

# Discover the power of compounding

Interest on an investment can 'compound' and grow like a snowball gathering size and momentum. It starts small, but as its size increases, it grows at a quicker pace.

## Compound Interest = "Interest on Interest"

Compound interest is the interest earned on the initial principal amount plus on the interest accrued so far. In other words, you earn interest on your initial investment and you're earning interest on that interest.

## Illustration of simple interest v/s compound interest



### Scenario 1: Simple Interest

Principal: Rs. 10,000

Annual interest: 10%

You earn interest of Rs. 1,000 after 1 year

### Scenario 2: Compound Interest

Principal: Rs. 10,000

Annual interest: 10%

You earn interest of Rs. 1,000 after 1 year



### What happens in the second year?

#### Scenario 1: Simple Interest

The interest earned with simple interest is not reinvested and does not add to the investment corpus. Therefore, in the second year:

- ▶ Your account balance is still Rs. 10,000 ▶▶
- ▶ Balance at the beginning of the year: Rs. 10,000
- ▶ Balance after earning interest: Rs. 11,000 (As the amount remains the same at the start of each year, there will be no additional interest earned.)

#### Scenario 2: Compound Interest

With compounding, you earn interest on your original investment and the interest you've already accrued.

- ▶ Your account balance is now Rs. 11,000, rather than Rs. 10,000 ▶▶
- ▶ You thus earn higher interest in the next year:
- ▶ Balance at beginning of year: Rs. 11,000
- ▶ Balance after earning interest: Rs. 12,100 (Instead of just earning simple interest on your initial principal, your previous interest itself earns more interest.)

## How to calculate compound interest



$$A = P \times \left(1 + \frac{r}{n}\right)^{nt}$$

A - Amount after compounding  
P - Initial principal  
r - Interest rate

n - Number of times the interest is compounded per period  
t - Number of periods (the amount of time in years)



## What makes compound interest so powerful?

### Simple Interest

Kiran invests Rs. 10,000 with 10% return with simple interest.

After one year: A = Rs. 11,000

After five years: A = Rs. 15,000

After twenty years: A = Rs. 30,000

### Compound Interest

Suman invests Rs. 10,000 with 10% compounded annual return.

After one year: A = Rs. 11,000

After five years: A = Rs. 16,105

After twenty years: A = Rs. 67,275

As you can see, the results in the first few cycles aren't that impressive, but the effect of compounding really kicks in as the interest is added again and again over several years.

## Factors that affect your long-term balance with compound interest:



### Initial Deposit

Compounding works the same, irrespective of the amount of money you invest. However, when you start with a large deposit, you will realise greater sums over time.



### Compounding Frequency

The more frequent the compounding, the more the amount you receive. This is because the effective annual rate is higher as compounding frequency increases. Choose savings accounts that compound daily (even if you see interest payments posted to your account once a month, computations are done daily).



### Interest Rate

Higher rates indicate a faster growth rate. But even with lower rates, you can reap significant amounts with compounded interest over extended periods.



## To sum it up

"Compound interest is the eighth wonder of the world." – Albert Einstein  
Harness the power of compounding and turbocharge your investments today!