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INFORMATION-BASED CREDIT CARD DESIGN

One element of an information-based strategy in the credit card industry has been the careful attention given to the design of product offerings. The attributes of a credit card could be changed easily and rapidly. In few other industries could the direct marketer move as quickly and effortlessly to match products to the changing marketplace. Taking advantage of this flexibility was one aspect of The Bank's information-based strategy. This case study examines The Bank, a fictitious bank attempting to implement an information-based strategy.

Bank-Card Attributes

For the purposes of this case study, we will consider the three major attributes of a bank card: annual percentage rate, annual fee, and fixed rate versus variable rate.

Annual percentage rate

The annual percentage rate (APR) was the rate of interest charged on outstanding balances. The higher the APR, the more finance charges the customer accrued on outstanding balances. Although customers could avoid finance charges by paying their bill each month, only about 30% did so. Thus, APR was a key determinant of the credit card's profitability. For the purposes of this case study, we consider three levels of APR: 14.9, 16.8, and 19.8.

Annual fee

In addition to the APR, card holders sometimes paid a fixed annual fee. We will consider two fee levels: no annual fee and a $20 annual fee.

Fixed or variable rate

A relatively recent innovation in the bank-card industry was the variable-rate card. A variable-rate card's APR was expressed as a function of the prevailing prime interest rate.

The advantage of a variable-rate card was that the bank could pass along most of the interest-rate risk to the customer. Ordinarily, when a bank's cost of funds went up, its margin became smaller. With a variable-rate card, a rise in a bank's borrowing costs led to a rise in the price to the customer, which protected the margin. Consumers appeared to be aware of this phenomenon and responded less readily to variable-rate cards than to fixed-rate cards.

In summary, The Bank was considering offering 12 ($3 \times 2 \times 2$) possible products in its next solicitation, solicitation 92–1.

Solicitation 92–1

Solicitation 92–1 was to be mailed in January 1992. There were approximately 750,000 names available to be mailed. As with previous mailings, The Bank obtained these names from one of the national credit bureaus. For this mailing, The Bank had ordered names of people with specified bankruptcy (BK) scores. One-third of the names had a BK score of 150, one-third had a BK score of 200, and one-third had a BK score of 250.[1] An individual's BK score was a measure of risk—the higher the score, the more likely that person was to default on a financial obligation. BK scores (available for a fee from the credit bureau) had a long and proven record of effectively predicting the creditworthiness of an individual. Through buying and using BK scores to select its mailing list, The Bank could target low-risk people.

Exhibit 1 shows the results of several recent mailings by The Bank. Although the names being mailed in Solicitation 92–1 were similar to those used in the previous mailings, several factors beyond The Bank's control had changed and could affect customers' responses. Several of The Bank's competitors had launched major marketing campaigns during the holiday season. One competitor was aggressively marketing no-fee cards, while a second was offering a substantial rebate program. In addition, interest rates had dropped: in the past six months, The Bank's cost of borrowing had fallen almost a full percentage point.

The fixed costs to prepare the solicitation material were \$10,000, with \$1,000 for each additional product variation used. The variable costs totaled \$0.50 per piece mailed. Included in this cost were variable printing costs, mailing costs, and name rental. Fixed mailing costs were fairly negligible, about \$800 per mailing.

Customer Value

In order to design products, The Bank had to have some idea how the lifetime value of a customer varied across the candidate products. This question was particularly difficult in the bank-card industry because the cash flows from a customer could last for many years. In addition, the

[1] This is a simplification. In actuality, the bank would have specified lower and upper BK scores and taken names with BK scores in between these two limits.

issuing bank faced the risk of customers defaulting at some unknown future date. Because a bank had to wait years to track the eventual rate of default by customers who had responded to a solicitation, judging the profitability of any solicitation took a very long time.

Exhibit 2 outlines one analyst's estimates of the lifetime values of customers acquired from each of the 12 candidate products. Notice that the values depended not only on the product offering, but also on the customer's BK score: the higher the BK score, the lower the lifetime value of the customer. In addition, the higher the APR or annual fee, the higher the lifetime value. The Bank preferred variable-rate products, and this preference was accounted for in the lifetime value estimates.

The Decision

The Bank had a little time to make the product-design decision, but not much more information than what has been presented here.

Exhibit 1

INFORMATION-BASED CREDIT CARD DESIGN

Results of Recent Solicitations

Date	APR	Fix/Var.	Annual Fee	VISA/MC	No. Mailed	No. Accts.	Avg. BK
April '91	16.8	Fixed	$20	MC	167,000	1,533	210
	16.8	Fixed	0	MC	81,000	2,896	210
	19.8	Fixed	$20	MC	143,000	590	210
	19.8	Fixed	0	MC	100,000	2,052	210
Sept. '91	14.9	Fixed	$20	Visa	177,000	4,329	255
	14.9	Var.	$20	Visa	170,000	3,004	255
	16.8	Fixed	$20	Visa	255,000	2,983	255
	19.8	Fixed	$20	Visa	35,000	175	255
	16.8	Fixed	0	Visa	65,000	2,516	255
	19.8	Fixed	0	Visa	95,000	2,115	255
Nov. '91	14.9	Fixed	$20	Visa	82,000	1,761	190
	14.9	Fixed	0	Visa	50,000	2,451	190
	14.9	Var.	$20	Visa	50,000	708	190
	16.8	Fixed	$20	Visa	50,000	372	190

Exhibit 2

INFORMATION-BASED CREDIT CARD DESIGN

The Bank Bank Product Design:
Lifetime Value Estimates

APR	Fixed/Var.	Annual Fee	BK Score 150	BK Score 200	BK Score 250
14.9	Fixed	$20	$ 83[1]	$63	$33
14.9	Var.	$20	$ 93	$73	$43
14.9	Fixed	0	$ 52	$32	$ 2
14.9	Var.	0	$ 62	$42	$12
16.8	Fixed	$20	$103	$83	$53
16.8	Var.	$20	$113	$93	$63
16.8	Fixed	0	$ 72	$52	$22
16.8	Var.	0	$ 82	$62	$32
19.8	Fixed	$20	$131	$111	$81
19.8	Var.	$20	$141	$121	$91
19.8	Fixed	0	$100	$80	$50
19.8	Var.	0	$110	$90	$60

[1] The Bank estimated that someone with a BK score of 150 who responded to an offer of a fixed-rate card that had an APR of 14.9 and an annual fee of $20 would be worth $83 to The Bank over the lifetime of that customer. This lifetime value did not include acquisition costs but did include all costs associated with processing and servicing the account.