Behavioural Finance-A Kaleidoscopic View

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Abstract

Most of the theory in securities market are based on the assumption that everyone takes full account of all the available information in the market and behave with rationality. But it has been observed that it is not the case always. A new area of research has come up which recognizes the psychological element in financial decision making and thus challenge the traditional models. This new area of study is known as behavioural finance and in the changing socio-economic and technological context; it is high time to study this new area of study. The objective of this paper is to present a detail view of the developments in this new area of research known as behavioural finance. The methodology adopted here is the review of the existing literature and the researches done in this area. The paper starts with an introductory remark of behavioural finance then discuss about the history of behavioural finance studies. After this the various theories developed in this area have been discussed followed by the criticisms of behavioural finance and the arguments in favour of behavioural finance. Finally, the paper ended up with a conclusion that undertaking research in this area does not mean that the conventional theories should be abandoned but a combination of both should be developed and conventional theories should be accepted as the workhorse for the sensible research if used appropriately.

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Introduction

There have been many studies that have documented long-term historical phenomena in securities markets that contradict the efficient market hypothesis and cannot be captured possibly in models based on perfect investor rationality. A New area of financial research which has started to recognize a psychological element in financial decision making and thus challenging the traditional models that assume investors will always weigh risk/return factors rationally and act without bias. In the back drop of the above statement, the concept of behavioural finance emerges. The premise of behavioral finance states that by taking psychological factors into account the effectiveness of investment strategies can be enhanced.

This is the field of study that uses the psychology-based theories to explain stock market anomalies. In behavioural finance models, it is assumed that the information structure and the characteristics of market participants systematically influence individuals' investment decisions as well as market outcomes.

This area of enquiry is also sometimes referred to as "behavioural economics". So, Behavioural finance combines the twin disciplines of psychology and economics to explain why and how people make seemingly irrational or illogical decisions when they spend, invest, save, and borrow money.

History of Behavioural Finance Study

During the classical period, economics had a close link with psychology. For example, Adam Smith wrote an important text describing psychological principles of individual behaviour, The Theory of Moral Sentiments and Jeremy Bentham wrote extensively on the psychological underpinnings of utility. Economists began to distance themselves from psychology during the development of neo-classical economics as they sought to reshape the discipline as a natural science, with explanations of economic behaviour deduced from assumptions about the nature of economic agents. The concept of homo economicus was developed and the psychology of this entity was fundamentally rational. Nevertheless, psychological explanations continued to inform the analysis of many important figures in the development of neo-classical economics such as Francis Edgeworth, Vilfredo Pareto, Irving Fisher and John Maynard Keynes.

Psychology had largely disappeared from economic discussions by the mid 20th century. A number of factors contributed to the resurgence of its use and the development of behavioural economics. Expected utility and discounted utility models began to gain wide

acceptance which generated testable hypotheses about decision making under uncertainty and intertemporal consumption respectively, and a number of observed and repeatable anomalies challenged these hypotheses. Furthermore, during the 1960s cognitive psychology began to describe the brain as an information processing device (in contrast to behaviorist models). Psychologists in this field such as Ward Edwards, Amos Tversky and Daniel Kahneman began to benchmark their cognitive models of decision making under risk and uncertainty against economic models of rational behaviour.

Perhaps the most important paper in the development of the behavioural finance and economics fields was written by Kahneman and Tversky in 1979. This paper, 'Prospect theory: Decision Making under Risk', used cognitive psychological techniques to explain a number of documented anomalies in rational economic decision making.

Theories in Behavioural Finance

Behavioural finance is an evolving area of study. It is basically the combination of psychology, anthropology, and other social sciences. Theories of human behaviour from psychology, sociology, and anthropology have helped and motivate much recent empirical research on the behaviour of financial markets. So it is better to set forth the theories from the other social sciences themselves, describing when possible the controlled experiments that demonstrate their validity, and give for each a few illustrations of applications in finance.

Prospect Theory

Tversky and Kahneman (1979) originally described "Prospect Theory" in 1979. They found that contrary to expected utility theory, people placed different weights on gains and losses and on different ranges of probability. They found that individuals are much more distressed by prospective losses than they are happy by equivalent gains. They also found

that individuals will respond differently to equivalent situations depending on whether it is presented in the context of losses or gains. Researchers have also found that people are willing to take more risks to avoid losses than to realize gains. Faced with sure gain, most investors are risk-averse, but faced with sure loss, investors become risk-takers.

