

Stockfighter®

LESSONS On Stock Market Investing

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Introduction

The *Stockfighter*® game teaches players how to become successful stock market investors. Stock market investing involves buying and selling stocks. The idea is to buy good stocks and sell them before they become bad stocks. The game teaches how to do this.

Stocks, also called shares, are ownership interests in companies. For example, a share of Microsoft represents a fractional ownership interest in the Microsoft corporation. Being an owner entitles one to participate in the profits of the corporation, and that is what is valuable about owning a share of stock, owners share the profits. If profits go up the value of the shares generally goes up. Thus owners of stock, or “shareholders,” are very much interested in how profitable their company is.

In the real world one buys and sells stocks through a stock broker such as Charles Schwab, Ameritrade or Merrill Lynch. Schwab and Ameritrade are online brokers. An investor goes to their website, opens an account by depositing some money, and can then trade on that account. Trades are entered online by typing in the buy and sell orders. Typically the broker charges a commission, often around \$10, to accept and process an order. It is also possible to phone the broker and place a trade over the phone. The commission charge is a little higher in this case. In *Stockfighter* players go to the “Enter Trades” screen and type in their buy and sell orders, e.g., Buy 100 shares of Aristo Airways, symbol ARA.

The lessons provided here are based on the **Almighty Formula**. This formula states that a good stock is one that represents an ownership interest in a company whose business is good, whose finances are strong, and whose stock is not over-priced. More briefly:

Good Stock = Good Business + Good Finances + Good Price

That is the **Almighty Formula**, and the following lessons explain how to use it to identify good stocks, how to do the research (both in the game and in real life) necessary to find good stocks, and how to know when to sell stocks that are in danger of becoming bad stocks. And that is all you need to know to become a successful stock market investor – how to find good stocks and how to know when to sell stocks that are no longer good.

The lessons teach you how to do this and the game lets you practice what you have learned in a realistically simulated stock market. Stock market investing is a skill and like any skill it takes practice to get good at it. The thing about *Stockfighter* is that it lets you practice without risking any money. A rating system in the game lets you know if you are acquiring the skills needed for successful investing.

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Lesson 1

The Almighty Formula

Buy good stocks, avoid bad ones, and use The Almighty Formula to figure out which is which. That is the most fundamental rule of all. It's like Will Rogers said, "It's easy to make money in the stock market. Buy a stock and when it goes up sell it. If it doesn't go up don't buy it." The good stocks are the ones that go up, and the trick is in figuring out which ones they are.

The Almighty Formula

The Almighty Formula says a good stock is due to three things--a good business, good finances, and a good price. This formula comes directly from the nature of a stock and from common sense. A share of stock is an ownership interest in a company. If a company has a million shares of stock and you own one of those shares, you own one-millionth of the company and are entitled to one-millionth of the company's profits. That is what is good about owning a share of a company, you get a share of the profits proportionate to your ownership.

Take, for example, **Anheuser-Busch (BUD)**. They have 714 million shares outstanding and the market price of a share on April 18, 2008, was \$48. Suppose you bought 100 shares for \$4,800, you would then own $100/714,000,000$ of the Anheuser-Busch company. That's not a lot, but fortunately their profits are large. For the fiscal year ending December 2007 the company earned \$2.79 per share, or \$2.12 billion. If you own 100 shares, your part of the profits comes to \$279.

But don't expect a check from the company for \$279. They are going to keep some of that money to use in expanding their business which should mean even larger profits next year. Anheuser-Busch, however, does pay a dividend which means they will be sending you a check for at least part of your profits. Not all companies do this. Some keep all of the profits to plow back into the business. Either way, though, dividends or growth of the business, should reward you as a stockholder. Either you receive cash in hand as a dividend payment or you own shares in a larger and growing business.

What it Comes Down To

This is what it comes down to in evaluating a stock—how big is the earnings pie and what is your cut? The bigger the pie the more you get. This is why the Almighty Formula says a good stock comes from a good business, and a good business is one whose earnings are growing and are likely to continue growing.

Caterpillar (CAT) is a stock with a good business. In 2006 they earned \$5.17 a share, in 2007 they earned \$5.37, up 4%, in 2008 they are expected to earn \$5.84, up 9%, and in

2009 they are expected to earn \$6.59, up 13%. Profits are growing at an increasing rate. Even though there is a lot of truth to the adage that “Stock prices follow earnings,” the raw earnings numbers, such as these for Caterpillar, are not the whole story.

Before you rush out and buy shares of Caterpillar remember there are two more parts of the Almighty Formula—good finances and good price. These will be covered later. For now remember that, at a minimum, a good stock must come from a company with a good business that is generating growing earnings.

QUIZ ON LESSON 1:

1. The Almighty Formula is:

- A. The formula for chocolate raspberry truffles.
- B. The formula that says a good stock equals a good business + good finances + a good price.
- C. Albert Einstein’s formula for success in life: “If A is success in life, then $A = X + Y + Z$ where X is work; Y is play; and Z is keeping your mouth shut.”

2. A business is good if:

- A. Every employee is given a large Christmas bonus.
- B. The company’s earnings are growing and likely to continue to grow.
- C. They run lots of cool ads on television.

Lesson 2

Where to Get the Information

Build A Bear (BBW) is in the business of experience-based shopping. They operate “make your own stuffed animal” stores where customers stuff, fluff, dress, accessorize and name their own teddy bears and other stuffed animals. As of July 2005 they had 186 stores in the U.S. and Canada.

In 2003 they earned \$0.45 per share. That jumped 137% to \$1.07 a share in 2004. In 2005 estimates are for earnings per share of \$1.19, an 11% increase, and for 2006 the estimates are \$1.48 a share, an increase of 24%. Although a bit uneven, the company’s earnings look good. The question is will they stay good? And that in turn raises the question of where to get information about past, present, and estimated future earnings. The Internet, of course, is the answer.

In *Stockfighter* earnings estimates for the current fiscal year and the next fiscal year are available in the Company Report for each company. Go to Stock Research then to Company Report and then type in the symbol for the company whose earnings you want to know about. The following material explains how to find out earnings estimates for real life companies.

Two Key Internet Sources

There are lots of places on the Internet to get information about a company’s business. As an example we will use the Microsoft Investor web site. (A good alternative web site is the Yahoo! Finance site at <http://finance.yahoo.com>.) At this point please go to: <http://moneycentral.msn.com/investor>. This site has lots of information; however, our focus will be on the company’s business. Specifically, we want to find the earnings numbers for BBW and we want to find information that will help us decide if their business is likely to stay good.

Finding the Earnings Data

At the Microsoft Investor home screen you should see a top menu bar with the “Investor” tab selected and below that a menu bar containing a tab for “Stocks.” Click on “Stocks.” At the “Stocks” screen enter BBW, the symbol for the Build A Bear company and hit Enter or click Go. You should see a screen with information about BBW.

On the left side of the screen there are a lot of choices. Click on “Financial Results.” We are now closing in on earnings data. Still on the left side of the screen under “Financial Results” click on “Statements.” You should now see the Build A Bear Financial

Statements screen with the “income statement” and “annual” view chosen. These are what we want.

Scroll down to the bottom of the table and look at the line for “Diluted EPS for Total Operations.” EPS stands for “Earnings Per Share.” Diluted means it is the EPS figure that would result if all convertible securities were converted into shares. It’s the EPS number that comes from spreading earnings over the largest possible number of shares. So, in the spirit of always-assume-the-worst, that is the EPS number we will use. This is where we see that in 2003 BBW earned \$0.45 a share and in 2004 they earned \$1.07 a share. That takes care of the historical data. The next step is to find the estimated earnings for the current fiscal year and the next fiscal year.

Go back to the left side of the screen and click on “Earnings Estimates.” You will be taken to the Build A Bear Earnings Estimates screen and toward the right side of that screen you will see that three analysts estimate the company’s earnings for the fiscal year ending 12/05 to be \$1.19 and for the fiscal year ending 12/06 the estimate is \$1.48. Of course analysts can change their estimates at any time and perhaps these numbers will be different by the time you are reading this, but you know where to look for the current and next year earnings estimates and that’s the key thing.

2008 Update: The economic slowdown or recession that began in 2007 has hit Build A Bear hard. Earnings have dropped and so has the stock price.

Earnings at Yahoo!

Earnings estimates are also available on the Yahoo! Finance web site. Go to <http://finance.yahoo.com>, enter a stock symbol and click “GO.” Then on the left side of the screen click on “Analyst Estimates.” That will take you to the current earnings estimates for the stock you have entered. For previous years earnings data click on “Balance Sheet” at the bottom of the left side of the screen.

It is worth noting that Yahoo! and Microsoft get their earnings estimates from different sources, so they don’t always agree. Yahoo! Finance gets its estimates from First Call and Microsoft gets estimates from Zachs. First Call and Zachs are two different companies that provide financial information, and while their estimates are usually pretty much in agreement they do vary on occasion. The First Call numbers are more widely used and relied on by stock market investors.

