Behavioral Finance: A Rational Explanation
Of Irrational Exuberance

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Abstract

The speculative bubble in stock prices (particularly those of technology stocks) that began to form in 1995 and subsequently burst in March of 2000 has renewed interest in the psychology of investor behavior. Although speculative bubbles are by no means new, they all share numerous characteristics, including irrational behavior on the part of investors, both individual and institutional. This study will seek to explore and address why investor behavior in speculative periods does not conform to traditional economic theory, which assumes that all actors behave rationally. In addition, the study will examine why, despite myriad historical examples, investors repeatedly make the same mistakes during these speculative times.
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I. Introduction

It has occurred to me that, living in America, our lives are a set of cycles. Women have pregnancy cycles, which then lead in to birth cycles. As children, we are in a continuous cycle of school for nine months, followed by three months of freedom (summer). Finally, after college graduation, we begin an everyday cycle of going to work. The most common things we do each and every day seem to be cyclical. Each day may have its ups or downs, but in the long run, it is still simply a cycle. Financial markets seem to follow these cycles as well. No matter how bad or good one day or time period is, the cyclical pattern seems to constantly return.

No more has this been relevant than over the course of the last decade. Early in the 1990's, the stock market began to flourish and grow. More and more businesses were beginning to finally achieve the upside potential that had been waiting to break out, and the economy seemed to be taking off. By the middle to late 1990's, things were looking wonderful. Corporations were expanding enormously and were turning out great earnings reports. This was especially true in the technology sector, which grew at an extremely rapid pace. The stock indexes climbed through the roof, and no one could see anything but blue sky ahead. But inevitably, storm clouds were forming just beyond the horizon. In financial markets, the storm took the form of a bubble. As everyone knows, when a bubble forms and grows, it has to burst sooner or later. And before the end of the decade, this one did.

The formation of the technology bubble began in 1995, when stock prices began to rise with no seeming end in sight. "The Dow Jones Industrial Average reached one milestone after another throughout 1995. At year-end, the index stood at 5117.12, up from 3834.44 12 months earlier. Total return on the Standard & Poor's 500 measured 36.89 percent. It was the stock
market's 10th best year since 1900" (Fridson 215). This was an exceptional year overall for the stock market, but there is another statistic that stands out in 1995. "At no point during 1995 did the Dow drop more than two points below its 1994 year-end level of 3834.44" (Fridson 216). On days when we now see drops of a hundred points or more, it is hard to imagine going a year without dropping more than two points from the previous year. That would seem unheard of today. However, these numbers were so good that many wondered if they would hold and continue to climb, and indeed they would.

"When Alan Greenspan, chairman of the Federal Reserve Board in Washington, used the term irrational exuberance to describe the behavior of stock markets investors...the world fixated on those words" (Shiller 3). Indexes across the globe dropped, yet in the United States the Dow only gave back 2.3%, and that was early in the day. Investors continued driving up prices, even after the speech by Greenspan, which seemed to indicate that maybe the Fed was planning a move to tighten monetary policy in the economy. However, this did not deter investors in the United States for any significant length of time. The growth that had been seen in 1995 and early 1996 would continue for the rest of the decade.

Before the close of the decade, the stock market levels had reached extremely high, almost unimaginable heights, including the Dow Jones Industrial Average. By 1999, it had passed 11,000, more than tripling in five years, a total increase in stock prices of over 200%. As the start of 2000, the Dow passed 11,700" (Shiller 4). The Dow, however, was not the only index that had experienced this phenomenal growth. Before the middle of 2000, the NASDAQ Composite Index had climbed above 5,000, up from just over 1,000 at the end of 1995. In addition, the S&P 500 had climbed from around a 600 level in 1995 to right around 1,500 in early 2000. My what a fall these indexes would experience.
All stock market indexes took extreme drops beginning sometime between March and the summer of 2000. The Dow would drop from its level of 11,700 all the way to just under 7,200 in the fall of 2002, before finally settling back in around 8,000 (which is where we have been, approximately, ever since). The NASDAQ, after passing 5,000, would fall all the way back under 1,300 in late 2002 and early 2003. It has since returned to a level somewhere in the neighborhood of 1,500 on a pretty consistent basis. Finally, the S&P 500, which had more than doubled in five years to slightly below 1,500, fell back down to less than 800. It has only gained back 100-150 points since that time, now settling in between 900-950, on average. If history has shown us this before, then why did it happen this time? Part of the reason stems from the fact that there was only a slight minority who believed that anything was wrong, or could go wrong.

During the run-up, there were few skeptics. Those who did argue that prices were rising too quickly and too far were quickly dismissed as out of touch with the "new" economy. After all, every one knew this time it was different. Or so they thought. Inevitably, the outcome would be the same as it always has been. Many ask the question, why does this continue to happen, even though the past has shown that boom periods always are followed by periods of decline? To understand this, we first must examine the rationale behind people in general. Analyzing the rational expectations theory — the dominant model in financial economics — will help to present a view of how the world supposedly reacts to certain situations and how people make financial decisions. However, this will not give us a complete answer, because this theory does not always hold when it comes to the financial world. Studies have recently been focused on a field called behavioral finance, which studies not simply the financial world and the markets, but looks at how and why investors, institutional or individual, make the decisions they do. This examination will then give a framework for analyzing the stock market bubble that was formed in the late 1990’s and subsequent burst at the beginning of the new millennium. I will analyze the buildup that occurred
from 1995-2000, looking at the climb in the stock market indexes. This will lead to an examination of the bubble that burst in March 2000. After looking at rational expectations theory and behavioral finance, I intend to explain the causes of the recent decline in the stock markets that the United States has been experiencing, as well as why these bubbles continue to occur time and again over the course of history.
II. The Internet Bubble of the 1990's

With all the problems financial markets have encountered in the past, and with all the advancements that have been made over the course of time, one would think that sooner or later we would finally be able to, as a society and an economy, recognize the warning signs of a bubble formation and slowly ease the markets back down before they burst. However, as we have seen time and time again, the markets continue to periodically rise to levels that are unsustainable, only to fall hard and fast when the bubble pops. No time has this been more apparent or easier to see than in the technology bubble, or what I will call the Internet bubble, of the late 1990’s. Sure, it obviously is much easier to see because I lived during the time that this one occurred, and again, hindsight is always 20/20, but what made this one so interesting was the way it happened and the ability of investors to be so gullible and seemingly uneducated in the investment decisions they were making.

