IQIC - Markets & Returns

#1: Markets & Price Movement

How Financial Markets Work

- **What is a financial market?**
  - A financial market connects people who want to buy assets with people who want to sell them
- **Core Process:** Buyer places an order → Market matches buyers and sellers → Trade occurs at an agreed price → Ownership is exchanged

- Buyers compete to purchase assets at attractive (low) prices
- Sellers compete to sell assets at attractive (high) prices
- A trade occurs when compatible buyers and sellers are matched
  - Millions of these decisions per second collectively form market prices (aka the price you see online)

- E.g. If you buy 10 shares of a stock @ $50, Another market participant must be willing to sell those shares at a compatible price.

Supply, Demand, and Price

- **What determines the price?**
  - Price is determined by **buying and selling pressure**

- **Greater Demand:** More investors want to buy → buyers may offer higher prices → Prices tend to rise
- **Greater Supply:** More investors want to sell → sellers may accept lower prices → price tends to fall

Ex: NVIDIA currently trades @ $50. Because of positive news, a lot of people want to buy, but few investors want to sell @ $50.

So, buyers begin offering higher: $50.00 → $50.25 → $50.50 → $51.00

The market prices adjusts upward until willing buyers and sellers can be matched

Information Changes Expectations

- **Why does buying and selling pressure change?**
  - Investors constantly receive new information that changes their expectations about the future / value of a company.

- **Examples:**
  - Earnings reports
  - New products
  - Interest-rate changes
  - Economic data
  - Industry developments
  - Company announcements

Ex:

Investors expect 5% earning growth, but a company reports 10% earnings growth → positive market reaction

Market Price vs. Estimated Value

Price ≠ Value

- **Market Price:** The price at which an asset can currently be bought or sold
- **Estimated value:** What an investor or modeler estimates the asset is worth based on available information and assumptions

Ex: Stock X trades @ $80

Investor A: Estimates value @ $95 → believes stock may be undervalued
Investor B:: Estimates value @ $70 → believes stock may be overvalued

Both investors analyze the same company and reach different conclusions because they may use different:

- Data
- Models
- Assumptions

From Markets to Quantitative Investing

- Quantitative Investors use enormous amounts of market data to search for **systematic relationships to help inform investment decisions**

- **Data Examples:**
  - **Market Data:** Prices, returns, trading volume, volatility
  - **Company Data:** Revenue, Earnings, Valuation Ratios, Profitability
  - **Economic Data**: Interest Rates, Inflation, Employment, Economic Growth

- **The Quantitative Process:** Data → Identify a pattern or relationship → create a signal → build investment rules → make decisions

Additional Resources

- **Stock Prices and How They Change - Investor.gov:** Guide Link
    - This guide explores how stocks work, why investors buy & sell them, and how company performance and investor expectations influence stock prices