

Introduction to Investing

Bobbi Brett's Economics Class, San Rafael High School

October 22, 2018

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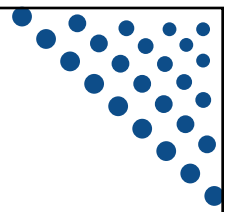
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Outline

- Introduction to Investing
- Stock Market
- Evaluating Investment Alternatives
 - How to think about the choices.



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What is an Investment?

- The action or process of investing money for profit or material result.
- A use of money that is intended to turn money you have into more money.



Examples of Investments

- Piggy bank
- Savings account
- Stocks
- Bonds
- Housing
- Business startup



What Makes One Investment Different from Another Investment? Two Things

Risk



Reward

Let's Consider a Variety of Investments

- Piggy bank
- Savings account
- Lend to a reputable company: Google
- Lend to a local business: doctor's office
- Buy stocks
- Startup

Evaluating Our List of Potential Investments

- **Piggy bank**

- Risk: close to zero
- Return: zero
- \$100 -> \$100 after a year

- **Savings account**

- Risk: zero
- Return: 0.25% interest
- \$100 -> \$100.25 after a year

- **Lend to Google**

- Risk: low, but not zero
- Return: 5%
- \$100 -> \$105 after a year

- **Lend to a doctor's office**

- Risk: Moderate
- Return: 8%
- \$100 -> \$108 after a year

- **Buy stocks**

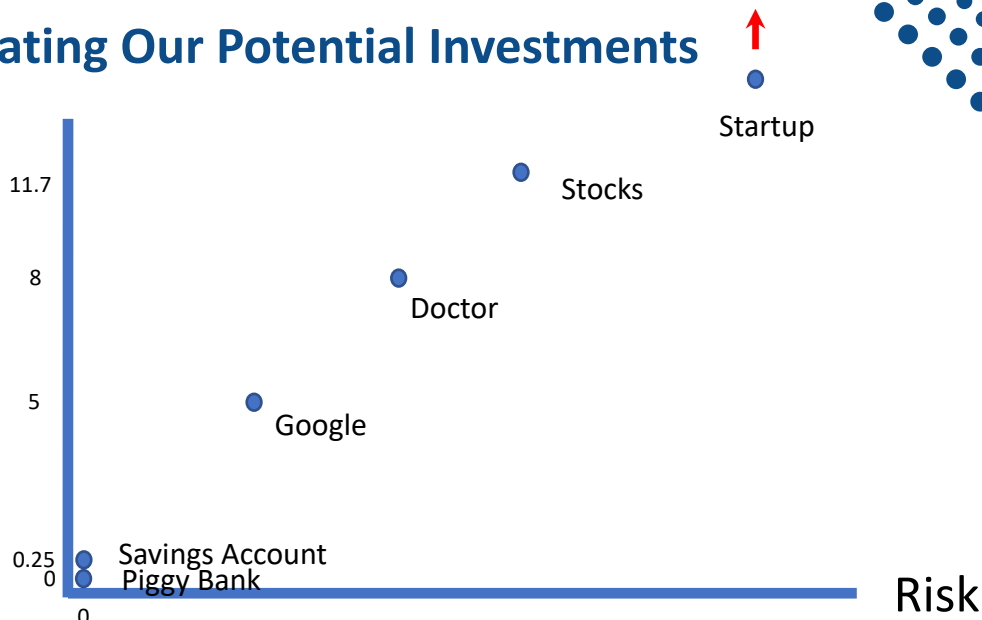
- Risk: moderately high
- Return: 11.7% (S&P 1973-2016)
- \$100 -> \$111.70 after a year

- **Startup**

- Risk: very high
- Return: potentially very high
- \$100 -> ??? \$1 million?

Evaluating Our Potential Investments

Reward



Summary Conversation

- Easier to predict risk or reward?
- Who should be risky and who should be safe?
- Given a level of risk, how do you pick between investments?
- Given a level of return, how do you pick between investments?