You should look up the earnings numbers for some other companies. See how they compare to Build A Bear’s earnings on a per share basis. Check out any companies you want, but here are some possibilities to start with: **Microsoft (MSFT), General Motors (GM), Anheuser-Busch (BUD), Intel (INTC), and Exxon-Mobil (XOM).**

The next step will be to find information that will help determine if Build A Bear’s business is likely to stay good. That will be lesson 3.

QUIZ ON LESSON 2:

Good places to get information about a company's earnings are:

- A. The Microsoft Investor and Yahoo! Finance web sites.
- B. Your barber or hair stylist.
- C. The Hogwarts School Library

(The names Microsoft and Yahoo used in these lessons are registered trademarks of those companies.)

Lesson 3

Is Business Good?

Whether a company's business is good and will stay good is the \$64 question, and it is impossible to know for sure. It is possible, however, to gather a fair amount of information, apply an appropriate analytical tool, and arrive at a reasonable estimate, but be advised that even carefully prepared estimates can get thrown off track when odd things happen.

Things That Can Go Bump in the Night

A company may announce one day that their best customer has accumulated excess inventory and will not be buying during the next quarter. Or worse, the best customer may have switched suppliers or may have redesigned its product so it no longer needs what the company is selling. Interest rates or prices of key raw materials may spike up and eat away profits. The economy may slow down and demand for the company's goods and services may drop. Competitors may start a price war. A company may announce it has lost a major lawsuit with adverse consequences for its expected earnings. An audit may reveal the company's previous earnings reports have not been accurate...

Lots of things can go bump in the night, but at least all investors are in the same boat. No one can predict perfectly about a company's business, so everyone is trying to do the same thing—the best they can. Meanwhile holding a diversity of stocks and holding them over a period of time will smooth the path. You should try to own at least ten stocks spread over several different industries.

Occasionally dishonest people will be caught trading on inside knowledge, that is, they have heard about material developments at a company and trade on that knowledge before the news becomes public. That is illegal and fortunately does not happen too often. In recent years the Securities Exchange Commission (SEC) which is the federal agency that polices the securities markets has taken some significant steps to curtail such insider trading. For one thing Regulation FD (fair disclosure) prohibits the officers and directors of a company from leaking critical information to their favorite bankers and stock market analysts before making the information public.

In *Stockfighter* go to the Company Report to get complete data on any company. There are even more sources available in real life. These are explained below.

Four Places To Find Key Business Information

Assuming that we will not be using inside information, what information can we use and how can we use it to evaluate a company's business prospects? Here are the four places to look: (1) Go to Microsoft Investor (<http://moneycentral.msn.com/investor>), click on "Stocks," and click on "Company Report" on the left side of the screen and enter the symbol for the company you want. This will bring up a short description of what the company does. (At Yahoo! Finance (<http://finance.yahoo.com>) they call it the "Profile" of the company.)

(2) Go to the company's web site. A quick browse through the site should also give you a feel for what products or services the company sells. The Company Report at Microsoft Investor will contain a link to the company's web site. Or you can Google the name of the company or its stock symbol to find its web site.

(3) Also, at either Microsoft Investor or Yahoo! Finance check the "Recent News" (Microsoft) or "Headlines" (Yahoo!) for the company. These are links to news stories in the financial press regarding the company. Browse the headlines for any that look interesting, especially any dealing with earnings.

(4) Finally, take a look at the company's most recent 10-Q report. That is a report that every company must file each quarter with the SEC. Of particular interest is the section of the report titled "Management's Discussion and Analysis of Financial Condition and Results of Operations." At either Microsoft Investor or Yahoo! enter the symbol of the company you want and then click on "SEC Filings" at the left side of the screen. Then look for the most recent 10-Q, or if it's the end-of-year report it is called the 10-K, and open it. Scroll down to Management's Discussion and see what they have to say.

Sometimes Microsoft and Yahoo don't have the most recent 10-Q, and some times they don't have them at all. In these cases you can always get a company's 10-Q from the SEC itself. Go to www.sec.gov. Then under "Filings & Forms (EDGAR)" click on "Search for Company Filings." Next, under "General Purpose Searches" click on "Companies & Other Filers." At this point you must type in the company name, e.g. General Motors, or the ticker symbol, e.g., GM, and click "Find Companies." You will see a screen listing the company's filings.

The reports that are of most interest are the 10-Qs, the 10-Ks (the end of year report), and the 8-Ks which are press releases put out by companies about events significant for their businesses. Sometimes a company will file an 8-K press release summarizing the quarterly earnings report before the actual 10-Q is filed. Once you see the report you want click on the "[html]" version for easiest reading.

Making Sense of What You Read

The last step is to make sense of what you read. Here is a simple analytical tool to help do that. Read with two questions in mind: (1) How strong is the general market demand for the type of goods or services this company sells? And (2) How strong is this company's competitive position? Read a 10-Q with a view to answering these two questions. Once you have these answers you will be in a position to form a reasonable estimate as to what the future holds for the company.

As an example take **Build A Bear (BBW)** which was discussed in Lesson 2 where we saw that they operate the "make your own stuffed animal" stores. Their earnings history and projections look good, but what about the future? Their most recent 10-Q report was filed August 16, 2005, and covered the quarter ending July 2, 2005. Here are some excerpts from the report:

"We are the leading, and only national, company providing a 'make your own stuffed animal' interactive entertainment experience under the Build-A-Bear Workshop brand, in which our guests stuff, fluff, dress, accessorize and name their own teddy bears and other stuffed animals. Our concept, which we developed for mall-based retailing, capitalizes on what we believe is the relatively untapped demand for experience-based shopping as well as the widespread appeal of stuffed animals. The Build-A-Bear Workshop experience appeals to a broad range of age groups and demographics, including children, teens, their parents and grand parents. As of July 2, 2005, we operated 186 stores in 42 states and Canada and had 16 franchised stores operating internationally...."

They go on to say they expect to open 30 more stores in 2005 in the U.S. and Canada and expect franchisees to open another 20 to 25 stores internationally. They estimate a market potential for 350 stores in the U.S. and Canada as well as 350 stores internationally. They opened their flagship store in New York City on July 8, 2005. Finally, they report that they are expanding the brand to include "Friends 2B Made," a line of make-your-own dolls and related products.

On the negative side the company reported in the 10-Q that same store sales decreased 6.9% in the second quarter from what they had been in the year-ago second quarter. The reason, however, was that a year ago the Easter holiday and related spring school recesses fell in the second quarter; whereas, in 2005 these fell in the first quarter. Consequently, the 2005 second quarter without the holiday shoppers looked bad in comparison to the previous year.

Now let's try to answer the two questions: (1) How strong is general market demand? As long as there are children, teens, parents and grandparents who like stuffed animals and like making them and customizing them to their own tastes it looks like demand will be good. The fact that the company is adding more stores at a fairly rapid rate also supports the observation that demand is strong.

(2) How strong is Build A Bear's competitive position? It's very strong since they are the only national brand company that does this. Other companies sell stuffed animals, but

only Build A Bear provides the experience of stuffing and customizing one's own bear, lion or gorilla. All-in-all it looks like Build A Bear's business is good and will likely remain good in the foreseeable future.

2008 Update: Two years later in 2007 the U.S. economy went into a major slowdown, if not recession, due to a collapsing housing market and a crisis in the financial markets. In this new environment Build A Bear, along with many other retailers, suffered. Earnings declined and the stock price followed. But now back to the story as it was in 2005...

Don't call your broker yet. We still have to check out their financial condition and their stock price. Next up, company finances.

QUIZ ON LESSON 3:

Build A Bear is:

- A. A genetics lab working on cloning bears.
- B. A unique mall-based retail company with good earnings.
- C. A stock analyst training program focused on downside risk.

Lesson 4

Are Finances Shaky?

A company's business can be rolling along just fine, but there can be hiccups. The whole economy might hit a slow patch. Or the company might enter a product transition period when sales of old products slow down before sales of new products ramp up. Or unexpected expenses may crop up such as the need to replace equipment or unanticipated legal expenses. In times like these the company is going to need an adequate supply of cash or credit to ride out the temporary slowdown. Without this cushion we cannot regard the company's forward business prospects as secure.

The Two Keys to Financial Condition

The two chief factors in shaping a company's financial condition are cash and debt. As a general rule we would like to see lots of cash and not too much debt. There are exceptions at the limits; for instance, if a company is sitting on a vast mountain of cash that might indicate they have no profitable means of putting the cash to work and that would suggest that perhaps their business prospects may have topped out. Such a situation would bear further scrutiny.

As for debt, if business is good and by spending \$1 a company can bring in \$1.50 or \$2 in profit that is \$1 well spent and it would make sense to borrow the \$1. So some debt may be a sign of a good business. Too much debt, however, can leave a company vulnerable. If large unexpected expenses arise at the same time that business slows down and just as a good chunk of debt falls due the company could be squeezed. They might have to sell off some assets that they would really rather keep just to generate the cash they need. This could hurt their long-term business prospects.

