Human Action and the Securities Markets

by

Steven Lee Yamshon


DISSERTATION.COM

Boca Raton, Florida
USA • 2006
Human Action and the Securities Markets

Steven Lee Yamshon

Doctoral Dissertation Presented to the Faculty of Universidad Empresarial, de San Jose Costa Rica

For the completion of the requirement of the

Doctor de Filosofía en Ciencias de la Administracion
Doctor of Philosophy in Business Administration Emphasis in Finance and Economics

July 2003
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Abstract</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Human Action and the Efficient Market Hypothesis</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>The Role of the Gifted Forecaster</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>Conclusion, Recommendations and Investment Considerations</td>
<td>23</td>
</tr>
<tr>
<td>5</td>
<td>Bibliography</td>
<td>38</td>
</tr>
<tr>
<td>6</td>
<td>Research Proposal</td>
<td>44</td>
</tr>
<tr>
<td>7</td>
<td>Process Reports</td>
<td>58</td>
</tr>
<tr>
<td>8</td>
<td>Notes and Correspondence</td>
<td>93</td>
</tr>
</tbody>
</table>
Chapter One

Abstract
HUMAN ACTION AND THE SECURITIES MARKETS

ABSTRACT

In 1985, at a finance seminar in the UCLA Executive Program, Professor Copeland was telling the class that he thought it was improbable for any investor to consistently beat the Standard & Poors 500. This statement intrigued me because my role as a money manager is dependent upon me beating the S&P, solidly and consistently. If I could not beat the S&P, clients would not need my service because they could go elsewhere or they simply could invest themselves, in an index fund at less cost. This question of performance has been of question to me since that lecture in 1985 (Copeland).

Between 1985 and 1994 I had further discussions about the securities markets with UCLA Professors Copeland, Cornell, Roll, Shelton, Tabbush, Titman, and Weston; London Business School Professors Schaeffer and Elton; and Harvard Business School Professors Donaldson and Hayes, but I had not formulated any hypothesis or developed any concrete evidence to either support or disavow Professor Copeland's statements in regards to Modern Portfolio Theory and Efficient Markets.

The Visiting Scholar Research Study

The opportunity to independently research my questions were provided by Professors Andrews and Rubinstein who sponsored me as a visiting scholar at UCLA. Immediately after my acceptance, I began my research.

To provide me with the necessary background to properly conduct the research, I started with a literature review in economics, financial theory, human behavior and management; and added advanced course work, separate from my undergraduate degree, graduate degree and certificates in business. My hypothesis was formulated in my original research proposal to Professors Andrews and Rubinstein.

After the literature review and course work, I collected primary and secondary data. During collection and testing, my results encouraged me to finish my research. However,
some data troubled me and I wondered if I was proceeding in the right direction. I became discouraged for several reasons. For one, I felt uneasy about my previous thinking on price equilibrium, an important factor in my hypothesis. Secondly, I neglected to hypothesize the importance of human actions in the investment process.

I reviewed my notes, entered into additional discussions with both market practitioners and academicians, and did some additional reading in regards to research methods by Professors Rubinstein of UCLA (Rubinstein) and the late Richard P. Feynman of The California Institute of Technology (Feynman). I was able to remove my paradigm and finish my research project.

This research paper is the culmination of three years as a Visiting Scholar at The Anderson School and reflects my theories based on my own research, personal practical experience, principles of economics learned from the Austrian School of Economic Thought, and the writings, research and teachings of Philip Fisher, Benjamin Graham, Murray Rothbard, and Ludwig Von Mises.
Chapter Two

Human Action and the Efficient Market Hypothesis
HUMAN ACTION AND THE EFFICIENT MARKET HYPOTHESIS

The efficient market hypothesis and the concept of risk, two underpinnings of modern portfolio theory have serious deficiencies within their construct.

