



Client Education

This document is meant to introduce you to some investment concepts we find important. We do not expect you to become an expert in any topic we discuss. The objective here is that you are able to answer some broad questions where these concepts are concerned. Those questions include:

1. What is the main function of the Investment Policy Statement?
2. What is the asset allocation process and what two elements should be considered in the process?
3. What is market timing and why should it be avoided?
4. What is the basic theory behind EMH, MPT and CAPM?
5. What is value investing? Have followers of value investing been successful?
6. How are value investors different from those investors that follow EMN, MPT, and CAPM?
7. What is the main benefit of running concentrated portfolios?
8. Why does Brick Financial prefer stocks to other asset classes?
9. Why does Brick Financial prefer direct investment into securities to mutual funds?

We encourage you to read the entire document. We understand that many will not do this in one session thus we have provided yellow "callouts" that summarize the main idea of the section in question. Please note these areas as they will provide insight into the questions listed above.

If you have any questions regarding all we have laid out for you here, please do not hesitate to contact us at:

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The Investment Policy

Investor Objectives – This is the opportunity to discuss the need to define each of the client’s objectives with time and specificity and to rank them in order of priority. Restraints can include any restrictions on the investment process that the client may desire.

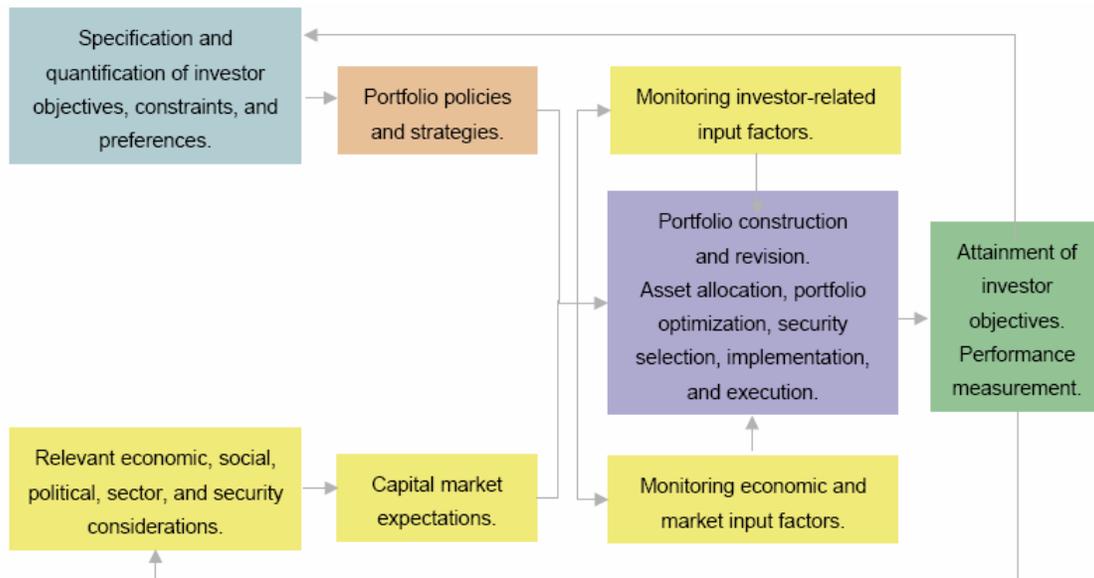
Brick Financial follows a structured process in gathering client data. The process consists of a multi-page questionnaire geared to uncover

- Your present financial position
- Your tolerances for certain types of investment risk
- Your goals and the time frame for each

This process is critical to establishing the Investment Policy – the document that articulates the client’s investment goals and identifies the interrelationship between investing and spending. It provides the broad based asset-allocation¹ guidelines within which Brick Financial may position a client’s assets.

At Brick Financial, we are what you call bottom-up value investors. We do not predict the direction or the impact of macroeconomic, social, or political

Figure 1. The Investment Policy Process



factors on financial markets. The factors do however, play a role in the assumptions we use to create our asset allocation models. Brick Financial uses complex and proprietary computer models, driven by valuation² of financial securities, to drive its asset allocation models. Because the process of valuation requires a number of assumptions, the process is art as well as science. We try to account for any “miscalculations” by establishing a margin of safety³.

Once we have all our estimates, we feed them into our optimization⁴ software and we arrive at a portfolio allocation that we believe will best suit our client's needs. With this analysis, we create the Investment Policy. Brick Financial runs several predefined portfolios⁵, each covering one or two segments of the equity, fixed income and real asset markets. In each of our portfolios, we attempt to outperform that related sector of the market. For example, in our Relative Value (see product list) portfolio, which is primarily made up of mid-cap⁶ stocks, we use the Russell Mid-Cap index^{7, 8} as the benchmark.

The Investment Policy Statement serves as the instruction manual to managing an investor's portfolio.

Asset Allocation / Value Allocation

Studies⁹ have shown that much of an investor's potential return is determined by the decision to place funds in stocks, bonds or cash – the asset allocation decision. These studies suggest that, in most periods, stocks beat bonds and bonds beat cash. Using this information, many investment managers, especially those that are believers in modern portfolio theory (MPT) and efficient markets (EMH)¹⁰, set Investment Policy with rigidity (ie, 20% large cap stocks, 10% foreign stocks, 15% small cap stocks, 10% short term bonds, etc). Their clients also wind up owning stocks from every corner of the market. Should any one piece of the client's portfolio advance or decline too significantly away from the Investment Policy allocation, the manager, either buys or sells according to the policy. This would seem to make sense under most circumstances, but these managers do not account for two things in their allocation policy – time and valuation. There are occasions when both bonds and cash return more than stocks, usually during extended bear markets. Thus the problem arises when the manager is arbitrarily selling (or buying) a portion of your portfolio that has advanced (or declined) significantly. The problem is exaggerated when valuations of the securities and the time horizon of the client say that the manager should take just the opposite action. Too much diversification, as traditional asset allocation requires, would always have the client in some asset that was underperforming. At best the portfolio would do about average with the market. Brick Financial believes that the manager should try and do better than the market.

Brick Financial believes that most clients, at all risk levels, should have some exposure to stocks at all times. But there may be times where we let the valuations of groups of stocks determine the asset allocation.

This process is sometimes called 'Tactical Asset Allocation' (TAA).

A more fitting title would be 'Value Allocation' (VA)– which accounts for both investment time horizon and valuation of securities.

The intent here is to take advantage of portions of the market

Asset Allocation is the process of dividing investments among different kinds of assets. The process should consider the investor's investment time horizon as well as security valuation.

that are undervalued.

We believe that over periods of time, we will outperform the markets through our stock selections of individual securities (Our Core Portfolios). Our Equity ETF Portfolios and our Fixed Income ETF Portfolios round out the Value Allocation of our client portfolios. Thus, although we use the tools of optimization and asset allocation, we do not let these tools dictate our investment strategy. The Investment Policy statements we create for our clients will give a range for an asset type (i.e., 50% to 70% equity) rather than a fixed percentage that would leave very little opportunity for taking advantage of an undervalued market.

Market Timing

It may seem logical for an investor to only be in the financial markets, especially stocks, when conditions are favorable for immediate profit. The old "Buy Low, Sell High" concept. This concept may be reasonable in theory, but highly difficult to execute in reality. Although an informed investor can make reasonably accurate assumptions about a security's valuation, he can not, with any consistency, say *when* market prices will come in line with those valuations.