The Critical Ratios

What we need to know then is whether a company has enough cash and not too much debt. The way to measure this is with two ratios, the "quick ratio" and the "debt / equity ratio." The quick ratio is a measure of the company's cash position and the debt/equity ratio is a measure of the company's debt position. These ratios are readily obtainable on the Microsoft Investor and Yahoo! Financial web sites. **(In *Stockfighter* both ratios are shown in the Company Reports.)**

On Microsoft Investor go to "Stocks," enter a stock symbol, then click on "Financial Results" on the left side of the screen, then click on "Key Ratios," and then click on "Financial Condition." You will see both the quick ratio and the debt / equity ratio for the company as well as some other ratios.

The quick ratio is the ratio of cash plus cash equivalents (often U.S. Treasury securities) plus accounts receivable to current liabilities, i.e., to liabilities due in less than a year. A

quick ratio of 1.0 would mean the company has the ability to pay off all of its short-term liabilities with nothing left over. A quick ratio of 2.0 would mean a company could pay off its current debts and still have that much cash or cash equivalents left over. As a rule of thumb a quick ratio of 1 or higher is a sign of a healthy company.

The debt / equity ratio is the ratio of the amount of money a company has borrowed to the amount of money its stockholders have put up. What investors pay for their shares is called equity. If the ratio is 0.5 that means debt is half as much as equity. For example, if a company has total capital of \$10,000,000 and \$4,000,000 of this is borrowed money and \$6,000,000 is equity, then the debt / equity ratio is $\$4,000,000/\$6,000,000$ or 0.67. A good rule of thumb is to look for a debt / equity ratio less than 1.

Build A Bear -- Again

Using **Build A Bear (BBW)** as an example, we find from Microsoft Investor that as of the end of their last quarter (July 2, 2005) their quick ratio was 1.3 and their debt / equity ratio was zero, meaning they have no debt. The debt / equity ratio certainly meets our test of being below 1; and the quick ratio meets the test of being above 1, but not by a lot, so give them a "B" for financial condition. If they can get that quick ratio above 1.5 and still have no debt their financial condition grade can be bumped up to an "A."

So far Build A bear has good earnings, good business prospects, and a good financial condition. There remains another component of the Almighty Formula to consider—price. If the stock is over-priced we don't want it even if business and finances are good.

2008 Update: In 2007 the U.S. economy went into a major slowdown, if not recession, due to a collapsing housing market and a crisis in the financial markets. In this new environment Build A Bear, along with many other retailers, suffered. Earnings declined and the stock price followed. Investors who bought the stock in 2005, however, would have been alerted to sell in early 2007 if they paid attention to the Four Horrible Dangers which are explained in Lessons 7 and 8.

QUIZ ON LESSON 4:

You can tell if a company's financial condition is good if:

- A. Good Housekeeping has given them their Financial Seal of Approval.
- B. An SEC investigation failed to find evidence of fraudulent bookkeeping.
- C. Their quick ratio is above 1 and their debt / equity ratio is less than 1.

Lesson 5

Is the Price Right?

What is the right price to pay for a stock? It does not help much to say whatever price the market sets because the market can be wrong. This happens when the market does not have enough information or the market is being driven by one of its two great passions—fear or greed. Once the market picks up the scent of either of these it often over-reacts. If it is over-reacting because of fear the price the market sets for a stock will be too low and the stock will be undervalued. If the market is over-reacting because of greed, the market price will be too high and the stock will be overvalued.

The P/E Ratio: An Unreliable Guide

The single most common approach to determining if a stock is overvalued or undervalued is the P/E ratio, the ratio of price to earnings per share. Many people rely on this and it does make a certain amount of sense. It relates stock price to the single most important driver of stock prices—earnings. But as we shall see below the P/E ratio is not an entirely reliable guide to evaluating stock prices.

If a stock is priced at \$20 and the company's earnings per share come to \$1, then the P/E ratio is $20/1$ or simply 20. This tells you how much you are paying for \$1 of earnings. If another stock was priced at \$30 and its earnings per share were \$1.70 the P/E ratio would be $30/1.7 = 17.6$. Apparently the second stock would be the better buy since with it you would only be paying \$17.60 to buy a dollar's worth of earnings, not \$20.

The Rock and Roar Corporations

The trouble with using the P/E ratio to determine if one stock is a better buy than another is that the ratio does not take into account the growth rate, how fast are earnings growing at the two companies? Take the example of Rock and Roar corporations. Rock is priced at \$20, is earning \$1 per share, and its earnings are growing at 15% a year. Roar is also priced at \$20, but it is earning only \$0.70 a share, however, its earnings are growing at 35% per year. Which stock would you buy?

Rock's P/E is 20, so you would be paying \$20 for \$1 of earnings. Roar's P/E is $20/0.7 = 28.6$, so you would be paying \$28.60 for a dollar's worth of earnings. You buy Rock. Right? No. Consider how things would be a year from now. In a year Rock's earnings per share will be \$1.15, up 15%. Roar's earnings per share will be \$0.95, up 35%. If we assume the P/E ratios of the two stocks have remained the same, then we can compute their respective prices a year hence simply by multiplying the P/E ratios by the new earnings. ($P/E \times E = P$, it is simple algebra). That gives Rock a price of $20 \times \$1.15 = \23.00 and Roar a price of $28.6 \times \$0.95 = \27.17 . Clearly Roar was the stock to buy at \$20.

A Better Test

What is needed is a better test of a stock's price than the simple P/E ratio, a test that involves both earnings and the growth rate of those earnings. This can be done by using the "PEG" ratio which is obtained by dividing the P/E ratio by the growth rate. This gives us the P/E per unit of growth, and we want this to be as small as possible.

Returning to the Rock and Roar example, the PEG for Rock would be $20/15$ (the P/E ratio divided by the 15% growth rate) = 1.33. The PEG for Roar would be $28.6/35 = 0.82$. This test, unlike the simple P/E test, would have told us to buy Roar which, as we have seen, outperformed Rock over the next year.

There are many approaches to the evaluation of a stock's price. Other popular tests are the Price/Sales ratio, the ratio of the stock's price to the company's sales per share and the Price/Book Value ratio, the ratio of price to the company's book value per share. These other approaches suffer from two defects. First, they do not involve earnings which are the primary drivers of stock price, and second, they are static ratios that do not allow for growth.

Is the Stock Over-Priced?

The best short-hand way to decide if a stock is overpriced or not is to use the PEG ratio. If that ratio is below 1.0 the stock is undervalued and may be a good buy. If the PEG ratio is between 1.0 and 2.0 be cautious. If the PEG ratio is above 2.0 the stock is overvalued and it's time to take defensive action.

What about **Build A Bear (BBW)**? With the price at \$22.81 and the earnings per share at \$1.19 the company's P/E ratio is $22.81 / 1.19 = 19.2$. The estimated growth rate for the coming year is 24% so the PEG ratio is $19.2 / 24 = 0.80$. The stock is not over-priced. The figures were taken from Microsoft Investor on September 13, 2005. (In *Stockfighter* the Company Report shows the P/E ratio and the next year earnings growth rate for each stock. Divide the P/E ratio by the growth rate to get the PEG ratio.)

2008 Update: In 2007 the U.S. economy went into a major slowdown, if not recession, due to a collapsing housing market and a crisis in the financial markets. In this new environment Build A Bear, along with many other retailers, suffered. Earnings declined and the stock price followed. Investors who bought the stock in 2005, however, would have been alerted to sell in early 2007 if they paid attention to the Four Horrible Dangers which are explained in Lessons 7 and 8.

QUIZ ON LESSON 5:

1. A stock is over-priced if:

- A. Its PEG ratio is greater than 2.0.
- B. You gasp and go into cardiac arrest when you see the price.
- C. You would have to re-mortgage your house to buy 100 shares.
- D. All of the above.

2. The P/E Ratio is an imperfect evaluator of stock price because:

- A. It has not been approved by the SEC.
- B. It has not been approved by Albus Dumbledore.
- C. It is subject to manipulation by hedge funds.
- D. It does not take into account the rate at which earnings are growing.

Lesson 6

Where to Find Good Stocks

This is a dangerous area because there are so many ways to go wrong. Here are some examples. You get a call from a broker who says Blind Turtle Software is positioned for fast growth and now is the time to snap up 1,000 shares. You hear the talking heads on CNBC saying Blind Turtle looks good to them. Your buddy says he has a friend whose uncle's sister's second cousin works for Blind Turtle and he knows the stock is about to take off. You see a list of 10 hot stocks in Forbes magazine or in USA Today and Blind Turtle is at the top of the list.

Being Foolish

If you buy for any of these reasons you are being foolish. You have no way of knowing that those who are recommending Blind Turtle Software have carefully worked through the Almighty Formula and ascertained that Blind Turtle has a good business, good finances and a good price. Unless you know that a stock meets these criteria you should not buy it. Even if a broker or someone on CNBC says the stock's business, finances and price are all good a prudent investor will want to check it out on their own. As we have seen, it is not that hard to do if you have access to the Internet, and you are far better off trusting yourself rather than some broker, money manager, or talking head on CNBC.

