



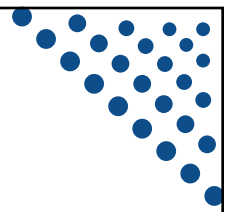
Introduction to Stock Markets

Stephen Hart's Economics Class, Redwood High School
September 16, 2019

Jon Haveman, Ph.D.

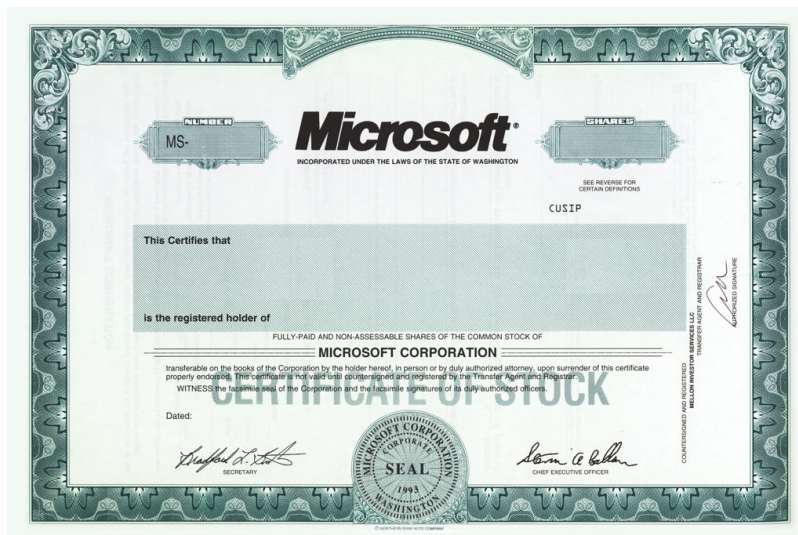
Outline

- What is a stock?
- How do you buy them?
- What is the stock market?
- How does a stock get listed?
- How is a stock's price determined?
- When should you buy or sell a stock?
- Some additional terminology
- Summary



What is a stock?

Stock Certificate



Stocks Represent Ownership

- **Why do companies issue stocks?**

- Raise money to, for example:
 - o Recoup investment
 - o Further growth or expansion

- **Why do people own stocks?**

- To make more money
 - o Buy low sell high!



Apple Stock

220.45 USD -3.39 (1.51%) ↓

Sep 17, 12:28 PM EDT · Disclaimer

1 day 5 days 1 month **6 months** YTD 1 year 5 years Max



Open	222.15	Div yield	1.32%
High	222.95	Prev close	223.84
Low	219.24	52-wk high	229.67
Mkt cap	1.07T	52-wk low	149.16
P/E ratio	19.13		

Are There Other ways to Raise Money?

- **Equity:**
 - Stocks
- **Debt:**
 - Bonds
 - Loans



More About Stocks

- **There are different types**
 - Common
 - High return, voting rights
 - Last to get paid
 - Preferred
 - More like debt than equity
 - No voting rights
 - 2nd to last to get paid
 - Receive a stream of dividends
 - Other types?
 - A great many: different classes (A, B, ...). Generally about voting power.



Dividends

- Kind of like interest on the money invested in a stock

- Larger more established companies pay stock owners a **quarterly share of profits**
- Smaller growth oriented companies tend not to pay dividends

- How are they paid?

- **Cash Dividend**
- **Stock Dividend:** Sometimes paid in additional shares of stock



Apple Stock - Dividends

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1.32% Dividend Yield

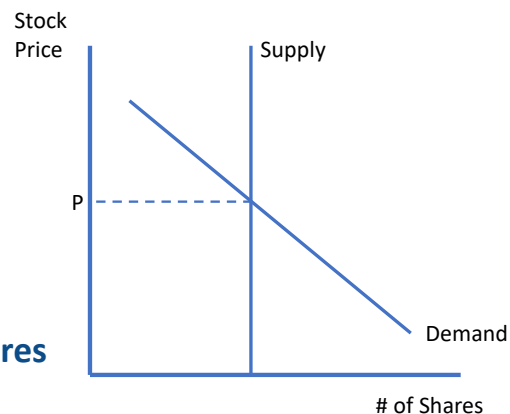
How do you buy a stock?

