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The Bank-Charge-Account Plan and Retail Food Marketing

By Norman Townshend-Zellner

The widespread growth of bank (and other) charge-account plans implies a distinct possibility that retail food marketing, as well as the food producing, processing, and distributive sectors, indirectly, may become involved to a significant degree in a consumer credit operation. The purpose of this report is to explore the rather complex marketing implications posed by the injection of a combined credit mechanism and sales promotional device into the retailing of food. Special attention is devoted to the potential impact of the credit system on marketing costs and practices, retail prices and competition, and consumer demand. It is hoped that the analysis in this report, though primarily nonempirical in nature, may be useful (1) in furnishing insight into the currently developing "credit card" situation confronting retail outlets for agricultural products, and (2) in supplying an analytical basis that may assist interested research workers in further analysis and empirical studies. A brief case study of the bank-charge-account plan in one foodstore is included at the end of the article.

TOTAL CONSUMER CREDIT outstanding in the first 2 years of the 1950's increased from 10 percent of total disposable personal income to about 15 percent in the last 2 years of the decade. Paralleling this expansion was an intensive development of several types of consumer-credit systems—revolving credit, credit card, revolving check credit, and bank (or central) charge-account plans.¹ The bank-charge-account plan, now operated by about 110 banks in the United States, thus far has shown the greatest potential for affecting the marketing of agricultural products.

Although first initiated in 1950, the bank-charge plan did not catch on until the fall of 1958, when the Bank of America (California) and the Chase Manhattan Bank of New York entered into full-scale charge-account banking activities.² The

Bank of America in May 1960, reported³ that more than 300 foodstores—excluding meat markets and liquor stores—were using its charge-account plan. But so far, the Chase Manhattan Bank of New York and the American Bankers Association have reported no entry into the retail food field. This paper draws exclusively on the charge-account operations of the Bank of America.

More than 27,000 California retail stores, other businesses, and professional services participate in the Bank of America's charge-account plan. Foodstores thus constitute only about 1 percent of the total number participating. Approximately 2 million families hold⁴ the bank's credit cards, which, upon presentation, automatically provide charge-account facilities at any of the 27,000 member outlets denoted by a well-advertised charge-account plan insignia. The consumer pays

¹ For detailed review and analysis of the diverse credit systems, see Lelia Easson, "New Developments in Consumer Credit," *Journal of Home Economics*, 51 (10): 846-848. December 1959.

² *Ibid.*, p. 848.

³ "300 California Food Stores Feature Bank Credit Plan," *Supermarket News*, May 30, 1960.

⁴ No data are available as to the number of card users as contrasted with cardholders.

no fee for the card, either initially or at the time of use. He receives a monthly bill from the bank itemizing all purchases made with the card. If the bill is paid within 25 days of receipt, no bank charge is made. For any unpaid balance outstanding for more than 25 days following receipt of the bill, a fee of 1½ percent per month is charged. The consumer is required to repay a stipulated minimum amount each month.

Retail stores that join the plan pay an initial sign-up fee of \$25 per location, and for \$1 per month they receive an imprinter that records the credit sale. The merchant may deposit his charge-account slips to his account at the bank daily and receive immediate credit for the deposit, less a deduction for the bank's fee.

The fee charged the merchant by the bank varies with the average size of sale. The charge may vary from 6 percent for quarterly sales averaging from \$3.50 to \$4.99, to 3 percent for sales ranging from \$25 to \$34.99. The impact of the bank fee on retail store costs, prices, and profits is, of course, at the heart of the matter. The merchant initially pays the full 6 percent upon surrendering his sales drafts—in other words, he receives 94 percent of their face value. Following computation of his quarterly average sales, he receives, if eligible, a refund based on the actual size of average sales. If his sales averaged \$26, for example, he is entitled to a refund of 3 percent—50 percent of the original amount withheld. An additional volume refund of 1 cent per draft is paid on the first 24,000 sales drafts over the first thousand submitted per quarter. All sales drafts in excess of 25,000 receive a 2-cent volume refund. All billings, collections, and losses become the responsibility of the bank.

Impact on Consumer

The issuance of a bank credit card to the consumer is identical with the granting of a specified line of credit which may be used at any of the retail outlets participating in the bank-charge-account plan. In using the credit card, the consumer creates an outstanding debt to the bank and experiences either, or both, of two spending effects:

1. If the consumer uses the card to *maintain previous purchasing patterns*, a counterpart

cash balance will accumulate to the extent that credit is substituted for purchases previously made by cash. The counterpart of the debt created is thus an accumulation of spendable funds, and the consumer's net worth remains unchanged.

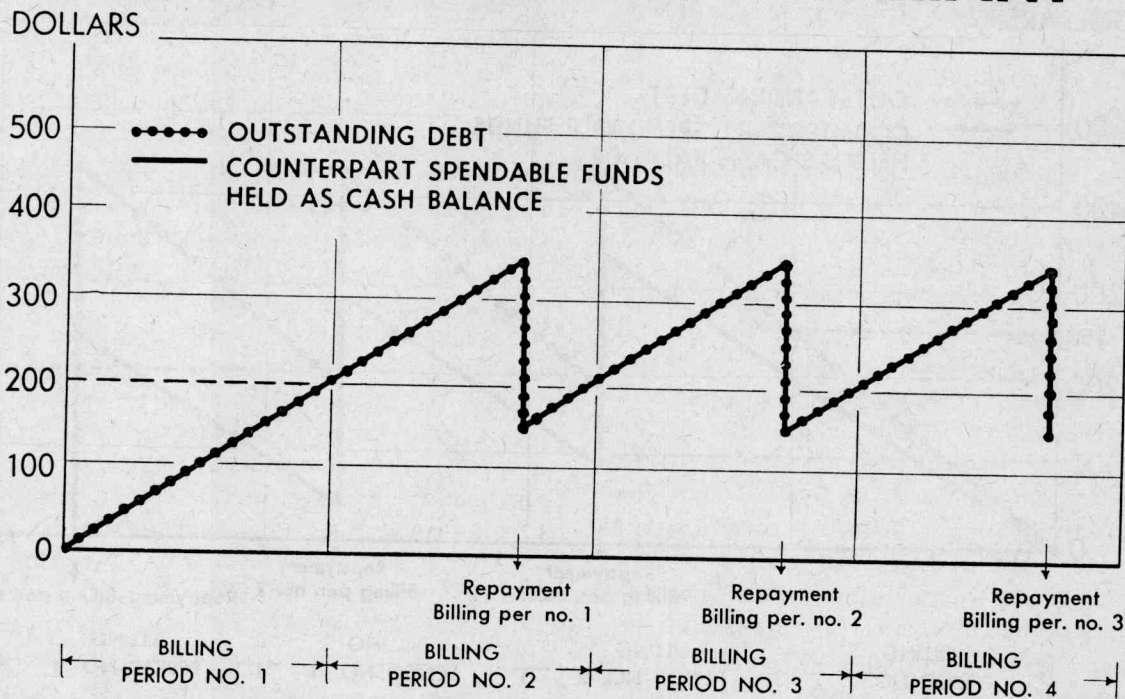
2. If the consumer uses the credit card to *upgrade previous purchasing patterns* (all else constant), the counterpart of the debt created is the actual spending of the additional funds provided by credit, accompanied by a corresponding decline in net worth.

In the discussion that follows these spending effects enable consumer credit-card use patterns to be analyzed into three basic variants. In practice, each use pattern ordinarily will consist of some combination of these variants.

The "unchanged purchasing—100 percent savings" variant.—In this variant, the consumer experiences the first spending effect by maintaining previous purchasing patterns and "saves" (does not spend) the accumulation of spendable funds. Consequently, in this variant, the credit card plays the role primarily of an accounting and convenience device, largely neutral in its impact on the pattern of consumer spending.

This variant facilitates consumer repayment of debt without incurring interest charges. In figure 1, for example, it is assumed that the consumer spends \$200 at a constant rate in each of the billing periods. By the end of the bank's first billing period, both the consumer's outstanding bank debt and counterpart spendable funds balance have risen to \$200. At the end of the billing period #1, the bank sends the consumer a bill in the amount of \$200, to be paid within 25 days of receipt. The consumer is also given the option of extending payment over a number of months by paying a minimum amount monthly, plus interest charges. Of course, any repayment method is consistent with the variant discussed in this section. However, if the spending pattern remains unchanged, it is rational behavior consistently to repay in full in time to avoid interest charges. Consequently, at the point designated in figure 1 as "Repayment: Billing Period No. 1" (not more than 25 days after billing date), the consumer repays the bank \$200. The lines designating "Outstanding debt" and "Counterpart spendable funds" fall accordingly, and then begin

"UNCHANGED PURCHASING— 100 PERCENT SAVINGS" VARIANT



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FIGURE 1

to rise again as the consumer continues the same pattern of credit-card use.

This variant of credit-card use, combined with repayment to avoid interest charges, bring about the following results:

1. The consumer gains all the usually cited objective and subjective advantages of the charge-account plan—convenience, no need for cash, once-a-month summary of all accounts, ability to buy large quantities of goods when desirable opportunities present themselves, fewer checks written per month, and so on.

2. The consumer experiences no decrease in net worth because of the debt created.

3. He gains the equivalent of an interest payment on the average counterpart spendable funds balance.

4. He experiences the impact on retail store prices of the bank's charge to the store for the credit service—see pages 91-101 for analysis of this impact.

