



2ND QUARTER 2015
MARKET SUMMARY

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EXECUTIVE SUMMARY

- *Discussion of Risk*
- *Averages don't communicate the entire story*
- *Valuation determines future return*
- *Valuations are at the top deciles of highs*

HFG Valuations Metrics, S&P 500 Q2'15

Valuation Metrics	Current	Average	Decline to Mean
P/E Year Trailing Earnings	21.00	14.57	-31%
Shiller P/E Ratio (CAPE)	26.43	16.58	-37%
Price to Sales Ratio	1.80	0.96	-47%
Market Cap to GDP	1.32	0.71	-46%
Q-Ratio	1.08	0.68	-37%
Wilshire 5000 to GDP	1.23	0.73	-41%

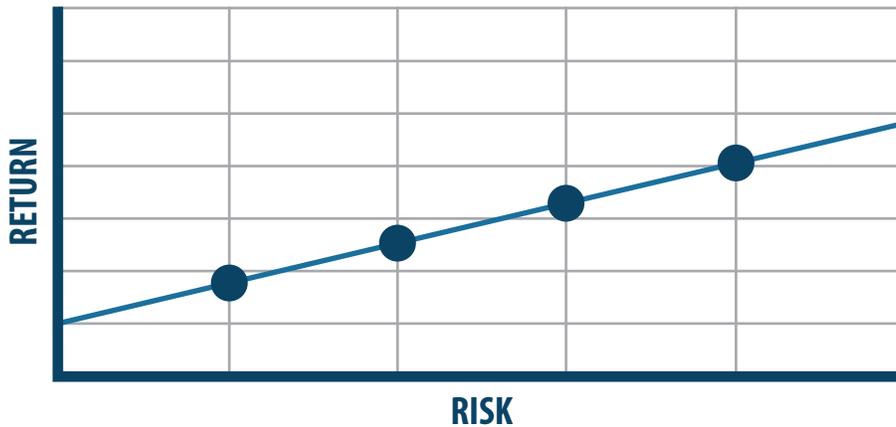
WHAT IS RISK?

Howard Marks has been considered the Warren Buffett of distressed debt investing. Distressed debt is a bond or loan which either is in default or the market has determined is proceeding in that direction. This is definitely an asset class which involves understanding risk. Marks' investment approach follows the thought there is no such thing as a bad bond; there is only a bad price. Even bonds which have defaulted generally have some terminal value. The trick is to determine what is left in the tank that can be extracted or confirmed for future repayment. Are you in first, second, or third position to collect on your debt? What is the collateral? Howard wrote a book called *The Most important Thing Illuminated*. In Chapter 5 he articulates understanding risk.

"Risk means more things can happen than will happen." –Elroy Dimson

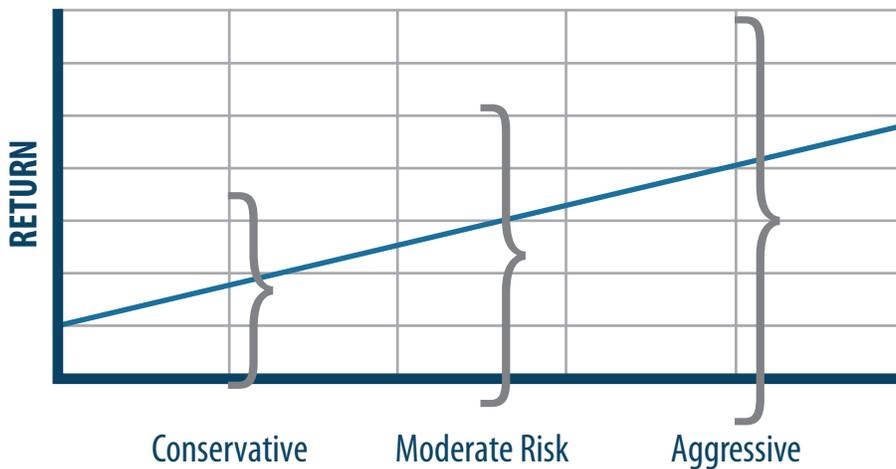
Marks starts by challenging traditional finance or what is being taught in MBA schools as illustrated by Exhibit 1. This chart illustrates that most investors and academics believe risk is a function of volatility. The Y axis is return and the X axis is risk. The more risk an investor is willing to take the more return they should garner. This implies an investor can "dial" in their return by determining their "pain tolerance" for volatility.

