International Journal of Economic Research
Volume 15, Number 3, 2018, ISSN : 0972-9380
available at http: www.serialsjournals.com

FINANCIAL INVESTMENT DECISIONS- A STUDY OF INVESTOR BEHAVIOR

CA [Dr.] Abha Mathur

Associate Professor, Satyawati College, University of Delhi, Delhi, E-mail: abhamathur25@gmail.com

Abstract: **Human beings do not always make good decisions. Their rational judgment is** influenced not only by passions and emotions but also by built-in biases such as overconfidence in one's own abilities. Behavioral finance is the study of psychological aspects of individual behavior and its effect on financial decision making skills.

Investment analysis is a broad term that encompasses many different aspects of investing. It can include analyzing past returns to make predictions about future returns, selecting the type of investment vehicle that is best for an investor's needs or evaluating securities such as stocks and bonds for valuation and investor specificity.

Investment analysis can help determine how an investment is likely to perform and how suitable it is for a given investor. It is key to any sound portfolio management strategy. Investors who are not comfortable doing their own investment analysis can seek professional advice from a financial advisor or other financial professional. Investment analysis can also involve evaluating past investment decisions in terms of the thought process that went into making them, how the decision affected a portfolio's performance and how mistakes can be regarded and corrected. Key factors in investment analysis include entry price, expected time horizon and reasons for making the decision at the time.

Performing Investment Analysis: In conducting an investment analysis of a mutual fund, an investor looks at factors such as how the fund has performed compared to its benchmark. The investor can also compare the fund's performance, expense ratio, management stability, sector weighting, style and asset allocation to similar funds. Investment goals should always be considered when analyzing an investment; one size does not always fit all, and highest returns regardless of risk are not always the goal.

The objective of this study is to investigate factors that influence investor information demand around earnings announcements and to provide insights into how variation in information demand impacts the capital market response to earnings. The Internet is one channel through which public information is disseminated to investors and we propose that one way that investors express their demand for public information is via Google searches. We find that abnormal Google search increases about two weeks prior to the earnings announcement, spikes markedly at the announcement, and continues at high levels for a period after the announcement. This finding suggests that information diffusion is not instantaneous with the release of the earnings information, but rather is spread over a period surrounding the announcement. We also find that information demand is positively associated with media attention and news, and is negatively associated with investor distraction. When investors search for more information in the days just prior to the announcement, preannouncement price and volume changes reflect more of the upcoming earnings news and there is less of a price and volume response when the news is announced. This result suggests that, when investors demand more information about a firm, the information content of the earnings announcement is partially preempted.

As behavioral finance affects financial decisions, research is being done on why people over search for information while investing.

Keywords: Finance, Behavior, Heuristics, Rationality

INTRODUCTION

Behavioral finance is the study of the influence of psychology on the behavior of financial practitioners and the subsequent effect on markets. Behavioral finance is of interest to value investors because it helps explain why and how markets might be inefficient. In addition, the study of behavioral finance helps investors understands how the mind can help or hinder investment success.

Behavioral Finance can also be viewed as a theory of finance that attempts to explain the decisions of investors by viewing them as rational actors looking out for their self-interest, given the sometimes inefficient nature of the market. Tracing its origins to Adam Smith's The Theory of Moral Sentiments, one of its primary observations holds that investors (and people in general) make decisions on imprecise impressions and beliefs rather than rational analysis. A second observation states that the way a question or problem is framed to an investor will influence the decision he/she ultimately makes. These two observations largely explain market inefficiencies; that is, behavior finance holds that markets are sometimes inefficient because people are not mathematical equations. Behavioral finance stands in stark contrast to the efficient markets theory. See also: Naive diversification, Formula plan, Subjective probabilities.

Behavioral finance combines psychology and economics to explain why and how investors act and to analyze how that behavior affects the market.

Behavioral finance theorists point to the market phenomenon of hot stocks and bubbles, from the Dutch tulip bulb mania that caused a market crash in the 17th century to the more recent examples of junk bonds in the 1980s and Internet stocks in the 1990s, to validate their position that market prices can be affected by the irrational behavior of investors.

It is an important subfield of finance. A behavioral finance use insights from the field of psychology and applies them to the actions of individuals in trading and other financial applications.

According to conventional financial theory, the world and its participants are, for the most part, rational **"wealth maximizers**". However, there are many instances where emotion and psychology influence our decisions, causing us to behave in unpredictable or irrational ways.