5. By definition, the consumer's spending pattern has remained unchanged.

6. Nothing has occurred to limit his freedom to choose between credit-card retail outlets and non-credit-card outlets.

7. The consumer can "go off" the credit plan at any time without drawing on resources other than his counterpart spendable funds balance.

8. Economywise, an inflationary bias is created: (a) Potential spending power is increased (as consumers' spendable funds are increased); and (b) if spendable funds are held in checking or savings accounts, the monetary system's reserves are thereby increased, allowing a

Consumer Credit Card Use Pattern:

"UPGRADED PURCHASING—100 PERCENT SAVINGS" VARIANT

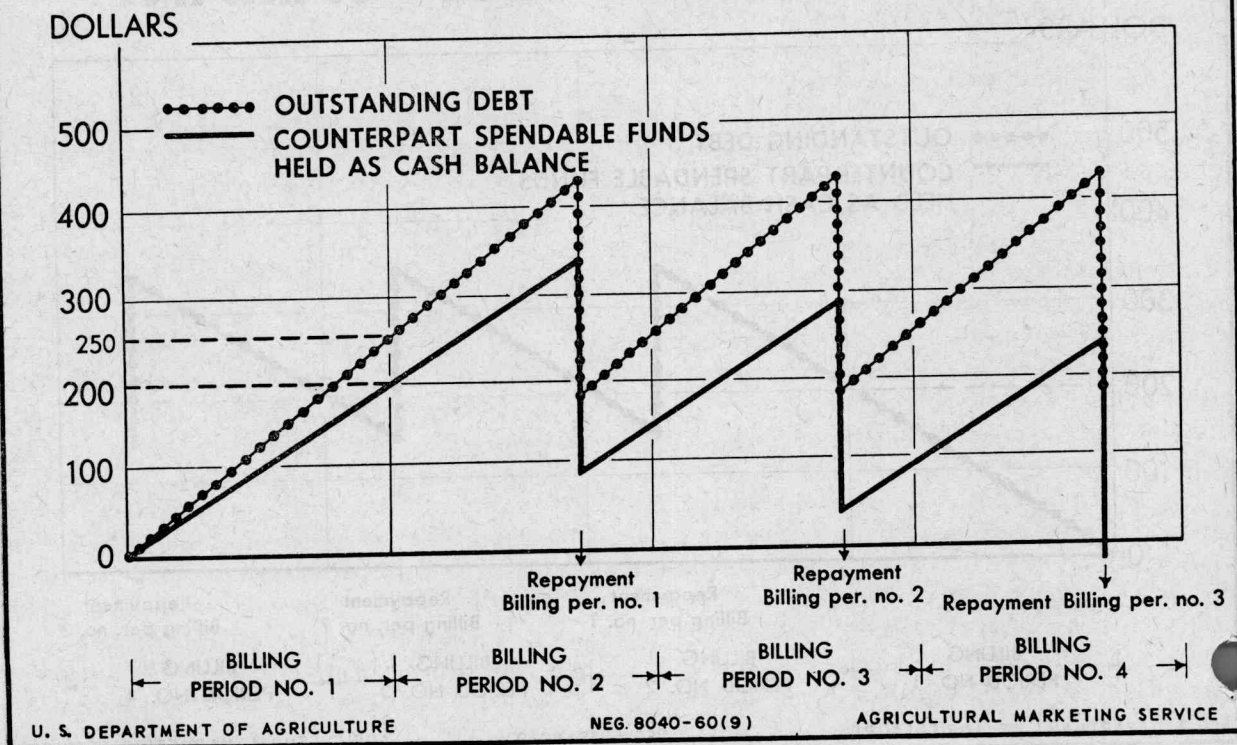


FIGURE 2

greater volume of bank credit relative to the volume of currency outstanding.⁵

"The upgraded purchasing—100 percent savings" variant.—In this variant, the consumer upgrades that portion of the previous purchasing pattern for which the card is used. Meanwhile, purchasing out of cash remains unchanged, and consequently the consumer spends for current consumption none of the counterpart spendable funds that accumulate as the credit card is used for purchases previously made on a cash basis. Given a fixed consumer income and limited financial resources, this variant of credit-card use

cannot be maintained continuously. Figure 2 is identical with figure 1, except that the consumer uses the credit card to upgrade by purchasing an additional \$50 worth of merchandise per month. By the end of the first billing period, an outstanding debt of \$250 has been created but, significantly, a counterpart spendable funds balance of only \$200 has accumulated, as only \$200 of the total spent by using the credit card has been substituted for cash previously spent.

Initially the consumer can pay the consistent monthly bill of \$250 by drawing down the counterpart spendable funds balance at the rate of \$50 per month. At this rate, as shown in figure 2, the spendable funds balance becomes deficient by repayment time for billing period #3. At this point, the consumer faces the inevitable situation brought about by the pattern (grossly exaggerated of course) of upgrading on credit-

⁵ Marcus, Edward, "The Impact of Credit Cards on Demand Deposit Utilization," *The Southern Economic Journal*, 26 (4) 314-316, April 1960. The inflationary impact discussed above abstracts from any potential "cost-price push" that may be generated by bank charges for the plan.

card purchases. The following choices present themselves:

First, the deficiency can be converted into a bank loan. This would occur automatically if the complete amount owed were not paid. Alternatively, the consumer could draw upon personal savings or other financial resources. But either solution would only temporarily postpone either the second or the third choice.

Second, the consumer could anticipate the deficiency and, in this case, reduce credit purchases by \$50 (to the level prior to upgrading) in the preceding billing period. This would mean overcoming the desire to spend beyond \$200 on credit card, and, crucially, the exercise of this restraint sufficiently in advance to avoid any deficit.

Third, the consumer could "make up" the \$50 deficit by forced—or at least unplanned—economizing in other items of the budget ordinarily purchased for cash. At the time for repayment of the bank bill, the \$50 deficit would be paid out of the consumer's cash on hand, thus leaving him "short" for later purchases ordinarily made on a cash basis. This choice comprises a technique whereby upgrading of purchases in the line offering credit is offset, so that the consumer can stay within the constraint of his total income, by economizing in lines where the expenditure is on a cash basis. It is significant to note that the preceding choice (reductions in credit purchases) must be planned and executed well in advance of the need to pay for such purchases, whereas the choice of economizing in cash lines occurs automatically—by default—as a result of a diminished amount of cash on hand relative to desired cash expenditures.

Results of this variant of credit-card use that differ from those cited for the first variant are:

1. The consumer's spending pattern initially can be upgraded in total for a very limited period, without a loan and interest charge but with a corresponding decline in net worth. Continuous upgrading on credit-card purchases, with or without a loan, is possible only by reducing expenditures in other lines.

2. If the consumer has upgraded total purchases and thereby substantially drawn down or exhausted his accumulated spendable funds balance, a tendency would be created to confine purchasing to credit-card outlets in order to set aside cash to meet the coming bank bill. It is difficult for the consumer to stop buying on

credit card within a short period, say a month, immediately subsequent to extended use of the card characterized by extensive upgrading. Such action would take drastic economizing or an outside source of funds in order to finance the double burden on current income of: (a) Paying for all current purchases out of cash; and (b) repaying the bill for the previous month's purchasing. Thus, a fundamental reason "tying" consumers to credit outlets (once they have drawn down their counterpart spendable funds balance by upgrading) is due to the fact that each credit purchase frees cash from current income to meet the oncoming bill. In this sense, credit outlets can expect repeat business from credit-card holders following the variant discussed in this section.

3. The proximate impact of this variant of credit-card use is inflationary. The increased credit extended by the bank to consumers is immediately reflected in increased demand for goods and services and increased money supply. In a community, the impact would be felt in the form of a major injection of spending as consumers, receiving their credit cards, began to upgrade purchases and increase their outstanding debt position. After complete introduction of the card in the community and extension of credit to the limit desired by consumers, the impact would be felt only in periods of contraction and expansion of credit by consumers in holiday seasons and the like, when incidentally, purchases could be increased to a greater degree not only because of the additional credit available, but because of its availability in lines formerly on a cash basis.

4. To the extent to which consumers convert their charge accounts to bank loans, the interest payments represent a change in the pattern of expenditures and must be offset by economizing in other lines. This results in the bank becoming an effective competitor (aside from any potential impact of the credit service on retail prices) for a share of the consumer's dollar.

