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Credit receivable costing between banks and merchants

Frank Whitney Hyatt

The University of Montana

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CREDIT RECEIVABLE COSTING BETWEEN BANKS AND MERCHANTS

By

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B.S.B.A., University of Florida, 1962

Presented in partial fulfillment of the requirements for the degree of

Master of Business Administration

UNIVERSITY OF MONTANA

1972

Approved by:

[Signatures]

[Names]

[Position]

Date

March 17, 1972
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CHAPTER I

INTRODUCTION

General

The importance of the total credit card system (consumer, merchant and bank) and its cost and benefit relationship has been recognized in the press and in academic analysis. Academic analysis occurred primarily in the period from 1967 to 1968 and has stopped since. The Federal Reserve initiated a study in 1967 to examine the economic impact of bank consumer credit plans. Starting in December, 1970, the Federal Reserve Call Report required all banks to report credit card information as supplementary information. This report will allow better analysis of future bank credit card operations.

History of Bank Credit Cards

The Chinese Khan in the 13th century issued traveling merchants letters of credit as verification of their financial responsibility. Letters of credit remained the primary method of verification of financial responsibility for travelers until this century.

Current forms of credit were started as early as 1914 by department stores and gasoline station chains. The merchant-issued credit card had three basic benefit-related functions: (1) prestige, (2) convenience, (3) safety. Government restraints on consumer spending and credit during World War II caused credit cards to
temporarily disappear. They were reissued after the war and their use expanded when travel and entertainment cards were initiated for consumer use.

Bank credit started with the Charge-It plan created by Flatbush National Bank in 1946. The plan used script which was exchanged for merchandise by participating merchants. The Franklin National Bank of Long Island in 1951 started the first sales ticket plan. This plan was very successful for the bank. In 1952 and 1953 nearly 100 small banks introduced credit card plans as a result of an article in The American Banker by Otto Lorenz.¹ The profitability of the service was greatly overestimated and nearly half of the banks dropped the plan after a short while.

The First National Bank of San Jose developed the first computer-automated plan in 1958. The plastic credit card innovation occurred in 1959 the same year bank credit card plans spread over a large geographical area from New York to Hawaii. In 1959 Bank of America introduced its plan in California and in 1964 reported recovery of starting costs.

Prior to 1966 the growth of local plans dominated, but after 1966 regional plans developed. Bank of America introduced its national franchise plan in 1966. Two other bank charge-card plans developed in 1966, one in California, called Master Charge, by a group of banks—the Bank of California, the Crocker Citizens National, and

¹The National Credit Card School for Bankers, Conducted by Preston State Bank, "A History of Charge Account Banking," Dallas, Texas, 1969. (Mimeographed.)
the United of California; a second plan was developed in the midwest by thirteen banks, four in Chicago and the others spread throughout Indiana and Illinois. This second group banded together in a group called Midwest Card Group and became a formal association that provided an interchange among themselves. In 1968 the Midwest Bank Card Group joined the Master Charge Group and adopted the Master Charge emblem and the small Interbank "i" as a common denominator. By the end of 1968 Master Charge had 17 million cardholders and 300,000 merchants, and BankAmericard had 16.7 million cardholders and 397,000 merchants. ²

Problem

A bank's credit card operation is to provide financial services for a fee to merchants on a cost basis and credit services to individuals as a no-cost benefit or as a credit extension cost. The merchant, when he uses bank credit cards for his credit sales, has his receivables cost and associated risk replaced by a bank service charge. The questions to be asked are: Is the bank service charge greater than or less than the merchant's receivable cost? Is this bank service profitable?

²Ibid.
CHAPTER II

EXCHANGE

The Mechanism

The exchange mechanism is an evolving process and has many stages of historical development. Exchange of actual goods was a beginning, and varying degrees of abstraction followed. Each stage of exchange development had its benefits and costs. The benefits of each stage were greater simplicity of recognition, specialization of exchange, and continuity of value. The exchange process, becoming more specialized at each stage, gradually developed a utility and identity of its own. The money exchange mechanism that was created became valuable due to a limit on economic resources available for exchange and the specialized exchange medium as an institution. The exchange process is defined for the credit card stage of exchange development in terms of risk, utility, trust, and value exchanged.

The Process

How credit cards perform in terms of cost and benefit for the providing unit (the merchant) and the consuming unit (the customer) is based upon how three factors are distinguished: exchange, liquidity, and credit. Exchange or consumption of economic value has three basic requirements. It requires that the economic partners in a transaction have access to each other, that the values offered in
the exchange be mutually identified and verified, and that a transfer actually be executed. A secondary effect of exchange is the ability to account for the exchange after it has transpired. The second factor, liquidity, is the means and ability to make the exchange. Cash and demand deposits are liquid resources and represent ability of the consumer and the means of exchange to the merchant. The result is that liquidity facilitates "access, identification and verification of value, and transferring value."³ Credit is another means of exchange and provides access, identification, verification and transfer. However, it is without proof of economic value and, as such, is not in the same simple category as liquid resources. Demand deposits are accessible upon presentation of a piece of paper—a check, certificate of deposit, or bank note—that must be accepted either upon blind faith, previous knowledge of good faith, or rejected. As such, demand deposit checks are similar in form to credit cards. Credit cards, a deferred exchange of cash for both the buyer and the seller, facilitate exchange and represent a simple trust that what is purchased is worth what was paid and that payment will be made in the future for the item. Given the acceptance of risk by a merchant and bank, and the consumer's trust in the economic value, credit provides access, identification, verification of values, and transfer of value.

When an exchange involving cash occurs, there are two related

consumer costs. The cost involved in the forgone alternate uses of cash and the cost associated with the risk that the utility of the items exchanged as originally verified and identified are no longer equal. When credit is used to make the exchange, a merchant has the costs of cash involved, plus risk-related costs involving future benefits lost due to no-cash input, the cost of verification of consumer credit, and the slow returns cost. The merchant should minimize these costs in order to increase his return on credit sales. When credit cards are used, exchange becomes more complex and costly, especially since liquid resources are not exchanged and the delayed exchange of liquid resources has a price.

Bank Credit Card Benefits—General

Bank credit card benefits fall into three general categories: consumer benefits, bank benefits, and merchant benefits; and are a central issue since the cost of benefits is considered as well as the non-cost aspects of benefits. Benefits are positive when they are favorable for the bank, and benefits are negative when they are not favorable. However, it has been noted in the literature that there is a tendency for banks to emphasize positive benefits when costs are not known, not identifiable, or are kept internal and not released. Benefits must be received either in the form of convenience, profit, reduced costs, or favorable market image in order for the bank credit card plan to work. All three participants—the merchant, the bank, and the consumer—must benefit if the plan is to be justified.
CHAPTER III

BANK CREDIT CARD PERFORMANCE

Profitability

Profitability of bank credit cards is an individual bank assessment in view of many factors. Banks do not evaluate profit measurement equally. Bank objectives range from profit motivation—to break even—to indifference on profitability or cost of services. The latter statement is supported by an analysis of 62 banks that had greater than $3 million in outstanding bank credit card balances.4 An example of bank card profitability is the very successful plan built by the Bank of America in California. Just from credit card operations in California the Bank of America "netted $10 million profit, in the first 10 months of 1969."5 This $10 million profit for 10 months of operation is quite significant, especially when for the entire year in 1968 the Bank of America "netted $7.3 million profit on its California bank credit card operations."6 The enormous success of the Bank of America is a major impetus for other banks to initiate the


6Ibid.
credit card service as a feature of banking. However, there are several offsetting costs to be considered.

