

How to Calculate IRR

1. With the help of Excel

money received in future	- 400000
instalment 1	150000
instalment 2	150000
instalment 3	150000
instalment 4	150000
irr	18.45%

1. Formula:

money received in future	-400000
instalment 1	150000
instalment 2	150000
instalment 3	150000
instalment 4	150000
irr	18.45%

=IRR(
IRR(values, [guess])

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2. Without the help of Excel

	-
money received in future	400000
instalment 1	150000
instalment 2	150000
instalment 3	150000
instalment 4	150000

a. Let's Calculate NPV @ 15%

instalment 1	150000	0.869565	130434.8
instalment 2	150000	0.756144	113421.6
instalment 3	150000	0.657516	98627.43
instalment 4	150000	0.571753	85762.99
total			428246.8

And you can see the NPV is not equal to Rs. 4,00,000

b. Let's Calculate NPV @ 20%

instalment 1	150000	0.833333	125000
instalment 2	150000	0.694444	104166.7
instalment 3	150000	0.578704	86805.56
instalment 4	150000	0.482253	72337.96
total			388310.2

And you can see the NPV is not equal to Rs. 4,00,000

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So in the case a the NPV is more than Rs. 4, 00,000 and other case (b) NPV is less than Rs. 4,00,000

So here we need a formula to find a rate where the all the present value of future payments is equal to Rs. 4, 00,000

$$=15+ (428246.8 - 400000)/(428246.8 - 388310.2) * 5$$

$$= 18.54\% \text{ (approx.)}$$

So here we can calculate IRR as explain above.

Thanks !!

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