



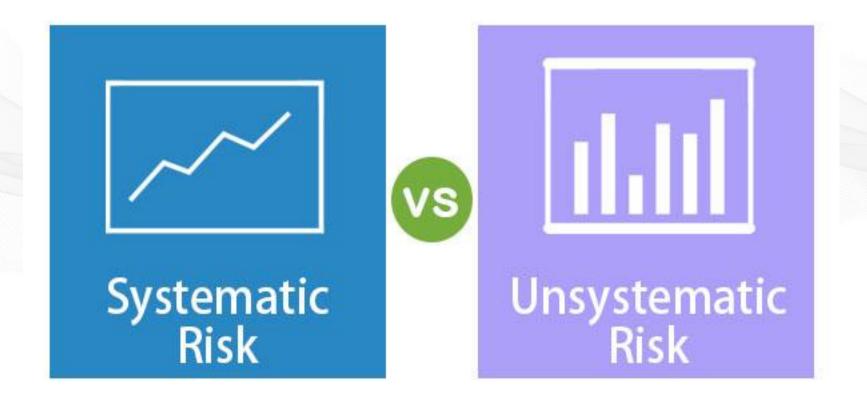
Session 3 & 4 - Risks & Financial Mathematics



#### Presentation Order

- > Systematic v/s Unsystematic
- Different Types of risk
- ➤ Risk Measurement Tools
- > Time value of Money











Risk/Threat associated with the market or the segment as a whole.



Hazard associated with specific security, firm or industry.

#### #2. Impact



Large number of securities in the market.



Restricted to the specific company or industry.











Interest Risk and Market Risk.



Financial and Business specific Risk.

#### #6. Responsible Factors



External.



Internal.



#### **#7.** Avoidance



Cannot be Avoided.



Can be avoided or resolved at a quicker pace.



# Types of risk an Investor Faces



### Systematic Risk

**Equity and Debt** 

- Inflation Risk
- Currency Risk
- Political Risk

Debt

 Interest Rate / Reinvestment Risk



### Unsystematic Risk

#### Debt

- Liquidity Risk
- Credit Risk

# Equity and Debt

- Business Risk
- Operational Risk

### Portfolio Risk

- Concentration Risk
- Horizon Risk
- Longevity Risk



#### Portfolio Level Risk

#### Concentration Risk

- Sector
- Security

#### Horizon Risk

Longevity Risk



## Risk Measurement Tools



#### Risk Measurement Tools

Standard Deviation

Deviation from its own past standards

Higher the number more the risk

Applicable to Equity & Debt both

Beta

Measures risk compared a diversified equity index

Higher the number more the risk

Applicable to Equity



### Risk Adjusted Ratio

(Portfolio Return minus Risk Free return) / Std. Dev of the Portfolio Returns

Higher the number more superior the risk-adjusted returns

Applicable to Equity & Debt both

(Portfolio Return minus Risk Free return) / Beta of the Portfolio Returns

Higher the number more superior the risk-adjusted returns

Applicable to Equity

Portfolio Return
minus Index
Return

Higher the number better the performance

Applicable to diversified equity schemes



# Financial Mathematics



### Know your numbers

Time Value of Money Rate Nper

Seturus XIRR XIRR



# Thank You