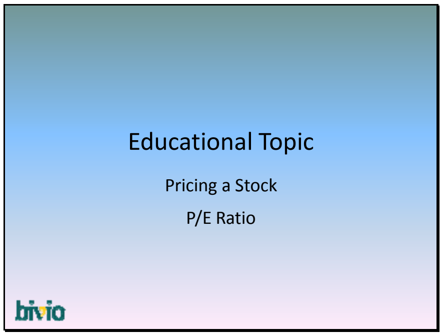
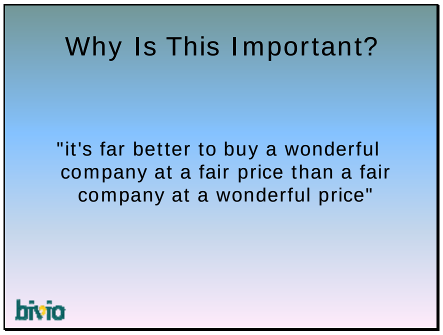


Have you ever wondered what determines a stocks price? In tonights educational topic, we'll discuss one of the ways used to determine it.

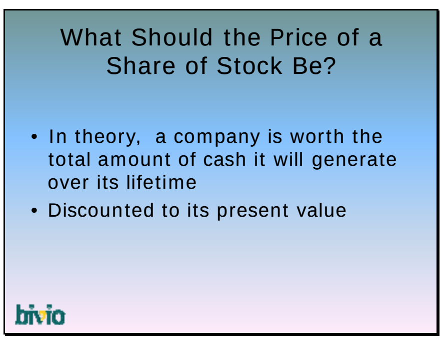
The P/E Ratio



Why is it important to understand how stocks are priced?

Because, to paraphrase Warren Buffet, you want to purchase "wonderful companies at fair prices".

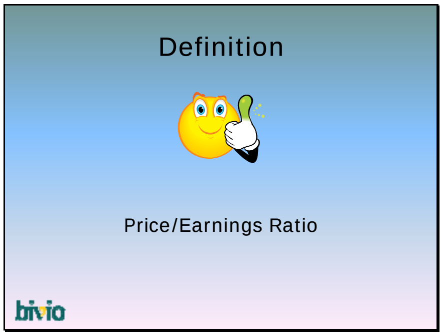
If you pay too much for a company you won't receive as good of a return on your investment. If you do not purchase well managed companies you will have a hard time predicting what their stock price might be in the future.



So how do you know what a fair price should be for a stock? Its important to think about this. Recent prices may be misleadingly seductive.

In theory it is the value today of the earnings you will receive in the future.

We call this their present value. For example, $100 that you will receive a year from now is worth less to you than $100 you will receive today. The reason for this is because if you had it today, you could invest it at some interest rate and a year from now you'd have more than $100.



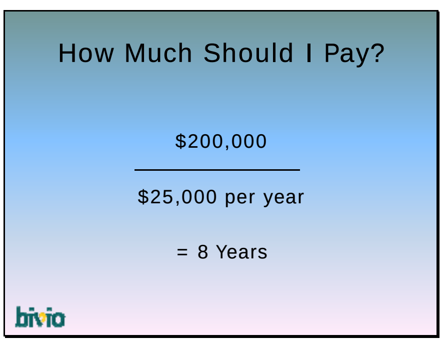
Present value is calculated using a mathematical technique called discounted cash flow. Using computers, it is not hard to come up with this value though it does require making several judgments.

Many investors like to start with simpler rules of thumb so they can evaluate prices quickly.

One of these is the Price/Earnings Ratio also called the price to earnings multiple. It is calculated by dividing the price of a share of stock by 1 years earnings per share.

As you know by now, I think a good way to understand what you need to know about investing is by thinking about owning a candy store in your local downtown.

Suppose you make $25,000 profit each year and you'd like to sell your business for $200,000



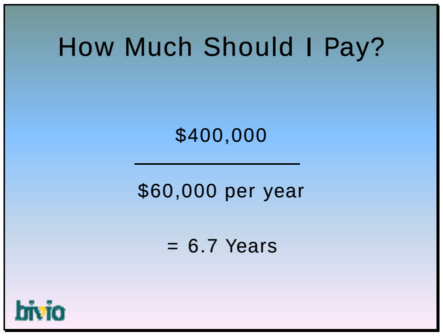
Suppose I want to purchase it. If I pay your asking price of

$200,000 and I think I will continue to earn

$25,000 dollars each year,

I can do a quick calculation to determine that it will take

8 years for me to recoup my investment.
My price to earnings ratio is 8. I can compare this to the price of other candy shops, the price of other retailers in similar businesses or the price of completely other businesses to get a feel for whether the price was reasonable or not and whether it was something I wanted to invest in.