The main thing to do in looking for good stocks is to keep the Almighty Formula uppermost in your mind because what you are hunting are stocks that meet all three requirements of the formula. Even stocks that meet all the requirements do not always work out because unexpected things happen and often when they happen it is not for the best.

You want to own stocks that are strong on all counts going into the game because they can withstand shocks better than others. If you own a stock that is already a little fishy bad news may really kill it; whereas, a stronger stock may bounce back from bad news. Furthermore, stocks that measure up to the Almighty Formula are less likely than other stocks to get hit with unexpected disasters in the first place.

The Best Way To Hunt

The best way to hunt for stocks that measure up to the Almighty Formula is to start with earnings. Watch for companies with good and growing earnings. Here are two ways to look for leads, one using Microsoft Investor and the other using Yahoo! Finance. **(In *Stockfighter* go to Stock Research and use the screening tools and company reports to search for good stocks. For instance, you can screen the game database for the stocks with the fastest earnings growth rates or the lowest PEG ratios. Similar screening tools are available in real life at the Microsoft and Yahoo web sites.)**

Go to Microsoft Investor at <http://moneycentral.msn.com/investor> and click on the “News” tab at the top. Then on the left side of the screen under the heading “News by Topic” click on “Companies.” At the top you will then see three sub-topics—“Earnings Reports,” “Earnings Forecasts,” and “Earnings Surprises.” Look through the headlines and read some of the stories. This is a good place to find stocks whose earnings are good and growing. Treat these as leads. Once you have a few good leads check them out as we did with the Build A Bear company in previous lessons.

Another way to find leads is to use the stock screener at Yahoo! Finance. (Microsoft Investor also has a stock screener.) Go to Yahoo! Finance at <http://finance.yahoo.com>. On the left side of the screen, under “Stock Research,” click on “Screener.” Then click on “Launch Yahoo! Finance Stock Screener.” The screening tool will allow you to search a large database of stocks and screen out those that meet criteria you specify.

Screening for Good Stocks at Yahoo!

At Yahoo try screening for stocks with PEG ratios equal to or less than 1.0, quick ratios equal to or greater than 1.5, and debt / equity ratios equal to or less than 0.5. At the top of the screener click on “Click to Add Criteria.” In the drop-down menu under “Valuation” click on “PEG ratio.” Then click on “Select a condition” and choose “<=,” which means “less than or equal to.” Finally, click on “Select a value” and type in 1.0. Hit Enter.

Then in the second row click again on “Click to Add Criteria” and under “Balance Sheet” click on “quick ratio.” Click on “Select a condition,” then click “Select a value” and type in 1.5. Hit Enter. Repeat the process for the third row using as the criteria “Total Debt/Equity” under the balance sheet category and type in the value 0.5. Hit Enter. Click on “Run Screen” and in a moment results will appear.

The results can be sorted on any column. For instance, scroll over to the column titled “PEG” and click on “PEG” in the title cell. The table will resort with the stocks having the highest PEG ratio at the top and those with the lowest at the bottom. Remember low PEG ratios are good. Review Lesson 5 if you need to. Clicking on a stock symbol at the left side of the screen will open the Yahoo basic data page on that stock.

You should then continue your research by reading the stock’s “profile,” checking out “headlines” for recent news stories about earnings, checking “SEC Filings” for the last 10-Q report, taking a look at “Analyst Estimates” to see where earnings are heading and how fast, checking out their “Competitors,” and taking a look at the company’s web site.

You may have to examine a number of stocks before you find some that satisfy all three parts of the Almighty Formula. The hunt, however, is worth the effort. For a ready-made list of stocks that satisfy the Almighty Formula take a look at the free sample issue of *The ARRVIN Report* at www.arrvin.com.

QUIZ ON LESSON 6:

The best place to get good stock tips is:

- A. From a broker or money-manager.
- B. From your friends and co-workers.
- C. From the experts on CNBC.
- D. From Harry Potter.
- E. From your own search guided by the Almighty Formula.

Lesson 7

The Four Horrible Dangers: Part I

Once you own a stock the question becomes, what do you do with it? Ideally you simply kick back and watch it climb in value. The trouble is that dangers lurk along the road to riches. To be precise there are four horrible dangers that one must watch out for, and when danger appears one must act. We will look at different means of taking defensive action in later lessons. For now the focus is on how to spot the four horrible dangers.

The Four Horrible Dangers

Here they are: (1) Business is getting bad. (2) Finances are getting bad. (3) The stock price is getting too high. And (4) the stock price is getting too low. The first two dangers are covered in this lesson; the next two are covered in Lesson 8.

Business is Getting Bad. Since the reason to own a stock is to own part of a company whose business is good and growing, that reason evaporates when business gets bad. A company's business goes bad when its earnings stop growing. Business is even worse when earnings start declining and business is at its very worst when earnings are replaced by losses. So these are the things to watch for—does earnings growth show signs of leveling off, declining or turning into losses?

In particular watch for news stories about your companies, check their web site periodically for press releases, and check the SEC site (www.sec.gov) for 8-K reports which is how companies report any significant new developments affecting their business. At a minimum watch each quarter for the company's press release reporting their earnings for the last quarter. The press release will probably come out two to three weeks after the quarter ends. The 10-Q report will generally be filed a week or so later. If earnings stop growing that may indicate danger; if they start declining that is definitely danger.

Finances are Getting Bad. The quarterly earnings reports and 10-Qs will also contain information on the company's financial condition. Watch the quick ratio and the debt / equity ratio to see if they meet the tests—the quick ratio should be at or above 1.0 and the debt / equity ratio should be at or below 1.0. If the company fails either test that is a sign of danger.

An Example: The Case of Majesco Entertainment

To illustrate the warning signs of a business going bad we will consider the unhappy case of **Majesco Entertainment (COOL)**. Majesco makes and sells video games. They are a small company in an industry dominated by a few large companies such as **Electronic Arts (ERTS)** and **Activision (ATVI)**; consequently, their competitive position is not strong. That was an early warning sign already on the table when we pick up the story.

On January 4, 2005, Majesco's stock price stood at \$15.68. It was all downhill from there. From the publicly available news stories and SEC filings we can track their downfall. The first hint of trouble, aside from the fact that we already knew their competitive position was weak, came on February 24 when the company announced that Patrick Flaherty, their Executive Vice President of Sales and Marketing, was resigning "for personal reasons." There was no elaboration. There was also nothing about when a successor might be hired. The stock price closed at \$12.14.

First Exit

A much stronger sign of trouble came on March 9 when the company announced its first quarter results. During the first quarter, which ended on January 30, the company earned \$0.05 a share. That was down from \$0.25 a share for the first quarter a year before. Not only were earnings dropping, they were dropping heavily. This sorry performance coupled with the recent unexplained resignation of the VP for Sales and Marketing should have caused a prudent investor to sell. The stock closed at \$12.99 on March 9. If one had bought at the start of the year at \$15.68 that would be a 17% loss in three months which would have been unpleasant; however, it was nothing compared to what was yet to come. Again, a prudent investor would have seen the signs and sold here at \$12.99.

It should be noted that in its March 9 press release the company talked a lot about coming new products, said it would continue investing in research and development as well as in marketing, and gave guidance for the fiscal year of \$16-\$18 million in operating income. They said, "This guidance anticipates increases in net revenue for all product lines and improvement in the profitability of video games...." Just remember all of this was talk. The substantial drop in earnings reported was fact. The unexplained departure of the VP for Sales and Marketing was fact. Fact outweighs talk.

Second Exit

On June 7 Majesco reported second quarter results. They earned \$0.01 a share, down from \$0.05 in the first quarter and down 9% from the year ago second quarter. Earnings were clearly tanking but the company continued talking about new products and reiterated its guidance of \$16-\$18 million in operating earnings for the year.

At this point the company's finances, based on their reported figures, looked good. The quick ratio was a little over 2.0 and the debt / equity ratio was under 0.25, both good numbers. It was the business condition, not the financial condition that was throwing off warning signs. On June 7 the stock closed at \$8.10. Two quarters in a row of sinking earnings should have sent even the most optimistic investors heading for the exits.

Fools' Exit

On July 12 the company issued a press release stating that its chairman and CEO, Carl Yankowski, had resigned. No reasons were given. The company also said, "We have lowered our net revenue and operating income projections for the year." Whereas previously the company had forecast operating income of \$16-\$18 million for the year, now they were forecasting a loss of \$16-\$19 million.

Also on July 12 the first of several class-action lawsuits was filed against the company and its directors for making "materially false and misleading statements" in connection with the company's business and finances. The stock dropped from \$6.89 on July 12 to \$3.56 at the close on July 13. At this point no one but a fool would continue holding shares of Majesco.

On August 1 the Executive Vice President and Chief Legal Officer resigned. No reasons were given. The stock was at \$3.30.

On September 12 the company reported third quarter results—a loss of \$1.69 a share. The stock plunged further, from \$2.44 to \$1.23, and on September 14 another class-action lawsuit was filed. Those who think they may recover some of their losses from one of the lawsuits are well advised to remember the old saying, "Only lawyers can get blood out of a turnip." Even though the lawyers may wind up with multi-million dollar fees, investors will be lucky to get a penny on the dollar for their losses. And that would be on a successful class-action lawsuit.

