

Behavioural Finance: Evidence from the literature Perspective

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Abstract

Behavioural finance has received a serious impetus over the last 20 years. During this paper, we have a tendency to discuss the foundations that have helped during this paradigm shift from ancient economical Market Hypothesis (EMH) to the a lot of experimental branch of finance, particularly activity finance. We have a tendency to discuss EMH within the context of its critics, and gift various theories still as psycho-logical ideas that are helpful in understanding activity finance. We have a tendency to conduct three separate experiments to check Prospect theory, a preferred theory place forth by Kahneman; Tversky [1]. We have a tendency to conduct the experiments on a special style of respondent cluster than that has been employed in the past. employing a relatively uniform cluster well versed in chance and statistics, we discover that career professionals exhibit less biases than student subjects that are employed in such experiments within the past.

Keywords

Experimental Economics, Behavioural Finance, Behavioural Economics, Prospect Theory, Experimental Finance, Efficient Market Hypothesis

1. Introduction

Behavioural finance is one in all the newer forthcoming areas in finance that has received a significant impetuous over the last twenty years. it's a field that seeks to mix behavioral and psychological feature psychological theory with standard economic science and finance to supply explanations for why folks create irrational money choices. behavioral finance, not like ancient finance, assumes that there are limits to arbitrage which all humans don't seem to be rational. one in all the crude assumptions that ancient theories create is that folks are rational and perpetually look for to maximise their own well-being by increasing their wealth. Emotions and different extraneous factors don't influence folks once it involves creating economic decisions. It assumes that although there are some irrational agents, they'll be weedless out of the market through arbitrage. but many studies have shown that there are limits to arbitrage [2], and human emotions and sentiment will have an effect on market outcomes. behavioural finance seeks to clarify "real man" actions, whereas fashionable finance seeks to clarify the actions of AN fanciful "economic man" (Homo economicus). Humans don't seem to be perpetually rational and neither do they need infinite computing power to contemplate all the potential things to create best choices. In fact, additional usually than not folks use rules of thumb instead of long, punishing calculations which might lead to creating sub-optimal decisions and may produce market frictions. Another assumption of ancient theory that irrational market participants are weedless out of the market through arbitrage also can be challenged on several fronts. for instance, take the case of a student UN agency makes a wrong call in connection the university best appropriate for his career. there's no method AN arbitrage is feasible in such things. Let's take another example of casino gambling. the percentages are

set such within the long-term all the players solely create losses. Still many folks gamble daily. If markets were complete and ideal arbitrage was potential, all the gamblers (irrational agents) ought to have lost all their cash to the casinos and casinos should have run out of business that isn't the case. therefore it is argued that markets don't seem to be roaring in deterring irrational folks from getting into markets and arbitrage opportunities will persist for long periods of your time. Therefore, it's vital that we discover an alternate theory to clarify actions of those irrational agents, which might influence the result, whereas creating choices.

Even though behavioural finance has established itself as a full-fledged branch of analysis, understanding it needs AN understanding of a number of the essential principles of economical Market Hypothesis (EMH). In what follows, we'll begin with a discussion of EMH before outlining its issues and also the *raison d'être* of behavioural finance. therefore Section II outlines a number of the essential ideas of EMH that are useful in understanding behavioural finance literature. Section III contains AN analytical survey of empirical studies that challenge the assumptions of ancient finance literature.

In Section IV, we tend to discuss numerous psychological ideas that are wide utilized in behavioural finance. In section V we tend to gift our experimental results of Prospect theory. Section VI presents the closing remarks.

2. Efficient Market Hypothesis: An Introduction

Efficient Market Hypothesis states that markets continually mirror complete info in costs. However, this statement is extremely general, and it's terribly troublesome to conduct empirical tests to prove or confute this hypothesis. Fama [3] classified the tests on EMH into 3 classes supported the data set into consideration. The weak type potency within which the data set into consideration is historical costs, the semi-strong type potency within which the data set into consideration is all in public on the market information, and also the robust type potency within which the data set into consideration is all in public and in camera on the market information.

