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Myths & Facts of EMI & EAI

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ABSTRACT

We are very much aware about banking functions; one among them is assessing loans. Loan Products are marketed by both Public and Private. Loan Products of Private banks are highly appreciable and accepted in the market. It is found that these products are designed according to the consumer needs. But do the consumers are aware about the amount which they are paying to the banks and how it is calculated and how much interest and principle amount they are paying against EMI. This paper deals with the Empirical study of Equated Annually Installments and Equal Monthly Installments and also to find out the methods used by the bank for calculating it. Using the Practical application of Capital Recovery Factor in the study and to calculate the EMI of Loan provided by the ICICI Bank with an Impact of CRR on the Interest rate of Bank. This study is mirror which shows the clear picture about the EMI and EAI.

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Introduction

Financial Management contains the study of Financial aspects . It deals with Indian Financial system, Time value of Money, Risk and Return, Valuation of securities, and many more. This study is to calculate the Equated Annually Installments and Equal Monthly Installments. To find out the methods used by the bank for calculating it. Using the Practical application of Capital Recovery Factor in the study to calculate the EMI of Loan provided by the ICICI Bank and to highlight the facts .

COMPANY PROFILE

ICICI Bank is India's second-largest bank with total assets of Rs. 3,446.58 billion (US\$ 79 billion) at March 31, 2007 and profit after tax of Rs. 31.10 billion for fiscal 2007. ICICI Bank is the most valuable bank in India in terms of market capitalization and is ranked third amongst all the companies listed on the Indian stock exchanges in terms of free float market capitalization*. The Bank has a network of about 950 branches and 3,300 ATMs in India and presence in 17 countries. ICICI Bank offers a wide range of banking products and financial services to corporate and retail customers through a variety of delivery channels and through its specialized subsidiaries and affiliates in the areas of investment banking, life and non-life insurance, venture capital and asset management. IN 2005 ICICI bank has provided 1.2 million loan as a micro finance to the underprivileged people and ranking No. 1 in India among the Private sector banks.

METHODOLOGY

Methodology is the Power of Methods and a very systematic approach of doing the things. Research methodology is the systematic procedure involved in conducting a research. It includes the techniques used for data collection and the tools for analysis called analytical tools.

The method used for calculating the Equated Annually Installments and Equal Monthly Installments by using Capital Recovery Factor which come under Time value of Money concept.

CONCEPTUAL RELEVANCE

Time Value of Money:

It deals with value of money those changes according to the time factor. Their two methods to calculate the Time Value of Money i.e Compounding and Discounting Method. The compounding Method is knows as for calculating the Future value of Money and again sub divided such as:

- 1. Future value of Single Flows.
- 2. Future value of Multiple Flows.
- 3. Future value of Annuity.
- 4. Doubling Method.

- Rule of 69
- Rule of 72

The Discounting Method is meant for calculating the Present Value of Money which can be sub divided as under :

- 1. Present value of Single Flows.
- 2. Present value of Multiple Flows.
- 3. Present value of Annuity.
- 4. Capital Recovery Factor.

Time value of Money the concept of Capital Recovery Factor is used for the calculation of EMI of loans. It comes under the Present Value of Annuity i.e. Annuity is the term used to describe a series of periodic flows of equal amounts. Here the equal amount will be monthly installment paid by the customer after taking the loan.

$$\text{Capital Recovery Factor} = \frac{\text{Principal Amount}}{\text{PVIFA (K,N)}}$$

Or
R

Where as,

- R = Capital Recovery Factor
- PVIFA = Present Value Interest factor Annuity
- K = rate of interest
- N = maturity period.

With the help of the above formula it is easy to calculate the amount paid annually to the bank as EMI and also to calculate the breakup of the EMI in to Principal and Interest.

Varieties of Loan Products in ICICI Bank:

The varieties of loans, different parameters of rates of interest, Calculation of EMI, Customer having been given options to choose the types of interest rates. The Varieties of Loan provided by the bank are as follows:

- 1. Personal loans



- 2. Working capital Loans



- 3. Home loans



4. Car loan



5. Two Wheeler Loans



6. Educational Loans

7. Personal Loans on credit cards



The types of loans and rates of interest.

Sr. No.	Loans	Rate of interest
1	Personal loan	14-23 %
2	Working Capital loan	19.5 %
3	Home loan	11%
4	Car loan	11%
5	Two Wheeler loan	11%
6	Educational Loan	13-15 %
7	Personal Loans on Credit cards	18-23%

But as a constrain for my study I consider only two product those are.