It is also interesting to note that it was not until September 12 that Wall Street stock analysts downgraded the stock. Following their advice an investor would have gotten out somewhere between \$2.44 and \$1.23. As we have seen it would not have been difficult to read the warning signs and get out well above that level. Your best analyst is generally going to be you. So pay attention to your stocks. If nothing else watch the earnings announcements once a quarter. That's not asking a lot in terms of time or trouble and, at a minimum, it would have gotten one out of Majesco on June 7 at \$8.10 and more likely on March 9 at \$12.99.

April 2008 Update: Majesco is still in business and its stock trades around \$1.10. Those waiting for a comeback are still waiting.

And the Warning Signs Were...

That, then, is the sad story of Majesco Entertainment. The thing to remember is that there were warning signs from the first—poor competitive position, VP for Sales and Marketing resigned with no explanation, bad first quarter earnings results, bad second quarter earnings results, chairman and CEO resigned.... When a business starts going bad **GET OUT OF THE STOCK**. There are always other stocks to buy, ones with good businesses.

In *Stockfighter* you can track changes in earnings growth rates in the company reports. These reports track 22 key variables, including earnings and growth rates, for each company round by round. Special news alerts concerning the companies in your portfolio also give you a heads-up on how your companies are doing.

QUIZ ON LESSON 7:

You should get out of a stock:

- A. When Wall Street analysts downgrade it.
- B. When class action lawsuits are filed against the company and its directors.
- C. When everyone else gets out.
- D. When quarterly earnings reports show that either the company's business or its finances are getting bad.

Lesson 8

The Four Horrible Dangers: Part II

Horrible dangers 3 and 4 are: the stock price is getting too high and the stock price is getting too low. What we want is the Goldilocks price, not too high and not too low, the price that is just right.

Even if business and finances are both great a stock can still be over-priced. This is a tough danger to watch for because we tend to be predisposed not to see it. Sometimes the business story sounds so great that we want a piece of it no matter what, and we don't even stop to ask if the stock is over-priced.

Other times we already own a stock, say a stock we bought at \$20 and we have held on to it as the price climbed to \$25, \$32, \$38, \$47, \$55. The temptation is strong not to give up such a good thing. At some point, though, that stock will become over-priced and eventually the market will make the appropriate correction. It would be nice to be out of the stock before the correction is made.

The Price is Too High When...

In Lesson 5 the PEG ratio was recommended as a means of determining whether a stock is over-priced. The PEG ratio is the ratio of the stock's P/E to its earnings growth rate. If the P/E is 16 and the growth rate is 20% a year, then the PEG ratio is $16/20 = 0.8$. If the ratio is under 1.0 the stock is under-priced. So this stock is a keeper.

Suppose in the above example the stock's price is \$32, its earnings per share are \$2, and the growth rate is 20%. The P/E is $32 / 2 = 16$. What happens if the stock price goes up to \$48? Then the P/E is $48 / 2 = 24$ and the PEG ratio becomes $24 / 20 = 1.2$. Now the stock is a little over-priced. A good rule of thumb is that a stock becomes seriously over-priced when the PEG ratio goes above 2.0. When the stock price goes higher, so does the PEG ratio. When the PEG ratio goes over 2.0 that is DANGER.

The Price is Too Low When...

To say that a falling stock price is danger is pretty obvious, after all, as the price falls you are losing money if you own the stock. But as obvious as it seems this is the trickiest of all situations to deal with. How do you know exactly when to pull the plug on a falling stock? What if you bought a stock at \$20 and then watched as the price went to \$25, \$32, \$38, \$47, \$45, \$55, \$53, \$56, \$54, \$52, \$53, \$49, \$45, \$41...\$12?

Do you say "Sell" the first time the price drops, which in this case was when it dropped from \$47 to \$45? If you sold then you would have missed the chance to sell at \$56 later. Furthermore, when the price fell to \$45 you would probably be thinking, "I bought this stock at \$20 and it has been a fairly steady climb up from there. They're still selling those

high-tech thingamajigs like crazy. What's to stop it now? This drop to \$45 is probably just some fluke of the market. All I need to do is hang on and it will go back up."

So you hang on and watch the stock hit \$56 and then drop to \$54 and \$52 and then bounce back to \$53. Why sell now? It's clear the stock has hit bottom and the bounce back to \$53 means the upward march is about to resume. Hang in there. Then it drops to \$49. That has to be a fluke; it would be foolish to sell here. And so on, all the way down to \$12 when finally the analyst at your broker's firm downgrades the stock and you sell at a 40% loss on your investment.

The problem with a falling stock price is when do you say, "Enough is enough. This is real danger and I'm getting out"? The answer is you have to have a system and you have to have the iron will it takes to follow your system when the going gets tough.

A Winning System

Here is the system that any successful investor needs. Pick some percentage—15%, 20%, 25%—whatever you think is right for you and call it your critical percent. Then when you buy a stock say, "I'm going to hold this as long as the price is going up, but the minute the price falls from the highest price it has reached since I've owned it by an amount equal to my critical percent I'm selling—no ifs, ands or buts—I'm out." That way you can never lose more than your critical percent. But you have to have the will power to follow the rule.

Take the above example where you bought a stock at \$20 and watched as the price went to \$25, \$32, \$38, \$47, \$45, \$55, \$53, \$56, \$54, \$52, \$53, \$49, \$45, \$41...\$12. Assume you had adopted 15% as your critical percent. The first time the stock dropped (\$47 to \$45) it was not a 15% decline, so you held on. Then the price hit \$56 and your new sell price became \$47.60 which is 15% below \$56. The first time you saw the stock price below that was when it was at \$45 so you sold at \$45.

You missed the top of course; however, you also got out having more than doubled your \$20 investment and long before your broker told you to sell at \$12. It takes iron will power to sell when your critical percent tells you to, but that is what it takes to cut your losses while letting your profits run. And that is the yellow brick road to successful investing.

Remember the danger of rising prices is that the PEG ratio will get too high, and the danger of falling prices is that the price will fall by an amount equal to your critical percent from the highest price the stock has reached since you have owned it. A useful way to put these two observations together is to say that as long as the PEG ratio is below 1.0, i.e., as long as the stock is undervalued, your critical percent will be, say 20%, but as soon as the PEG ratio goes above 1.0 your critical percent will drop to, say, 15%. This way as long as the stock is undervalued the higher critical percent will mean there is less chance of your being whipsawed out of your position, but as soon as the stock ceases to be undervalued a more conservative critical percent comes into play.

That's it for the Four Horrible Dangers—watch for bad business, bad finances, stock prices that are too high (PEG above 2.0), and stock prices that are too low (prices that have fallen by the critical percent).

QUIZ ON LESSON 8:

The Four Horrible Dangers include:

- A. Wall Street analysts.
- B. Jim Cramer.
- C. Bad business, bad finances, stock prices that are too high or too low.
- D. All of the above.

Lesson 9

Defending Against Danger: Part I

When danger comes you have to act. We have already seen how to spot danger. That was covered in Lessons 7 and 8. The question now is what to do when danger arises? Of course, you can never go wrong simply selling the stock that is in danger. This is the easiest and most usual way to defend against danger; however there are some other means of defense that are worth considering.

The following material about options is not necessary for playing *Stockfighter* since the game does not provide for the use of options. Furthermore, it is not necessary to use options to become a successful stock market investor. Options, however, can be useful for investors who want some additional tools with which to work.

Using Options to Defend Stocks

These other means of defense involve the use of options so here is a brief explanation of what stock options are and how to use them to defend a stock position. If you own an option you own the right to do something such as buy a stock at a set price or sell a stock at a set price. For instance an option might give you the right to buy shares of **Wal-Mart (WMT)** at \$40 a share any time between now and three months from now, or whenever the option expires. That would be a “call” option because it gives you the right to “call in” shares of Wal-Mart at \$40. Even if the market price is \$45 you can buy the shares at \$40. Forty-dollars is said to be the “strike price” of that option.

Another option might give you the right to sell shares of Wal-Mart at, say, \$35 any time between now and two or three months from now when the option expires. That would be a “put” option because it gives you the right to “put” your shares to someone else who has to buy them at \$35 no matter what the market price of the stock is. If the stock has fallen to \$30 your put option still gives you the right to sell at \$35 any time before the option expires. A put option is like insurance. It guarantees you a selling price no matter what the market does.

Even though options are “derivative” securities because they derive their value from the stocks they relate to, they are traded like stocks; that is, they are bought and sold on public exchanges. You can buy and sell both call and put options. Options quotes can be obtained from both Microsoft Investor and Yahoo! Finance web sites. The following quotes were obtained 9/21/05 when the stock price was \$42.46.