Exhibit 1



Logically, he illustrates how this is false. If riskier investments have higher volatility and deliver reliable higher returns, why would they be riskier? Marks challenges conventional belief by illustrating in Exhibit II the variability of return. If you look below, you will see on the Y axis is return and risk is on the X axis. As risk increases, Marks views that the range of results (returns) can in fact be higher or lower than what was originally “dialed in”. In essence, the outcomes of the possible returns are not normalized or consistent. “Riskier investments involve greater uncertainty regarding the outcome, as well as the increased likelihood of some painful experiences.” Howard Marks-Chapter 5.

Exhibit 2



In summary, riskier investments are those that have outcomes which are more uncertain and have more variability of results. Riskier investments should have:

- *higher expected returns*
- *the possibility of lower returns, and*
- *the possibility of significant losses.*

All of this brings us to the question of what is risk? In the academic world it is defined as volatility. By this time I hope you see that this isn't the real risk. Warren Buffet has said there are two rules of investing. First rule, don't lose capital. Second rule, refer to rule number 1. If you analyze Warren's annual reports and interviews how could you conclude that volatility is risk from his perspective? Did he imply one should never invest and take the risk of volatility? I don't think so. He has purchased hundreds of companies and stocks over his lifetime and I don't believe he thought he could avoid temporary market declines. I believe he is defining loss as impairment. Impairment means either a permanent loss of capital or such a loss that would take 5-10 years to overcome. For example, if you make a loan to Enron and it files for bankruptcy, you will experience impairment. If you purchased the NASDAQ in the year 2000 at a price of 5000 and it hasn't recovered until 2014, you've experienced impairment. Don't get me started or I could be the next Jeff Foxworthy of finance. If you bought tech stocks in 2000, you might have impairment. You get the idea?

PERMANENT OR TRANSIENT RETURNS

This discussion now takes me to my next topic regarding returns. Returns generated in highly overvalued markets, like today, historically have been transient. What is transient many of you might ask? Transient simply means temporary or something that lasts only for a short time. This would contrast permanent or realized returns. Why is this important? It is important because as value investors the retention of wealth is typically the desired end result as opposed to short term euphoria and thrill. For example, investors that bought the S&P 500 from 1996 through 2000 (one the greatest bull markets in history) gave back all of their returns that were above Treasury Bills after the 2000-02 market decline. If this wasn't a sufficient learning experience it was repeated again in 2008. If investors could go back and opt for less variability and realize a portion of their transient return, surely most of them would. Hindsight always seems to provide 20/20 vision doesn't it?

The comfort of averages

As a society we relish laws and tend to rely on averages to guide our decision making. Averages generalize results across a variety of instances; they're easy to remember and are what most of us use when building a Fantasy Football team. We also like laws of science such as the Law of Gravity because it's predictable and definite; what goes up must come down or no matter how good a preseason the Mariners have they won't make the playoffs (speaking as a fan). All jokes aside, what statistic should we use when deciding to draft either Peyton Manning or Tom Brady in a fantasy league? How should we use statistics when managing a portfolio? Should averages become a "law" of finance? I would wager, no.

In more than thirty years as a financial advisor, I've been told stocks have averaged 10% returns while alternatives such as bonds and cash have returned significantly lower. The logic goes, if we have a long-term horizon we should allocate substantially to stocks. For example, since 1900 the average decade return of stocks as measured by the S&P 500 has been 10%.

