Let's Talk Stocks

Advanced Level

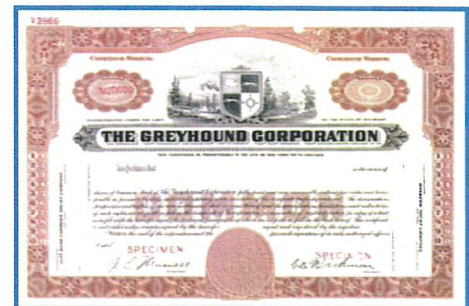## Why Learn about Investing in the Stock Market?

We hear about the stock market on a daily basis. Not necessarily because we want to, but because it has become an integral part of American society. The stock market can be a great source of confusion for many people, however, it is the foundation of investing. Stocks and bonds represent companies which touch aspects of every person's life.

Stock Market - A general term used to describe the place where all transactions involving the buying and selling of stock shares issued by a company take place

The **stock market** is a general term used to describe all transactions involving the buying and selling of stock shares issued by a company. A **stock** is a share of ownership in the assets and earnings of a company. It is represented by a piece of paper called the **stock certificate**. A **bond** is type of debt (loan) that a company issues to investors for a specified amount of time. The company pays annual interest on the loan until the maturity date is reached when the principal is paid back to the bondholder (lender).

When a private company would like to grow, there are several methods they can employ to raise the necessary funds to pay for ongoing business activities. One of the most preferred methods is to sell shares of ownership in the company called stock to investors. When a company decides to sell shares on the stock market, they are "going public", and this is known as an Initial Public Offering, or **IPO.** Companies prefer to issue stock because stockholders provide capital to the company without the company's promise to pay the capital back and the stockholder shares the risk of the company's success without knowing if their stock will increase in value. In simplest terms, they are giving up a fraction of their company for cash. It also allows business owners and executives the opportunity to use their stock as a method for making further investments, as opposed to tying up cash. Investors that purchase stock earn money from increases in the stock's value and/or dividends. The company's board of directors decides whether or not to issue dividends.

Would you purchase a stock or a bond from a company? Why?

The other method for raising funds is to issue bonds. Investors that are more concerned about risk will often choose to purchase bonds because when investing in bonds, the company provides a promise to repay the debt along with quarterly interest payments to the bondholder.

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Risk is the uncertainty about an outcome; **financial risk** is uncertainty about the outcome of an investment. For example, an individual who keeps all of his/her earnings in an ultraconservative savings and investment option, such as a Certificates of Deposit (CD), will have low earnings, which will barely cover taxes and inflation. Stocks tend to offer a higher rate of return than savings, money market, checking or certificates of deposit because stocks are less liquid than these other investment tools. **Portfolio diversification** reduces risk by spreading investment money among several investment opportunities. The greater the risk a person is willing to make on an investment the greater the return they may potentially receive. Risk tolerance

changes over a person's lifetime. Investing in stocks can increase an individual's potential future earning power; however, along with the potential increase in earning power there is also an increased risk the individual will lose his/her money. * See Investment Risk Pyramid.
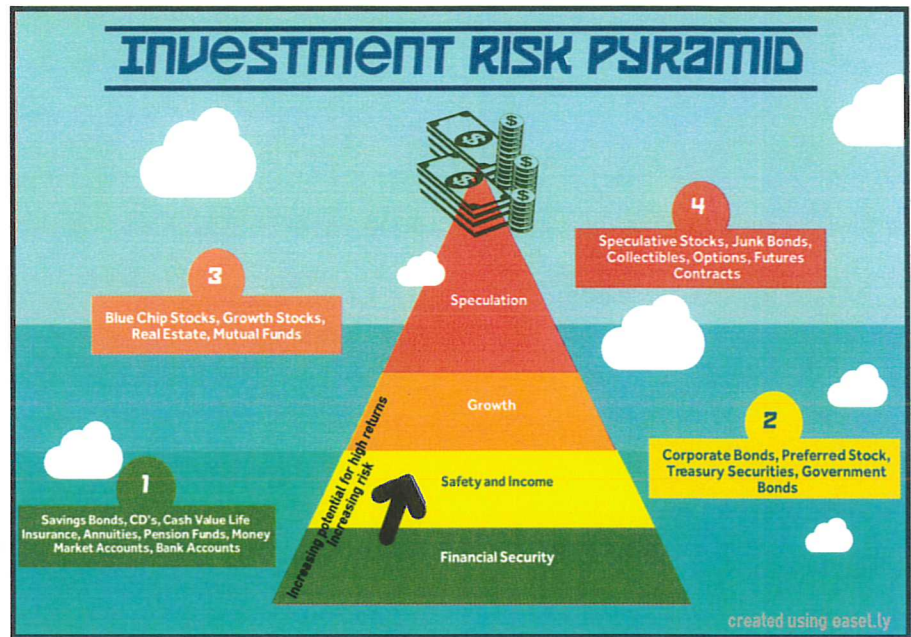
Determining which stock to purchase can be very difficult because there are more than 19,000 stocks in the US from which an investor can choose. One must be able to research and track stocks and bonds in order to decrease potential risks associated with investing in the stock market. There are two basic types of stock an investor may choose to put his/her money into: common and preferred.

