INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH & DEVELOPMENT

ISSN 2278 – 0211 (Online)

Study of Banking Break Even Point: An Innovative Tool for Banking Industry

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Abstract:
Breakeven point is that point of business target where there is no loss no profit it can recover its fixed cost. We always calculate Break Even Point of the Product only and never think about services sector like banking institution. This research paper developed the formula and methodology for banking breakeven point. Which indicates that amount of lending and deposit will recover the fixed cost and if there is desired profit it will also calculate.

Keywords:*Banking Breakeven Point, Banking breaks even lending, Break even deposit amount and Break even deposit interest and break even lending interest*

1. Introduction

1.1. Meaning of Breakeven Point

Break-even point is that point of sales or amount of sales or revenues must generate in order to equal to its expenses. In another words, it is the point at which the company neither earn a profit nor suffers a loss. It means equal to revenue to cost of that goods. It is a powerful quantitative decision making tool for managers. In its simplest form, break-even analysis provides insight into whether or not revenue from a product or service has the ability to cover the relevant costs of production of that product or service. Managers can use this information in making a wide range of business decisions, including setting prices, preparing competitive bids, and applying for loans with the financial institution

Variable Cost =Variable costs are those that increase with the quantity produced more materials will be required as more units are produced.

Fixed Cost = Fixed Cost are those that will be incurred by the company even if no units are produced. In a company that produces a single good or service, this would include all costs necessary to provide the production environment, such as administrative costs, depreciation of equipment, and regulatory fees. However, In a multi-product company, fixed costs are usually allocated to all products.

Marginal Contribution= Profit margin + Fixed Cost

P/V Ratio= Profit Volume Ratio (It indicates the Proportion of Profit + Fixed cost proportion out of selling price.

1.2. Importance of the Study

We always calculate the breakeven point of the product only. This study starts to study of the banking breakeven point. Before this study there was no concept of the banking breakeven point. In this study we can calculate the breakeven point of the banking sector. It gives an idea to banking industry haw we can calculate or how much amount is require to meet our fixed expenses it can be easily calculate. It will provide complete guidelines for the banking organization or to the researcher.

1.3. Objectives of the Study

- To find out the direct BEP (for Lending and Deposit) amount for the Banking Institutions.
- To find out the BEP Interest for Lending and Deposit amount for the Banking Institutions.
- To find out the BEP Interest for Lending and Deposit with desired amount of profit for the Banking Institutions.

The formula of BEP calculation in the manufacturing area is

$$\text{Break Even Point} = \frac{\text{Fixed Cost}}{1 - \frac{\text{Variable Cost}}{\text{Sales}}}$$

$$\text{Or BEP in unit} = \frac{\text{Fixed Cost}}{\text{Marginal Contribution per Unit}}$$

$$\text{Or BEP} = \frac{\text{Fixed Cost}}{\text{P/V Ratio}}$$

$$\text{Profit Volume Ratio} = \frac{\text{Marginal Contribution}}{\text{Sales}} \times 100$$

OR

Total Contribution = Total Fixed Costs

Unit Contribution x Number of Units = Total Fixed Costs

$$\text{Number of Units} = \frac{\text{Total Fixed Costs}}{\text{Unit Contribution}}$$

Example 1. Suppose the fixed costs of a factory are Rs. 15000/- per year, the variable cost is Rs. 5 per unit and selling price is Rs. 10 per unit. What will be the breakeven point in terms of quantity or in terms of Rupees?

$$\text{Number of Units} = \frac{\text{Total Fixed Costs}}{\text{Unit Contribution}}$$

Total Fixed Costs = 15000/-

Unit Contribution = Selling price – Variable Costs = 10 - 5 = 5

BEP in Units = $\frac{15000}{}$ = 3000 Units

BEP in Rs = BEP Units x Selling Price = 3000 x 10 = 30000/-

$$\text{BEP in Rs} = \frac{\text{Fixed Costs}}{\text{Contribution Margin}}$$

$$\text{BEP on Rs} = \frac{15000}{\text{Contribution/ Sales}}$$

$$\text{BEP on Rs.} = \frac{15000}{0.5} = 30000$$

BEP in Rupees = 30000/-

Verification: - BEP Sales – Fixed cost = Variable cost.