The December call option with a strike price of 35 had the symbol WMTLG. This call gave you the right to buy shares of Wal-Mart at \$35 a share any time between September 21 and December 16, 2005. Options expire on the third Friday of the month, so the December options in 2005 expired on December 16. Each call option (and put options, too) covers 100 shares of stock. The price of options is quoted on a per share basis. In this case the WMTLG call was quoted at \$7.80 bid and \$8.00 ask. Prospective buyers were bidding \$7.80 for these calls and prospective sellers were asking \$8.00. Often they will reach an accord at \$7.90 and the trade will be executed. Since the price is quoted on a per share basis and each option covers 100 shares the cost of buying one WMTLG call at the bid price would be $100 \times \$7.80 = \780 plus any brokerage commission.

How to Place an Order for Options

If you wanted to buy one of these calls your order to your broker might be, “Buy one December 35 call on Wal-Mart, symbol WMTLG, at a limit price of \$7.90.” That means buy one call with a strike price of \$35 that expires in December and don’t pay more than \$7.90 for it. If the broker can get it cheaper he will, but in no event will he pay more than whatever limit you set. You may or may not get your order filled at \$7.90. If you wanted to be certain that your order would be filled you would have to agree to pay the “market” price which is the ask price and in this case is \$8.00. You know there are sellers out there willing to sell at \$8.00 so at that price you can be certain your order will be filled.

Also on the Microsoft Investor and Yahoo!Finance web sites you can get quotes for put options. A “put” option, remember, gives you the right to sell shares of Wal-Mart stock at the strike price any time before the option expires. Buying a put option is like buying insurance against the stock price falling below a certain level, namely, the strike price of the option.

Defending With a Put Option

On 9/21/05 with the price of Wal-Mart stock at \$42.46 you could have bought a December put option with a strike price of \$40. That strike price is just a little below the price of the stock. Let’s say you own 100 shares of Wal-Mart but a danger alert has appeared and you know you must act to defend your position. One way to do that would, of course, be to sell your 100 shares. But let’s suppose you think the danger will only be temporary and in the long run you want to continue owning Wal-Mart. What you can do is insure your 100 shares at \$40 a share by buying one of the December 40 puts. That would guarantee you the right to sell 100 shares at \$40 a share any time before 12/16/05. You will run some risk that the stock will go down to \$40, but below \$40 you have no risk at all. You will have locked in your right to sell at \$40.

The December 40 put was priced at \$0.70 bid and \$0.75 ask. If you paid the ask price your cost would be $100 \text{ shares} \times \$0.75 = \$75$ plus a brokerage commission. Whether you think it is worth this amount to insure your 100 shares against loss below \$40 for the next three months is up to you, but it is an alternative to selling.

It is also possible to use call options to defend a stock position, and we will take that up in the next lesson.

QUIZ ON LESSON 9:

A “Put” Option:

- A. Gives the right to sell shares of stock at a set price any time before the option expires.
- B. Was used by George Bush when he put the White House up for sale on E-Bay. (He said he preferred his ranch.)

Lesson 10

Defending Against Danger: Part II

Let's set the scene. We are talking about the situation where we have bought some stock, have been watching for danger, and now danger has appeared. We have to take defensive action. One thing to do that is always acceptable is simply to sell the shares we own. But there are other kinds of defensive actions. In the last lesson we looked at buying put options. In this lesson we will look at two other defensive option strategies.

The following material about options is not necessary for playing the *Stockfighter* game since the game does not allow for the use of options. Furthermore, it is not necessary to use options to become a successful stock market investor. Options, however, can be useful for investors who want some additional tools to work with.

Buying puts is a way to insure a stock position against loss, but it costs money to buy puts. There are two ways around this problem of actually having to spend money in order to cope with danger. One is to sell calls which will actually bring in money, and the other is to buy the puts but use someone else's money to pay for them. (Don't worry. It's legal.)

Selling Calls

Selling calls is defense light. It is not as complete a defense as selling the shares or buying puts, but its merit is that it actually brings in money, money that can cushion any minor decline in the stock price while you continue holding your shares. This is a good defensive strategy when you think the danger to your stock is likely to be temporary and not too serious.

Let's assume you own 100 shares of Wal-Mart that you bought at \$40 a share. Today the price of the stock is \$42.46 but a danger alert has appeared. Perhaps Wal-Mart has said they foresee an increase in fuel costs for the next quarter due to a temporary shortage of gasoline resulting from hurricane damage to various oil refineries. Eventually, however, the refineries will be back at full throttle and the shortages and gas prices will ease. But for one quarter Wal-Mart is expecting a hit to earnings. This is a "business is getting bad" type of danger, but it is likely to be temporary and not too severe. In a situation like this selling calls might be prudent.

On 9/21/05 the December calls with the strike price of \$42.50 were the ones closest to the stock price which was \$42.46. These calls are said to be "at-the-money" because their strike price is almost the same as the market price of the stock. The calls with a strike

price of \$35 are said to be “in-the-money” because if you owned these you would be able to buy shares at \$35 instead and immediately sell them at the market price of \$42.46 making a profit of \$7.46 a share. You would be in-the-money. Strike prices above the market price, say at \$50, are said to be “out-of-the-money” because they have no intrinsic value. If you own these calls all you can do is hope the stock price will rise above \$50 before the calls expire.

Selling Calls “Short”

As a defensive strategy we want to sell at-the-money calls against our position of 100 shares of Wal-Mart. Since each option covers 100 shares and we own 100 shares we will be selling just one call option. At this point you may wonder how we can sell something (the calls) that we don’t already own. One way to think about it is simply to say that we are selling one call option and promising to deliver it on the expiration date which is 12/16/05 in this case. Lots of things are sold subject to future delivery. (Technically we will be borrowing the option from our broker and then selling it. We will be obliged to return it to him later and if necessary we will have to go into the market and buy a call in order to return it.)

The thing to remember is that when we sell an option “short,” i.e., sell an option we don’t already own, we undertake an obligation to deliver that option later OR we can deliver the shares covered by the option. In our example we own 100 shares of Wal-Mart so if push comes to shove we can deliver those shares and the option-holder, the person who owns the option we sold, will pay us for the shares at the strike price of the option. Since we already own the shares that would be needed if we had to make delivery we say our option position is “covered.”

An Example

To be specific, suppose we sell the December \$42.50 call. That means if the stock is above \$42.50 on December 16 someone can demand that we hand over our 100 shares at \$42.50 each. On the other hand, if on December 16 Wal-Mart stock is at \$40 then the call we sold will expire worthless. It is worthless because no one would want to exercise it and demand that we sell our shares to them at \$42.50 when they can buy Wal-Mart stock on the open market at \$40. Since we think Wal-Mart stock is going down due to the impact on their business of higher fuel prices this is the scenario we are anticipating. That is, we will sell the December \$42.50 call, pocket the proceeds of the sale, wait for December 16 when the option will expire worthless and we will keep both our 100 shares and the proceeds of the option sale.

So how much would we get for selling the December \$42.50 call option? The bid price for these calls was \$1.90. If we sold at this price we would receive $100 \times \$1.90 = \190 minus any brokerage commission. This will cover our losses if the stock goes down to \$40.56 ($\$42.46 - \$1.90 = \40.56). That’s OK if we don’t think the stock will go lower than that. If, however, we see a greater downside risk we may want to go back to the plan of buying a put option to insure our position.

Option Collars

The problem with buying puts was that they cost money. Here is how to overcome that problem--pay for the puts with someone else's money. This is done by buying a put and selling a call at the same time. We use the money received for selling the call to pay for the put. What we end up with is called an "option collar" because it collars the stock price. It locks it in place as far as we are concerned for the life of the options.

On 9/21/05 we could have bought the December \$42.50 puts at \$1.65, the ask price. Buying one of those puts would have guaranteed our right to sell our 100 shares of Wal-Mart stock at \$42.50 any time before December 16. To pay for this we could have sold the December \$42.50 call option, as discussed above, at \$1.90. That would have more than covered the cost of the put. So, ignoring commissions, we would have paid out \$165 to buy one put, but we would have taken in \$190 for selling one call. We would have been \$25 ahead and our stock position would be protected until December 16. Now that's DEFENSE.

Owning the put meant we could have sold our shares at \$42.50 if the stock price fell below that. Selling the call meant we would have had to sell our shares at \$42.50 if the stock price rose above that. Either way would have sold for \$42.50. So at no cost to us we locked the stock price in place at \$42.50 for three months. Then we could have seen how the fuel situation looked and re-evaluated.

At any time we could have unwound our option position and kept our shares. To do that we would sell the put option that we bought and buy back the call option that we sold. Whether this would be a good thing to do would, of course, depend on what had happened to the stock price and the option prices as we approached December 16. In any event, we at no cost created some flexibility. In fact we picked up \$25 when we originally opened the position.

QUIZ ON LESSON 10:

1. An Option Collar:

- A. Refers to an illegal hit on the running back in an option play in the NFL.
- B. Can be thought of as a way to buy a put option using someone else's money.
- C. Refers to detachable mix-and-match collars on an expensive new line of winter coats.

2. Selling calls:

- A. Is the name of the game at the Don't-Buzz-Me-Off Telepest Corporation.
- B. Is a way to defend a stock position when minor danger appears.
- C. Is lawful only when the moon is full on the fifth Monday of a month.