Market returns, both positive and negative, frequently occur in short spurts. Successful market timing requires not one, but two correct "calls" – getting out of the market before it goes down *and* getting in before it goes back up. To demonstrate the difficulty in catching market spurts, consider the S&P 500's performance of 2003:

Table 1
Why Market Timing Doesn't Work
2003 Stock Market Price Performance

	S&P 500 Appreciation	# of Trading Days	% of Return for Year
Entire Year	26.4%	252	
Mar 12 - Mar 21	11.9%	9	49%
May 21 - Jun 5	7.7%	14	31%
Rest of 2003	4.9%	229	20%

*80% of the return occurred over a 23 day period

Table 1 demonstrates that in 2003, almost all of the year's positive return occurred during 23 of the 252 trading days. Almost 50% of the return was attributable to just 9 trading days between March 12 to March 21. The problem is there were no obvious indicators that the market was going to take off on those 9 days. If there was an indicator, all investors would act on it, negating any positive affects the strategy presented. As Benjamin Graham stated:

Market timing is not possible and should be avoided.

"A moment's thought will show that there can be no such thing as a scientific prediction of economic events under human control. The very 'dependability'

of such a prediction will cause human actions which will invalidate it."¹¹

Table 2

**S&P 500 Typical Monthly Price Change¹²
Years 1926-2002**

Month	% of Months Up	% of Months Down	% of Months Even
January	53.47%	45.18%	1.35%
February	48.97%	49.10%	1.93%
March	50.67%	47.07%	2.26%
April	52.01%	45.56%	2.43%
May	51.04%	46.99%	1.97%
June	52.08%	46.25%	1.67%
July	54.27%	43.37%	2.36%
August	51.19%	47.01%	1.80%
September	50.19%	47.81%	2.00%
October	50.64%	47.51%	1.85%
November	53.12%	45.33%	1.55%
December	52.63%	45.09%	2.28%
Average	51.70%	46.34%	1.96%

Table 2 demonstrates the folly in trying to predict which month the market will be up or down. The speculator would be right about half the time.

Market timing should be avoided.

Modern Portfolio Theory (MPT), CAPM and Efficient Markets (EMH)

(This is where the technical vocabulary begins. If this is your first introduction to these concepts, you may find the material unsettling at first. Do not be intimidated. Simply stated, careful contemplation of the material will serve you here. We are reviewing the concepts together for several reasons: they are important to know, they are related in some way, and they are of *marginal* use to the careful and studious investor.)

In 1952, Harry Markowitz, a University of Chicago graduate student, wrote an article for *The Journal of Finance* entitled "Portfolio Selection". The paper basically made the point that return and risk are linked. In other, he surmised that for an investor to achieve above average return, he must take on above average risk.¹³ This brief article is credited with launching modern finance and Modern Portfolio Theory (MPT). MPT is defined as:

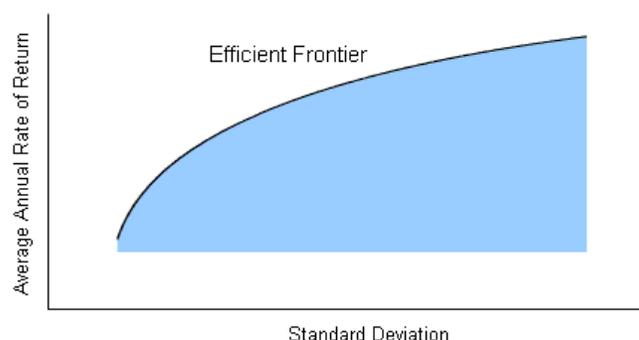
- The overall investment strategy that seeks to construct an optimal portfolio by considering the relationship between risk and return, especially as measured by standard deviation¹⁴, alpha, beta, or R-squared. This theory recommends that the risk of a particular stock should not be looked at on a standalone basis, but rather in relation to how that particular stock's price varies in relation to the variation in price of the stock market. The theory

goes on to state that given an investor's preferred level of risk, a particular portfolio can be constructed that maximizes expected return for that level of risk.

Risk, as MPT would define it, is the short-term (one year to the next) fluctuations in the price of a security.

In order to help clarify his thoughts, Markowitz devised what he called the *efficient frontier*. The efficient frontier is simply a line drawn on a graph representing the tradeoff of risk and return. In the graph (Figure 2) below the black line is the efficient frontier and the blue area is where *inefficient* portfolios – those offering less return for their given risk level – are set.

Figure 2



According to Markowitz, it is the investment manager's job to match portfolios to an investor's level of risk tolerance while limiting or avoiding inefficient portfolios. He used standard deviation (variance) as his measure of risk which can be thought of as the distance from the average. The greater the distance, the greater the risk.

While variance may provide a gauge of the riskiness of one stock, it fails in this regard when considering a portfolio of stocks. The variance of the portfolio is not the simple average variance of all the stocks it contains. Markowitz came up with a way to define the risk of the entire portfolio and called it covariance. Covariance measures the direction of a group of stocks. High covariance is exhibited when two stocks move together in the same direction while low covariance is when stocks move in opposite directions. Thus the investor (or his manager) should determine the level of risk he is willing to accept, and construct an efficient diversified¹⁵ portfolio of low covariance (correlated) securities.

In MPT's strictest form, diversification occurs when the portfolio contains *all* liquid asset classes – not only U.S. stocks, bonds, and cash, but international investments, short positions, foreign exchange, and various commodities and precious metals. The idea is that this balance gives an investor most of the returns of equity securities and allowing the benefit of lower volatility from bonds and cash, and the assumed low covariance of equities from different

sectors and countries.

Enter William Sharpe, and UCLA PhD student. In 1963, Sharpe published a dissertation called the "A Simplified Model of Portfolio Analysis" in which he tried to simplify Markowitz' ideas. Sharpe believed that all securities were related to some base factor. According to Sharpe, the base factor for stock prices – the single greatest influence on their behavior – was the stock market itself. Volatility of a portfolio could be determined easily by the simple weighted average volatility of the individual securities. Sharpe's measure of volatility was called beta.¹⁶

In 1964, Sharpe presented a concept called the Capital Asset Pricing Model (CAPM), presented in an article titled "Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk" in *The Journal of Finance*. CAPM assumes that *all* individual investors build portfolios that have the lowest possible risk given their level of expected return. Thus, when all individual portfolios are considered together, they form the efficient frontier. In other words, CAPM says the market portfolio (i.e. the S&P 500) lies perfectly on Markowitz's efficient frontier. Thus an investor is getting the most return for the risk taken by simply investing in the entire market.

Using the elements of Markowitz – proper risk/reward balance depends on proper diversification – and Sharpe – definition of risk as beta and development of CAPM – Eugene Fama developed the Efficient Market Hypothesis (EMH). Fama's PhD dissertation, "The Behavior of Stock Prices," was published in *The Journal of Business* in 1963. He concluded that stock prices are not predictable because the market is too efficient (EMH). In an efficient market, as information about securities becomes available, all that information is immediately priced into the stock. The implication is that the stock is always fairly priced and attempts to build individual portfolios to outperform the market portfolio are futile. (Brick Financial produces portfolios with the intent to do just that by the way.) If EMH is correct, there is no possibility, except random chance, that any person or group could outperform the market.

The problems with MPT, CAPM and EMH are that each depends on certain circumstances to hold true that do not in reality. The assumptions under these theories are as follows:

- All investors select portfolios with risk in mind
- All investors measure risk the same way
- All investors use CAPM to value securities
- There are no taxes or transaction costs
- All investors have the same time horizons
- All investors can borrow at the risk-free rate of return¹⁷
- All investors have identical expectations about asset returns
- All investors have access to every piece of information about a company, and in aggregate, analyze this information correctly

- All investors act *rationally*

Simply based on the assumptions required for these theories to hold true, one can see that they stand on faulty ground. These criteria do not apply to most investors yet the theories require the all criteria to. Investors, for the most part, do not consider risk implications of their security selections. No investor gets the risk free rate, not even the very largest corporations. Everyone pays slightly higher interest costs. All investors, at some point, *do* pay taxes and all investors *do* pay transactions costs. Investors do not have the same time horizons – some are investing for retirement 30 years away, some are investing for college expenses 10 years away.