Common Stock vs. Preferred Stock

Common stock, the most typical type of stock, refers to shares or units of ownership in a public corporation. An individual who has invested in common stock has one vote per share owned to determine the company's board of directors. **There are four ways the value of a stock can change.** First, the dollar value of a stock changes between the time the buyer purchases and sells the stock. Second, the value can also change when a **stock split** occurs. For example, if there is a 2 for 1 split and an individual owns one share worth $100.00 after the split, the individual will own two shares worth $50.00 each. After a split, the value of a stock generally increases. Third, a merger between two companies is a way the value of a stock can change. Finally, **Dividends** are distributions of earnings a corporation pays to stockholders; this is the fourth way the value of a stock can change. Dividends can be paid in the form of cash, company products, property, discounts, and additional stocks. Dividends can be paid annually, quarterly, monthly, etc.

Preferred stock refers to shares of stock which pay fixed dividends and have precedence over common stock. As a result of this precedence, preferred stock has less risk than common stock. Individuals do not have a vote to determine the company's board of directors. Dividends for each stock are stated as a percentage known as the **par value.** This value is a fixed percentage stated on the stock certificate. If a $100.00 stock has a par value of 6%, the dollar amount would be $6.00 per dividend period. The **market price** (amount a willing buyer would pay a willing seller for the stock) is based upon interest rates of the economy. Market price is the current price of a single share of stock. Typically a person can find this information on the internet.

Types of Common Stock

Stocks fall into different categories, based on an investor's preferences and risk tolerance, they may choose stocks accordingly. For an investor to have a diversified stock portfolio, they must have a variety of stocks which fall into different categories.

Based on the characteristics associated with the underlying company

1. **Income -** These pay high dividends because the company chooses to retain only a small portion of its profits. These stocks are from companies who have a steady stream of income. Utility companies fit this profile.
2. **Blue Chip -** From nationally recognized companies which dominate their respective industry and often have revenue of $1 billion or more. They have consistent records of profits, dividend payments, and a good reputation for company management.
3. **Growth -** A company who has a consistent record of relatively rapid growth and earnings in all economic conditions. Generally growth stocks are associated with new companies who pay no dividends to their investors.
4. **Emerging Growth -** A young firm in an emerging industry, consisting of a few companies and is often centered around a new technology. It is high risk, with great prospect for growth.

> *Stocks may fall into more than one category at a time!*

Based on the characteristics associated with the industry

1. **Cyclical -** These stocks are greatly influenced by changes in the economic business cycle. They are associated with companies who operate in major consumer dependent industries such as automobiles and airlines.
2. **Countercyclical -** Also called "defensive," these stocks are associated with companies that have consistent returns even when the economy is suffering due to the fact that their products are in high demand. Grocery stores and utility companies are examples.
3. **Speculative -** These companies have a spotty earning pattern, but have potential for substantial earnings in the future, pharmaceutical companies are represented by this type of stock. They are very high risk stocks.

