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Psychological Indicator(s) in Stock Activities considering SDGs: The Wealth Maximization Criteria of Investors and Growth of Economy

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ABSTRACT

Objective-Psychological Indicator specifies impetus and drift way, in addition to overbought and overvalued worth echelons and its conforming conceivable mean setbacks. These indicators play an essential role in sustainable development goals via stock market activities. The central objectives of the study are to identify the key psychological cognitive indicators behind the abnormal movements of the market.

Methodology-For this purpose, a Semi-structured scale - developed on a self-basis - (with the help of literature and connoisseur's meetings) was used after the context and the content validity to get an extensive array of differentiated information.

Results -According to the experts of the market: investors do not always behave rationally, most investors either fall in the category of overconfident investors or status quo investors, usually the Rookies or beginners in the stock markets only have elementary knowledge and basic experience in investment domain, based on little or no knowledge of rookies it is so hard for them to recognize the prospects of the securities, and not only investors but stock market's financial analysts can also be subjected to the behavioral biases but on the other hand to understand and recognize one's own behavioral biases and proneness towards those biases investors can rely on financial planners.

Conclusion-The traditional economic theory states that the investor is rational: which is not true in every case and is hard to generalize. Investors must overcome the general predispositions that lead to poor decision-making if they are to become successful in the stock market in the long run. And the investor must learn all about the investment accounts available in the stock market.

Keywords: Psychological Indicators, Stock Activities, SDGs, Wealth Maximization, Investors, Economy

1. INTRODUCTION

Behavioral finance studies the different aspects of whether the members of the market sector effects the speculation choices of investors and the results of the market. It

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is expected by standard finance that members of finance sectors and markets behave rationally. Rational decisions made by individuals can increase their wealth whereas irrational decisions, suffers individuals to have a poor results. While investing in complex businesses the behavior of the stock market creates a lot of intricacies. These complexities exhibit varied emotions and behavioral patterns while taking investment decisions in the stock market. Thaler (1980) argues that investors behave irrationally under the influence of behavioral biases. Thaler (1980) explained that the investor's behavior in the stock exchange is different from what has been projected by the finance theories.

The stock development project is a unique blend of academia, investors, and policy advocacy. The sensitization of investors will be done with the help of messages from the regulatory body (SECP). The policy review will be done by the technical experts for developing future directions and regulations. The prime purpose of the project is to sensitize the SECP on policy, investors, and government about the global economic challenges and take appropriate corrective measures in this regard. The perspective of the current stock abnormalities and economic growth policies will also be reviewed for future potential and catering to growth challenges.

Behavioral finance responds to the query of why investors constrain methodical errors and how the psychosomatic phenomenon disturbs investor capabilities to make a decision (Leković, 2020). This research finds the causes of biases that affect the investment decisions and finds the relationship between endowments bias that allows the irrational and suboptimal decision making. so in this research, the identification of the most important biases that affect the investor decision-making and their interrelationships are empirically proved. The research problem this to identify the possibly prominent antecedents behind behavior biasness as well as to develop a scale for future implications regarding specific emotional biasness of the investor.

It is established that the endowment effect, overconfidence, and self-attribution effect the rational decision-making of investors. Theoretically, relationships among these biases exist but there is not much empirical research exists on this type of relationship. So the problem statement is how these biases are interrelated and what their effects on

investment decisions are.

The objective of the project is to know about the most prominent cognitive biases of investors that exist at the time of investment in the stock market of Pakistan.

2. LITERATURE REVIEW

Sattar, Toseef, and Sattar (2020) studied the role of emotional bias on investment decisions from a behavioral finance perspective for India. This paper focused on different emotional biases such as overconfidence, and the endowments effect that can impact on investment decision of an individual.

2.1. Endowment Effect

The endowment effect is the most prominent emotional bias in behavior finance (Arlen, Spitzer, & Talley, 2002) that affects the corporate and individual investment decisions, and it may also lead to an improbable valuation of the things (Ortona & Scacciati, 2003). According to this bias, stockholders tend to worth the assets more which are presently being detained by them than their real market value. Endowment bias occurs widely with the stockholders who have involved some emotional feelings toward certain stock (Jaeger, Brosnan, Levin, & Jones, 2020). Usually, people with such sort of behaviors are greedy, as according to Bradburd and Mann (1993), financial soundness is often measured by endowment, but this may not be a single factor to measure the wealth of an investor. It is yet another type of emotional bias which influences the investors' decision-making. At this time, a question arises whether an increase in the greed of the investor may lead to an increase in the endowment bias of the investor or not.