30000-15000 = 15000 (5 x 3000)

The above mentioned example is for the product only.

2. Break-Even Point Calculation for Banking Institution

BEP means breakeven point. In manufacturing it is that point of production where no loss no profit. As like in banking, it is that point where banks earn that amount, where no profit no loss. This point is called as a break-even point of the banks. This calculation is useful and important in risk management. Even it is useful in risk identification and for business risk reduction.

Banking institution comes under service sector; they don't produce any physical products. They provide services like deposits and lending. There is some difference between lending and deposit rates. We can assume deposits rates are direct expenses and lending rates is a selling price. We can find Contribution. Therefore contribution equal to fixed cost + profit.

2.1. Assumptions of Banking Break-Even Point

Banking Break even points will give accurate amount if this assumption will fulfills.

- Variable cost is interest in deposits.
- Fixed costs are those cost which do not very up to some limitation of the business.
- Selling price is a lending interest rate.
- There are only in the case of lending if investment is there the return may be same as lending.
- There should be credit and deposit ratio will be 100%.
- There is no other source of income.
- Rate of interest is fixed to that period.
- There should not any interest variation in lending and deposits.

2.2. New Replacing Word with Traditional Word

We can assumes

Sales price = Lending rate

Direct cost = Deposit rate

Therefore,
Contribution= Lending rate – Deposits rates.
Therefore the formula should be

$$\text{Breakeven Point} = \frac{\text{Fixed Costs}}{\text{Lending rate-Deposit rate}}$$

BEP in Lending and Deposits amounts

$$\text{Breakeven Point} = \frac{\text{Fixed Costs}}{\text{Lending rate-Deposit rate}}$$

$$\text{Breakeven Point} = \frac{\text{Fixed Costs}}{\text{Contribution}}$$

$$\text{Break Even Point} = \frac{\text{Fixed Cost}}{1 - \frac{\text{Deposit Rate}}{\text{Lending Rate}}}$$

Example No 2. If Lending rate = 12 % = Selling Price is 12 Rupees
Deposit rate = 8% = Variable Cost is 8 Rupees
If Fixed Cost is equal to 50000/-
Then BEP = ?
The formula is

$$\text{Break Even Point} = \frac{\text{Fixed Cost}}{1 - \frac{\text{Deposit Rate}}{\text{Lending Rate}}}$$

$$\text{BEP} = \frac{50000}{1 - \frac{08}{12}}$$

= Rs. 150000 Interest should be earned. This is a like quantity sales to earned Rs. 150000.
For earning interest Rs. 150000 we must lend $\frac{(150000 \times 100)}{12} = 1250000/-$
If we lend this amount 1250000/- we earn Rs. 150000 interest @12%
If we deposit this amount 1250000/- we must pay Rs. 100000 Interest @8%

$$\frac{(1250000 \times 8)}{100} = 100000/-$$

Therefore,
From above calculation we found Rs. 150000 is an direct earning & Rs. 100000 is a direct expenses.
Fixed Cost = Selling Cost – Direct Costs
50000= 150000-100000
BEP Lending = 1250000
BEP Deposit = 1250000
The another methods of representing the Banking Breakeven point
This formula find out the actual amount to be deposit and same will be lend
These formulas calculate the breakeven interest amount.
This formula find out the actual amount to be deposit and same will be lend

- BEP of Lending & Deposit $= \frac{\text{Fixed Expenses} \times 100}{\text{Bank Lending Rate} - \text{Bank Deposit Rate}}$

Same amount from:-
Example No 2. If Lending rate = 12 % = Selling Price is 12 Rupees
Deposit rate = 8% = Variable Cost is 8 Rupees
If Fixed Cost is equal to 50000/-
Profit to be earned 25000/-

$$\text{BEP} = \frac{50000 \times 100}{12 - 08} = 1250000/- \text{ (Lending and Deposit Amount)}$$

$$\text{Or BEP} = \frac{50000}{0.12 - 0.08} = 1250000/- \text{ (Lending and Deposit Amount)}$$

- BEP of L/D &Profit $= \frac{\text{Fixed Expenses + Targeted profit} \times 100}{\text{Bank Lending Rate} - \text{Bank Deposit Rate}}$

