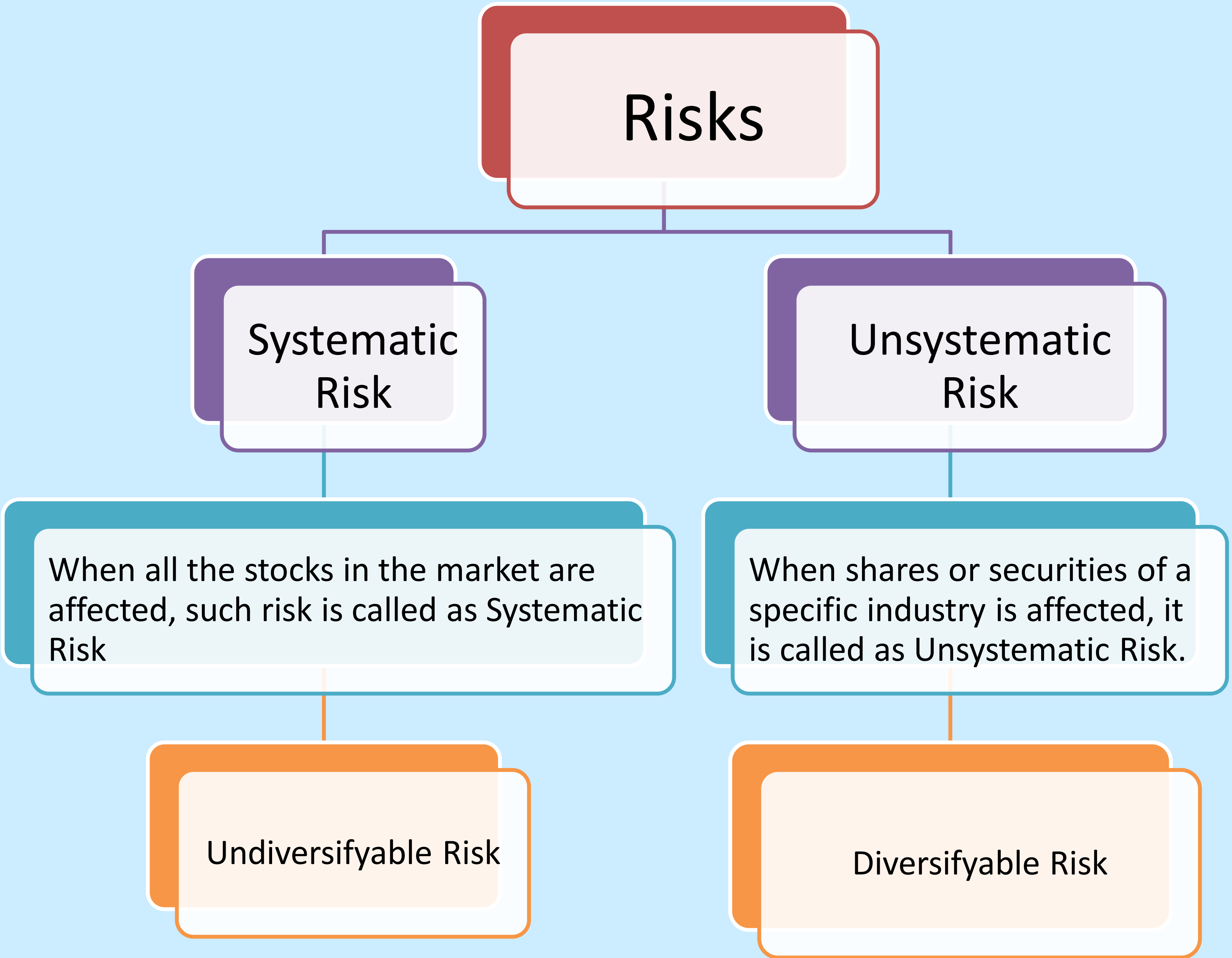
Chapter 2: Risk Management

- To minimise the risk, define the risk.
  - Uncover the “known” risk
  - Making the known risks easy – VaR (Value at Risk)
  - Understand and uncover unknown risk
- Diversification
  - More basket, more eggs (Long term investment)
  - Variety always brings spice
  - Safety in numbers
  - No portfolio is too small

Types of Risks



Risk Measurement Techniques

- Sharpe’s Ratio/ Formula
- Trenor’s Ratio / Formula
- Jensen’s Alpha Ratio
- Computation of Beta

Sharpe's Ratio

Sharpe's Ratio

Sharpe's ratio is defined as follows :-

$$\text{Sharpe's ratio} = \frac{R_p - R_f}{\sigma_p}$$

where, R_p = Return of Portfolio

R_f = Risk free return

σ_p = Standard Deviation of Portfolio.

- Sharpe’s ratio calculates the <u>excess return</u> per unit of <u>total risk</u>
- Total risk includes Systematic risk and unsystematic risk
- Sharpe’s ratio cannot be used individually.
- Sharpe’s ratio must be compared with other relevant sharpe ratio’s to arrive at a conclusion.
- While comparing, higher the sharpe, better is the position.

Trenor’s Ratio

Trenor’s Ratio

$$\text{Trenor's Ratio} = \frac{R_p - R_f}{\beta_p}$$

where β_p = Beta of Portfolio

Trenor’s ratio calculates the excess return per unit of Systematic risk

Trenor’s ratio cannot be used individually.

Trenor’s ratio must be compared with other relevant Trenor’s ratio’s to arrive at a conclusion.

While comparing, higher the Trenor, better is the position.