The human mind and thinking are subject to various biases. For instance, during decision making various biases affect the rationality of an individual and what he will finally choose. The endowment effect for instance implies that a particular item becomes automatically more desirable when viewed into one's endowment (Bostrom&Ord, 2006; Groening, Wiggins, & Raoofpanah, 2021). People may react rationally or irrationally to their liking.

2.2. Overconfidence Bias

Overconfidence bias is a failure to diagnose the limits of one's knowledge (Cassam,

2017; Russo & Schoemaker, 1992). Researchers found that decisions related to unreliable events have the element of overconfidence. Overconfidence bias can be very risky in investment decisions: the stockholder will overvalue their knowledge and thus will invest vigorously. But financing actively does not promise encouraging results. According to Huck, Kirchsteiger, and Oechssler (2005), sometimes, overconfident investors become biased towards the endowment, as they have a strong belief in their objects or entities.

Research related to overconfidence (Godfrey, 2020; Maluleka, 2021; Nwoke, 2020) studied people's self-reliance to answer general knowledge questions, but the same kind of conclusion has also been detected in financial situations. It has been concluded that people suffer from overconfidence also in investment judgment making. Overconfidence effects on investment decisions can be risky to financial wellbeing. Lewellen et al. (1977) studied overconfident stakeholders' businesses more, believing higher profit returns than less confident investors do. Huang (2021); Odean (1998) also studied that overconfident stockholders will misjudge their private data, causing them to do business vigorously. However, active trading does not lead to enhanced performance. Barber and Odean (2000), studied household business trends and concluded that households that earn much lower from their business get much less profit return than those that business infrequently. Thus overconfidence can be hazardous to a businessman's profit. Here the question is whether overconfidence in own perception of the investor may lead to an increase in the investor's endowment or not.

2.3. Self-Attribution Bias

When individuals relate bad luck for their failures and achievement with their capabilities is self-attribution bias. Gervais and Odean, (2001) argued that investors take too much credit for their success, they found that self-attribution bias affects the impression of investors regarding their abilities and diverts them from learning from past achievements. Self-attribution bias affects the own capabilities of an investor as it deters the evaluation of past acts. This leads to overconfidence. In the vein of this, Gervais and Odean (2001), who studied the previous trends of traders' performance, concluded that achievement leads to increase overconfidence. When a trader achieves his destination, he attributes too much of his achievement to his capabilities which increases

overconfidence. Gervais and Odean (2001) also find that both volume and volatility increase with the degree of a trader's learning bias. As a result, overconfident businessmen lower their expected returns as they act sub optimally.

The Pakistan Stock Exchange (PSX) was informationally efficient from 1964 to 1987 (Nishat & Saghir, 1991), whereas, afterward, the condition of the Pakistan Stock Exchange (PSX) is volatile and fluctuates gradually, as according to Demirgüç-Kunt and Levine (1996); Fernandez-Perez, Gilbert, Indriawan and Nguyen (2021), less volatility in the stock market indicates the greater stock market development. As we may observe in the Pakistan Stock exchange (PSX) that investors are emotionally biased regarding their investment decisions and the movements of the stock market are highly fluctuating as well (Rehan, Alvi, Javed, & Saleem, 2021). And the biggest dilemma at this stage is that investors might not know about the reasons for such emotionally biased behavior and how they can reduce such behavior. And also, there is extremely weak information accessible regarding the investor's biasness in the market.

3. RESEARCH METHODOLOGY

For this research, a qualitative approach is used, as it is mandatory to get a diverse range of information. It is guaranteed that the whole process of data collection is crystal clear as no early material is provided to the participants. Furthermore, the multi-case study method based on the interviews (Eisenhardt, 1989; Eisenhardt & Graebner, 2007) is used, where evidence is collected using semi-structured deliberations, to get a vast amount of diversified knowledge on psychological indicators of the investors at the time of investment. Numerous cases proposed the chance to classify forms and essential matters by the adjacent going-over of themes and proof. The case study sedateness (Haddock-Millar, Sanyal, & Müller-Camen, 2016) is set in Table 1.