EMH, MPT and CAPM are investment theories that essentially say that investors can not outperform the average returns in the stock market by picking there own investments. And if an investor can not beat the market, he may as well join it by buying a broad based index fund.

The most prominent reasons that these theories, especially EMH, are not defensible can be easily summarized:

- Investors are *not* rational. If investors were rational, we would not have run ups in markets, or severe drops in markets, when the fundamentals have hardly changed. In fact it may not be possible for most investors to act rationally in financial markets as it is against human nature. What is rational behavior everywhere else is irrational in the financial markets.

**Table 3
Rational Behavior in Life vs. Investing**

Presence of:	A Grizzly Bear	A "Bear" Market
Defined by	A large hairy mammal known to have large teeth and claws. Also known to attack unpredictably and could easily injure or maim.	A prolonged period in which investment prices fall, accompanied by widespread pessimism. Also known to attack unpredictably and could easily injure or maim.
Rational behavior exhibited	Run! As quickly as possible remove oneself from the Bear's path.	Rejoice! <i>Run towards</i> this market as quickly as possible. This is the opportunity to purchase undervalued securities and potentially profit greatly.
	This is extremely easy to do.	This is extremely <u>hard</u> to do.

Rational behavior would require the individual to behave differently in these situations.

- Investors do *not* always process information correctly. Most investors rely on shortcuts to determine security prices.

Value Investing

Benjamin Graham's and David Dodd's, *Security Analysis*, is largely seen as the point at which value investing was articulated in print. The approach rests on three key characteristics of financial markets:

1. The prices of financial securities are subject to huge and irrational movements.
2. Market prices are separate and distinct from intrinsic value - the perceived actual value of a security.
3. A strategy of buying securities only when their market prices are significantly below their intrinsic value will produce superior returns in the long run.

According to MPT, EMH and especially EMH, determining a securities value and purchasing below that value is impossible. But followers of Graham and Dodd tenets have done this for decades. Value investing does work. Several distinct sources provide evidence of this superiority:

1. A series of mechanical tests show that portfolios of "blindly" selected groups of stocks with low price-to-book¹⁸ or low price-to-earnings¹⁹ values, consistently and significantly outperform the market portfolio. These portfolios have returned returns higher than the market at much lower volatility – also viewed as impossible under MPT, CAPM and EMH. (see Table 4)
2. Technical tests, specifically those that buy or sell an asset based on its current relation to its trailing moving average, which *suggest* value, have proved to produce returns higher than the market.
3. Institutional investment companies that follow the value investing principles, have also outperformed the market with lower risk over long periods.
4. Money managers whom Warren Buffett called the 'superinvestors of Graham and Doddsville', have dominated the market over an extended period of time.²⁰ Buffett points out that these managers superior performance is likely not due to random chance – as EMH suggests it would have to be – since all of the managers he mentions are from the same "intellectual village".

Table 4
Annual Returns by Size and Price to Book Ratio²¹
July 1963 to December 2000

Entire Period		Size Quintiles by Market Cap				
		Small	2	3	4	Large
Price to Book Quintiles	Value	23.26%	15.94%	17.44%	16.18%	13.59%
	2	20.40%	15.23%	14.60%	15.18%	11.27%
	3	18.03%	13.96%	14.75%	11.39%	11.02%
	4	12.87%	11.99%	11.83%	10.37%	12.13%
	Growth	6.41%	5.15%	5.93%	10.71%	10.28%

The yellow area (10.37%) is about the return of the S&P 500 for the period.

Is the Superiority of Value Investing Permanent?

It seems that if value investing is so appealing, investors would flock to the teachings of Graham and Dodd in droves, thereby, diminishing the superiority of the value investing style of investing. But as Warren Buffett

states in a 1984 article commemorating the 50th anniversary of *Security Analysis*:

"...some of the more commercially minded among you may wonder why I am writing this article. Adding many converts to the value approach will perforce narrow the spreads between price and value. I can only tell you that the secret has been out for 50 years, ever since Ben Graham and Dave Dodd wrote *Security Analysis*, yet I have seen no trend toward value investing in the 35 years that I've practiced it. There seems to be some perverse human characteristic that likes to make easy things difficult. The academic world, if anything, has actually backed away from the teaching of value investing over the last 30 years. It's likely to continue that way. Ships will sail around the world but the Flat Earth Society will flourish. There will continue to be wide discrepancies between price and value in the marketplace, and those who read their Graham & Dodd will continue to prosper."

Value investing consists of assessing the true value of a security and then purchasing only if the current price is below that estimated value. Value investors have consistently beat the market averages over time.

There still seems to be no trend toward the value investing style in mass. This is good for followers of these principles.

Implications of Value Investing for Diversification and Risk

MPT makes excessive diversification a central features to proper portfolio development. Because, as the theory holds, an investor will not be compensated (return) for the high risk he takes in owning only one or a few securities. The only risk that does earn a commensurate reward is the risk of volatility. EMH – the idea that the market always incorporates the best estimate of the true value of a security – is embedded in this conception of risk and diversification; otherwise it might be possible for a clever investor to pick relatively few securities and be rewarded for those selections.

Value investors on the other hand think stock selection *does* matter, and they do not accept the definition of risk as simply relative volatility. And volatility risk isn't best reduced by owning a multitude securities. Thus, value investors generally run more concentrated portfolios. This is because the only securities that most value investors select, are those that they feel they understand well. They reduce their apparent risk by steering clear of permanently weak companies, not by excessive diversification. Second, most value investors implement a "margin of safety" rule – only buying securities when the intrinsic value is far less the current market price.

Also, volatility, as far as the value investor is concerned is not the best measure of risk. Whenever the price of a security drops precipitously, its volatility increases, but so does its margin of safety. Here, Warren Buffett conveyed his view on risk vs. volatility:

"We bought The Washington Post Company at a valuation of \$80 million back in 1974...it('s intrinsic value/worth) was \$400 million. Now under the whole theory of (standard deviation) and modern portfolio theory, we would have

been doing something riskier buying stock for \$40 million than we were buying it for \$80 million, even though it's worth \$400 million – because it would have been more volatile. With that they've lost me."²²

The odds of predicting whether the stock market will be up or down in a short period, like a month or a year, about 50/50 (see *Market Timing*). The value investor is more likely to define risk, not as volatility, but as the risk of losing purchasing power. In other words, the impending threat of inflation is a risk. Value investors regard volatility as secondary to inflation risk.