- 1)Home Loan
- 2)Educational Loan

ANALYSIS OF DIFFERENT PARAMETERS OF RATES OF INTEREST

The Interest rate charged by the bank is simple not compounding. But Bank charges some processing fees on car loan i.e. 5 %-10 % and on every other loans at 2 %. In spite of this customers have a choice of choosing the type of interest rate to be charged i.e. Floating or Fixed.

Floating rate of interest is such rate of interest that varies thought out the life time of loan according to the banks rates prevailing from time to time. As per changes effected by the RBI . It is actually less in first 3 years and after that the rate of interest grows high.

Fixed rate of interest is such rate of interest that is fixed as a benchmark irrespective of changes in the bank rate as it happens in case of floatation interest rates.

Myths

- HOME LOAN

EQUATED MONTHLY INSTALLMENT

The Equated Monthly installment is calculate by ICICI bank is calculated by the formula .

$$= \text{Principal} + (\text{Principal} * \text{Flat rate} * \text{No. years.}) / \text{No. Months}$$

$$= 10,00,000 + (10,00,000 * 0.11 *12) / 144$$

$$= 12,836$$

I taken a profile of one customer of the bank he has take Home Loan from of Rs. 10,00,000 according to the existing rate of Interest he is suppose to pay 11 % and the period of loan is 12 years.

Here I used the Capital Recovery Factor for calculating EAI and EMI.

$$\text{Equated Annual Installments} = \text{Principal} / \text{PVIFA}(k,n) = 10,00,000$$

$$\text{PVIFA}(11\%,12)$$

$$= 1,54,036.$$

$$\text{Equated Monthly Installments} = \text{EAI} / 12$$

$$= 1,54,036 / 12$$

$$= \text{Rs. } 12,836.$$

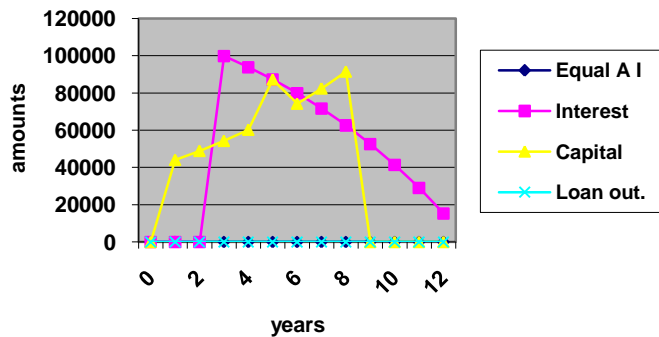
The calculated by both methods comes same where it is true but the fact is different the below table explains use about the segmentation of the EMI which the brower repays

Facts

EAI Includes the combination of Interest and Capital shown in the below table.

Years	Equal Annual Installments B	Interest Content C	Capital content D= B-C	Loan out Standing E
0	NIL	NIL	NIL	10,00,000
1	1,54,036	1,10,000	44,036	9,55,964
2	1,54,036	1,05,156	48,880	9,07,082
3	1,54,036	99,779	54,257	8,52,827
4	1,54,036	93,811	60,225	7,92,602
5	1,54,036	87,186	67,186	7,25,752
6	1,54,036	79,833	74,203	6,51,549
7	1,54,036	71,670	82,366	5,69,183
8	1,54,036	62,610	91,426	4,77,757
9	1,54,036	52,553	1,01,483	3,76,274
10	1,54,036	41,390	1,12,645	2,63,629
11	1,54,036	28,999	1,25,037	1,38,592
12	1,54,036	15,245	1,38,792	NIL

From the above table it analyzed that banks charged high interest in the initial stages to reduce the risk of creditability of the bank.



It is clearly observed in the chart that the interest rate at the initial level is high and the capital is less in the Equated Annual Installments. The Equated Annual Installment is nothing but the EMI multiple with 12 months. So annually whatever the amount is paid to the bank initially the bank collect the greater amount of Interest and lesser amount of principal to minimize their risk.

• EDUCATION LOAN :

EQUATED MONTHLY INSTALLMENTS:

I Study an case of student takes loan of amount Rs. 4,00,000 for his education purpose . for which bank charges some procedure fee and at the time EMI the student has to pay rate of interest on the loan for 2 year during his studies and after completion of the course he is suppose to pay the principle amount so the EMI will be calculated at two different levels i.e. at the time interest paying and at the time of principle repayment.

Therefore EAI for the Interest will be :

$$4,00,000 * 13 / 100 = \text{Rs. } 52,000 \text{ yearly}$$

$$\begin{aligned} \text{EMI} &= 52,000 \\ &12 \\ &= \text{Rs. } 4333.33 \end{aligned}$$

EAI for the Principle will be as it has a maturity of 5 years

$$\begin{aligned} \text{EMI} &= 4,00,000 \\ &48 \\ &= \text{Rs. } 8333.33 \end{aligned}$$

Under education Loan no myths and facts where found because here the banks take care about the students they don't much emphasis on the interest. Here the banks go little bit ethically.

