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PFG Bank: Credit Card Exercise

Scenario Description and User Guide

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 an information-based strategy. This exercise examines PFG Bank (PFG), a fictitious bank, and its attempt to implement an information-based strategy.

Bank Card Attributes

For the purposes of this exercise, 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, cardholders 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 PFG 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.

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Consumers appeared to be aware of this phenomenon and responded less readily to variable-rate cards than to fixed-rate cards.

In summary, PFG was considering offering 12 (3 × 2 × 2) possible products in its next solicitation.

Solicitation 92–1

Solicitation 92-1 was to be mailed to approximately 750,000 people. As with previous mailings, PFG obtained these names from one of the national credit bureaus. For this mailing, PFG 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, PFG could target low-risk people.

Exhibit 1 shows the results of several of PFG's recent mailings. Although the names being mailed to in Solicitation 92-1 were similar to those used in the previous mailings, many factors beyond PFG's control had changed and could affect customers' responses. Several of PFG's competitors had launched major marketing campaigns during the holiday season. One competitor was aggressively marketing no-fee cards and a second was offering a substantial rebate program. In addition, interest rates had dropped: in the past six months, PFG'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, PFG had to have some idea how the customer lifetime value (CLV) 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 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 CLV of the customer. In addition, the higher the APR or annual fee, the higher the CLV. PFG preferred variable-rate products, and this preference was accounted for in the CLV estimates.

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

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The Decision

PFG had a little time to make the product-design decision, but did not have much more information than what has been presented here. Using the URL provided by your instructor, maximize the profitability of the upcoming solicitation by deciding which of the 750,000 customers will receive which product mailing. Instructions are included in the **Appendix** at the end of this handout.

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Exhibit 1

PFG Bank: Credit Card Exercise

Results of Recent Solicitations

Date	APR	Fixed/ Variable	Annual Fee	Visa/ Master Card (MC)	Number Mailed	Number of Accounts	Average BK
April	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
September	14.9	Fixed	$20	Visa	177,000	4,329	255
	14.9	Variable	$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
November	14.9	Fixed	$20	Visa	82,000	1,761	190
	14.9	Fixed	0	Visa	50,000	2,451	190
	14.9	Variable	$20	Visa	50,000	708	190
	16.8	Fixed	$20	Visa	50,000	372	190

Source: All exhibits and figures, unless otherwise specified, were created by the author.

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Exhibit 2

PFG Bank: Credit Card Exercise

PFG Product Design: CLV Estimates

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

[1] PFG 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.

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Appendix

PFG Bank: Credit Card Exercise

User Guide

Overview

This interactive marketing simulation emulates the product-design process at banks using an information-based strategy. PFG Bank (PFG) has a variety of different products (12 versions of a credit card) and detailed information (summarized by a single credit score) on several thousand potential customers. The question at hand is which product(s) should be offered through direct mail to which customers.

Your team will plan and implement two rounds of mailings of up to 12 different product solicitations to as many as 750,000 prospects. Enter your Round 1 decisions into the online exercise, receive Round 1 results after an appropriate delay (simulating actual mailing lag time), and last, enter Round 2 decisions and receive Round 2 results. The profit achieved by each team will be revealed during class. This exercise illustrates the test-cell marketing process and the benefits of product tailoring.

Signing In and Starting the Game

To access the exercise, open the URL your instructor provided. It will be provided either in class or in an e-mail message sent through the Forio.com simulation platform. It will look similar to the message below (**Figure 1**).

Figure 1. Sample E-mail invitation.

This e-mail is being sent in response to your request for your "PFG Bank: Credit Card Exercise" password.

Your log-in ID: professor

Your password: test

Simulation URL: https://forio.com/simulate/darden/credit-card-simulation

Forio Support Team

Users will either click on the URL in the e-mail or enter the URL provided by your instructor. You will be prompted with a log-in screen (**Figure 2**). Please enter your e-mail address and the assigned password and then click "Log In."