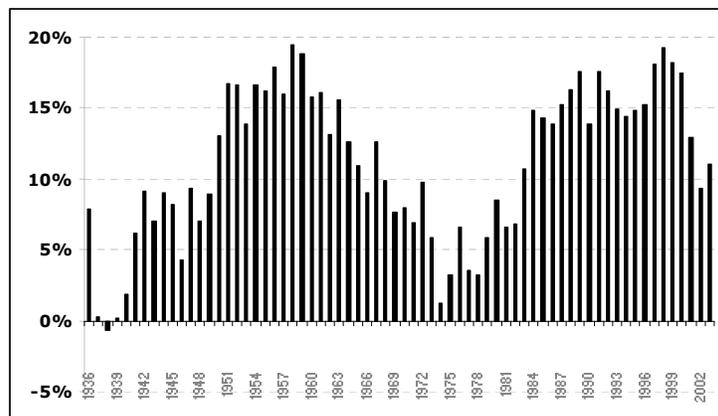
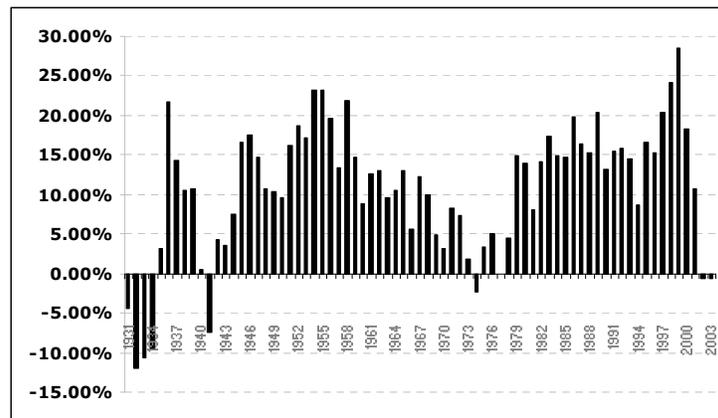
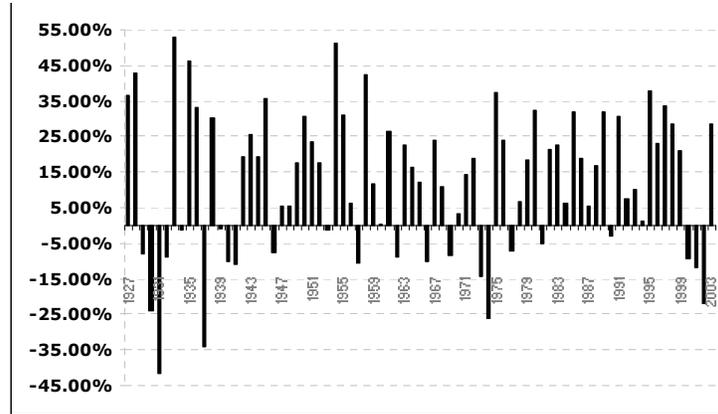
Volatility risk is also linked to the investor's time horizon. Stock investors should be long-term (at least 3 years) investors, so year-to-year changes in security prices should not affect them. Volatility is greatly diminished when considering longer time periods (see Chart 1, next page). When measured year-to-year the S&P 500 has had negative returns 21 out of 77 (27%) times during the period 1927-2003. But there have only been 9 in 73 (12%) down periods when measured over five year periods and only 1 ten year period in 63 (1%) that was down.

Diversification can be measured in more ways than simply the number of securities in a portfolio. Most believers in MPT and EMH believe in owning the entire market through a broad market index fund²³. (The Vanguard²⁴ Total Stock Market Index fund holds 3,620 stocks.) The task for investors is to find assets with negatively correlated or low correlated returns. Different companies in different industries in different circumstances become attractive to the value investor at different times. Since value investors are constantly looking for securities that are trading in price below their intrinsic value, he is bound to find a security that is not highly correlated with the securities currently in his portfolio. This is why some value investors hold securities that are in different industries, or affected by different economic factors. It is a pleasant consequence of the value investing process. The bonus is this takes only a few positions to accomplish, less than 20 (see *Investment Risk*).

Value investors do not believe in over-diversification and do not define risk as volatility of returns as do investors who follow EMH and MPT.

Value investors protect themselves by (1) insisting on a margin of safety, (2) continually challenging themselves on the merits of their holdings, and (3) limiting themselves to some degree to the how much of a holding they will allow in their portfolios.

Chart 1. 1 Year, 5 Year and 10 Year Stock Returns (1927-2003)



Correlation Coefficient

Correlation measures how closely two assets relate to one another. Correlation coefficients (measure of the relative movement) range from -1.0 through to $+1.0$. A correlation coefficient of $+1.0$ implies that investment A consistently moves in the same direction as investment B. A correlation coefficient of -1.0 may be interpreted as meaning investment A consistently moves in the *opposite* direction as investment B. A correlation coefficient of zero suggests that both A and B investments are not correlated. The following table shows different correlation ranges:

Table 5

High Correlation = 0.80 to 1.0
Moderate correlation = 0.30 to 0.70
Low correlation = 0 to 0.30
Negative correlation = -1.0 to 0

Chart 2

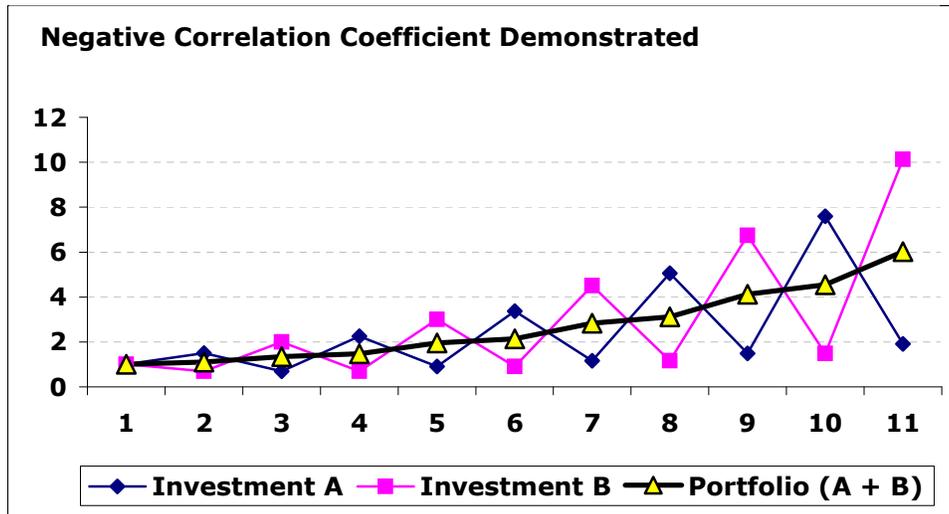


Chart 2 demonstrates a portfolio of two investments, A and B. Over time the returns of both A and B are similar but as single investments, their volatility is substantial. However, when combined in a Portfolio (A+B), much of the volatility disappears, because these two assets have a negative correlation (-0.8). Table 6 shows the historical (26 year period) correlation of different asset classes²⁵:

Table 6. Correlation of Assets 1973-1998²⁶

	Large Stocks	Small Stocks	EAFE	High Yield	LTGC	T-Bill	REIT
Large Stocks	1.00						
Small Stocks	0.66	1.00					
EAFE	0.46	0.34	1.00				
High Yield	0.53	0.57	0.31	1.00			
LTGC	0.57	0.31	0.19	0.65	1.00		
T-Bill	-0.09	-0.01	-0.15	-0.11	0.06	1.00	
REIT	0.56	0.84	0.33	0.64	0.29	0.02	1.00

Correlations between asset classes do not stay the same over time.

Table 7. Correlation of Assets 1993-2003²⁷

	Large Stocks	Small Stocks	EAFE	High Yield	LTGC	T-Bill	REIT
Large Stocks	1.00						
Small Stocks	0.88	1.00					
EAFE	0.84	-0.79	1.00				
High Yield	0.57	0.52	0.29	1.00			
LTGC	-0.22	-0.27	-0.29	0.33	1.00		
T-Bill	0.04	-0.10	-0.19	0.09	-0.30	1.00	
REIT	0.35	0.56	0.28	-0.33	-0.06	-0.10	1.00

In the last 10 years, Table 7 shows that Large and Small stocks have become highly correlated (0.88), while in the past they were only moderately correlated (0.66) (Table 6). The same trend holds true for Large and International (EAFE) stocks as well, going from a modest correlation of 0.46 (Table 6) in the prior period to a relatively high correlation of 0.84. Other asset classes have different correlations in the each of the periods as well.

