# ECON 233 Finance 1- Week 2

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# Market Price and Intrinsic Value

- Market Price of any asset is determined by the forces of demand and Supply.
- Individuals accept a price to buy and sell based on their expected returns, volatility, and every metric important to them.
- Intinsic value of any asset is the present value of the expected future cash flows from the asset.
- Intrinsic Value = $\sum_{t=0}^{\infty} \frac{CF_t}{(1+r)^t}$
- Absent mispricing, buyers and sellers in the market perfectly price in the correct expected future cash flows so that the price determined by the market reflects its intrinsic value exactly.

# Market Buy order limit Buy order

- **Market Buy order**- Immediately buys specified shares of the asset at the current market price.
- Guaranteed execution.
- **Limit Buy order** - Buys the specified shares of the asset at (or below) the price you choose.
- Not guaranteed, only buy when stock price falls sufficiently.
- You get to choose your price.

# You sold short 100 shares of Apple stock at a price of $140 per share

- So right now, you got $140x100=$14,000.
- If Apple falls to $100, you buy them back at $100 (i.e., $10,000) and pocket $4000 in profit. (sweet!)
- But apple announces they are investing $100 Billion into manufacturing plants in the US - price shoots up to $300.
- Still have to buy them at $300 a share (i.e., $30,000) and make a $16,000 loss.
- Worst that can happen is share prices rise indefinitely leading to indefinitely high losses.
- **Stop-buy** order at a price a bit higher $140 so that you buy back shares at that price in case price does not fall.

# Financial Markets and short selling shares

- Many markets do not allow short selling or only allow short selling up to a limit.
- Preventing price discovery. Prices not determined by true demand and supply forces as there are not “enough sellers”.
- Overvaluation.
- During downturns often regulations are imposed to stop shorting. Affects liquidity.
- Short Squeeze

# Time Value of Money/ Present Value

- \$100 today is worth more than \$100 tomorrow.
- \$100 today has the potential to give you higher returns tomorrow and become $\$100(1+r)$ **(more than \$100)** if invested correctly.
- Likewise when we talk about \$100 in the future, it should be 'discounted' to 'today'.
- Why? Because we only require $\frac{\$100}{(1+r)}$ today for it to turn into \$100 tomorrow.

# What is compounding and how does it work?

- Let's calculate a kid's college fund!
- What is your tuition fees? (or pick any fancy school)
- How much money do you need to invest at birth so that in 18 years your kid does not have to worry about college fees?
  - Assume 10% rate first.
  - Then 12%.
  - Then 14%.