(a) The weak form of market efficiency tests

In the weak form of market efficiency tests the “fair game” variable ($Z_{i,t}$), de-fined as given below, should have zero serial covariance between its lagged val-ues else the market is weak form inefficient.

$$Z_{i,t} = r_{i,t} - E(r_{i,t} | r_{i,t-1}, r_{i,t-2}, \dots) \quad (1)$$

where $r_{i,t}$ refers to stock i in period t . This definition implies that the actual stock returns are randomly distributed around an expected mean return. However, this condition is sometimes mistaken to be equivalent to equation 2 which is a necessary condition for random walk models.

$$E(r_{i,t+1} | r_{i,t}) = E(r_{i,t+1}) \quad (2)$$

Random walk models assume that expected stock returns are constant and do not vary over time as implied in Equation (2). However, this is not a necessary condition for markets to be efficient. If the stock returns follow a random walk, then they are weak form efficient. On the contrary, if the stock returns are weak form efficient they need not follow a random walk. The expected returns in the above equations can be estimated using any model (e.g. Sharpe-Linter model etc).

Another way of testing weak form of EMH is to see if any trading rule formed using past returns data can generate excess profits. The final method of disproving weak form of market efficiency hypothesis would be to show that some of the market microstructure related constructs can lead to inefficiency.

(b) The semi-strong form of market efficiency tests

The semi-strong form of market efficiency says that the stock prices fully reflect all the publicly available information. A lot of publicly available information is subjective and can be interpreted in different ways by different people. What-ever be the price of the security it can always be justified as a result of careful consideration

of all the publicly available information. Hence it is very difficult to directly test if the stock prices actually reflect all the information. The best way to test semi-strong form of efficiency would be to do an event based study. A lot of event-based studies on stock splits, earnings announcements, etc. have been conducted in this area which will be discussed in greater detail in section III.

(c) The strong form of market efficiency tests

A considerable amount of research has been done in this area, and there is a general consensus among researchers that markets are not strong form efficient. For example, Niederhoffer & Osborne [4] have shown that specialists on NYSE use their monopolistic access to information for generating profits. The Enron and WorldCom scandals in the US; Satyam Computers Services scandal in Republic of India, etc are obvious samples of sturdy variety of market unskillfulness. Since most of the investors don't have access to non-public info, it's unreasonable to assume that market costs absolutely mirror non-public info. Therefore for the rest of the paper, we'll not discuss sturdy type tests for market potency.

This basic understanding of EMH are going to be useful in understanding which kind of tests refute (or support) EMH at what level of market potency i.e. Strong, Semi-strong or Weak level of market potency. a very important feature of those tests on EMH is that the Joint Hypothesis drawback. Most of the tests on EMH should assume the validity of AN equilibrium plus valuation model. For example, weak form of market efficiency tests check for zero serial autocorrelation of “fair game” variable ($Z_{i,t}$) defined as in equation 1. Estimating this fair game variable requires estimation of $E(r_{i,t} | r_{i,t-1}, r_{i,t-2}, \dots)$ which represents next period's expected return conditional on past returns. This next period expected return conditional on past returns is generally estimated using an equilibrium asset pricing model like CAPM, Fama French three factor model etc. Similarly, event based studies in semi-strong form of market efficiency tests assume the validity of an equilibrium asset pricing model for calculating risk adjusted excess returns.

Therefore, every such test on market efficiency is a dual test of both market efficiency and the equilibrium pricing model. So, if any of these tests reject EMH it could be either due to the deficiencies in the equilibrium pricing model or be-cause the markets are inefficient or both. This is called the joint hypothesis problem and one of the prime reasons behind the difficulties in disproving EMH. With this understanding, we now provide an analytical review of literature discrediting EMH in the next section.

Analytical Review of Literature Discrediting Traditional Theory

The literature in behavioral finance is continuously evolving with new branches developing every day. In what follows, we divide the entire literature into four categories. The first group covers studies related to the Capital Asset Pricing Model. The second discusses studies on Prospect theory, an alternative to Utility theory. The third focuses on empirical and theoretical studies of Under-reaction and Over-reaction. The fourth lumps other miscellaneous studies including individual investor behavior, applications of behavioral finance in corporate finance, etc.