- **Through a stock broker**
- **Stock brokers are members of an exchange**
 - NASDAQ
 - NYSE
- **Stocks are “listed” on the exchange**
 - Initial Purchase Offering (IPO)
 - If they have:
 - \$10 million in earnings over 3 years
 - \$100 million in shares outstanding

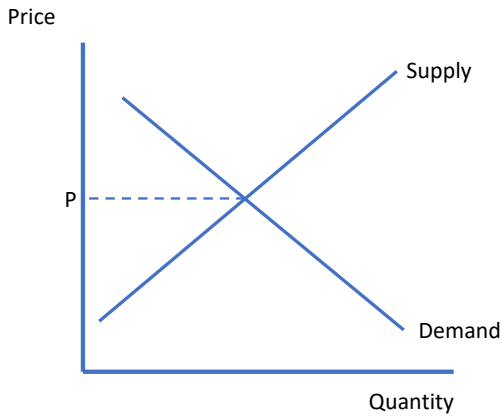


How is a stock's price determined?

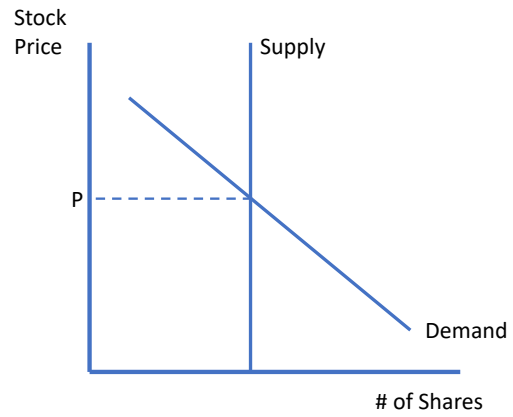
- **Sense of the market**
 - Demand
- **# of outstanding Shares**
 - Supply
- **Price = Market Valuation / # of shares**



Simply Supply and Demand!

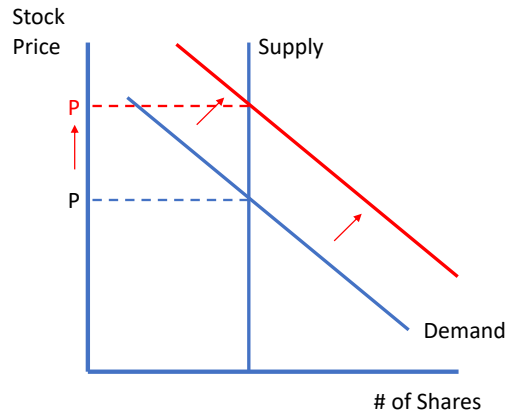


$$\text{Price} = \text{Market Valuation} / \# \text{ of shares}$$



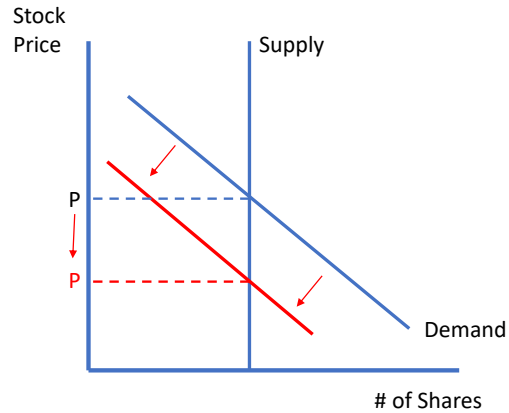
What happens to a stock with GOOD news?

- What happens to the number of shares?
- What happens to the market's assessment of the value of the firm?
 - Market Valuation
 - Market Capitalization



What happens to a stock with BAD news?

- What happens to the number of shares?
- What happens to the market's assessment of the value of the firm?



Apple Stock – Bad News and Good News

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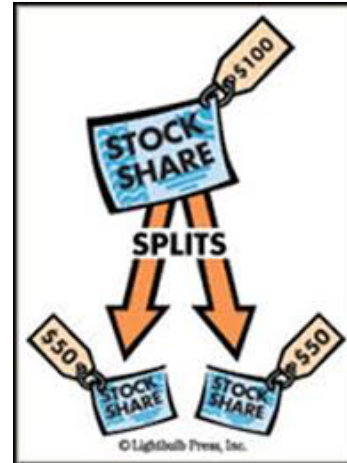
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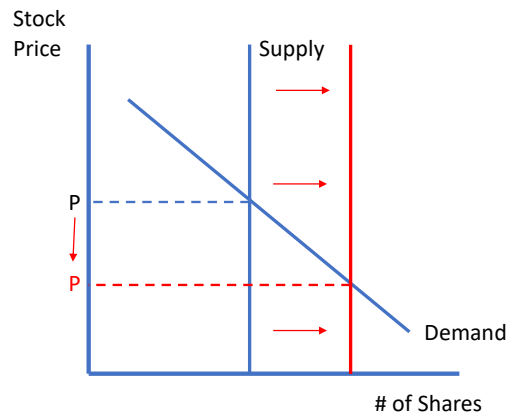
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Stock Dividends often Called "Stock Split"