Lesson 11

The Investment Environment

Companies do not exist in a vacuum. They exist in countries and in the world; consequently, there are both national and international factors that shape the investment environment. In general terms a favorable investment climate is one marked by peace, prosperity and predictability.

General conditions of economic prosperity favor all companies and hence all stocks. As they say, a rising tide lifts all boats. War, on the other hand, benefits companies that sell to the military; however, most companies do not and most companies prosper more in peace time than in war time. Not only war but also civil violence such as that stemming from insurrections, revolutions and organized crime are disruptive to economic prosperity.

Predictability is also essential to business success and hence to the success of investments in business. A company must be able to plan with some degree of assurance regarding the continued availability of capital, raw materials, supplies, labor sources, and markets. A lack of some minimal degree of predictability, or “visibility,” with respect to a company’s business prospects is a heavy strike against that company.

What to Do When the Investment Environment is Bad

Before turning to the question of how to evaluate an investment environment, let's take a look at what you should do once you know how good or bad the investment environment is. If the environment is great then just buy good stocks and watch them go up, always keeping a sharp eye out for the four horrible dangers. In a great investment environment you might even consider buying some long-term call options on your good stocks. Generally buy options that don't expire for at least a year and whose strike price is at or under the market price. Forget the options, however, if the investment environment is just average rather than great. For more about the use of options in a great investment environment see *The Almighty Formula* by Milton Garber.

Now what about times when the investment environment is below average or outright horrible? In bad environments bad things are more likely to happen so you want to be conservative with your investments. One way to be conservative is to invest less and hold more cash. Another way is to react faster, that is, sell sooner, when one of the four horrible dangers appears.

Another conservative strategy is to buy stocks that pay good dividends and because their business is good are likely to continue paying these dividends. Dividends tend to support the stock price. For instance, a \$20 stock that pays a \$1 dividend is yielding 5% just on the dividend payments. Suppose the stock price dropped to \$10 and the company kept on paying the \$1 dividend. Now the dividend yield is 10%, so tempting that other buyers

will be attracted and kick the stock price back up. That is why dividend paying stocks are good picks in scary times.

Another risk-reducing strategy to consider when the investment environment is bad is to select stocks with low betas. Beta is a measure of how fast a stock's price tends to move compared to the market index. If the stock moves just like the index the stock's beta is 1. That is, if the index goes up 2% the stock goes up 2% and if the index goes down 2% the stock goes down 2%. If a stock's beta is above 1 then its price tends to move faster than the index; for example, a stock with a beta of 1.5 will move up 1.5% when the index moves up 1%. A low beta means a stock will move slower than the index. A stock with a beta of 0.7 will only move up or down 0.7% when the index moves up or down 1%. The key point with respect to investing in bad environments is that a low beta stock will move down slower than the index. Alternatively, in a great investment environment high beta stocks will tend to move up faster than the index.

Preconditions for a Healthy Investment Environment

There are some fundamental preconditions necessary for a favorable investment environment, and while these preconditions can be taken as given in most developed countries, e.g., the United States, Canada, Western Europe and Japan, they should be considered carefully when deciding whether or not to invest in the stocks of companies in the emerging countries. The preconditions are of three kinds—political, economic and technological.

The political preconditions are: (1) The existence of a widespread belief that government is legitimate. This is usually achieved through popular control of the policy-makers by means of elections and freedoms of speech and press. (2) The rule of law, meaning laws are knowable in advance, impartially applied and effectively enforced. And (3) a government that exercises pro-growth economic leadership.

The economic preconditions are private ownership of property, free markets and the legal recognition of some sort of limited-liability business entities such as corporations or limited liability companies. Limited liability means that a business as an entity is liable for its debts and other obligations, but individual shareholders are not liable for the obligations of the company. If everyone who bought a share of stock in General Motors were personally liable for the debts and liabilities of GM there would be few people willing to buy GM shares and the whole process of equity-funding of business enterprises would dry up. Some economic historians believe the invention of the limited liability company was the single most important invention in making modern economies possible.

The technological preconditions for a favorable investment environment are the economic use of integrated circuits (semiconductor chips), modern computers and communications.

These preconditions can all be taken for granted in the developed countries today; however, before investing in a stock of in one of the emerging market countries one

should run down the checklist and if that country is far behind in meeting the preconditions forget it. The investment environment may not be sufficiently safe. Two good sources for getting information on particular countries are the CIA's web site, www.cia.gov/cia/publications/factbook/, and www.heritage.org/research/features/index/countries.cfm which is the Index of Economic Freedom web site produced by the Heritage Foundation and *The Wall Street Journal*.

Just because stocks of foreign companies trade on the New York Stock Exchange as American Drawing Rights (ADRs) does not mean that you should forget to analyze the country in which those companies exist and operate. When you buy the ADRs of, say, a Chinese company, traded on the New York Stock Exchange you are not actually buying shares of the company, rather you are buying rights to those shares. That is why they are called ADRs. For all practical purposes, however, you can consider that you are buying the shares. Hence you must be concerned about the investment environment of the country in which that company operates.

Rating the U.S. Investment Environment

Let's suppose now that we are dealing with American companies, and we know all the preconditions for a favorable investment environment are met. Is that it? Not really. We should look more closely at the actual current condition of the American investment environment, and this means evaluating the economic environment, the interest rate environment, and the foreign affairs environment.

When economic conditions, interest rates and foreign affairs are good stock market investing will be good; when they go sour so will stock market investing. That means one should be more aggressive when conditions are good and more conservative when conditions are bad.

One way to be more conservative in picking stocks is to pick those that not only satisfy all the conditions of the Almighty Formula (good business, good finances, and good price) but that also pay a nice dividend. The regular payment of a dividend will tend to insulate a stock from a precipitous decline in price. Assume a stock is priced at \$20 and pays a \$1 dividend (5%) each year. If the stock dropped to \$10 and the company continued paying that \$1 dividend the dividend yield would now be 10% which would probably attract more buyers of the stock and the stock price would go back up. That is why dividends are good buffers against precipitous price declines.

So how is one to evaluate the economic, interest rate and foreign affairs conditions? The answer is to read a lot, reading such things as *The Wall Street Journal*, *The Economist* and *Foreign Affairs*, and then make your best judgments. Or you can read *The ARRVIN Report* (available at www.arrvin.com) where it is done for you. Each issue has a brief evaluation of the current investment environment. Here, for example, are the ratings from the September 1, 2005 issue of *The ARRVIN Report*:

Each condition is rated on a five point scale ranging from 1 = Great to 5 = Horrible.

U.S. Economy. Average. Katrina was a big deal. One analyst, speaking of the gasoline market, put it well when he said, “You take a market that’s already running on the edge of ragged and you wallop it—it’s not a pretty sight and it will affect consumer spending.” Consumer spending accounts for about two-thirds of the economy. Even before Katrina, orders for durable goods fell 4.9% in July, the biggest decline in more than a year. Taking the city of New Orleans with its \$50 billion GDP offline for a quarter or two will also have a negative effect on national GDP which had been expected to grow smartly in the third and fourth quarters. That’s less likely now; consequently, the outlook for the economy goes down from good to average. Score = 3.

Foreign Affairs. Below Average. The quagmire in Iraq continues to deepen with the Sunni rejection of the proposed constitution. The constitution goes to a vote on October 15 where a defeat in three provinces will kill it. The Sunnis are a majority in four provinces; however, there will be a great temptation to do some vote-rigging on the part of the existing government. Either defeat of the constitution or its passage in a flawed election will not make it easy for the Bush Administration to embark on troop withdrawals given its commitment to staying the course until we have brought democracy to Iraq. Such a course will probably take decades if it can be accomplished at all. Meanwhile the war remains a huge drain on our finances, troops, and international standing. On a more positive note, with China’s aid the negotiations with North Korea are inching forward. Things could be worse. Score = 4.

Interest Rates. Good. Katrina may have stopped the Fed in its tracks. The markets are discounting the likelihood of further interest rate raises to 3.75% or 4%. The last raise in August was to 3.5%. This level, or even 3.75%, remain favorable, and long-term rates, which remain around 4%, are also looking good. The interest rate environment remains good. Score = 2.

In sum, you should pay attention to the investment environment for it can have a significant impact on how businesses do, and how businesses do goes a long way toward determining how stocks do. When the investment environment is good you want to be most aggressive with your investments since that may be when you make most of your money. When the investment environment goes bad that is the time to become more conservative in your stock-selection, focusing largely on stocks that pay good dividends or simply holding more cash.

QUIZ ON LESSON 11:

1. The Investment Environment for Stocks in the U.S. is Good If:

- A. George Bush says it is.
- B. Jay Leno says it is.
- C. Economic conditions, interest rates and foreign affairs are all in good shape.

2. For help in analyzing investment environments you should consult:

- A. The spin doctors in The White House Office of Communications.
- B. The current holder of the Mighty Mouth Award in the U.S. Senate.
- C. The first 50 names in the Poughkeepsie telephone book.
- D. *The Wall Street Journal*, *The Economist*, and *Foreign Affairs*.