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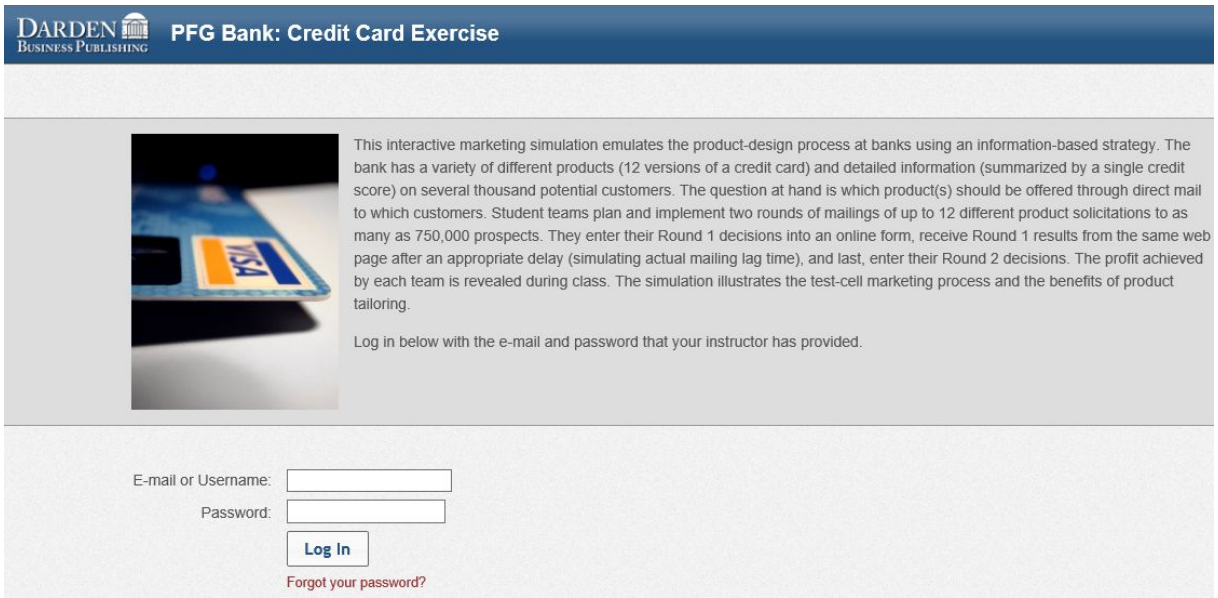
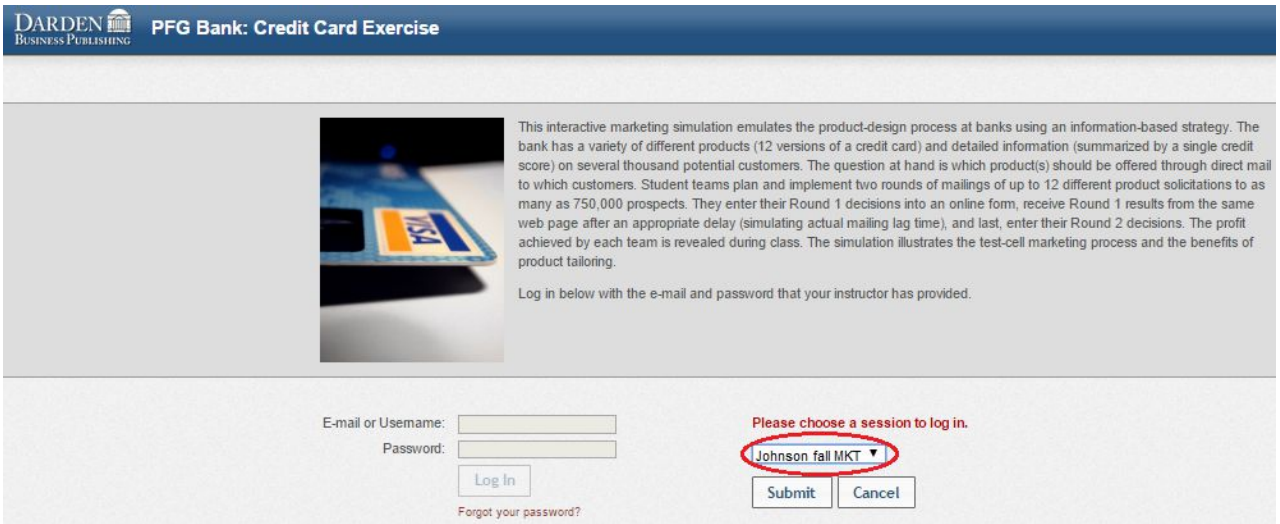
Figure 2. User log-in screen.