For example, if the candy shop down the road was selling for twice as much,

$400,000 but had earnings of

$60,000 per year, it would have a

P/E ratio of 6.7 and might be a better investment, even though it cost more.

Of course all this assumes that the candy shop business is not growing. It is reliable and predictable which adds value to the business. But, it's even better if it is increasing each year. Suppose I buy the candy shop for $200,0000 but instead of earning

$25000 my second year,

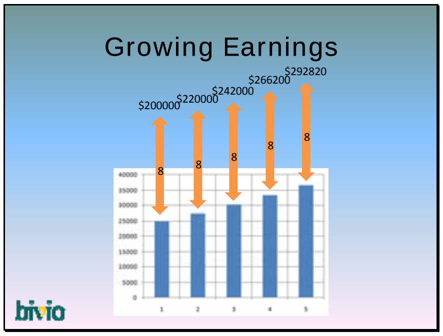
my earnings grow by 10% and I earn

$27500.

If someone would still pay a multiple of 8 times earnings for my business, it has now increased in value from

$200,000 to $220000. This means along with the earnings from the business, I have made money because of the increase in value of the business. The earnings have gone up 10% but so has the value of my business and the price I might be able to get for it if I want to sell it.

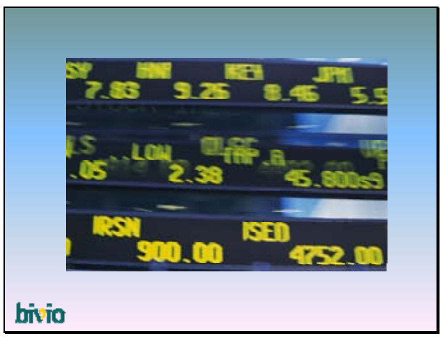
I will recoup my original investment faster than I originally thought.



If my earnings increase by 10% each year, ^^^^^ for the next 5 years

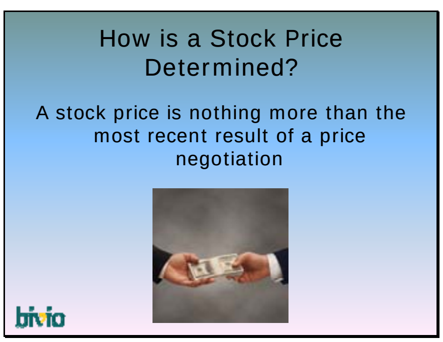
and then I want to sell the business, I might even be able to find someone who will think it will be worth more than 8 times the earnings. The P/E might increase because not only do I have the reliable earnings that were present when I purchased the store, I have demonstrated that earnings can grow reliably by 10% each year.

It’s the same with stocks, the price of the stock will be affected by how fast and how reliably earnings are growing.



If you were purchasing a candy shop, you would probably take a little time to figure out what you felt comfortable paying for it. You should make sure to do this when purchasing stocks also.

Train yourself to not be enticed by stock prices that change by the minute and stream across your television or computer screen. If you are an investor you don’t need to jump in without taking the time to make a reasonable determination of what an appropriate price is.



So how is candy store price related to stock prices?
While you aren’t buying the whole business when you buy a share of stock, you have an ownership stake. You will earn money on your investment if the company distributes part of their earnings to you as dividends, and/or if the stock price grows due to growth in earnings.

The price of the share is the result of a negotiation between current owners of the stock and prospective buyers.

The stock market is where the negotiation takes place.

As you can imagine, different people will place a different value on certain characteristics of a company. That's why stock prices vary so much.