BEP with Profit = $\frac{50000+25000 \times 100}{12-08}$ = 1875000/- (Lending and Deposit Amount)

Or BEP Profit = $\frac{50000+25000}{0.12-0.08}$ = 1875000/- (Lending and Deposit Amount)

If we lend this amount 1875000/- we earn Rs. 225000 interest @12%
For earning interest Rs. 225000 we must lend $\frac{(225000 \times 100)}{12}$ = 1875000/-
If we deposit this amount of Rs. 1875000/- we must pay Rs. 150000 Interest @8%
$\frac{(1875000 \times 8)}{100}$ = 150000/-
Therefore,
From above calculation we found Rs. 225000 is a direct earning & Rs. 150000 is a direct expense.
Direct income – Direct Expenses = Profit + Fixed cost
225000-150000 = 25000 +50000
BEP Lending = 1875000/-
BEP Deposit = 1875000/-
These formulas calculate the breakeven point of lending and deposit amount.

- BEP of Lending & Deposit = $\frac{\text{Fixed Cost} \times 100}{\text{(Deposit Interest rate /Lending interest rate).}}$
- BEP of L/D &Profit = $\frac{\text{Class B type expenses +Dep +Targeted profit} \times 100}{\text{(Deposit Interest rate /Lending interest rate).}}$

Fixed Costs = Administrative costs, depreciation of equipment, and regulatory fees
This Formula finds out the total Receive from the required business

2.3. Fixed Costs
Fixed costs are those business costs that are not directly related to the level of production or output. In other words, even if the business has a zero output or high output, the level of fixed costs will remain broadly the same. In the long term fixed costs can alter- perhaps as a result of investment in production capacity (e.g adding a new factory unit) or through the growth in overheads required to support a larger, more complex business**.**

2.4. Variable Costs
Variable costs are those costs which increases or decreases directly with the level of output. They are raw material cost direct labour cost fuel and revenue related costs but in the case of Banking business variable cost is interest in deposit because cost of deposit increases when deposit increases.

3. Finding

- From above study we can find out breakeven point of the banking organization like manufacturing organization. For finding direct breakeven lending and deposit amount we can use this formula.

BEP of Lending & Deposit = $\frac{\text{Fixed Expenses} \times 100}{\text{Bank Lending Rate – Bank Deposit Rate}}$

- Another method of finding banking breakeven point is to find out that amount of interest where no profit no loss. For that we can calculate from this formula

Break Even Point = $\frac{\text{Fixed Cost}}{1-\frac{\text{Deposit Rate}}{\text{Lending Rate}}}$

- If we want to find out breakeven point with desired amount of profit for the Banking Institutions this formula is more suitable for calculation.

BEP of L/D & Profit = $\frac{\text{Fixed Expenses + Targeted profit} \times 100}{\text{Bank Lending Rate – Bank Deposit Rate}}$

3.1. Suggestion
In earlier study breakeven point is possible for manufacturing industry only. All banking business is a one of the service sector industry So many of us think it is impossible to calculate the breakeven point of the banking organization because it does not produce product only it work lending and deposits only. It is possible to the banking institution. This study focused on the breakeven point of

lending and deposit and with profit margin. All sector banking institution can used this formula for calculation for finding their breakeven point.

4. Conclusions

The above finding and suggestion based on the earlier assumptions. For breakeven point calculations we must fulfilled the above mentioned assumptions. This formula is useful we can calculate breakeven interest as well as breakeven deposit amount and lending amount from above study. This study wills again refining in the latter study with decreasing number of assumptions.

5. References

1. Saxena V.K.,Vashist C.D (1999) Advanced Cost & Management Accounting, New Delhi, Sultan Chand & Sons
2. Garrison, Ray H., and Eric W. Noreen (1999) Managerial Accounting. Boston: Irwin/McGraw-Hill.
3. Kaptan S.S (2012) New Concepts in Banking, New Delhi, Sarup & Sons.
4. Horngren, Charles T., George Foster, and Srikant M. Datar (1997) Cost Accounting: A Managerial Emphasis. Upper Saddle River, NJ: Prentice Hall.