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Bank credit cards: Effect of purchasing habits on bank profit

Gary Edward Whitman
The University of Montana

BANK CREDIT CARDS: EFFECT OF PURCHASING HABITS ON BANK PROFIT

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Gary Edward Whitman

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Approved by:

Lawrence P. Douglas
Chairman, Board of Examiners

John M. Stewart
Dean, Graduate School

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CHAPTER I

INTRODUCTION

In general, credit is the power to obtain goods and services in exchange for a promise to render a future equivalent. This power resides in the prospective buyer or borrower, and is based upon his character, capital and capacity, and is influenced by business conditions. When it is stated that the creditor grants credit, it means that he grants the credit privilege; he grants to the customer the right to make use of his (the customer's) credit.[1]

Credit of various forms is very prevalent today. For example, the federal government and private industries use credit by borrowing money, usually by means of selling their bonds or notes; farmers and small businessmen borrow and buy on credit. Individuals use consumer credit to obtain goods and services.

Consumer credit, a function of marketing that facilitates consumer buying, has played an important role in the expansion of the economy since World War II. Total consumer credit outstanding at the end of 1945 was about $5,665 million, and as of January 1, 1970, $122,469 million, or an average annual increase of 13.8 percent.[2]

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[1]Clyde Williams Phelps, Retail Credit Fundamentals (St. Louis, Missouri: National Retail Credit Associations, 1952), p. 5.

[2]U. S. Bureau of the Census, Statistical Abstract of the United States: 1969 (90th edition; Washington, D. C.: Government Printing Office, 1969), p. 460; U. S. Bureau of the Census, Statistical Abstract of the United States: 1970 (91st edition; Washington, D. C.: Government Printing Office, 1970), p. 451.

The field of consumer credit includes all credit extensions for personal use. It includes personal loans granted to consumers by commercial banks and small loan companies, credit granted by merchants and sales finance companies on installment sales contracts, and the credit provided by other financial institutions. In addition, consumer credit includes the outstanding debt on charge accounts and more recently on credit cards.[3] The commercial bank credit card, a type of consumer credit, is this study's concern.

History of Credit Card Development

In the early part of the twentieth century a few hotels began to issue credit cards to their regular patrons, and as early as 1914 large department stores and gasoline station chains were issuing cards.[4] Then in the late thirties, American Telephone and Telegraph pioneered the "Bell System Credit Card"; and shortly thereafter, both the railroads and airlines came out with their own credit card plans to solicit travelers.[5]

Before 1950, most credit cards in circulation were sales promotion devices for a particular card-issuing organization. In 1950, however, the credit card expanded from its limited role of providing

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[3]H. Lee Mathews, and John W. Slocum, Jr., Marketing Strategies in the Commercial Bank Credit Card Field (Chicago: Bank Public Relations and Marketing Association, 1968), p. 1.

[4]Board of Governors, Federal Reserve System, Bank Credit Card and Check-Credit Plans (Washington, D. C.: Publications Services, Division of Administrative Services, Federal Reserve System, July, 1968), p. 7.

[5]Mathews and Slocum, Marketing Strategies in the Commercial Bank Credit Card Field, p. 1.

service for a particular organization and became a business. The multipurpose card that could be used nationwide and at most types of retail outlets emerged.[6]

The commercial bank multipurpose credit card was introduced in 1951 by the Franklin National Bank in Franklin Square, New York. In the next three years almost one hundred banks--primarily small ones--entered the credit card field. However, about half of them discontinued the service in a short time because the expected profits were not realized. Little growth occurred in the bank credit card industry until 1958, when the Bank of America introduced its plan. Several other large banks followed quickly, and by the end of 1959 more than forty banks had entered the field.[7] By 1969 numerous banks and bank affiliated associations were issuing credit cards. The two largest plans were Bank Americard and Master Charge; the latter is an inter-bank card association.[8]

The bank credit card industry has grown from nearly nil in the early 1950's to a total of 1.7 billion outstanding cards as of June 30, 1969. During this time period the most significant growth occurred in the late 1960's. The number outstanding January 1, 1968, was .8 billion and the number of cards outstanding more than doubled in the

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[6]Ibid.

[7]Board of Governors, Bank Credit Card and Check-Credit Plans, p. 7.

[8]Many banks throughout the United States have incorporated their credit card ventures, which enables an individual to use his card in more than one geographic location.

following one and one-half years.[9]

Procedures for card usage. The commercial bank credit card plan enables an individual to obtain a prearranged line of credit, limited in amount, available when the card is used. It is a substitute for cash to any merchant who belongs to that particular card plan. If an item is obtained with the credit card, the merchant then deposits that sales slip at the bank; the bank credits that merchant's demand deposit account. The bank bills the consumer with the option to repay within one billing cycle, usually thirty days at no additional cost, or to extend the payments--as an installment loan--over a longer period subject to a service charge.

Profitability of Bank Cards

As mentioned earlier, many banks entering the credit card field during the early 1950's discontinued their venture because of insufficient profits. Management's ability to make a credit card program lucrative is still a problem in the 1970's.

Credit card earnings consist of interest income and a merchant discount fee. In addition, earnings may be realized when new customers are attracted to the bank by the card service. Several factors can adversely affect these earnings. For example, requirements for additional equipment and personnel, losses from mass mailing of cards, and credit control reduces profits. A profit may not be realized if

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[9]U. S. Senate, Unsolicited Credit Cards, Hearings before the subcommittee on Financial Institutions of the Committee on Banking and Currency, 91st Congress, December 4, 1969, Table 3, p. 31.

merchant solicitation and card promotion are not effectively carried out. Also, competition from other types of credit plans such as those offered by retailers, oil companies, and other finance institutions can reduce earnings. As evidence of such problems, a national credit card conference was held October 25-28, 1970; the topics of discussion were consumer acceptance, credit card legislation, and fraud prevention.[10]

Elimination, or even reduction of these problems, depends on identifying and understanding who should possess the card, how they will use their card and their attitudes toward the purchasing of consumer goods. In other words, an important determinant of the profitability of credit cards is management's ability to determine and understand the target market.

If the target market for credit cards is well defined, marketing strategies can be developed to facilitate more effective and efficient channeling of the limited resources, capital and personnel. A sophisticated campaign to promote card usage and acceptance by both merchants and individuals is feasible with adequate knowledge about the market potential of consumer goods.