Outline: Stock Market

- 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

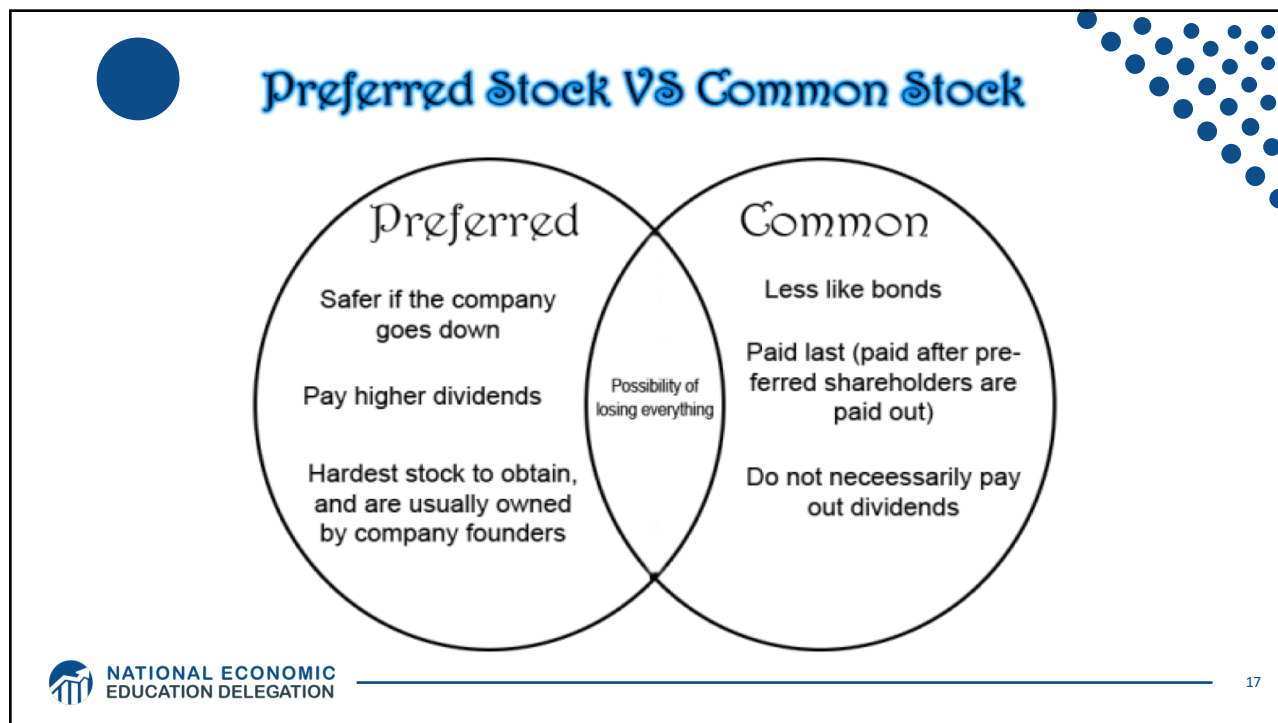
- **Debt:**
 - Bonds
 - Loans



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

Chance
BANK PAYS YOU
DIVIDEND OF \$50

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18



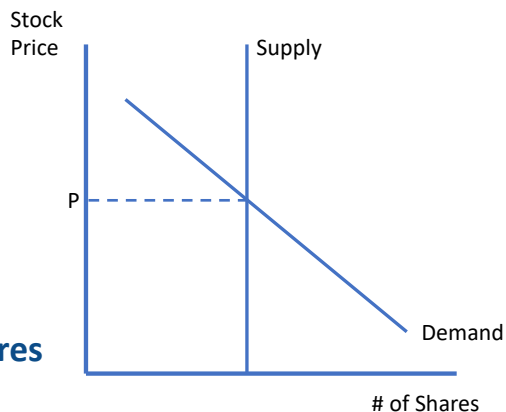
How do you buy a stock?