While a company with a long history will tend to develop a "signature" Price to earnings multiple, there may be short term fluctuations and even long term changes due to several factors. For example,

Market supply and demand

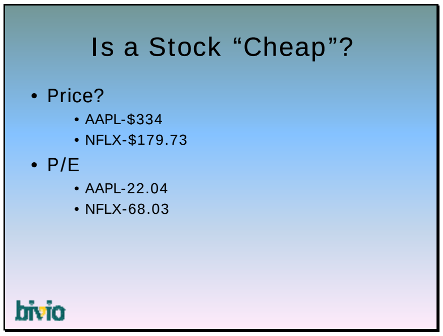
Earnings growth rates, both historical and expected future

Perceived risk, including risk due to things like

consistency in earnings or

increased or decreased use of debt

Changes in the economy can have sweeping impacts on Price to earnings multiples of all the companies in the stock market. An awareness of this type of influence can provide you with an opportunity to buy good companies at bargain prices.



Sometimes people use the price of a share of stock to determine whether a it is "cheap" or not.

A stock with a low price may actually be quite expensive. Conversely, one with a stock price in the hundreds of dollars may actually be quite inexpensive.

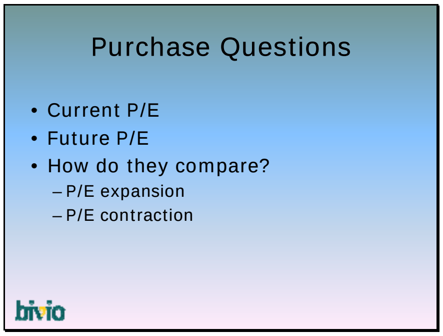
For example, APPL closed yesterday at a price of $334,

NetFlix closed at $179.73
It looks like Apple is an "expensive" stock compared to Netflix.

That is why it is important to have a reference point to determine whether these shares are a good value. That is why we look at their Price to Earnings Ratio's

Apple is trading at a multiple of 22.04 of it's past 12 month earnings

while Netflix is trading at a multiple of 68.03
This should certainly raise some flags that Netflix, while having a price around half of Apple, may not offer as much potential for future price increases and therefore may not be the better value.



Here are some questions to answer about P/E of a stock you are looking at purchasing.

Is it's current P/E reasonable?

What might you expect it's P/E to be in the future?

How do they compare? If a stock is "undervalued", ie you are buying it for a really good multiple of earnings
You might increase the return on your investment if it returns to its fair value or or more when you sell it. We call that P/E expansion because the price may increase faster than the earnings growth. If this happens in a reasonable time frame, you can brag about the "bargain" you got.

If you overpay for a company, it's price may decrease, even if it's earnings increase as you expect. We call that P/E contraction. This often happens when stocks are priced at unrealistic levels. If you remember the "dot com" bubble, this is what happened. People were making really bad judgments about future earnings potential of many internet companies and then using them to justify paying really high prices for the companies stocks.

Let's talk about how to find out what the current P/E's are and how to decide whether they are reasonable or not. One place you can find information about P/E's is at finance.yahoo.com.

If you select "Key Statistics", you'll get to a page of information like this. As of the closing price on Wednesday January 5, Apple was selling at a current P/E of 22.04. Current P/E is current price divided by the trailing 12 months earnings.

It's Forward P/E was 14.08. This is the current price divided by the analysts estimates for earnings for their 2011 fiscal year. If Apple can sustain a 22 P/E, it looks like there might be room for the price to grow.

How To Tell if the Current P/E of a Stock is Reasonable

Compare to historical rates
BigCharts.com

bivio

There are several other checks you can do to determine if the current P/E of a stock you are interested in is reasonable.

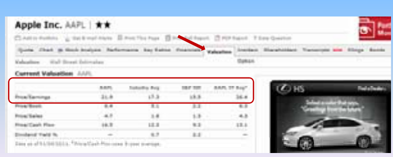
First, you can compare it to the P/E's the stock has sold at in the past. This is probably one of the best indicators of how people have been valuing the stock in relation to its earnings. You can get a plot of historical P/E's at www.bigcharts.com

On this graph you can see that in the past 5 years, Apple stock has traded for as high as a 43 P/E and as low as an 11.4 P/E For the past couple of years, it looks like it has been trading around 20

If the P/E changed dramatically at some point, make sure you understand why. This helps you decide whether you might expect similar changes in the future. Apples P/E seems to reflect the state of the stock market pretty well and probably also has some correlation to the state of Steve Jobs health.

