

# STOCK MARKET INVESTMENT RISK & RETURN

— Understand Risk Today, Create Wealth Tomorrow —



KNOWLEDGE + DIVERSITY + PATIENCE + DISCIPLINE = WEALTH CREATION

## 1 INTRODUCTION

The stock market offers incredible opportunities for wealth creation but comes with uncertainty.

Risk and Return are the two sides of the same coin. Understanding them helps investors make better decisions and build long-term financial freedom.

*"In the short run, the market is a voting machine, but in the long run, it is a weighing machine."*  
— Benjamin Graham

## 2 WHAT IS RISK?



### MARKET RISK

Loss due to overall market movements.



### INFLATION RISK

Loss of purchasing power over time.



### INTEREST RATE RISK

Changes in rates affect bond & stock prices.



### LIQUIDITY RISK

Difficulty in buying or selling investments.

## 3 WHAT IS RETURN?

Return is the profit or gain earned from an investment.



### CAPITAL GAIN

Profit from increase in price of an asset.

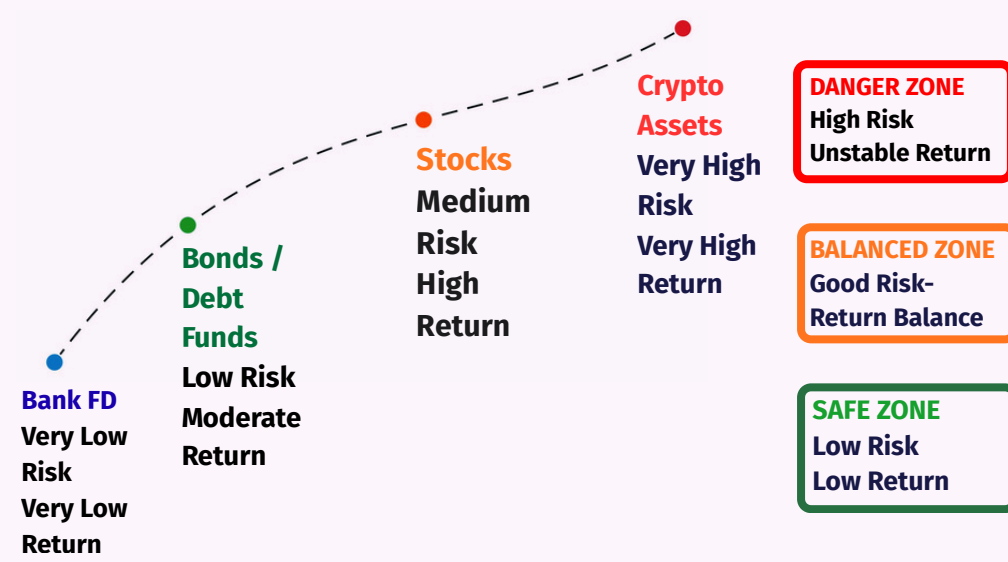


### DIVIDENDS

Portion of profits distributed by companies.

## 4 THE RISK-RETURN TRADE-OFF

Generally, higher potential returns come with higher risks.



The goal is not to eliminate risk, but to find the right balance.

## 5 HOW DO WE MEASURE RISK?

### Volatility

Measures the degree of variation in returns.

$$\sigma = \sqrt{\frac{1}{N-1} \sum_{i=1}^N (R_i - \bar{R})^2}$$

where,  
R<sub>i</sub> = Individual return  
R̄ = Average return  
N = Number of observations

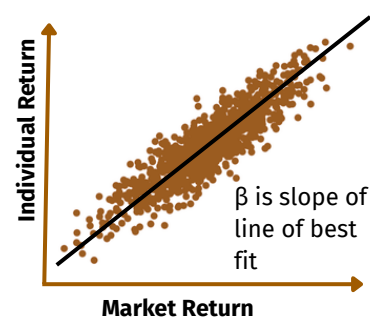


### Beta

Measures a stock's sensitivity to market movements.

$$\beta = \frac{Cov(R_i, R_m)}{Var(R_m)}$$

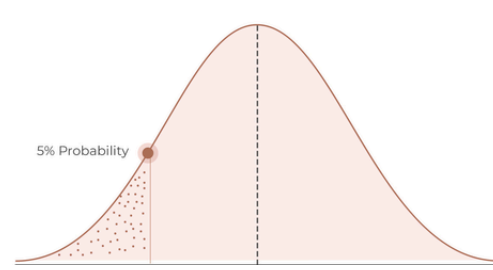
β > 1: High risk  
β = 1: Moves with market  
β < 1: Low risk



### Value at Risk

Potential maximum loss in a given time period at a certain confidence level

$$P[\text{Loss} > VaR_p] \leq 1 - p$$



Tailing area under the loss distribution curve represents confidence level p

## 6 RETURN METRICS

### A) SIMPLE RETURN

Gain relative to starting value.

$$\text{Return} = \frac{\text{final} - \text{initial}}{\text{initial}}$$

### B) COMPOUND GROWTH

$$A = P(1 + r)^t$$

where,  
A = Amount after t  
P = Principal amount  
r = Rate of return  
t = Time (years)

### C) EXPECTED RETURN

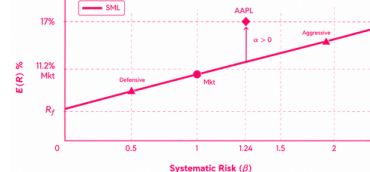
Average return across outcomes.

$$E(R) = \sum_i r_i \cdot P_i$$

where,  
E(R) = Expected return  
r = Return in outcome i  
P = Probability of outcome i