In looking at the market bubbles in France and England (which will be discussed later), one could sit and wonder how people could pay such high prices, and how those things could even command such a price, when the company had so little actually there. “What must it have been like to live in such a time, I wondered? Now you and I know. Not since...bubble companies of the seventeenth and eighteenth centuries have entities with so little substance commanded such high prices” (Bernstein 151). People have often looked back and commented on the ridiculous price that investors were paying for shares of the South Sea Company or the Mississippi Company, yet those same people, when the Internet stocks began to hit the markets, were among the first to pick up the phone, call their broker, and place an order. The attitude of “it won’t happen that way this time” can easily be seen in the Internet bubble that formed towards the end of the decade.
The 1990's, especially from 1995 on, was a time when technology was on the rise, and on the rise fast. Companies were forming left and right, new Internet businesses were opening everyday, and there seemed to be no end in sight. What is amazing, however, is the price at which some of the stocks of these companies were selling. "...Terra Networks, selling at 1,200 times sales; Akamai Technologies, 3,700 times sales; Telocity, 5,200 times sales. Not a one with earnings. What were we thinking" (Bernstein 152)? These figures, to someone who is completely oblivious to the financial world, may not seem to indicate or mean very much. However, to anyone who knows even a morsel of how the financial markets work know that this is, for lack of a better word, insane. Stocks are almost always priced based on earnings, never on sales. That is because for the stock to grow, the company has to be earning something, or there must be evidence that the company will, at some future date, earn something. Pretty common knowledge, I would say. Yet investors fell into the trap of being swept up by the herd, and in the process purchased things that many now look back on wondering what was going through their heads.

Let's look at one in particular, a company by the name of Internet Capital Group. When the shares went public, they were priced at $6. They proceeded to rise to $212, then fall back under $1. Extreme, yes, but this is something that has been known to happen from time to time. "What made it such an enchanted soul was that it was the direct descendant of the 1920's leveraged investment trusts – its holdings were small, private companies operating in the most wild and wooly part of the Internet scene – business-to-business (B2B)" (Bernstein 152). Basically, this was a company that invested in small Internet companies, then turned around and issued shares to the public. In many ways this would seem somewhat like a mutual fund, diversifying instead of owning just one individual company. However, the problem was that all the companies it held were small, new, speculative types of companies, making the risk associated with it inherently great. "The frosting on the cake was that it sold at an estimated ten times the value of the companies it held.
So it not only owned just fluff, but was valued at ten times the fluff it held" (Bernstein 152). What investors did not realize was that the price was inflated, yet the probability of actually seeing sustained growth in a company like this was very low. It was highly unlikely that the company would ever reach the point of meeting the expectations that were already built into the price of its stock.

This is just one company, just one example of the problems that were present in the mid 1990's. There are hundreds and hundreds of these companies that could be looked at, analyzed, questioned, etc. However, the more important fact to look at is why all these companies existed. If people really make rational decisions, even if those decisions are based upon bounded rationality, then what ever caused so many people to invest in so many speculative and vaguely researched companies? Maybe, in part, it was just that time again. The four pieces necessary for the bubble formation were once again in place, so maybe there was no preventing it. The displacement was there, obviously, in the large amount of money being invested to research and develop all this new technology. Liquidity was also readily available, with "a Federal Reserve as accommodating as any red-light district house of pleasure" (Bernstein 152). Enough time had passed that the last generation to experience bad times was either gone or too old to really care about it. Finally, there were people in positions of power and influence that had absolutely no idea about how they should correctly value the stocks, causing stock prices to be extremely overvalued.

I will later present three historical cases where markets became inflated and a bubble was formed, only to burst a short time later. Two of these, the South Sea Company and the Mississippi Company, occurred centuries ago across the ocean in Europe. However, the other two have occurred within the last 100 years here in the United States, and there were others between those two that could be discussed and analyzed as well. This story, however, seems to be the most relevant because it occurred in the present. It is not been examined just to point out the ignorance
with which investors can use when making decisions. "These stories of financial excess...are not just entertaining yarns, they are also a moral warning to all investors. There will always be speculative markets in which the old rules seem to go out the window. Learn to recognize the signs..." (Bernstein 152). The signs are constantly there, if only investors will look for them. It is possible to see the signs ahead of time, not just at the end, but investors must recognize that they exist. By pushing them aside and believing that this time will be different, we are only setting ourselves up for another disaster.
III. Rational Expectations Theory

Rational expectations theory began to formally be developed in the late 1950's and early 1960's. One of the main developers of this theory was a man from Carnegie-Mellon University named John Muth. He realized that the current economic models that existed did not take into account any allowance for changes in expectations. "Muth suggested that economists are often interested in how expectations might change in certain circumstances and thus should not be satisfied with fixed expectational formulas that do not allow for change when, for example, the structure of the system changes" (Sheffrin 4). He recognized the fact that expectations do in fact change over time, but this was not accounted for in the existing economic theories that were being used. He argued that because this was a problem, economists shouldn't just settle for the theories they have, but should look to develop new and better ways of examining the economy.

Muth continued his argument by stating that a change in the economic system would lead to an eventual change in the expectations of those who play a role in the economy. From this, he presented his hypothesis, which was as follows: "I should like to suggest that expectations, since they are informed predictions of future events, are essentially the same as the predictions of the relevant economic theory. At the risk of confusing this purely descriptive hypothesis with a pronouncement as to what firms ought to do, we shall call such expectations 'rational' " (Sheffrin 4). Muth realized that while these expectations should be almost the same as those of the economic theory, he emphasized that there may be differences from time to time in what should be done, and he defined these expectations as rational.
While many economists argued that a theory that was based on rational behavior would not correctly explain observed actions, Muth argued the other side. He believed that the current "economic models did not assume enough rationality. One way to ensure this rationality was to insist that expectations of economic actors be consistent with the models used to explain their behavior," which he felt was by all means possible (Sheffrin 4). Muth insisted that by forcing people to use the model to form their expectation, it would guarantee that the expectations were consistent with the model being used. He felt that in doing so, the outcomes would be much more precise and form a better view of what was actually taking place in the economic world. Muth believed that his theory was above and beyond anything that had been developed to this point.

Before going any further, we must examine exactly what is meant by the words "rational" and "expectations." While there are many definitions from many different authors, I have found that the following seem to make the most sense. Let's begin by looking at "rational." "Economics, it is alleged, dehuman-ises homo sapiens — reducing him to homoeconomicus, a creature that is little more than a robot, brutishly programmed to make as much money as possible" (Economist 90). Many have the view that rationality simply means making as much money as one can. However, this begs the question, what if someone isn't driven by money? I mean, heaven forbid someone has a love for something other than money, right? That is where the world tells us we should place our attention. Believe it or not, there are some people who are motivated by other things. "So, economic 'rationality' has two main ingredients: self-interest (broadly defined) and consistency (narrowly defined). Having decided what to seek, people then, according to the economist's view of the world, work out how to get as much of it as they can" (Economist 90). What, however, is the difference between broadly defined and narrowly defined?