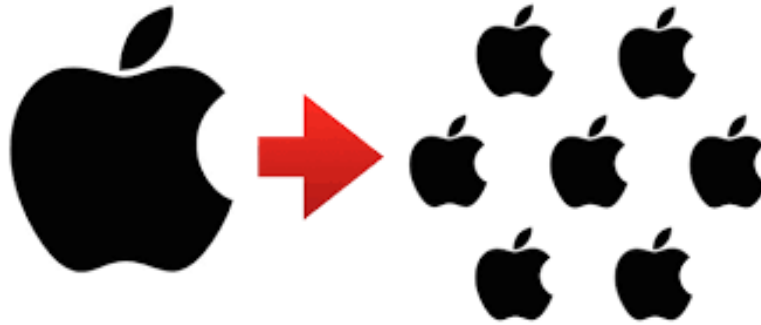
- **Split: Generally doubles the # of shares outstanding**
 - What happens to share prices?
- **Can be any ratio - even a reduction in the number of shares outstanding**



Stock Splits and Prices



What Happened When Apple Split: 7-1



Apple: 7:1 Stock Split – not an 80% decline



When to buy a Stock

- **Flippant: When you think the price will rise!**

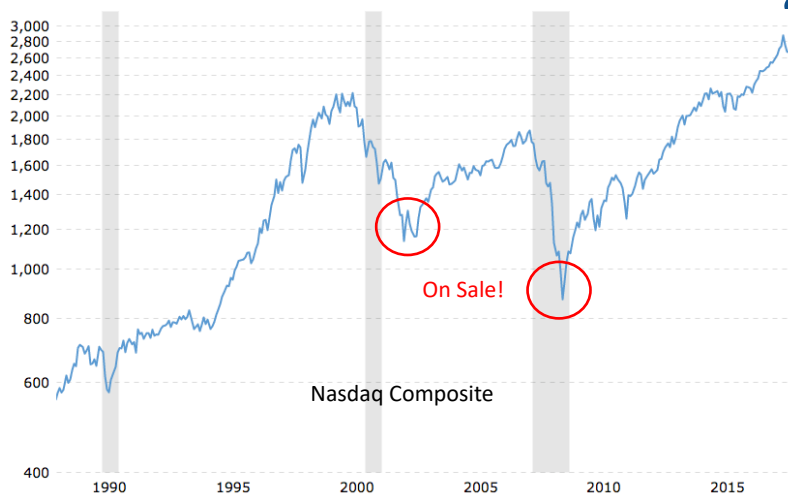
- When you have done your homework
- When it hits your “buy” price
- When stocks are on sale



- **Too many statistics, but one is important:**
PE Ratio = Price/Earnings

When are stocks “on sale”?

- **Follow the indexes:**
 - Dow Jones
 - S&P 500
 - Nasdaq Composite



What is the P/E Ratio? Why is it important?

- **It tells the relationship between prices and earnings**
 - Basically: the higher earnings are, the higher prices should be
 - Comparing “price per share” with “earnings per share”
- **Market P/E Ratio: 25.09 for S&P 500**
 - If the P/E ratio is **high**, simple expectation is for price to **fall**
 - If the P/E ratio is **low**, simple expectation is for price to **rise**
- **What about Apple’s P/E ratio?**



Apple: P/E Ratio

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19.13 P/E ratio

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What about: FAAMG? (Note: was FANG)

	Company	P/E Ratio	Price	Market Capitalization
F	Facebook			Trillion
A	Apple			Trillion
A	Amazon			Trillion
M	Microsoft			Trillion
G	Google			Trillion

- **Tech Sector Giants**
 - Combined Market Cap: \$4.3 Trillion
 - Greater than the GDP of Germany (\$3.7T)
 - Together occupy the top 5 spots in the market

Which do you buy? Which do you sell?