A major step in defining the market is determining the goods that people believe are acceptable to buy with a bank credit card. Attitudes toward acceptable articles to charge can be measured by looking at the items actually financed with the card. Such findings are indicative of those articles presently being obtained, and also of the

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[10]"Credit Cards Studied at New York Meeting," Commercial West Magazine, October 31, 1970, p. 14.

type of merchandise which logically could be charged but currently is not.

This information enables the firm to emphasize the favorable merchandise. Merchants who handle such items can be solicited and consumers informed that certain perceived needs can be satisfied by securing particular articles with a bank credit card. Furthermore, a bank can then find out why seemingly acceptable merchandise is not being charged.

A number of possible customer groupings by individual characteristics can be used in analyzing purchasing behaviors. One characteristic which will aid in the establishment of market strategies is the user's repayment pattern.

Purpose of the Study

Objectives of this study were: (1) to analyze the consumer behavior of bank credit card holders in Missoula County, Montana; and (2) to determine what types of purchases obtained with bank credit cards are most profitable for the bank.

More specifically, the study defined the relationship between profitability and consumer behavior by looking at: (1) repayment behavior, (2) usage rate, and (3) items purchased. The findings were used to discuss marketing strategies for bank credit cards.

Two major repayment patterns were installment and convenience. An active credit card holder's repayment pattern was determined by using the following definitions. Installment users were those account holders electing to pay a minimum amount and pay the interest charges

on the unpaid balance. The other repayment pattern is associated with those card holders who paid their balance off within one billing cycle; these customers use the card in lieu of cash as a convenient finance instrument and are identified as <u>convenience users</u>. Individual repayment patterns and other functions of consumer behavior were found to be affected by social class membership.

For example, W. Lloyd Warner reported that middle social class consumer behavior is significantly different from that of the lower social classes, and what each buys, and where each buys reflects different economic and symbolic values.[11] As evidence, Mathew's and Slocum's study on bank credit cards indicated that repayment patterns vary according to social class membership.[12] Members of the lower social classes used their credit cards primarily for installment financing, and the higher the social class the smaller the percent of individuals employing the card for installment financing.[13] It also appeared that consumers with the installment loan repayment patterns used their card more often and preferred to purchase consumer durable merchandise such as appliances, furniture, and clothing. While convenience users also had a favorable attitude toward consumer durables, this group felt that gasoline, restaurant expenses, entertainment,

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[11]W. Lloyd Warner, <u>Democracy in Jonesville</u> (New York: Harper and Brothers, 1949), quoted in H. Lee Mathews and John W. Slocum, <u>Marketing Strategies in the Commercial Bank Credit Card Field</u>, pp. 6-7.

[12]Mathews and Slocum, <u>Marketing Strategies in the Commercial Bank Credit Card Field</u>, pp. 17-29.

[13]Occupation and education determined social class membership.

groceries and hobbies were more acceptable goods to charge than did installment users.

It was beyond the scope of this study to determine which environmental factors affected the consumer behavior of a particular bank's credit card users. The effects that social class membership have on credit card usage are presented to give an example of the variables influencing consumer behavior and to justify the design of this study.

The remainder of this study: (1) analyzes consumer behavior of credit card holders; (2) relates that behavior to profitability of bank credit cards; and (3) presents some marketing implications of the findings.

Chapter two describes the types of data examined, design of the study, methodology, and problems this research poses in areas such as measurement and classification.

Chapter three is devoted to the analysis of consumer behavior patterns. Specifically, data on repayment behavior, card usage rate and items purchased are presented, plus two demographic characteristics of the card holders: average daily checking account balance, and sex.

Chapter four shows the effects of consumer purchasing habits on the profitability of bank credit cards. And finally, the marketing implications of these findings are presented.

CHAPTER II

RESEARCH METHODOLOGY

The universe for the study consisted of active commercial bank credit card holders of one local bank in Missoula, Montana.[14] A random sample of 318 active accounts was drawn from the records of this firm; from the accounts sampled 2,739 sales slips were examined.

Several factors should be noted about the sample. First, the bank credit card plan started operations in September, 1969; the data were obtained from the first ten months of operations, September 1, 1969-June 30, 1970. Secondly, because of the venture's short existence, consumers were apt to be unfamiliar with the card and therefore inclined not to use it. Thirdly, past experience by other banks indicates that bad debt charge-offs were higher during the first year of operations. This was probably because borrowers who lacked the power to repay their loans were issued cards. As a consequence, an unusually high number of delinquent accounts was experienced.[15] Finally, July and August were not included in the study; as a result, the seasonal purchasing habits for those two months were not examined.

Generally, as the credit card gains acceptance with merchants and with the public, types of merchants honoring the card plan and pattern

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[14]To qualify as an active card holder, the card must have been used at least once since it was issued.

[15]Board of Governors, Federal Reserve System, Bank Credit-Card and Check-Credit Plans, p. 31.

of card use by the public will change. Therefore, these findings may not compare with those of other studies, nor will they necessarily remain unchanged for any extended period of time.

For the purpose of this study, consumer behavior was made up of three parts: repayment patterns, usage rate, and items purchased. As discussed in the first chapter, repayment patterns were used as criteria for classifying consumers. This method of classification enabled the bank to determine the relationship between profitability and consumer behavior. Since extended repayment patterns (installment loans) were generally more profitable, repayment habits (willingness or ability to repay) can be used in isolating the relationship between earnings and consumer behavior. Relevant literature indicates that social class membership also significantly affects consumer purchasing behavior, but this factor lies beyond the scope of this study.

Variables Affecting Profitability

Assuming that there is relationship between a consumer's buying pattern and profit for a bank, the variables were classified as follows: Independent variable: consumer purchasing behavior consisting of (1) repayment patterns, (2) card usage rate, and (3) items purchased; dependent variable: profit. Chart I shows the relationship between the variables.

CHART I

RELATIONSHIP OF VARIABLES

Dependent Variable	Independent Variable
Profit	f(Consumer purchasing behavior)

Definition of repayment patterns. As mentioned previously, a card holder may use his card for two reasons--convenience or installment financing--and the consumer's buying habits significantly affect card usage. To analyze the card holder's buying behavior, it was necessary to define the terms, installment and convenience, in such a way that would enable one to draw some meaningful conclusions.