Banks must absorb several types of costs that were part of the merchant's cost prior to the introduction of bank credit cards. In the case of small retailers who did not have a customer-receivable credit line established, the cost is added to bank costs when bank credit cards are used by these merchants. When a retailer already has a customer-receivable credit line established, the cost is transferred to banks. Credit losses in terms of collections, bad debts and slow payments are a considerable portion of the credit line cost. Based upon the data presented in the Brimmer study, annual bad debt charge-off amounts and procedures can be analyzed. In 1969 the charge-offs were 2.38 per cent of end-of-year outstanding bank credit card balances. In 1970 the charge-offs were 3.39 per cent of end-of-year outstanding balances. The actual range, as reported to the Federal Reserve, in 1970 (Chart 1) was between 2.17 per cent for State member banks and 3.72 per cent for National member banks. The difference between these percentage charge-offs can be traced to nonstandard accounting procedures. "National banks are required by the Federal Reserve to charge off their delinquent accounts after six billings [90 days] without receiving a payment. In contrast only eighteen

7 Andrew F. Brimmer, "Bank Credit Cards—The Record of Innovation and Growth" (Board of Governors of the Federal Reserve, paper presented at the Puerto Rican Bankers Association, San Juan, March 26, 1971), pp. 6-7.

8 "Effective April 5, 1971, Regulation Z was amended to require creditors to give 15 days notice, rather than 30 days, to active customers regarding a change in terms of an open end credit account." Federal Reserve Bulletin, March, 1971, p. 246. This made official a.
Chart 1

Charge-Offs as a Percent of End of Year Outstandings, 1969 and 1970

---

Brimmer, "Bank Credit Cards," Table 1.
per cent of the State member banks reported using the ninety-day charge-off period at the end of 1970.¹⁰ (Table 1.) Forty per cent of the State member banks reporting used a 120 to 130-day charge-off period. These current figures on loss ratios depict greater losses than reported a few years ago. According to the Federal Reserve System Task Group study, as of September 30, 1967, losses ranged from 0.36 per cent to 2.42 per cent.¹² The lower loss ratios were reported by the smaller banks. By comparison the delinquency rate on home policy that applied to credit card operations at an earlier time.

¹⁰ Brimmer, "Bank Credit Cards," p. 7. ¹¹ Ibid., Table 2.

¹² Federal Reserve System Task Group, p. 31.
mortgages for 1969 was 3.22 per cent.\(^\text{13}\)

Overhead expenses include all expenses not directly attributable to credit card operations. Portions of each item in Appendixes A and B cannot be accurately charged to the credit card operation for agent banks and are broken down by sponsoring banks as a ratio of cardholders signed on to all cardholders billed by the sponsoring bank. For sponsoring banks this problem is simplified since the credit card operation is a separate costing center and often a subsidiary corporation such as BankAmericard.\(^\text{14}\)

Operating expenses include all expenses that have to do with the daily operation of the credit card service, such as plastic card embossing, color photographing, association assessments, telephone expense, credit reporting expense, personnel expense, mailing expense, credit checking expense, travel and entertainment expense (used for obtaining new merchants and keeping old ones), and equipment expense. The expenses for an agent bank are not the same as the expenses for a sponsoring bank.

Electronic Data Processing (EDP) expense is not a major expense for an agent bank since statements and merchant receipts are usually handled by sponsoring banks. This is not to say that agent banks don't have EDP; they do, but it is not exclusively for credit card operations. Sponsoring banks have EDP hardware and software expense. In many cases they also have subdivided new peripheral


\(^{14}\)A sponsoring bank, generally a large bank in a region, that has many smaller banks (agent banks) signed on to expand the
equipment as separate expense. This type of equipment includes such items as modems, data phones, cathode ray tube input-output devices (CRT's), remote terminals, and redundant computer facilities. Software includes personnel, programming, analysis, servicing, and often preventative maintenance contracts.

Promotion expense for getting merchants to sign on to a credit plan are considerable for agent banks since they are the banks that actually obtain the bulk of the merchants. A sponsoring bank will also sign on merchants but in a small area only.

Advertising aimed at the consumer is used to attract new consumers and getting consumers to use their cards. Developing the public image of social acceptance for the card and its users is another aim of bank card advertising. The cost of advertising is shared by sponsoring banks and associations. Advertisements by agent banks are aimed at local merchants and consumers for the purpose of identifying the bank with a particular credit card plan.

Credit loss expense is the amount of charge-offs that a bank has as a result of delinquency or bad debt. This cost is usually absorbed entirely by sponsoring banks. Agent banks which usually do not absorb the cost have a low bad debt cost since by agreement they are not directly involved.

Losses due to fraud or unauthorized use of stolen credit cards, once completely passed on to the cardholder, are now almost completely absorbed by banks. The Consumer Credit Protection Act, geographical area of the bank card use by merchants and acceptance by consumers. This is discussed in Chapter VI in more detail.
amended on October 26, 1970, prohibits issuance of unsolicited credit cards and limits credit cardholders to a maximum of $50 liability for unauthorized use of their cards. In addition, the Federal Reserve Board initiated Truth-in-Lending changes to Regulation Z on January 25, 1971. The Federal Reserve contacted 45 banks in an informal survey, and the majority of respondents stated that the bank was absorbing all losses on unauthorized use of cards and banks were not invoking the $50 limit on cardholder liability because of public relations, cost, and competitive reasons.¹⁵

Bank credit card implementation costs are considerable. Appendixes A and B illustrate agent-bank direct and indirect expenses. However, for all banks these costs are divided into: (1) overhead expenses, (2) operating expenses, (3) electronic data processing expense, (4) promotion (merchant selling) expense, (5) advertising (consumer selling) expense, (6) credit losses expense.¹⁶ Start-up expenses averaged 2 per cent of total bank operating expense and were recovered in three to four years.¹⁷ The cost of initiating a credit card service is reduced considerably by accepting agency status or association membership.¹⁸ As of September 30, 1967, there were 197 banks with credit card plans.¹⁹ As of December 31, 1969, there were 685 card-issuing banks and 5,450 agency banks.²⁰ As of December 31, 1970, there were 1,427 card-issuing banks and 7,684 agency banks for a

¹⁵Federal Reserve System Task Group, p. 26. ¹⁶Ibid., p. 27.
¹⁷Ibid. ¹⁸Ibid., p. 28. ¹⁹Ibid., p. 85.
²⁰Brimmer, "Bank Credit Cards," Table 7.
total of 9,111 banks offering credit card service. The cost to
agent banks varies depending upon which plan is used. "Bank of
America charges its banks a fee that can run to 25,000 dollars" for
agent status, and "then charge a service charge on each bank's card
volume." 

Service

Advantages to be gained by banks entering the credit card
field are in the indirect expansion of other bank services. Credit
card service has provided opportunities for obtaining new merchant
accounts, new consumer accounts, selling additional bank services:
safety deposit boxes, time deposits, trust management, commercial
loans, and lending on revolving accounts. The services that banks
offer are very competitive and the addition of a credit-card service
allowed expansion at the expense of banks not offering the service.
An example is the ten-year analysis made by one bank of current
customers who were not customers prior to issuance of the credit card
and because of the added credit-card feature became customers of the
bank. "Seventy-three per cent of these customers made use of other
services in the bank." 

Industry Growth

A summary of the banking industry's goals for bank cards was
made by Karl Hinke, chairman of Interbank Card Association in 1969.

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21 Ibid. 22 Business Week, December 20, 1969, p. 78.
23 Ibid. 24 Brimmer, "Bank Credit Cards," p. 20.
We would call the establishment of the bank charge card a new medium of exchange, a renaissance of banking. The credit card of the future will be a membership card in a nationwide—eventually international—electronic payment and booking network. It has the potential of eliminating many conventional uses of checks and money.25

Since this is the trend, many banks want to participate in the growth in this important segment of the industry. The rate of growth for bank credit cards as compared to other types of revolving credit cards is shown clearly in Table 2 and Chart 2. The banking industry accounted for 50 per cent of the growth in revolving credit plans from December 31, 1967 to December 31, 1970. The rapid growth of credit outstanding, 362.5 per cent over this period, is a significant event that marks general public and bank acceptance of the credit card. The growth trend of credit card plans by the number of banks having plans and the amount outstanding, from 1967 to 1970, is shown in Chart 3. Credit outstanding is increasing at a greater rate than the increase in the number of cardholders, showing that consumer utilization of the card is increasing. The average credit line outstanding, for the period from June 30, 1969 to December 31, 1970, changed from $182 to $232 which is a 27 per cent increase. As of September 30, 1967, the outstanding balance of the average credit card account was only $124. The outstanding balance growth rate for the period between September, 1967 and December, 1970 was 188 per cent.26 Bank revolving credit plans accounted for 21.4 per cent of the total revolving credit