"The unchanged purchasing—less than 100 percent savings" variant.—In this variant, the consumer uses his credit card, without upgrading, in an unchanged purchasing pattern. In figure 3, this is indicated by the outstanding debt of \$200 at the end of the first billing period. Crucially, however, the consumer chooses to upgrade by

"UNCHANGED PURCHASING-LESS-THAN-100 PERCENT SAVINGS" VARIANT

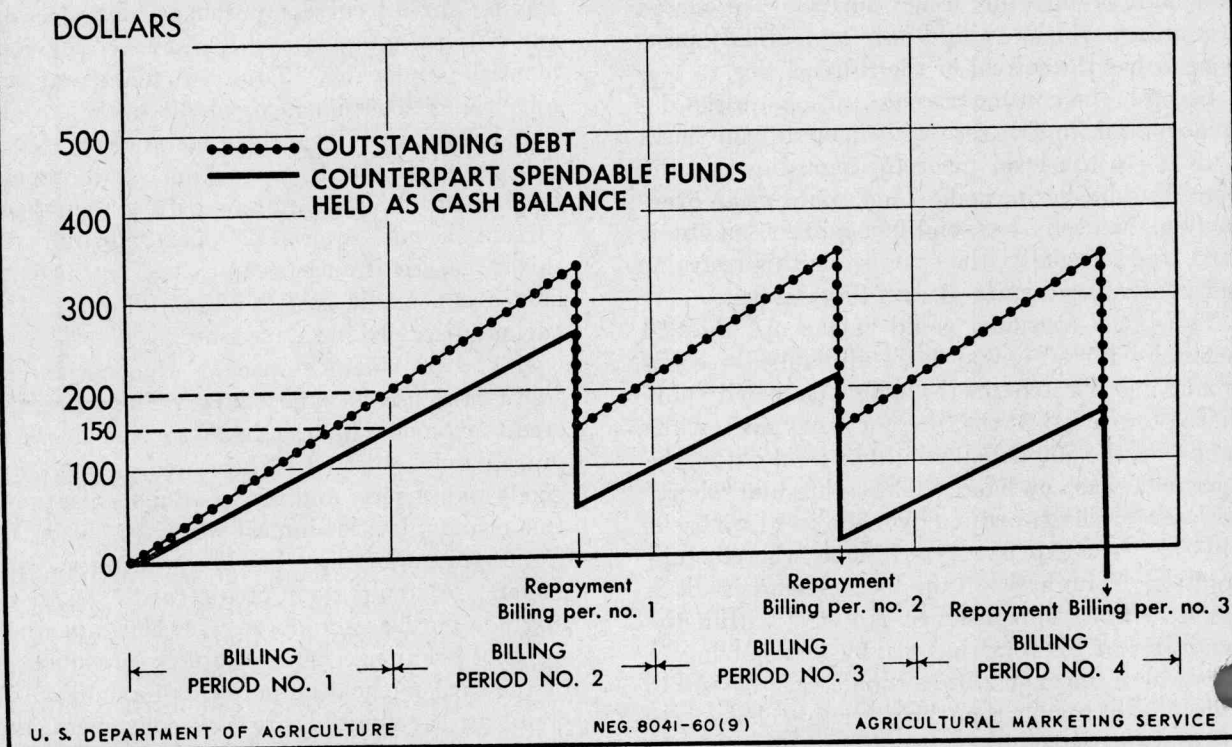


FIGURE 3

spending at least some of the accumulated spendable funds balance, rather than saving 100 percent. Instead of setting this cash aside to meet oncoming bank bills and incurring no increase in indebtedness, the consumer *spends the counterpart cash itself in lines and outlets not necessarily tied to the credit-card plan.* Thus, at the end of the first billing period (fig. 3) there is again a discrepancy between the net outstanding debt and the spendable funds balance on hand. In this variant, the consumer can continue temporarily to upgrade his non-credit-card purchases until the growing deficit forces him into the situation of deciding on one of the same set of choices analyzed in the preceding variant of credit-card use.

The results of the variant shown in figure 3 are identical with the preceding one (fig. 2), with a major exception: In this case (fig. 3) credit extended by the bank can be used to increase

expenditures at *any* outlet of the consumer's choice and in the form of any good or service, subject to the restriction that the consumer must use the credit card at member outlets in order to accumulate the spendable funds balance later to be spent for additional purchases in other lines and outlets. In short, under this variant the expenditures representing upgrading by consumers can "leak" out of member stores using the charge-account plan.

Influence on consumer choice of retail outlets.—The charge-account plan furnishes consumer credit-card holders with strong motives to use the member retail outlets offering credit. Such outlets have differentiated themselves significantly from competing outlets as the consumer can gain the presumed advantages of the plan only by shopping at member stores. As the preceding analysis shows, motives (apart from those typi-

cally cited as "advantages" of the plan) that influence consumers to shop at member credit stores may include: (1) The opportunity to upgrade; (2) the ability to obtain counterpart cash to spend in other (nonmember) stores or lines; and (3) the opportunity to accumulate cash to pay oncoming bank bills covering credit purchases in previous months. Impelled by these and other motives, some credit-card users might be willing to transfer their shopping to foodstores offering the charge-account plan. As will be seen in the following section, such transfers play a major role in the cost, price, profit, and competitive aspects of the charge-account plan for retail foodstores.

Impact on Retail Foodstores

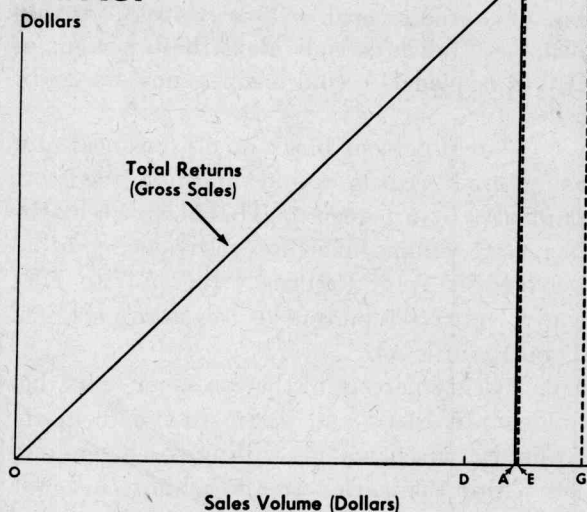
The impact of the bank-charge-account plan on sales volume, costs, competitive situation, and prices of member retail foodstores will vary markedly, depending upon whether the plan is in an initial or secondary stage of adoption. In any market area, the initial stage would be characterized by a relatively small percentage adoption of the plan by retail foodstores; the secondary stage would be distinguished by a substantial percentage of adoption. The two stages are interrelated in that the potential profitability of the plan in the initial stage can induce the competitive response that results in the more widespread adoption characteristic of the secondary stage.

The purpose of the various assumptions used in the subsequent analysis and examples is not so much to approximate actual conditions as to provide a technique of developing some general operating relations in the adoption and use of the charge-account plan by retail foodstores.

Sales and Total Revenue

Initial stage impact.—Possible sources of potentially increased sales and total revenues to the comparatively small percentage of firms that initially offer the plan in a given market area are: (1) New customers drawn from within the marketing area who have transferred their business from outlets not offering credit; (2) new customers drawn from contiguous, or even distant, market areas, for whom the attraction of using credit cards is sufficient to alter locational shopping preferences; (3) new transient customers—people "passing through" the area, and drawn to the store by display of the charge-account em-

TOTAL SALES OF CHARGE-ACCOUNT PLAN FOOD STORE: INITIAL STAGE IMPACT



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FIGURE 4

blem; (4) old customers who may upgrade their purchases by using the credit card.

Some combination of these categories is possible; for example, an old customer who previously bought about 40 percent of her purchases in the charge-account store, but after introduction of the plan switched to 90 percent. In this instance, the store would receive the impact of "new" business, plus any upgrading impact that may have occurred.

Figure 4 shows the impact of the initial stage in terms of a typical member foodstore. The diagram incorporates the following assumed conditions:

1. The store is initially at Sales Volume OA equal to Total Returns BA.
2. In the store's market area are six other competitive stores, all equal as to sales volume. In the initial stage, none of the competitors is assumed to have the plan, and thus the adoption rate is one-seventh, or 14 percent.
3. Twenty percent of the market area's consuming units (all equal in size and consumption) have bank credit cards.
4. Fifty percent of these consumers (10 percent of area total) desire to use the card for foodstore purchases if their accustomed outlet joins the plan—there is assumed to be a 50-per-

cent willingness rate of foodstore use for credit-card holders. Thus, the store in the charge-account plan could expect that approximately 10 percent of its old customers would begin to use the credit card. This "block" of old customers taken as equivalent to 10 percent of OA, is labeled DA (old business now on credit basis).

5. The 10-percent block of old business now using credit cards would upgrade foodstore purchases by 5 percent.⁶ This is shown by the increased volume of sales AE resulting in an increase in Total Returns (from AB to EF) equivalent to 0.5 percent of the store's original Total Returns AB.

6. Twenty percent of the consumer units that hold credit cards and desire to use them for foodstore purchases are willing to change outlets within the market area to achieve this goal. Thus, 2 percent of all consumers in the market area⁷—or 2 percent of all consumers in each outlet—would be willing to transfer. This implies that the store offering credit on the charge-account plan will attract 2 percent of the business of each of his six competitors. Since all are assumed to be equal in volume, the store would experience an increase in new business of 12 percent in sales volume, which, incorporating the assumed degree (5 percent) of upgrading would actually come to 12.6 percent. This is shown as EG. Thus, the store's final position is that of Total Returns GH, an increase of 13.1 percent over its initial Total Returns AB (by AE upgrading of old business, plus EG new business). On the alternative assumption of zero upgrading (all else constant) the store's increase in total revenue would be a still substantial 12 percent.

Secondary stage impact.—If, in the initial stage, member stores become increasingly successful in attracting customers from competitors, there

⁶ This assumption of upgrading is an arbitrary one. Empirical investigation would be required to establish the impact of credit purchasing on upgrading. Examples and analysis that follow are equally valid for an assumption of zero upgrading.

⁷ This is the product of 10 percent of all consumers in the market willing to use cards for food multiplied by 20 percent of this number willing to transfer between outlets.

would be generated an impelling motive for rival stores to adopt the charge-account plan to regain customers and restore their competitive standing. Thus, in the hypothetical secondary stage, where the charge-account plan achieves fairly widespread adoption in a market area, the distribution of customers could be expected to tend to revert substantially (but not entirely) to the old pattern. The availability of bank credit would no longer serve to differentiate a very small percentage of stores.