Based on the Market Capitalization (Size) of the Company
Market capitalization (Market cap/market value) is calculated by multiplying the number of outstanding shares by the current stock price. For example, if a company had 200 million shares of common stock outstanding and a current stock price of $100 per share, it's market cap would be $20 billion (200 million x $100)
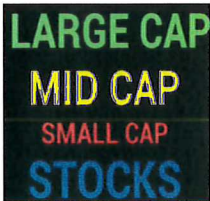
1. Mega-cap - Over $200 billion
2. Large-cap - Over $10 billion
3. Mid-cap - $2 billion–$10 billion
4. Small-cap - $250 million–$2 billion
5. Micro-cap - Below $250 million
6. Nano-cap - Below $50 million

LARGE CAP
MID CAP
SMALL CAP
STOCKS

Methods to Analyze Stocks

Technical Analysis: uses charts and graphs to track and study historical trends.

Fundamental Analysis: focuses on the financial statements of a company; uses formulas to calculate hidden value of company by looking at revenue, earnings, return on equity and profit margins.

Researching a Company

Determining which stock best meets one's needs can be a difficult process. To choose a stock, one must evaluate the history of the company to determine a stock's classification (income, growth, cyclical, etc). An individual should also research the historical annual rate of return on an investment. Lastly, an individual should research the market price of the stock, and if the company has distributed dividends in the past. Often the consumer will hire an **investment broker** to assist with investment choices. A basic understanding of stock terminology is critical for anyone who invests privately or through their companies retirement plan (this includes almost everyone). There are four numerical measures which help an investor determine how well a company's stock is doing: **Book Value**, **Earnings Per Share (EPS)**, **Price/earnings ratio (P/E ratio)** and **Beta**.

Researching a Company

Book value - the net worth of a company. It is determined by subtracting a company's liabilities from it's assets. These numbers can be found in the company's annual report. The number indicates what would happen if a company's assets were sold, debts paid off, and all proceeds were distributed to those who own shares of common stock.

Assets - Liabilities = Book Value

Price/earnings ratio (P/E ratio) is the relationship between the price of one share of stock and the annual earnings of the company. It is the most widely used and critical measure of a stock's price. It represents how much investors are willing to pay for each dollar of a company's earnings. Most companies' P/E ratio is 5 to 25. Financially successful companies have a ratio of 7-10, rapidly growing companies are between 15-25, and speculative companies are 40-50. Lower P/E stocks pay higher dividends, have less risk, lower prices, and slow growth. High P/E ratios indicate a firm is expected to have a lot of growth in the future.

$$\frac{\text{Price per share}}{\text{Earnings of the stock}} = \text{P/E ratio}$$

Earnings per share (EPS) indicates how much income a company has available to pay in dividends and reinvest as retained earnings on a per share basis. This indicator is highly regarded as an important statistic to evaluating a stock because it indicates how well as company is doing overall. It is determined by dividing the corporation's after tax annual earnings (before common stockholders are paid but after dividends are paid to preferred stockholders) by the total number of shares of common stock.

$$\frac{\text{After tax earnings}}{\substack{\text{Total number of shares} \\ \text{of common stock}}} = \text{Earnings per share}$$

Beta measures a stock volatility compared to changes in the overall stock market. If a stock has a beta of +1.5 and the market went up 10%, it is expected the value of the stock would rise 15%. Conversely, if the market dropped 10%, a +1.5 beta stock would drop 15%. Stocks have an average beta between +0.5 - +2.0. A negative beta indicates a countercyclical stock because the price changes are opposite the movements in the business cycle. Conservative investors want a stock with a beta of +1.0 or less meaning the stock is less sensitive to changes in the market. A beta of +1.1 - +2.0 indicates the stock is more sensitive to changes in the market because it moves at a greater percentage. A higher beta indicates a greater risk, but also the possibility of a greater reward.