26 Federal Reserve System Task Group, p. 81.
Table 2

Outstanding Balance of Revolving Credit Plans
(Billions of Dollars)27

<table>
<thead>
<tr>
<th></th>
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<tr>
<td>Bank Credit Cards</td>
<td>0.8</td>
<td>1.0</td>
<td>1.3</td>
<td>1.7</td>
<td>2.6</td>
<td>3.0</td>
<td>3.7 (est.)</td>
<td></td>
</tr>
<tr>
<td>Oil Companies</td>
<td>1.0</td>
<td>1.1</td>
<td>1.2</td>
<td>1.3</td>
<td>1.5</td>
<td>1.6</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>Department Store Revolving Credit</td>
<td>3.5</td>
<td>3.6</td>
<td>3.7</td>
<td>3.8</td>
<td>4.2</td>
<td>4.0</td>
<td>4.6</td>
<td></td>
</tr>
<tr>
<td>Retail Charge Accounts</td>
<td>5.9</td>
<td>5.3</td>
<td>6.5</td>
<td>5.6</td>
<td>6.7</td>
<td>5.8</td>
<td>6.9</td>
<td></td>
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<tr>
<td>Travel and Entertainment Cards</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>All Other</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
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<tr>
<td><strong>Total of All Types</strong></td>
<td><strong>11.5</strong></td>
<td><strong>11.3</strong></td>
<td><strong>13.0</strong></td>
<td><strong>12.7</strong></td>
<td><strong>15.3</strong></td>
<td><strong>14.7</strong></td>
<td><strong>17.3</strong></td>
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</table>

27 Brimmer, "Bank Credit Cards," Table 10.
Balance in Billions of Dollars
1967 to December 31, 1970
Growth of Revolving Credit Plan: December 31,

Chart 2

Year

1967  1970
All Others

1967  1970
Travel and Entertainment Cards

1967  1970
Retail Charge Accounts

1967  1970
Department Store Revolving Credit

1967  1970
Oil Companies

1967  1970
Bank Credit Cards

Revolving Credit Outstanding
(Billions of Dollars)
outstanding as of December 31, 1970, compared to only 7 per cent December 31, 1967. 30

30 Brimmer, "Bank Credit Cards," Table 11.
CHAPTER IV

BANK CREDIT CARD AND THE CONSUMER

Consumer Costs

A consumer has several approaches in analyzing bank credit cards. One is cost which may be 0 to 18 per cent a year interest on his unpaid balance. The card is issued free of charge to a qualified requestor, and the line of credit given to the consumer is free of any interest for the first fifty days. This means that a consumer can use the card for purchases and get the non-cost benefits free, plus use of the item purchased and money not spent in lieu of the use of the credit card. When full payment is made within the interest-free period, the full credit is again extended. However, if the consumer does not pay within fifty days, he incurs an interest (service) charge that varies from state to state depending upon the particular state usury laws. The monthly interest ranges from five-sixths of one per cent to one and a half per cent per month on the unpaid balance. 31

Consumer Awareness of Costs

Consumer awareness of costs is increasing and the number of people holding cards who don't know the costs at all dropped

31 Personal confidential letter from a major bank's Senior Vice President.
significantly after the Truth-in-Lending law became effective in 1969. Consumer awareness of credit costs by education level was determined by a Federal Reserve Board Survey of consumer awareness and is shown in Table 3. A more accurate consumer estimate on interest rate and a decline in the don't-know category is clearly shown for 1970. There is also a better estimate of the actual interest rate as the educational level increases. The don't-know category decreases dramatically when consumers responding had attended college. The number of respondents possessing cards also increased with the increase in educational level. Consumer awareness of costs by income group is shown in Table 4. The very large increase in the accuracy of cost estimate is largely attributed to the Truth-in-Lending law. However, the over $10,000 income bracket showed a greater awareness of actual costs. In 1970 the difference of each income bracket in the don't-know category didn't vary more than plus 7.5 and minus 3.7 percentage points from the average don't-know of 27 per cent (Chart 4). The data indicate that this category is fairly uniform in awareness and is less sensitive to variation of income. Consumers as a whole recognize the costs and weigh them with the benefits that follow.

**Consumer Benefits**

Credit cards do different things for different people. Some people understand the costs involved and some do not. Benefits must be positive and identified with for cards to be accepted. If no one identified with the services provided by the cards, they would not

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32 Brimmer, "Bank Credit Cards," p. 17.
Table 3

Consumer Awareness of Bank Credit Card Costs by Education Level

<table>
<thead>
<tr>
<th></th>
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<td>Number reporting ownership of a bank credit card</td>
<td>1,324</td>
<td>918</td>
<td>355</td>
<td>167</td>
<td>422</td>
<td>293</td>
<td>540</td>
<td>435</td>
</tr>
<tr>
<td>Number answering interest rate question</td>
<td>1,226</td>
<td>651</td>
<td>314</td>
<td>95</td>
<td>387</td>
<td>212</td>
<td>519</td>
<td>344</td>
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<tr>
<td>Percentage Rate Distribution of Those Answering Interest Rate Question</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Interest Rate (Per cent)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8 or less</td>
<td>11.5</td>
<td>5.9</td>
<td>11.5</td>
<td>8.4</td>
<td>11.9</td>
<td>7.0</td>
<td>12.7</td>
<td>4.3</td>
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<tr>
<td>9-18</td>
<td>32.1</td>
<td>66.2</td>
<td>20.1</td>
<td>41.1</td>
<td>25.8</td>
<td>55.7</td>
<td>42.8</td>
<td>79.7</td>
</tr>
<tr>
<td>Over 18</td>
<td>1.1</td>
<td>0.9</td>
<td>1.6</td>
<td>2.1</td>
<td>1.3</td>
<td>1.0</td>
<td>0.8</td>
<td>0.6</td>
</tr>
<tr>
<td>Don't know</td>
<td>55.3</td>
<td>27.0</td>
<td>66.8</td>
<td>48.4</td>
<td>61.0</td>
<td>36.3</td>
<td>43.7</td>
<td>15.4</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
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</table>

33 Brimmer, "Bank Credit Cards," Table 9.
Table 4

Consumer Awareness of Bank Credit Card Costs by Income

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<tr>
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<tr>
<td>Under $5,000</td>
<td>162</td>
<td>78</td>
<td>252</td>
<td>142</td>
<td>246</td>
<td>154</td>
<td>597</td>
<td>523</td>
</tr>
<tr>
<td>$5,000-$7,999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$8,000-$9,999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$10,000 and over</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
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</table>

Number reporting ownership of a bank credit card

Number answering interest rate question

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8 or less</td>
<td>9.2</td>
<td>9.4</td>
<td>11.5</td>
<td>11.5</td>
<td>10.5</td>
<td>5.3</td>
<td>12.0</td>
<td>4.2</td>
</tr>
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<td>9-18</td>
<td>13.5</td>
<td>62.5</td>
<td>28.5</td>
<td>54.2</td>
<td>31.1</td>
<td>59.3</td>
<td>40.1</td>
<td>71.5</td>
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<tr>
<td>Over 18</td>
<td>0.7</td>
<td>0.0</td>
<td>1.0</td>
<td>1.0</td>
<td>1.3</td>
<td>0.9</td>
<td>1.2</td>
<td>1.0</td>
</tr>
<tr>
<td>Don't know</td>
<td>76.6</td>
<td>28.1</td>
<td>59.0</td>
<td>33.3</td>
<td>57.1</td>
<td>34.5</td>
<td>46.7</td>
<td>23.3</td>
</tr>
</tbody>
</table>