Once you have completed the log-in process, you might be prompted to choose a session. Your instructor will tell you which session to join if multiple sessions appear in the dropdown menu (**Figure 3**).

Figure 3. Choose a session.



Click "Submit." You will see the "Welcome" page (**Figure 4**). Read the scenario and, when you are ready, click on the "Proceed to Mailing Page" button.

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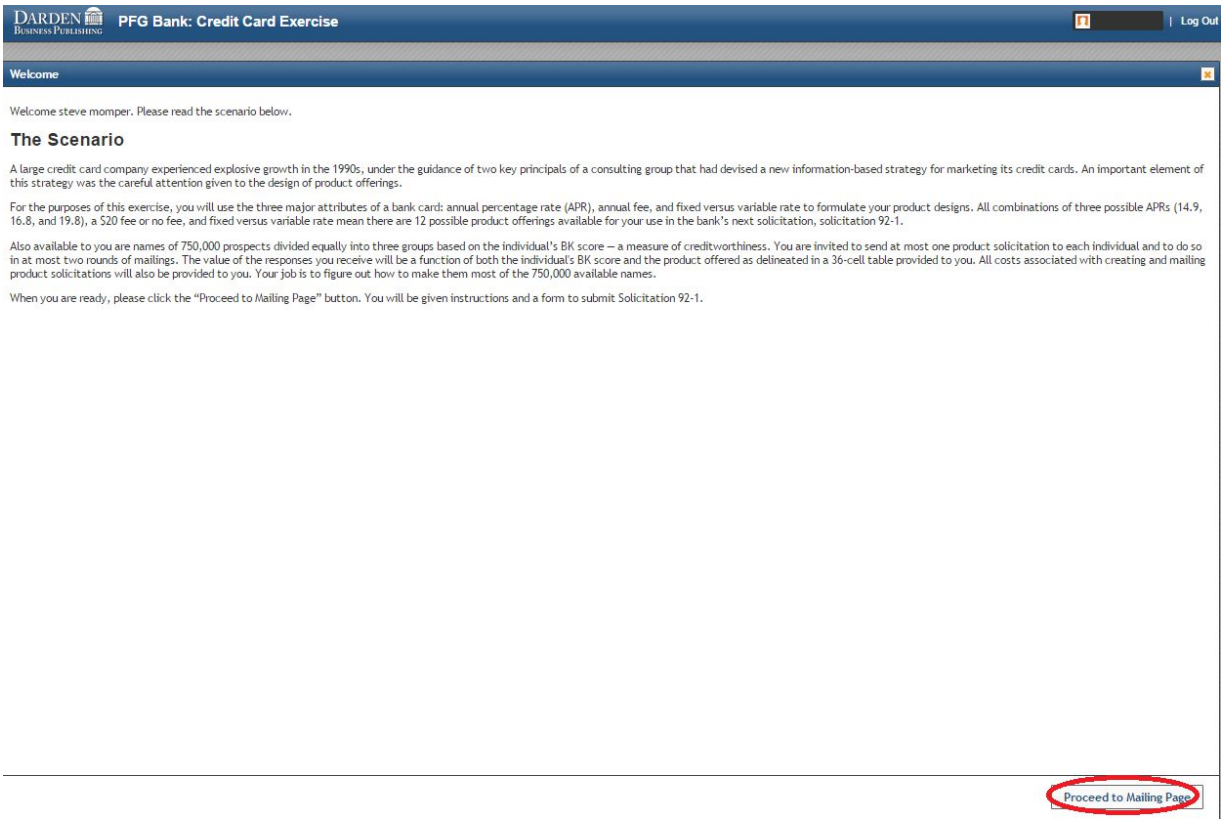
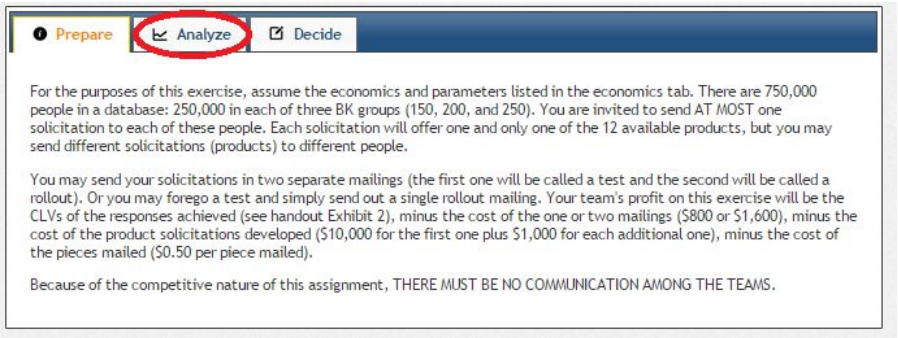
Figure 4. Welcome page.