In this secondary stage the sharp increases in sales experienced by early (first stage) adopters of the plan would tend to be cut back as new entrants to the plan regained lost customers. If *all* competing outlets adopted the plan, and all had the same percentage of credit-card customers, then increased sales by each store would depend entirely on the possibility of increased spending because of upgrading associated with the use of credit cards.⁸

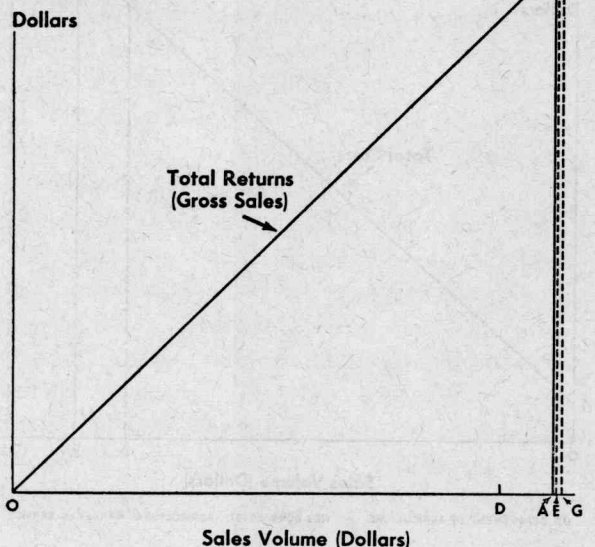
In figure 5 (Secondary Stage, Impact "A"), it is assumed that 4 of the store's 6 competitors have adopted the credit-card plan, a 71-percent adoption rate. This would imply no change in the 0.5-percent increase in Total Returns (AE) because of upgrading by old business done on credit card, but it would cut the 12.6 percent initial stage gain from new business (EG) to a gain of only 0.84 percent. The two stores not offering credit lose 2 percent each of total sales, which now must split up among five stores. This results in a gain per store of 0.8 percent which, plus 5 percent upgrading, equals 0.84 percent. Thus, in the secondary stage of adoption, the store's volume of additional business resulting from use of the plan would decline severely (from 13.1 to 1.3 percent) as newly attracted customers returned to their previous shopping habits at stores now offering credit.⁹

It would be more realistic to incorporate some other changes in the assumed conditions that could reasonably be expected to have occurred over the period of time during which the store-adoption rate of the plan changed from 14 to 71 percent.

⁸ This phase of the analysis abstracts from the impact on demand of any induced price increases.

⁹ Assuming zero upgrading, the decline would be from a 12-percent increase to a gain of only 0.8 percent.

TOTAL SALES OF CHARGE-ACCOUNT PLAN FOOD STORE: SECONDARY STAGE IMPACT "A"



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FIGURE 5

Figure 6 (Secondary Stage, Impact "B"), is therefore drawn for the same 71-percent adoption rate, with all conditions identical with figure 5 except the following: (1) The percentage of consumers in the market area holding cards has doubled, from 20 to 40 percent, and (2) the grocery-use willingness rate has increased from 50 to 60 percent. On this basis, AD (old customers using credit cards) increases from 10 to 24 percent of total sales. AE (5 percent upgrading by old customers) therefore increases (from 0.5 percent) to 1.2 percent of total sales. EG (volume purchased by new customers) increases (from 0.84 percent) to 2.02 percent,¹⁰ primarily because there are more foodstore credit-card users to be attracted. Even under these changed conditions, however, the major conclusion remains unchanged—in the secondary stage of adoption, the additional sales volume attracted in the initial stage on the basis

¹⁰ Calculated as follows: (24 percent credit-card grocery users) (20 percent willing to transfer) = 4.8 percent transfers from each noncredit store.

$$\frac{(4.8 \text{ percent}) (2 \text{ noncredit stores}) + (5 \text{ percent upgrading})}{5 \text{ credit stores}} = 2.02 \text{ percent.}$$

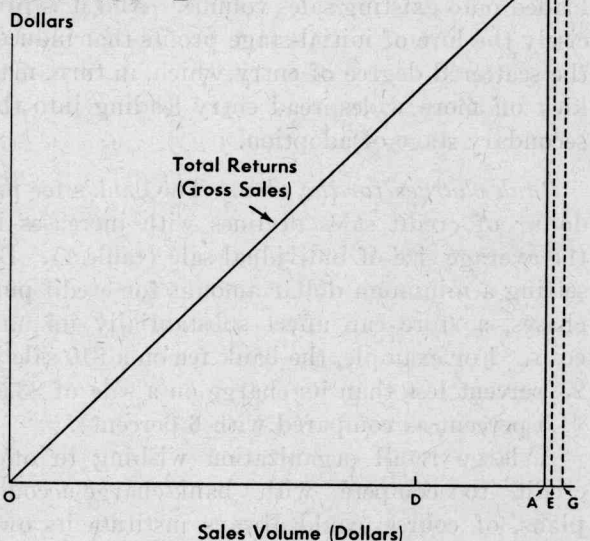
of credit tends to decline, primarily because of the entry of rivals into the plan and the consequent substantial drop in new customers for the initial stage adopters. Under our assumptions the increase in sales volume of 13.1 percent (fig. 4) for initial adopters falls to the neighborhood of 1.3 percent (fig. 5) to 3.2 percent (fig. 6).¹¹

Costs

The dominant cost factor in the charge-account plan is the bank's charge to the store for the credit service which varies typically from 3 to 6 percent of credit sales. Compared with a typical net-profit situation (2 percent of sales) in retail foodstores, the plan would seem to be eminently unprofitable from the cost standpoint, at least without compensating price increases. This line of analysis is correct for the secondary stage of widespread adoption of the plan, but crucially not for the initial stage, in which additional costs

¹¹ Under the assumption of zero upgrading, the 12-percent increase in sales volume in the initial stage falls to 0.8 percent (fig. 5) to 1.9 percent (fig. 6).

TOTAL SALES OF CHARGE-ACCOUNT PLAN FOOD STORE: SECONDARY STAGE IMPACT "B"



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FIGURE 6

TABLE 1.—Bank charge-account plan: Merchant refund chart and fee schedule¹

Quarterly average transaction amount ²	Original percentage withheld	Percentage of allowable refund	Basic fee
<i>Dollars</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
3.50-4.99	6.00	0.00	6.00
5.00-5.99	6.00	.25	5.75
6.00-6.99	6.00	.50	5.50
7.00-7.99	6.00	.75	5.25
8.00-8.99	6.00	1.00	5.00
9.00-9.99	6.00	1.25	4.75
10.00-12.49	6.00	1.50	4.50
12.50-14.99	6.00	1.75	4.25
15.00-19.99	6.00	2.00	4.00
20.00-24.99	6.00	2.50	3.50
25.00-34.99	6.00	3.00	3.00

¹ Volume refund: An additional volume refund is made according to the total number of sales drafts submitted per quarter as follows:

First 1,000 net sales drafts, 0-cent refund per sales draft.

Next 24,000 net sales drafts, 1-cent refund per sales draft.

Over 25,000 net sales drafts, 2-cent refund per sales draft.

In no case shall the volume refund reduce the charge per sales draft below 21 cents.

Fees:

Initial fee: \$25 fee per location will be required when contract is signed.

Imprinter fee: Sales-draft imprinters rent for \$1 each per month, payable quarterly in advance.

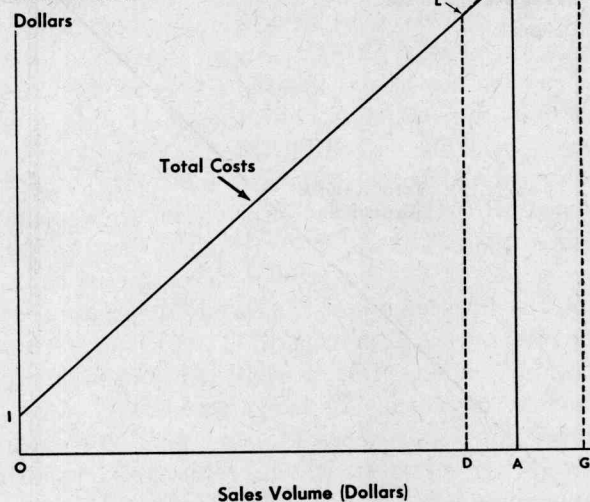
² No refund in event quarterly average transaction amount is less than \$3.50, the equivalent of the minimum sales-draft charge of 21 cents. Refund rates above \$35 unpublished and available to store upon request to bank.

may be associated with new business rather than loaded onto existing sales volume. And it is precisely the lure of initial-stage profits that induces the scattered degree of entry which, in turn, may kick off more widespread entry leading into the secondary stage of adoption.

Bank charges for the plan.—The bank's fee per dollar of credit sales declines with increases in the average size of individual sale (table 1). By setting a minimum dollar amount for credit purchases, a store can affect substantially its unit costs. For example, the bank fee on a \$10 sale is 25 percent less than its charge on a sale of \$3.50 (4.5 percent as compared with 6 percent).