- 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

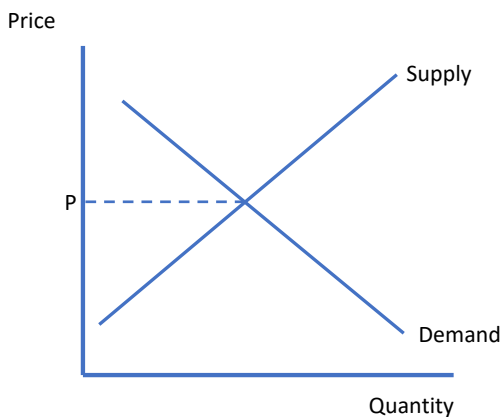
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How is a stock's price determined?

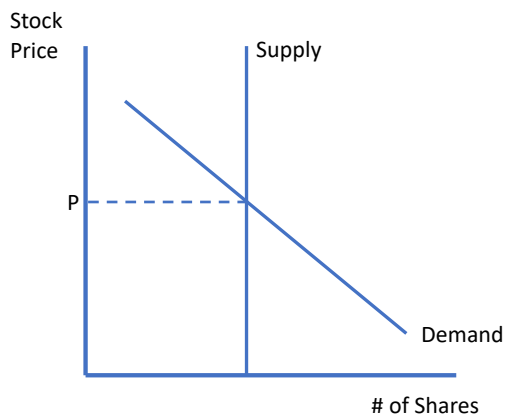
- **Sense of the market**
 - Demand
- **# of outstanding Shares**
 - Supply
- **Price = Market Valuation / # of shares**



Simply Supply and Demand!

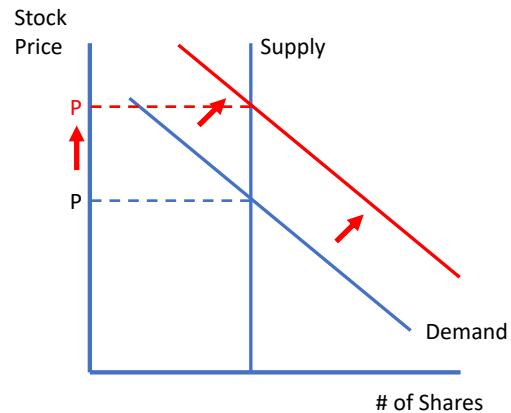


Price = Market Valuation / # of shares



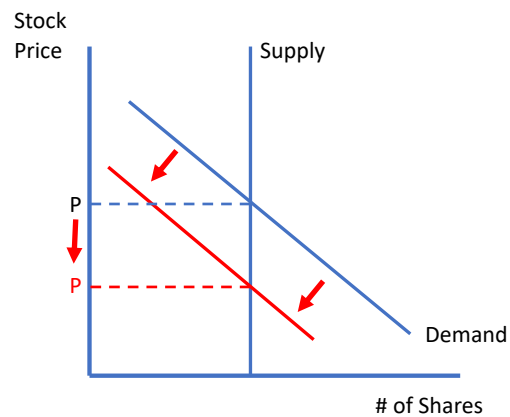
What happens to a stock with GOOD news?