Concepts of rational expectations was introduced by (Muth) in 1961 where he hypothesized; that when making predictions, market participants would make the best use of all available information, including the economic models used in the observations.

According to Muth's theories, in a competitive market, if all participants have the same information, then the likely outcome will be that no one has an advantage over another. Bray (1985) characterizes a rational expectations equilibrium (REE) as follows: (1) traders choose asset demands to maximize their expected utility conditional upon any private information observed; (2) traders' beliefs about the distribution of all observable random variables are fulfilled; and (3) markets are clear, so that prices depend on information and demand. Bray theorizes that in REE, the price signals all of the information perceived by the traders.

Efficient market theorists have applied supply and demand theories to their equation; but with serious miscalculation. Efficient Market Hypothesis fails to account for human action in the decision making process and because rational expectations theory is based on perfect knowledge which no one has, it's basic premise is flawed (Soros).

MAXIMIZATION OF PSYCHIC INCOME

All economic activity is based on human action with the ultimate end result being the satisfaction of human wants and needs. If every want and need could be satisfied, there would be no progress in world economic order, for there would be no reason for invention, improvement, or increased productivity. Each person develops a value preference based by his/her priorities. By nature there is a limit to choices due to scarcity, but even if choices were unlimited there would limiting factors such as choice and location (Rothbard). In other words, each individual chooses what is important to him/her and ranks these in order of importance in an attempt to maximize psychic income.
Psychic income being the most important want or need, economic or non-economic. And its man's nature to try and fulfill these needs as quickly as possible, in the shortest time frame that can be achieved. Each action will differ from one person to another because each will have a different value on his/her preference scale.

We can apply the maximization of psychic income to the endeavor of investing. For example, we will assume that each individual has met their basic needs; such as food, water and security. Upon examination, we would find that some individuals would delay immediate consumption of goods and favor saving for the future, while other individuals would spend all of their money for immediate goods and services. The decision to save, is an individual action, based on an individual’s preference.

Let us assume that there are four different people each having $45,000 of disposable income (see table one).

**TABLE ONE: RANKINGS OF IMPORTANCE OF EXPENDITURE OPTIONS TO INDIVIDUALS**

(1 being least important and 8 being most important)

<table>
<thead>
<tr>
<th></th>
<th>Person A</th>
<th>Person B</th>
<th>Person C</th>
<th>Person D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Housing</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Utilities</td>
<td>5</td>
<td>2</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Clothing</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Education</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Leisure</td>
<td>7</td>
<td>4</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Transportation</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Savings</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

For these four persons, purchasing food is the most important option. In regards to housing, B's preference differs from A, C, and D. The desire of B to live in a more expensive house than A, C, and D is more important to him/her than the others. Whatever the case may be, housing preference of one person has a different value than to another person. It depends on the order of importance. In our example, A and B feels it more important to save than C and D while C's preference for leisure is more than B's.

In my example above, with one exception, is not much different than most other decisions made at the margin. Most decisions are made at the margin! The exception is
that only the individual whose sole decision is his/hers to make can determine how to maximize his/her psychic income.

One of the problems associated with making mathematical decisions, such as probability, is that the mathematician is making a decision using a formula, without the true knowledge of the individual decision makers.

When one has attained a certain end, which has fulfilled his/hers happiness, he or she has achieved the maximization of his/hers psychic income. Conversely when someone considers himself worse off, and fewer of his ends are being met, his/hers satisfaction has decreased (Rothbard). Therefore psychic income can not be measured mathematically for it is not possible to measure or compare changes in satisfaction of different people because it is not possible to mathematically compare the happiness of people. In order for any measure to compared they must be homogeneous in nature. His/hers preference can be only expressed in simple choice or rank.

However if I were to quantify the decision making process using probability based on my own personal preferences and marginal utility I would use the mathematical formula outlined in table two.

