The Case Study

Analyzing an affinity credit card (special card only available to members of a specific group). Think of it like this - the credit card company is like Citibank and the affiliated group is a company like Indian Oil or Barista. The affiliated group has to pay some fees to credit card company (because the credit card company is providing this service to the group)

Facts:

1. average card balance is Rs 1000
2. each card has an interest rate of 15%
3. membership fee is Rs 20 per card
4. loss rate is 3% (NOTE: what are the interpretations of this? state your assumption CLEARLY when solving)
5. Rs 25 operating cost per card
6. Rs 10 affiliation fee per card (cost to the group organization itself, so that their members get this awesome card program)
7. 6.5% cost of funds (that credit card company must pay to the bank where it gets money)

There are two scenarios and all following questions must be answered for both scenarios. There might be some terminology that may not be familiar to you. This is expected. We want to see if you can research and find out about them and then answer these questions.

Scenario 1:

  i) Interest rate is simple interest.

  ii) Interest is calculated on a daily basis.

  iii) Average card balance is average end of month balance.

  iv) All members are more than a year old.

Scenario 2:

  i) Interest rate is compounded quarterly.

  ii) Interest is calculated on a monthly basis.

  iii) Membership grows at 5% month on month.

  iv) Card balance grows at 5% per month for each member.

  v)  Average card balance is average end of month balance.

Answer the following for both scenarios.

Q1: How much profit % is generated in 1 year?

Q2: The 3% loss rate can either mean either 3% of the outstanding balance defaults or 3% of the borrowers default on their entire balance. If the average balance is increased to $2000, what happens to the loss?

Q3: Is a borrower with a low balance more or less likely to default then a borrower with a high balance? Why? explain clearly

Q5: The group company has now become unhappy with the credit card provider. it wants to start its own credit card. But for that, it will need to purchase the customers from the current credit card company. If the affiliated group offered Rs 20 per account to purchase all the customers from the credit card company, what would their profit be? (assume that we are only talking about 1 year)

Q6: What numbers can the financial institution change to convince the affiliated group not to want to purchase, while still not going into a loss? Give a range of what the new numbers are (min and max)

ANSWERS

Some basic assumption:

1. Let the number of card holder be 100
2. Loss rate is variable, depends on the many other factors i.e. number of customers, average card balance and interest rate.
3. In scenario 2, Membership fees grows by 5% in the end of each month
4. In scenario 2, Average balance grows by 5% in the end of each month

**ANS 1**

The six sigma 5 why technique

Problem: loss of 3%

Why there is loss?

because people are unable to pay back their credits

Why people are unable to pay back their credits?

because repayable amount is very high due to high interest rate

Why interest rates are high?

Because credit card company faces high risk of uncertain payment

Why there is risk

Because the credit is not secured with any guarantee, definitely credit card company can sue the defaulter to get their credit back but it’s a later procedure the credit will be treated as default after 6 months of no payment

Why this is not secured

To attract more and more customer toward this kind of short-term loans

So, they main cause/root cause is lack of secured credit

How this problem can be solved?

The problem of loss can be solved if company start taking mortgage/Secure their credits so that they charge less interest and attract more customer with less default rate

According to scenario 1

Profit percentage is 33.6 approx.

And according to scenario 2

Profit percentage is 56.2 approx.

**ANS 2**

Since the 3% loss rate can either mean either 3% of the outstanding balance defaults or 3% of the borrowers default on their entire balance which directly means it’s dependent on other factors we can conclude with the increase in average balance is increased to $2000 the loss rate will increase but the rate of increase in loss may vary from different situations , which may be similar to the economics theory of return to scale , there can be three cases

1. When average balance increase by 100%, the loss rate may increase with less than 100%
2. When average balance increase by 100%, the loss rate may increase with 100%
3. When average balance increase by 100%, the loss rate may increase with more than 100%

**ANS 3**

If you have a credit limit of $5,000 and keep a balance of $4,000 on your credit card, your credit utilization is 80%, which is extremely high. This tells creditors and lenders you aren't responsible with credit and you become a high risk of defaulting on a future loan or credit card payment. A low credit utilization proves to creditors and lenders that a cardholder is able to manage credit responsibly. Maintaining a high credit card balance can lead to disaster. If an unexpected emergency arises, a high balance reduces your ability to use a credit card. It also increases the chance of increasing your debt load, using risky financial products or paying late fees.

The six sigma 5 why technique

Problem: borrower with high balance are more likely to default

Why borrower with high balance are more likely to default?

Because they need to pay heavy return

Why they need to pay heavy return

Because interest rate is high

Why interest rates are high?

Because credit card company faces high risk of uncertain payment

Why there is risk

Because the credit is not secured with any guarantee, definitely credit card company can sue the defaulter to get their credit back but it’s a later procedure the credit will be treated as default after 6 months of no payment

Why this is not secured

To attract more and more customer toward this kind of short-term loans

So, this gives the same result as question 1

How this problem can be solved?

The problem of default with high balance borrower can be solved if company start taking mortgage/Secure their credits so that they charge less interest and attract more customer with less default rate people with high balance have to give something more valuable as security and this led to less chance of default.

**ANS 5**

The six sigma 5 why technique

Problem: The group company is unhappy with the credit card provider

Why The group company is unhappy with the credit card provider?

Because group company may not find it profitable so they decided to purchase the customers from the current credit card company and start their own credit card.

Why credit card company is not profitable?

Because they are paying $1000 which may be high according to group company

why do group company think this affiliation fee is high?

Because the cost of fund they are getting in exchange of money and the affiliation fee they are spend is high according to the group company.

Why do group company think the cost of fund they are getting in exchange of money is less?

Cost of fund is only 6.5%

Why cost of fund is only 6.5%?

Credit card company want to gain as much as possible so they are giving less to group company

Solution: either a credit card company should increase interest and increase cost of fund so that their profit can be stable or increase the number of customers by decreasing interest rate.

According to scenario 1

Profit percentage after the affiliated group offered Rs 20 per account to purchase all the customers from the credit card company, is 31.2 approx.

And according to scenario 2

Profit percentage after the affiliated group offered Rs 20 per account to purchase all the customers from the credit card company, is 54.9 approx.

ANS 6 (answer in based on assumption )

If the credit card company increase the cost of fund to the level that give affiliated group as much profit as they are getting after purchasing all customer this will convince the affiliated group not to want to purchase while still not going into loss.

There are two options with credit card company either a credit card company should increase interest and increase cost of fund so that their profit can be stable or increase the number of customers by decreasing interest rate which will automatically increase the value cost of funds.

For second option New number for interest rate could be 7% to 9% this fall in interest rate would increase the number of customer and fall in the rate of default which results in the increase in profit

And for first option rate of interest could be between 17 to 19% and cost of fund be 10%