Behavioral finance is a relatively new field that seeks to combine behavioral and cognitive psychological theory with conventional economics and finance to provide explanations for why people make irrational financial decisions.

Behavioral finance is in conflict with the perspective of efficient market theory, which maintains that market prices are based on rational foundations, like the fundamental financial health and performance of a company.

Many behavioral biases are ingrained aspects of human decision-making processes, which have served us well as ways of coping with day-to-day choices. But, they are unhelpful for achieving success in long-term activities such as investing.

Only by understanding the biases and their effect, are we able to avoid major pitfalls and achieve a better understanding of financial market behavior.

"Traditional vs. behavioral finance

Over the past fifty years established finance theory has assumed that investors have little difficulty making financial decisions and are well-informed, careful and consistent. The traditional theory holds that investors are not confused by how information is presented to them and not swayed by their emotions. But clearly reality does not match these assumptions.

Behavioral finance has been growing over the last twenty years specifically because of the observation that investors rarely behave according to the assumptions made in traditional finance theory.

Behavioral researchers have taken the view that finance theory should take account of observed human behavior. They use research from psychology to develop an understanding of financial decision making and create the discipline of behavioral finance. This guide summarizes the findings of these ground-breaking financial theorists and researchers."

"We cannot cure the biases, but we can attempt to mitigate their effects. Using techniques such as feedback, audit trails for decisions, checklists, and 'devil's advocates' can help us take decisions in a more rational manner and improve the chances of investment success."

OVERVIEW AND PROBLEM STATEMENT

Types of behavioral investors

The behavioral investor type (BIT) framework identifies four categories of clients

- **The Preserver**
- **The Follower**
- **The Independent, and**
- **The Accumulator**

[i]-A Preserver is an investor who places a great deal of emphasis on financial security and preserving wealth rather than taking risks to grow wealth. These investors are guardians of their assets and take losses very seriously. Preservers are often deliberate in their decisions and sometimes have difficulty taking action with their investments, out of concern that they may make the wrong decision. They may instead prefer to avoid risk and stick to the status quo. Preservers often obsess over short-term performance (in both up and down markets, but mostly down markets) and losses and also tend to worry about losing what they had previously gained. This behavior is consistent with how Preservers have approached their work and personal lives—in a deliberate and cautious way.

Analysis

Name of Behavioral Investor Type: Preserver

Basic Orientation: Loss averse and deliberate in decision making

Dominant Bias Types: Emotional, relating to fear of losses and inability to make decisions/take action

Impactful Biases: Loss aversion and status quo

Investing Style: Wealth preservation first, growth second
Level of Risk Tolerance: Generally lower than average

[ii]-A Follower is an investor who is passive and often lacks interest in and/or has little aptitude for money or investing. Follower investors typically do not have their own ideas about investing. Rather, they may follow the lead of their friends and colleagues, or whatever general investing fad is occurring, to make their investment decisions.

Often their decision-making process does not involve a long-term plan. They sometimes trick themselves into thinking they are smart or talented in the investment realm when an investment decision works out, which can lead to unwarranted risk-seeking behavior. Since Followers don't tend to have their own ideas about investing, they may also react differently when presented more than once with the same investment proposal; that is, the way something is presented (framed) can make them think and act differently. They may also regret not being in the latest investment fad and end up investing at exactly the wrong time, when valuations are the highest.

Analysis

Name of Behavioral Investor Type: Follower

Basic Orientation: General lack of interest in money and investing and typically desires direction when making financial decisions

Dominant Bias Type: Cognitive, relating to following behavior

Impactful Biases: Recency and framing

Investing Style: Passive

Level of Risk Tolerance: Generally lower than average but often thinks risk tolerance level is higher than it actually is

[iii]-An Independent is an investor who has original ideas about investing and likes to get involved in the investment process. Unlike Followers, they are not disinterested in investing, are quite engaged in the financial markets, and may have unconventional views on investing. This "contrarian" mindset, however, may cause Independents to not believe in following a long-term investment plan. With that said, many Independents can and do stick to an investment plan to accomplish their financial goals. In essence, Independents are analytical, critical thinkers who make many of their decisions based on logic and their own gut instinct. They are willing to take risks and act decisively when called upon to do so. Independents can accomplish tasks when they put their minds to it; they tend to be thinkers and doers as opposed to followers and dreamers.