**TABLE TWO: PROBABILITY OF MARGINAL BENEFIT VS MARGINAL COST**

For each individual, the expected marginal benefit \( E(MB) \) must exceed the expected marginal cost \( E(MC) \)

\[
E(MB) \geq E(MC)
\]

In order for the individual to act, the expected marginal benefit may be thought of as the probability \( P \) of making the decision multiplied by the expected marginal benefit: \( P \times E(MB) \). Since the chance of failing to make the decision is \( (1 - P) \), the expected marginal loss is \( (1 - P) \times E(MC) \)

Therefore: \( E(MB) \geq E(MC) \)
\[ P \times E(MB) \geq (1-P) \times E(MC) \]
\[ P \times E(MB) \geq (1 \times E(MC)) - (P \times E(MC)) \]
\[ (P \times E(MB)) + (P \times E(MC)) \geq E(MC) \]
\[ P \geq E(MC) / (E(MB) + E(MC)) \]

Mathematically, the final relationship says that the individual should increase his or her option up to the point where the probability of choosing one or more options is greater than or equal to \((E(MC) / (E(MB) + E(MC)))\).

For example, let us assume that it costs $3 for a private school to prepare each lunch for each student and sells each lunch for $6. For each one sold, the marginal profit is $3. For each one wasted, the marginal loss is $3. From the above relationship, \(P = 3 / (3+3) = 0.5\). If the school cafeteria's records suggest that there is a 50 percent chance in selling 100 such lunches and a 45 percent chance in selling 101 lunches, in mathematical terms, the student should instruct the chef to prepare 100 lunches (i.e., \(P > 0.5\)). For each meal served, the chief interest lies to the chef and the school because of the cost of serving each meal, but also an undeniable interest also lies with the simple choice or preference of the student. In the case of the student, the marginal benefit is unquantifiable because the maximization of psychic income can only be obtained by the individual student acting alone in a case probability and not in class probability as well as his/her preference or choice. In reality, the student may think the food is bad tasting, and at any cost, skip the prepared meal and possibly go somewhere else, at higher or lower cost. Costs and taste may not even be a consideration. For example, the individual may want to maximize his psychic income in the form of time spent doing another activity instead of eating. According to Rothbard, the student can say "I am happier or "I am better off" by not eating in the school cafeteria, but it would be meaningless for the student to assign a numerical value to his eating choice by saying: "I am two and one-half times happier by eating a pizza than eating at school. "Two and one-times what?" There can be no comparison. Values cannot be measured as utilities cannot be added, subtracted or
multiplied. They can only be ranked better or worse. A man will only know if he is happy, happier or worse, but not by "how much," not by a measurable quantity (Rothbard).

In the economist's model, the economist assumes rationality based on the rationality of people as a collective. It is assumed in many models that people follow similar patterns and therefore, in the case of the students in the private school, eat lunch in the cafeteria. Again, not every individual is rational, and at times, many collectives are irrational. In addition, the maximization of psychic income will determine the individual's choice and cannot be defined mathematically and be correct.

First and foremost human actions can only be undertaken by individuals, not collectives, because only individuals have ends and the means to attain them. Action takes place by choosing which ends shall be satisfied by which means and in a finite time frame. Scarcity must also be involved (Rothbard). For example, if man has an abundance of foods, he would not need to take any action obtaining more. Therefore, scarcity plays an important part in forcing humans to take action. Each man, based on his own particular circumstances places value on each action that confronts him. For example, a businessman is planning his Monday schedule and faced with several choices, he will rank Monday's activities according to their value preference based on his attaining psychic income, the maximization of his wants, not necessarily the attainment of monetary income. Our business person may have a very busy schedule and many important money making items to complete on his agenda, but still may choose to take the afternoon off, although that is not what he/she should do if he/she wants to maximize monetary income. For example, a currency trader at Citibank chooses to read *Moby Dick* for two days, instead of trading. He/she certainly will not be maximizing his/hers monetary income, but if he/she has reading *Moby Dick* on top of his/hers value preference scale, then he/she will maximize psychic income. Marginal utility is where the least valuable preference is on the person's scale. Man will only maximize his/hers monetary income if all other psychic factors are neutral with respect to all of his/hers choices (Rothbard). Many economists ignore these factors.
People have a wide array of choices when they invest their money. Let's say that an investor has a choice of three alike investments with a one year time period in which Investment A earns 15 percent; Investment B earns 13 percent; and Investment C earns ten percent. If all psychic income factors are neutral, then the investor will opt for the largest return, in our example, 15 percent. However, if for some reason, our investor did not like Investment A, but liked Investment C, then their is a clear positive and negative nondetachable psychic factor. Which investment he/she chooses will depend on his/hers value preference scale and the maximization of his/hers psychic factors. This will ultimately drive his/her choice towards one of three investments.