Next, carefully read the scenario provided under the "Prepare" tab (**Figure 5**). Once you have read and understand the information on the Prepare tab, click on the "Analyze" tab (**Figure 5**).

Figure 5. Select Analyze page.



The Analyze tab provides the information that you will use for your decisions. You will find the costs associated with planned mailings, as well as estimates of the customer lifetime value (CLV estimates) and BK Score of each of the 36 test cells (**Figure 6**). Once you have completed your analysis, click on the "Decide" tab to input your decision.

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Figure 6. Select Decide tab.

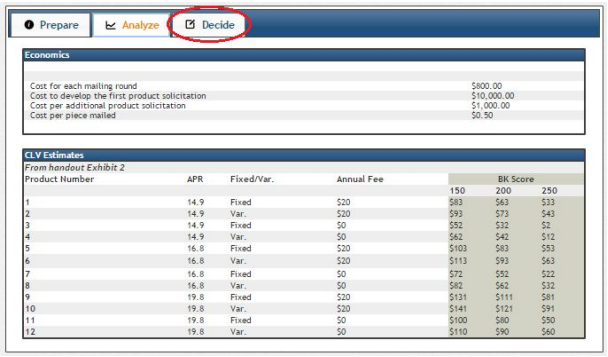
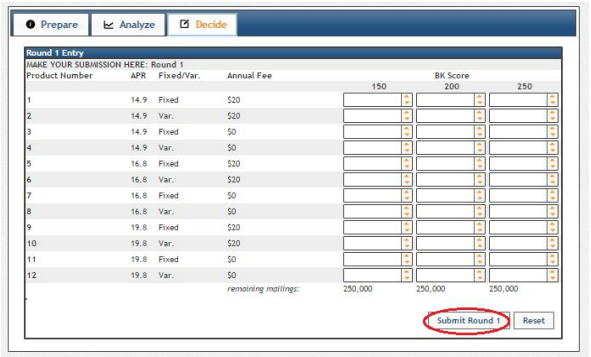


Figure 7. Enter decision into test cells



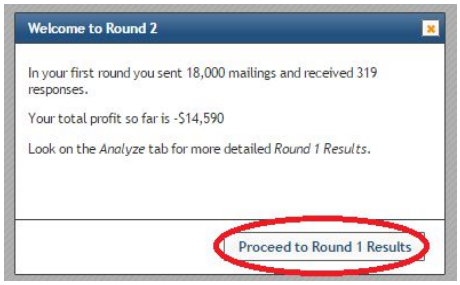
Enter your decision into the 36 test cells (**Figure 7**). Once you have entered your decision into each of the test cells, click on the "Submit Round 1" button.

Once you click the Submit Round 1 button, you will see a pop-up window in which you confirm your decision (**Figure 8**). Click the OK button labeled to confirm your choice.