The prominent probes of the deliberations are grounded on the study's theme – determining Psychological Indicators of Investors – and the Wealth maximization of investors as well as the economy's growth. This research will capture the maximum diversified information based on particular scenarios which will allow the proportional analysis of strategies to the identifying and controlling of psychological indicators of the

stock market's investors towards enhancing the economy's growth and growth of an individual too.

For this research, the experts, practitioners from Pakistan Stock Exchange (PSX), and policymakers as well were the population for this study. To get a wide range of diver data, semi-structured discussions were used. Also, for this research, almost 21 interviews were organized – 17 were head-on and 4 were online via an open-ended scale from top executives and experts of the market (Table 2) - but, just 14accusers gave complete and thorough replies as per the criterion of the research.

Table 1. Case study protocol.

Case Study's Ladders

1. To identify the scope of the study and research's focus
2. Identification of distinctive affluence to grow into 'several cases'
3. Supporting the development of the interrogations for study
4. To ascertain the veracious tools for the research and proprieties of the study, having qualitative data gathering means for instance semi-structured deliberations and focus groups
5. To ascertain the 'apposite' participants: an erect and straight slice of the case studies with knowledge of market initiatives
6. Period of data collection – May 2021
7. Breakdown of the data
8. Progression of prime themes
13. Review of literature again: identification of similarities and discrepancies
14. Reaching end: literature and data heap attained
15. Dissemination: article development

Table 2. Respondents of the Discussions.

<i>Job role</i>	<i>Pakistan</i>
<i>Category</i>	
Advisers and Experts of the Market	8
Policy Makers	2
Practitioners	11
Total participants	21

Job roles in Table 2 show that all participants have an unconscionable knowledge about psychological indicators and the general ups and downs of the market.

Initially, gaps were found based on existing relevant literature and informal interviews of the experts in the areas of psychological biases of investors and SDGs too. The questions of semi-structured interviews are provided in Table 3.

The deliberations began with a widespread discussion of the psychological biases of investors in the stock market, the individual investor's perception and knowledge, investor's capabilities, the sensitivity of the financial market, profit generation of the market, and individual as well. The deliberations then stirred into the precise areas documented in the literature, along with the use of SDGs based concepts in the direction of stock buying and selling. The head-on discussions continued between 20 and 45 minutes and up to 50 minutes for each individual.

Table 3. Discussion Procedure and Questions.

Protocol of the interviews

Present the participants of the study
Plan the detailed process for the study
Outline the purpose of the study, having goals and objectives
Address the likely results of the study
Sketch structure of the interviews/focus group

Themes of the study and clear probes

Expert's Opinion regarding investor biases

1. What kind of behavior of the investors exist in the stock market?
2. How emotional biases may affect the investor's decision?
3. How endowment bias may affect the returns of the investors and market?

Individual investor perception and knowledge

1. Do you know about the boundaries of an individual's knowledge?
2. How do individuals usually perceive the market?

Investor's capabilities

1. Do you think that individuals relate bad luck to their failures and achievement with their capabilities in the market?
2. Can you check the cognitive ability of investors?
3. May you please outline two or three utmost significant cognitive biases of the investors at the time of stock investment decisions?
4. What role do you play to convince individuals for rational investment decisions?

Sensitivity of the financial market

1. How sensitive is the Pakistan Stock exchange (PSX)?
2. Which level of efficiency (weak, semi-strong & strong) may exist in the PSX?

Profit and loss propensity of individuals and the market

1. How endowment bias may affect the investor's decision?

2. How overconfidence bias may affect the investor's decision?
3. How self-attribution bias may affect the investor's decision?
4. How these biases can be hazardous to a businessman's profit?

About you

1. As per your opinion, what are the main significant pillars to consider at the time of investment?
2. What do you see as the key bars to do rational stock investment?

4. FINDINGS

Investors do not always behave rationally and can often deviate from logic and reasoning because their decision-making processes get affected by numerous behavioral biases. Based on personality types, these biases vary from person to person an investor; these biases are classified as emotional and cognitive biases. Emotional bias deals with the influence of emotions and feelings on taking actions rather than focusing on the facts and figures while cognitive bias includes the influence of thinking and acting in a particular way, following a rule of thumb or heuristic on decision making. Cognitive biases may result in systematic deviation from the good judgments and or the standard of rationality. However, research has still been carried out to see whether these biases always result in irrationality or they can result in user behavior or attitudes too.