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

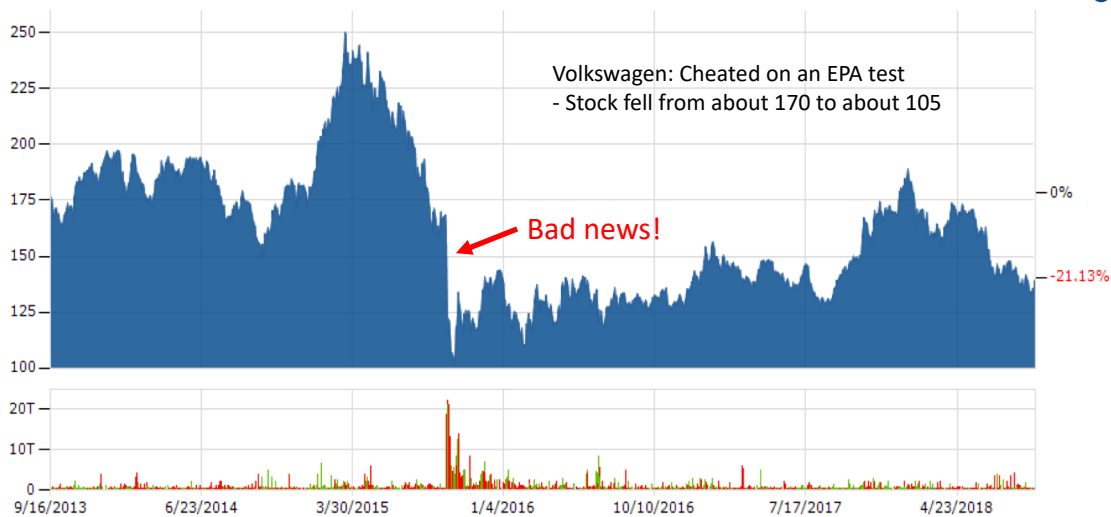


What happens to a stock with BAD news?

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



Example of Bad News



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Apple Stock – Bad News and Good News

220.45 USD -3.39 (1.51%) ↓

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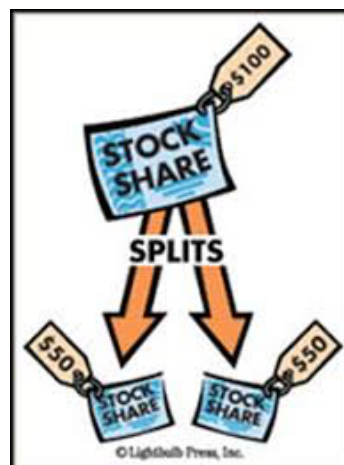


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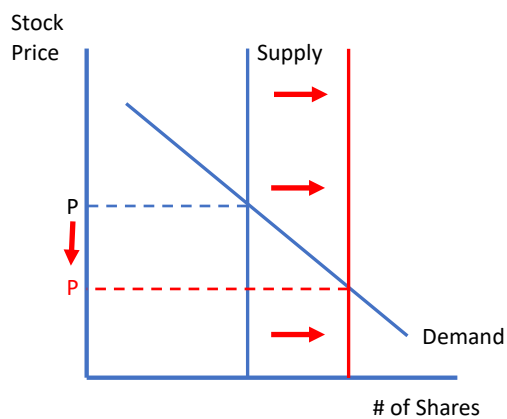
26

Stock Dividends often Called "Stock Split"

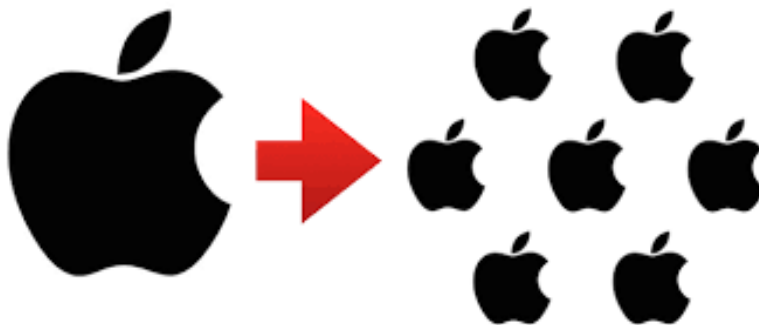
- **Split: Generally doubles the # of shares outstanding**
 - What happens to share prices?
- **Can be any ratio - even a reduction in the number of shares outstanding**