(a) Studies related to the Capital Asset Pricing Model

The Capital plus valuation Model, derived by trial and error from the essential principles of ancient finance literature, was used at the start to clarify the come back on risky assets, and conjointly received some empirical support. but proof as early as 1968 have shown that stocks with low P/E earn higher risk-adjusted returns vis-à-vis stocks with high P/E [5]. Most of those early papers suffered severely from lack of sturdy methodology. Basu [6] was one amongst the primary papers to receive wide recognition. He conjointly found that stocks with low P/E ratios gave higher risk-adjusted returns than those with high P/E ratios. He argued that the determined anomaly was thanks to market unskillfulness. However, this paper like several others suffered from the Joint Hypothesis downside. Their findings instructed that either Capital plus valuation Model or economical Market Hypothesis or each might be wrong.

Most of the above studies were also discredited by the proponents of EMH, owing to the presence of methodological errors. Ball [7] reviewed twenty studies of post-announcement excess returns including those on earnings announcements, dividends announcements, and value line ratings. He referred to these as proxies of yield and called them yield-surrogates. He concluded that methodological or data errors could not possibly explain all of the observed excess returns in these studies and concluded that the two-parameter model had few omitted variables related to yield surrogates. However, he failed to put forth a convincing argument as to why EMH was not invalid. Later, Watts [8] provided an excellent argument against EMH. He conducted a two-period study and observed risk-adjusted abnormal returns in only one of the periods. Watts argued that if the risk-adjusted excess returns were due to model misspecification, then it should have been observed in both the periods. However, since the anomaly was observed in only one of the periods, Watts argued that it was probably because the market deviated from efficiency in that period¹.

The above studies clearly show that traditional theory is not inviolate in explaining market returns. From the Joint hypothesis problem either CAPM could be wrong or EMH or both. It should be noted, however, that while CAPM has been derived empirically from first principles of economics like Utility theory etc., EMH is just a hypothesis which has never been proven empirically beyond doubt.

(b) Prospect theory

The roots of most of the current asset pricing models like CAPM, APT etc. lie in the validity of Utility theory [10]. Kahneman & Tversky [1] conducted several experimental studies and found evidence contrary to utility theory. They have shown experimental evidence for Certainty Effect, Reflection, Isolation effect etc., discussed in the next section, which contradicts Utility theory. Using the above anomalies as a basis, they proposed an alternative theory called the Prospect theory. Unlike utility theory, the decision-making process in Prospect theory is divided into two phases: the *editing phase* and the *evaluation phase*. The editing phase often results in simplification of prospects. Kahneman & Tversky refer to several biased editing techniques like Combination, Segregation, Coding etc. which people tend to use during the editing phase. These editing techniques can result in inferring wrong conclusions in the second phase. In the second stage the probabilities of prospects are replaced by decision weights and these decision weights in general are not necessarily equal to their respective probabilities. The Prospect theory value function is not always a concave function and is as shown in **Figure 1**.

Three decades since the first publication of the paper on Prospect theory, it is still one of the major contributions from behavioral finance questioning the validity of Utility theory. However, it is yet to achieve wide acceptance because

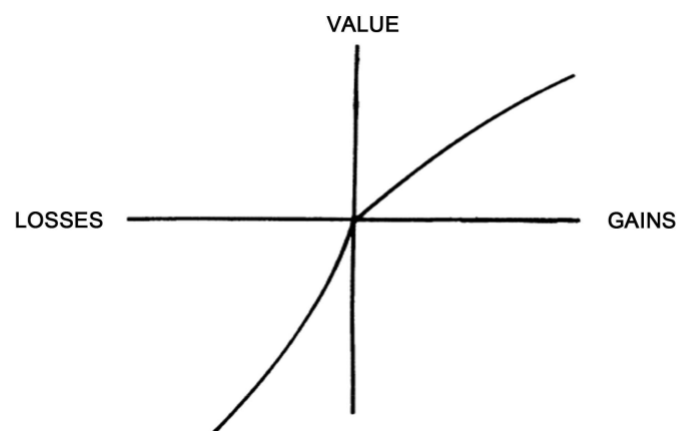


Figure 1. Prospect theory value function².

unlike utility theory, Prospect theory is perhaps more complex. For example, it is possible for two similar persons with similar choices to choose different options depending on the way they simplify the options in the editing phase. This value function represents the utility that is achieved as a result of a certain amount of gain or loss. The value function is an S-shaped curve. Similar to utility theory, at higher probability of gains it is concave in nature. However, it is convex when the probability of gains is very small. This shape derives from the testable hypothesis

that people are risk averse when the probability of gain is large and positive, but risk seeking when the probability of gain is small and positive.

