Stock Valuation and Ownership

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WHAT'S COVERED

In this lesson, you will learn how stocks are traded and valued. You will examine stocks as an option when you are using your problem solving skill to invest. Specifically, this lesson will cover:

1. Stock Ownership

You already understand the basics of stocks, so let’s explore them in more detail. As you work through this lesson, consider how this financial tool might help you problem solve as you work to achieve your financial goals.

1a. Brokerage Accounts

Where do you go to buy shares of stock? First, you must generally have a **brokerage account**. A brokerage account is an account with an investment company into which you deposit money and then use that money to buy stock. You have two primary choices when it comes to opening a brokerage account:

1. Full-service brokers, like Merrill Lynch, Edward Jones, and UBS, provide advice before you buy and sell stocks.
2. Online brokerage firms, or discount brokers such as Scottrade, TD Ameritrade, Fidelity, and E*Trade, are used by investors who do not need or want advice.

Both types of brokers charge a commission every time you buy or sell shares of stock. However, the commission is lower for online brokerage firms – ranging from $1 to $15 per trade. Both types of brokerage firms also provide investors with recordkeeping services so that you will know how much you paid for a stock, when you purchased it, and any gains or losses that have been received.

DID YOU KNOW

Cash within brokerage accounts is insured by the federal government (similar to bank accounts). However, investments, such as stocks, are not insured.

TERM TO KNOW

Brokerage Account

An account with an investment company into which you deposit money and then use that money to buy stock.

1b. Stock Exchanges

Once you have opened a brokerage account, it is time to find stocks to purchase. Remember, all publicly traded stocks are bought and sold on a stock exchange, which is simply a place where buyers and sellers meet to trade stocks. By opening a brokerage account, you gain access to these markets. There are three major stock exchanges in the United States:

1. New York Stock Exchange (NYSE)
2. American Stock Exchange (AMEX)
3. NASDAQ

Together, these exchanges give you access to thousands of companies. If you add in stocks traded in international markets, you have more than 10,000 stocks to choose from. The process of establishing a brokerage account and purchasing shares on an exchange is shown in this illustration.

Okay, we know that choice is a good thing. But sometimes too many choices can lead to mental overload. For example, how is someone supposed to pick a few good investments from thousands of choices? You can hire a financial advisor to help you make buying and selling decisions. An effective alternative is to become better informed yourself. That is, you should consider the following procedure:

- Open an online brokerage account.
- Conduct your own research.

- Pay attention to news and current events that relate to your investments.
- Buy and sell stocks and other investments online to create your own portfolio of investments.

Let’s turn now to some valuation methods you can use to help make the research process easier.

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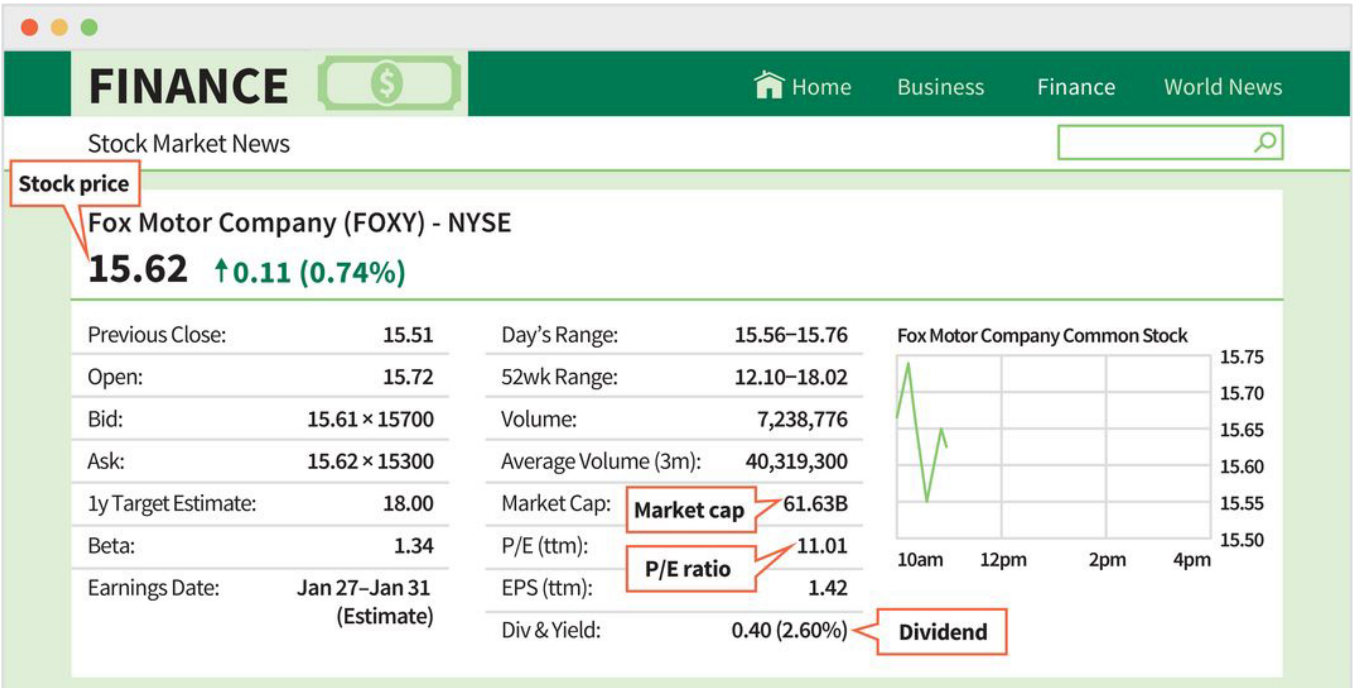
2. Valuing Stocks