Broadly defined relates to the self-interest aspect of rationality. What this means is that self-interest is not limited to one or two things. Some people may be motivated by volunteer work,
while others may be driven by money, and still others may find desire by expressing love and compassion. Thus, the first person may perform charity work, the second seek out a high paying job, and the third find a profession such as a caregiver, in which they must express love and compassion to others, regardless of their condition. As we can see, these are three different people with three different motivations, yet they are all pursuing their self-interest, and the choices they make are based on that self-interest. Narrowly defined, then, refers to the consistency with which one makes these decisions. If a person is known to like Economics better than Math, and Math better than English, then it should be safe to assume that the individual prefers Economics to English. These combined ideas formed the basis for the original definition of rationality, and are still somewhat the same today, but with a slight adjustment. Economists today now view this as true, but only to an extent. This is known as bounded rationality, which means that "people try to make self-interested choices, but are limited by lack of information and the cost of gathering and interpreting it" (Economist 90). A simple definition of rationality, then, is that people will seek out that which motivates them, and try and get as much of it as they can, based on the information they have to use (and can understand).

We now turn to the idea of expectations. "Expectations (in economics) are essentially forecasts of the future values of economic variables which are relevant to current decisions" (Carter 12). Forecasting economic activity can take many forms. Companies must forecast sales in the upcoming quarter, year, etc. in order to determine how much to order/produce. People must make their own forecasts when determining whether or not to purchase a new car or home. Also, expectations play a major role in determining where people invest their money and whether or not they should reinvest somewhere else, refinance their home, and so on. "Expectations, then, are the decision maker's forecasts or predictions regarding the uncertain economic variables which are relevant to his or her decision" (Carter 12).
There are two issues that must be taken into account when looking at expectations in this way. The first is that all expectations are subjective, which means that they are based upon the beliefs and judgments of one person. Even when an expectation is given for an entire market or industry, what it boils down to is that the expectation is simply the sum of each individual's expectations for that market or industry. Second, it must be remembered that an expectation of one item/variable is not simply a single value, but is the sum of a great number of possible values expected over the course of time. For example, when stocks are priced, the amount of dividends expected over a period of time, not just the next year, must be taken into account. Without this acknowledgement, stocks would be, for the most part, extremely under priced, because no time value would have been accounted for (Carter 13).

We now have a more clear definition of what the terms "rational" and "expectations" mean, and thus we can develop a simple definition of rational expectations theory. The simplified definition of this theory could be stated in the following way: Rational expectations theory is a theory that states that all decisions that are made by individuals, in all facets of life, are made with the underlying idea that the thought process when making these decisions were based on one's self-interest, and the expectations that were determined in order to help make this decision were also derived in the same manner. What we must realize is that determining these expectations is a very critical and important step in the process, because most decisions made have, if not a lot, at least some uncertainty about what will actually happen in the future. A key concept in this model is that all actors have access to equal and complete information, and that everyone will interpret that information in the same way. If this isn’t true, then expectations will differ between individuals, and that poses a problem.

As we can now see, "The hypothesis of Rational Expectations not only exposes a problem which had previously gone unnoticed, but also provides a framework in which to predict the
probable revision of expectations when a new policy is adopted" (Begg 3). Rational expectations theory did not, when brought to the forefront of economics, simply expose what had been a problem with older economic theories for so many years. This new theory went a step further and presented an alternative way to measure expectations, and offered insight as to how expectations will change when policies change in the economy. The main reason for this was due to the fact that the general public does experience changes in expectations over periods of time. "It would be ludicrous for policy advice to be made contingent on what economists think the public believes" (Sheffrin 4). Instead of allowing economists to basically guess on public sentiment, this new theory offered a way for the public sentiment to be measured through the public themselves.

It would seem that a theory of such importance would have developed long before it actually did, and taken hold in many more disciplines than it did early on, but that was not the case. As we stated before, rational expectations theory became better known with studies done in the 1950's and early 1960's. "At that time, rational choice theory [another name for the theory] was a small subfield in a political science discipline that was dominated by institutional analysis, behaviorist methods, and the group-based pluralist theory of politics" (Green 2). In the early stages, this theory was mainly used in studying politics. It had little effect in its early stages on anything outside the political science realm. However, this would change shortly. "Rational expectations theory emerged as the bright new theoretical star of the 1970s" (Carter 10). At this point in time, the theory spread to new disciplines, especially that of economics. What economists finally realized is that the old theories had left something out. The idea of expectations was a major determining factor that had been left out of the old theories. With the birth of rational expectations, economics would be forever changed.

Rational expectations theory did something for economics that it can't and hasn't done for other disciplines, such as psychology. "The rational choice paradigm provides economics with a
disciplinary unity that is lacking in the other social sciences. Psychology, in particular, is a fragmented discipline consisting of a number of separate research communities that do not share an easily identifiable paradigm. Moreover, the study of choice does not play a central role in this discipline" (Hogarth 4). It is obvious that rational expectations theory offers something to economics that it doesn’t offer to other disciplines that use it. In economics, much is based upon the element of choice, or what we could call decision-making. Firms, individuals, and even governments are constantly making choices, so there is no reason not to include this in the economic theory one wishes to use and study.

Here we must realize that expectations have always influenced decision makers, and yet it is hard to see until recently how they fit into economic theories. “Although the importance of expectations in economics has long been recognised, attempts to formalise the role of expectations are relatively recent” (Carter 35). For many years, economists understood that expectations played a fairly large role and should be included in the theories they use, yet no one could determine how to best do so. It was not until the late 1950’s and early 1960’s that there was finally a theory developed that included these expectations. Even then, the use of these theories was somewhat limited and informal. However, over time the role of expectations continued to advance in the economic field.

While the discovery of this theory greatly influenced the economic side of things, it did little in its initial stages to affect the real financial world, which seems somewhat ironic. The choices that are made each and every day by the players in the financial world are based on expectations that have been formed, and they also have an effect on the expectations that will be made for the future. However, the field of finance did not include these expectations in the same way as economics did. The only expectations that were originally included in financial studies were the expected dividends a company would pay out and the expected growth rates, which were used to
determine a fair market price for a share of stock. Not much was really discussed about how these expectations affect other aspects of the financial world, especially investing. That is, however, until recently, with the emergence of a field of study known as behavioral finance, which has become increasingly more relevant and mainstream.
IV. Behavioral Finance

"In the 1970's, two psychologists, Amos Tversky and Daniel Kahneman...developed a new model – called prospect theory – of how individuals actually behave and make decisions when faced with uncertainty" (Article 318-319). This notion of prospect theory helped to establish the study we now refer to as behavioral finance. The uncertainty that faces investors was finally taken into account in the theory they developed. What was once known but not accounted for – the decisions and how they were formed – could now be studied under a more definitive framework. The theory offered the ability to examine the actions and decisions of investors with the understanding that people don't always act rationally, and that the decisions people make are not always the choices that should be made. Tversky and Kahneman's model helped to spur on the study of behavioral finance and make it a much more widely accepted discipline in the financial world.

Behavioral finance is a financial market theory that incorporates the psychology of individual behavior in markets. It does not assume that people act in a completely rational way, but simply to a certain point. "In contrast to modern capital market theory, which attributes the pursuit of profit as the sole motive for trading by participants in financial markets, behavioral finance theory postulates that actors may have additional motives. It does not always assume that market participants are fully informed. Actors do not always have access to important information, which may affect their decisions. Certain information may be unavailable, or may simply be missed or interpreted wrongly" (Goldberg 10). This method of study seeks to understand why people, namely investors, make the decisions they make. What forces drive them to invest in certain securities,
buy and sell when they do, and sometimes make, what on the surface appear to be, irrational choices?