Cash Reserve Ratio

A cash reserve ratio (or CRR) is the percentage of bank reserves to deposits and notes. The cash reserve ratio is also known as the cash asset ratio or liquidity ratio. India's central bank ordered commercial banks to hold a larger share of deposits in cash, and raised a key short-term lending rate in a bid to curb high inflation that has stoked

fears of overheating. The reserve ratio is sometimes used as a tool in monetary policy, influencing the country's economy, borrowing, and interest rates . However, Central banks rarely alter the reserve requirements due to the fact that it would cause immediate liquidity problems for banks with low excess reserves. Instead, open market operations are used. As of 2006 the required reserve ratio in the United States was 10% on transaction deposits (component of money supply "M1"), and zero on time deposits and all other deposits. An institution that holds reserves in excess of the required amount is said to hold excess reserves. "Inflation is a monetary phenomenon and is also being driven by supply-side constraints," Finance Minister P. Chidambaram said. The Reserve Bank of India stipulates the cash reserve ratio — the proportion of deposits that commercial banks must hold in cash to control the availability of money in the market and there by control the inflation. Hence CRR as an instrument for balancing monetary impact, should only be used under extreme conditions of excess liquidity and that too when other options are exhausted.

Impact of CRR on the Banks Interest rate:

CRR affects the bank interest rate, but the other side of the coin if the Private banks are not increasing their interest to stick to the competition. They have to hit their Net Interest Margin which they earn from the banking functions.

The Net Interest Margin is nothing but the difference between Actual yield – cost of funds. At present the banks NIM is 3.50% and to stick to the market competition if they do not vary the interest rate than their NIM will be hit.

Current changes in banking sectors.

The interest rate on ICICI Bank Home Loans is linked to the ICICI Bank Floating Reference Rate (FRR / PLR). As per earlier communication, FRR / PLR was increased by 0.5% on 1% on Feb 9, 2007. Consequently interest rate for all existing customers under Adjustable Rate Home Loans (ARHL) also went up by 1%. Subsequent to this change, as per recent announcement, the FRR / PLR has been further increased by 1% effective from March 31, 2007. The FRR has gone up from 11.75% to 12.75% and PLR has gone up from 13.75% to 14.75%.

Apprehending tightening of monetary policy by the Reserve Bank in its forthcoming annual credit policy, industry chamber Assocham said increasing interest rates will not help in containing inflation. "The price and supply conditions may get worse if the RBI resorts to raising interest rates to control the spiraling inflation and the move would not only hurt the industry but also the consumers," according to an Assocham survey of CEOs. RBI is related to announce the annual credit policy on

April 29 amid apprehension that it would raise interest rates to control inflation. April 8, 2008.

Central Bank of India has revised interest rates downward on various retail loans. In respect of housing loans, the interest rate has been reduced by 25 basis points on the floating rate to 9.25% and 50 bps on the fixed rate to 10%. In respect of educational loan, the rate has been reduced by 50 bps to 12% for male students and 11.5% for female students. In case of students of IIT and IIM, the interest rate is further reduced to 11.5% for male students and 11% for female students. For scheduled caste(SC), scheduled tribe (ST) and minority students, the rate is 11% for male/female students for normal/IIT/IIM studies March 20, 2008.

INDIAN BANK has registered a 61.44 per cent increase in its net profit at Rs 307.50 crores for the quarter ended December 31, 2008 compared to Rs 190 crores worth net profit the bank earned for the corresponding period last year. The bank reported a 36.3 per cent increase in its total income at Rs 1,676 crores for the third quarter as against Rs 1,229.5 crores income for the same period in the last financial year. The interest income rose by 30.4 per cent to Rs 1,375.4 crores and the bank's net interest income increased by 35 per cent at Rs 561.79 crores. January 14, 2008

CONCLUSIONS:

The ICICI Bank provides all types of banking services to their customers .

It was found that as they provide various types of rates of interest on loan it vary according to the terms and conditions. Again the customers have a choice about the type of rates of interest they prefer. But banks have their own objectives behind that for charging different rates of interest. After the analysis of the floating rate and fixed rate , the customers will be benefited if they go with floating rates of interest only. The banks to reduce their risk factors charged high interests in the initial stage and less amount of principal against EMI or EAI. Their less private banks which are found to provide educational loan to the society ICICI is one among them. The increase in CRR will affect the increase in the rates of interest charged by the bank. The CRR is increased to control the inflation rate and to regulate the fiscal policy of the nation which will help to slow the economy.

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