In the Efficient Market Hypothesis model, it is always assumed that man is maximizing his monetary income, not the sum total of his psychic income. Efficient Market Theory is also based on perfect competition.

There is no such thing as perfect competition and the Economist's world of perfect competition is not real. Market participants attempt to maximize psychic income—not necessarily monetary income, which the Economist's model does not account for.

**IMPERFECT INFORMATION**

We live in an imperfect world. Human action is the basis for all economic decision making. Human beings, by nature are not perfect and therefore their knowledge, experience and other actions are imperfect (Soros). Humans interpret facts, figures and other information biased by their views or paradigms. Each human will base his decision differently and no two decisions will be exactly alike (Von Mises). The human mind is like a computer - it receives data as input and then processes the information. However, unlike a computer, the human mind's processed information has a bias and this bias is based on the input of imperfect knowledge (Soros). It has to be biased because information when interpreted is evaluated using an individual's knowledge and experience to process the information and to come to an opinion. Market prices are a collection of every participant's bias and represent imperfect information, not true prices. Markets try to move towards equilibrium, but they never achieve it (Von Mises, Rothbard).
Chapter Three

The Role of the Gifted Forecaster
THE ROLE OF THE GIFTED FORECASTER

Entrepreneurs are individuals who want a better rate of return than the normal rate of interest. They are willing to take on additional risk for the chance of a better return than otherwise. For the purpose of this paper 5% represents the interest rate in the Evenly Rotating Economy (ERE), (Rothbard). In order for the entrepreneur to achieve a rate of return better than 5%, he needs to be a better forecaster of future events than other market participants. If the entrepreneur has the same forecasting abilities as other participants, then his return will approximate the 5% and conversely, if his abilities are worse than others, then it is also true that his return will be lower than 5%. This action is supply and demand going towards equilibrium, in its simplest form.

In the real world, not in the evenly rotating economy (ERE); none of the future values are precisely known. All must be guessed by the participants. It is the hope of the entrepreneur that his forecasting ability will enable him to buy factors that are under priced. If he is correct he will be rewarded with a profit above the interest rate and if the entrepreneur is wrong, he will have a loss. In stock market terms, if the speculator correctly estimates the combination of future factors, then he will be rewarded with a return that is better than the stock market as a whole. If not, then the speculator will have a return that is lower than the market. This is assuming that the entrepreneur/speculator wants to maximize both his monetary and psychic income (MI=PI). Therefore, prediction abilities, judgment and accuracy of forecasts are critical to the above average performance of market participants.

The entrepreneur is always on alert to find discrepancies in which he can earn more than the going rate of interest. Realized profits over the market rate are gained because the combination of future factors are under priced and undercapitalized and the general market erred by underestimating the future rents of the factors. However, the entrepreneur was able to forecast better than other market participants and acted upon it. Therefore he is rewarded in a profit above the going rate. The Economist model of the stock market
presumes that every investor has the same abilities. However, as in any endeavor there will be those who have a talent and gift. The bright investor who has a talent for investing has a gift not unlike an athlete, musician, physicist, or actor. Can we say that Babe Ruth, Mozart and Richard Feynman were just lucky. No, they had raw talent, refined over years of practice and experience. It is such an investor who can better forecast future events with more accuracy than others, or he can better see the difference between perceived and intrinsic value. This investor has less imperfect knowledge than others. Those investors who have better abilities will out perform those who don’t. This is no different than endeavors in any other field.