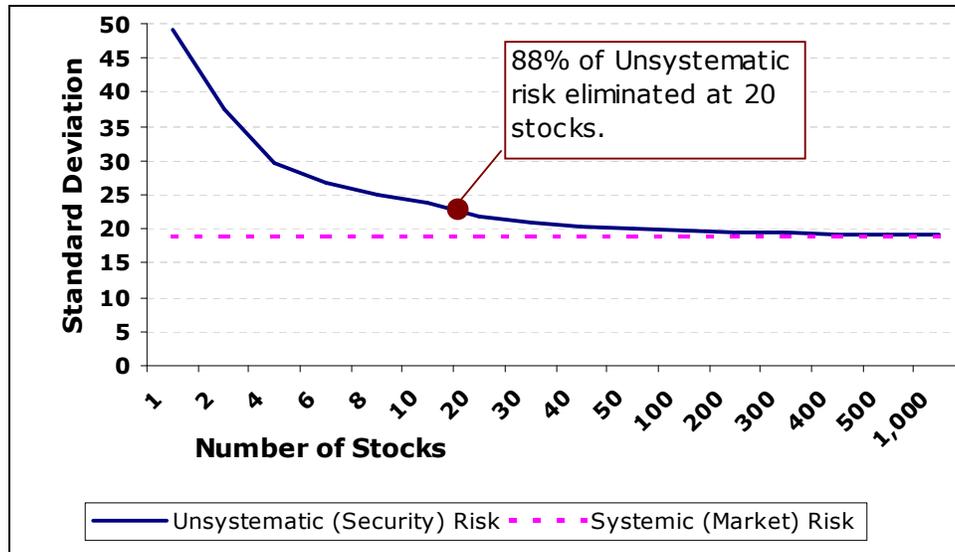
Many followers of MPT and EMH develop portfolios with a multitude of wide ranging securities (diversification) that have had low correlations in the past. However, we can see by looking at the above tables that correlations change. This is further evidence that markets are not efficient and that extreme diversification gives the investor a false sense of risk reduction. Although finding assets that have in the past had low correlations, this should not replace the investor's/manager's insight into valuation of securities. Determining an assets valuation and buying below that valuation is the way to reduce risk, not excessive diversification.

Investment Risk and Diversification

When followers of MPT and EMH talk about risk there most certainly speaking of volatility risk. Many factors affect the volatility of a portfolio. In the investment world those factors are generally categorized under either systematic risk or unsystematic risk. Systematic risk is the risk that will not disappear no matter how much an investor diversifies. It is the risk of being in the market, the risk of inflation and the interest rate risk. It is the risk associated with the investment 'system'. Nonsystematic risk is the risk associated with a single security. Business risk, industry risk and financial risk are all examples of unsystematic risk. This is the risk that *can* be diversified away by owning more than one security.

As mentioned before, according to MPT and EMH an investor does best by simply holding all securities in the market – through an index fund. However, studies have shown that almost all of the risk that can be eliminated through diversification – unsystematic risk – can be achieved with very few securities²⁸. Meir Statman suggests that an investor can eliminate 91% of the unsystematic risk in a portfolio with as little as 30 stocks, and 79% with just 10 stocks (Chart 3). Other studies suggest you can eliminate over 90% of specific risk with 20 stocks²⁹.

Chart 3. Standard Deviation of Different Sized Portfolios



The number of stocks in the portfolio is relevant because, it greatly affects the potential return. In a study conducted by Legg Mason portfolio manager, Robert Hagstrom and Dr. Joan Lamm-Tennant of General Re Corporation, they found that portfolios with fewer securities had a better chance of outperforming the market. They isolated 1,200 companies that displayed measurable data, including revenues, earnings, and return on equity, from 1979 through 1986. They then randomly assembled, from those 1,200 companies, 12,000 portfolios of various sizes:

1. 3,000 portfolios containing 250 stocks
2. 3,000 portfolios containing 100 stocks
3. 3,000 portfolios containing 50 stocks
4. 3,000 portfolios containing 15 stocks

With each drop in portfolio size, there was an increase in the probability of outperforming the market return.

- Out of 3,000 15-stock portfolios, 808 beat the market
- Out of 3,000 50-stock portfolios, 549 beat the market
- Out of 3,000 100-stock portfolios, 337 beat the market
- Out of 3,000 250-stock portfolios, 63 beat the market

With a 15-stock portfolio, the investor has a 1-in-4 chance of outperforming the market. With a 250-stock portfolio, the investor's chances of outperforming the market are 1-in-50.

The above data shows that volatility risk is not greatly reduced past 20 securities, however, an investor will continue to reduce his returns and the probability of beating the market by adding more stocks. With these findings in mind, it makes little sense to hold the market (an index fund) or excessive numbers of securities when

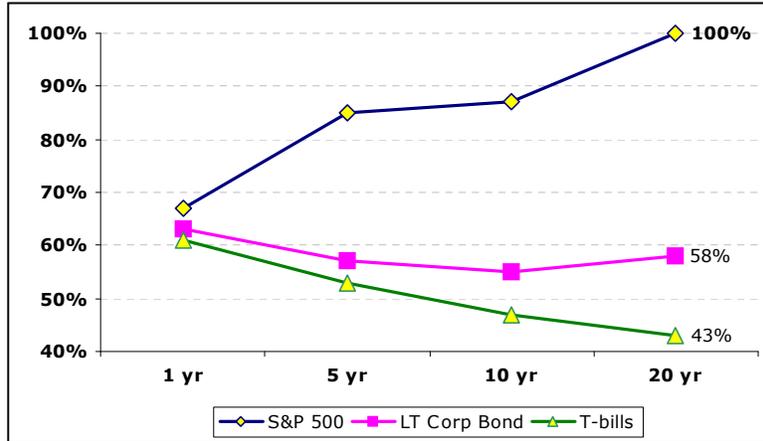
- 1. 90% of the benefits of diversification happen somewhere around 20 securities,**
- 2. the chance of outperforming the market greatly increases as the number of securities decreases,**
- 3. short-term (year-to-year) volatility matters little to the long-term (at least 3-5 years) investor because volatility diminishes over time,**
- 4. securities chosen on the basis of value, have greater returns at lower risk than the market portfolio (index fund).**

Brick Financial runs concentrated portfolios of undervalued stocks. The firm will usually hold stocks for at least five years and in many cases longer. We prefer stocks as holdings as these securities offer the investor the best chance of protecting his purchasing power.

The main benefit of running concentrated portfolios is they tend to increase an investors potential return.

Our use of other assets – bonds, cash, and real assets – is to reduce volatility in instances where the client is in the withdrawal stage of his investment lifecycle (retirement).

Chart 4. Probability of Asset Class Exceeding Inflation



Asset Classes

There are four major asset classes – stocks, bonds, cash and real assets. Each asset class has multiple hierarchies. For examples, stocks may be broken down into large cap, small cap, mid cap, international, emerging market, global, value, growth, and an array of other classifications. But it is beneficial to group assets in the four major classes that share similar characteristics. Chart 5 shows the historical returns of the major asset classes.

Table 7, Percentage of periods when Stocks outperform Bonds and Cash: 1871-2001

Investment (Holding) Period	Stocks Outperform Bonds	Stocks Outperform Cash
1 Year	60.3%	64.1%
5 Year	74.0%	77.1%
10 Year	82.4%	84.7%
20 Year	95.4%	99.2%
30 Year	100%	100%