Percentage Rate Distribution of Those Answering Interest Rate Question

Total 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0

34 Brimmer, "Bank Credit Cards," Table 9.
Chart 4
Consumer Awareness of Bank Credit Card Costs

Brimmer, "Bank Credit Cards," Table 9.
have a measurable utility for consumers. Credit card use and recognition is not sufficient for acceptance due to prestige, group identity and utilization as a means of identification. In order to establish who benefits from cards and the extent of acceptance, Chart 5 shows the effect education, income and age have upon card ownership. There were 5,137 responses to a 1969 Federal Reserve System study. Only 25.8 per cent held bank credit cards. In 1970 there were 3,033 responses to another study, and 30.3 per cent held cards. Federal Reserve data show that of all respondents in 1970, 79.6 per cent were high school graduates or better, that 91.3 per cent of all respondents earned greater than $5,000 annually and that 70.0 per cent of the respondents were 35 years or older. The conclusion is that bank credit cards are used more by the better educated and by the higher paid. This latter statement is further substantiated by Federal Reserve data for 1970 that 58.3 per cent of the sampled cardholders earned over $10,000 annually. During the same two periods, in 1969 there were 43.4 million cardholder accounts with 8.6 million (20.0 per cent) active; and in 1970 there were 47.6 million cardholder accounts with 15.3 million (32.0 per cent) active. This meant that, for all customers, there was a $21.7 billion credit line (given that $500 is authorized per account) for 1969 and a credit line of $23.8 billion for 1970. The data indicate that bank credit cards are accepted and

36 Brimmer, "Bank Credit Cards," Table 8.
37 Ibid.
38 Ibid., Table 7.
Total Responses

Some High School or Less
High School Graduates
College Graduates or Some College
Less than $5,000
$5,000 - $7,999
$8,000 - $9,999
$10,000 and over
Under 35 years
35 - 49 years
50 Years or older

Percent Having Bank Card Credit

Chart 5

Percentage Ownership of Bank Credit Cards by Education Level, Income Level and Age Level, 1970

39Brimmer, "Bank Credit Cards," Table 8.
used, and their growth rate is significant (Chart 2 above).

Benefits are not measured but are listed as advantages for the consumer. The consumer is sold on advantages developed by the banking industry and he is convinced, through advertising and communications marketing, that advantages are actually measurable benefits.

Advantages for the bank card as listed by the Federal Reserve Task Group are:

1. The single application for credit conveniently spares the customer the bother of multiple form filling when his card can be used in a number of separate stores where he might wish to make purchases.

2. One "all purpose" card may conveniently replace a multitude of special purpose credit cards in his wallet.

3. The single monthly statement received by the customer enables him to see at a glance all his purchases for the month and to simplify his budget process.

4. The cash advance feature of a credit card enables the customer to handle unexpected contingencies without destroying his budget and making an unwanted dip into his savings, and without excessive formalities.

5. Bank credit cards permit some economizing on the amount of cash carried.

6. Payment of bills is simplified since the cardholder needs to write only one check to pay for many purchases. This may also reduce service charges on his checking account.40

These advantages as listed by banks are not necessarily benefits as the consumer sees the card. After careful analysis of available literature, it appears that consumer benefits are more likely to be simply convenience plus the following:

1. Free loan for up to 50 days on credit purchases, if a single payment is made.

2. The revolving credit feature, similar to traditional installment lending, allows even payment for uneven expenditures.

40Federal Reserve System Task Group, pp. 57-58.
3. A reduced need to carry cash due to the wide acceptability by merchants and the cash loan feature of the card.

4. The reduced need for savings deposits for unexpected contingencies because the card is widely accepted.

5. The wide acceptance of the cards (with color photographs and signature) by merchants has provided a means of customer identification.

Negative bank credit card benefits for consumers fall into two categories: (1) cost, (2) overobligation.

1. Cash customers have to bear the added cost created by the other customers' use of credit cards, as prices rise to cover higher handling expenses, including the merchant discount.\(^{41}\)

Banks consider the cost as a transfer cost only. In addition many consumers prefer to trade with cash only because of the finality of sale and zero interest charged on purchases.

2. Credit cards lead consumers to buy more than they would if they had to pay by cash or check. Credit cards lead consumers not only into debt, but into overindebtedness as well, with an attendant rise in consumer delinquencies and even bankruptcies.\(^{42}\)

There are three factors that greatly aid in amplifying the bank credit cards negative aspects for consumers.

1. Convenient automatic loan when the bill is left unpaid.

2. Less painful expenditure through revolving credit.

3. Widespread use and social acceptability of bank credit card plans and debt.

For bank credit cards to survive, the positive benefits for consumers must outweigh the negative benefits. The above factors help

\(^{41}\)Ibid., p. 58. \(^{42}\)Ibid.
encourage the positive benefits. In addition, more consumers must feel that the positive features outweigh the negative features in order to provide an acceptable volume of business for banks and merchants. A benefit not discussed or inferred in current literature on bank credit cards is the impact of the bank credit card on impulse buying and immediate consumer satisfaction by satiation of the impulse need. This aspect of the card is a rather powerful influence in view of the wide merchant and consumer acceptability of the card. Another consumer benefit is that during a period of inflation the high interest rate of bank cards is closer to the actual interest rate and the purchasing power of money borrowed today is greater than that paid back in the future.
CHAPTER V

BANK CREDIT CARD AND THE MERCHANT

Cost to the Merchant

For business the cost of exchange is minimized when it accepts cash exclusively. The assets of cash and marketable securities are considered to be the most liquid of assets, but as seen from the analysis of the exchange process there is a cost involved even with cash. Marketable securities are even more costly since they are subject to the market terms of sale, which are unknown until a sale is actually completed, and they have value only as long as the unit issuing the security is solvent or is worth, in the market place, what the security represents. The business has a receivable account which has the following costs tied to it: (1) cost of cash; (2) cost of changing present value (inflation reduces the value and the receivable in cash not available for use); (3) opportunity cost of the future returns on cash; (4) cost associated with varying risk in opportunities lost due to no cash; (5) cost of no payment; (6) cost of late payment; (7) cost of servicing the receivables. These costs can be simplified in terms of inflation, bankruptcy, lost opportunities, lost interest, lack of flexibility, bad debt expense, payroll expense, equipment expense, and the cost of a reduced transaction, liquid and speculative position.
Bank Services for the Merchant

When a bank provides services to a merchant for handling the operating liquidity needs of the business, there is a significant receivables savings for the merchant. All costs except those involved in holding cash and the cost of verification and trust are eliminated. The merchant using the bank service has the bank's financial service expense, plus the intangible cost of loss of direct customer contact (in the form of monthly mailing of sale notices and advertising). The result is that a relationship between the bank, merchant and customer is developed, and the three units have an exchange system established. The three units have preestablished access, in terms of the bank credit card system, where exchange values are identified and verified at point of exchange, normally where the exchange is completed. The liquidity for the exchange is provided by the bank and is mutually beneficial to the merchant and the consumer since it provides, at a cost, immediate cash for the merchant and consumer. A bank–customer obligation, that is, a simple short-term loan with or without interest depending upon the time involved, is developed by the customer's credit borrowing of cash from the bank and repayment to the bank. The procedure for the merchant (not a factoring of the merchant's receivables) is a continuous fixed-rate service by the bank. The bank discounts a specified amount, monthly, to the merchant for the service, and no additional fee is charged to the merchant.

Costs Transfered to the Banks

The banking system, in the case where merchants utilize the
bank's credit card financial service, absorbs the merchant's receiv-
able cost which, on a macro scale, costs merchants billions of dollars
in terms of billing, accounts receivable, credit rating checks,
preparing, mailing and processing checks and bills, and absorbing
losses on bad checks that should pay on accounts, and non-payment of
credit accounts. When banks provide the credit receivable function
for the merchant, the discount rate is charged for the service. The
discount rate is a very competitive feature used by banks to sign on
merchants. The discount rate has dropped from 6 per cent to, in many
cases, 1 per cent or less and, in cases of stiff competition, to
0 per cent discount. 43

The merchant discount is income to the bank but it is not an
extra charge for the merchant. The service charge cost for the
merchant is not an internal cost but a cost transferred to the bank.
In reality there is a net savings by most merchants. The cost of the
average small merchant's total credit receivable program is between 6
and 7 per cent. 44 By adopting the bank credit card for his account
receivables the small merchant lowers his cost to 1 to 3 per cent
(the discount service charge that is negotiated). 45 According to a
National Retail Merchants Association study, large department stores
have an average cost of carrying credit receivables of 3.47 per
cent. 46 This cost is more than the current discount service charge

43 Personal confidential letter from a major bank's Senior
Vice President.

44 Ibid.

45 Ibid.

46 Ibid.
being negotiated with large department stores. The large department stores have carefully negotiated contracts with banks, and discount service charges often are less than 1 per cent and in some cases no charge.\(^{47}\) This reflects the strong bargaining position of the larger department stores plus the intense competition between banks vying for merchants. Besides the cost savings aspect for merchants there are many benefits to be gained by adopting bank cards.