Analysis

Name of Behavioral Investor Type: Independent

Basic Orientation: Engaged in the investment process and opinionated on investment decisions

Dominant Bias Type: Cognitive, relating to the pitfalls of doing one's own research

Impactful Biases: Confirmation and availability

Investing Style: Active

Level of Risk Tolerance: Generally above average but not as high as aggressive investors

[iv]-An Accumulator is an investor who is interested in accumulating wealth and is confident he can do so. They have typically been successful in some business pursuit and are confident that they will be successful investors. As such, they often like to adjust their portfolio allocations and holdings to market conditions and may not wish to follow a structured plan. Moreover, they want to influence decision making or even control the decision-making process, which can potentially diminish an adviser's role.

Analysis

At their core, Accumulators are risk takers and are firm believers that whatever path they choose is the correct one. Unlike Preservers, they are in the race to win—and win big. Unlike Followers, they rely on themselves and want to be the ones steering the ship. And unlike some Independents, they usually dig down to the details rather than forge a course with too little information.Each of whom has distinct behavioral biases and risk profiles. Understanding which categories your clients fall into can go a long way toward producing better investment returns and building stronger relationships.

RATIONALE /JUSTIFICATION FOR CHOICE OF THE TOPIC OF THE RESEARCH

Behavioral Finance = "open-minded Finance"

As Thaler, correctly stated "Sometimes, in order to find the solution to an empirical puzzle, it is necessary to entertain the possibility that some of the agents in the economy behave less than fully rationally some of the time. Any financial economist willing to consider this possibility seriously is ready to take a try at behavioral finance."

When it comes to money and investing, we're not always as rational as we think we are – which is why there's a whole field of study that explains our sometimes strange behavior. Where do you, as an investor, fit in? Insight into the theory and findings of behavioral finance may help you answer this question.

Behavioral Finance: Questioning the Rationality Assumption

Much economic theory is based on the belief that individuals behave in a rational manner and that all existing information is embedded in the investment process. This assumption is the crux of the efficient market hypothesis.

But researchers questioning this assumption have uncovered evidence that rational behavior is not always as prevalent as we might believe. Behavioral finance attempts to understand and explain how human emotions influence investors in their decision-making process. You'll be surprised at what they have found.

The Facts

In 2001 Dalbar, a financial-services research firm, released a study entitled "Quantitative Analysis of Investor Behavior," which concluded that average investors fail to achieve market-index returns. It found that in the 17-year period to December 2000, the S&P 500 returned an average of 16.29% per year, while the typical equity investor achieved only 5.32% for the same period – a startling 9% difference!

It also found that during the same period, the average fixed-income investor earned only a 6.08% return per year, while the long-term Government Bond Index reaped 11.83%.

In its 2015 version of the same publication, Dalbar again concluded that average investors fail to achieve market-index returns. It found that "the average equity mutual fund investor underperformed the S&P 500 by a wide margin of 8.19%. The broader market return was more than double the average equity mutual fund investor's return (13.69% vs. 5.50%)."

Average fixed income mutual funds investors also under performed at 4.18% under the bond market.

In order to understand why this happens, following theories can be considered to understand the concept better: Here are some possible explanations.

[i]-Regret Theory

Fear of regret, or simply regret theory deals with the emotional reaction people experience after realizing they've made an error in judgment. Faced with the prospect of selling a stock, investors become emotionally affected by the price at which they purchased the stock.

So, they avoid selling it as a way to avoid the regret of having made a bad investment, as well as the embarrassment of reporting a loss. We all hate to be wrong, don't we? What investors should really ask themselves when contemplating selling a stock is: "What are the consequences of repeating the same purchase if this security were already liquidated and would I invest in it again?"

If the answer is "no," it's time to sell; otherwise, the result is regret of buying a losing stock and the regret of not selling when it became clear that a poor investment decision was made – and a vicious cycle ensues where avoiding regret leads to more regret. Regret theory can also hold true for investors when they discover that a stock they had only considered buying has increased in value. Some investors avoid the possibility of feeling this regret by following the conventional wisdom and buying only stocks that everyone else is buying, rationalizing their decision with "everyone else is doing it."

Oddly enough, many people feel much less embarrassed about losing money on a popular stock that half the world owns than about losing money on an unknown or unpopular stock.

[ii]- Mental Accounting

Humans have a tendency to place particular events into mental compartments and the difference between these compartments sometimes impacts our behavior more than the events themselves. Say, for example, you aim to catch a show at the local theater and tickets are $20 each. When you get there you realize you've lost a $20 bill. Do you buy a $20 ticket for the show anyway?