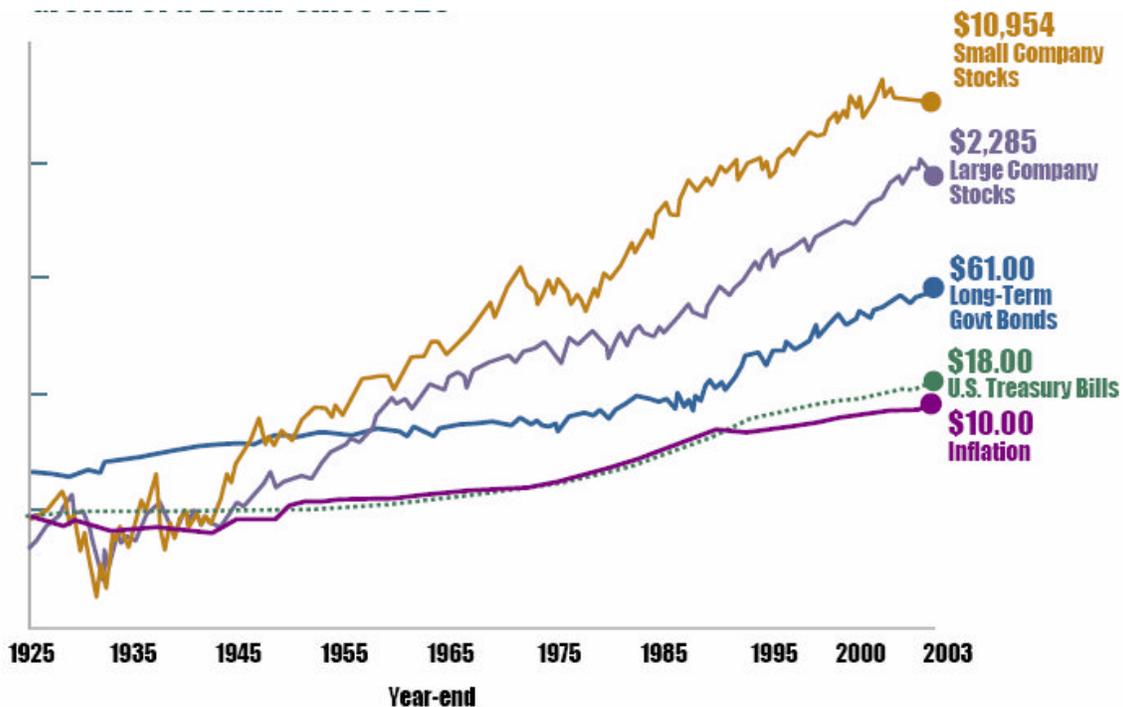
Cash

For investment purposes, the choices are T-bills, money market, cash reserves, and similar highly liquid investments. T-bills for instance is the most associated asset with the cash-class. They are geared to short-term investors. They have the shortest maturity of all the Treasury issues, with

terms of 4 weeks, 13 weeks, and 26 weeks. Their strength is in their safety and liquidity but they do not benefit the long term investor.

T-bills may be purchased for \$10,000 or higher in multiples of \$5,000. When purchasing T-bills, investors pay less than the face³⁰ amount to buy the bills, but receive the full face amount when the bill matures. T-bills do not make interest payments. The return on T-bills was 3.77% for the 1926-1998 period (inflation was 3.08%).³¹

Chart 5. Growth of a Dollar in since 1926 in Different Assets



Bonds (Fixed Income)

Bonds represent a debt instrument. An entity, like a government or corporation needs funds and asks the investor for a loan, by issuing bonds. The investor becomes the lender. Bonds usually pay some type of monthly coupon to the investor over a period of years until the obligation is satisfied.

Bonds can be thought of by their maturities – short-term (1-3 years), Medium Term (3-10 years) and Long Term (>10 years). Fixed income securities are complex. Like T-bills, treasury bonds offer protection from default on protection from default. Usually, as maturities get longer, the securities become more sensitive to interest rate fluctuations. Bond prices and interest rates have an inverse relationship. As interest rates rise, bond prices fall. The investor is rewarded for this sensitivity by receiving higher rates of return than he'd get on T-bills.

Stocks

Stocks, unlike bonds, represent ownership in a corporation. Companies in an

effort to raise money for their current and future operations, have decided to let anyone purchase a stake in their business. That stake, or unit of stock, is called a share. Most investors obtain shares of stock on stock exchanges, which is simply a supermarket for financial securities. Foodtown deals in food, the New York Stock Exchange deals in stocks (and other securities). Because shares of stock represent ownership, and because debtholders (holders of bonds) will be compensated before all other obligations are met, shares of stock usually pay higher rates of return. Investors need to be compensated for the subordinate position of equity ownership as opposed to lending (holding bonds).

Large company stocks have returned about 11% between 1926 and 2003. That return represents an inflation adjusted doubling of wealth every 9 years. A \$1,000 investment would have become \$2,285,000 over that period. Small company stocks, which make up about 20% of all stocks, did well over that period too. Those stocks had a return of greater than 12%. A \$1,000 investment would have become \$10,954,000. No other investment class can match these returns. The one caveat with stocks is that they can be volatile over short periods. But as shown earlier (see Chart 1) this volatility diminishes over time.

Brick Financial prefers stocks to other securities because stocks have outperformed all other asset classes – including bonds, bills, real estate and precious metals – over long periods of time.

Real Assets (Real Estate, Commodities, Metals)

Commodities (grain, oil, energy) and metals (gold, silver) are usually used as inflation hedges. They do not however make good long term investments. Real estate however has shown its ability to grow in line with inflation over long periods as well as pay reasonable income. Real estate can be purchased through direct ownership or through a real estate management company (REIT). REITs have in recent years (since 1975), had returns that are competitive with large company stocks. The period of 1975-2003 both REITs and large stocks both returned about 14% per year. REITs are in the midst of a bull market (1995-present) thus those returns are likely inflated. But over long periods of time, REITs should offer returns that are higher than bonds, but not quite as high as large company stocks.

REITs have one major disadvantage. REITs have to pay out nearly 90% of their income to investors, causing a taxable event every year. Stock investors can delay the income burden, thus avoid paying taxes.

Direct ownership is another option for investing in real estate. This form of investment is wrought with problems however. They include

- investment returns (property appreciation and property income) have not exceeded returns of the stock or bond markets³² in the 20 years ending in 2002
- real estate investment returns have not exceeded the cost of

mortgage financing between 1978 and 2003, thereby eliminating the benefit of leverage

- costs of the investing directly in real estate are high
- liquidity risk – the risk of not being able to convert the asset into cash – is extremely high
- reinvestment risk – the risk of not being able to reinvest the income of the property, back into the property at a decent rate of return – is extremely high

Although the real estate market is highly fragmented and highly inefficient (bargains can be found), the likelihood of even an excellent direct investment in real estate exceeding an average investment in stocks is small. This is especially true over a normal investment lifetime of 50 or so years. Most investors interested in investing in real estate are better off investing through REITs.

Investment Vehicles: Mutual Funds, ETFs and Direct Investment

Mutual Funds

Mutual funds are the most common type of fund investment for individual investors. Essentially, funds consist of investor's money (your money) which are pooled investments run by one or more professional money managers according to a predetermined strategy. All mutual funds are required to hold to a particular type of defined strategy, which is outlined in the fund's prospectus³³.

There are a number of ways to classify mutual funds – by investment objective, by investment style, by market-cap weighting, by their cost (load or no load) and by how they are managed to name a few.

There are so-called benefits to owning mutual funds, and they are listed below. But with each "benefit" we can see that there exist downfalls.

Professional Management:

So-called benefit: The money accumulated in a mutual fund is invested by professional money managers. These professionals have access to a variety of resources to help conduct thorough research, analyze financial data, interpret economic and market trends and help make sound investment decisions.

Downfall: The real deal is that very few professionally run mutual funds outperform passively run index funds. In fact, in any given year, 80% of mutual funds will fail to beat index funds. Does this mean that these managers are poor investors? Absolutely not. The truth is that Securities and Exchange Commission rules for mutual funds somewhat hogtie professional managers into owning inferior investments. This is because mutual funds are not allowed to own more than 5% of the equity in any

one company. If you do the math, mutual funds must at the very least own 20 or more stocks. In reality most mutual funds own over 100 stocks. Chances are good that all 100 stocks are not that managers best investments.

Of course there are other reasons why managers underperform. We won't list them all but we will mention one more. Professional mutual funds managers are compensated, not on how well the mutual fund performs, but on how much investor dollars he brings in. And since most investors are mesmerized by short term (quarterly) investment return results, mutual fund managers trade to get that quarterly bounce in returns. This behavior is necessarily detrimental to long term results (but long term results do not tend to sell mutual funds).

