# How Stocks and the Stock Market Works


The stock market appears in the news every day.  You hear about it any time it reaches a new high or a new low, and you also hear about it in statements such as "The Dow Jones Industrial Average rose 2% today, with advances leading declines by a margin of….."

In this lesson we will learn why stocks are important. What is a stock? What is a stock market? Why do we need a stock market? Where does stock come from to begin with, and why do people want to buy and sell stocks?

**A Simple Example: Determining Value**

Let's say that you want to start a business, and you decide to open a restaurant. You go out and buy a building, buy all of the kitchen equipment, tables, chairs and accessories that you need. You then buy your supplies and hire a cook, servers, bus-boys etc. You advertise and have a "Grand Opening."

Let's say that:

You spend $500,000 buying the building and the equipment
In the first year, you spend $250,000 on supplies, food, and the payroll for your staff
At the end of your first year, you add up all of the money you have received from customers and find that your total **income** is $300,000.

Since you have made $300,000 and paid out $250,000 for **expenses**, your **net profit** is:

**$300,000 (income) - $250,000 (expenses) = $50,000 (profit)**

At the end of your second year, you bring in $325,000 and your expenses remain the same, for a net profit of $75,000. At this point, you decide that you want to sell the business. What is it worth?

One way to look at it is to say that the business is "worth" $500,000. If you close the restaurant, you can sell the building, the equipment and everything else and get $500,000. This is a simplification, of course -- the building probably went up in value, and the equipment went down in value because it is now used. Let's just say things balance out to $500,000. This is the **asset value**, or **book value** of the business - - the value of all of the businesses' assets if you sold them outright today.

**But what if you keep it going?**

## A Simple Example: Selling Shares

If you keep the restaurant going, it will probably make at least $75,000 this year - - you know that from your business history. Therefore you can think of the restaurant as an investment that will pay out something like $75,000 in interest every year. Looking at it that way, someone might be willing to pay $750,000 for the restaurant, as a $75,000 return per year on a $750,000 investment represents a 10% rate of return. Someone might even be willing to pay $1,500,000, which represents a 5% rate of return, or more if he or she thought that the restaurant's income would grow and increase earnings over time at a rate faster than the rate of inflation.

The restaurant's owner, therefore, will set the price accordingly. You might price the restaurant at $1,500,000. What if 10 people come to you and say, "Wow, I would like to buy your restaurant but I don't have $1,500,000." You might want to somehow divide your restaurant into 10 equal pieces and sell each piece for $150,000. In other words, you might sell **shares** in the restaurant. Then each person who bought a share would receive one-tenth of the profits at the end of the year, and each person would have one out of ten votes in any business decisions. Or, you might divide ownership up into 1,500 shares and sell each share for $1,000 each to make the price something that more people could afford. Or, you might divide ownership up into 3,000 shares, keep 1,500 for yourself, and sell the remaining shares for $500 each. That way, you retain a majority of the shares (and therefore the votes) and remain in control of the restaurant while sharing the profit with other people. In the meantime, you get to put $750,000 in the bank when you sell the 1,500 shares to other people.

Stock, in basic terms, is really that simple. It represents ownership of a company's assets and profits. A **dividend** on a share of stock represents that share's portion of the company's profits, generally dispersed yearly. If the restaurant has 10 owners, each owning one share of stock, and the restaurant makes $75,000 in profit during the year, then each owner gets a dividend of $7,500. A large company such as Apple has millions of shares of stock outstanding – about 5.865 Billion! (10/10/2014 per *YCharts*)

In that case, the total profits of the Apple are divided by 5.865 billion and sent to the shareholders as dividends.

One measure of the value of a company, at least as far as investors are concerned, is the product of the number of outstanding shares multiplied by the share price. This value is called the **capitalization** of the company.


Stock Certificate

# A Stock Exchange

If I am a private citizen who owns a restaurant, and I am selling my restaurant stock to other private citizens in the community, I might do the whole transaction by word-of-mouth, or by placing an ad in the local newspaper. This makes selling the stock easy for me. However, it creates a problem down the line for investors who want to sell their stock in the restaurant. The seller has to go out and find a buyer, which can be hard. A **"stock market"** solves this problem.

Stocks in publicly traded companies are bought and sold at a **stock market** (also known as a **stock exchange**). The New York Stock Exchange (NYSE) is an example of such a market. In your neighborhood, you have a "supermarket" that sells food. The reason why you go there is for one-stop shopping, it is more convenient than driving around town and going to individual stores. The NYSE is a supermarket for stocks! Think of it as a great big room where everyone who wants to buy or sell shares of stocks can go to do their buying or selling.

**<u>There are Three major stock exchanges in the United States:</u>**

**NYSE – New York Stock Exchange**
**NASDAQ – National Association of Securities Dealers**
**AMEX – American Stock Exchange**

A company lists its stock on an exchange. For example the NYSE has about 2,800 companies listed. They have a total worth around $18 trillion.

The exchange makes buying and selling easy. You don't have to travel to New York City to visit the New York Stock Exchange - - you can call a **stock broker** who does business with the NYSE, and he or she will go to the NYSE on your behalf to buy or sell your stocks. If the exchange did not exist, buying or selling stock would be a lot harder. You would have to place a classified ad in the newspaper, wait for a call then haggle over the price every time you wanted to sell stock. With an exchange in place, you can buy or sell shares instantly.