The reverse is the case for losses. When the probability of losses is large the value function is convex and when the probability of loss is very small it becomes concave. This implies that investors are risk seeking when the losses are large and risk averse when the losses are small. Also the value function of losses is much steeper than the value function of gains. This shows that a loss creates a greater feeling of having low value (pain) compared to the feeling of having higher value (joy) created by an equivalent gain. For example, people find it more painful losing \$10 than they feel joy in finding \$10.

(c) Studies on Overreaction and Underreaction

It is a well-documented reality in psychological science that folks tend to respond to fulminant and unexpected news events. Bondt; Thaler [11] tested this hypothesis in connectedness to the exchange by testing if past losers outstrip past winners. The logic behind this hypothesis is that investors tend to respond to dangerous data within the previous quarters of a loser portfolio stock leading the stock to be a lot of under-priced than it ought to optimally be. employing a similar logic, stock in an exceedingly winner portfolio ought to be over-priced. If the on top of hypothesis is correct, under-priced stocks ought to yield higher returns because the costs revert to their mean values and equally expensive stocks should provide lower re-turns than expected. Their empirical results support this hypothesis and supply proof for momentum in costs.

The reaction hypothesis mentioned on top of may be wont to justify the P/E anomaly discussed earlier. Stocks with low P/E may be viewed as corporations with dangerous data over the previous quarters. This negative data might have resulted in associate degree reaction by investors, resulting in a bigger visit costs of stocks than rationally excusable and thence low P/E. Similarly, stocks with high P/E ratio may be viewed as expensive stocks thanks to positive in-formation over the previous quarters. Jegadeesh & Titman [12] show that purchasing stock that have performed well and commercialism stocks which have performed badly over a three - twelve month holding amount can generate excess profits. in an exceedingly similar study Lakonishok, Shleifer, & Vishny [13] prove that investor investment methods generate risk-adjusted excess returns.

Fama & French argued that aside from Jegadeesh & Titman's momentum strategy most of the on top of mentioned anomalies are thanks to missing issues within the valuation model and show that their 3 factor models account for many of the anomalies. However, the economic explanation given by them has received a lot of criticism.³

Combining the works of Jegadeesh & Titman [12], UN agency show short term momentum in stocks, therewith of Fama & French [3], and Bondt & Thaler [11] UN agency show semipermanent reversal in stocks, Barberis, Shleifer, & Vishny [14] developed a model for explaining capitalist sentiment. Their model is predicated on the psychological ideas of representativeness and political theory. Daniel, Hirshleifer, & Subrahmanyam [15] additionally projected a model for capitalist sentiment using ideas like certainty and biased self-attribution. Another vital model of capitalist behavior explaining the on top of development is developed by Hong; Stein [16].

(d) Miscellaneous

Shiller [17] showed that the stock prices are five to thirteen times more volatile than expected when compared to changes in dividends. However if EMH is true, the volatility of stock prices should be approximately equal to that of dividends. Even if we consider variations due to data errors, methodological errors etc the stock prices are too volatile to be explained by these.

One the common assumptions of EMH is that on an average noise traders bet against each other and at an aggregate level they don't have any effect on stock prices. Even if some of these noise traders try to influence the stock prices

the rational speculators quickly act against them and remove any mispricing. However Long Shleifer Summers & Waldmann [18] show that this would not hold true if noise traders follow positive feedback trading policies. They argue that it would be in the best interest of rational speculators to buy the stocks when they expect noise traders to buy stock so that they can sell it when the stock's price goes up. This line of reasoning implies that even rational agents acting rationally can lead to destabilization of markets.

4. Psychological Concepts Used in Behavioural Finance

Behavioural finance brings insights from science, scientific discipline and alternative scientific discipline disciplines to assist U.S.A. perceive development that can't be explained by ancient finance. This field encompasses similar and dissimilar theories that share one divisor. All question the quality of assumptions underlying EMH, and provide various explanations to clarify ascertained behaviour. one in all the most criticisms of this branch of analysis is that it's an advertisement hoc assortment of many models every making an attempt to clarify a distinct development. because it lacks an overlaying principle which may make a case for all the ascertained anomalies, this space is ripe for additional analysis. during this section, we have a tendency to describe a number of the theories that are rife below this broad umbrella.

