

Interest And Its Types

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What is Interest???

- interest is a payment made by a borrower to the lender for the money borrowed and is expressed as a rate percent per year.
- As Prof. Marshall has said – “The payment made by borrower for the use of a loan is called Interest.”
- As Prof. Keynes has said – “Interest is the reward of parting with liquidity for a specified period.”
- According to Carver – “Interest is the income which goes to the owner of capital.”

Why Interest is Paid or Charged:

There are two views regarding Interest paid or is charged:

1. From Debtor's point of view
2. From Creditor's point of view

From Debtor's Point of View:

- Debtor's pay interest on capital because he is aware that capital has productivity.
- if it can be used in production there can be increase in income.
- Out of the earned income, a part of the income is paid to the creditor or a lender from whom money has been taken as loan is known as Interest.

Important reasons for giving Interest

- **Use of Capital:**
- Whatever amount is paid to the owner of the capital for the use of the capital is known as Interest.
- the capital is used in further production and whatever he earns, he pays a part of his earnings to the owner of the capital or the lender of the money.

Continued

- **Reward for Risk:**
- Loan giving is a risk which lender takes at the time of giving loan or advancing money.
- Lender exposes himself to risk when he lends money and sometimes the loan become bad-debts.
- It has been said that Interest is the reward for risk taking.

Continued...

- **Interest is Reward for Inconvenience:**
- When a lender gives loan of money he forgets its use for the duration of the loan, if he needs this amount for his personal use, he will have to undergo the inconvenience of arranging it from some other source. Thus, he feels inconvenience.
- **Expenses in Relation to Management of Business:**
- For organizing and running the business, businessman needs money. Money taken as loan for running and managing business, keeping accounts, maintaining standard of business etc. one has to arrange money and for that has to pay interest over the money.

From Creditor's Point of View

- Creditors or lender of money demands Interest because he has taken pains in saving money.
- Has suffered inconveniences in postponing his needs and has taken risk of bad debts.
- He must get some reward for the pains of inconvenience and risk.

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Types of Interest:

1. Simple Interest
2. Compound Interest

Simple Interest:

- interest paid or computed on the original principal only of a loan or on the amount of an account.
- The simple interest I on a principal (present value) P at an annual interest rate i for N years is $I = PNi$.

Example

- calculate the simple interest on \$1000 deposit at an annual interest rate of 5% for 2 years.
- ANSWER: $I = (\$1000)(.05)(2) = \100 .
- Also the future value of the investment is :

$$F = P + I = \$1000 + \$100 = \$1100.$$

Add – on interest example

- A \$1200 flat-screen TV is financed over a 2 year period with 12% add-on interest. Find the monthly payment.
- First calculate the simple interest on the loan: $\$1200 \times 0.12 \times 2 = \288 .
- The future value of the loan is
 $\$1200 + \$288 = \$1488$.
- Since the loan is for 2 years, there will be 24 monthly payments. Thus the monthly payment is $\$1488/24 = \62

Compound Interest:

- **Compound interest** is the addition of **interest** to the principal sum of a loan or deposit, or in other words **,interest on interest.**

$$F = P(i+1)^N \quad \$ F = A((i+1)^N - 1)/i$$

- F = Future Payment
- P = Principle Amount
- I = interest rate
- N= number of years (time)
- A = Installments

Continued

- Principle plus the interest of one period becomes the principle for next period.
- This goes on till the total time period for which the interest is calculated.
- This period is called the period of compounding or the compounding interval.

Consider this example: You begin with \$100 invested at 10% annual interest.

After	Simple Interest	Compound Interest
1 year	110	110
2 years	120	121
3 years	130	133
4 years	140	146
5 years	150	161
10 years	200	259
20 years	300	672
50 years	600	11,739

Interest Graph