**Benefits for Merchants**

Benefits for merchants are a bit simpler (because of the large amount of material on the merchants' operation in a checkless society) than the consumer or bank benefits; however, they are equally important for the success of the credit card service. Positive benefits are:

1. Bookkeeping expense for credit sales is reduced.

2. Losses involved in credit transactions are eliminated and banks assume the collection risks.

3. Selling costs are reduced since bookkeeping costs are reduced.

4. An increase in sales volume as a result of using the card widens the distribution of overhead expense and reduces the unit fixed cost.\(^{48}\)

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\(^{47}\)Ibid.

\(^{48}\)The increase in sales volume as a result of using cards comes about from three categories of consumer purchases. First, the pure credit sale that is in addition to cash sales and other credit card sales. This latter is a complement sale and emphasizes the wider base of customers added. Second, the credit sale that is a substitute for the cash sale of equal value or larger credit sale over
5. The demand deposit account is immediately credited with cash upon turn-in of bank credit card sales receipts. The amount credited is net, less the discount.

6. The merchant's liquidity is enhanced, cash turnover is faster, and the carrying cost of accounts receivable is reduced or eliminated.

7. Merchants reduce the cost of checking credit ratings.

8. Merchants can still sell on credit but to selected consumers using their own time-payment credit plan with a line of credit greater than what the bank offers.

9. Greater geographical area of exposure for customers (Table 5).

Table 5 shows supermarket data for the year it started and the year after it started a bank card plan. Initially bank card customers traveled a greater distance to shop at the store than did the store charge-card customers. When the bank charge plan matured, the distance traveled to the store for bank charge customers exceeded that for store charge customers. In view of the fact that a large number of competitive stores had to be passed on the way to the bank charge

cash sale. Lastly is the credit sale that reduces cash sales but does not substitute or complement. Table 6 shows that this last case is insignificant. Proof of expanding dollar sales volume is in the increasing retail sales base and the increasing credit card outstanding. From 1965 to 1970 retail sales went from $284 billion to $365 billion (U.S. Dept. of Commerce, Bureau of the Census, Statistical Abstract of the United States, 1971, end-of-year data seasonally adjusted). During the same period credit card sales went from $304 million to $3.7 billion (Brimmer Report, Table 3). Currently there is not sufficient data available to determine what percent of credit card sales are complementary, substitutive or detractive.
Table 5

Location of Bank Charge Account Customers Compared to Store Charge Account Customers

<table>
<thead>
<tr>
<th>Distance from store</th>
<th>July 1959</th>
<th></th>
<th>April-May 1960</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Store-charge-account customers</td>
<td>Bank-charge-account customers</td>
<td>Store-charge-account customers</td>
<td>Bank-charge-account customers</td>
</tr>
<tr>
<td>Miles</td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>0-0.49</td>
<td>11</td>
<td>31.4</td>
<td>1</td>
<td>3.2</td>
</tr>
<tr>
<td>0.50-0.99</td>
<td>13</td>
<td>37.2</td>
<td>2</td>
<td>6.4</td>
</tr>
<tr>
<td>1.00-1.99</td>
<td>8</td>
<td>22.8</td>
<td>7</td>
<td>22.6</td>
</tr>
<tr>
<td>2.00-2.99</td>
<td>2</td>
<td>5.7</td>
<td>2</td>
<td>6.4</td>
</tr>
<tr>
<td>3.00-3.99</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>22.6</td>
</tr>
<tr>
<td>4.00-4.99</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>5.00-7.49</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>6.4</td>
</tr>
<tr>
<td>7.50-9.99</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>12.9</td>
</tr>
<tr>
<td>10.00 and over</td>
<td>1</td>
<td>2.9</td>
<td>3</td>
<td>9.7</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
<td>100.0</td>
<td>31</td>
<td>100.0</td>
</tr>
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</table>

Table 6

Cost of Money Analysis by Bank Size\(^{50}\)

<table>
<thead>
<tr>
<th>Deposits up to $50 million (per cent)</th>
<th>Deposits from $50 to $200 million (per cent)</th>
<th>Deposits over $200 million (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Demand Deposits</td>
<td>1.76</td>
<td>1.61</td>
</tr>
<tr>
<td>Cost of Time Deposits</td>
<td>4.83</td>
<td>4.88</td>
</tr>
<tr>
<td>Cost of Net Capital Funds</td>
<td>2.60</td>
<td>2.67</td>
</tr>
<tr>
<td>Net Cost of Money</td>
<td>3.37</td>
<td>3.26</td>
</tr>
</tbody>
</table>


account store and customers could have shopped closer, they preferred to shop at the store offering the bank charge feature.\(^{51}\)

Negative benefits for merchants are difficult to quantify since many tangible and intangible factors are involved.

1. Use of a bank credit card plan may reduce or eliminate the merchant's mail communications with customers. Retailers often use the monthly mailing of accounts as a means of distributing advertising brochures.

2. Merchants must accept the discount fee as a cost and if the discount fee is greater than existing credit and risk cost, then the bank credit card plan has increased the merchant's total cost.

Banks, merchants and consumers usually identify benefits and costs together (one versus the other) because the costs cannot be accurately defined. When benefits and costs are considered, there is a transfer of the businessman's risk to a bank and the business is freed to do its merchandizing function. There is a possible social cost involved if merchants cannot manage the business and its associated risk adequately. If a merchant had to rely upon his revolving credit interest returns as income, then the merchant was partially in the financing business rather than the retail, merchandizing, or producing business and should have redirected his goals.

There are beneficiaries of the bank credit card system other than the bank, merchant and consumer. These other beneficiaries are not involved in the exchange process; however, significant benefits are received by:

1. Credit card companies or associations
2. Communications companies
3. Computer equipment companies
4. Credit information businesses

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52Mateer, The Checkless Society, p. 12.
CHAPTER VI

BANK CARDS AND THE BANK

Costing—Pre Credit Card

Banks have become one of the fastest growing services busi-
nesses and are faced with a new problem—how to price for the
services they provide. The costing problem is very complex and is
traditionally an individual bank policy. Because of government
regulations, competition, economic and social responsibilities, the
banks have "traditionally undercharged for most corporate services,
offering them at cost instead of charging a price that includes a
profit."\(^{53}\) Table 7 has some examples of zero profit services that
are continued as a social responsibility. Banks should charge for
services a price that is equitable for the customer and the bank. An
example of traditional policy is: "Banks have used unrealistically
low interest rates in establishing the value of the service charge on
checking account balances with which corporations pay for most of
these services."\(^{54}\) This under crediting of the service charge on
demand deposit balances was to make them "profitable"\(^{55}\) or at least
balance the cost of the service versus the return, by having larger


\(^{54}\)Ibid.  