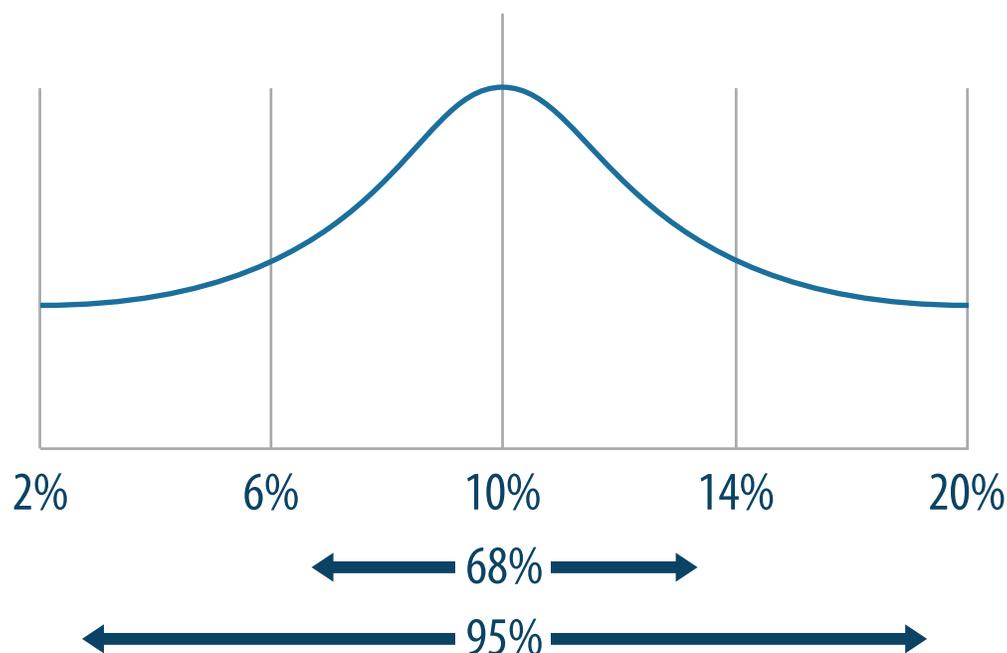
Armed with this information, the industry, through no fault of its own, has witnessed generalizations take root which can often lead to portfolios and investment strategies that are overly optimistic or aggressive. Here are some of the generalizations clients hear. First, as previously mentioned, stocks have averaged 10% returns and if an investor owns a diversified portfolio of stocks long enough they should have similar results. Second, to determine your allocation between stocks and bonds take the numbers from 100 to 120 and subtract your age. For example, if you were to use 120 and your age was 50, your allocations to stocks should be 70%. The logic behind using this simple math formula is it will determine your investment time horizon. Investors with longer horizons should be allocated more to stocks.

However, what these generalizations fail to communicate is the range for each decade of returns. The range has varied from a high of 18% per year to a low of -3%. The variance of 18% to negative 3% is quite wide. Thus, looking at averages without comparing deviations or variance is misleading. Allocating assets to stocks based solely on averages can be problematic at best. Let me illustrate.

The insight of variance

A useful and complimentary statistic is called standard deviation. It measures the average variation of an average. For example, re-examining the returns of stocks from 1900-2014, every decade produced an average return of 10%, but it also provided a standard deviation of 4%. Our engineers and financiers know where I'm going, it is called the "bell curve." I'll explain what this means. If the average is 10% and the average deviation is 4%, this tells us 95% of all 10 year returns in stocks, based upon past information will fall between 2% to 18%. Yes, it averages 10%, but the range of results makes investing rather unpredictable. **In my opinion the art and science of good investment management isn't maximizing return. It is maximizing the predictability of return in order to minimize risk. Let's see how we might be able to do this.**

Exhibit 3



VALUE INVESTING 101

DETERMINING VALUE AND FUTURE RETURNS

Novice investors look at the price of an investment to determine value. This isn't much different than looking at two packages of the same steak and purchasing the lower priced package without regard to quantity or quality. In products that are a commodity, variations like quantity and quality need to be compared with absolute price. When it comes to evaluating investments, we should look at the income or future income an investment will deliver. Step 1: Income is the starting point of determining value. Step 2: Value determines return. This is so important it needs to be repeated. **VALUE DETERMINES RETURN.** Let me illustrate. Ron, a new investor, looks at a duplex selling for \$200,000. He rationally compares this price with other duplexes. If others are selling for more than \$200,000, Ron concludes he is getting a good price. A professional investor doesn't ignore this fact; however, they start from a different perspective.

Bill, a seasoned investor asks the seller what the rent is per unit. He is told they are \$1,000 per month (per unit) or \$2,000 per month. Rents are the income the investment generates. Bill knows his primary return from the duplex will be rent. After gathering the current rent he researches to determine what the market rate of rent is for similar sized duplex units. He finds market rent is closer to \$1200 per unit. Even though this is good news, this alone isn't sufficient to determine if the duplex is a good value. The next step is to determine the cost of managing the duplex. Bill finds he will be responsible for taxes, insurance, utilities, maintenance and a property manager fee. All told, these items add up to \$600 per month. Bill now has an estimate of what his net income could be with the purchase. Let's illustrate.