Installment users were divided into four categories. These four installment categories were: (1) card holders who had generated at least $30 of interest charges; (2) card holders who had been charged some interest but less than $30; (3) card holders who were "past due," that is, people who had not made a payment for 30 days, but were still less than 60 days past due; and (4) card holders who were in "arrears," those who had not made a payment for at least 60 days. The convenience users category consisted of those account holders who had not paid any interest charges from January 1, 1970 to June 30, 1970. (It should be noted that between September 1 and December 31, 1969, some interest was probably generated, but data pertaining to interest charges during this time were not available. Therefore, all accounts in the sample population were categorized by looking at their repayment patterns for six months, January 1, 1970 to June 30, 1970.)

The various categories were designed to avoid having one account fall into more than one category. Convenience users could not also be installment users because if a consumer had interest charges he would not qualify for the former category. Nor would it be possible for an account to be in either the "past due" or "arrears" category and in one of the other two installment groupings, the reason being if an

account as of June 30, 1970, was in one of the former groups, it was automatically barred from the latter.

With this repayment classification, comparison was possible not only among the categories, but also, each group could be compared to the total sample population (actual or estimated totals). Comparisons were made by weighting each category sampled as a proportion of all groups samples (total sample population). In most cases, a total population such as the total number of sales slips in a category was not known; therefore, an estimate had to be projected.

Examination of purchases. Information pertaining to the items a consumer purchased and his card usage rate was found by examining each sales slip for the following information: (1) who made the transaction (man or woman); (2) the dollar amount of the article; (3) the item acquired. The merchandise charged was determined either by the type of store (clothing, hardware, etc.) or the description of the article. These findings were then classified into one of 50 merchandise categories ranging from air transportation, men's apparel and accessories, wigs and transformations, to cash advances. The final assessment did not consist of a detailed analysis for all 50 categories, but instead only those types of purchases that seemed to be significant and/or most direct in affecting profitability.

It should be noted that the sales slips examined were for charges between September 1, 1969 to June 30, 1970. Admittedly, as previously mentioned, repayment groups were categorized by interest accumulated from January 1, 1970 to June 30, 1970; thus some charges examined for the first three months (September-December) by convenience users could

have generated interest, particularly cash advances. But in order to incorporate seasonal purchasing habits, articles acquired during these months had to be included.

Measuring Profitability

The following method was devised to determine the most lucrative types of purchases. On a per sales slip basis, the net earnings generated by each type of user in each merchandise category was determined, using the formula

$$E = I + D - C$$

where E = net earnings obtained per sales slip
I = interest income
D = merchant discount
C = variable expenses

Furthermore, each factor in the formula ($E = I + D - C$) was, in turn, based on a particular formula or method. The formula for determining interest income per sale (I) was

$$I = \frac{i_a \cdot d_m}{ss/n}$$

where I = average interest income per sales slip for a given merchandise category by type of installment user

i_a = average interest income per account each month by type of installment user

d_m = amount spent in each merchandise category as a percentage of total expenditures by type of installment user

ss = average number of sales slips per month for a given merchandise category

n = sample size of account holders in a particular installment category

The interest income formula evolved from the idea that it was determined by the dollar amount of credit card sales. Therefore, if the total interest earned per account and the total amount spent in each merchandise category were known during a certain time period, one could allocate interest income per account to each merchandise category ($i_a \cdot d_m$). And if the average number of sales per account in each merchandise category during that time period were known (ss/n), then interest earned per account divided by the number of sales per account would result in interest income per sales slip.

The merchant discount, factor (D), was equal to 3 percent of the purchase price per item, except for a cash advance. Cash advances obtainable only at a bank were, in this study, charged a fee of 4 percent (minimum $4.00, maximum $15.00). This fee covered interest expense for the first month.

The formula used for determining factor (C), cost:

$$C = H_c + B_e$$

where C = variable expense per sales slip
H_c = estimated handling costs per sales slip
B_e = bad debt expense per sales slip

Handling costs had to be estimated because the bank failed to keep the necessary detailed cost records such as computer processing expense. A method devised by an inter-bank association was used for estimating the variable expense. The formula was

$$H_c = d_a + f_c$$

where H_c = estimated handling cost per sales slip
d_a = 1 percent of the dollar amount of each purchase
f_c = an expense of 15 cents per sales slip

All accounts in arrears as of June 30, 1970, that were written off as bad debt expenses prior to November 1, 1970, were used to determine the total bad debt expense. Bad debt expenses (B_e) were then allocated to each merchandise category.

Profitability was considered a function of consumer purchasing behavior. Convenience and installment users made up the active card holders population. Installment users were divided into the "at least $30," "less than $30," "past due," and "arrears" categories. Each purchase was classified into one of 50 merchandise categories ranging from air transportation, men's apparel and accessories, wigs and transformations, to cash advances.

CHAPTER III

CONSUMER PURCHASING BEHAVIOR

Consumer purchasing behavior of credit card holders was examined by concentrating on three areas: (1) repayment patterns, (2) card usage rate, and (3) items purchased. By examining these functions of consumer behavior and relating the findings to income accrued by the credit card venture, more effective marketing strategies can be developed.

Repayment Patterns

Basically, one's repayment behavior depends on his attitude toward savings and consumption. This attitude is affected by the ability to pay and by environmental factors, such as social class membership.

The total number of active credit card holders is presented in Table I. Card usage was quite equally divided among convenience users (50.3 percent) and installment users (49.7 percent). The data indicated that numerous individuals did not need the card as an installment financing device or were not willing to "over spend" in that period, thus they were convenience users. These people had the ability to defer gratification.

Approximately half of the users viewed the bank credit card as a source of funds to be used as a type of installment loan. In the economic sense, for these consumers to obtain goods and services immediately, it was worth the interest charged. Thus, the sum of the utilities gained could have included both that of the product and that of

TABLE I

ACTIVE CREDIT CARD HOLDERS BY REPAYMENT CATEGORY

Repayment Category	Total Number of Active Accounts	Percent of Total
Convenience	1,071[a]	50.3
Installment	1,058	49.7
Less than $30	774	36.4
At Least $30	85	4.0
Past Due	135	6.3
Arrears	64	3.0
Totals	2,129	100.0

[a] The total number of convenience users was determined by randomly sampling 15 of 63 pages containing inactive and active accounts. The mean number of convenience users on each page was 17; this average times 63 (the total number of pages) equals the total estimated number of convenience accounts (1,071).

using the product prior to the time when it could otherwise be obtained through a cash purchase. Therefore, credit cards created for some individuals an identifiable value which might be called "possession utility."[16] In reducing the gap between desired needs and the present ability to obtain them, some consumers were forced to use credit.