Reading a Stock Quote

Stock	YTD%	52-Week High	Low	DIV	YLD%	P/E	VOL 100's	High	Low	Close	Net Chg
AAR	-16.3	43	36	.33	2.5%	22	1479	40	37	42	.027

1. **STOCK** - Each company's stock is provided with an abbreviated trading symbol name.
2. **YTD%-Year to date percentage** Change in price since 1/1
3. **52-WEEK HIGH & LOW** - Shows the highest and lowest prices the stock was sold per share during the last 52 weeks.
4. **DIV - Dividend per share** is the total cash paid to common stockholders per share annually. An "e" next to the number indicates dividends have been paid in the previous year, but not on a regular basis. A blank in this space indicates the company does not currently pay out dividends. If a company paid $10,000 in dividends for 30,000 shares, the dividends per share would be $0.33 (10,000/30,000).
5. **YLD% - Dividend yield percentage** is the dividend expressed as a percentage of the price of the share. If a company paid $1.25 in dividends for a stock with a market price of $50.00, the dividend yield percentage would be 2.5% (1.25/50.00).
6. **P/E - Price/earnings ratio** is the closing price of the share compared to the annual earnings per share. If a stock's market price is $50.00 and the earnings per share is $2.25, the P/E ratio will be 22.2 (50.00/2.25) or 22 to 1. This means for every dollar the company earns, the stock's market price is worth $22.00. This shows how the market values a stock because it describes how much investors are willing to pay for each dollar of earnings.
7. **VOL 100s** - This is the number of transactions to the share on the reported day, represented in hundreds (take the number and add two zeros).
8. **HIGH & LOW** - These entries represent the high and low selling prices of one share of stock for the previous day.
9. **CLOSE** - This is the price of the last share sold for the day.
10. **NET CHG - Net Change** is the difference between the closing price of the share from the prior day and the current day. A loss is indicated by a minus sign.

The Health of the Markets (Or How the Stock Market is Doing Overall)

There are three basic indexes which track stocks and give individuals a sense of the general health of the economy. These indexes vary daily because of the variety of stocks they measure.

1. **The Dow Jones Industrial Average** began in 1884 and is the oldest indicator of the ups and downs of the stock market. It was named after a cofounder, Charles H. Dow, and is nicknamed the Dow. It lists the 30 leading industrial blue chip stocks.www.djindexes.com

2. **The Standard & Poor's 500 Composite Index** covers market activity for 500 stocks. It is more accurate than the Dow because it evaluates a greater variety of stocks. www.standardandpoors.com

3. **The NASDAQ (National Association of Security Dealers Automated Quotations)** monitors fast moving technology and financial services stocks. It covers the market activity for all stocks traded on the NASDAQ. Because the NASDAQ monitors smaller companies with a more speculative stock, it generally has more dramatic ups and downs compared to the Dow.www.nasdaq.com
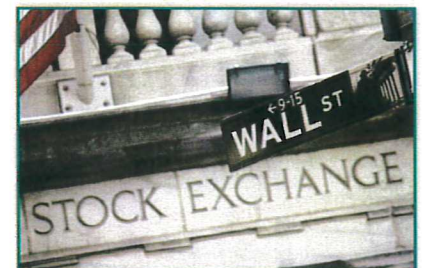
When referring to the general health of the economy, stock analysts often use the terms "bear market" and "bull market". The term **bull market** describes a state of the economy when prices have risen 20% or more over time. The market's upward trend is the result of investors who are optimistic about the economy and purchasing stocks. A **bear market** describes the state of the economy when the market is doing poorly and investors are not confident in the economy; therefore, they are not purchasing stocks or selling those already owned. A bear market is characterized by a 20% decline in prices over time. The above terms are also associated with a person's outlook on the market. For example if a person is a pessimist, believing that stocks are going to drop, he/she is called a bear.
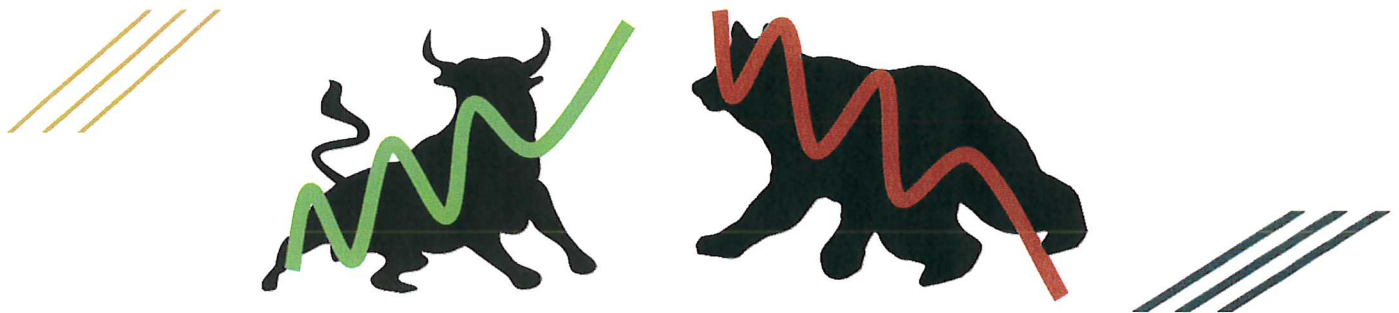
Organized Exchanges