THE FORECASTER AND MARGINAL UTILITY

This is not luck or the random toss of a coin (Cohen, et al). Each investor is ranked to his marginal utility in relation to all other investors. Using data supplied from successful investors: Warren Buffet, Peter Lynch, John Neff, and Walter Schloss; we can rank the above mentioned investors according to the group’s marginal utility (See table three). I have also tested data supplied from other investors whose returns are consistently below market averages, including one investor who was a direct disciple of Benjamin Graham, an investor whose knowledge should have enabled him to consistently outperform the S&P benchmark. His talent did not allow him to do so.
NUMBER OF PEOPLE

LEVEL OF TALENT

FIGURE 1

FIGURE 2
The results of the Bill James study was very similar to my data concerning the market investors in table three and with my hypothesis in regards to superior forecasters, talented and gifted individuals. The investors who have superior performance records over long periods of time, are gifted, have talent, and compete in a competitive market with those investors who are not so gifted (see figure 1). All compete at the margin. The not-so-gifted investors set prices at the margin.

MARGINAL UTILITY, EQUILIBRIUM AND STOCK PRICES

As more traders enter the market, superior profits begin to erode and move towards average profit or equilibrium, but never true equilibrium. Even though prices will move towards equilibrium, the superior traders will take advantage of the fact as prices become overvalued or undervalued and again act accordingly. The general effect of Speculation is to make the supply and demand curves more elastic; to shift them from DD to D' D' and from SS to S'S' in figure 2. The more people engage in such correct speculation the more elastic will be the curves, and by implication, the more rapidly will be the equilibrium price be reached (Rothbard). Prices of factors move from under valuation to overvaluation based on the maximization of psychic income. In periods of rapid market disruption the desires of investors to maximize their psychic income leads to price inefficiencies and price disequilibrium. Two good examples of this effect are illustrated by the market disruptions of October 1987 and more recently, July 1996. On Wednesday, October 15, 1987, the Dow Jones Industrial Averages (DJIA) closed at 2412. Three business days later, on Monday, October 19, 1987, the DJIA closed at 1738 a decline of 673 or 28%. In this same time period the declines in the options and futures markets were even more dramatic as measured in percentage terms. More recently, between July 5, through July 14, 1996 the DJIA declined from 5778 to 5172, a decline of 11.7%. An immediate reversal began and by August 22, 1996, the DJIA increased to 5740, a gain of 11%. Economic and business fundamentals had not changed sufficiently during the above mentioned 1987 and 1996 time periods to warrant such a large drop in stock prices and to reverse themselves in such short succession. The investors imperfect knowledge of
perceived future events led them to their action. However investors with better forecasting abilities, those who have talent to better interpret information, made choices that would lead them to a superior profit based on their entrepreneurial skill.

The gap between intrinsic (true value) and perceived (imperfect) value is reduced as more and more traders join the marketplace. The market price will move towards equilibrium and will come close to eliminating the arbitrage, but will never completely achieve it. The market's true value and perceived value are entirely separate and at times a wide gap exists between the two different valuations.

At times of high market valuation the gap between intrinsic value and perceived value grows larger and the risk of a large market decline also increases. This is due to market forces narrowing the gap between intrinsic and perceived value. Stocks become expensively priced in relation to their earning power, but more importantly the perception of value widens from what the true value actually is. Much of a stock's price quotation above book value is due to the investors perceived future earning power of the issue in question. Each investor has his own notion of what he is willing to pay for a stock and this is based on his interpretation of the future earning power of the security being examined. Conversely, in times of under valuation the gap between intrinsic and perceived value is also wide, but in an opposite manner than when valuations are high. Stocks are priced much cheaper than they are truly worth. Again, this is due to a market participants perception of value. In *Alchemy of Finance*, George Soros theorizes the traders gap as the difference between perception and reality (Soros).