Among installment users a little over 73 percent used their card on a limited basis, while 8 percent used their card extensively for

[16]Robert Bartel, "Credit Management as a Marketing Function," Journal of Marketing, 28(3):60 (July, 1964).

installment loan financing. Within the delinquent accounts, the "past due" category represented almost 13 percent of all installment financing, and 6 percent were in the "arrears" category.

About 81 percent of the installment users (those in the "less than $30" and the "at least $30" categories) managed their money well enough to make at least a minimum payment. In contrast, presumable many of the remaining 19 percent bought more merchandise than they could pay for.

Checking account balances of card users. With respect to repayment behavior, an identifying characteristic was found in the form of the average daily checking account balance.[17] As Table II indicates, there seemed to be a direct relationship between the ability to pay cash and the amount of money in the individual's checking account.

TABLE II

AVERAGE DAILY CHECKING ACCOUNT BALANCE OF INDIVIDUALS WITHIN EACH REPAYMENT CATEGORY

Repayment Category	Average Daily Checking Account Balance (dollars)
Convenience	527.00
Installment	380.00
Less than $30	435.00
At Least $30	284.00
Past Due	246.00
Arrears	127.00

[17]The average daily checking account balance refers to the history of one's account while with this particular bank.

Convenience users had an average daily balance of $527.00 in their checking accounts; installment users had $380.00. Consumers using their card the most for installment financing and individuals failing to make their payments within one billing cycle on the average had, in descending order, the least amounts in their checking accounts.

It should be pointed out that the figure representing each repayment category was calculated by finding the mean checking account balance and, therefore, may be misleading. For example, the convenience users as a group had a mean checking account balance of $527.00; within this group almost 19 percent were comprised of balances less than $200. And individuals in the "at least $30" category, those most often using the card as an installment financing device, as a group had a mean checking account of $284.00; however, over 15 percent of their checking accounts contained at least $500.00.

Credit Card Usage Patterns

As a group, installment users--during a ten-month period--used their credit card more often and borrowed more funds than did convenience users (Table III). The former group accounted for 71 percent of all expenditures and over 54 percent of all purchases, while the latter type of user charged 29 percent of all expenditures and nearly 46 percent of the purchases. Installment users--excluding the "arrears" group because it contained all the bad debt expenses--accounted for nearly 65 percent of all funds and almost 48 percent of the total charges. These findings show that installment users, including or excluding the "arrears" category, accounted for the bulk of the dollar volume within the bank's credit card market.

TABLE III

CREDIT CARD USAGE DURING A TEN-MONTH PERIOD[a]

Repayment Category	Total Estimated Dollars Spent by Population	Percent of Total	Total Estimated Number of Purchases by Population	Percent of Total
Convenience	151,946	29.0	10,508	45.6
Installment	372,243	71.0	12,518	54.4
Less than $30	223,622	42.7	7,124	30.9
At least $30	78.313	14.9	2,356	10.2
Past due	37,831	7.2	1,553	6.8
Arrears	32,477	6.2	1,485	6.5
Total	524,189	100.0	28,026	100.0

[a] See Appendix A for computations.

Additional information regarding card usage is presented in Table IV. The average purchase by an installment user was $29.74 and with this bank's credit card he obtained an average of 1.18 articles a month. In comparison, each convenience user spent about $14.46 on every purchase and charged less than one item (.98) each month. These findings indicate that installment users bought only a few more items per month than convenience users, but their cost per item was significantly greater. Data of this kind support the idea that consumers with different repayment patterns also have different card usage behavior.

TABLE IV

AVERAGE CREDIT CARD USAGE RATE PER INDIVIDUAL

Repayment Category	Average Amount Spent on Each Purchase (dollars)	Average Number of Purchases Per Account Each Month
Convenience	14.46	.98
Installment	29.74	1.18
Less than $30	31.39	.92
At least $30	33.87	2.77
Past due	24.36	1.15
Arrears	21.87	2.32

In examining the installment categories from Table IV, it should be noted that individuals who generated the most interest within a six-month period (those in the "at least $30" category) also, on the average, bought more articles (2.77 per month) and paid larger amounts, almost $34, for each purchase. In contrast, although individuals in the "less than $30" group, on the average, bought items costing over $31, they used their card less than once a month. Finally, among the delinquent categories, especially the "arrears" category, consumers had charged quite extensively. Each "arrears" user charged about $22 per item and purchased about 2.32 items a month.

<u>Card usage patterns by sex</u>. Closely associated with the use of the bank credit card as a financing device is the role played by male and female in group or family decision making. Kenkel proposed that

in the United States men have more influence in actually "deciding" to buy and concluding the sale.[18] The female, in contrast, seemingly is more concerned with "suggesting" purchases. The proposition, if valid, indicates that the male will more likely decide what instrument will be used to finance a purchase.

In this study, whether a male or female financed an article with a bank credit card was determined by examining each sales slip. The signature on the sales slip was used as the criterion and it was assumed that whoever charged the article signed his or her name.

The findings in Table V suggest that the card was used mainly by men. On the average, males used their cards more often and charged more expensive items; they accounted for almost 72 percent of total expenditures.

It should be emphasized that from this information one can not deduce that males in general conclude more sales than do females, although such a behavior may be the case. The information seems to point out that there are more acceptable articles to charge by men, at least in this locale. It may be more convenient for men than for women to finance with a bank credit card.

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[18] William Kenkel, "Family Interaction in Decision-Making on Spending," in Household Decision-Making, ed. Nelson N. Foote (New York: New York University Press, 1961), pp. 140-164, quoted by Thomas S. Robertson, Consumer Behavior (Glenview, Illinois: Scott, Foresman and Company, 1970), p. 76.

TABLE V

CARD USAGE RATE BY SEX

Repayment Category	Percent of Total Purchases		Average Amount Spent on Each Purchase		Percent of Total Expenditures	
	Men	Women	Men	Women	Men	Women
Convenience	34.2	11.4	$15.19	$12.25	22.8	6.2
Installment	35.1	19.1	32.63	24.49	49.1	21.9
Less than $30	19.4	11.6	33.72	27.48	28.7	14.0
At least $30	6.5	3.7	38.52	24.10	11.0	3.9
Past due	5.0	1.7	24.10	25.10	5.3	1.9
Arrears	4.2	2.3	22.32	21.03	4.1	2.1
Overall Average	69.3	30.7	25.98	19.93	71.9	28.1

Product Purchasing Behavior

The items acquired with a credit card provide information about goods that consumers deem as acceptable to charge. Such knowledge improves marketing strategies designed to promote acceptable merchandise. Although consumer needs and attitudes change, knowledge of this type can act as a base point from which new trends in consumer behavior can be measured, thus keeping the marketing strategies flexible and in line with current customer purchasing habits.