Behavior finance has found that roughly 88% of people in this situation would do so. Now, let's say you paid for the $20 ticket in advance. When you arrive at the door, you realize your ticket is at home. Would you pay $20 to purchase another?

Only 40% of respondents would buy another. Notice, however, that in both scenarios you are an investing example of mental accounting is best illustrated by the hesitation to sell an investment that once had monstrous gains and now has a modest gain. During an economic boom and bull market, people get accustomed to healthy, albeit paper, gains. When the market correction deflates investor's net worth, they're more hesitant to sell at the smaller profit margin. They create mental compartments for the gains they once had, causing them to wait for the return of that gainful period.

[iii]- Prospect/Loss-Aversion Theory

It doesn't take a neurosurgeon to know that people prefer a sure investment return to an uncertain one; we want to get paid for taking on any extra risk. That is very reasonable.

Here is the strange part. Prospect theory suggests people express a different degree of emotion towards gains than towards losses. Individuals are more stressed by prospective losses than they are happy from equal gains.

Prospect theory also explains why investors hold onto losing stocks: people often take more risks to avoid losses than to realize gains. For this reason, investors willingly remain in a risky stock position, hoping the price will bounce back. Gamblers on a losing streak will behave in a similar fashion, doubling up bets in a bid to recoup what has already been lost.

Therefore,, despite the rational desire to get a return for the risks we take, investor tends to value something that he/she owns higher than the price that would normally be prepared to pay for it. The loss-aversion theory points to another reason why investors might choose to hold their losers and sell their winners: they may believe that today's losers may soon outperform today's winners. Investors often make the mistake of chasing market action by investing in stocks or funds which garner the most attention. Research shows that money flows into high-performance mutual funds more

rapidly than money flows out from funds that are underperforming.

[iv]- Anchoring

In the absence of better or new information, investors often assume that the market price is the correct price. People tend to place too much credence in recent market views, opinions and events, and mistakenly extrapolate recent trends that differ from historical, long-term averages and probabilities. In bull markets, investment decisions are often influenced by price anchors, which are prices deemed significant because of their closeness to recent prices. This makes the more distant returns of the past irrelevant in investors' decisions.

[v]- Over-/Under-Reacting

Investors get optimistic when the market goes up, assuming it will continue to do so. Conversely, investors become extremely pessimistic during downturns. A consequence of anchoring, or placing too much importance on recent events while ignoring historical data, is an over- or under-reaction to market events which results in prices falling too much on bad news and rising too much on good news. At the peak of optimism, investor greed moves stocks beyond their intrinsic values. When did it become a rational decision to invest in stock with zero earnings and thus an infinite price-to-earnings ratio, for example, dotcom era, circa year 2000? Extreme cases of over- or under-reaction to market events may lead to market panics and crashes.

[vi]- Overconfidence

People generally rate themselves as being above average in their abilities. They also overestimate the precision of their knowledge and their knowledge relative to others. Many investors believe they can consistently time the market, but in reality there's an overwhelming amount of evidence that proves otherwise. Overconfidence results in excess trades, with trading costs denting profits.

Counterviews considered to understand how an Irrational Behavior is an Anomaly

As we mentioned earlier, behavioral finance theories directly conflict with traditional finance academics. Each camp attempts to explain the behavior of investors and implications of that behavior. The theory that most overtly opposes behavioral finance is the efficient market hypothesis (EMH), associated with Eugene Fama (University of Chicago) & Ken French (MIT). Their theory that market prices efficiently incorporate all available information depends on the premise that investors are rational. EMH proponents argue that events like those dealt with in behavioral finance are just short-term anomalies, or chance results, and that over the long term these anomalies disappear with a return to market efficiency.

Thus, there may not be enough evidence to suggest that market efficiency should be abandoned since empirical evidence shows that markets tend to correct themselves over the long term. In his book "Against the Gods: The Remarkable Story of Risk" (1996), Peter Bernstein makes a good point about what's at stake in the debate: "While it is important to understand that the market does not work the way classical models think, there is a lot of evidence of herding, the behavioral finance concept of investors irrationally following the same course of action

[vii]- The Bottom Line

Behavioral finance certainly reflects some of the attitudes embedded in the investment system. Behaviorists will argue that investors often behave irrationally, producing inefficient markets and mispriced securities – not to mention opportunities to make money. That may be true for an instant, but consistently uncovering these inefficiencies is a challenge. Questions remain over whether these behavioral finance theories can be used to manage your money effectively and economically. That said, investors can be their own worst enemies. Trying to out-guess the market doesn't pay off over the long term. In fact, it often results in quirky, irrational behavior, not to mention a dent in your wealth. Implementing a strategy that is well thought out and sticking to it may help you avoid many of these common investing mistakes.