Next you will see a pop-up window containing a quick summary of your decision and a button labeled "Proceed to Round 1 Results" (**Figure 9**). Click on the button to see a detailed report with the results of the Round 1 mailing.

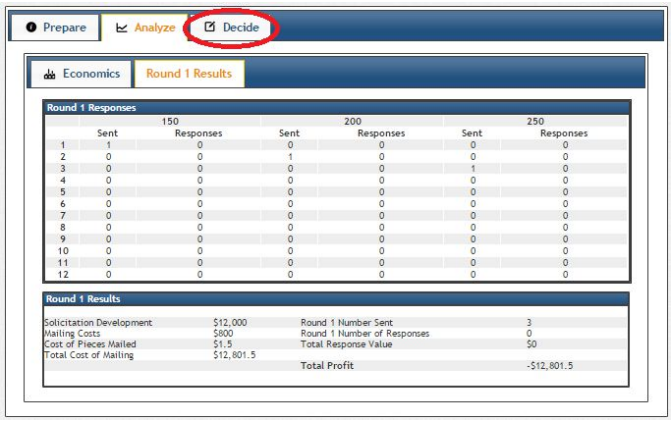
Figure 8. Confirm your decision.

Figure 9. Proceed to Round 1 results.



The responses for each test cell will be displayed on the "Round 1 Results" tab. Analyze your results, and when you are ready to make your final mailing, click on the Decide tab. (Note: Your results will appear in the test cell matrix below (**Figure 10**). Results have been suppressed in the example provided.)

Figure 10. Round 1 results.



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Based on your results, you will make your decision for the final mailing. Enter your decision into the 36 test cells in the matrix and click on the "Submit Round 2" button (**Figure 11**).

Figure 11. Submit Round 2 decision.

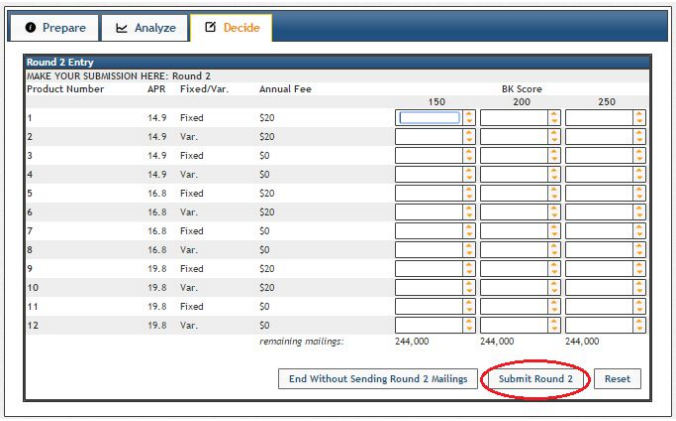
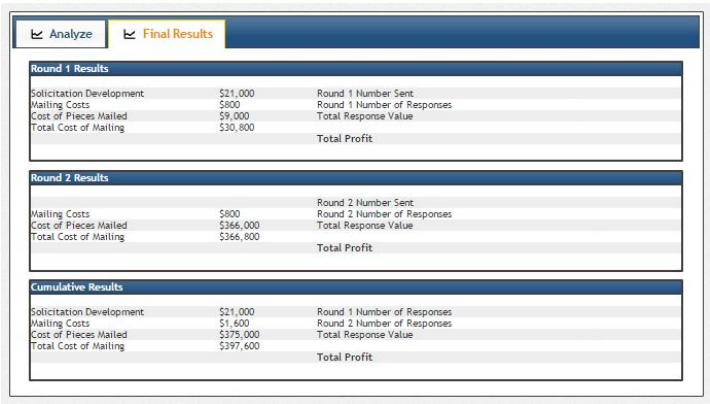


Figure 12. Confirm Round 2 decision.

You will again have an opportunity to confirm your decision (**Figure 12**). Click the "OK" button when you are sure that you want to submit your decision.

In a few seconds, you will see Round 1 results, Round 2 results, and Cumulative Results (**Figure 13**).

Figure 13. Final results.



This concludes the exercise. Log out of the exercise by clicking the button in the top right-hand corner of the screen.

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