The first main idea we must look at is the idea that market participants may not, and probably are not, fully informed. To begin, as humans, we can only absorb, comprehend, and understand so much information. Most would agree that it is impossible to research, to the extent necessary to make good decisions, every single company an investor wishes to buy stock in. This can clearly be seen simply by looking at the number of brokerage houses, investment companies, and financial advisors that exist today. These positions have been developed to help the majority of the investing community overcome the problem of asymmetric information. Take, for example, a mutual fund investing in 40 companies. If one investor tried to research all 40 companies, the time and money needed would be enormous. However, the mutual fund company researches the corporations and makes educated decisions on where to invest. The financial advisor with whom the investor is working can promote the funds that he or she believes are good. Or, the investor may research the funds on his own, but with the understanding that the fund managers have previously researched the individual corporations.

Second, investors may not always have access to the important information that would be necessary to make the most informed decision they could. This has two results. On the one hand, this is offset by the presence of financial advisors and financial analysts, who have more and easier access to some of this information than does the general public. However, the other side of it is that even advisors and analysts do not always have all the information. As we will look more closely at later, this is the problem that occurred in both the technology bubble that formed in the late 1990's and in the downfall of Enron. This lack of 100% of the information is what forces investors to make choices based not on what they should know, but on the incomplete information
they actually have. This contrasts with rational expectations theory, which assumes all actors have complete and relevant information.

Finally, there is always the notion that not all information necessary is available. An individual investor cannot go into the corporate offices of a company and ask to see any and all relevant documents. It just isn’t allowed. Also, some of the information that is available can either be overlooked or misinterpreted. Take, for example, the annual report of a major corporation. To begin, there are many in the investing community that have no idea what half of the charts and data sets mean, let alone how to interpret their meaning. If they can’t even understand them, how are they supposed to use them to make a decision? In addition to this, do you know many people who actually take the time to sit down and read the annual reports of the companies they are invested in? No, and it is probably because they don’t really care that much, for one reason or another. Thus, there is information that may be important, but is either skimmed over because it is not understood or is misunderstood and taken in the wrong context. Either way, this presents a possible problem for the rational expectations model.

Many economic models and theories concern themselves with gathering and analyzing information. However, behavioral finance extends beyond this. “It goes one step further and studies the decision-making behavior of participants in financial markets. Even when the alternatives seem completely clear, the way they are framed can influence the decision” (Goldberg 11). Behavioral finance looks to study and try to explain the rationale behind the decisions people make. Unlike previous financial studies, which focused on outcomes, behavioral finance examines the underlying thought processes that lead investors to make the decisions they do. What may appear to be irrational on the surface may in fact be completely rational to the investor making the decision. For example, if an investor bought a stock at $35 per share and sold it at $25 per share, that may seem completely irrational. Why would the investor not hold the security and hope the
price returns to the purchase level? However, what may not be known is that the investor is looking to dump some of the under performing stocks in his portfolio. In addition, the investor has large capital gains during the course of the year and is looking to offset these gains for tax purposes. Now, all of a sudden, the move seems completely rational.

This would seem to indicate that money is what motivates people in the financial world. Though before we argued that money is not always the sole or even principal motivating factor, when it comes to the financial world it is pretty clear that if the motive is not money, then money is at least a part of the motive. "Most people imagine that market participants have only one motive – maximizing profit" (Goldberg 154). Many would argue that the single motive in investing in financial markets is to maximize profits. While this is at least partly true, there are other factors that influence people to invest, especially in things they may not normally invest in. One motivating factor may be jealousy. "Envy of neighbors, colleagues, or friends is at the bottom of many transactions" (Goldberg 154). Imagine two friends who are both elementary school principals in the same town. All of a sudden, one of them sells his house and moves into a brand new, much bigger house in the new subdivision. This could very well make the other jealous, thinking that his friend was paid about the same, yet could afford this. When it is discovered that the money was made in the stock market, he may feel that he is just as smart, so he could accomplish the same thing. This envy may lead him to make bad decisions, which could cause him to lose money in the process.

On the opposite side, people may be motivated to invest in places they normally would not because everyone else is doing so. "Human beings are supremely social animals. We enjoy associating with others, and we particularly love our common interests. In general, this is a good thing on multiple levels – economic, psychological, educational, and political. But in investing, it's downright dangerous" (Bernstein 166). While being social is one of the things Americans do best,
it is not something that one should seek to do in investing. One problem is that if everyone is investing in the same things, those prices will be bid up to relatively high levels. Simple supply and demand dictates that the price will continue to rise until no one will pay a higher price. The problem is that if the investment is “hot,” no one knows when the price will stop increasing, or at what point it becomes a bad investment.

Let's look at the following excerpt from a discussion between an investment counselor (IC) and a man (Dave) who got caught up in the hype of the technology boom.

IC: Let us first discuss your decision to get into the Internet stocks. Think back to October 1999. Do you remember why you decided to buy those stocks?

Dave: Yes, my stocks were simply not going anywhere. My friends at work were investing in the Internet and making a lot of money. There was so much excitement about these stocks; everyone claimed that the Internet was a communications revolution that would change business forever.

IC: When everyone is excited about the stock market, you should be extremely cautious. Stock prices are based not just on economic values but also on psychological factors that influence the mood of the market. Yale economist Robert Shiller, one of the leaders of the behavioral finance movement, has emphasized that fads and social dynamics play a large role in the determination of asset prices. Shiller showed that stock prices have been far too volatile to be explained by fluctuations in economic factors such as dividends or earnings. He hypothesized that much of the extra volatility can be explained by fads and fashions that have a great impact on investor decisions.

Dave: I did have my doubts about these Internet stocks, but everyone else seemed so sure they were winners (Article 319).

As we can see, it can be very easy for people to get caught up with the crowd. In this case, Dave even admits that he questioned the investments he was making, but because of the fact that everyone else was doing it, he continued on. As was mentioned before, too many people investing
in one area simply has the effect of raising prices to levels that are, the majority of the time, well above what they are fundamentally worth. Investing with the herd can lead to trouble.

Finally, some people just want to look good to others. They want to be able to boast and brag about their success. This leads to two problems/issues. First, "the desire to look clever can be a motive to enter into commitments that might merely yield many quick profits, instead of a high return: many small gains are often offset by a single loss" (Goldberg 154). Americans place a lot of importance on how they are viewed in society. Thus, if the opportunity arises and an investor believes he can make a quick profit, even though it may not be a solid investment, often times he will go through with it. However, sooner or later the luck will run out, and what was once a profitable tool turns into a bad apple.