#### EXAMPLE

60% chance of 8% return,  
40% chance of 2% return  
E(R) = 0.6(8%) + 0.4(2%) = 5.6%



### D) SHARPE RATIO

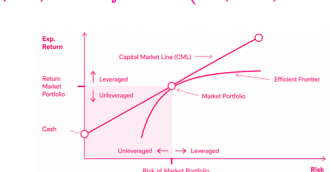
Extra return per risk unit.

$$\text{Sharpe} = \frac{E(R_i) - R_f}{\sigma_i}$$

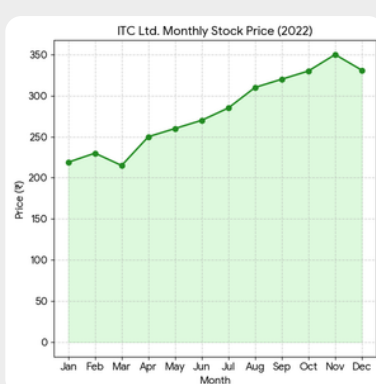
### E) CAPM

Capital Asset Pricing Model

$$E(R_i) = R_f + \beta_i(E(R_m) - R_f)$$



## 7 CASE STUDY : SAME INVESTMENT, DIFFERENT JOURNEY



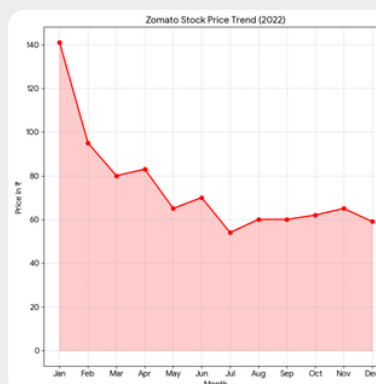
### ITC LTD. (The Stable Performer)

Final Value (Jan 2023) ₹15,173/-  
Return +51.73%  
Risk Level Lower

Amount Invested : ₹10,000/-  
Time Period : 1 year

**KEY COMPARISON**  
Same money invested in the same market.  
Different risk → Different outcomes.

Metric	ITC Ltd. (Steady)	Eternal / Zomato (Volatile)
Average Beta (β)	0.64	1.39
Annualized Volatility	~18% (Lower)	~52% (Higher)



### Eternal (Zomato) LTD. (The Roller Coaster)

Final Value (Jan 2023) ₹4,266/-  
Return -57.34%  
Risk Level Higher

## 8 MARKET SHOCK EVENT

A Real-World Lesson in Extreme Volatility



### THE CRASH

Global markets saw a record-breaking decline in early 2020 as severe economic uncertainty and global lockdowns caused panic selling across traditional industries.

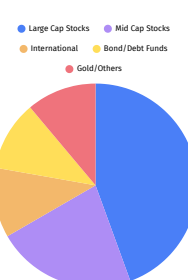
### THE HISTORIC REBOUND

Fueled by massive government stimulus and a rapid shift toward technology, the market aggressively reversed course to reach new highs.

## 9 MANAGING RISK

### A) DIVERSIFICATION

Don't put all eggs in one basket



Diversification reduces risks without sacrificing long term returns

### B) LONG-TERM HORIZON

Stay invested for the long haul to smooth short-term volatility and reduce risk

### C) HEDGING

Use strategic investments to offset potential losses in your portfolio and protect against adverse movements.

### D) RISK PARITY

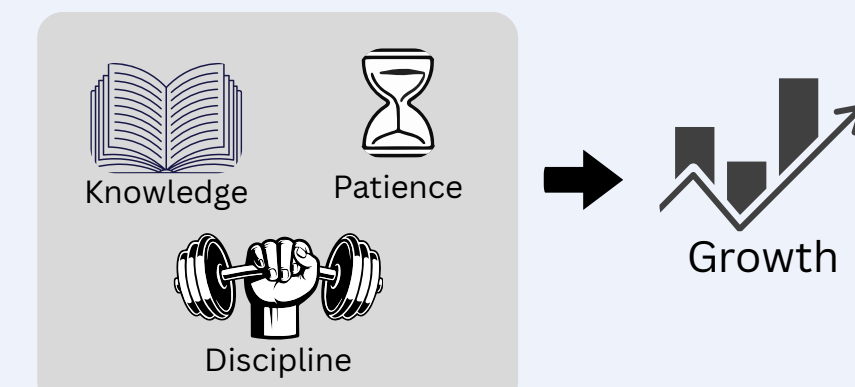
Focus on allocating capital based on the risk level of each asset class for a more balanced and stable portfolio.

## 10 MYTH v/s TRUTH

- ✗ High risk always gives high return
- ✓ High risk means high uncertainty, not guaranteed return
- ✗ Stock Market is Gambling
- ✓ Investing is delta-driven, not luck driven
- ✗ You need luck to win
- ✓ Knowledge, discipline and patience creates wealth
- ✗ Market timing is easy
- ✓ Time in the market beats timing the market
- ✗ You need a lot of money to invest
- ✓ Start small, stay consistent and let compounding work

## 11 THE BIG PICTURE

Investment is not about avoiding risk, it's about managing it wisely.

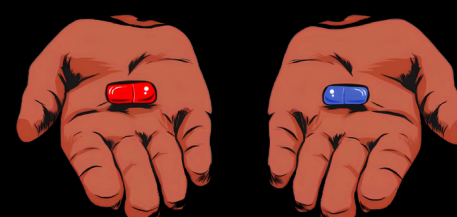


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Finally, what will you choose?

Take Risk Play Safe



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