(a) Disposition Effect

The tendency of investors to sell winners too early and hold on to losers for too long is called *Disposition Effect*. In the process, people act as if they are trying to maximize their tax which is in contradiction to the predictions of traditional finance literature where people are tax minimizers. Ideally, people should book their losses early to gain tax benefits early and delay booking profits to defer paying taxes [19]. However, empirical evidence provides support for the *Disposition Effect* [20].

(b) Cognitive Dissonance

In Psychology, *Cognitive Dissonance* is defined as mental discomfort that people experience when they confront new information contradicting their existing views. People try to reduce dissonance by rejecting or misinterpreting any new information which is not in conformance with their existing beliefs. *Cognitive Dissonance* could be one of the reasons behind the delayed adjustment of stock prices for surprises in earnings announcements.

(c) Regret Avoidance and Regret Theory

Regret Avoidance deals with the emotional reaction people experience as humans have a tendency to feel the pain of regret for making errors in their judgement and tend to act in a way so as to reduce regret. Humans become emotion-ally affected by their original purchase price of a stock in their portfolio when they consider selling it. They avoid selling the stock in which they have made losses, in order to avoid the regret of having made a bad investment. This makes them hang on to a bad decision, which can further aggravate their loss. Similarly, people rush to book profits as soon as possible to reduce the pain of regret in future for not booking profits before the price falls from its peak [21]. Hence this tendency of humans to feel the pain of regret could be the reason behind the disposition effect. Similarly, cognitive dissonance can also be seen as a result of pain of regret of holding wrong views. So, people try to reduce the pain of regret by discrediting the new information and in turn try to reduce dissonance of holding wrong beliefs.

Regret Theory holds that individuals anticipate the regret they're planning to have in creating their money choices which may build them either risk seeking or risk disinclined. AN capitalist might take larger risk to avoid the regret of not holding a security that has the potential to realize in future. Similarly, an capitalist may additionally become risk disinclined to avoid the regret of holding a stock which may perform poorly in future. The essence of Regret

Theory is that Regret shunning will generally lead investors to create choices which can cut back their regret within the short term however are doubtless to be inefficient in the long-term.

(d) Anchoring Bias

It is a well-known fact that people make their final estimates by making adjustments to initial estimates. In psychology, these initial estimates are anchors. However, more often than not these adjustments are not sufficient enough to adjust the initial estimates. The resulting bias in the usage of anchors is called the *Anchoring Bias*. For example, past prices of stocks can act as anchors for investors.

(e) Representativeness

Representativeness is an important heuristic which can lead to biased decisions when making judgments on the probability of occurrence of event under uncertainty. A person whose decisions are biased by this heuristic evaluates the probability of an uncertain event “by the degree to which it is 1) similar in its essential properties to the parent population, and, 2) reflects the salient features of the process by which it is generated” [22]. For example, let us take a person who is acquainted with several Investment bankers who have a 16 hours/day work schedule. Now he suddenly comes across a person who has a 16 hours/day work schedule and isn’t aware of any other characteristic of that person. He would immediately relate this person to his Investment banker acquaintances and mentally associates a high probability of him being an Investment Banker. However, in reality, less than 1% of the total population are investment bankers, and hence the probability of him being an Investment Banker is very low. This bias in judging an event based on how similar it is to its parent population is called *representativeness*.

(f) Conservatism

As the name suggests, *Conservatism* refers to the fact that people are some-times conservative to new information i.e. people are slow in changing their be-liefs to new information when compared to a rational Bayesian benchmark. *Conservatism* could be one of the reasons behind the underreaction to new in-formation.