Regret Theory

Professor Statman is an expert in the behaviour known as the "fear of regret." People tend to feel sorrow and grief after having made an error in judgment. It is observed that investors avoid selling stocks that have gone down in order to avoid the pain and regret of having made a bad investment. The embarrassment of having to report the loss to the clients, accountants, spouse and others may also contribute to the tendency not to sell losing investments. Many investors find it easier to buy a popular stock and rationalize it going down since everyone else owned it and thought so highly of it. Additionally, many believe that money managers and advisors favour well known and popular companies because they are less likely to be fired if they under perform.

Anchoring

Anchoring is a phenomenon in which, in the absence of better information, investors assume current prices are about right. In a bull market, for example, each new high is 'anchored' by its closeness to the last record, and more distant history increasingly becomes an irrelevance. People typically give too much weight to recent experience and extrapolate recent trends that are at odds with long-run averages and statistical odds. Anchoring is a reference point in the mind of the investor and while making any kind of investment decisions they use to compare the situation with the reference point.

Over and Under-Reaction

The consequence of investors putting too much weight on recent news at the expense of other data is market over- or under-reaction. People show overconfidence. They tend to become more optimistic when the market goes up and more pessimistic when the market goes down. As an example, Professor Shiller found that at the peak of the Japanese market, 14% of Japanese investors expected a crash, but after it did crash, 32% expected a crash. Hence, prices fall too much on bad news and rise too much on good news (Barberis N., Shleifer A and Vishny R, 1997).

Mental Accounting

Related to the anchoring and framing phenomena is a human tendency to place particular events into mental compartments based on superficial attributes. Instead of looking at the big picture, as would be implied by expected utility theory, they look at individual small decisions separately. People may tend to place their investments into arbitrarily separate mental compartments, and react separately to the investments based on which compartment they are in. Shefrin and Statman (1994) have argued that individual investors think naturally in terms of having a "safe" part of their portfolio that is protected from downside risk and a risky part that is designed for a chance of getting rich. Shefrin and Thaler (1988) have argued that people put their sources of income into three categories, current wage and salary income, asset income, and future income, and spend differently out of the present values of these different incomes. For example, people are reluctant to spend out of future income even if it is certain to arrive.

The Disjunction Effect

The disjunction effect is a tendency for people to want to wait to make decisions until information is revealed, even if the information is not really important for the decision, and

even if they would make the same decision regardless of the information. The disjunction effect is a contradiction to the "sure-thing principle" of rational behaviour (Savage L. J, 1954).

The disjunction effect might help explain changes in the volatility of speculative asset prices or changes in the volume of trade of speculative asset prices at times when information is revealed. Shafir and Tversky (1992) give the example of presidential elections, which sometimes induce stock market volatility when the election outcome is known even though many skeptics may doubt that the election outcome has any clear implications for market value.

Gambler's Fallacy

The tendency for people to gamble has provided a puzzle for the theory of human behaviour under uncertainty, since it means that we must accommodate both risk-avoiding behaviour (as evidenced by people's willingness to purchase insurance) with an apparent risk loving behaviour. For one thing, people who gamble do not appear to be systematically risk seekers in any general sense; instead they are seeking specific forms of entertainment or arousal. The complexity of human behaviour exemplified by the gambling phenomenon has to be taken into account in understanding the etiology of bubbles in speculative markets. Gamblers may have very rational expectations, at some level, for the likely outcome of their gambling, and yet have other feelings that drive their actual behaviour. Economists tend to speak of quantitative "expectations" as if these were the only characterization of people's outlooks that mattered. It is revealed from interviews and survey results, that the same people who are highly emotionally involved with the notion that the stock market will go up may

give very sensible, unexciting, forecasts of the market if asked to make quantitative forecasts (Friedman M and Savage L J, 1948).

The Irrelevance of History

One particular kind of overconfidence that appears to be common is a tendency to believe that history is irrelevant, not a guide to the future, and that the future must be judged afresh now using intuitive weighing only of the special factors one see at a particular time. This kind of overconfidence discourages taking lessons from past statistics. Until academic researchers started collecting financial data, most was just thrown away as irrelevant. Lack of learning from historical lessons regarding financial and economic uncertainties may explain why many investors show little real interest in diversification around the world and why most investors appear totally uninterested in the correlation of their investments with their labor income, violating with their behaviour one of the most fundamental premises of financial theory (Fischhoff B., 1975).