The Internet provides a tremendous amount of information about stocks. For example, the illustration below presents information you might see on an online site that offers financial information about Fox Motor Company shares.



In the previous illustration, note the four highlighted figures:

- The stock’s price (on this day and time, Fox stock could be purchased for $15.62 per share).
- The stock’s dividend ($0.40).
- The stock’s price to earnings (P/E) ratio (11.01).
- The stock’s market capitalization (market cap) ($61.63 billion).

You can use these four data points to value a stock (you will learn how to use these data in the following pages). Keep this in mind before moving forward: the process of stock valuation can get quite complex. What we present here is a basic method that some investors use to get a feel for the value of a given stock. If you are a novice investor, you may want to take note of this valuation method but ultimately invest in mutual funds (which we will describe in another topic).

2a. Discounted Dividend Valuation Model

As an investor, here is an important question that you need to ask: is the price of Fox stock a bargain, overpriced, or priced fairly? One way to answer this question, for companies that pay dividends regularly, is to use the **discounted dividend valuation model**:

FORMULA TO KNOW

Stock Value

$$Stock\ Value\ =\ \frac{Dividend \times (1 + Dividend\ Growth\ Rate)}{Your\ Required\ Rate\ of\ Return\ -\ Dividend\ Growth\ Rate}$$

In the formula:

- The dividend is the dollar amount you will receive for every share owned.
- The dividend growth rate is how quickly the dividend has grown and will hopefully grow in the future.
- Your required rate of return is what you need to earn in order to make an investment.

Let’s now value the Fox stock. To do this:

STEP BY STEP

1. Check the stock market news report from above and find the stock’s current dividend: $0.40 per share.
2. Determine your required rate of return. This input is unique to you (see Hint below).
3. Calculate how quickly you think the dividend will grow in the future. Most companies that do pay dividends increase them over time. To estimate a company’s growth rate, you can review its history of dividend payments, which is usually 2% or 3% per year.

HINT

If you have a high risk tolerance, your required return will be lower (such as 5%) compared to someone who has a low tolerance for risk (such as 9%).

The following table shows the value of Fox stock with different inputs. As the required rate of return increases, the estimated value decreases. As a result, what is a bargain (when the estimated price is more than the current price) to one investor may be overvalued to another investor. For example, the estimated value of Fox stock, given a required rate of return of 10%, is [($0.40)] ÷ (0.10 − 0.03) = $5.89.

HINT

Investors with a higher risk tolerance (lower required rate of return) are usually willing to pay a higher price for a stock than those with a lower risk tolerance (higher required rate of return).

Dividend	$0.40	$0.40	$0.40	$0.40	$0.40	$0.40	$0.40
Your required rate of return	10%	9%	8%	7%	6%	5%	4%
Dividend growth rate	3%	3%	3%	3%	3%	3%	3%

Calculated value	**$5.89**	$6.87	$8.24	$10.30	$13.73	$20.60	$41.20
Current price	$15.62	$15.62	$15.62	$15.62	$15.62	$15.62	$15.62
Result	Overpriced[a]	Overpriced	Overpriced	Overpriced	Overpriced	Bargain[b]	Bargain

a When estimated value is less than current market price.
b When estimated value is greater than current market price.