Even though several psychological theories have been explained here as if they are mutually exclusive in practice they are interlinked with one another. For example, the *Disposition Effect* can be explained as a special case of Regret avoidance. Similarly, *Cognitive Dissonance* can be seen as the pain of regret of mistaken beliefs. Market under and over reaction can be explained using investor overconfidence and self-attribution; representativeness bias and conservatism etc. Therefore, typically every anomaly observed through empirical studies can be explained by more than one of these theories. More research is required to study whether there are cases where these theories can be differentiated.⁴

5. Experimental Test of Prospect Theory

Much of traditional finance theory is based on the assumption of the validity of utility theory including Capital Asset Pricing Model and Arbitrage theory of as-set pricing. Kahneman & Tversky [1] criticized some of the assumptions of Expected Utility theory and proposed an alternative called Prospect theory. This theory is developed from certain psychological concepts explained next.

One fair criticism of experimental research is that they use university students as human subjects. However trained professional might not be subjected to the same biases. Therefore we test Prospect theory by Kahneman & Tversky [1] on officers from Indian Statistical services to see if they exhibit similar biases. Our subjects are also significantly much older than the experimental subjects of Kahneman & Tversky [1]. **Appendix I** has the questionnaire administered to the subjects.

i) Certainty Effect

Certainty effect refers to the fact that people prefer certain outcomes to merely probabilistic outcomes. Kahneman & Tversky [1] explain this phenomenon using the following pair of choice problems.

Problem 1:	A : (25,000, 0.33; 24,000, 0.66)	B: (24,000, 1.00)
	17%	83%
Problem 2:	A: (25,000, 0.33)	B: (24,000, 0.34)

50%

50%

Source: Author's calculations.

[Where notation (25,000, 0.33; 24,000, 0.66) represents chance of winning 25,000 with 0.33 probability, 24,000 with 0.66 probability and zero with probability 0.01. Similarly (25,000, 0.33) represents chance of winning 25,000 with 0.33 probability and 0 with 0.67 probability. The percentages represent the proportion of participants who chose the respective options.]

In problem 1 subjects preferred option B. This implies

$$0.33 * U(25,000) + 0.66 * U(24,000) < U(24,000) \text{ or}$$

$$0.33 * U(25,000) < 0.34 * U(24,000)$$

However in problem 2 subjects prefer option A which violates the above inequality and hence violate the substitution axiom of utility theory. According to the utility theory the subjects should have chosen either the former or latter option in both the experiments. This unwarranted surge in preference of subjects for certain outcomes is called the *certainty effect*. While statisticians in our experiment also exhibit certainty effect it is less than as predicted by Kahneman & Tversky [1]. We also conduct a simpler version of the above experiment as shown below. Our results are qualitatively similar to the above pair of choice problems. In problem 3, 82% prefer Rs 30,000 with certainty ($p = 1$), and 18% prefer Rs 40,000 with 0.80 probability. In problem 4, 52% prefer 30,000 with 0.25 probability and 48% prefer Rs 40,000 with 0.20 probability. From problem 3 and 4 we can conclude that Statisticians exhibit much lesser certainty effect than as compared to students.

Problem 3:	A: (40,000, 0.8)	B: (30,000, 1.00)
	18%	82%
Problem 4:	A: (40,000, 0.20)	B: (30,000, 0.25)
	48%	52%

Source: Author's calculations.

In the same study, Kahneman & Tversky [1] found that when the probability of winning is very low, then the subjects chose the option with a maximum possible payoff.

Problem 5:	A: (60,000, 0.45)	B: (30,000, 0.9)
	21%	79%
Problem 6:	A: (60,000, 0.001)	B: (30,000, 0.002)
	52%	48%

Source: Author's calculations.

In problem 5, 79% prefer Rs 30,000 with 0.90 probability while 21% prefer Rs 60,000 with 0.45 probability. In problem 6, 48% prefer Rs 30,000 with 0.002 probability while 52% prefer Rs 60,000 with 0.001 probability. In the above experiment we find when the probability of winning is very low people switch to the riskiest choice. However, the subjects would have chosen the same option in both the cases had expected utility theory held. We find that statistical officers do not change their preference at low probabilities to the extent predicted by Kahneman & Tversky.

ii) Reflection Effect

In another set of experiments, Kahneman & Tversky [1] showed that when their subjects were given an option between a risk averse and risky choice with equal expected gains, they chose the former. However, when the amounts were merely multiplied with a negative sign (loss expectation instead of profit), they chose the latter. This implies that people are risk averse as predicted by utility theory when it comes to profits while the same doesn't hold true when it comes to losses. This distortion in expected behavior of subjects when it comes to choices

involving losses is called the *reflection effect*. Our results shown below for statisticians show that they also exhibit reflection effect.