A large retail organization wishing to offer credit to compete with bank-charge-account plans, of course, could always institute its own (or a cooperative) credit plan on the presumption that costs would be lower, and customers who

TOTAL COSTS OF CHARGE-ACCOUNT PLAN FOOD STORE: INITIAL STAGE IMPACT



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FIGURE 7

joined the plan would tend to be "tied" to the chain or group of chains offering the plan.¹²

Nature of costs—significance of ratio of new to old business on credit card.—The merchant's fee for the charge-account plan is a variable, or "out-of-pocket" cost,¹³ incurred only in conjunction with business actually done on credit cards. In figure 7, for example, the total fixed costs of the retail foodstore are OI, and the Total Costs line IJ (prior to adoption of the credit plan) rises at an assumed constant rate of 90 cents for each dollar increase in sales volume. This rate would consist of the variable operating costs and cost of goods sold. Prior to offering credit cards, the store is assumed to be at sales volume OA, with Total Costs AJ. It is assumed that the store offers credit, and experiences the initial-stage impact on sales, as shown in figure 4. In this case, the store now has a volume of credit sales equivalent to DG consisting of 10 percent of the old business now on credit card DA, plus AG, an addi-

¹² This type of competing organization has evolved in the case of the trading stamps-promotional device.

¹³ Except for the initial fee of \$25 per location and the imprinter rental fees.

tional 13.1 percent of new business on credit card.¹⁴

Assuming average sales of \$10 on credit card, the bank fee would be 4.5 percent of credit sales.¹⁵ Since DA is taken as equal to 10 percent of the sales volume, the total costs for sales volume OA show an increase of 0.45 percent of sales (as the 4.5 percent fee is spread over 100 percent of the sales volume) to AK. Thus, the new Total Costs line becomes the kinked ILKM. At the new Sales Volume OG, Total Costs are now GM, as contrasted with GN, what Total Costs would have been at Sales Volume OG without the additional fees paid for DG business done on credit card. MN, the additional cost for the credit business, is equivalent to 0.92 percent of Total Sales, OG.¹⁶

Figure 7 makes clear an easily overlooked point, which is that the bank's fee on credit-card sales—4.5 percent—approaches 4.5 percent of *total* sales only to the degree to which credit-card business approaches 100 percent of total sales. In early stages of adoption at least, credit-card business could reasonably be expected to be well below 100 percent of a store's total sales volume.

The retail outlet will experience a different impact on its variable costs per dollar of total sales, depending upon whether its additional costs for the charge-account plan are associated with old business (DA in fig. 7)—purchases that normally would have been made at the outlet irrespective of credit—or with new business (AG in fig. 7)—purchases by new customers attracted by credit, plus the upgraded portion of purchases by old customers. In the case of new business, the additional variable costs of the plan are associated *with increased volume* of sales. In the case of old business, the additional variable costs of the plan are associated with the same amount of sales and therefore are loaded on existing volume. Conse-

¹⁴The AG new business includes upgrading of old customers.

¹⁵This implies that the variable cost per dollar of sales imputed exclusively to the credit-card business (corresponding to DG) rises from 90 cents to 94.5 cents per dollar of credit-card sales volume.

¹⁶Calculated as follows: $OG \text{ Sales Volume} = 113.1$ percent of OA. Sales on credit card, DG, equal 20.4 percent of OG Total Sales, $\frac{(AD+AG)}{OG}$. At an assumed fee

of 4.5 percent covering 20.4 percent of total sales, the unit cost spread over the entire sales volume is 0.92 percent (4.5×0.204).

quently, stores having a large ratio of new business on credit card to old business on credit card would experience a smaller increase in variable costs per dollar of sales than stores in a similar situation but with a lower ratio of new to old credit-card business.

The practical implication of this impact on costs is that in the initial stage, by definition, a store would tend to have a much higher ratio of new credit business to old—in figure 4 the ratio would be AG/DA (13.1 to 10)—and therefore would find its unit costs lower than those in the later stages where entrance of competitors had reduced its ratio (by the regaining of lost customers), and increased its unit costs—in figure 6, the ratio falls to AG/DA (3.2 to 24). It follows that the pressure of costs on prices will be greater in secondary than in initial stages of adoption. This impact on costs tends (in part) to account for the relatively high expected profitability of the plan in the initial stages—when the merchant has a legitimate expectation of attracting a sizable volume of new (credit card) business at the fairly nominal cost of approximately 4½ percent of new sales. At the same time, since the offer of credit is across-the-board to new and old customers alike, the merchant, especially in the early stages, may not feel that more than a very small proportion of his existing customers will use the credit service, and thus the loading of an extra 4½ percent on existing business will be inconsequential.

Impact on costs via store-operating practices.—

In addition to the direct bank charges, the retail store will experience changed costs as a result of the impact of the plan on its operation. The plan presumably is intended to substitute for the cost of the store's credit operation including such items as bookkeeping, bad debts, interest costs, and so on. When this is the case, this aspect of the plan may lower costs as well as free capital tied up in accounts receivable. But if the bank's charge-account plan and the personal credit of a local merchant are not substitutable, the merchant may have to maintain his own credit facilities in order to retain 100 percent of the customers who desire credit. In most of the retail food industry that does not offer credit there are no potential offsets to the cost of the charge-account plan by way of eliminating an

existing credit system. Other potentially cost-saving features are hypothetically possible to the extent that the credit-card user makes fewer trips to the store, does not have to coordinate shopping with the weekend paycheck, and has less need of check-cashing facilities.

The cost-raising features of the operation would include the extra checkout time involved in recording the customer's purchases on sales drafts, imprinting the draft with the customer's credit card, and telephoning the bank for approval of unusually high purchases. Additional costs also would be involved in handling, tallying, depositing, and checking the sales drafts and bank statements.

Dynamics of Adoption: Profitability, Competition, Costs, Prices, and Margins

For any given store price policy, the profit potential of credit-card operations in the initial stage of adoption would be greater than in the secondary stage when, for competitive reasons, a substantial number of the competing outlets in a given market might adopt the plan. Crucially, adopters of the plan in the initial stage would attract a much higher level of new business and experience a higher ratio of new business on credit cards to old business on credit cards, than would adopters in the secondary stage. Thus, although the exact impact of the plan on profits in the initial stage cannot be determined without empirical study, it can be inferred that at least the credit-card operation would exert much less pressure on costs and net profits in the initial than in the secondary stage of adoption. Moreover, in the initial stage, it is possible that, despite the pressure of increased costs, increased store profits could result with no increase in price. But the results in the secondary stages of adoption would seem to generate an inexorable pressure for credit-card outlets to raise prices and increase gross margins in order to maintain profits in the face of rising costs.

In the secondary stage, the extent of the increase in prices and margins would be greater (1) the greater the percentage of the store's total business done on credit card—a function primarily of the degree of adoption and use of the plan by consumers in the market area; (2) the higher the ratio of old to new credit-card business—a function primarily of the degree of adoption of the

plan by stores in the market area; and (3) the smaller the size of average purchase.¹⁷ Levying charges directly on credit-card users, including such policies as no trading stamps issued with credit purchases, seems to be the only alternative to increasing prices generally to all buyers. In the face of reported opposition to credit-card plans by some major chains, the possibility exists that the charge-account plan might be adopted rather heavily by a minority of stores and not at all by most stores. In this case, two distinct pricing and operating policies could emerge, depending upon whether the store offered the credit service, and consumers would have greater opportunity to avoid any possible rise in prices resulting from adoption of the credit service.

Initial stage impact.—Figure 8 analyzes the impact on profits of the credit-card plan in the initial stage of adoption. This diagram incorporates the following assumptions: (1) The Total Returns line reflects a given price policy existing prior to adoption of the plan; (2) OI fixed costs are 8 percent of sales;¹⁸ (3) BJ net profits (before taxes), are 2 percent of Sales; (4) the slope of the Total Costs line is 0.90;¹⁹ (5) OA sales volume represents some underutilization of store capacity; and (6) impact of credit cards on operating practices and costs is ignored.

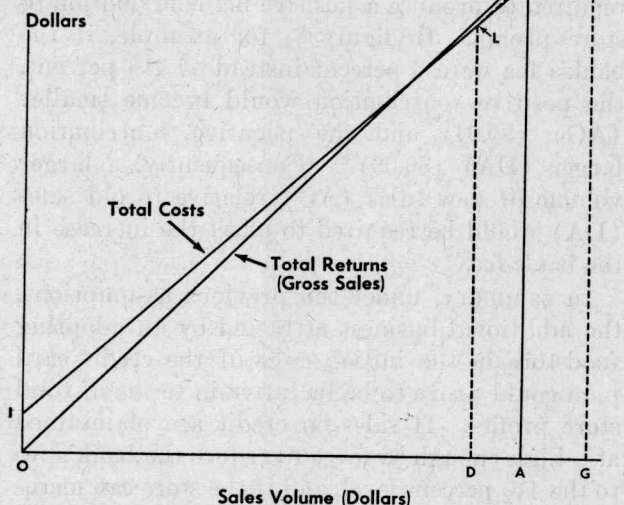
The assumptions of figure 4 are used to establish the character of the consumer market using credit cards and the consequent impact on store volume of sales. Prior to operation of the plan, the retail outlet is at sales volume OA, well beyond the break-even point, making profits BJ. With institution of the charge-account plan, AG more

¹⁷ Costs and benefits to the store via changed operating practices (because of credit cards) are not considered here.

¹⁸ A gross margin of 20 percent is assumed. Total fixed costs (OI) are defined hypothetically as all costs that would be incurred at zero output, or costs that would exist (except spoilage) if the store were open but did zero business. Empirically, this would include such items as skeleton store crew and administrative overhead. Total fixed costs are assumed to be 40 percent of the margin, or 8 percent of total sales.