Second, trying to look better than others and impress people can lead to overconfidence, a serious problem when it comes to investing. Let's look at the following example. Imagine taking a questionnaire with 10 historical/factual questions, such as the year of a famous person's birth, weights of certain objects or animals, distances, etc. These could include things such as the weight of a blue whale, the year in which Napoleon was born, and so on. All the answers to the questions are numbers. Obviously, you won't know the exact answers, but you are only asked to provide a range – a minimum and maximum – within which you are 90% sure the answer lies. In checking your answers, you would most likely find that you scored less than 50%, even though theoretically you should score 90%. Be comforted, though, because you are part of the crowd. "Most people miss five or more questions.... The fact is that you are too certain about your answers, even when you have no information or knowledge about the topic. Even being educated in probability is no help. Most finance professors miss at least five questions, too" (Nofsinger 4). This is a prime example of overconfidence. While given the opportunity to provide a range sufficient to be 90% certain of the answer, most people will still be overconfident and guess too
narrowly. In the same way, overconfidence causes investors to pick stocks based upon the belief that they are competent to interpret relevant information correctly.

Overconfidence also leads to excessive movements in one's equity accounts (too much trading). "Overconfidence increases trading because it causes investors to be too certain about their own opinions.... In general, investors overestimate the precision of their information and are biased in their interpretation of that information. Overconfident investors believe more strongly in their own valuation of a stock, and concern themselves less about the beliefs of others" (Nofsinger 10). While every once in a while this will prove profitable, it will for the most part just cause more problems. The excess trading costs money, and those costs will many times offset the gains that are made by participating in all the extra trading. Let's revisit Dave and his investment counselor.

**IC:** Dave, let me shift the subject. From examining your trading records, I see that you were an extremely active trader.

**Dave:** I had to be. Information on the industry was changing so quickly, I felt I had to reposition myself constantly to reflect the new information.

**IC:** Let me tell you something. Trading does nothing for you but cause extra anxiety and losses. A couple of economists published an article entitled 'Trading is Hazardous to Your Wealth' — and, I may add, to your health. Examining the records of tens of thousands of traders, they showed that the returns of the heaviest traders were 7.1 percent below those who traded infrequently.

**Dave:** You're right. I think trading has hurt my returns. I thought I was one step ahead of the other guy, but I guess I wasn't.

**IC:** It is extraordinarily difficult to be a successful trader. Even bright people who devote their entire energies to trading stocks rarely make superior returns (Article 321).

Excessive trading, along with overconfidence, often leads to trouble, yet people continually engage in these practices. What this shows is that no matter how many times it happens, bubbles will still form, and still burst.
“People like to believe that their behavior is prudent. They also tend to pay too much attention to recent data and not enough to long-run averages or statistical odds. Together, these biases make people crowd together and follow trends. This may explain why markets become dominated by prevailing moods, why bubbles form – and why contrarian investors such as George Soros and Warren Buffett (boss of Berkshire Hathaway, an investment firm) can do so well by betting against the market” (Economist 91). Here we see a description of what has happened repeatedly in economies across the globe. People get all excited about something and start jumping on the bandwagon, and the bubble forms. While things are good, the bubble continues expanding. However, at some point it will get too large, and the fun will be over. The ironic thing is that investors have all the signs from previous bubble formations, yet they always think that it won’t happen again. Even our friend Dave, with all his troubles, understands the idea of bubbles.

Dave: Exactly. So many were hyping these stocks that I felt there had to be something out there. If I didn’t buy the Internet stocks, I thought that I was missing out.

IC: I know. The Internet and technology bubble is a perfect example of social pressures influencing stock prices. The conversation around the office, the newspaper headlines, the analysts’ predictions – they all fed the craze to invest in these stocks. Psychologists call this penchant to follow the crowd the *herding instinct*, the tendency of individuals to adapt their thinking to the prevailing opinion.

The influence of social psychology in financial matters has long been recognized. In 1852, Charles Mackay’s *Extraordinary Delusions and the Madness of Crowds* identified a number of financial bubbles where speculators were driven into a frenzy by the upward movement of prices: the South Sea bubble in England in 1720, the Mississippi bubble in France about the same time, and the tulip mania in Holland a century earlier.

Let me read you my favorite passage from the book. See if you can relate with this:

We find that whole communities suddenly fix their minds upon one subject, and go mad in its pursuit; that millions of people become simultaneously impressed with one delusion and run after it….Sober nations have all at once become desperate gamblers, and risked most their
existence upon the turn of a piece of paper... Men, it has well been said, think in herds... they go mad in herds, while they only recover their senses slowly and one by one.

**Dave (shaking his head):** This happens again and again through history. Even though others were pointing to those very same excesses last year, I was convinced that “this time is different.”

**IC:** As were many others. The propensity of investors to follow the crowd is a permanent fixture of financial history. And following the crowd is not always irrational, although it may lead to some very bad results (Article 320).

Even with his knowledge of previous bubbles that had formed, Dave still thought that for some reason this time would be different from the past.

This idea of following the crowd is known in economics as an information cascade, and it is thought to play a major part in what happens in financial markets. “For example, when one company bids for another, often other suitors will join in. When an initial public offering (IPO) gets a strong following, other investors join in bidding. Individuals have a feeling that ‘someone knows something’ and that they shouldn’t miss out. Sometimes that’s right, but very often that is wrong” (Article 321). Investors, because of the fact that they can’t obtain all relevant and necessary information, often use others as a guide for what to do. If a group of people are investing in something, others may feel that since it is more than one person, they know what they are doing, and will thus proceed to get involved as well, even if they have no knowledge of what they are investing in. Some of this also relates back to asymmetric information. A very cheap way of getting information is to get it from someone else, such as a trusted friend, coworker, or acquaintance. While this is not the best way to obtain facts and figures, it is by far the most inexpensive, which for some makes all the difference.

Behavior now plays a major role in studying the financial markets and the investment choices made, which is why behavioral finance is now so popular. It has been seen that investors,
both institutional and individual, do not always act rationally. There are certain times when investors start making decisions that do not really have any rationality behind them at all. Even as we saw with Dave, he questioned his decisions about the stocks he was buying, but for certain reasons still chose to trade. A major factor was the influence of others. He felt that if others were doing the same thing, then it must be the right thing to do. Also, he was overconfident in his ability to pick stocks that were supposedly going to be winners. Finally, he was assuming that the information he had was 100% complete, and that he was interpreting in the correct way (or at least that other people were doing so). These things affect not just Dave. Many investors were influenced by these factors during the bubble times. This shows that because people do not always act rationally, behavior must always be accounted for when examining and analyzing the financial world.
V. Historical Bubbles

No matter how much information investors have, or how many facts and figures they can obtain, the truth remains that bubbles will still form in the financial markets, regardless of the past ups and downs that have occurred. Much has been made of the recent technology bubble of the late 1990's and early 21st century, but this certainly wasn't the only bubble to occur in history. References have been made earlier to bubbles in France and England, and bubbles have also been seen in earlier times in the financial markets of the United States. Let's examine the bubbles that occurred basically simultaneously in France and England, and then examine the bubble that was formed in the 1920's, and the subsequent Great Depression that struck the United States economy in the 1930's.