Diversification:

So-called benefit: A mutual fund's assets are typically invested in a multitude of securities. This strategy helps reduce volatility risk.

Downside: We have discussed the downside of excessive diversification throughout this document. The more stocks owned, the lower your potential return. We've also pointed out that volatility is not the best measure of risk.

Variety:

So-called benefit: There are over 15,000 mutual funds in existence, representing a wide variety of investment objectives, from conservative to aggressive. They are further classified into specific categories according to their basic investment objective. This makes mutual funds an effective investment vehicle in creating a diversified portfolio.

Downside: There is no downside to the variety of mutual funds per se. Investors may however run into the problem of redundancy in their mutual fund selections. Even though there are thousands of mutual funds, the investments that make up the funds are not much different from fund to fund.

Liquidity:

So-called benefit: Investors may sell some or all of their mutual funds shares any day the market is open and receive the current value of your shares (net asset value), less some costs.

Downside: Many mutual funds have redemption fees designed to discourage frequent trading of their funds. These fees benefit the long term investor in the fund but if you happen to be the individual who needs to sell before the redemption period is up, these fees will hurt you.

Then the investor has to consider the cost of owning mutual funds. Mutual funds are amazing in the way that they hide various expenses, such as front-end loads, back-end loads, 12b-1 charges, management fees, and fund-switch fees. Investors must carefully examine each fund to determine just how much is being taken off the top. Consider this:

A mutual fund that charges a one time 5% load, plus 1.75% annually in 12b-1 and management fees. If an investor held that fund for 5 years, it's a net loss of about 2.75% off the top every single year. A fund that was earning an average of 12% per year would be brought down to a much more pedestrian 9.25% after fees and commissions.

No matter what anyone tries to tell you, loads and other types of fees make a difference -- sometimes a big one. Some of the costs associated with owning mutual funds include:

Load. A load is an upfront sales commission charged and deducted from your initial investment amount. (Load charges run as high as 8.5 percent but are more commonly in the range of 3 percent to 4.5 percent.)

No-load. No-load means no initial sales commission fee. No-load refers only to upfront sales commission charges. Many no-load funds have other fees (listed below).

Back-end loads. Also known as "redemption fees," this is a fee charged to the net asset value (NAV) of your shares when you sell them. Either your profit is cut or your loss increased.

Deferred loads (contingent deferred sales fees). A deferred load is charged by some funds only if you redeem your shares before a specified time -- typically a few years. This makes these funds a poor choice if you're investing for the short-term.

Reinvestment loads. Some fund companies dock your dividend, interest and capital gains should you decide to reinvest them. Any fund that does this is discouraging a very wise investment choice -- reinvesting dividends.

12b-1 fees. Some funds deduct the costs associated with advertising and marketing themselves from the fund's overall assets. The charge associated with such deductions is called a 12b-1 fee, and ranges as high as 1.25 percent. Some funds feed a portion of the fee to the broker who sold you the fund.

The fee situation is one that is pretty widely known. But what takes many investors totally by surprise are the capital gains distributions. As mutual funds make money, they will generally pay out their profits annually as a

distribution of capital gains. There are three problems with this.

- First, the IRS considers that distribution to be a taxable event. If you bought a stock, you decide when to sell out and realize your gain. But you don't have that control with a mutual fund. Those thoughtful people at the mutual fund company have decided for you that you need to pay a little tax every year, and so they distribute those gains.
- Secondly, if you put the money back into the fund (after paying your taxes) you will probably end up with a record-keeping nightmare after a few years. You'll have to keep track of each time money went in and out, how much tax you already paid and what the prices were on each distribution. When you finally sell out, you'll need to accurately report that information to the IRS. CPA's have a tough time correctly calculating the basis and tax owed on a mutual fund that was held for several years.
- Thirdly, if you buy into the fund near the time of the distribution, you'll have to pay tax on money you never made! If you bought 1,000 shares of a fund that was at \$10, which then did a \$1 a share distribution, here is what will happen. You'll have \$1,000 plus 1000 shares at \$9. You still have your original \$10,000, no gain, no loss. But the IRS still considers that \$1,000 a capital gains distribution. So you'll have to pay income tax on it. Whether you decide to put the money right back into the fund is irrelevant; you still owe the tax.

ETFs

An exchange-traded fund (ETF) is a basket of securities usually designed to replicate the performance of a stock or bond index (e.g., S&P 500, Dow Jones Industrial Average). ETFs are listed on an exchange and can be traded intra-day at a price set by the market. ETFs add the flexibility, ease, and liquidity of stock trading to the benefits of traditional index fund investing.

ETFs:

- Allow you to buy an interest in an entire portfolio of securities by purchasing a single security
- Are passively managed and have limited expenses
- Are designed to track the performance of an unmanaged index
- Track a broad market index or target a specific sector or segment of the market
- Track markets in various regions or countries

ETFs may be preferable investment options to mutual funds for some of the following reasons:

Key Differences Between ETFs and Mutual Funds

ETFs	Mutual Funds
Shares can be bought and sold at intra-day market prices on an exchange. If permitted by your broker, shares on the secondary market can be bought on margin or by limit order, and may be sold short subject to exchange rules.	Shares can be bought and sold directly from the fund at a net asset value set once per day, typically at 4 p.m. ET. Mutual funds generally cannot be sold short or bought on margin.
Generally have lower expenses than traditional mutual funds (even index funds) usually averaging around 0.2% and may have some tax efficiencies at the fund level.	Management fees for mutual funds average 1.5% of fund assets. Mutual funds pass on capital gains to the investor.
When buying shares in the secondary market, there are no investment minimums (i.e., you can purchase a single share) or sales charges other than the cost of a stock transaction.	Investment minimums can vary by fund. Fund shares can be either load or no-load but almost all have fees other than management fees.
Rapid trading in the secondary market by other investors does not create costs for other shareholders, and since the price is set throughout the day by the market, there is no opportunity for late trading.	Rapid trading by other investors can create costs for other shareholders since the fund manager must have cash on hand (or sell shares of securities to generate cash) to satisfy redemptions.
Shares are not individually redeemable from the fund. Instead they must be sold on the secondary market.	Shares are individually redeemable from the fund.
Shares are sold on the secondary market at market value, which may be less than NAV. There are no sales loads, however, transactions on the secondary market are subject to brokerage commissions.	Shares are redeemed at NAV

Brick Financial may make use of ETFs for some of our strategic portfolios.

Direct Investment

By investing directly into securities, as we do at Brick Financial, we take control of our costs, capital gains, investment selection and the like.

Although investing directly in securities takes more effort in terms of research and portfolio maintenance, it is worth in terms of the control the investor gains. The benefits of direct investment include:

Brick Financial prefers direct investment to mutual funds because it allows greater control over investment options, portfolio construction and costs.