Exhibit 4



$$\begin{aligned} &\$1,200 \text{ (Rent)} \times 2 \text{ (Units)} \times 12 \text{ (Months)} = \$28,800 \text{ Total Rent} \\ &\$600 \text{ (Expenses)} \times 12 \text{ (Months)} = \$7,200 \text{ Total Expenses} \\ &\$28,800 \text{ (Total Rent)} - \$7,200 \text{ (Total Expenses)} = \$21,600 \text{ Net Income} \end{aligned}$$

With this information Bill can now determine the value and attractiveness of this investment by comparing the net income to the asking price. There are two formulas that provide different views of the investment. The first is called the Earnings Yield. We take the net income of \$21,800 and divide the asking price of \$200k into it to get an 11% earnings yield. This means Bill could expect an 11% cash flow return from this investment if he paid cash for the duplex. We will discuss later why the 11% isn't likely to be his total return. The next formula is a calculation to determine the ratio of a dollar invested to a dollar of return. We call this the Price to Income ratio. This metric compares the productivity of the asset. We take the selling price of \$200k and divide the net income of \$21,800 into it to get a ratio of about 9. This means we are investing \$9 to get back \$1 each year.

What does the Price to Income (PI) ratio tell us?

Because Bill is an experienced investor he knows rental property historically sells for a PI ratio of 7 to 15. Thus, Bill concludes over time the price of \$200k or a PI of 9 is within a reasonable valuation. Using a 7 or 15 PI the price of the rental could range from a low of \$150k to a high of \$320k. Conclusion: The rental property is a good value at a price of \$200k.

Exhibit 5



$$\frac{\text{Price } \$200,000}{\text{Net Rent } \$21,600} = 9 \text{ P/I Ratio}$$

Low Value: Rent X 7 = \$151,200
High Value: Rent X 15 = \$324,000

WHAT RETURNS SHOULD BILL EXPECT?

Earlier we discussed the metric of Earnings Yield and concluded Bill should expect an EY of 11%. I also stated this wasn't necessarily his return. The return of an investment is far more dynamic than just using the EY or earnings yield. Return is the combination of the earnings yield, the change in rental income over time and the selling price in the future. Fortunately, there is a simple formula we can use to estimate the expected return. At HFG we call this the PIG formula. P stands for Price change. This provides the component of return that relates to the selling price. I stands for Income. This measures the current income or earning yield from the investment. G stands for Growth or the change in future rental income. By adding these three components of return we can estimate Bill's return on the purchase of the rental.

Exhibit 6



To perform the math calculation I'm going to start with I or earnings yield first and determine P at the end. Since it is an addition equation it doesn't matter which return component we start with. I equals Earnings Yield. This is the annual income from the investment divided by our cost. Above we calculated this as 11%. Next we estimate G or the growth or change in future rents. This estimate should use the projected rate of inflation. For our example, we will use 2% per year. So far, by adding 11% and 2% we have a total return of 13% before factoring the change in price when the property is theoretically sold. Bill, through his research, learned duplex rentals sell for 7 to 15 time net rental income. Further research found the average was 11. Thus, to estimate the impact of return on the future selling price we need to simply view this as buying the asset at a price of 9 and selling it in the future at 11. The only question that remains is how far into the future do we forecast? In our example we'll use 10 years. Buying at 9 and selling at 11 over 10 years equates to an annual price change of about 2%. For math geeks the formula is $[(11/9) ^ (1/\# \text{ of year which is } 10)] - 1$. We can now add our three components of return to estimate Total Return. $(11+2+2)=15\%$.

Exhibit 7



To provide contrast and to illustrate why Valuations are the most important determinant of future return, let's use some other purchase prices to calculate future return.

Exhibit 8—Growth + Price Change + Income = Total Return

Price	Growth	Price Change	Income	Total Return
\$200,000	2%	2%	11%	15%
\$250,000	2%	0%	9%	11%
\$300,000	2%	-2%	7%	7%
\$350,000	2%	-4%	6%	6%

Let's assume all of the prior information is the same with the exception that the asking price is \$300k. At this price our PI ratio is at the upper end of valuations at 14 or 13.64. ($\$300K/\$22k$). Let's go through the PIG formula again to forecast future returns. We'll start with I again. The income or earnings yield will be $22/300$ or 7%. Note: as the price increases for the duplex, our income remains the same. However, our percentage of income to price decreases. **This is why Valuations determine future return.** Next, our G won't change. Whether Bill pays \$200k or \$300k for the duplex we assume rents will increase at 2% per year. The third component of return, P, will change dramatically. Bill purchased the duplex at a PI ratio of 14 and we always assume an investment will be sold for its average valuation. The average valuation or PI is 11. Thus, Bill purchased an asset for 14 and will sell it for 11. This is a loss of 25% over 10 years, which equates to about a -2% annualized loss per year. For our math geeks the formula is $[(11/14) ^ (1/10)] - 1$. Bill's future return looks totally different when the duplex is purchased at \$300k. $(7+2-2)=7\%$.