The bubbles in France (the Mississippi Company) and England (the South Sea Company) occurred at relatively the same time. The Mississippi Company was founded in France by a Scotsman named John Law. In 1719, Law's company was granted a monopoly on trade with all of French North America, along with the right to exchange French government annuities (rentes) for shares of the Mississippi Company. Also, the company would issue money if the value of its shares increased. These three things made the Mississippi Company look like an absolute gift sent from heaven to the French government. However, this also created all the right pieces for a bubble to form. These included "a major shift in the financial system, liquidity from the company's new banknotes, and a hiatus of three decades from the last speculation" (Bernstein 138).

The Mississippi Company was not, however, the only company of this sort. In England, the South Sea Company had been exchanging with the government for a decade. They had a
slightly different set-up though, in that they could “issue a fixed number of shares that could be exchanged for the government debt it bought up from investors.” This also meant that investors could trade their government securities for shares of the company. Hence, it made sense for the South Sea Company to drive its share price as high as possible, and thus have to trade less shares for the government debt. Share prices reached as high as 1000 pounds, versus the 130 they began at, and the government got worried. Some under-the-table dealings were done and things settled down, but this allowed the opportunity for the formation of what were known as “bubble companies.” The South Sea Company passed a charter through parliament limiting the boundaries of existing companies and providing opportunities for new companies, but this would be the downfall (Bernstein 138-139).

In 1720, the bubble in France finally popped. “The precipitating factor, it is said, was the decision of the Prince de Conti, annoyed by his inability to buy stock, to send his notes to the Banque Royale to be turned in for gold.... Meanwhile, others were seized by the thought that gold might be better than notes” (Galbraith 40). The notes were supposedly backed by coin being held at the Banque Royale, but the amount of paper being passed around greatly exceeded any money actually in the bank. It was not only John Law that took a hit for this sharp economic downturn, but also the entire banking industry in France. “It was...John Law who was deemed responsible, as was his Banque Royale, and for a century in France banks would be regarded with suspicion. Those who had lost their minds as well as their money and made the speculation spared themselves all censure” (Galbraith 42).

Coincidentally, it was in 1720 that the bubble burst in England as well. The government passed the Bubble Act in July to try and prohibit some of these “bubble companies” from continuing to form. “However, by this time the end of that company [South Sea Company] was in sight. The stock went into a tailspin, partly, without doubt, the result of profit-taking by those inside and at the
top" (Galbraith 50). While efforts were made to turn things back around, it was obvious that the company was officially through. However, as always happens, hindsight is 20/20, and it was too late. Men were kicked out of government, assets repossessed, and some even imprisoned or exiled. The economy, too, took an extremely large hit. "As in the aftermath...of John Law, the economic life of the City of London and that of the country as a whole were notably depressed" (Galbraith 51).

These two situations both had four ingredients that are necessary if a bubble is going to form. First, there must be "displacement" in the economy, and in both cases, this occurred with the intertwining and substituting of private equity and public debt. Second, with banks creating their own money, there was an extreme ease with which one could obtain credit. Third, it had also been thirty years since the last bubble, which left the economy ripe and ready for another to occur. Fourth, the market had become overrun with individuals in positions of power who knew absolutely nothing about how to price/value the stock of a company. Even before any dividend models existed for pricing stocks, "no one could make a rational case for 1000 pounds," which was the price of the South Sea Company stock at its peak (Bernstein 140). Not even the greatest minds of the time could come up with an explanation for what took place in the two countries. "Probably the most famous dupe of the South Sea episode was none other than Sir Isaac Newton, who famously remarked, 'I can calculate the motions of the heavenly bodies, but not the madness of people'" (Bernstein 141). I am sure he would agree that this holds true for the Mississippi Company as well.

Probably the greatest and most well known downturn in the history of the United States financial markets began on an October day in 1929. Selling was extremely heavy on both Monday, October 28th and Tuesday, October 29th, and the markets fell drastically. "Worse, the most famous of all market crashes was just the opening act of the longest and most painful episode in American financial history." No one could have foreseen the extent to which the selling that took place these
two days reached. The markets, however, did not stay down at this point, and rebounded to slightly higher levels in the early part of the next year. After that point, though, it was all downhill, and "for the next two years, the market relentlessly fell, reducing stock prices to a fraction of their former value and taking the rest of the economy with it" (Bernstein 145). However, the only way to experience losses of this magnitude are after a bubble has formed, so we must examine what cause the bubble to form in the mid 1920's.

Just as the bubbles formed with South Sea Company and the Mississippi Company had certain ingredients necessary for their formation, so did these ingredients exist in the late 1920's in America. The "displacement" of this bubble occurred on the technological side of things. "The early twentieth century saw a rate of innovation second only to that of the post-Napoleonic period. The aircraft, automobile, radio, electrical generator... all burst upon the scene within a few decades. And once again, an expansion of credit loosened the investment floodgates" (Bernstein 145). During this time period, much money, even through the government, was spent on developing and advancing technology. The loose credit that was present in 18th century France and England was again readily available. Winston Churchill could be partly to blame, for he had fixed the pound at a level that was highly overvalued. Low interest rates already prevailed in the United States, and needed no more encouragement to be lowered again. However, Churchill wanted United States interest rates to drop to stabilize the fixed rate in Britain. This was not in the best interest of the United States, but the British did get what they wanted. Benjamin Strong, a friend of the Bank of England's Governor and chairman of the Federal Reserve Bank, "got his way and interest rates were lowered. This was the equivalent of throwing gasoline onto a fire" (Bernstein 146).

The final two bubble ingredients were also in place at this time. Since the downturn during the push for railroad development and expansion, over a decade had passed, leaving few to warn the "youngsters" about the potential dangers that lay ahead. The market was primed for a bubble
to form again. Finally, many uneducated citizens began to see their friends and neighbors make more and more money. This led many of them, most of whom had no idea how the stocks were actually valued in the first place, into the financial markets. "They were joined by tens of thousands of professionals who should have known better. Over the subsequent two and a half years, stock prices rose more than 150%" (Bernstein 146). Little else has to be said about the actual bursting of the bubble. The above facts show that it was inevitable, only a matter of time before the good times ended. It had all four ingredients in place, and by 1930 had mixed just right to send it over the edge.

"Of all history's great bubbles, the 1920's bull market was the most 'rational' " (Bernstein 145). One may ask, how can the development of a bubble be rational? In some ways, it can't be. There are always some irrational actions behind any bubble. However, the decade of the 1920's saw GDP in the United States rise almost 50%, and stocks were considered cheap. "Until 1928, they sold at approximately ten times earnings and yielded about 5% in dividends. Even at the peak, in the summer of 1929, stocks fetched just 20 times earnings, and dividends fell only to 3%. Again, tame by today's standards" (Bernstein 145). By comparing this to the present values, one would be forced to agree that it was seemingly rational. Nothing seemed to be out of line, yet maybe it was for that time period. It is hard to compare our figures today with the figures back then, because today we deal with so much more money in the economy, much larger financial markets, and expectations that are seemingly much higher than they were at that time. Thus, while it can be deemed the most rational of any bubbles, the presence of the four main ingredients necessary for a bubble to form seem to indicate that at least some part of it was irrational, and it would be hard to argue otherwise.