Stock Splits and Prices



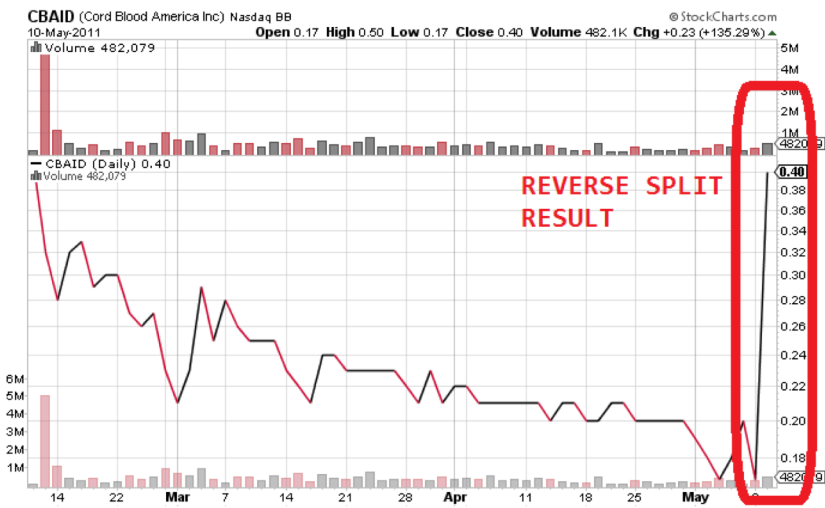
What Happened When Apple Split: 7-1



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



Reverse Stock Split



Did it really more than double?

.17 -> .50

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



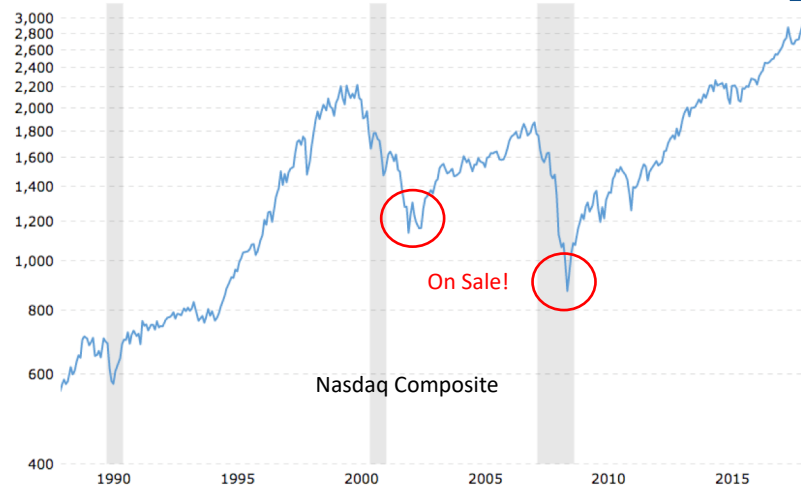
- Too many statistics, but one is important:

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?

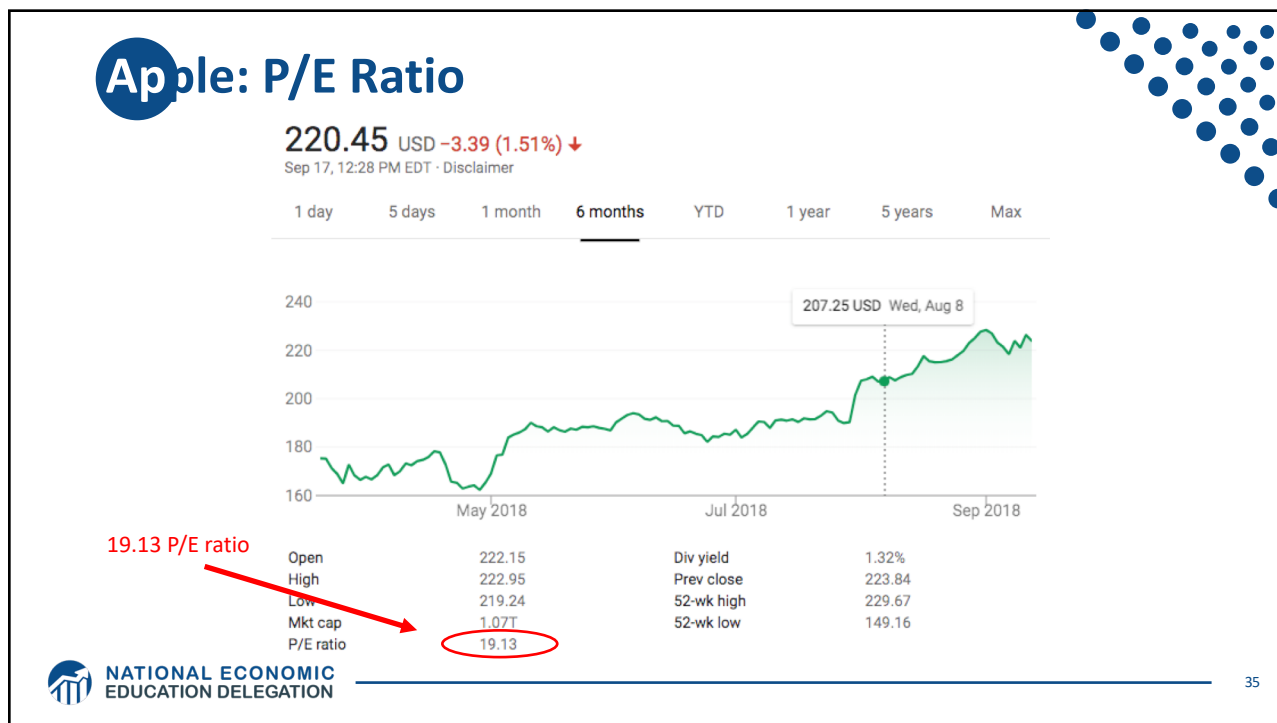
- **It tells the relationship between prices and earnings**