Exhibit 9



This is why I stated Valuation is the primary determinant of future returns. Whether the duplex was purchased at 200k or 300k the net income is the same. However, total return is lower when buying assets at higher valuations. Secondly, when making an investment we should assume all things being equal, the investment will be sold at an average valuation in the future. If Bill purchases the duplex at a low valuation he is likely make a gain on the sell which in turn creates a higher total return. If he pays above average value he is likely to incur a loss at sale which will generate a below market return.

Intermediate Distortions

Let me illustrate why Value Investing is not a panacea. Going back to our duplex illustration let’s assume Bill paid \$300k for the rental. As stated this is 14 time rents, which historically is at the top end of valuations. A value investor would pass on this investment and if there were no alternatives that could produce satisfactory results, the value investor would likely remain patient. In earlier letters we’ve used the baseball analogy of “Waiting for the Fat Pitch.” Patient means the value investor would keep their capital in conservative low returning assets until opportunity presented itself. Now, let’s go back to our example of Bill purchasing the rental for \$300k, or 14 time rent. Bill is chided by his value investor friends of being foolish. One year later valuations have increased from 14 to 15 time rents. With this information let’s calculate Bill’s first year return.

His earnings yield is 7%, he chose to raise rent thus G was 0. His price change of 14 to 15 provided a change in value from 15-14/14=7.1%. So, his total return the first year was 7% Income + 7.1% price change or 14%. Bill now feels empowered to chide his value investor friends because his purchase of the rental has provided much better returns than they have earned in their patient portfolios. To play this out further let’s assume PI valuations continue increasing to a point they are above the highest point of any historical period. Two years later valuations or PI increase to 17. Using the PIG formula and assuming no increase in rent rates, Bill’s returns have averaged 13-14% per year over the 3 years. (7% income plus 6-7% annual price changes). However, in year 4 there is a shock to the system. The combination of an economic slowdown and builders increasing the supply of duplex properties, as they saw an opportunity to profit from rising valuations, has now caused a significant decrease in duplex valuations. Vacancies are up and rent rates are dropping. Even though Bill isn’t forced to sell, his return for the 4 years is now close to negative. What he paid \$300k for now can only be sold at 10 time rents or \$220,000. Over the 4 years he has received \$88k in rents, however, it has been offset by a \$80k drop in value, thus his total return is effectively 0.

This, from my perspective, is an excellent illustration of what has been transpiring since 2000 in the global stock and real estate markets. Total returns in the S&P 500 since 12/31/1999 have been about 4%, well below the 10% average historical returns. Though there are outstanding years or intermediate horizons that post wonderful returns, unless an investor is efficient enough to exit prior to the down years the “excellent returns” are never realized, they are transient. In our opinion this is precisely where we believe we are in today’s financial markets. They have provided rewarding returns since the overvaluation climate of 2012-13, but the question remains will they be realized (permanent) or transient?

HOW DOES THIS FIT INTO THE NARRATIVE OF TODAY'S FINANCIAL MARKETS?

The process of investing in stocks, mutual funds that own stocks, or other ownership type assets is the same as was illustrated in the duplex example. The difference is stocks don't generate rent, they generate sales, which if expenses are managed, turn into profits. Our industry will also call this earnings or net income. Just as the duplex valuation started at examining net income; investing in stocks should be the same. Once we have determined net income we need to compare it to price to determine valuation. Once we know valuations we have a good estimate of future returns. Note, future returns in this example relate to investment time horizons of 7-10 years or more. Forecasts inside of 7 years are less accurate or are not as predictive. Today, we find stocks in the US as measured by the S&P 500 selling for over 25 times earnings (PE ratio) when the average historical PE ratio has been 15-18. If we choose to examine other valuation metrics such as Price to Sales, Market Cap to GDP, or the Q-ratio, all of them indicate the same forecast of dismal if not poor returns over the next decade.

In closing, this is why we believe the only reliable method of generating realized and not transient returns is to base investment decisions on valuations. In our opinion this is where the Evidence takes us.

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