The main dilemma that arose from this crash was where to place the blame now that it was all over. It wasn't totally irrational, so who was at fault? According to Galbraith, "the stock-market
debacle should rightly be held sharply responsible. There can be no plausible doubt that it had a substantial and ultimately devastating economic effect" (Galbraith 88-89). In the aftermath of the Great Depression, there were many affects outside the investing world that put the economy in the hole that hurt it so badly. Demand weakened across the board, resulting in a lower level of confidence among businesses. This sought to decrease investment in businesses, and thus businesses began to fail. This was all directly linked to the enormous decline in the stock market, and for that reason the market is the main player to be faulted in the downward economic spiral that occurred during the 1930's.

Surprisingly, however, there was some good that came out of the Great Depression and the stock market crash that went along with it. First were the policy changes that were implemented by the government. "Some steps were taken – the creation of the Securities and Exchange Commission; restraints on holding-company pyramiding, which had been particularly great in electric utilities; the control of margin requirements – and these were not without value" (Galbraith 85-86). One can hardly imagine the financial markets today without the existence of the SEC or margin requirements. Those two together play an extremely large role in keeping the financial markets, as well as companies in the financial industry, operating efficiently, smoothly, and to the extent that they can, lawfully and morally. The only things that the government did not deal with were the speculative instruments that were used in the markets. "Nothing was said or done or, in fact, could have been done about the decisive factor – the tendency to speculation itself" (Galbraith 86). While the government can deal with certain things, the financial markets perform with a great deal of speculation built in. The problems arise when this speculation gets out of hand.

The second good thing that arose out of the 1930's was that, for the first time, it seemed that the bursting of the bubble actually stuck with people in their memories, and affected their
decisions for a longer than normal period of time. "For the next quarter of a century, securities markets were generally orderly and dull. Although this mood lasted longer than usual, financial history was not at an end. The commitment to Schumpeter's mania was soon to be reasserted" (Galbraith 86). While the United States economy did revert back to the expected ways, it took longer than usual to occur. It seemed that the extreme affects the Great Depression had on people ingrained it in their minds for longer than normal. Although it did take longer, it should be remembered that it didn't fully hold. Once again, what was expected came to be, and that was that the cycle would still continue to repeat itself, and still does today. It may not occur at exact intervals, but bubbles will always form after a certain period of time.

Over the course of history, one thing has been shown to repeat itself over and over again in the financial markets. People will get excited about something, a build-up will occur, a bubble will form, and sooner or later that bubble will burst. While investors can't always see that bubble until it breaks, history has presented us with four factors that are always must be present in order for a bubble to form. One, economic displacement must be existent in the economy. Two, there must be an ease with which credit can be obtained in the economy. Three, enough time must have passed to allow those who experienced the previous bubble to either pass away, forget, or get to the age where they don't really care anymore. Four, the economy must be filled with a majority of people who know little or nothing about the investing they are actually doing. Only in retrospect can a true bubble be seen, but if investors would stop looking for a bubble and start recognizing the warning signs, maybe at some point an end could be brought to the revolving irrationality that occurs in the financial markets.
VI. Lessons To Be Learned

There are many things that investors can learn from the bubbles that have occurred in the financial markets over the course of time. The first thing is the inability of society to learn how and why these cycles happen. "What is truly amazing is that after so many boom/bust cycles we still do not properly understand how financial markets operate" (Soros 18). One would think that the past would teach us something, but it always seems like such a distant memory. George Soros argues that this is because the way markets actually operate is not the way we are generally taught. He does not believe that the entire market tends toward equilibrium. "Instead of a one-way connection between supply and demand via market prices, there is a two-way connection: Market prices can also alter the conditions of supply and demand in a circular fashion" (Soros 18). He feels that just as supply and demand affect market prices, so do market prices affect supply and demand. He has defined this connection "reflexivity."

"The theory of reflexivity does not offer a new way of determining the outcome; it holds that the outcome is impossible to determine. For instance, it was predictable that the Internet bubble would burst, but it was impossible to predict when" (Soros 18). Soros' theory argues that the future is not only unknown, but there is actually no way of knowing it. The reason for this is because the future is based on decisions that must be made over time, and the sum of the decisions made by each individual will determine what takes place in the future. This causes problems for many, because it goes against all notions of what scientific theories should do. "Accepting reflexivity requires acknowledging that social science in general and economics in particular cannot provide scientifically valid predictions. This is a paradigm shift that has not occurred" (Soros 18). I believe
Soros would argue that until this shift does occur, markets will continue in the same boom and bust cycles that have been occurring. And because I don't believe that anyone could really argue that this paradigm shift will actually occur anytime soon, it looks as though we are stuck in the rut of being surprised, followed by a period of looking back and asking why we were surprised at all.

Part of the problem relates to the notion of market fundamentalism, which became popular in the 1980's, and basically states that if everyone pursues his or her own self-interest, then the market itself will be pursuing the common interest of all. This idea assumes that markets tend toward equilibrium on their own. "But if financial markets do not tend toward equilibrium, as the theory of reflexivity maintains, private interests cannot be equated with the public interest. Left to their own devices, financial markets are likely to go to socially disruptive extremes" (Soros 20).

Funny, but isn't that what has occurred in each and every cycle? The markets reach extremely high levels, then are shot back down to levels no one ever thought we would drop to again. The way I see it, that is a pretty good example of socially disruptive extremes.

We have seen these bubbles continue to form, even with the past giving us numerous examples of times when bubbles formed. The symptoms are the same time and time again, but never seem to be recognized until it is too late. While the economy can grow over an extended period of time, the downturn usually does not occur in that same fashion. "Bubbles often burst rather than deflate gently. As they grow, many people are making the same decision ("buy"); but they do so on the basis of limited information. As a result, even a little new information may be enough to change everybody's mind. If this happens all at once, a sustained boom can be followed by a sudden bust" (Economist 91). First and foremost, then, we must learn to not be surprised by sudden declines in the market. We have seen it happen time and time again.

However, until the belief that "it won't happen this time" subsides, we will not only continue to experience bubbles, but we will continue to be caught off guard when they occur.
"A further rule is that when a mood of excitement pervades a market or surrounds an investment prospect, when there is a claim of unique opportunity based on special foresight, all sensible people should circle the wagons; it is the time for caution." All bubbles are built up by not just one or two people or groups of people, but by the masses. It takes a large number of people to form a bubble and drive it to the point of being ready to burst. Yes, there is always the chance that it will continue to grow, or slow down softly, but that is not very likely. "Perhaps, indeed, there is an opportunity. Maybe there is that treasure on the floor of the Red Sea. A rich history provides proof, however, that, as often or more often, there is only delusion and self-delusion" (Galbraith 109). Sure, the slight possibility always exists that it won't happen again. However, what the markets have shown us over the years is that the probability is pretty high that it will come back again, that the bubble will burst, and that people will once again be shocked at what occurs, even though there should be no shock whatsoever.

