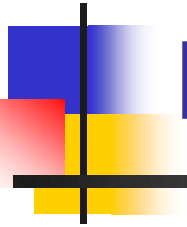


# Measurement of Return and Risk

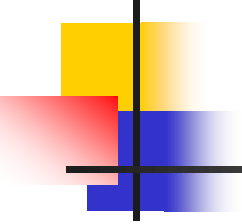




# Return

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- The returns on the investment can be broken in to two parts.
- 1.Dividend yield-The reward investor gets by owning this asset over the holding period
- 2. Capital gain-The gain investor makes upon selling the asset after the holding period.

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- Total return=Dividend yield+Capital gain
  - Total % return=(Dividend+capital gain)/Initial investment
  - $=\{D_1+(p_1-p_0)\}/p_0$
  - $=(D_1/p_0)+\{(p_1-p_0)/p_0\}$
  - Where  $D_1$ -Dividend
  - $P_0$ -Initial investment
  - $P_1$ -Selling price



# Example

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- The current market price of a share is rs 300. An investor buys 100 shares. After one year he sells these shares at a price of rs 360 and also receives the dividend of Rs 15 per share. Find out his total return, % return, dividend yield and capital gains.

# ASSIGNING RISK ALLOWANCES



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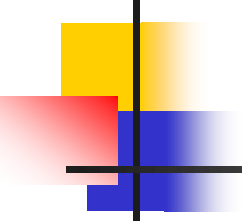
- One way of Quantifying risk and building a required rate of return would be to express the required rate as comprising risk less rate plus compensation for individual risk factors.
- $R = I + P + B + F + M + O$
- Where,
  - I = Real interest rate (Risk less Rate)
  - P = Purchasing Power Risk Allowance.
  - B = Business Risk Allowance.
  - F = Financial Risk Allowance.
  - M = Market Risk Allowance.
  - O = Allowance for Other Risk.

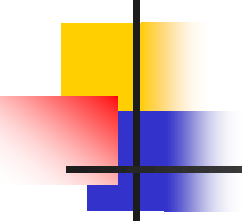


# Starting Predictions “Scientifically.”

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- Security analysis can not be expected to predict with certainty whether a stock's price will increase or decrease or by how much.
- Analyst can not understand political and socioeconomic forces completely enough to permit predictions that are beyond doubt or error.
- This existence of uncertainty does not mean that analysis is value less.
- It does not mean that analysis must strive to provide not only careful and reasonable estimates of return but also some measure of the degree of uncertainty associated with these estimates of return.

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- $R = \sum PO$
  - $\text{Variance} = \sum P (O-R)^2$
  - $\text{s.d} = \sqrt{\text{variance}}$
  - $R = \text{Expected return}$
  - $P = \text{probability}$
  - $O = \text{Outcome}$

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- 
- Suppose that **stock A**, in the opinion of the analyst, could provide returns as follows.
  - Returns (%)
  - 7
  - 8
  - 9
  - 10
  - 11
  - 12
  - 13
  - Likelihood
  - 1 chance in 20.
  - 2 chances in 20.
  - 4 chances in 20.
  - 6 chances in 20.
  - 4 chances in 20.
  - 2 chances in 20.
  - 1 chance in 20.
  - A likelihood of four chances in twenty is  $4/20$  or  $.20$ . The total of the probabilities assigned to individual events in a group of events must always equal 1.00.





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Consider **Stock B** -:

	<b>Return (%)</b>	<b>Probability</b>
■	9	.30
■	10	.40
■	11	.30

Find out the risk of stock A and Stock B