In examining the product purchasing habits of consumers, all merchandise was divided into 50 categories; each of 21 categories had at least one percent of the total expenditure. These 21 groups made up

over 93 percent of all expenditures; within this group seven accounted for over 55 percent of the credit charges and 12 can be credited with over 76 percent of all dollars spent. Whereas a large variety of goods seemed to be acceptable to obtain with a credit card, the data indicated that there was a concentration of charges within a few categories. (See Appendix B for original data.)

In general, consumers seemed to feel that certain services, consumer durables, and some necessities such as money or drugs were acceptable charges to be made with a bank credit card.[19] They were apparently less apt to go into debt for merchandise considered by many as luxury items, such as jewelry (0.86 percent of the total expenditures) or items acquired at a florist shop (0.55 percent).

Interestingly enough, three types of merchandise--attire, automobile-associated items, and household goods--accounted for over 47 percent of the total expenditures. As Table VI shows, consumers used their cards to acquire basic necessities, largely consumer durable merchandise and related services. In addition, if cash advances (16.4 percent of the total consumer expenditures) were added to the above group, the sum would represent 64 percent of all expenditures by credit card during the period examined in this study.

Various banks have found that within the first year of credit card operations, an above-average amount was loaned out in the form of cash advances due to the inadequate screening of potentially high

[19]The category entitled "drugs" may be misleading because it includes all items that were purchased at drug stores.

TABLE VI

AMOUNT SPENT FOR SELECTED ITEMS AS A PERCENTAGE OF TOTAL EXPENDITURES

Merchandise Category	Percent
Attire	
Men's Apparel and Accessories	6.5
Women's Apparel and Accessories	3.8
Shoes and Shoe Repair	2.0
Subtotal	12.3
Automobile-Associated Items	
Automobile Dealers and Services	5.3
Automobile Services	1.2
Automobile Parts	1.6
Gasoline Service Stations	8.2
Tires and Tire Service	3.9
Subtotal	20.2
Household Goods	
Appliance Sales and Service	3.5
Building Material	3.9
Floor Covering	1.8
Hardware	1.2
Home Furniture	4.7
Subtotal	15.1
TOTAL	47.6

risk accounts. Furthermore, it seems reasonable to assume that new programs are usually characterized by little merchant participation and consumer awareness; as, a result, people may borrow money to obtain items that could have been directly charged at a store. In other words, after the abnormalities of the first year or so, cash advances may account for a smaller percent of the total credit card expenditures.

Product purchasing behavior by sex. Among items purchased by men and women only two of the 21 most "significant" categories had over one-half of the expenditures accounted for by females, those being women's apparel and accessories with almost 93 percent, and shoes and shoe repair with a little over 51 percent of the total (Table VII). Furthermore, women accounted for at least 32 percent of the total within only two major classifications--drugs (about 40 percent), men's apparel and accessories (over 32 percent). In the rest of the "significant" categories male expenditures dominated.

TABLE VII

PRODUCT PURCHASING BEHAVIOR BY SEX
AND MERCHANDISE CATEGORY

Merchandise Category	Proportion of Total Expenditures		
	Men	Women	Total
Women's Apparel and Accessories	7.1	92.9	100.0
Shoes and Shoe Repair	48.8	51.2	100.0
Drugs	60.1	39.9	100.0
Men's Apparel and Accessories	67.9	32.1	100.0

These findings imply that women used their credit cards for attire and household necessities. As previously discussed, men accounted for over 72 percent of the charges and made larger purchases than women. More specifically, men spent more money on items such as tires, sporting goods or building materials.

Purchasing habit variances within repayment classifications. As Table VIII shows, convenience and installment users purchase different items. Among convenience users, gasoline service stations, motels and hotels, and air transportation contained the largest amounts of their charges. On the other hand, installment users charged the largest amounts to acquire cash advances, men's apparel, and sporting goods.

TABLE VIII

CATEGORIES BY TYPE OF USER AS A PERCENT OF TOTAL EXPENDITURES BY THE POPULATION[a]

Merchandise Category	Convenience Users (percent)	Installment Users (percent)
Gasoline Service Stations	4.0	
Motels and Hotels	3.9	
Air Transportation	2.8	
Cash Advances		15.5
Men's Apparel and Accessories		5.1
Sporting Goods		4.7

[a]Merchandise categories containing the most charges.

This indicates that convenience users used their card while traveling more so than did installment users. Also, the data point out that the latter group had an apparent inability to save or lacked énough money to satisfy current needs: over 15 percent of all their charges were made for cash advances. The demand for additional money among installment users tends to support the findings that individuals in this category generally had less cash available in their checking accounts than did convenience users.

In addition, it should be emphasized that among the "significant" merchandise categories only three--motels and hotels, air transportation, and hardware--contained more expenditures by convenience than by installment users (Table IX).

TABLE IX

PRODUCT PURCHASING BEHAVIOR BY TYPE OF USER AND MERCHANDISE CATEGORY

Merchandise Category	Proportion of Total Expenditures	
	Convenience Users	Installment Users
Motels and Hotels	66.9	33.1
Air Transportation	58.7	41.3
Hardware	53.1	46.9

<u>Purchasing habit variations among installment users</u>. Cash advances not only accounted for the largest dollar amount of installment users' charges, but they also represented the most significant difference among installment users' product purchasing behavior. Over 31 percent

of the amount charged by consumers in the "arrears" category was for cash advances (Table X). In contrast, a little under 21 percent of all expenditures by "other installment" users was accounted for by cash advances.

TABLE X

CASH ADVANCES AS A PERCENT OF TOTAL EXPENDITURES BY TYPE OF USER

Repayment Category	Cash Advances (percent)
Arrears	31.2
Other Installment Users[a]	20.9
Less than $30	13.8
At least $30	5.7
Past due	1.4

[a] Weighted as a proportion of the total expenditures for the three categories.