These lessons point towards the understanding of the market movements and how it works, but there are also lessons that investors can learn and put into practice. "A common adage on Wall Street is that the markets are motivated by two emotions: fear and greed.... However, acting on those emotions is rarely the wise move. The decision that benefits you over the long-term is usually made in the absence of strong emotions" (Nofsinger 81). One should invest knowing that there is the chance that, in the short term, there could possibly be dramatic price swings. While we have determined that rational expectations don't hold in financial markets, investing can be done rationally if emotions are set aside. Let the market run its course, and chances are in the long run, the investor will come out ahead.

Along with this, people need to analyze their decisions before they make them and look at the possible consequences. If investors would do this, "it would also be a significant step in the direction of successful trading. Making rational decisions is the same as concentrating exclusively
on the analysis of their consequences, without giving in to one's emotions and without glancing backwards. However, even Mrs. Lot in the Old Testament did not manage to refrain from looking back" (Goldberg 201). Many times investors realize how much they could have made if they would have just invested a little here or a little there, but by that time it is too late. A smart, rational investor will invest somewhere and leave it alone. There is no greater force or power in the world of investing than that of compound interest. By avoiding excess trading and management fees and leaving the money alone, compound interest will work for the investor and help to make the account that much more fruitful.

From compounding investing, we know that small gains occurring repeatedly can turn into big gains in the end. “How do you achieve these incremental increases? The real secret is so simple, and seemingly obvious, that many investors miss it: Don’t focus on trying to beat the market or trying to beat other investors, which you can’t control; instead, emphasize the avoidance of mistakes, which you can control” (Owen 13). By analyzing past mistakes and correcting them for the future, investors can gain much more than they would by trying to beat someone else out. An investor cannot control the decisions others make, and if they get lucky, then good for them. More times than not, however, the patient investor, the one who has thought the most rationally and clearly, will be the one that in the end comes out ahead.

We have learned that rational expectations do not hold in the financial markets, and we have seen that investors continually make mistakes, but there are some suggestions investors could put into practice to help them in their investing practices. The following list is from William Bernstein’s book, The Four Pillars of Investing:

1. Avoid the thundering herd. If you don’t, you’ll get trampled and dirty. The conventional wisdom is usually wrong.
2. Avoid overconfidence. You are most likely trading with investors who are more knowledgeable, faster, and better equipped than you. It is ludicrous to imagine that you can win this game by reading a newsletter or using a few simple selection strategies and trading rules.

3. Don't be overly impressed with an asset's performance over the past five or ten years. More likely than not, last decade's loser will do quite well in the next.

4. Exciting investments are usually a bad deal. Seeking entertainment from your investments is liable to lead you to the poorhouse.

5. Try not to worry too much about short-term losses. Focus instead on avoiding poor long-term returns by diversifying as much as you can.

6. The market tends to overvalue growth stocks, resulting in low returns. Good companies are not necessarily good stocks.

7. Beware of forecasts made on the basis of historical patterns. These are usually the results of chance and are not likely to recur.

8. Focus on your whole portfolio, not the component parts. Calculate the whole portfolio's return each year.

9. If you are very wealthy, realize that your broker will likely do his best to bleed you with vehicles featuring excessive expenses and risks.

While investors will still act irrationally and bubbles will still occur, these things can help investors to do a better job of not adding their two cents to the bubble. Maybe, in time (a very long time), investors will finally realize what they are doing and the bubbles will stop. Until then, these 9 ideas can help pave the way to more success as an investor.
VII. Conclusion

Rational expectations theory was once the concept behind all human behaviors, from psychology to sociology to yes, even economics. Some of it still does apply in the economic discipline, but it is often now viewed as a much more bounded rationality. It is much harder to apply that theory to finance because of all the information available, along with still more information that isn’t open to the public. Thus, an informed decision can’t be made as easily as it can in other areas of life. When a person is asked why he ate something, he will reply that he was hungry, or that he enjoys it. He knows the consequences of his actions. He will be full or be satisfied. However, it is not so easy in the financial markets. Asking an investor why he chose to invest in a certain stock will produce a variety of answers, yet the outcome is still unknown. It is largely based upon speculation, whether it is an informed speculation or a random choice. This lack of predictable outcomes handicaps the rational expectations theory from helping explain the financial world.

This has led to the creation of a new school of thought known as behavioral finance, which examines the thought processes behind the actions that cause markets to form bubbles, bubbles to burst, and people to be left with no money, wondering what in the world just happened. Bubbles formed in the seventeenth and eighteenth centuries, and continue forming even today. I feel somewhat blessed that I have had the opportunity to experience already the formation and subsequent bursting of a stock market bubble. It puts this generation sort of ahead of the game in the future, assuming the cycle continues and another bubble forms down the road. Investors, even with all the information of the past, constantly push it aside as old news, believing that for some
reason that present will be different, that it won't happen again, or that this bubble isn't going to burst. For that reason, one wonders if there is any way to fix it.

"The final question that remains is what, if anything, should be done? Recurrent descent into insanity is not a wholly attractive feature of capitalism.... Yet beyond a better perception of the speculative tendency and process itself, there probably is not a great deal that can be done." As long as man has been alive, at least one has always wanted more. There is never a time when everyone is content. Thus, wantonness breeds speculation, and it is speculation that causes bubbles to form. Because I doubt we will ever see a time when everyone is completely content, bubbles will continue to be a recurring part of the cycle in financial markets. "The only remedy, in fact, is an enhanced skepticism that would resolutely associate too evident optimism with probable foolishness and that would not associate intelligence with the acquisition, the deployment, or for that matter, the administration of large sums of money" (Galbraith 108-109). Yeah, like that will ever happen.

Behavioral finance will, I believe, continue to grow and be an evermore exciting and intriguing field of study, mostly because it has so much to do with the world of investing. "As University of Chicago economics professor Dick Thaler points out, all finance is behavioral. Investors will forever be captives of the emotions and responses bred into their brains over the eons." Investing is an action, and therefore is completely related to behavior. How and why people invest in what they do and when will be something that is studied for years and years to come. The main question that is still unanswered is, why do investors continue to speculate and form bubbles when they know at some point the bubble has to burst? Until that question is answered, behavioral finance will be a growing discipline. This could be forever, because the only answer we have is that it will never stop. "As this book is being written, most readers should have no trouble believing that irrational exuberance happens. It is less obvious, but equally true, that the
sort of pessimism seen in the markets 25 and 70 years ago is a near certainty at some point in the future as well" (Bernstein 162).
Works Cited