Therefore, it would indeed be very interesting to understand as to how and why people behave while dealing with finance and why investors over search for information.

OBJECTIVES OF THE STUDY

The following are some of the objectives framed for the study.

- To find gender differences, if any with regard to searching of information
- To find significant difference, if any, between senior level & middle level investors in searching information
- To make a comparison between more experienced investors with that of less experienced investors with respect to chosen variables for the study.
- To assess the relationship between the over search of information and confidence level of the investor

REVIEW OF LITERATURE

(Dehnad, 2011). Under difficult and risky situations investors make predictable, non-optimal choices because of heuristic simplifications. Thus, behavioral biases abstractly are defined in the same way as systematic errors are in judgment

(Chen *et al,* 2004). Advocates of behavioral finance have been able to explain a number of these biases as psychological characteristics and these behavioral traits have a significant relation with the decision making process of the investors

(Shahzad *et al.* 2013). The investors, who are not literate enough to do the detailed financial analysis base their decisions on various heuristics like fear, affect heuristics and anger. Fear helps investors in taking precaution in financial decision making process, while affect heurists and anger have negative impact on the decision making process of the investors.

(Hassan *et al.,* 2013). Throughout the past five decades researchers have distinguished specific biases in their studies and behavioral finance research relies on a broad collection of evidence pointing to the ineffectiveness of human decision making in various economic decision circumstances

(Pompian, 2006). Some researchers refer to biases as heuristics

(Brabazon, 2000; Parikh, 2011) while classifying biases along cognitive or emotional lines (Shane, 2005; Kristensen and Garling, 1997; Montier, 2002).

However, experts of behavioral finance believe that investors are more affected by cognitive errors than behavioural biases

(Jureviciene & Jermakova, 2012). Proponents of behavioral finance have argued that investors make seemingly irrational or illogical decisions when they spend, invest and mostly these investment decisions are based on hunches or emotions

PROPOSED METHOD

- **It is proposed to carry out a personal interview of investors and where is not feasible, then, a telephonic interview shall be conducted to find out the frequency of seeking information**
- **Effort shall be made to contact and interview a large number of respondents**
- **Respondents shall be from diverse fields, genders and levels in terms of experience and positions**
- **The result collected shall be collated to find out the reasons for searching for more and more information before investing**

Experimental data

Sample size

Sample- the sample consisted of investors at both senior & middle levels, male & female investors. It was a non-probability incidental sample.

A total of 100 respondents were interviewed

The break-up being

Males -60

Out of 60 male respondents, 20 were young, 20 were middle aged and remaining were holding senior positions within age group of 40-55 years

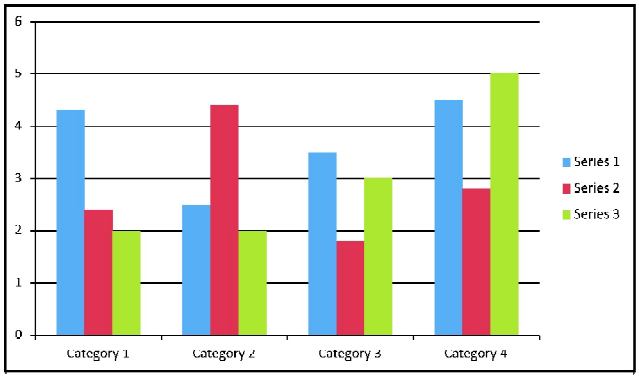
Females-40

Out of 40 female respondents, 15 were young with no experience in investing, 15 were highly experienced

investors and remaining 10 were holding senior positions in the industry who had outsourced collection of information.

A personal and telephonic interview was carried out with investors of diverse backgrounds and inference was drawn from the data so collected.

CONCLUSION/ DATA OUTCOMES



Blue – denotes male investors
Red –denotes experienced investors
Green –denotes female investors

Category-1: It shows the over confidence parameters, where the males scored the highest, next were the experienced investors and the lowest was scored by female investors

Category-2: Risk taking was comparatively less in male investors as compared to experienced investors and the risk taking was the least amongst females.

Category -3: Search impacted the decision most in case of males, least in case of experienced investors and moderate in case of female investors.