While expenditures for cash advances varied among installment users, charges for consumer durable merchandise and related services were similar (Table XI). Both "arrears" users and the "other installment" users spent 13.7 percent on articles relating to attire. Consumers in "arrears" spent 18.5 percent of their total expenditures on automobile-associated items, while the three installment categories, as one group, spent 18.2 percent. A difference of 4.4 percentage points for various types of household goods, marked the largest difference between the two repayment classifications. The "arrears"

TABLE XI

AMOUNT SPENT FOR SELECTED ITEMS AS A PERCENTAGE OF TOTAL EXPENDITURES BY TYPE OF USER

Merchandise Category	Arrears	Other Installment Users[a]	Difference
Attire			
Men's Apparel and Accessories	6.5	7.2	+0.7
Women's Apparel and Accessories	4.5	3.6	-0.9
Shoes and Shoe Repair	2.7	2.9	+0.2
Subtotal	13.7	13.7	0.0
Automobile-Associated Items			
Automobile Dealers and Services	2.3	5.7	+3.4
Automobile Services	2.1	1.6	-0.5
Automobile Parts	0.8	1.3	+0.5
Gasoline Service Stations	11.0	5.5	-5.5
Tires and Tire Service	2.3	4.1	+1.8
Subtotal	18.5	18.2	-0.3
Household Goods			
Appliance Sales and Service	6.3	3.2	-3.1
Building Material	1.8	4.7	+2.9
Floor Covering	0.0	2.8	+2.8
Hardware	3.3	0.6	-2.7
Home Furniture	1.2	5.7	+4.5
Subtotal	12.6	17.0	+4.4
TOTAL	44.8	48.9	+4.1

[a] Other Installment Users: "At least $30," "less than $30," and "past due" categories.

category attributed 12.6 percent and the "other installment" users attributed 17.0 percent of all their charges to household goods.

Within these broad classifications of consumer durable goods, the "arrears" category charged about the same amount as the "other installment" users. The type of items purchased, however, differed within these classifications. Comparison among the installment users shows that individuals in arrears charged--as a percent of their total expenditures--over 5 percentage points more for articles at gasoline service stations and about 3 percentage points more for both appliances and hardware. "Other installment" users charged--as a percent of their total expenditures--over 4 percentage points more on home furniture and over 3 percentage points more on both building material and floor covering than individuals in arrears.

Clearly, then, preferences vary among installment users. Such preferences, in turn, affect the profit of this credit card plan, as will be shown later in this study. However, purchasing patterns may not be entirely descriptive of consumer attitudes. For instance, purchasing patterns are partially determined by considerations such as competitive credit plans, merchant willingness to promote card usage, availability of this particular bank service and consumer awareness. Nonetheless, these considerations do not necessarily affect one's attitude toward the use of the credit card.

As an illustration, necessities such as groceries or service received at hospitals may be financed with a credit card if the need or opportunity arises. However, these two merchandise categories combined represented only 0.20 percent of all expenditures. Specifically,

groceries were not charged because few grocery stores, if any, in this market area offered credit card services. The bank credit card was probably seldom used at hospitals because hospital insurance was available. Thus, consumer attitudes are not the only influence affecting purchasing habits of bank credit card users. In other words, findings relating consumer behavior to consumer attitudes should be approached cautiously and conclusions drawn only after careful consideration of variables not isolated in this paper.

<u>Summary</u>

In general, convenience and installment users purchased about one article each month; there were two exceptions: those with "at least $30" in interest charges and those in the "arrears" category, who purchased two or more items per month. Despite this similarity, installment users charged a larger amount per sales slip than did convenience users and, as a result, the former group accounted for over 71 percent of all expenditures.

Although the population in general charged a large variety of goods, expenditures were concentrated in the categories of cash advances, attire, automobile-associated items, household goods, drugs and sporting goods.

Convenience users charged a larger amount of their total expenditures for merchandise related to traveling--lodging, air transportation and items acquired at gasoline service stations. Installment users charged a larger amount of their total expenditures for cash advances.

The most obvious difference in purchasing behavior among installment users was the amount used for cash advances, items acquired at

gasoline service stations, and categories within the broad classification of household goods.

Finally, men used their credit cards more often and charged more expensive items than did women. Women accounted for more than half of the expenditures in only two "significant" merchandise categories--women's apparel and accessories, and shoes and shoe repair.

CHAPTER IV

PROFITABILITY OF BANK CREDIT CARDS

Bank credit cards may affect the profitability of a bank directly as well as indirectly. Profits are affected indirectly when, by offering additional customer services such as bank credit cards, new customers are attracted to the bank. For example, if a person is satisfied with the service on his bank credit card, he may come to the same bank for a loan or to use its deposit services. These indirect effects, though important, are very difficult to measure quantitatively and will not be examined in this study.

Credit card sales affect profitability directly in two ways. First, if the customer is an installment user, the bank charges interest on the unpaid balance ($1\frac{1}{2}$ percent per month). Secondly, the bank charges each merchant utilizing the bank credit card a discount fee; the fee is charged to compensate the bank for assuming the accounts receivable of the merchant. Monthly interest charges on installment purchases, together with the discount fee, comprise the gross earnings from credit card sales. Net earnings are derived by deducting variable expenses (handling charges plus bad debt expenses) from gross earnings. This means that the net earnings or the "profitability index" used here does not take into account fixed expenses--general overhead, administrative costs, and computer processing expenses. (Few banks keep the detailed cost records necessary to allocate fixed expenses to particular banking functions, such as credit cards.) Nonetheless, the

index still provides a basis for examining the effects of consumer purchasing habits on the profitability of bank credit cards.

The yield--interest earned per dollar of credit card sales--varied among the goods from a high of 5.84 percent for sporting goods, and bicycles and motor cycles, to a low of 3.65 percent for the miscellaneous group (Table XII). Overall, the average yield was 4.68 percent. Most of the difference in yields among these categories was caused by consumer purchasing patterns. Specifically, earnings were affected by aspects of consumer behavior--repayment patterns, card usage rate, and items purchased.

Repayment patterns affected earnings because a direct relation exists between the type of user charging an item and the interest earned on it. Categories containing a larger proportion of "other installment" users had a high yield; these users generated both interest charges and merchant discount fees without incurring bad debt expenses. Convenience users' behavior generated only the discount fee while the "arrears" user, although generating substantial interest income, accounted for all the bad debt expense.

The dollar amount charged--a measure of card usage--affected earnings. Generally, the larger the purchase the higher the earnings. This was because handling costs were on a sales slip basis. As an illustration, excluding interest earned (I) and bad debt expense (B_e), income per sales slip equaled the merchant discount (D) minus handling cost (H_c). Thus, income earned on a $100 purchase was $1.85, whereas a $10 purchase brought in a net amount of 5 cents. For this reason, the three categories with high yields all had purchases per sales slip above the average of $22.77.