Magical Thinking

B. F. Skinner (1948) in what is now regarded as a classic experiment, fed starved experimental pigeons small quantities of food at regular fifteen-second intervals with no dependence whatsoever on the bird's behaviour. Even though the feeding was unaffected by their behaviour, the birds began to behave as if they had a "superstition" that something in their behaviour caused the feeding. Each pigeon apparently conditioned itself to exhibit a specific behaviour to get the food, and because each bird exhibited its characteristic behaviour so reliably, it was never deconditioned: One bird was conditioned to turn counter-clockwise in the cage, making two or three turns between reinforcements. Another repeatedly thrust its head into one of the upper corners of the cage. A third developed a tossing

response, as if placing its head beneath an invisible bar and lifting it repeatedly. Arbitrary behaviours that are so generated are referred to with the term "magical thinking by psychologists. A wide variety of economic behaviours are likely to be generated in exactly the same way that the arbitrary behaviours of the pigeons are generated. Thus, for example, firms' investment or management decisions that happened to precede increases in sales or profits may tend to be repeated, and if this happens in a period of rising profits (as when the economy is recovering from a recession) the notion that these decisions were the cause of the sales or profit increase will be reinforced. Because firms are similar to each other and observe each other, the magical thinking may be social, rather than individual, and hence may have aggregate effects.

Roll (1986), with his hubris hypothesis concerning corporate takeovers, argued that managers of bidder firms may become overconfident of their own abilities to judge firms, because of their luck in their first takeovers. This overconfidence can cause them to overbid in subsequent takeover attempts.

The U.S. stock market used often to be buoyed by positive news about the economy, but in recent years it appears to tend to be moved in the opposite direction by such news. This new "perverse" movement pattern for the stock market is sometimes justified in the media by a theory that the good news will cause the Federal Reserve to tighten monetary policy and that then the higher interest rates will lower the stock market.

Quasi-Magical Thinking

The term quasi-magical thinking, as defined by Shafir and Tversky (1992), is used to describe situations in which people act as if they erroneously believe that their actions can influence an outcome (as with magical thinking) but in which they in fact do not believe this.

It includes acting as if one thinks that one can take actions that will, in effect, undo what is obviously predetermined, or that one can change history. While this particular experimental outcome might also be explained as the result of a desire for self deception, Shafir and Tversky report as well as other experiments that suggest that people do behave as if they think they can change predetermined conditions. Quasi-magical thinking appears to operate more strongly when outcomes of future events, rather than historical events, are involved.

It appears likely that such quasi-magical thinking explains certain economic phenomena that would be difficult to explain the basis of strictly rational behaviour. Such thinking may explain why people vote, and why shareholders exercise their proxies. In most elections, people must know that the probability that they will decide the election must be astronomically small, and they would thus rationally decide not to vote. Quasi-magical thinking is thinking that in good society's people vote and so if they vote it can increase the likelihood that they have a good society or a good company which might explain such voting.

The disposition effect as mentioned by Shefrin and Statman (1985) referred to above, the tendency for individuals to want to hold losers and sell winners might also be related to quasi-magical thinking, if people feel at some level that holding on to losers can reverse the fact that they have already lost. Public demand for stocks at a time when they are apparently overvalued may be influenced by quasi-magical thinking, a notion that if I hold, then the stocks will continue to rise.

Attention Anomalies and the Availability Heuristic

William James criticized earlier psychologists, who in their theories effectively assumed that the human mind takes account of all sensory input, for taking no note of the phenomenon of selective attention. But the moment one thinks of the matter, one sees how

false a notion of experience that is which would make it tantamount to the mere presence to the senses of an outward order. Millions of items of the outward order are present to ones senses which never properly enter into his experience. The reason is because they have no interest for him. Ones experience is based on the events what he agrees to attend to. Only those items which he will notice shape his mind — without selective interest, experience is utter chaos (Shiller, R. J., 1989). The same criticism might equally well be applied to expected utility maximization models in economics, for assuming that people attend to all facts that are necessary for maximization of the assumed objective function (Berger, L. A., 1994).

Investment fashions and fads, and the resulting volatility of speculative asset prices, appear to be related to the capriciousness of public attention. Investor's attention to categories of investments (stocks versus bonds or real estate, investing abroad versus investing at home) seems to be affected by alternating waves of public attention or inattention. Investor's attention to the market at all seems to vary through time, and major crashes in financial markets appear to be phenomena of attention, in which an inordinate amount of public attention is suddenly focused on the markets (Shiller R. J, 1987).