Category -4: Trust and credibility were built most in case of female investors, least in case of experienced investors and moderate in case of male investors

The data was analyzed and following outcomes were seen:

1. **Search is not a Cost but an Investment-** If there is an investment with a high return, it is observed that the returns can be truly stupendous when you get it right.
2. **Search brings the right focus -**It is difficult to tackle thousands of prospects at once, and search gets the right emphasis and focus.
3. **Search creates confidence -** Some sort of confidence is created in the investor if more and more search is carried out for information.
4. **More and more search impacts the investing decision-** As the search for data continues, there is a fluctuation in the decision. At one point it appears to be bad and with more information it starts appearing good again and this continues with fickle minded people.
5. **More searches cause confusion and give conflicting results -** If the investor is not convinced with the results, he/she keeps on trying for more information, which causes confusion and leads to conflicting decisions.
6. **Search is usually not too costly-** Search is usually not a cost, therefore investors keep on searching for more and more until it amounts to paying for it.

RECOMMENDATIONS & SUGGESTIONS

- Search is not an Icing On The Cake but it is an Important Ingredient People should search for the reason of losing and not just out of fun or curiosity.
- Search Can Multiply the Impact of investment & women investors find it very reliable.
- Search should be carried out as Portfolio balancing, as that becomes a reality with more and more search.
- Search Builds Trust & Credibility in investment, particularly in case of young investors, both males & females.
- Search can make the investment stronger, better and well recognized. The eventual goal should be that, when people search for investment decisions, they should aim for the top of search results.
- Search has been found to be making the investor Ubiquitous
- Search must be made a Long-Term Strategy by all types of investors.
- Search deliver quick results & can be effective in the short term and help businesses that need results now and deliver an ongoing ROI over the long term also

- For some investors such as women investors & young male and female investors, Search is a **'Secret Weapon'**
- A professional search is a great asset in developing the investment portfolio. A skilled searcher of information can run in-depth analyses of the investment.
- search is outsourced by senior and experienced investors, in order to Run Hands-Free and enjoy the benefits of investment
- Searching of information has also been observed to be outsourced to know what is needed currently, while being proficient at predicting what will be needed in the future.
- Search is so fruitful that it can even convince skeptics
- Search even convinces those who do not believe in seeking information. Equally important, it will be great insurance against investing in non-lucrative strategies and tactics.
- Search will always provide endless Opportunity
- Search is helpful in Capitalizing on strong investments
- For some, search is like casting a fish net into waters that are teeming with sea-life and hauling back a rich catch

LIMITATIONS OF THE STUDY

- Limited predictive power
- Contradictory implications
- Failure to offer a viable alternative to the theories it challenges
- Behavioural finance limits itself to pointing out failures of cognition and calculation
- Time is always a constraint in any research
- Sample size, if increased can give different results

REFERENCES

BARBERIS, Nicholas C., and Richard H. THALER, (2003). A survey of behavioral finance In: George M. CONSTANTINIDES, Milton HARRIS, and René M. STULZ, eds. Handbook of the Economics of Finance: Volume 1B, Financial Markets and Asset Pricing. Elsevier North Holland, Chapter 18, pp. 1053–1128.

De BONDT, Werner F. M., and Richard THALER, (1985). Does the stock market overreact? The Journal of Finance, 40(3), 793–805.

FAMA, Eugene F., (1998). Market efficiency, long-term returns, and behavioral finance. Journal of Financial Economics, 49(3), 283–306.

FESTINGER, Leon, Henry W. RIECKEN, and Stanley SCHACHTER, (1956). When Prophecy Fails. Minneapolis: University of Minnesota Press.

KAHNEMAN, Daniel, Paul SLOVIC, and Amos TVERSKY, eds., (1982). Judgment Under Uncertainty: Heuristics and Biases. Cambridge University Press.

KAHNEMAN, Daniel, and Amos TVERSKY, (1979). Prospect theory: An analysis of decision under risk. Econometrica, 47(2), 263–292.

KAHNEMAN, Daniel, and Amos TVERSKY, (2000). Choices, Values, and Frames. Cambridge University Press.

TVERSKY, Amos, and Daniel KAHNEMAN, (1974). Judgment under uncertainty: Heuristics and biases. Science, 185(4157), 1124–1131.

TVERSKY, Amos, and Daniel KAHNEMAN, (1981). The framing of decisions and the psychology of choice. Science, 211(4481), 453–458.

TVERSKY, Amos, and Daniel KAHNEMAN, (1992). Advances in prospect theory: Cumulative representation of uncertainty. Journal of Risk and Uncertainty, 5(4), 297–323.