How To Tell if the Current P/E of a Stock is Reasonable

Compare to industry
www.morningstar.com



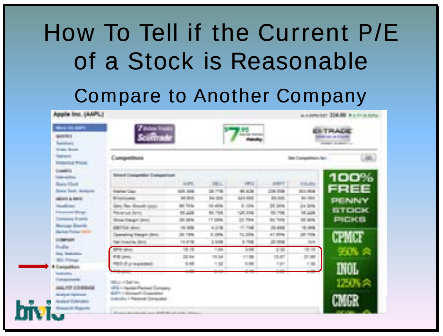
bivio

You can also compare the current P/E to average P/E's for the industry sector it is in. You can find industry comparisons in a variety of places.

One of them is at morningstar.com.

Select the "Valuation tab"

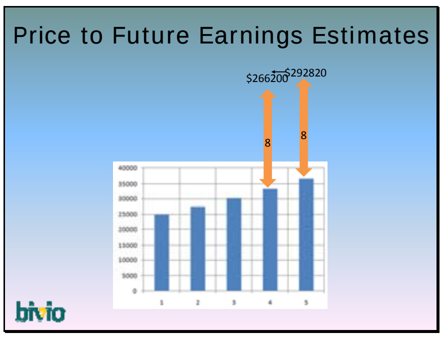
You'll see a table like this, where both Apples P/E and the P/E for the industry sector it is part of are displayed. You'll see here that Apple has a little higher valuation than the average for it's industry. Apple has been hitting a lot of homeruns recently so there is probably a good reason for that. However, the industry average gives us some sense of how Apple stock prices might move downward if it's momentum slows. It is interesting that despite the current success of Apple, it's stock price still seems to be pretty down to earth.



Finally, you can compare it to the current P/E's of companies in similar businesses. At finance.yahoo.com,

you'll find a competitors page which will present comparison statistics for you.

While you can see that Apples current P/E is a bit higher than it's competitors, it's price to expected growth rate or "PEG" ratio is lower. If you recall from our candy store example, a higher growth rate might justify a higher Price to Earnings ratio because return on your investment will happen faster. Another rule of thumb some use is to look for a PEG ratio of 1 or less.

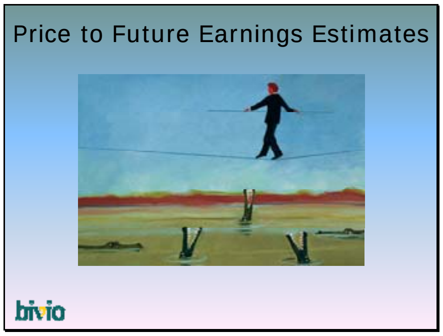


You can also look at future earnings estimates for a company and look at it's current price compared to those. Often times a stock price may have moved up in advance of earnings being reported.

For example, lets go back to our candy store. Suppose we've just completed year four. We've had another successful year and again, our earnings grew 10%.

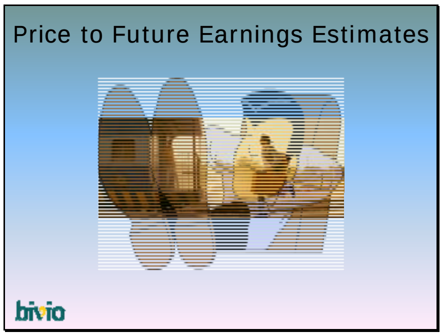
At the 8 P/E we use to value our business, we determine it's now worth $266200
Suppose we decide that we are ready to retire from this business and place it up for sale. What will we charge for it? $266200? Probably not. If we expect earnings for the future to grow at 10% a year again, and we only charged $266200, the buyer would be getting our store for a bargain future P/E of 7.28

We would probably set the price assuming at least an 8 P/E for the projected earnings. The buyer will take a risk that store earnings will grow as they have in the past. But, tolerance for those risks is what makes a market.



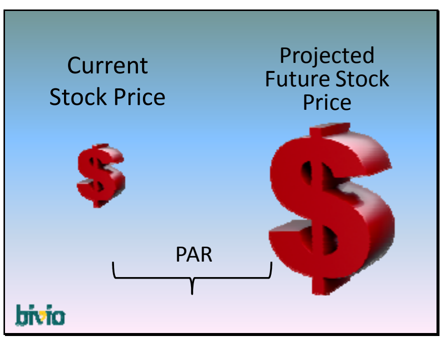
This happens a lot with stocks.
Investors are making judgments about the future and stocks are priced assuming they might come true.

They may be educated judgments but a stock trading at a P/E much higher than it's historical rates may have more risk involved with it's purchase. As an investor, you have to understand the risk and determine whether you are comfortable making the investment.