There are a few challenges associated with using the discounted dividend valuation model:

- You should only compare companies in the same or similar industry.
- Many companies do not pay dividends on their stock, making this valuation method difficult to use.
- Valuation fails to consider other factors that can influence the price of a stock.

So why even consider this valuation technique? This approach helps illustrate how mutual funds and other investments that purchase stocks for you operate. Additionally, if you ever do decide to buy stocks directly, you will have at least one tool to help you estimate value, even if the tool is somewhat basic.

TERM TO KNOW

Discounted Dividend Valuation Model
A calculation to determine if a stock is fairly priced.

2b. P/E Ratio

Investors also use a stock's P/E ratio to estimate the relative value of a stock; that is, they divide the stock price per share (P) by the earnings per share (E).

- The P/E ratio tells you how much you are paying for one dollar of current earnings.
- Stocks typically trade in a P/E range between 10 and 30.
- Value-oriented investors (those who tend to be risk-averse) prefer to purchase stocks with lower P/E ratios because they are able to buy shares at a lower price.

HINT

Companies in different types of industries will have different average P/E ratios, so it is best to avoid comparing companies across industries.

The reason for different P/E ratios from one stock to another has to do with how quickly earnings are *expected* to grow. Generally, investors are willing to pay a premium (high P/E ratio) for shares of companies whose earnings are growing rapidly. Growth-oriented investors (those who are risk-seekers who believe the future of a company is promising) often purchase companies with relatively high P/E ratios because growth investors are more interested in the large future earnings of a company, not necessarily the present earnings or current dividends.

TERM TO KNOW

P/E Ratio

A stock valuation tool that is calculated by dividing a stock's price per share (P) by the earnings per share (E).

2c. Market Capitalization

Investors often classify companies into one of nine broad categories as shown in the table below (see Hint). To see how this works, find Fox's **market capitalization** (market cap) in the stock market news report from earlier, which is just the price of a stock multiplied by the total number of shares in the marketplace. As you can see, the market cap for Fox is $61.63B (billion). Market capitalization allows investors to compare large companies to other large companies, and small companies to small companies.

HINT

The stock classification table can only be completed after applying a stock valuation model and determining a stock's market capitalization.

Value	Size		
	Market Capitalization		
	Large (more than $10 billion)	Medium ($2–$10 billion)	Small (less than $2 billion)
Bargain (value)			
Fairly priced (average)	**Fox**		
Expensive (growth)			

As you can see from the previous table, Fox is a large company and fairly priced (at least for a risk-averse investor)!

- The larger the company, the "safer" the stock.
- But remember that safety is relative. Unlike a bank account, stocks can go down in value.
- Always remember that financial experts recommend that most people are best served by purchasing mutual funds or ETFs (exchange-traded funds) rather than individual stocks.
- Large-company stocks just tend to go down less than small-company stocks and, conversely, small-company stocks tend to increase more than large-company stocks.

DID YOU KNOW

Yahoo! Finance, Google Finance, and Morningstar are free Internet sources and provide everything you need to start analyzing and classifying stocks today.

TERM TO KNOW

Market Capitalization

The price of a stock multiplied by the total number of shares in the marketplace.

SUMMARY

In this lesson, you learned about **stock ownership** and how to **value stocks**. You considered how stock valuation may be able to help you problem solve to meet your financial goals. The two primary types of stock **brokerage accounts** are full-service brokers and discount brokers. One main difference between them is the added advice you get from a full-service broker. By opening a brokerage account, you gain access to the **stock exchange** where stocks are publicly traded.

The **discounted dividend valuation model** is one way to value a stock before buying. You'll need three numbers: the stock's dividend and dividend growth rate, and the rate of return that you require. A **P/E ratio** is another tool for finding relative value of a stock, calculated by dividing price per share by earnings per share. Lower P/E ratios are for investors who prefer lower levels of risk. **Market capitalization** is one way to compare sizes of companies in order to predict the risk associated with company stock.

TERMS TO KNOW

Brokerage Account

An account with an investment company into which you deposit money and then use that money to buy stock.

Discounted Dividend Valuation Model

A calculation to determine if a stock is fairly priced.

Market Capitalization

The price of a stock multiplied by the total number of shares in the marketplace.

P/E Ratio

A stock valuation tool that is calculated by dividing a stock's price per share (P) by the earnings per share (E).