Each exchange has minimum requirements for a stock to ensure only reputable companies are used. The minimum standards include an evaluation of annual earnings before taxes, net assets, market value, number of common shares offered to the public, and number of stockholders owning 100 or more shares. Each exchange has a limited number of seats available which brokerage firms purchase to give them the legal right to buy and sell stocks on the exchange.

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Organized Exchanges, continued...

1. **The New York Stock Exchange** (NYSE) began in 1792 and is the largest stock exchange by market capitalization of its listed companies in the US. It has the strictest company standards. There are over 2,800 companies who offer stocks on the NYSE, whose market capitalization was over $12 Billion as of 2017. www.nyse.com
2. **National Association of Securities Dealers Automated Quotations** (NASDAQ) is an over-the-counter electronic stock exchange. The NASDAQ has more than 3,300 small American and foreign companies listed. The company requirements are not as strict as NYSE. The market capitalization for 2017 was over $21 trillion. The price at which a stock is sold is the lowest price any broker will accept at the time. www.nasdaq.com
3. **Regional Stock Exchanges** trade stocks to investors living in a specific geographical area. Regional exchanges include Boston, Cincinnati, Intermountain, Midwest, Philadelphia, and Spokane.
4. **International Stock Exchange List**: stock markets can be found around the world; here are some of the most widely known world-wide exchanges:

● **CAC** = France ● **DAX** = Germany ● **FTSE** = UK ● **Hang Seng** = Hong Kong ● **Nikkei** = Japan

Purchasing Stocks

When individuals think of a stock exchange, they imagine this scene of frantic activity, people yelling, making strange hand signals, and papers flying. However, the stock exchange actually has a very methodical and organized system. Buyers and sellers are meeting to compete for the best price for their customers. It is based upon the laws of supply and demand. A trade occurs when the best bid meets the lowest offer to sell. **Supply** is the relationship of prices to the quantities of a good or service sellers are willing to offer for sale at any given point in time. **Demand** is the relationship between prices and the corresponding quantities of a good or service buyers are willing to purchase at any given point in time.
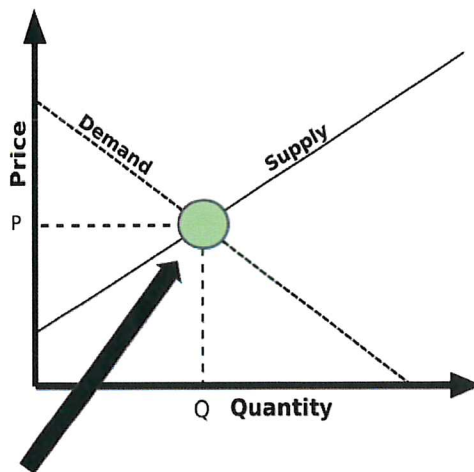
A trade occurs when the best bid meets the lowest offer to sell

Investors most commonly buy and trade stock through brokers. A **broker** is an employee of a brokerage firm who is licensed to buy and sell stocks, provide investment advice, and collect a commission on each purchase or sale. A broker buys and sells stocks on the stock market (organized exchange).

You can set up an account by depositing cash or stocks in a brokerage account. Firms like Charles Schwab and Fidelity offer **brokerage accounts** that can be managed online or with a broker in person. If you prefer buying and selling stocks online, you can use sites like E-Trade or Ameritrade.

Once you open an account you will tell your broker how many and what types of stocks you'd like to purchase. The **broker executes the trade** on the your behalf. In turn, he or she earns a **commission**, normally several cents per share or a per trade fee. Online trading sites typically charge lower commission fees, because most of the trading is done electronically.