¹⁹ The Total Costs line rises over the entire sales volume range from 8 percent of total sales at Zero sales volume to 98 percent of sales volume (at 100 percent of sales.) Thus, variable costs (all costs other than fixed) are assumed to rise uniformly at the rate of 90 cents per \$1 of sales volume.

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FIGURE 8

volume is added on the basis of new credit-card business, while DA of old business sales volume converts to, and is done on, the credit-card basis. Thus, the new Total Returns is GH. There exists the high ratio of new to old business done on the credit-card basis (AG/DA) that would characteristically be experienced by an early adopter of the credit-card plan. The credit-card operation results in the new, kinked Total Costs line ILKM (see fig. 7 and p. 95 for method of derivation). IJN reflects the Total Costs line that would have prevailed for sales volume OG, had it been reached without the credit-card device.

Given the new volume of operations and the changed cost-revenue relationships, the impact on profitability may be analyzed best by considering separately the segments of old and new business done on credit cards. Given the old (precredit) price policy, the segment of *old* business considered *alone* always reduces the store's profit. At the old volume of sales, OA, the original profit was BJ. Since old business on credit card will always raise the Total Costs line (from ILJ to ILK), because of the added cost of the credit service, net profits will always be reduced (by JK, from BJ to BK). The added cost of the credit

service *on old business* thus always constitutes an offset in the overall net profit picture resulting from the credit-card operation. How large this offset will be depends on (1) the percentage of old business done on credit and (2) the size of the bank's fee. Under the assumptions of our diagram (AD=10 percent of old business on credit, and the bank fee is 4.5 percent) total costs increase by 0.45 percent of total sales and thus constitute that much of an offset to profits. Since profits are assumed to be 2 percent of sales volume OA, it can be inferred that if there were no upgrading or new business done on credit card, the store's net profits would have declined by 22½ percent (from 2 percent of OA to 1.55 percent of OA).

As a result of the segment of *new* business done on the credit card, three possibilities are opened:

1. A positive impact on profits occurs, and it outweighs the (always) negative impact on profits of old business on credit card. In this case, the credit-card operation will increase the net profits of the store.
2. A positive impact on profits occurs but does not outweigh the negative impact on profits of old business. In this case, the credit card operation will result in a decrease in total profits to the store.
3. A negative impact on profit occurs, and this, when added to the negative impact of old business, produces a marked decrease in total profits.

Two major cost factors determine the degree of profitability of the segment of new credit-card business. Because price policy has been assumed constant, revenue factors are not uniquely involved, and therefore the Total Returns line, though rising as a result of the new business, will retain the same rate of increase over AG, the volume of new business.²⁰ The first cost factor is related to the size of the bank's percentage fee, and the second depends on the rate of increase in (or slope of) Total Costs²¹—the higher the bank's

²⁰ Actually, if, as has been reported, credit-card users tend to buy more higher margin items than other customers, the total revenue would climb somewhat more sharply over the range of credit volume, DG, and, other things constant, thus provide a more profitable component of total volume OG.

²¹ Equivalent to the level of the marginal cost curve, assumed horizontal.

percentage fee and the higher the rate of increase in total costs, the less profitable will be the segment of new business.

In figure 8, the segment of new business brings in additional profits to the store at a rate of 10 cents for each dollar of new volume (since total costs are assumed to rise at the rate of 90 cents per dollar of sales volume).²² Normally, therefore, the store would expect from AG dollar volume of new business, a net profit of AG multiplied by \$0.10. But because of the bank's fee, an additional 4½ cent cost on each additional dollar of sales must be deducted, or AG multiplied by \$0.045. In this case, the net contribution of the new business segment to store profits is positive, equaling AG times \$0.055. Thus, the final profit rate (per dollar of sales volume) on new business is always the slope of the Total Returns line minus (1) the slope of the Total Cost line, and (2) the bank fee in cents per dollar of sales. Under the conditions assumed, the bank fee would have to be above 10 percent for the segment of new business to contribute a negative impact on store profits. On the other hand, at a bank rate of 4½ percent, other conditions as assumed, total fixed costs would have to be less than 2½ percent of sales for the slope of the Total Cost line to be steep enough for new credit-card business to contribute negatively to store profits. It appears, then, that under *usual* store and credit-plan operating conditions, the segment of new business on credit card, considered alone, will *always* make a positive contribution to store profits, and thus, possibility (3) must be excluded from consideration.

Whether the normally positive contribution to the store's net profits of the new credit-card segment of business outweighs the always negative impact of old business on store profits will depend primarily on (1) the *ratio* of new credit-card business to old and (2) size of the bank's fee. The higher the ratio of new to old business on credit card, the greater the possibility of an overall positive contribution of the credit-card device to store net profits. In the case of figure 8, the positive contribution is (AG) (\$0.055), while the negative contribution is (DA) (\$0.045) and there is a net positive contribution, (AG)

²² Again, this is based on the underlying assumption of 8 percent fixed costs (OI), a 20-percent margin, and a 2-percent profit rate at OA.

(\$0.055) > (DA) (\$0.045), in part because AG > DA. The size of the bank's fee is also involved in the direction of the inequality. The larger the fee, the higher the ratio of new to old business required to produce a positive net contribution to store profits. In figure 8, for example, if the bank's fee were 6 percent instead of 4½ percent, the positive contribution would become smaller (AG) (\$0.04) and the negative contribution larger (DA) (\$0.06).²³ Consequently, a larger volume of new sales (AG) relative to old sales (DA) would be required to offset the increase in the bank fee.

In summary, under the previous assumptions, the additional business attracted by an adopting foodstore in the initial stage of the credit card plan could prove to be lucrative in terms of total store profits. If sales on credit are maintained at a high enough average to reduce the bank's fee to the 4½ percent level, and if the store can maintain a high ratio of new/old business on credit card, it is plausible that (1) the charge-account plan will increase the store's net profits, and (by definition) (2) prices will be under no upward pressure from increased costs. But even in the initial stage of adoption, it is not difficult to specify a set of unique conditions that could cause the plan to decrease the store's profits and result in an upward push of costs on store prices.

These conditions would include: (1) High bank fees incurred because of very low average sales on credit; (2) a low willingness rate of consumers holding cards to transfer from one outlet to another in order to use the card for food purchases; (3) location of the credit-card store in a market area with few (or no) competitors; (4) individual store policies (e.g., high prices) that ordinarily make it difficult for the store to attract customers; (5) very low percentage of fixed costs; and (6) an unusually large concentration of credit-card holders and users among that store's existing customers, as contrasted with the concentration prevailing in the market area.

Irrespective of how lethargic foodstore response to the charge-account plan may appear, latent and explosive dimensions in the dynamics of adoption exist. First, it is very likely that the plan will

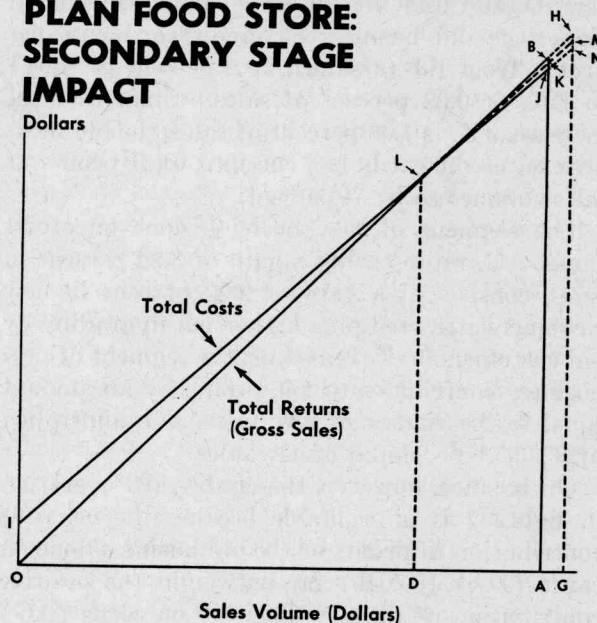
²³ With a 6-percent bank fee, the positive contribution per unit on AG, sales volume, would be \$0.10 ($\Delta TR - \Delta TC$) minus \$0.06 = \$0.04. The negative contribution of DA would increase directly to total: (DA) (\$0.06).

prove profitable to some aggressive initial adopters who will pull customers away from other stores. This will be especially true when the initial entrant is highly competitive with its rivals in all respects, particularly in pricing. The tendency always exists that rivals in the same market area and in contiguous areas may be induced into retaliatory, albeit unwilling, adoption of the plan. Second, because financial institutions are aggressive in promoting the credit plan in an overall sense, the growth of the plan in terms of total dollar use and numbers of credit-card holders and member sales outlets may prove to be an ever-increasing inducement to adoption by foodstores. Third, aggressive competition among financial institutions to acquire the foodstore market for the credit device could bring heavy sales pressure into the picture as a force influencing adoption.

At this point, one can only surmise that, on one hand, the charge-account plan may simmer along and never really catch on, while, on the other, the possibility exists that it will grow and be widely adopted. If the plan just simmers along, it will not, in terms of this analysis, grow beyond the initial stage of adoption. This implies that most foodstore firms will ignore the adoption of the plan by a very small group of stores. This situation would be most likely when the adopting group of stores varies significantly from the nonadopting group in terms of price, product, and service policies. An important precipitant hastening widespread adoption could well be the decision of several respected chainstore managements to take the plunge. This type of move could tend to set off a chain reaction with the likelihood of widespread secondary-stage adoption of the plan in areas where the bank-charge-account plan is, or would become, available.