A lot of times, when a stock price is going up and up and up and P/E's are expanding, we feel pressure to "get on board". In general, especially if you have not developed a lot of investing expertise, this is a pretty risky action to take.

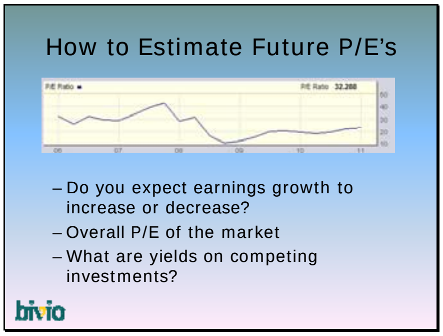
If you look for good, well managed companies, you have the time to watch and wait for their prices to get to attractive levels. This often happens due to influences that have nothing to do with a specific company. There may be overall reasons the market goes up and down. If you're keeping an eye on good companies, you will know when to take advantage of these opportunities and purchase your stocks then.



So how do we use P/E to decide ahead of time what price we think is reasonable to purchase a stock at? We make a judgment about what we think the P/E will be in the future.

That allows us to calculate a possible future stock price.

We can compare it to todays price to figure out our projected annualized return.



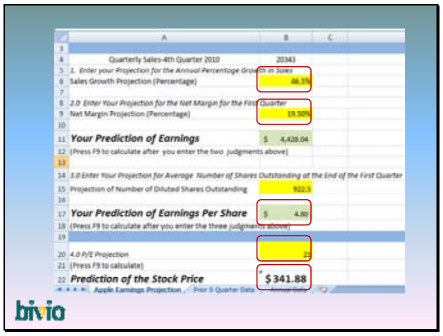
To estimate the future P/E, you need to think about the types of things that might change that might affect it.

First, I would take a look at it's history. Here is the plot of the quarterly P/E's for the past 5 years from bigcharts.com.
When I try to estimate what the P/E might be in the future, I first take time frame into account. I think for the next year or so, it is not unreasonable to project that the Price of Apple stock might remain at least where it is now at a P/E of 21 or 22.
If, however, I am thinking out for a longer time frame, I get more conservative in my thinking. In that case, I think a more conservative estimate of perhaps 18 might make me more comfortable.
At some level I am taking things like this into account:

Do I expect their earnings growth rates to increase or decrease in the future? Apple is a pretty big company, I think it is reasonable to expect they might slow down a bit.

What is the overall P/E of the stock market? Is it historically high or low right now?
Since 1900, the average P/E ratio for the S&P 500 index has ranged from 4.78 in Dec 1920 to 44.20 in Dec 1999,with an average around 15 which is where it is today. The average P/E of the market varies in relation with, among other factors, expected growth of earnings, expected stability in growth of earnings and expected inflation.

Yields of competing investments will also affect P/E. For example, when US treasuries yield high returns, investors prefer them as a risk free place to put their money and therefore will pay less for a given earnings per share and P/E's fall.



Once we've decided on our P/E judgment, it's time for us to run our calculations. If you recall from our discussions of sales growth and net margin in November and December, we use a spreadsheet like this to enter our judgments and do that.

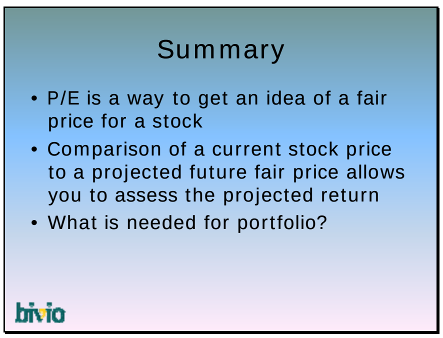
First, we enter a judgment for sales growth

Then net margin

These are used to calculate future earnings per share

We can multiply this by our expected P/E

to get an idea of what the stock price might be. In this example, we are looking at a projection for stock price for the current quarter. We can easily adjust this to project out over any time frame we'd like.



In summary, the P/E ratio is a rule of thumb you can use to help you decide whether the current price of a stock is high, low or reasonable.

Comparison of a current stock price to a projected future fair price allows you to assess the projected return if you bought the stock at it's current price.

If the projected return is not what you need for your portfolio, you can use P/E to determine what price might be a good one to wait to purchase the stock at.