After selecting the stocks that you want to purchase, you can either make a "market order" or a "limit order." A **market order** is one in which you request a stock purchase at the prevailing market price. A **limit order** is when you request to buy a stock at a limited price. For example, if you want to buy stock in Dell at $60 a share, and the stock is currently trading at $70, then the broker would wait to acquire the shares until the price meets your limit.

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Option #2: Investing in Stocks to Create a Diversified Portfolio
A Group Investment Activity

	Total Points Earned
	Total Points Possible
	Percentage

Date _____

Class _____

Names and group: _____

_____

Your Mission: You are a member of an investment team. Your group has received **$10,000** as an incentive and want to invest it for the future. The members of your group have learned about saving and investing and have decided they will purchase stocks with this money. All members of your group have nearly 40 years until they retire, so this is a chance to find some companies with strong growth potential that will provide a good return on your investment. Your group will want to minimize risk by having a diverse portfolio, so they plan to include three different companies from different sectors. Your team plans to use E*Trade for stock purchases, so keep in mind that they charge $6.95 per trade. These fees need to come from the $10,000 incentive fund.

In order to find three solid companies to invest in, your team will have to research more than that, so you have your work cut out for you. You plan to use some standard factors to compare your companies so that you are basing your decision on performance, not on your intuition. Let's get started.

Step 1: Research and Data Collection

All members of your investment team should use the stock data provided for the five companies in your group. Record the information on the spreadsheet below. Make sure you label your numbers as millions and billions as applicable.

Companies in Group A

	Stock #1	Stock #2	Stock #3	Stock #4	Stock #5
Company Info					
Name of company	Aflac	AT&T	Devon Energy	Dow DuPont	Alexion Pharmaceuticals
Ticker symbol					
Current Price					
What does this company make or sell?					
Profile					
Sector					
Industry					
Market Cap					
Stock Charts					
What has happened to the stock's price in					
last 1 year?					
last 3 years?					
last 10 years?					
Forecasts					
What do analysts predict will happen with this stock in the next 12 months?					
• High forecast					
• Median forecast					
• Low forecast					
Financials					
Income Statement					
• Gross Income					
• Net Income					
• EPS (Earnings Per Share)					
Cash Flow Statement					
• Net Cash Flow – Operating Activities					
Balance Sheet					
• Total Shareholder Equity					

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Companies in Group B

	Stock #1	Stock #2	Stock #3	Stock #4	Stock #5
Company Info					
Name of company	Exxon Mobile	Harley Davidson	McDonalds Corp	Johnson & Johnson	Merck & Co
Ticker symbol					
Current Price					
What does this company make or sell?					
Profile					
Sector					
Industry					
Market Cap					
Stock Charts					
What has happened to the stock's price in					
last 1 year?					
last 3 years?					
last 10 years?					
Forecasts					
What do analysts predict will happen with this stock in the next 12 months?					
• High forecast					
• Median forecast					
• Low forecast					
Financials					
Income Statement					
• Gross Income					
• Net Income					
• EPS (Earnings Per Share)					
Cash Flow Statement					
• Net Cash Flow – Operating Activities					
Balance Sheet					
• Total Shareholder Equity					

Companies in Group C

	Stock #1	Stock #2	Stock #3	Stock #4	Stock #5
Company Info					
Name of company	Apple	Bank of America Inc	3M	American Airlines Group	American Express
Ticker symbol					
Current Price					
What does this company make or sell?					
Profile					
Sector					
Industry					
Market Cap					
Stock Charts					
What has happened to the stock's price in					
last 1 year?					
last 3 years?					
last 10 years?					
Forecasts					
What do analysts predict will happen with this stock in the next 12 months?					
• High forecast					
• Median forecast					
• Low forecast					
Financials					
Income Statement					
• Gross Income					
• Net Income					
• EPS (Earnings Per Share)					
Cash Flow Statement					
• Net Cash Flow – Operating Activities					
Balance Sheet					
• Total Shareholder Equity					