\(^{55}\)Ibid.
Table 7

Rate of Return Ratios by Size of Bank

<table>
<thead>
<tr>
<th>Portfolio analysis</th>
<th>Deposits up to $50 million (per cent)</th>
<th>Deposits from $50 to $200 million (per cent)</th>
<th>Deposits over $200 million (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross yield</td>
<td>7.31</td>
<td>7.38</td>
<td>7.72</td>
</tr>
<tr>
<td>Net yield</td>
<td>6.28</td>
<td>6.39</td>
<td>6.74</td>
</tr>
<tr>
<td>Net yield after cost of money</td>
<td>2.92</td>
<td>3.13</td>
<td>3.15</td>
</tr>
<tr>
<td>Investments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross yield</td>
<td>6.67</td>
<td>6.75</td>
<td>7.05</td>
</tr>
<tr>
<td>Net yield</td>
<td>6.52</td>
<td>6.63</td>
<td>6.89</td>
</tr>
<tr>
<td>Net yield after cost of money</td>
<td>3.16</td>
<td>3.37</td>
<td>3.30</td>
</tr>
<tr>
<td>Loans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross yield</td>
<td>7.74</td>
<td>7.77</td>
<td>8.03</td>
</tr>
<tr>
<td>Net yield</td>
<td>6.13</td>
<td>6.23</td>
<td>6.67</td>
</tr>
<tr>
<td>Net yield after cost of money</td>
<td>2.77</td>
<td>2.97</td>
<td>3.08</td>
</tr>
<tr>
<td>Real estate mortgage loans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross yield</td>
<td>6.37</td>
<td>6.32</td>
<td>6.64</td>
</tr>
<tr>
<td>Net yield</td>
<td>5.66</td>
<td>5.69</td>
<td>5.97</td>
</tr>
<tr>
<td>Net yield after cost of money</td>
<td>2.30</td>
<td>2.43</td>
<td>2.38</td>
</tr>
<tr>
<td>Installment loans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross yield</td>
<td>10.21</td>
<td>9.99</td>
<td>10.49</td>
</tr>
<tr>
<td>Net yield</td>
<td>6.86</td>
<td>6.35</td>
<td>6.41</td>
</tr>
<tr>
<td>Net yield after cost of money</td>
<td>3.50</td>
<td>3.09</td>
<td>2.82</td>
</tr>
<tr>
<td>Commercial and agricultural loans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gross yield</td>
<td>7.39</td>
<td>7.66</td>
<td>7.95</td>
</tr>
<tr>
<td>Net yield</td>
<td>6.08</td>
<td>6.58</td>
<td>7.11</td>
</tr>
<tr>
<td>Net yield after cost of money</td>
<td>2.72</td>
<td>3.32</td>
<td>3.52</td>
</tr>
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</table>

Table 7—Continued

<table>
<thead>
<tr>
<th>Deposits up to $50 million (per cent)</th>
<th>Deposits from $50 to $200 million (per cent)</th>
<th>Deposits over $200 million (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand deposit earnings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before taxes</td>
<td>3.10</td>
<td>3.21</td>
</tr>
<tr>
<td>Time deposit earnings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before interest and taxes</td>
<td>5.52</td>
<td>5.54</td>
</tr>
<tr>
<td>After interest and taxes</td>
<td>1.18</td>
<td>1.19</td>
</tr>
<tr>
<td>Net capital funds, earnings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before taxes</td>
<td>3.68</td>
<td>3.72</td>
</tr>
<tr>
<td>Return on net capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After taxes</td>
<td>1.78</td>
<td>1.76</td>
</tr>
<tr>
<td>Available funds, Earnings before taxes</td>
<td>2.19</td>
<td>2.29</td>
</tr>
</tbody>
</table>

amounts as a minimum deposit.

Because banks traditionally use costing methods for measuring services and charging customers, there is a large degree of individual bank variation involved as to how much to charge. The judgment is quite subjective and is not tied to individual customer accounts. When the interest rates on treasury bills climbed above the 2 to 4 per cent range, it became unprofitable for customers to keep large demand deposits when they could earn more on the cash than the benefits received from the bank for maintaining some minimum balance and obtaining no service charge. The decision by a bank customer to
reduce the demand deposit to a very low level results in a service charge being made. The service charge added did not increase the cost of the services enough to cause demand deposits to increase to the minimum level required to offset the service charge, since the customer could earn on his cash more than enough profit to cover the service charge.

An example of bank decision-making in servicing corporate accounts is when the banks added EDP equipment and started to provide more services, such as bank reconciliation of corporate checking accounts. (Reconciliation by banks is easy to do and there are several systems used to provide check numbers and amounts to banks daily or weekly.) Banks could do the job more simply, conveniently, and cheaply than the corporation. Corporations took it for granted that this type of service was "part of their regular demand deposit account-ing," and banks offered it as a free service in order to be more competitive in gaining accounts away from banks not providing the service.

Since the treasury rate and the prime interest rate have climbed, there is a depositor shift from non-interest-bearing demand deposit accounts to interest-bearing time and savings deposit accounts. A time deposit will give a bank money for a longer period and allow more profitable portfolio management. The earnings on time deposits minus the dividends and operations cost yield a time deposit profit for banks of 1.18 to 1.29 per cent before taxes. The result of this

\[ 57\text{Furniss, "Should Banks Reprice Corporate Services?" p. 100.} \]

low return is an increase in the bank's expense ratio and a profit squeeze with bank management putting increased emphasis upon profitability. The net result is a change in bank attitude from costing services to pricing services (costing being a charge for the service and pricing being a charge for the service plus an added charge for operation and overhead plus a profit). What is needed is to identify cost and profit contribution per activity per customer. This involves a complete and accurate costing procedure and an accurate account of services rendered per customer.

There are two crucial questions that a bank must answer:

1. Should a cost greater than a return be absorbed as a service related benefit to the customer who may use other bank services to counterbalance the cost?

2. Does the service require capital to be tied up in order to make the service available? If so, what is the comparative risk of alternate investments, the cost of tied-up capital, and internal rate of return on capital, and how acceptable is the return in view of the competitive position of the bank?

Costing—Post Credit Card

Banks should earn a profit on each business account not within a specific department but within the bank's system of service. The business account comes about from the transaction between the merchant and the borrowing consumer. The retailer who makes a cash sale and makes a deposit in a demand account at a bank uses the cash for various expenditures, such as stock purchase, salaries, new capital
equipment, dividends, taxes, etc. If a credit sale is made, the traditional method is to credit account receivables and to await cash payment. (It is assumed that receivables are not factored.) This involves a time lag for usable cash and has a risk and cost associated with it. The merchant may use his receivables as collateral for a loan (factoring) if its liquidity is less than its transaction demand for cash. (The best mix for financing is a complex decision which includes the following factors: Risk analysis, cost of capital, interest rate, and expected return above the cost of money.) Once a financial mix is decided upon, there is also the cost of delayed receivables inflow to the cash account due to time payment, slow payment, or default on payment. There are two additional costs involved: opportunity cost where the current rate of interest received on its portfolio is less than the cost of capital; and a capital cost if the current cost of borrowed funds is greater than the expected rate of return. Slow payment compounds the time payment cost. Default on payment is the most expensive, for it involves all time payment costs, the compounding cost of the delayed cost, the actual negative cash inflow of the dollar amount that was credited, and the return (opportunity cost) of receipts forgone. The tax deduction of losses is of some benefit but is greatly delayed.

When bank credit cards are used, a new method of credit receivable management saves all of the above costs, specifically the cost of credit management, credit accounting, record keeping, credit checking, etc. The bank credit card method works when a sale is made on credit and the merchant deposits his bank-card credit slips
in his bank. The bank then credits the merchant's demand deposit account for the amount presented less a discount fee. This is a kind of instant cash for the merchant and represents none of the traditional costs to the merchant. Actually, the traditional costs are not gone, they have just been transferred to the bank. However, the bank has several advantages since they issue the credit card to consumers and they collect from consumers. The problem for banks is: Is the fee collected from merchants enough to cover the cost, to the bank, of the receivable loan to the merchant since the bank has a delay in collecting from the consumer? When the merchant's credit receivables are converted into cash by the bank credit-card feature, the immediate cash available, less the discount, is not unlike a free short-term loan by the bank (when compared to previous receivable collection procedures) because the bank must use its own capital if the merchant withdraws his cash balance prior to the bank collecting from the consumer. This is called free period cost and is handled in two different ways by banks.

**Costing Procedures**

In actual practice there are two basic approaches to costing for bank credit-card operations. Both methods use a cost center approach for the credit-card center. One uses a pooled cost approach that doesn't consider opportunity cost but only actual costs. This system has arrived at a cost of 4.59 per cent. (In 1970 the cost of money in credit-card operations averaged 4.59 per cent according to statistics compiled from 79 banks responding to a Charge Account
Bankers Association survey.) The other method uses a more itemized costing approach that considers opportunity cost and actual costs. This system has determined the cost to be 4.25 per cent. There are many common procedures in the two major credit-card operations, and each will be discussed, the first being the pooled cost operation.