Lesson 12

Two Recommended Books and Two Bonus Tips

The Almighty Formula by Milton Garber. www.amazon.com, \$14.95.

This book explains the key principles for picking good stocks, avoiding bad ones, limiting losses, and maximizing gains. Many of these principles have been touched on in the foregoing lessons. The book adds more detail, more examples, and explains how to use stock options safely and effectively to enhance portfolio performance. One chapter is devoted to analyzing the investment environment.

The book is written largely in the form of dialogue between Arrvin and his nemesis Spike. Arrvin is the guy with the plan and the "can-do" attitude. Spike is the pugnacious fellow who knows that if anything can go wrong it will, and he is not afraid to say so.

Dr. Garber publishes a twice-a-month electronic newsletter, *The ARRVIN Report*, that applies the Almighty Formula to the analysis of real stocks. It is available at www.arrvin.com.

The Little Book That Beats The Market by Joel Greenblatt. www.amazon.com, \$19.95.

An entertaining book that explains how to use just two pieces of data to evaluate stocks. The two key pieces of data are return on capital and earnings yield. The *Stockfighter* game includes screens for these two variables so it is possible to apply Mr. Greenblatt's "magic formula" in the game. Mr. Greenblatt is a founder and managing partner of a highly successful private investment partnership, Gotham Capital, and an adjunct professor at Columbia Business School.

BONUS TIPS

Lloyd George, a British statesman, said the most dangerous thing in the world is to try to leap a chasm in two jumps. His point was that in the world of diplomacy leaping to an agreement without carefully negotiating both sides is dangerous. It's the same in the world of stocks. Leaping to a stock pick without following the steps set out in Lessons 1-6 is dangerous. You may live to tell about it, but you are being foolish nonetheless.

There are, however, some ways to get a head start on the process, some ways to quickly identify good candidate stocks for further analysis. One of these ways is explained by Joel Greenblatt in *The Little Book That Beats the Market*. Mr. Greenblatt calls his approach the Magic Formula, and here it is:

Greenblatt's Magic Formula

1. Take a group of stocks and rank them according to return on capital from the stock with the highest return down to the stock with the lowest return. (*Stockfighter* has a research screen which will return the 20 stocks with the highest return on capital.) Return on capital is a measure of a company's business, the higher the profit on the capital deployed, the better the business.
2. Next rank the same group of stocks from highest to lowest by earnings yield. (*Stockfighter* has a research screen which will return the 20 stocks with the highest earnings yield.) Earnings yield is an evaluation of the company's stock price. The higher the yield in earnings per dollar of stock price, the more favorable the price.
3. Finally, add the rankings for each stock. For example, if Acme Widgets is ranked #3 on return on capital and #12 on earnings yield, its combined ranking is 15. Then buy the stocks with the lowest combined rankings.

That is the magic formula. Mr. Greenblatt presents data showing that this formula beats the market averages consistently; however, even he recommends using the formula as a starting point for further analysis, not as one's sole guide to stock-picking.

The ARRVIN Report

The foregoing lessons were based on the proposition that the key to picking and managing good stocks is the Almighty Formula (Good Stock = Good Business + Good Finances + Good Price). The lessons showed how to apply this formula. *The ARRVIN Report* goes a step further and applies it for you to real stocks. Each month the report has a list of "ARRVIN'S New Picks" featuring a number of stocks that a computer model has found to meet the requirements of the Almighty Formula. The report also contains two model portfolios managed by the ARRVIN system. In case you are wondering, ARRVIN stands for Adjusted Risk-Reward Value Indicator.

Even though *The ARRVIN Report* does some of the work for you, it is still a good idea to develop your own ability to apply the Almighty Formula, and the way to do that is to practice applying it in *Stockfighter*. Practice is the key to skill development in many areas including picking and managing stocks. With *Stockfighter* you can develop your investment skills without risking any real money until you know you are ready.

GLOSSARY

Almighty Formula. Good Stock = Good Business + Good Finances + Good Price. Business must be good, that is, a company must have good earnings (profits) that are growing each year and are likely to continue growing for the foreseeable future. Finances should be strong, that is, the company should have sufficient cash on hand (or cash equivalents) to more than cover its current liabilities. The company's total debt should not exceed its equity (the money shareholders have put up). The stock must not be over-priced. One good measure is the PEG ratio or the ratio of the stock's P/E ratio (price to next year's estimated earnings) to its percentage growth rate. The stock is under-valued if this ratio is less than 1, it is fairly valued if the ratio is between 1 and 2, and it is over-valued if the ratio is greater than 2.

Debt / Equity Ratio. The debt / equity ratio is one of two key measures of a company's financial condition. (For the other see "quick ratio.") The debt / equity ratio is the ratio of the amount of money a company has borrowed to the amount of money its stockholders have put up. What investors pay for their shares is called equity. If the ratio is 0.5 that means debt is half as much as equity. For example, if a company has total capital of \$10,000,000 and \$4,000,000 of this is borrowed money and \$6,000,000 is equity, then the debt equity ratio is $\$4,000,000/\$6,000,000$ or 0.67. A good rule of thumb is to look for a debt / equity ratio of less than 1.

Earnings. Earnings are also referred to as profits or income. Earnings are important in stock market analysis because owning a stock gives one the right to share in a company's earnings. An old adage says that stock price follows earnings and there is a lot of truth to this. There are various ways of figuring a company's income but what is called "net income" is figured the same way for all companies. General accepted accounting principles (GAAP) specify how it is to be calculated, so it is the best number to use when comparing companies. Net income, however, includes extraordinary or one-time events that do not recur regularly year to year; hence, these should be noted and allowed for when using net income.

Four Horrible Dangers. There are four horrible dangers that can afflict any stock. These dangers are: (1) Business is getting bad, (2) Finances are getting bad, (3) The price is getting too low, and (4) The price is getting too high. An investor must remain constantly on the alert for these dangers and when they appear either sell the stock or utilize a defensive options strategy. If earnings stall out or start dropping business is getting bad. If the quick ratio is less than 1 or the debt / equity ratio is greater than 1 finances are getting bad.

If the price drops below some previously set critical percent, say 15%, then the price is getting too low. Before you buy a stock set some percent below which you will not tolerate a drop in price. Say you pick 15% and the stock starts at \$20, then a drop to \$17 is a sell signal. If the stock moves up to \$25, then a drop to \$21.25 is your sell signal. When a stock hits your sell price SELL IT. This takes iron will and self-discipline, but it

will save you lots of money. This is the way to cut your losses and let your profits run. Finally, a stock's price is too high when its PEG ratio is greater than 2.0. At that point the stock is over-priced and you are better off being one of the first out rather than one of the last.

P/E Ratio. The single most common approach to determining if a stock is overvalued or undervalued is the P/E ratio, the ratio of price to earnings per share. Many people rely on this and it does make a certain amount of sense. It relates stock price to the single most important driver of stock prices—earnings. If a stock is priced at \$20 and the company's earnings per share come to \$1, then the P/E ratio is 20/1 or simply 20. This tells you how much you are paying for \$1 of earnings. The problem with this ratio is that it does not take into account how fast earnings are growing. A ratio that takes growth into account is the PEG ratio.

PEG Ratio. This ratio is a good indicator of whether or not a stock is over-priced. It is obtained by dividing the stock's P/E ratio by the expected earnings growth rate for the coming year. It is a measure of P/E per unit of growth and the lower this is the better. For example, assume Acme Widgets has a P/E of 15. If its earnings per share are expected to grow at 20% then the PEG ratio is $15/20 = 0.75$. This is good. The stock is under-valued. If, however, the growth rate were 12% then the PEG ratio would be $15/12 = 1.25$ which is so-so. Be cautious. And if the growth rate is 5% then the PEG ratio is $15/5 = 3$. The stock is way over-valued, avoid it.

Quick Ratio. The quick ratio is one of two key measures of a company's financial condition. (For the other see "debt / equity ratio.") The quick ratio is the ratio of cash plus cash equivalents (often U.S. Treasury securities) plus accounts receivable to current liabilities, i.e., to liabilities due in less than a year. A quick ratio of 1.0 would mean the company has the ability to pay off all of its short-term liabilities with nothing left over. A quick ratio of 2.0 would mean a company could pay off its current debts and still have that much cash or cash equivalents left over. As a rule of thumb a quick ratio greater than 1 is a sign of a healthy company.

Share of Stock. A share of stock is an ownership interest in a company. If a company has a million shares of stock and you own one of those shares, you own one-millionth of the company and are entitled to a one-millionth share of the company's profits.

10-K, 10-Q, and 8-K Reports. These are financial reports that publicly traded companies must file periodically with the Securities Exchange Commission. The reports are available for free at www.sec.gov. 10-K reports are annual and 10-Q reports are filed quarterly. Both reports contain a wealth of information about the nature of a company's business, who its competitors are, what problems it might be facing, its financial condition, revenues, earnings, etc. Particularly useful is the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations." 8-K reports are press releases put out by companies about events significant for their businesses. Sometimes a company will file an 8-K press release summarizing the quarterly earnings report before the actual 10-Q is filed.