Secondary stage adoption.—In the secondary stage, with widespread foodstore adoption of the credit card (accompanied by normal growth of the entire credit-card plan), it is likely that the potential profitability of the plan would decline. Stores adopting the plan in the more profitable initial stage would experience a pronounced decline in their newly acquired credit-card customers as such customers returned to their former outlets in response to widespread, competitive adoption of the charge plan. In addition, greater consumer acceptance of the card would increase the store's percentage of old business on credit card. The

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FIGURE 9

key factor in the secondary stage would be a decided reduction from the initial stage in the ratio of new to old credit-card business resulting in an increase in costs. The ensuing squeeze on profits would lead inexorably to price increases to re-establish the former profit level. The inevitable increase in marketing margins would be a continuation of the recent trend of additional retailing services being compounded into the retail price of food.

Figure 9 illustrates the impact on net profits of a secondary-stage situation in which five out of seven stores in a given market area have adopted the charge-account plan. The assumptions underlying the Total Returns line are identical with those in figure 6.²⁴ The segment of old business done on credit card, AD, now equals 24 percent of the original sales volume, OA.²⁵ The additional cost of this segment is 1.08 percent of total

²⁴ The market area contains seven stores, all equal in sales volume; 40 percent of consumers hold credit cards; 60 percent of cardholders are willing to use them for food purchase; 20 percent of the latter group are willing to transfer among outlets to use their cards; and there is a 5-percent sustained upgrading rate in the food use. Note that the conclusion of this section would still be valid on the assumption of a zero upgrading rate.

²⁵ See p. 93 for computations.

sales, OA.²⁶ The new costs are represented by the new Total Costs line ILKM. Thus, considered alone, the old business on credit card cuts net profits from BJ (assumed at 2 percent of sales) to BK, or 0.92 percent of sales. Since the cost increase, JK, is 1.08 percent of sales, the old business on credit cards has cut into total profits at sales volume OA by 54 percent.

The segment of new business done on credit cards, AG, representing a gain of 3.22 percent in sales, consists of a gain of 2.02 percent in new customers attracted plus 1.2 percent upgrading by old customers.²⁷ Taken alone, the segment of new business contributes to net profits by an amount equal to the volume of new sales, AG, multiplied by \$0.055²⁸ per dollar of new sales.

On balance, however, the credit-card operation in figure 9 is unprofitable because the negative contribution to profits of the old business done on cards (DA) (\$0.045) far outweighs the positive contribution of the new business on cards (AG) (\$0.055). Significantly, the diminished ratio of new to old business on credit cards (AG/DA) has made the secondary stage unprofitable. At sales OG, total costs, GM, with the credit plan exceed GN, what total costs would have been in the absence of credit cards, by 1.19 percent.²⁹

In this example, prices would need to be increased by 1.15 percent to restore net profits to the 2-percent level in credit-card stores. Presumably, in the short run, the rivals not adopting the cards would also suffer a drop in profits because of declining volume of sales resulting from loss of customers to credit-card outlets. The price increase required would be still higher in situations characterized by (1) smaller average credit-card sales (higher bank charges); (2) a larger percentage of old business done on credit card; (3) a higher store-adoption rate of the plan; and (4) a lower (or zero) degree of upgrading on credit

purchases. The impact on costs because of changed store operating practices as a result of the charge-account plan are not included in the above analysis.

Some Aggregative Implications

The preceding sections indicate that, within the decade of the 1960's, it is at least possible that a significant proportion of retail food purchases may be made on a credit basis. Should this possibility be realized, major issues would center on the impact on retail food prices and the possibility of upgrading induced by credit.

In the event of significant development of credit in the retail food business, the assumed 4.5-percent charge for credit would be approximately the extent of the general price increase only in the limiting case of 100 percent nationwide store adoption and consumer use. If 50 percent of the food business were done on credit in stores doing 100 percent of their business on credit, the price increase *in such stores* would be somewhat less than 4.5 percent (because of the presumed increase in volume of new business) and consequently the national increase would be somewhat less than 2.25 percent. Alternatively, if the same stores did only 20 percent of their business on credit, their price increase would be less than 0.9 percent, and the national increase less than 0.45 percent.

In general, the price increase in all food at retail would be approximately equivalent to the bank charge multiplied by the fraction of the Nation's business done on credit card, subject to a possible offset owing to the positive impact on profits attributable to the segment of new business attracted by the credit service. The higher the proportion of national adoption of the credit plan, the smaller would be the possibility of attracting new business and the lower this offset.³⁰ It would seem that increased retailing margins and the necessity for a segment of the retail food business to raise prices inevitably generate market forces which operate back through marketing channels and exert unique downward pressure on prices paid to processors and farmers.

³⁰ The impact of cost-saving and cost-increasing operating features of the plan cannot be estimated without empirical study.

²⁶ Twenty-four percent of the 4½-percent bank charge = 1.08 percent.

²⁷ See p. 93 for the calculation of the increases in sales volume.

²⁸ Net profit per unit of new credit-card business is calculated as follows: Slope of TR, \$1, minus slope of original total cost line, \$0.90, minus bank fee per dollar of sales, \$0.045.

²⁹ 26.37 percent of total sales, OG, are on credit:

$$\frac{DA + AG}{OG} = \frac{27.22}{103.22} = 26.37.$$
 26.37 percent of the 4.5 percent bank fee represents an increase in total costs, at OG, of 1.19 percent.

Case Study

The question of whether consumers will upgrade their purchases on credit can be answered only by empirical investigation of actual purchasing patterns. Agricultural interests, of course, would be concerned with whether consumers who use credit buy food in greater quantity or of higher quality. Such upgrading would be equivalent to an increase in the demand for food on that portion of the consumer market involved in upgrading. It is possible that consumers buying on credit would not upgrade purchasing at all. But the impact of even an assumed 5-percent level of upgrading is not likely to be of the first order of importance. Even with 50 percent of the Nation's food business on credit, a 5-percent upgrading rate would increase total sales of food by only 2.5 percent.

Upgrading on credit and the degree of price increase resulting from the credit plan are inter-related in their impacts on total food expenditures. During the last several decades, agriculture generally has not had credit available as a marketing tool at the retail food level. By contrast, the use of credit has proliferated in nonagricultural lines competing for a share of the consumer's dollar. It could be argued that any potential advantages inhering in credit as a marketing tool to secure a larger part of consumer expenditures have necessarily been on the side of nonagricultural sectors.

But this argument does not take into account the impact of the credit service on prices. With the development of cash-and-carry mass merchandising, elimination of credit in food retailing enabled food to be sold at a price advantage in this respect, as compared with other retail lines bearing the additional cost of the credit service. In the current situation, the full reintroduction of credit in retail food marketing would reestablish the food business on a "credit parity" with other retail lines, but would wipe out the price advantage of cash-and-carry business now reflected in retail marketing margins. Consumers facing the price increase would adjust by moving back up the aggregate demand curve, downgrading or purchasing less in response to the general increase. Even on the assumption of upgrading, a similar movement would occur on the newly increased demand curve appropriate to the credit-card users, offsetting to a degree their original tendency to upgrade on credit.

The foodstore selected for case study was a partner-managed, nonaffiliated, independent, carrying a full line of groceries, meat, delicatessen, and produce. The store is near the center of a large metropolitan area in California. It has an annual sales volume of approximately \$750,000; it is located on a major arterial, not in a shopping center or heavily concentrated shopping district; and within the radius of a mile there are 42 grocery outlets of all sizes, 12 of them within a half-mile radius—approximately 7 blocks. Extension of credit to a limited number of customers was an existing store policy at the time it adopted the bank-charge-account plan.

The store came to the attention of the writer as a result of widespread newspaper, magazine, and trade journal attention directed to its bank-charge-account plan operation. Cooperation by store management and full access to its excellent records were additional factors in influencing its selection for study. There is *no* basis for implying that the findings for this store are representative of the approximately 300 California foodstores which, as of June 1, 1960, were using the bank-charge-account plan.³¹ The store is highly atypical in one respect—its average bank credit sale is extremely high and its cost for the plan is therefore much lower than that of other stores using the plan.

Management reported that the plan was adopted primarily in the hope that it would reduce excessive financial and cost burdens of credit extended on store charge account. The store has operated the plan from June 1959 to date. Data collected cover the 12-month period June 1959–May 1960.

As defined earlier in this article, the store's market area is in the extremely early phase of the initial stage of adoption. As of May 1960, only one other foodstore outlet within a half-mile radius offered the bank charge plan, and in the entire metropolitan area only four other foodstores had it.

Store promotion and advertising of plan.—The store uses no advertising or promotion to let consumers know it offers the bank-charge plan. Management reports that consumers have learned of

³¹ "300 California Food Stores Feature Bank Credit Plan," *Supermarket News*, May 30, 1960, p. 1.

the plan: (1) By reading newspaper or trade journal publicity accounts; (2) by bank referrals in response to inquiries of credit-card holders concerning location of foodstores offering the plan; and (3) by seeing the imprinter or the credit card transaction at the checkout stand. In contrast to its extremely cautious and passive policy of attracting credit-card business, the management actively promotes, through personal sales talk to users of the credit card, the importance of maintaining a high sales volume on each purchase made with the card. This policy, it appears, accounts for the extremely high average credit-card sale.