- No limit on the size of the investment; securities can take up as much of or as little of a portfolio as the investor sees fit
- The ability to manage concentrated portfolios
- Control over the timing of capital gains
- Control over the level of transaction fees

- No loads
 - Trading by investors does not affect the costs of remaining investors who hold on to the stock
 - No investment minimums
 - The ability to buy on margin³⁴
 - The ability to short³⁵
-

As we said at the beginning of this document, you do not have to be an *expert* in any subject we have talked about here. The primary objective of this document is to introduce you to some investment concepts we find important. You should now be familiar with the answers to the following questions:

1. What is the main function of the Investment Policy Statement?
 2. What is the asset allocation process and what two elements should be considered in the process?
 3. What is market timing and why should it be avoided?
 4. What is the basic theory behind EMH, MPT and CAPM?
 5. What is value investing? Have followers of value investing been successful?
 6. How are value investors different from those investors that follow EMH, MPT, and CAPM?
 7. What is the main benefit of running concentrated portfolios?
 8. Why does Brick Financial prefer stocks to other asset classes?
 9. Why does Brick Financial prefer direct investment into securities to mutual funds?
-

If you have any questions regarding all we have laid out for you here, please do not hesitate to contact us at:

invest@brickfinancial.com

or

phone: 973-313-1220
toll-free: 888-BRICK-10
fax: 973-313-1230

Endnotes

- 1 **asset allocation** The process of dividing investments among different kinds of assets, such as stocks, bonds, real estate and cash, to optimize the risk/reward tradeoff based on an individual's situation and goals.
- 2 **valuation** The process of determining the value of an asset or company. There are many techniques for valuation, and it is often partially objective and partially subjective.
- 3 **Margin of safety** In his book *The Intelligent Investor*, Benjamin Graham describes this concept as being the gap between intrinsic value of an investment and the current market price. The wider this gap, the higher the potential return.
- 4 **optimization** Putting together a portfolio in such a way that return is maximized for a given risk level, or risk is minimized for a given expected return level.
- 5 **Brick Financial Portfolios** Brick offers an array of portfolio styles that will allow us to satisfy the risk and return profiles of any consumer. Our portfolios consist of our Core group of equity selections, designed to be the cornerstone of all Brick Financial client's asset allocation makeup, Special Situation equity group, to compliment the core, and the Fixed Income group for client's concerned with volatility and income.
- 6 **Capitalization** The market price of an entire company, calculated by multiplying the number of shares outstanding by the price per share, here also called market cap or market capitalization. Large-cap refer to stocks where the calculation of price x shares is greater than \$10 billion, Mid-cap stocks are between \$10 billion and \$1 billion, and Small-cap stocks are lower than \$1 billion. These ranges are generally accepted in the investment community but are not "solid rules".
- 7 **The Russell Midcap Index** offers investors access to the mid-cap segment of the U.S. equity universe. The Russell Midcap Index is constructed to provide a comprehensive and unbiased barometer for the mid-cap segment
- 8 **index** A statistical indicator providing a representation of the market price of the securities which constitute it. Indices often serve as barometers for a given market or industry and benchmarks against which financial or economic performance is measured. Some indices are the S&P 500, the Russell 2000, the Lehman Brothers Aggregate Bond Index, and The Dow.
- 9 Brinson, Hood & Beebower, "Determinants of Portfolio Performance", *Financial Analysts Journal*, July-August 1986.
- 10 MPT and EMH will be discussed later.
- 11 Benjamin Graham & David Dodd, *Security Analysis*, (New York: McGraw-Hill, 1934 & 1962), p. 609
- 12 Howard Silverblatt, Research Analyst, Standard and Poor's, Inc.
- 13 **risk** Although there are many different types of risk, it is defined here as the volatility of returns, usually measured by standard deviation.
- 14 **Standard deviation** A statistical measure of the historical volatility of a mutual fund or portfolio, usually computed using 36 monthly returns. More generally, a measure of the extent to which numbers are spread around their average.
- 15 **diversification** A portfolio strategy designed to reduce exposure to risk by combining a variety of investments, which are unlikely to all move in the same direction. The goal of diversification is to reduce the volatility risk in a portfolio. Volatility is limited by the fact that not all asset classes or industries or individual companies move up and down in value at the same time or at the same rate. Diversification reduces both the upside and downside potential and allows for more consistent performance under a wide range of economic conditions.
- 16 **beta** A quantitative measure of the volatility of a given stock, mutual fund, or portfolio, relative to the overall market, usually the S&P 500. Specifically, the performance the stock, fund or portfolio has experienced in the last 5 years as the S&P moved 1% up or down. A beta above 1 is more volatile than the overall market, while a beta below 1 is less volatile.

-
- 17 **risk-free return** A theoretical interest rate that would be returned on an investment which was completely free of risk. The 3-month Treasury Bill is a close approximation, since it is virtually risk-free.
- 18 **price to book ratio** A stock's capitalization divided by its book value. The value is the same whether the calculation is done for the whole company or on a per-share basis. This ratio compares the market's valuation of a company to the value of that company as indicated on its financial statements. **Book value** A company's common stock equity as it appears on a balance sheet, equal to total assets minus liabilities, preferred stock, and intangible assets such as goodwill. This is how much the company would have left over in assets if it went out of business immediately. Since companies are usually expected to grow and generate more profits in the future, most companies end up being worth far more in the marketplace than their book value would suggest.
- 19 **price to earnings ratio** The most common measure of how expensive a stock is. The P/E ratio is equal to a stock's market capitalization divided by its after-tax earnings over a 12-month period, usually the trailing period but occasionally the current or forward period.
- 20 **The Superinvestors of Graham and Doddsville** This article is a talk given at Columbia University in 1984 commemorating the fiftieth anniversary of *Security Analysis*, written by Benjamin Graham and David L. Dodd. This specialized volume first introduced the ideas later popularized in *The Intelligent Investor*. Buffett's essay offers a fascinating study of how Graham's disciples have used Graham's value investing approach to realize phenomenal success in the stock market.
- 21 Jeremy Siegel, *Stocks for the Long Run*, (New York: McGraw-Hill, 2002), p. 138
- 22 Robert G. Hagstrom, *The Warren Buffett Portfolio* (New York: John Wiley & Sons Publishing, 1999), p. 29
- 23 **index fund** A passively managed mutual fund that tries to mirror the performance of a specific index, such as the S&P 500. Since portfolio decisions are automatic and transactions are infrequent, expenses tend to be lower than those of actively managed funds.
- 24 **Vanguard** A mutual fund company that specializes in index funds.
- 25 **asset class** A type of investment. The four major asset classes are stocks, bonds, real assets (including real estate, commodities and precious metals), and cash.
- 26 William Bernstein, *The Intelligent Asset Allocator*, (New York: McGraw Hill, 2001), p. 185. Large stocks = Standard & Poor's 500; Small stock = U.S. Small Stocks (CRSP 9-10 Decile); EAFE = MSCI Europe, Australia and Far East; High Yield = First Boston High Yield Bond Index; LTGC = Lehman Bros. Long-Term Government & Corporate Bond Index; T-Bill = 30-day U.S. Treasury Bill; REIT = National Association of Real Estate Investment Trusts (Equity) Index
- 27 Columbia Management, Inc.
- 28 Statman, Meir. "How Many Stocks Make a Diversified Portfolio?" *Journal of Financial and Quantitative Analysis*, Vol. 22, No.3, September, 1987
- 29 Some studies argue that even 10-18 stocks are sufficient (90%) for diversification. Francis, J.C. *Investments: Analysis and Management*, 4th ed. New York: McGraw-Hill (1986). Reilly, F.K. *Investment Analysis and Portfolio Management*, 2nd ed. San Francisco: Dryden Press (1985).
- 30 **face amount** The amount to be paid upon maturity.
- 31 Return figure were taken from Ibbotson, Siegel and Bernstein.
- 32 Standard and Poor's, "Taking Stock of Real Estate Investments", 2003
- 33 **prospectus** A legal document offering securities or mutual fund shares for sale, required by the Securities Act of 1933. It must explain the offer, including the terms, issuer, objectives (if mutual fund) or planned use of the money (if securities), historical financial
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statements, and other information that could help an individual decide whether the investment is appropriate for him/her. also called offering circular or circular.

³⁴ **buying on margin** A risky technique involving the purchase of securities with borrowed money, using the shares themselves as collateral.

³⁵ **short sale** Borrowing a security (or commodity futures contract) from a broker and selling it, with the understanding that it must later be bought back (hopefully at a lower price) and returned to the broker. Short selling (or "selling short") is a technique used by investors who try to profit from the falling price of a stock.