Personal Loan is a product that allows customer lending money from the bank without any collateral. In the marketing campaigns, the bank will send loan information to selected customers, aiming at attract more customers apply loan product and increase the revenue.

You, being an Analyst, is working on projects in order to review and improve the campaign effectiveness. Please make use of whatever available information or data to complete the tasks.

**Q.I Personal Loan Campaign Analysis**

**Business Background:**

The bank launched loan campaign in May 2015. The selected customers will receive message with loan offers. Customers can enjoy the offer if applying the loan within designated period.

**Data Source:**

1. Campaign List:

Table Name: dummy\_camp\_elig\_base

Description: Customer list who were selected for the loan campaign.

Data Month: May 2015.

Table Detail:

|  |  |  |
| --- | --- | --- |
| Field Name | Key | Description |
| dummy\_cus\_key | Y | Customers’ unique ID within the bank. |
| channel |  | Different customer will receive the message through different channel.   * Phone Call: The contact channel with highest cost per contact. * SMS: Text message. The cost is lower than phone call. * Email: The contact channel with lowest cost per contact. |
| contact\_ind |  | Contact\_ind = ‘Y’ indicates:   * Phone Call: customer picked up the call. * SMS: customer read the message. * Email: customer opened the email. |
| response |  | Indicates whether a customer apply for a new loan account (1 or Y means “Yes”). |
| loan\_amount |  | Indicates the applied loan amount. |

1. Lending Product Information:

Table Name: dummy\_loan\_usage\_master

Description: The customer level information of historical loan product holding.

Data Month: May 2015.

Table Detail:

|  |  |  |
| --- | --- | --- |
| Field Name | Key | Description |
| dummy\_cus\_key | Y | Customers’ unique ID within the bank. |
| msk\_ever\_loan\_user |  | Indicates customers who ever had any loan product (1 or Y means “Yes”). |
| msk\_instl\_loan\_user |  | Indicates customers who ever had personal loan product (1 or Y means “Yes”). |
| msk\_other\_lending\_user |  | Indicates customers who ever had other unsecured lending product (1 or Y means “Yes”). |
| msk\_unauth\_over\_card\_limit |  | Indicates customers who ever had unauthorized over-limit of credit card (1 or Y means “Yes”). |
| msk\_mth\_since\_last\_limit\_review |  | Number of months since last credit card limit increase. |

1. Customer Information:

Table Name: dummy\_month\_data\_m1, dummy\_month\_data\_m2, dummy\_month\_data\_m3, dummy\_month\_data\_m4, dummy\_month\_data\_m5, dummy\_month\_data\_m6

Description: historical monthly customer information

Data Month: m6 - May 2015; m5 - Apr 2015; m4 - Mar 2015; m3 – Feb 2015; m2 – Jan 2015; m1 – Dec 2014.

Table Detail:

|  |  |  |
| --- | --- | --- |
| Field Name | Key | Description |
| Customer\_id | Y | Customers’ unique ID within the bank. |
| msk\_age |  | Age. |
| msk\_bank\_tenor |  | Number of months since customers open their first account with the bank. |
| msk\_education |  | Education level. |
| msk\_gender |  | Gender. |
| msk\_job |  | Job category. |
| msk\_mortgage |  | Indicates customers who are holding mortgage by month-end of the data month (1 or Y means “Yes”). |
| msk\_total\_saving\_bal |  | Total deposit balance (including demand deposit and time deposit) by month-end of the data month. |
| msk\_total\_investment\_bal |  | Total investment product balance by month-end of the data month. |
| msk\_hold\_insurance\_ind |  | Indicates customers who are holding insurance product by month-end of the data month (1 or Y means “Yes”). |
| msk\_credit\_card\_bill\_bal |  | Credit card bill amount of the bill cycle in the data month. |
| msk\_credit\_card\_limit |  | Credit card limit by month-end of the data month. |
| msk\_credit\_card\_revolving\_bal |  | The credit card revolving balance carried over from previous bill cycles. |
| msk\_total\_credit\_trn\_amount |  | Total transaction amount of cash withdrawal or transfer-out in the data month. |
| msk\_total\_credit\_trn\_atm\_amount |  | Total transaction amount of cash withdrawal or transfer-out via ATM in the data month. |
| msk\_total\_credit\_trn\_count |  | Total transaction count of cash withdrawal or transfer-out in the data month. |
| msk\_total\_deposit\_trn\_count |  | Total transaction count of cash deposit or transfer-in in the data month. |

**Questions:**

1. Loan product manager and marketing manager are discussing whether we should continue this loan campaign. They will consider from many perspectives. Examples are, but not limited to, response rate and revenue.

They approach you to understand the result and seek for your view on it. Please evaluate the result of the loan campaign and provide your view on the campaign effectiveness.

1. To meet the financial target on loan product, product manager and marketing manager decided to keep running the loan campaign. How can we improve the campaign effectiveness? You are encouraged to use whatever methodology to come up with a feasible solution. Examples are, but not limited to, business rules, decision tress, regression model or other techniques.
2. Due to marketing budget limitation, we can select 40,000 customers only for sending message and providing favored offer. How should we select the targeting customers? Which channels should we use when approaching designated customers? Why?