Much of the time US exchange listed stocks are a semi-strong form of efficiency and this is because of the many traders in the marketplace leading towards price equilibrium. However at other times, especially during times of extreme euphoria or pessimism the markets become uncertain and become quite inefficient, swinging widely from levels of optimism to pessimism and back again (see figure 3). The perception of traders move markets from overvaluation or under valuation, back to equilibrium but never fully achieving full equilibrium. Further, at times the markets stated value and its intrinsic value vary wildly. Again this is due to human action and the imperfect knowledge of the majority of market participants.
It is reasonable to expect that the majority of investors both professional and laymen cannot consistently beat the market index because of lack of exceptional talent and secondly, the wish to maximize psychic income, not monetary income. For example in October 1987 the market became very inefficient, not because economic fundamentals had changed or all available information was built into the pricing mechanism, it was because investors were maximizing their psychic income, shortening their time preferences and re-adjusting their marginal utilities, all with great speed. Just as there are marginal buyers and sellers in economic transactions, there are marginal investors, both laymen and professional.

FALSE MARKET RISK

In modern portfolio theory, risk has not been adequately defined. Risk needs to be separated into two distinct categories; market price risk and financial risk. Beta is an attempt to quantify market uncertainty or market price risk. However Beta is a poor indicator of uncertainty, but it is a good indicator of volatility in a stock’s price. Current mathematical approaches to investing have put much emphasis on market fluctuations, but market price risk is not true risk, it is only the risk associated with price fluctuations, not risk associated with the business aspects of the company in question. It isn’t risk associated with the financial structure of the company, or its prospects for the future.

Modern Portfolio Theory attempts to quantify uncertainty using class probability. According to Von Mises if man knew the future, there would be no purpose to choose or act upon any economic determination. He simply would react to his environment without thinking. Therefore every action refers to an unknown and is risky. “Class Probability” means: We know or assume to know with regard to the problem concerned, everything about the behavior of a whole class of events; but the singular event we know nothing, but they are all elements of this class (Von Mises).

In Professor Michael C Jensen’s paper on The Performance of Mutual Funds in the period 1945-64, he argued that 80 percent of all growth and value mutual funds could not out perform the Standard & Poor’s 500 index during this time period. In another study
conducted by SEI Corporation, during the period of 1970-92, equity mutual funds returned 10.8%, while the total stock market returned 12.0%. Many additional research studies by academics and practitioners show similar results. After examining Jensen’s paper and the SEI Study we can see that the majority of money managers do not out perform the stock market on a consistent basis. This explains the whole class of events; but the singular event (each individual manager) we know nothing, except that the managers are an element of this class.

CASE PROBABILITY NOT CLASS PROBABILITY

The mathematics of probability do not provide the trader with any information which could lessen the risk of investing nor influence value preferences. Insurance companies rely on class probability in order to be profitable, otherwise their underwriting of risks would be pure speculation. For example, if an insurance company writes life insurance policies for ten individuals, they know from mathematical probability that they will have to pay funds for one individual. However if the insurer were to insure one only, then the company would not be insuring, but gambling instead. The company would substitute itself for the insured. The characteristic of insurance companies is that they deal with whole classes of events, not individual events. Probability is useful for insurance companies, not investing in the stock market.

“Case probability” means: We know, with regard to a particular event, some of the factors which determine its outcome; but there are other determining factors about which we know nothing (Von Mises).