Pooled Cost Operation

The pooled cost operation utilizes a franchise system for its credit-card operation. There is an initial franchise cost and a participation fee. There are three sources of income for the bank. In a mature operation a bank should earn from .625 to 1.165 per cent per month from the service charges outstanding. This represents about 75 per cent of the gross income per month. Merchant discounts represent another source of income, and earnings on merchant and consumer deposits are the final source of income. 59

The service charge, as discussed above, ranges from five-sixths of 1 per cent to 1 1/2 per cent per month on the balance outstanding. A merchant pays from 1 to 3 per cent depending upon the monthly ticket volume and average draft size. An example of the different merchant costings is as follows: An $8 gas ticket costs the same to process as a $100 airlines ticket; however, the dollar yield on the airlines ticket at 1 per cent is much greater than the dollar yield of the gas ticket at 3 per cent. The calculations are shown below. The result is that the airlines ticket pays for its processing

59 Personal confidential letter from a major bank's Senior Vice President.
cost, and a larger per transaction yield is realized. The gas ticket
does not have a per transaction yield as high as the airlines ticket.
The cost that is the basis of comparison is about 4.59 cents on each
transaction. Since a dollar transaction has the same cost as a $100
transaction, the costs covered are greater the larger the dollar
amount.

Gas ticket at $8 x 0.03 per cent = $0.24
Net Yield = $0.24 - $0.046 = $0.194

Airlines ticket at $100 x 0.01 per cent = $1.00
Net Yield = $1.00 - $0.046 = $0.954

The bank cost of money, adjusted quarterly, was used for computing
the costs of money and is applied as a standard for the banks' cost
centers. The bank cost factors used to figure a cost base are shown in Table 6. This cost base is then adjusted quarterly by the
average Federal Reserve fund rate. The total adjusted figure is an
adjusted sum of the average cost of money for the bank plus the
Federal Reserve fund rate adjustment which, for February, was between 3.46 and 4.14 per cent. 60

Opportunity cost is not considered in the cost accounting.
The reason was that to consider X dollars on hand in loanable funds
employed at the best rate Y is "unrealistic because it has the effect,
particularly in a period of rising interest rates, of indicating that every... department is a loser. Yet the operation as a whole is
making a substantial profit."61


61 Personal confidential letter from a major bank's Senior Vice President.
Under the pooled cost concept the free period cost of funds is not considered for a mature operation. This is because the three sources of income are considered collectively and the total income less all operation expenses is considered net income. During the start-up period the free period cost was a major factor since money was given out and little was paid in. In order to finance the free period cost the merchant and consumer deposits were "bankrolled" and were a significant source of funds.

The net return goal on funds employed is between 2 to 4 per cent, but the majority of banks involved in credit-card operations have not yet reached this level of profitability. The lack of profitability is compensated for by the additional collateral benefits explained later in this chapter.

**Itemized Cost Operation**

This system utilizes an association of sponsor and agent banks. A sponsor bank is responsible to the regional association and is responsible for its regional agent banks. An agent bank has a fixed fee payable to the regional association through the sponsor bank. This fee, for one region, is 2.79 per cent of the retail sales volume processed through the agent bank. A sponsoring bank also has this cost, since it is a member of the association. The sponsor bank is responsible for all agent bank credit-card expenses, such as funding outstanding credit, processing accounts, collecting, and

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62 Ibid.  
63 Ibid.  
64 Ibid.
customer services.

The sponsoring bank itemizes and reports all direct and indirect expenses to its agent banks. The expenses listed in Appendixes A and B are what a sponsoring bank reports to an agent bank for expensing its credit card operations. The sponsoring bank has an average cost of 4.25 per cent,\(^{65}\) which varies as the Federal Reserve fund rate moves up and down. The cost is figured as in Table 6 and is adjusted monthly for the cost center.

An agent bank is at liberty to sign on a merchant at any discount rate, but the agent bank must guarantee at least 2.79 per cent to the association. There is a very significant competitive factor in negotiating merchant discounts, and the average rate charged small stores varies between 3 to 5 per cent. Major stores have signed contracts that are at a zero discount rate.\(^{66}\) When a bank signs a contract at a discount rate less than its basic association cost, it considers the collateral benefits from merchants and consumers to be enough to compensate for the loss.

Agent bank income is considered to accrue from several sources: The merchant discount, the consumer service charge (for sponsoring banks only), earnings on merchant and consumer deposits, and a free period cost income (for sponsoring banks). This latter return is complex to compute and is based upon the cost of money computations (Table 6) adjusted by the Federal Reserve Fund rate, being less than the actual 2.79 per cent association costs. Although

\(^{65}\)Ibid. \(^{66}\)Ibid.
one factor in the cost of money is built into the 2.79 per cent figure (which is based upon one-half of the previous month's average weekly Federal Reserve fund rate), the 2.79 per cent is considered to be the cost of 25 days of free period money. When this cost is actually greater than the internal cost of funds for the bank for the same period, the result is an income for the credit-card center. This may not necessarily be the case for every sponsoring bank. Agent banks do not have this income.

The expected return on funds employed during 1971 is less than 1 per cent. This rate is expected to grow to 5 to 6 percent in future years. The low yield is attributed to (1) a high Federal Reserve fund rate (cost of money), (2) operating deficits for the first 18 months of operation, (3) implementation deficits which were originally to be recovered in 5 years but now may be recovered in more than 5 years.

Opportunity cost is considered since the 2.79 per cent cost is added to actual costs of internal funds to arrive at the total cost of money of 4.25 per cent. (The 2.79 per cent cost includes items averaged in Table 6 plus a cost of money adjustment. These costs are attributable to a sponsor bank and not an agent bank.)

Cost Analysis

Cost analyses by bank size and by department are made, to provide a means of comparison for credit card operations and traditional bank functional costs. The net yields on available funds from each of

67 Ibid. 68 Ibid.
the major functions of a bank are itemized in Table 7. Net yields, after cost of money, ranged from 2.30 per cent to 3.52 per cent for each of the six major bank functions. Demand deposits earned from 2.88 per cent to 3.21 per cent before taxes, and time deposits earned from 5.52 to 5.91 per cent before taxes and interest, and from 1.18 to 1.29 per cent after taxes. The two important figures are earnings on available funds of 2.07 to 2.29 per cent, and earnings on net capital funds, after taxes, of 0.95 to 1.78 per cent. These figures show that banks are not overly efficient. The profit figures range from 10.96 per cent to 11.51 per cent after taxes as shown in Table 8.

Table 8
Capital Earning Ratios by Bank Size

<table>
<thead>
<tr>
<th>Deposits up to $50 million (per cent)</th>
<th>Deposits from $50 to $200 million (per cent)</th>
<th>Deposits over $200 million (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings on Capital Funds (Return to Stockholders)</td>
<td>Average Capital Funds</td>
<td>$2,064,111</td>
</tr>
<tr>
<td>Total before taxes</td>
<td>23.74%</td>
<td>24.12%</td>
</tr>
<tr>
<td>Total after taxes</td>
<td>11.51%</td>
<td>11.42%</td>
</tr>
</tbody>
</table>


In addition there are other services provided by banks that do not cover the cost of providing them for customers. The department losses (Table 9) for computer services, trust services and safe deposit box
services averaged between $16,964 (48.6 per cent loss) to $249,059 (10.1 per cent loss). These loss figures show that banks consider the benefits gained by providing the services are greater than the revenue that is forgone by increasing the price of the services. The return to stockholders is another measure of bank profitability and in spite of the low return on available funds and losses in many departments, banks have returned, after taxes, between 10.96 and 11.51 per cent to stockholders (Table 8).