Companies in Group D

	Stock #1	Stock #2	Stock #3	Stock #4	Stock #5
Company Info					
Name of company	Travelers Companies	Caterpillar Inc.	Cisco Systems	Best Buy Co Inc.	Carnival Corp.
Ticker symbol					
Current Price					
What does this company make or sell?					
Profile					
Sector					
Industry					
Market Cap					
Stock Charts					
What has happened to the stock's price in					
last 1 year?					
last 3 years?					
last 10 years?					
Forecasts					
What do analysts predict will happen with this stock in the next 12 months?					
• High forecast					
• Median forecast					
• Low forecast					
Financials					
Income Statement					
• Gross Income					
• Net Income					
• EPS (Earnings Per Share)					
Cash Flow Statement					
• Net Cash Flow – Operating Activities					
Balance Sheet					
• Total Shareholder Equity					

Companies in Group E

	Stock #1	Stock #2	Stock #3	Stock #4	Stock #5
Company Info					
Name of company	Costco Wholesale Corp	Darden Restaurants	Home Depot	General Dynamics	E*Trade
Ticker symbol					
Current Price					
What does this company make or sell?					
Profile					
Sector					
Industry					
Market Cap					
Stock Charts					
What has happened to the stock's price in					
last 1 year?					
last 3 years?					
last 10 years?					
Forecasts					
What do analysts predict will happen with this stock in the next 12 months?					
● High forecast					
● Median forecast					
● Low forecast					
Financials					
Income Statement					
● Gross Income					
● Net Income					
● EPS (Earnings Per Share)					
Cash Flow Statement					
● Net Cash Flow – Operating Activities					
Balance Sheet					
● Total Shareholder Equity					

Companies in Group F

	Stock #1	Stock #2	Stock #3	Stock #4	Stock #5
Company Info					
Name of company	Intel Corp	JP Morgan Chase	Verizon Communications	Visa Inc	United Health Corp.
Ticker symbol					
Current Price					
What does this company make or sell?					
Profile					
Sector					
Industry					
Market Cap					
Stock Charts					
What has happened to the stock's price in					
last 1 year?					
last 3 years?					
last 10 years?					
Forecasts					
What do analysts predict will happen with this stock in the next 12 months?					
● High forecast					
● Median forecast					
● Low forecast					
Financials					
Income Statement					
● Gross Income					
● Net Income					
● EPS (Earnings Per Share)					
Cash Flow Statement					
● Net Cash Flow – Operating Activities					
Balance Sheet					
● Total Shareholder Equity					

Step 2: Compare Your Data

Now your team is ready to compare company data. Remember that your team of investors wants a diverse portfolio, so look at the industry and sector information for your assigned companies in addition to comparing their financial and historical data. When looking at the comparisons, use the *Information to Know About Trading Stocks* 2.4.8.E1 resource for some reminders about what you are looking for. Which types of companies would you want in your portfolio? Are you looking for high numbers? Trends? Be as objective as possible.

Step 3: Make Your Decision

As your team evaluates the data, highlight which two companies have the best numbers for the following financial factors: market cap, median analyst forecast, gross income, net income, EPS, net cash flow, total shareholder equity. That will make it easier to see which companies stand out. Once you have them highlighted, review all of your data and narrow down your 5 companies to your top 3 choices. Complete the table below to explain your team's decision including details of the key financial indicators that may have influenced the team's choices.

Final Team Portfolio Selections

	Companies your team selected	What made your team believe these companies would be a good investment for your portfolio?
Choice #1		
Choice #2		
Choice #3		

Step 4: How Many Shares Will You Purchase?

Remember that your team has $10,000 to spend for the stock purchases and your broker fees. The price of each stock will partially determine how many shares your team can purchase. Your confidence in these companies may also influence your decision to purchase more or fewer shares of one company compared to another. Make your decision, calculate your costs, and record the numbers below to show how you decided to spend your investment money.

Recording Your Team's Stock Purchases

	Company Ticker Symbol	Current Price	# of Shares You Will Purchase	Broker Fee	Total Cost of this Purchase
Choice #1					
Choice #2					
Choice #3					
				Total Money Invested	

Step 5: Track the stocks in your portfolio for three days

Reflection Questions

1. Did any of your stocks have a gain after three days? Which ones?

2. Did any of your stocks have a loss after three days? Which ones?

3. If you have the chance to invest when you are an adult, do you think you'll put money into the markets? Why or why not?