TABLE XII

PROFITABILITY OF CREDIT CARD SALES BY MERCHANDISE CLASSIFICATION AND USER[a]

Merchandise Classification	Annual Yield[b]	Amount Spent as Percentages of the Total Expenditures: Other Installment Users	Amount Spent as Percentages of the Total Expenditures: Convenience and Arrears Users	Average Amount of Each Credit Card Sale (dollars)
Sporting Goods, Bicycles and Motor Cycles	5.84	77.7	22.3	46.63
Cash Advances	5.82	82.4	17.6	182.30
Household Goods[c]	5.34	72.8	27.2	47.45
Attire	4.96	68.5	31.5	21.13
Automobile-Associated Items	4.05	64.0	36.0	14.40
Gasoline Service Stations	1.67	43.5	56.5	7.54
All Other[d]	5.68	69.1	30.9	38.13
Travel-Related Items	3.72	35.3	64.7	24.89
Air Transportation	4.52	39.3	60.7	74.61
Hotels and Motels	3.06	32.0	68.0	16.10
Miscellaneous Categories[e]	3.65	58.4	41.6	14.65
OVERALL AVERAGE	4.68	64.8	35.2	22.77

[a] See Appendix C for original data.

[b] The yield was determined by dividing total credit card sales for the ten-month period into the net earnings. This result times 1.2 was the annual yield.

[c]Includes appliance sales and service, building material, floor covering, hardware, and home furniture.

[d]Includes automobile dealers and services, automobile services, automobile parts, and tires and tire service.

[e]Includes drugs, music stores, restaurants and "other" category.

Total expenditures on each type of merchandise provided a measure of consumer acceptance. The total of each category partially determined the average yield of the credit card venture as opposed to the yield of that particular merchandise category. Overall, the average yield was higher, if a merchandise category with a high yield had a large dollar amount of credit card sales. (For each merchandise category, the total dollar amount of credit card sales and the net earnings are shown in Appendix B.)

Although each behavior pattern affected earnings, one or two patterns often dominated the results. For example, the high yield on sporting goods, bicycles and motor cycles reflects the type of user. Most of these purchases were made by "other installment" users; the "arrears" group made virtually no expenditures for bicycles and motor cycles.[20]

In contrast, although cash advances contained both the highest proportion of "other installment" users and the largest charge per sales slip, the yield was offset by bad debt expenses.

The yield on household goods (5.34 percent) results from "other installment" users pushing the yield up by their expenditures for floor covering, home furniture and building material, plus the large amount per sales slip for these three goods. The offsetting factor was the charges by convenience and "arrears" users on hardware and appliances.

The near average yield on attire reflects, again, expenditures by "other installment" users, in this case, on men's apparel and accessories.

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[20]"Less than $30," "at least $30" were more profitable than the "past due" category.

The balancing factors were small amount per sale for shoes and shoe repair and women's apparel and accessories, plus a concentration of convenience and "arrears" users in the latter category.

The low yield on automobile-associated items reflects: (1) the total dollar amount of credit card sales at gasoline service stations (about 42 percent of this category's total sales); and (2) the low yield on purchases at gasoline service stations, which traces to the large proportion of convenience and "arrears" users and the small charge per item purchased. Excluding items purchased at gasoline service stations, expenditures by "other installment" users and the large charge per sale pushed the yield up on automobile services, automobile dealers and services, and tires and tire service. But expenditures by convenience and "arrears" users for automobile parts reduced the earnings.

In some cases, one behavior pattern conflicted with another. For example, in the case of travel-related items (yield of 3.72 percent), convenience users predominated and pushed the yield down. On the other hand, the relatively large charge per sales slip for air transportation pushed the yield up, only to be offset by the small charge per sales slip for hotels and motels. Thus, the amount charged per sale was high in the case of air transportation and low for hotels and motels. In both cases, however, interest income was low.

Occasionally, two unprofitable behavior patterns were dominant. As an illustration, the low yield for merchandise within the miscellaneous category was caused by the high proportion of convenience and "arrears" users and the small charge per sales slip.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS OF FINDINGS

The sample was drawn from the active credit card holders of a bank in Missoula, Montana. The findings may represent only the consumer purchasing patterns in this locale, so caution should be used when applying the marketing implications of this study elsewhere.

Installment users on the average made larger purchases than did convenience users and, as a result, the former group accounted for over 71 percent of all expenditures. (Using the mean to measure behavior patterns can be misleading. For example, one individual may charge a large dollar amount per sales slip, while another card user may charge only a small dollar amount per sales slip. The mean value would be the average of the two purchases, not the actual amount of each charge. In other words, the average does not reflect the distribution of the elements.)

Expenditures by the population were concentrated in the categories of cash advances, attire, automobile-associated items, household goods, drugs and sporting goods.

Convenience users charged a larger amount of their total expenditures for lodging, air transportation and items acquired at gasoline service stations. Installment users charged a larger amount of their total expenditures for cash advances. Cash advances were also the most obvious difference in purchasing behavior among installment users.

Men were responsible for nearly 72 percent of the dollar volume.

A discrepancy existed between this finding and a national campaign created by a Master Charge advertising agency. The message was skewed 55-45 toward women.

Repayment patterns affected earnings because merchandise categories containing a large proportion of expenditures by "other installment" users had a high yield. In contrast, the categories with predominantly expenditures by convenience and "arrears" users had a low yield. The reason was that "other installment" users generated both interest charges and merchant discount fees without incurring bad debt expenses. Convenience users' behavior generated only the discount fee while the "arrears" users, although generating substantial interest income, accounted for all the bad debt expense.

The dollar amount charged--a measure of card usage--affected earnings. Generally, the larger the purchase the higher the yield. This was because a fixed handling cost of 15 cents was attached to each sales slip regardless of its dollar amount.

Total expenditures on each type of merchandise--a measure of consumer acceptance--affected the average yield of the card venture, rather than the yield of a particular category. Overall, the average yield was higher, if a merchandise category with a high yield had a large dollar volume of credit card sales.

The effects of consumer behavior on bank credit card profitability are quite clear. A high yield reflects a predominance of "other installment" users and a high charge per sale. As a result, the marketing implications are twofold: goods with these characteristics and stores carrying these goods should be heavily promoted. To increase

profit the bank should first solicit merchants selling these items and with them strive for higher sales by making consumers, especially men, aware that such items can be charged with a bank credit card. Table XIII shows which stores should be heavily promoted.