- Basically: the higher earnings are, the higher prices should be

- **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?**



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: \$3.8 Trillion
 - Greater than the GDP of Germany
 - Together occupy the top 5 spots in the market

Which do you buy? Which do you sell?

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36



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!

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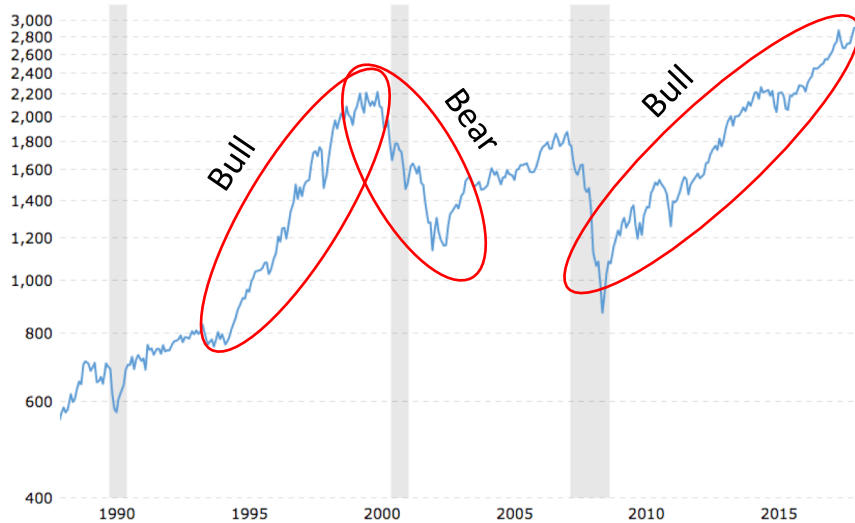
38

Additional Terms

- Short selling
- OPM – Other People’s Money
- Indexed funds
- Bear market
- Bull market



NASDAQ: Bull or Bear?



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**



Investment Choices

- **How do you rank these 3 investments:**
 - Apple stock
 - Uber IPO
 - Apartment building
- **In terms of risk (low to high)?**
 1. Apple stock
 2. Apartment building
 3. Uber IPO
- **In terms of reward (high to low)?**
 1. Uber IPO
 2. Apartment building
 3. Apple stock

What Investment Should you make:

- **If you are a 30 year old in the tech sector**

- Uber IPO or Apartment building

- **If you are 60 years old**

- Apple stock
- Better still, something less risky:
 - Buy a market indexed fund
 - Treasury bonds



Concept: Expected Return on Investment

- **Combination of risk and reward:**

- **Return on investment = risk * reward**

- Risk = .5 (50%)
- Reward = 10%

- **Return on investment = .5 * 10% = 5%**



Back to Our Original Investment Options

| Investment | Reward | Risk | Expected ROI |
|-----------------|--------|------|--------------|
| Piggy Bank | 0 | 0 | 0 |
| Savings Account | 0.25% | 0% | 0.25 |
| Google | 5% | 10% | 4.5% |
| Doctor | 8% | 25% | 6% |
| Stocks | 12% | 33% | 8% |
| Startup | 100% | 90% | 10% |