Amazon looks like a good sell by P/E ratio



Open	1,954.73	Div yield	-
High	1,956.82	Prev close	1,970.19
Low	1,887.41	52-wk high	2,050.50
Mkt cap	940.78B	52-wk low	931.75
P/E ratio	175.18		

Summary of When to Buy and Sell

- Do your research!
- Know that it is very difficult to pick winners!
- Know that things can change in a hurry!



Additional Terms

- Stock buyback
- Short selling
- OPM – Other People's Money
- Indexed funds
- Bear market
- Bull market



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BULL OR BEAR MARKET

WHAT
HOW THE STOCK MARKET IS DOING

BULL MARKET
ECONOMY **IS** DOING WELL

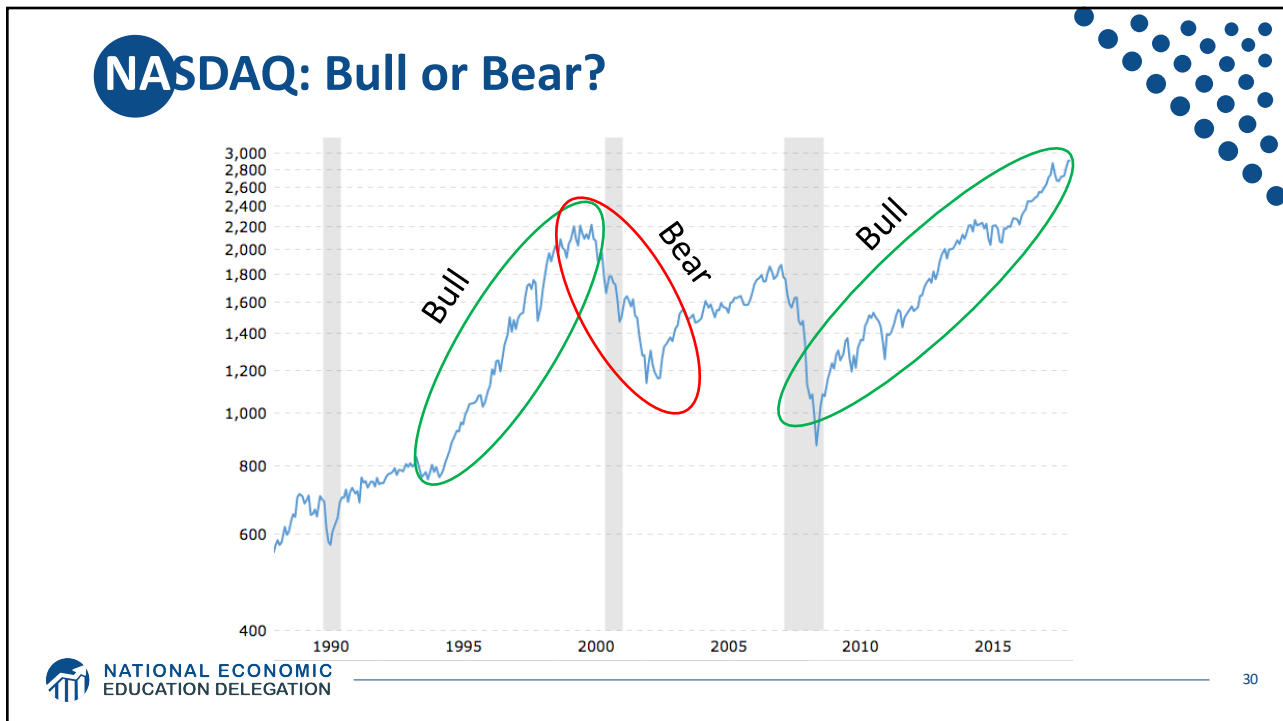
- UNEMPLOYMENT LOW
- STOCKS RISING
- PRICES GOING UP

BEAR MARKET
ECONOMY **NOT** DOING WELL

- UNEMPLOYMENT HIGH
- RECESSION APPROACHING
- PRICES GOING DOWN

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29



Stock Market Summary

- **Basically an investment in:**
 - The economy
 - A small part of the economy
- **Great way to generate wealth**
- **Great way to reduce your wealth**
- **Rewards specialized knowledge**
- **Filled with conflicts of interest**



Thank you!

Any Questions?

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Jon Haveman, Ph.D.

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