Table 9
Earnings on Services by Bank Size

<table>
<thead>
<tr>
<th>Deposits up to $50 million (per cent)</th>
<th>Deposits from $50 to $200 million (per cent)</th>
<th>Deposits over $200 million (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Earnings from Computer Services</td>
<td>-12.51%</td>
<td>-13.27%</td>
</tr>
<tr>
<td>Net Earnings from Trust Department</td>
<td>-29.89%</td>
<td>-17.91%</td>
</tr>
<tr>
<td>Net Earnings from Safe Deposit Department</td>
<td>-63.02%</td>
<td>-65.49%</td>
</tr>
<tr>
<td>Total Services Income</td>
<td>$34,843</td>
<td>$298,909</td>
</tr>
<tr>
<td>Total Services Expenses</td>
<td>51,807</td>
<td>399,301</td>
</tr>
<tr>
<td>Total Net Earning on Services (Loss) ($16,964)</td>
<td>($100,392)</td>
<td>($ 249,059)</td>
</tr>
<tr>
<td>Total per cent Earnings (Loss)</td>
<td>(48.6%)</td>
<td>(33.6%)</td>
</tr>
</tbody>
</table>

The cost of money for credit card operations, which is from 2.79 to 4.59 per cent, is close to the net cost of money for all bank-available funds which range from 3.26 to 3.58 per cent (Table 6). Given the above cost comparisons and the fact that actual returns are less than 2 per cent of available funds for credit card operations and the actual return on all available funds is greater than 2 per cent, the credit card operations are returning a yield that is less than the average fund yield. Since the returns on credit card operations are not as high as the other bank operations, the bank benefits must be studied.

Bank Benefits

Although there are some common benefits for banks, bank benefits are nearly as numerous as there are banks, due to the differences in bank goals and emphasis on goals. Some bank functions are profit oriented; some are service oriented, but at a minimum profit; some are service oriented but at a zero profit (meet costs); some are service oriented, even if a loss is involved. (This is supported by Tables 6 and 7.) Positive bank benefits are:

1. The revolving credit feature is attractive because it provides an opportunity to handle a large number of recurring, small loans to consumers efficiently and at a profit.\(^1\)

2. New merchant accounts exposed to bank services.

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\(^1\)Survey results showed that a profit was made but it was less than desired, and growth in profits is anticipated. Source: Personal confidential letter from a major bank's Senior Vice President.
3. New consumer accounts exposed to bank services.

4. "Retention of loan business that would otherwise be
   sliding off to department stores."\(^72\)

5. Credit cards offer a natural monopoly to the bank initiat-
   ing a bank card plan, provided there are no other credit card plans in
effect. This benefit loses its effect after a short period of time
due to credit card offering by other, competing, banks.

6. Adoption of the credit card plan offers a bank not
   previously involved with a credit card plan a method for increasing
   its competition for merchant accounts.

7. Banking by mail is increased by the credit card plan.

8. Central urban banks can service suburban areas and thus
   compete with suburban banks.

9. Bank credit cards substitute for other credit card
   plans.\(^73\)

10. Banks can finance merchant accounts receivable and the
    merchant discount can be varied depending upon the type of competing
    cards involved, the elasticity of demand for the merchant's products,
    and the social pressure involved.

11. The state of the art is enhanced and the banking industry
    expands using the advantages of the latest technology.

12. Banks do not initiate product demand. Merchants provide
    product demand and banks provide a means of exchange.

   Negative benefits for banks vary, depending upon the bank, the

\(^72\)Ibid. \(^73\)Brimmer, "Bank Credit Cards," pp. 3, 20.
merchant acceptance of the plan, the amount of loans outstanding versus the credit line balance available through the bank and the stage of growth of the plan. Some negative benefits are:

1. Banks must compete with specialized consumer credit institutions.

2. Many consumer credit purchases are greater than the card limitations determined at the time of initial credit extension.

3. Other institutions are situated or organized in a way that allows acceptance of different risk levels and different risk spreads.

4. Little or no control over the amount of the total credit line used.

5. High initial start-up costs.

6. Bad public image from
   a. Theft of cards.
   b. Banks trying to collect the fifty-dollar liability minimum from a customer who lost his card and had unauthorized purchases on it.
   c. Mass mailing of cards.
   d. High delinquency rate on card payments.
   e. Credits and payments posted or not posted by computer equipment.

The expectation of positive benefits must be greater than of negative benefits in order for banks to look favorably upon the credit card service. The bank card benefits offered to consumers and merchants as discussed in chapters IV and V must also be positive.
The net result is that the working plan must have returns and positive benefits greater than the costs and the negative benefits.
CHAPTER VII

CONCLUSIONS

Bank credit cards are an established means of exchange. The costs of the bank credit card system are primarily borne by consumers who utilize the time payment feature of the cards. Additional support, though small, comes from merchant fees and bank interest return on deposits. There are, in view of the low return on available funds invested in the credit card service, two significant factors of operation. First, the majority of banks have greater hopes of larger capital return than they can actually produce. This is a matter of efficiency within the service center which needs to reduce operating costs, increase the number of card users among cardholders, increase the amount outstanding without increasing the risk of loss, reduce the delinquency ratio and reduce the expected amount of return on invested capital. Second, and more important, is the need to review the benefits to the banking system of a cash versus a credit system and to recognize that there is an evolving process where banks, through computer automation, are able to support a new means of exchange.

Under a cash system of exchange money has value of its own because of the time lag in transfer. Under a credit system there is no time lag needed when the system is completed. Banks are in the beginning stages of a new exchange system and, as such, the innovation costs
must be borne by the innovator until there is enough public support to fund complete adaptation of the new system.

When there is a shift from a cash to a credit system there are many changes involved and besides the obvious change in the means of exchange there are significant changes in the benefits received. Under a credit system the consumer has many benefits and pays the major part of the cost. However, it is the merchant who has the greatest change in benefits and the smallest part of the cost. There are three benefits received that are not paid for by merchants: The quicker turnover of cash, the reduction or elimination of receivable costs, and the reemphasis of their prime job, merchandizing. These benefits are much greater than the price paid by merchants, which means that under a complete credit system there is a need to align the price paid to the value of the benefits received.

Merchants are induced to adopt the bank credit card feature now, for very low discount fees. This practice is necessary in initial stages of credit system growth to give a return to the parties who expect a return as a necessary adjunct of doing credit business. It is public opinion that must sway the merchant into accepting a larger share of the credit card cost. The merchants' discount fee must increase and the consumer fee decrease in order to balance the cost versus benefit dilemma.

The current stage of bank credit card growth is a financial problem but there is more to come, and growth is not as important as the next stages of a new, improved system of exchange.
## APPENDIX A

### AGENT BANK

#### DIRECT EXPENSE BREAKDOWN

<table>
<thead>
<tr>
<th>Agent Name</th>
<th># of Cardholders</th>
<th>Date</th>
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<tbody>
<tr>
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#### DIRECT

<table>
<thead>
<tr>
<th>Expense Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
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<tr>
<td>Stationery, Forms and Supplies</td>
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<table>
<thead>
<tr>
<th>Statement Mailed</th>
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<tr>
<td>Plastics Embossed</td>
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<td>Association Assessments</td>
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<td>Losses</td>
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<table>
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<td>Telephone</td>
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<td>Travel and Entertainment</td>
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<td>Credit Reports</td>
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<td>Credit &amp; Collection Expense</td>
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<table>
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<tr>
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**TOTAL DIRECT**

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<thead>
<tr>
<th>Amount</th>
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# APPENDIX B

## AGENT BANK

### INDIRECT EXPENSE BREAKDOWN

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<tr>
<td># of Cardholders</td>
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<tr>
<td>Date</td>
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<tr>
<td>INDIRECT</td>
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<td>Personnel</td>
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<td>Dues &amp; Subscriptions</td>
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<td>Service Contracts</td>
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<td>Telephone</td>
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TOTAL INDIRECT

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BIBLIOGRAPHY

"Are Bank Credit Cards Really Inflationary?" Business Week, December 20, 1969, p. 77.

Bailey, Thomas L. "The Unique Role of the Bank Card Association." Banking, October, 1970, p. 34.


Bogie, William P. "What's in the Cards for Credit Men?" Banking, October, 1970, p. 29.


Nadler, Paul S. "Evolving Implications of the Credit Card." Banking, October, 1970, p. 34.