There are dozens of brokerage houses. Some names you might know are Charles Schwab, Scottrade, and TD Ameritrade. You pay the broker a **commission,** between $40 to $100 per trade depending on the value of the trade and the individual broker. You can also trade stock online and you can start a basic account for a nominal fee and trades are only a few dollars.

Stocks that are not listed on an exchange are sold **Over The Counter (OTC).** OTC stocks are generally in smaller, riskier companies. Usually an OTC stock is stock in a company that does not meet the corporate and financial requirements of an exchange.

## Stock Averages - "BULLS" or "BEARS"

Every day we hear the news about the **Dow Jones Industrial Average (DJIA)**, or simply **"The DOW"** and other averages like the **Standard and Poor's 500 (S&P 500)** or the **Russell 2000**. These are broad market averages designed to tell you how companies traded on the stock market are doing in general. For example, the Dow Jones Industrial Average is simply the average value of 30 large, industrial stocks. These are companies such as AT&T, Disney, General Electric, Home Depot, and Wal-Mart Stores, Inc. The S&P 500 is the average value of 500 large companies and the Russel 2000 index averages the values of 2,000 smaller companies.

What these averages tell you is the general health of stock prices as a whole. If the economy is "doing well" then the prices of stocks as a group tend to rise in what is called a **"bull market."** If it is "doing poorly" prices as a group tend to fall in what is called a **"bear market."** The averages reveal these tendencies in the market as a whole.

Statue outside of Frankfurt Stock Exchange
http://en.wikipedia.org/wiki/Market_trend

The stock exchange has an interesting side effect. Because all the buying and selling is concentrated in one place, it allows the price of a stock to be known every second of the day. Therefore investors can watch as a stock's price fluctuate based on news from the company, media reports, national economic news and many other factors. For example, if the automobile industry has a supplier go on strike in Asia then their stock prices may drop as parts will be delayed due to the strike and production will fall causing job lay-offs.

The price of a stock also reflects the **dividend** that the stock pays and the **projected earnings** of the company in the future. An example of this is if bad weather results in a poor tea harvest in China then the price of Lipton stock may change dramatically.

## Corporations

Any business that wants to sell shares of a stock to a number of different people does so by turning itself into a corporation and the process is called **incorporating**. A corporation is a "virtual person" meaning that it is registered with the government and has a **Federal Tax ID Number**. Remember, a corporation can own property, make contracts, go to court and sue people and it can also be sued.

By definition, a corporation has stock that can be bought and sold, and all of the owners of the corporation hold shares of stock in the corporation to represent their ownership. One interesting point is that a corporation can have an infinite life span.

There is a whole body of laws that controls corporations and they are in place to protect the shareholders and the public. Every corporation must have a **board of directors**. If all of the shares are owned by just one person there is still a board of directors, only it is just one person. The shareholders in a company must meet every year to vote on the people for the board. The board of directors makes the decisions for the company. It hires the officers (president and other major officers), makes the company's decisions and sets company policies.

## Shareholders

Shareholders are a group of people that own a corporation. The board of directors decide how many total shares there will be. In addition, the company can decide if it is either **privately held** or **publically held.**

In a **privately held** company, the shares of stock are owned by a small number of people who probably all know one another. They buy and sell their shares amongst themselves.

In a **publicly held** company, it is owned by thousands of people who trade their shares on a public stock exchange. It is the publicly held corporation that is the basis of the stock market.

A corporation is an easy way to gather large quantities of **investment capital** – money from investors. When a corporation first sells stock to the public, it does so in an **IPO (Initial Public Offering).** The company might sell one million shares at $20.00 each to raise $20 million. It will do so through one or several brokerage houses who will take their fee from the $20 million. The investors (shareholders) hope that with the equipment and employees, the company will make a profit and return to them a dividend for their investment.

## Stock Prices

Let's say that this new corporation raised $20 million in its IPO. In the first year, when all of the income and expenses are added up, the company makes a profit of $1 million. The board of directors can decide to do a number of things with that $1 million:

- It could put it in the bank and save it for a rainy day
- it could decide to give all of the profits to the shareholders, so it would declare a dividend of $1 per share [the IPO was for one million shares to be sold]
- it could use the money to buy more equipment and hire more employees and expand the business
- it could pick some combination of these three options

If a company traditionally pays out most of its profits to its shareholders, it is called an **income stock.** The shareholders get income from the company's profits.
If the company puts most money back into the business, it is called a **growth stock**. The company is trying to grow larger by increasing the amount of equipment and the number of people who run it.

## Income vs. Growth

The price of an **income stock** tends to remain the same unless profits and dividends go up. People are getting their dividend money each year but the business is not really growing. This would be the case for holding stock in a single restaurant that distributes all of its profits to the shareholders each year.

Let's say the same restaurant saves its profits and eventually opens a second restaurant. That is the behavior of a **growth company**. The value of the stock rises as twice as much equipment is owned and twice as much profit is made. In a growth stock, the shareholders do not get a yearly dividend but they own a company whose value is rising. The shareholders make money when they sell their shares of this stock. **[This is assuming the golden rule – Buy Low, Sell High].**

In a publicly traded company, all of their financial information is public. The **Securities and Exchange Commission (SEC)** is in charge of collecting this information and making it available to investors. As this information is public, a perspective shareholder can research the company to see if it is a good or bad investment.

The **price/earnings ratio** also helps determine how much a stock is worth. This is the price of the stock divided by the earnings per share. Past company history is also an excellent indicator of how a company performs on the stock market. However, there are many other ways to research companies through the Web and decide if your investment will be profitable.