Many Factors Affect Risk

- When does the 30 year old buy:

- Savings account
- Google
- Startup

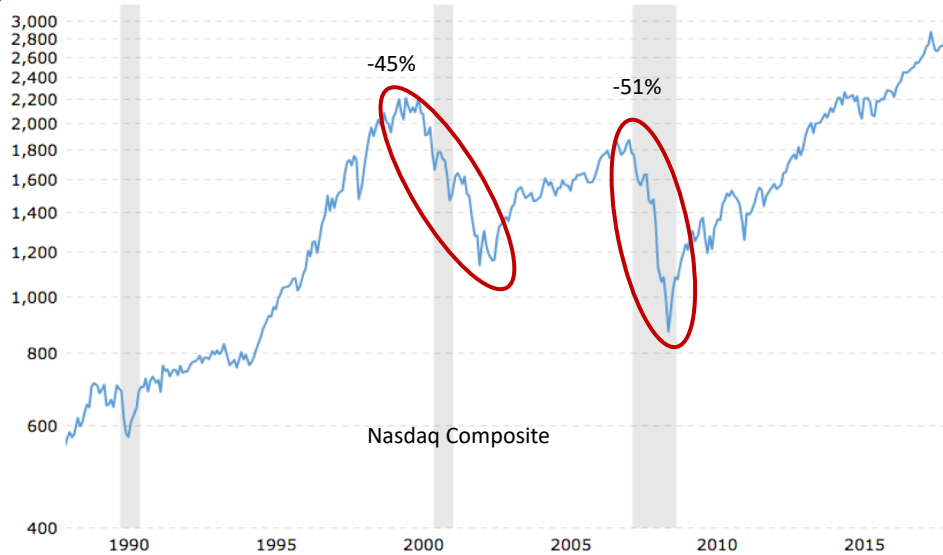


Summary

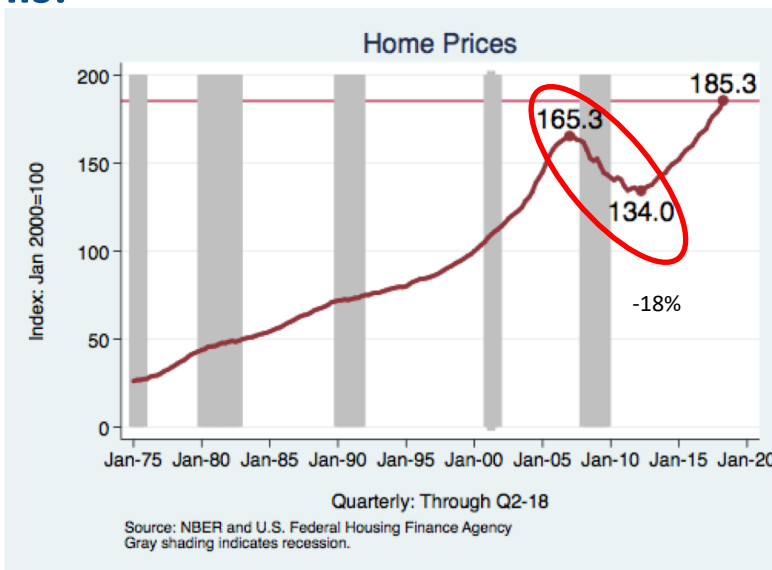
- **Investing can be, but need not be complicated.**
 - Getting the most from your money is HARD!
 - Getting a reasonable return is not.
- **Have to balance risk and reward.**
 - Risk is often very difficult to assess.
- **Get a ton of information before investing.**
 - Important for evaluating potential risk.
 - And often reward.
- **Approach investing with great care.**
 - Your situation matters as much as the market.



Remember This



And This:



Thank you!

Any Questions?

www.NEEDelegation.org

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Contact NEED: NEEDelegation@gmail.com