Problem 7:	A: (-40,000,0.20)	B: (-30,000,1.00)
	30%	80%
Problem 8:	A: (-40,000,0.20)	B: (-30,000,0.25)
	17%	23%
Problem 9:	A : (-60,000, 0.45)	B: (-30,000, 0.9)
	51%	69%
Problem 10:	A: (-60,000, 0.001)	B: (-30,000, 0.002)
	11%	19%

Source: Author's calculations.

iii) Isolation Effect

When people are faced with two choices they generally tend to neglect commonalities between the two choices and focus only on the differences. For example, let us consider a two stage game where there is a 75% probability of ending the game with a zero payoff and 25% probability of moving to the second round. If you reach the second round you have a choice between the following options below. However the choice must be made before the outcome of first experiment is known.

Problem 11:	A : (40,000, 0.80)	B: (30,000)
	20%	50%

Source: Author's calculations.

This is similar to a one stage game of choosing between lotteries worth 40,000 with 20% ($0.25 * 0.80 = 0.20$) chance of winning and 30,000 with 25% ($1 * 0.25 = 0.25$) chance of winning. However in the two stages game majority of the sub-jects chose option B while in the single stage game majority chose option A. This tendency of people to neglect commonalities between choices before making de-cisions can lead to making choices contradicting utility theory. This is called the *isolation effect*.

Coding: *Coding* refers to the fact that people make decisions perceiving indi-vidual outcomes as gains or losses rather than changes of their final state of wealth. This is in contradiction to the utility theory where it assumes people try to maximize the utility of their total wealth rather than the utility of individual decisions.

Using the above discussed psychological biases Kahneman & Tversky [1] proposed the famed *Prospect Theory* discussed in the previous Section III.

6. Discussion and Conclusion

Many researchers have argued that the shortcoming of empirical tests to reject EMH doesn't give proof in favor of the hypothesis.⁵ Researchers have completely different opinions on this issue. whereas the proponents of the economical Market Hypothesis believe that markets are efficient, the proponents of behavioral finance believe that markets are inefficient intermittently. notwithstanding the ascertained anomalies were a results of data processing and method errors, because the proponents of economical Market Hypothesis argue, we tend to believe that these anomalies have junction rectifier to a development of other hypothesis that has improved our understanding of the markets.

Since behavioral finance may be a comparatively new field, abundant of analysis has focussed on characteristic anomalies. currently it's time to shift the main focus of analysis in planning an overlaying principle which might justify multiple anomalies at a time. Lack of an alternate overlaying principle is additionally a vital reason why folks are reluctant to reject the economical Market Hypothesis. Barberis, Shleifer,; Vishny [14]; Daniel, Hirshleifer, Subrahmanyam [15]; and Hong & Stein [16] have created few tries in developing empirical models which might simultaneously justify multiple development. Clearly rather more effort is required during this direction.

In this paper, we've mentioned a number of the foundational papers that have junction rectifier to the event of behavioral finance. whereas abundant of the normal finance literature is predicated on the idea of validity of expected utility theory, it fails once tested through empirical observation. Kahneman; Tversky [1] projected Associate in Nursing alternative to Expected Utility theory for higher cognitive process below risk and known as it Prospect Theory. Like several educational studies Kahneman; Tversky [1] use student subjects in their experiments. so we tend to take a look at if statistically trained subjects additionally exhibit the biases as projected in Prospect theory. we discover that our results are qualitatively similar however they're not as sturdy as foreseen by Kahneman; Tversky [1]. so we tend to conclude that have helps in reducing the biases a lay person exhibits. With Prospect Theory finding intensive usage in behavioral finance literature [24], such experimental studies with various teams would go a protracted means in informing us whether or not Prospect Theory itself exhibits anomalies, or it will function a helpful counterpoint to ancient finance. it'd be attention-grabbing to visualize however these results can interruption if we feature out similar experiments on senior level force of corporations World Health Organization truly have an effect on the investment choices. we tend to leave this as a district of any analysis.

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