Culture and Social Contagion

The concept of culture, central to sociology and cultural anthropology ever since the work of Tylor (1871), Durkheim (1893) and Weber (1947), is related to the selective attention that the human mind exhibits. There is a social cognition, reinforced by conversation, ritual and symbols that is unique to each interconnected group of people; to each nation, tribe, or social group. People tend not to remember well facts or ideas that are not given attention in the social cognition, even though a few people may be aware of such

facts. If one speaks to groups of people about ideas that are foreign to their culture, one may find that someone in the group will know of the ideas, and yet the ideas have no currency in the group and hence have no influence on their behaviour at large. The array of facts, suppositions, symbols, categories of thought that represent a culture have subtle and far-reaching affects on human behaviour.

The same methods that cultural anthropologists use to study primitive peoples can also be used to study modern cultures. O'Barr and Conley (1992) studied pension fund managers' behaviour using personal interviews and cultural anthropological methods. They concluded that each pension fund has its own culture, associated often with a colorful story of the origin of their own organization, akin to the creation myths of primitive peoples. The culture of the pension fund is a belief system about investing strategy and that culture actually drives investment decisions. Cultural factors were found to have great influence because of a widespread desire to displace responsibility for decisions onto the organization, and because of a desire to maintain personal relationships within the organization.

A Global Culture

There are many examples of imitation across countries apparently widely separated by both physical and language barriers. Fashions of dress, music, and youthful rebellion, are obvious examples. The convergence of seemingly arbitrary fashions across nations is evidence that something more is at work in producing internationally-similar human behaviour than just rational reactions to common information sets relevant to economic fundamentals. And yet it will not be an easy matter for any one to decide in what avenues global culture exerts its influence. There is now a world culture, but one had to better make sure that he understand what this means. It is marked by an organization of diversity rather

than by a replication of uniformity. No total homogenization of systems of meaning and expression has occurred, nor does it appear likely that there will be one any time soon. But the world has become one network of social relationships, and between its different regions there is a flow of meanings as well as of people and goods. Sociologists have made it their business to study patterns of influence within cultures, and we ought to be able to learn something about the nature of global culture from their endeavors. Reading such sociological studies inclines us to rather different interpretations of globally similar behaviours than might occur naturally to many traditional economists. This will probably explain the reason why the stock markets of the world moved somewhat together, and also the stock markets of the world show greater tendency to move together after the stock market crash of 1987 in U.S.A. If one recognizes the global nature of culture, there is no reason to assume that these events have anything to do with genuine information about economic fundamentals (Featherstone, M, 1990).

Criticisms of Behavioural Finance

The following points can be highlighted as the criticisms of Behavioural Finance

1. **Collection of Anomalies:** Critics of behavioural finance, such as Eugene Fama, typically support the efficient market theory (though Fama may have reversed his position in recent years). They contend that behavioural finance is more a collection of anomalies than a true branch of finance and that these anomalies will eventually be priced out of the market or explained by appeal to market microstructure arguments (Fama E.F. and Macbeth JD, 1973).
2. **Inapplicable to Market Situations:** Critics of behavioural economics typically stress the rationality of economic agents. They contend that experimentally observed

behaviour is inapplicable to market situations, as learning opportunities and competition will ensure at least a close approximation of rational behaviour.

3. **Limitations of Experimental and Survey Based Techniques:** Traditional economists are also skeptical of the experimental and survey based techniques which are used extensively in behavioural economics. Economists typically stress revealed preferences, over stated preferences (from surveys) in the determination of economic value (Myagkov M. and Plott C R, 1997).
4. **Weak Empirical Evidence:** Chicago finance professor Eugene Fama, for example, argues that the empirical evidence is weak, they don't have a coherent theory and without that, there is no behavioural finance. Until we find something that can replace the theory of efficient markets with a systematic alternative theory, we don't have anything.
5. **Too Much Emphasis on Individual Irrationality:** Peter Bernstein (2004) who devotes two chapters of his bestselling book on risk to the gurus of behavioural finance - whom he calls the 'theory police' - is less dismissive though still critical. 'While it is important to understand that the market doesn't work the way classical models think - there is a lot of evidence of herding, the behavioural finance concept of investors irrationally following the same course of action – and one can't do anything with that information to manage money.
6. **More Weightage on Attitude Than an Investment System**

Certainly, it is true that there is no behavioural equivalent of the CAPM, and while markets obviously do not work as the strong versions of the EMH suggest, it can be difficult to see how a behavioural approach can be used to manage money. Perhaps behavioural

finance is more of an attitude than an investment system; a helpful check at potential turning points but not an everyday guide (Grinblatt M. and Han B, 2005).