TABLE XIII

SELECTED RETAIL STORES WHICH SHOULD RECEIVE HEAVY PROMOTION FOR HIGHER PROFITS

Type of Store	S.I.C. Code [a]
Sporting Goods and Bicycle Shops	5950
Motor Cycle Dealers	5599
Floor Covering Stores	5713
Furniture Stores	5712
Building Materials	5211
Radio, Television and Music Stores	5730
Automobile Repair Shops	7530
Tires, Batteries and Accessory Dealers	5531
Motor Vehicle Dealers (New and Used Cars) plus Repairs	5511
Men's and Boy's Clothing and Furnishing Stores	5611

[a] For detailed description of the types of merchandise carried in these stores, see the Standard Industrial Classification Manual, 1967, obtainable from the Office of Statistical Standards, Superintendent of Documents, U. S. Government Printing Office, Washington, D. C.

Of major concern, cash advances, obtained only at a bank, should also be encouraged because of their high yield.

Unfortunately, the findings of this study do not identify the card users. Their consumer behavior patterns can be more predictable and promotion techniques more effective if individual characteristics such as position in life cycle, social class membership, and level of income are known. It is recommended that additional research be done to obtain this information.

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APPENDICES

APPENDIX A

METHODS USED TO ESTIMATE TOTAL EXPENDITURES AND PURCHASES

To estimate the total expenditures for each repayment pattern, the average dollar amount of each purchase was multiplied by the estimated total number of purchases in that repayment category.

The total number of purchases was not known for each repayment pattern. To determine this all accounts (total population) or a sample of accounts (sample size n) were examined. The formulas were:

$$X_1 = S \cdot N \cdot M \quad \text{or} \quad X_2 = \frac{ss}{n} \cdot N$$

where X_1 = estimated total number of sales in a category using the first technique

X_2 = estimated total number of sales in a category using the second technique

ss = number of sales slips in the sample

n = number of accounts in the sample

S = number of purchases per month by a particular category's population

N = number of accounts in a particular category's population

M = number of months in the survey

(The first technique was used in determining the total for the "arrears" and the "at least $30" categories. The reason was because a few accounts in these two repayment categories made a very large number of purchases for one type of item. The results would be biased toward that particular type of item, if those accounts were in a sample that

covered all purchases during a ten-month period. A very large sample would have had to been taken to eliminate bias and still look at all purchases.)

Using the first technique, the total number of purchases in a category was estimated by taking the total number of sales slips attributed to a repayment pattern for one month times the number of months (10) in the survey. (To eliminate bias from changes in monthly purchasing habits, all accounts in a particular category's population were divided by 9, the number of billing cycles. This allowed an equal proportion of the accounts to be assigned to each month. In addition, within the "arrears" category, the number of items charged per account had to be examined for more than one month to obtain a large enough sample. A total of 118 "purchasing months" were looked at. The average number of "purchasing months" per account was 1.84 [118 ÷ 64 accounts]; this result divided into 651 [the number of purchases within the 118 "purchasing months"] was 353 charges per month by the "arrears" population. This figure times 10 months was 3,531--the estimated total number of purchases by these users.)

If the second technique was used, the total number of sales slips in a particular sample was divided by the sample size n, the results being the average number of sales slips per account. Then that average times the total number of accounts in the category was the estimated total number of purchases.

APPENDIX B

PERCENTAGE OF NET EARNINGS AND TOTAL CREDIT CARD SALES
BY MERCHANDISE CATEGORY

Merchandise Category	Percentage of Net Earnings	Percentage of Total Credit Card Sales (Consumer Expenditures)
Floor Covering	2.9	1.8
Bicycles and Motor Cycles	2.3	1.7
Automobile Service	1.7	1.2
Home Furniture	6.1	4.7
Automobile Dealers and Services	6.6	5.3
Cash Advances	20.4	16.4
Building Material	4.8	3.9
Music Stores	1.2	1.0
Tires and Tire Service	4.7	3.9
Men's Apparel and Accessories	7.9	6.5
Sporting Goods	7.1	5.9
Shoes and Shoe Repair	2.1	2.0
Air Transportation	4.6	4.8
Automobile Parts	1.5	1.6
Appliances and Services	3.3	3.5
Women's Apparel and Accessories	3.1	3.8
Other	6.3	7.8
Drugs	5.0	7.0
Restaurants	1.4	2.0
Hotels and Motels	3.8	5.8
Gasoline Service Stations	2.9	8.2
Hardware	0.3	1.2
OVERALL AVERAGE	4.6	4.5

APPENDIX C

PROFITABILITY OF CREDIT CARD SALES BY MERCHANDISE CATEGORY AND USER

Merchandise Category	Annual Yield[a]	Amount Spent as a Percentage of Total Expenditures: Other Installment Users	Amount Spent as a Percentage of Total Expenditures: Convenience and Arrears Users	Average Amount of Each Credit Card Sale (dollars)
Floor Covering	7.36	98.4	1.6	205.91
Bicycles and Motor Cycles	6.47	85.0	15.0	86.32
Automobile Service	6.45	85.3	14.7	39.24
Home Furniture	5.99	78.1	21.9	109.73
Automobile Dealers & Serv.	5.82	70.0	30.0	34.29
Cash Advances	5.82	82.4	17.6	182.30
Building Material	5.78	78.7	21.3	38.40
Music Stores	5.77	70.7	29.3	44.25
Tires & Tire Service	5.74	69.4	30.6	59.74
Men's Apparel & Accessories	5.67	72.6	27.4	27.15
Sporting Goods	5.67	75.7	24.3	41.20
Shoes & Shoe Repair	4.77	69.7	30.3	17.44
Air Transportation	4.52	39.3	60.7	74.61
Automobile Parts	4.44	53.2	46.8	24.99
Appliances & Services	4.42	40.0	60.0	40.98
Women's Apparel & Accessories	3.83	60.8	39.2	16.70
Other	3.80	55.4	44.6	17.42
Drugs	3.31	59.0	41.0	9.78
Restaurants	3.19	62.1	37.9	8.93
Hotels & Motels	3.06	32.0	68.0	16.10
Gasoline Service Stations	1.67	43.5	56.5	7.54
Hardware	1.16	30.0	70.0	14.76
OVERALL AVERAGE	4.68	64.8	35.2	22.77

[a] The yield was determined by dividing total credit card sales for the ten-month period into the net earnings. This result times 1.2 is the annual yield.