For example, let say, two football teams, the Aggies and the Hornets will play next week. In the past the Aggies have always defeated the Hornets. Knowing this we cannot classify the football game as a class event. It is a case event because in each game played in the past, the Aggies have won. However it is far from certain that the Aggies will win all future games. If we placed a bet on the outcome, it would be gambling for we can never be sure with certainty that the Aggies will win every time. Any human action is uncertain and every action is speculation. Therefore risk needs to be redefined.
FIGURE 3

SUPERIOR FORECASTERS

1. Concentrate holdings in undiversified portfolio
2. Choose secular growth stocks and hold for long period of time
3. Buy at Fair Value
4. Sell when growth slows
5. Do not use index funds

FIGURE 4

AVERAGE OR SUBPAR FORECASTERS

1. Diversify broadly
2. Purchase undervalued securities and sell at full value
3. Use index funds
The stock market as a whole can be classified by class probability. In other words, a trader can say that the probability of the stock market increasing in value over the next ten years is 99 percent assured. However, the trader cannot be certain of this. Too many variables enter the equation. Therefore a trader can identify certain risk characteristics in the stock market as a whole but within the market, each stock has its own characteristics. For example an electric utility may have a lower beta than a pharmaceutical company, and measured by beta, the utility would appear to have less risk. However, if the utility is poorly capitalized or has unfavorable regulation, the trader could have a riskier investment than a well-established pharmaceutical with excellent product lines and cash flows, even though the drug company's beta is higher. Each case must be judged on its own merits.

The real indicator of risk in a single company's stock issue is a function of financial leverage and the difference between intrinsic and perceived value. Volatility in stock prices, while bothersome to some, is not to others. As in case probability, volatility can only be judged on an individual basis.

Modern portfolio theory views stock market risk as economists view commodities and homogeneous goods. However, stocks are not commodities, but individual companies within a market. Therefore each individual stock cannot be a homogeneous good, but instead, a separate good.

When a commodity is equally capable of rendering the same service to a person, this available stock is considered a supply. A supply of goods is available in specific units each perfectly suitable for each other. For example, according to Rothbard in *Man, Economy, and the State*, a farmer has two pounds of butter and one pound was considered better than the other in terms of quality. In the view of the farmer, the two butters are evaluated differently and now become two different goods – not two units of a supply of one good. What is important is not the physical features of a good, but how the person evaluates the good. No matter how identical the two pounds of butter are, if the farmer evaluates them differently, they become two different goods. And if the farmer gives up one of the pounds of butter, then he gives up the marginal utility, or the one at the margin.
(Rothbard). Therefore individual stocks comprising a portfolio, can not be homogenous goods or commodities. Each company has its rank or utility along the preference scale.

An individuals marginal utility, psychic income and forecasting ability will determine what investment methodology he will use. For example, investors such as Warren Buffett who are able to process imperfect information better than others might choose secular growth investing while others, not so able, will be better off using a value investment style. Those who do not have superior forecasting abilities should not waste theirs or others time and resources in following an approach which requires intimately knowing details about industries and companies. However, a value approach, in which investors do not pay too much for growth, would be a valid method for those who do not have superior talent or forecasting skills. And lastly, depending on the maximization of psychic income and the ranking of preference scales most investors would improve investment performance if they used an index approach, because most people, by temperament, will not be able to out perform their respective index (see figure 4). For example, most investors psychic income would prevent them from having all of their funds fully invested in the stock market at all times.

Like a gifted musician, athlete, tennis player or other superior talented person, much time goes into perfecting the individuals skill. To be an average investor he must be willing to spend considerable time researching his investments. Value Preference dictates that most average investors wish to spend his time doing other things.

Regardless of style, all investor decisions will be based on the human action of maximizing psychic income in a irrational world.

Many of the tenets of Modern Portfolio Theory and the Efficient Market Hypothesis need rethinking. In the economists model, their view of the securities markets is based on rational investors thinking alike, perfect information and that stocks like commodities, are all homogeneous goods. There is much evidence to prove otherwise.