Arguments in favour of behavioural finance

The following are the arguments which are put forward by the supporters of behavioural finance:

1. **Absence of a Behavioural CAPM:** Richard Thaler (2000) comments "Regarding the absence of a behavioural CAPM, I think the two camps are equally at a loss. We know from the work of Fama and his colleague Kenneth French that the rational CAPM is false, so neither side has a complete theory. Several recent papers have tried to develop behaviorally based theories of asset pricing and while they are not the final word, they are better than nothing". This statement itself can be put forward in favour of behavioural finance and it highlights the need for development of the subject.
2. **Validity of Efficient Market Hypothesis and Investor Rationality is Questionable:** As to whether one can make money using investor irrationality, a similar question can be asked that what else can one do. The only investment strategy consistent with rational efficient markets is indexing, and it is known that if everyone indexes, the markets are no longer efficient. Any active management strategy that has a chance of being successful must rely either on better information or on an understanding of why other investors are producing mispriced securities. The one strategy that everyone seems to agree has worked well for a very long period of time is value – buying, low price-to-earnings (P/E) or price-to-book (p/b) stocks. As Fama and French (1998) have shown, this strategy does well all around the world. It can be said to be a classic behavioural strategy, first advocated by Benjamin Graham in the

1930s. Time will tell as to whether other behaviorally motivated strategies yield superior long-term returns.

3. **Investors Make Systematic Mental Mistakes:** Thaler has explained the practical application of his ideas. 'Behavioural biases that affect security pricing can be divided into two classes: non-economic behaviour, for example, when agents do not maximize the expected value of their portfolio because they are maximizing other behavioural factors; and heuristic biases. Heuristics are mental shortcuts or rules-of-thumb, which people use to solve complex problems. But in some instances, reliance on heuristics can result in biased or mistaken judgments. Such biases can cause investors to make systematic mental mistakes in evaluating new information and forming expectations about the future prospects of firms. By focusing on behavioural factors that cause the market's expectations to be biased, one can successfully identified mispriced securities and generated above normal returns for his clients. There are developed strategies for exploiting the heuristic biases that cause over- and under-reaction to information. Because the heuristics are different, these strategies identify different types of stocks and, as a result, different portfolio characteristics. 'For example, ones growth portfolios capitalize on anchoring bias that, under certain circumstances, causes investors to under react to new, positive information. As a result, the market's expectations are biased concerning the future profitability of these companies and their stocks tend to be underpriced. This strategy typically selects stocks that have 'growth' characteristics. 'Our value portfolios capitalize on heuristic biases associated with representativeness and saliency. Reliance on these heuristics causes investors to overreact to bad, but temporary, information concerning the

profitability of companies. In such cases, the market naively extrapolates the recent temporary negative news concerning a company, resulting in biased expectations of the companies' future prospects and these stocks tend to be underpriced. This strategy typically selects stocks with 'value' characteristics.

Conclusion

The analysis of investor psychology is having a growing impact on both investment research and practice as it seeks to expose and explain the shortcomings of modern financial theory problems in the models used to price stocks and the difficulties of making sense of market anomalies. It is an important dimension of investment and almost all investors consciously or unconsciously take it into account though they call it different things. The new directions of behavioural finance are being pushed toward biological metaphors by researchers. It is expected that if purely mechanical number computation fails to give us useful models, perhaps the complex biological functions will. Early evidence is strongly suggestive of success. The lesson from the literature surveyed here, and the list of varied behavioural phenomena, is not that “anything can happen” in financial markets. Indeed, while the behavioural theories have much latitude for interpretation, when they are combined with observations about behaviour in financial markets, they allow us to develop theories that do have some restrictive implications. Moreover, conventional efficient markets theory is not completely out the window. Doing research in the area of behavioural finance does not imply that the conventional theories should be abandoned but a combination of both should be developed and conventional theories should be accepted as the workhorse for the sensible research if used appropriately.

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