Figuring out the EMI

Some of us simply don't take things at face value. We like to check them out. The ubiquitous EMI calculators on most home loan websites tell us what the EMI would be for a given combination of rate, loan amount and time period. What if we could replicate the numbers on our worksheets? And perhaps figure the logic of those numbers? That is what we seek to demonstrate this week.

It would be an ideal world where we can borrow Rs.100 and return the same amount over time. The real world features interest rates. So if we borrowed Rs.100, and the borrower charges 8% interest per year, we will have to return Rs.108 after a year. Alternatively, if we borrowed 100 and repaid 108, we can use both numbers and figure that the interest rate was 8%.

If a bank makes out a home loan and charges an interest rate of 8%, this interest is built into the repayment EMI, using the same logic. The link between the EMI repayments and the loan amount is the interest rate. (To those more inclined to take in financial maths, the sum of the present value of the EMIs, discounted by the interest rate, is the value of the home loan).

To know the EMI for a loan you are considering, do the following:

- Open a spreadsheet
- Click on the function icon 'fx' or go to Insert> function
- Select 'Financial' under the head 'or select a category'
- Under the list of functions, select 'PMT' (See Image 1)

When you click on PMT, a window like the one displayed in Image 2 opens.

- Key in the interest rate as '8%/12' since the repayment is monthly
- Key in the nper as '15*12' since monthly instalments are payable for 15 years
- Key in PV as the value of the loan -1000000 (do not insert commas)
- The formula result at thebottom of the window is your EMI – Rs. 9557.

To know how much of the EMI is interest and how much is principal, we can use a function called IPMT. Repeat the same steps to select the financial function IPMT. The screen you get is like Image 3.

- Key in the interest rate as '8%/12' since the repayment is monthly
- 'Per' is the specific instalment, for which you want to find out the interest component. In the illustration, we have taken the 10th EMI. Key in '10'.
- Key in the nper as '15*12' since monthly instalments are payable for 15 years
- Key in PV as the value of the loan -1000000 (do not insert commas)
- The formula result at the bottom of the window is your interest component – Rs. 6489.

The 10th instalment of EMI of Rs 9557 is split into Rs. 6489 towards interest, and Rs. 3068 (9557 minus 6489) towards principal.
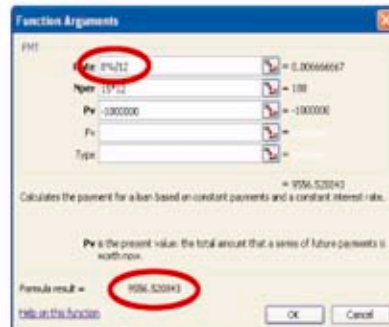
You can also use the spreadsheet function PPMT to get the results for principal component in an EMI, in the same manner.

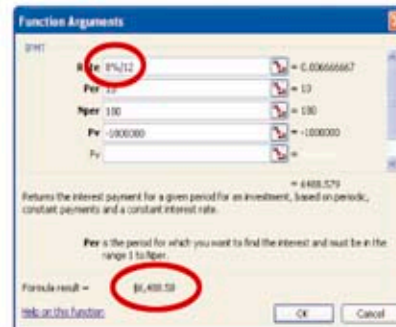*Centre for Investment Education and Learning*
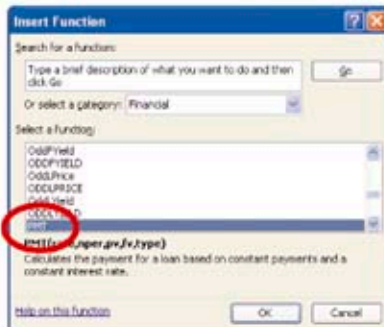
FAQs

Is the EMI equally split between interest and principal?

No. A large proportion of the EMI goes towards paying the interest and a smaller proportion towards principal, in the initial period. As the loan matures, the interest component falls, and the principal component moves up.

Is EMI computed on simple interest basis or compounded interest basis?

A home loan is a long term loan, repayable over 10 years or more. It therefore charges a compounded rate of interest.

If a loan is pre-paid, would this amount go towards interest or principal?

Usually, a pre-payment will be used towards principal repayment, though the practice can vary among lenders.

We welcome your suggestions and feedback on this column. Please use the 'Email Us' link at www.icicibank.com or send <CF your comments> as an SMS to 53030.

I am buying a house on this beach by Monthly Installment. This month I have bought a door, next month I will buy windows, then the wall & roof...

>> IMAGE 1

>> IMAGE 2

>> IMAGE 3