Volume and size of bank-charge-account sales.—Credit-card sales averaged \$959 monthly during June 1959–May 1960, but amounted to only 1.5 percent of total store volume. By comparison, a bank report indicates that the average monthly volume for 200 southern California foodstores in the first quarter of 1960 was \$975.³² In the period June–December 1959, the store showed some growth in credit-card sales, with an average of \$1,135 monthly. However, January–May 1960 saw a steady decline in credit card sales from a monthly average of \$923 in January–February to \$572 in March through May. Management attributed the decline to the more conservative bank policy, following bad debt losses, in reissuing credit cards to consumers. The decline in credit card volume cannot be attributed to a decline in overall store volume, since sales increased by 8.5 percent in March–May 1960, over January–February 1960.

Over the 10-month period June 1959–March 1960, the store's average sale on credit card was \$24.89. In contrast, the average store sale was only \$4.18 over the same period. Size of average sale on credit card was extremely stable:

Quarter:	Average sale on credit card
July–September 1959.....	\$25. 58
October–December 1959.....	24. 72
January–March 1960.....	24. 95

By way of comparison, the bank has reported³³ an average sale on credit card of \$13 in January–March 1960 for 200 member foodstores in the southern portion of California.

³² *Ibid.*, pp. 1 and 30. The report states that in the first quarter of 1960, these stores averaged 75 transactions per month, with average sale of \$13.

³³ *Ibid.*, p. 30.

Over the 10-month period June 1959–March 1960, the store averaged 42 credit-card sales per month. By comparison, the 200 southern California foodstores previously referred to averaged 75 such sales per month in the quarter January–March 1960.

Bank fee paid by store for charge-account service.—Data from bank statements show the following fees³⁴ expressed as a percentage of sales volume done on bank credit card:

Period:	Bank fee (as a percent of charge-account sales)
Month, June 1959.....	3. 5
Quarter, July–September 1959.....	3. 0
Quarter, October–December 1959.....	3. 5
Quarter, January–March 1960.....	3. 5

By comparison, for the \$13 average credit-card sale reported for the 200 southern California foodstores, the bank fee would be 4.25 percent.³⁵

Significant store-operating practices associated with the bank-charge-account plan.—Trading stamps were not issued with credit-card purchases. This policy constituted an offset of about 1 percent to the bank charge. A similar policy has been followed on store-charge-account sales.

Management reported that very few customers buying on store-charge-account switched to the bank-charge-account plan. In two pairs of successive months—one pair including the months immediately before and after the plan's inception—store- and bank-charge-account records show only one customer changing from store to bank charge account. Thus, the plan did not reduce materially the financial burden of the store's private credit system.

Management reported that the checkout process was unduly delayed, with embarrassment to some customers, by the necessity to call the local bank office and clear credit sales over \$25 for customers whose credit card did not automatically authorize purchases over \$25. In the period June–August 1959, such calls to the bank were required in 38 out of 126 credit-card transactions.

Customers buying on credit card did not distribute their purchases evenly over the week, nor did their pattern differ materially from the store's regular business. Credit-card customers spent

³⁴ The fee is exclusive of a \$6 quarterly rental fee for imprinters.

³⁵ See table 1, for schedule of bank fees, p. 94.

TABLE 2.—*Straight-line distance from store location to bank- and store-charge-account customers' residences, July 1959 and April-May, 1960*

Distance from store	July 1959				April-May 1960			
	Store-charge-account customers		Bank-charge-account customers		Store-charge-account customers		Bank-charge-account customers	
Miles	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0-0.49	11	31.4	1	3.2	12	25.0	6	28.6
0.50-0.99	13	37.2	2	6.4	15	31.1	4	19.0
1.00-1.99	8	22.8	7	22.6	12	25.0	3	14.3
2.00-2.99	2	5.7	2	6.4	3	6.3	1	4.8
3.00-3.99	0	0	7	22.6	0	0	2	9.5
4.00-4.99	0	0	3	9.7	1	2.1	1	4.8
5.00-7.49	0	0	2	6.4	1	2.1	2	9.5
7.50-9.99	0	0	4	12.9	1	2.1	0	0
10.00 and over	1	2.9	3	9.7	3	6.3	2	9.5
Total	35	100.0	31	100.0	48	100.0	21	100.0

32.6 percent of their weekly total on the first 3 days (Monday, Tuesday, and Wednesday) of the store's 6-day week, compared with 30.9 percent for all store customers combined.³⁶

Location of bank-charge-account customers—comparison with store-charge-account customers.—In July 1959, the second month of the plan's operation, the residences of bank-charge-account customers patronizing the store were highly dispersed over the entire metropolitan area (table 2). Only 9.6 percent lived within a mile of the store, while 61 percent lived more than 3 miles from it and 22 percent lived at a distance of more than 7½ miles.

This was in sharp contrast to the locational pattern of the store-charge-account customers, highlighted by a marked clustering of customer residences in the immediate neighborhood of the store, with the cluster oriented about the major arterial on which the store was located. Nearly all of the 69 percent of store-charge-account customers living within a mile of the store were included in the cluster. The remainder of store-charge customers were dispersed, but only 3 percent of all store-charge customers lived more than 3 miles from the store.

In April-May 1960, with the plan in operation 10 months, and at much-curtailed sales volume, the store-charge-account customers showed much

the same locational pattern, but dispersed at somewhat greater distances from the store.

The locational pattern of bank-charge-account customers showed a shift: Clustering in the neighborhood of the store occurred, with 47½ percent of all April-May bank-charge-account customers living within a mile of the store. However, 33 percent of all bank-charge-account customers still lived more than 3 miles from the store (as contrasted, in April-May, to 12.6 percent of all store-charge-account customers). Two inferences may be drawn from the substantial distances which a high percentage of bank-charge-account customers traveled to patronize the store:³⁷

1. Since many of the credit-card customers were drawn from contiguous or distant market areas, such customers were *strongly* motivated to patronize the store because of the credit plan.
2. Since a large percentage of credit-card customers came from a different "universe" of customers (with respect to distance) than usually patronize the store, they comprised a substantial new business component. This is substantiated by management's report that most of the credit business is new business.

Dollar volume of monthly purchases per bank-charge-account customer did not decline with increased residence distance from the store. Ac-

³⁶ Based on data covering 33 weeks free from the influence of holidays over the June 1959-May 1960 period.

³⁷ Irrespective of the route followed, in every case of substantial distance a large number of competitive stores had to be passed on the way to the bank-charge-account store.

TABLE 3.—Monthly purchases per bank-charge-account customer by straight-line distance of customer residence from store location, July 1959, and April–May 1960

Distance from store	Monthly purchases per bank-charge-account customer			
	July 1959		April–May 1960	
	Dollars	Percent of average for all customers	Dollars	Percent of average for all customers
Miles:				
0–0.49	32.15	68	34.04	91
0.50–0.99	26.75	57	44.83	119
1.00–1.99	38.58	82	35.04	93
2.00–2.99	32.41	69	33.22	88
3.00–3.99	68.45	145	22.01	59
4.00–4.99	43.22	92	49.83	133
5.00–7.49	79.84	169	50.45	134
7.50–9.99	37.27	79		
10.00 and over	41.46	88	36.27	96
Unweighted averages:				
All customers	47.17	100	37.58	100
Customers under 3 miles	35.04	74	37.28	99
Customers 3 miles and over	54.84	116	38.19	102

tually, credit-card customers who lived more than 3 miles from the store bought more heavily during both July 1959, and April–May 1960, than did credit-card customers living at closer distances (table 3).

Comparison of sales on store and bank-charge account; repeat business from credit-card customers.—In July 1959, store-charge-account customers bought more heavily, averaging \$75.29 per month, as contrasted with \$47.17 for credit card customers. However, the size of average sale on credit card, \$26.11, was greater than the \$9.21 averaged by store-charge-account customers.

Among the 73 new customers who appeared to buy on credit during June–October 1959, 30 did not repeat in any later month in the period July–November, 1959. Taken as a group, the new customers repeated sales in 30 percent of all subsequent months.

Profit estimate on store's credit-card operation.—Major profit rate determinants are: (1) Size of bank fee; and (2) ratio of new to old business on credit card. The store's bank fee will be taken to be 3.5 percent which, less the 1-percent offset for nonissuance of trading stamps, may be assumed as 2.5 percent of credit-card business. The ratio of new to old business on credit card will be estimated, conservatively, to be 4:1. The slope of the store's total cost line will be assumed at 0.9 (identical with the assumption for fig. 7) and consequently the net profit increment per dollar of sales volume beyond the store's breakeven point is 10 cents. Monthly credit-card business is taken as \$1,000, of which \$800 is new business. The profit estimate consists of three steps:

1. *Profit offset for segment of old business (\$200) now done on credit card:* The 2.5-percent charge loaded on to the old business amounts to a profit offset of \$5 monthly.

2. *Gross profit on segment of new business (\$800) now done on credit card:* Profit rate per dollar of new business is 7.5 cents (10 cents minus 2.5 cents). Gross profit on new business is \$60.

3. *Net additional store profit rate on credit-card operation:* \$60–\$5=\$55 net additional store profit on the credit-card operation. Net profit rate on the \$800 new credit-card business, is 6.9 percent. By comparison, under our assumptions, the net profit rate on new business not requiring any promotional costs would be 10 percent.