One's instinctive behavioral biases can become a big barrier in his way to success such as the investment decisions of investors being ordinary people can also be influenced by many behavioral biases. Although controlling the behavioral biases is a time-consuming process but once it gets understood how they work in certain situations, they can be helpful for the individuals in making rational decisions in such situations.

Most investors either fall in the category of overconfident investors or status quo investors. Overconfident investors trade actively in the stock market while status quo investors are not attentive to the management of their portfolios. Overconfidence is an emotional bias that deals with an investor thinking that he can always make the best decisions by knowing almost everything and not needing extensive research. They make rushed decisions based on their feelings and their prediction about the market. They are expected to take more high-risk decisions about the investment. This generates a need to

keep a balance between these two types of investments.

The Rookies or beginners in the stock markets only have elementary knowledge and basic experience in the investment domain. They do not know anything about the exact time investment neither they can invest and trade with devotion due to a lack of knowledge and expertise. This can expose the beginners to initiate failed investments. Most of them get going by using a “buying and hold” trading strategy. The beginner in the stock market doesn’t possess extensive knowledge about the market and trading strategies hence resulting in little or limited trades per month from a cash account. Even with that little knowledge the beginners also place high expectations in their trading activities in the stock market. At that moment they are interested in gaining more knowledge as well as experience in investing in the stock market to gain greater results.

Usually, most rookie stock market investors believe in buying the stock at low prices and selling at higher prices to make a gain. Even in that case, they can’t let their emotions and feelings not influence them while making an investment or trading. Even if they make an unjustified initial investment in a particular stock they stick to it no matter what the direction of the market is, in the hope that the particular stock will cover the losses on its own and rise in prices sooner or later. And whenever they see the emergence of higher prices they tend to sell the stock so soon often resulting in insignificant profits or just reaching the breakeven.

Based on little or no knowledge of rookies it is so hard for them to recognize the prospects of the securities. These types of investors can usually make profits during the strong ‘bull’ markets but once the “bear” market approaches they can’t find a way to become successful and become clueless. The stock market has basic investment guidelines for such investors which could prove to be useful for beginners.

Not only investors but stock market’s financial analysts can also be subjected to behavioral biases. An unbiased and rational market forecast by the analysts can help investors make better investment decisions but biased predictions and forecasts by the analysts can result in misconceptions about the market in the mind of the investors. Previous studies showed that analysts can also be biased and their behaviors can influence the accuracy of their forecasts in different situations resulting in stock market

mispricing. Such forecasts can be problematic for investors or rookies.

To understand and recognize one's own behavioral biases and proneness towards those biases, investors can rely on financial planners. A good financial planner will suggest and make a customized investment plan for the individual investor by grasping the knowledge about behavioral biases and how they work and affect that particular investor and by helping him make tactical and strategic decisions based on facts and figures rather than emotions and feelings. This will include risk mitigation and systematic asset allocation. Risk mitigation deals with understanding the risk tolerance of the investor while systematic asset allocation deals with creating a systematic plan that works fine in any market direction such as dollar-cost averaging. By knowing the purpose of each investment in that portfolio and by knowing and understanding the risk appetite. Investors will feel relaxed and confident about their investment plans resulting in peace of mind. An investor has peace of mind and is less susceptible to making common behavioral mistakes.

5. CONCLUSION

The attitude of an investor towards risk is guided by several factors apart from genes. The external factors that affect the risk appetite of an investor are education, wealth, and income. The risk appetite is positively correlated to the change in the value of the aforementioned factors. In layman's terms, risk tolerance is the feeling an investor gets after opting for a risky financial instrument. Also, the feeling of anxiousness the investors get once they opt for any risky financial venture.

The risk tolerance of an investor is affected by the apparent risk of the prospective financial instrument. Risk tolerance is the foremost important factor for stock market traders. That expert in basic skills of trading generally states that there is less risk involved in financial ventures. The basic skills of trading are assessing the stock market volatility before trading in stocks. The important factor for investors before they invest is the speed of stock conversion into cash. That means the stock is highly liquid. If a stock is easily convertible into cash, then the investment will be attractive for the investors.

If the markets had recently been bearish, investors would feel fear, apprehension, and

negativity. If the markets had recently been bullish, investors would feel optimistic, happy, and positive. Such behavior encourages the mistakes of “Buying High, Selling Low”.

The investors will get fewer collywobbles because the decision is taken by what they feel is the right thing to do. Investors base their investment decisions on what they think is a less risky investment. If the investor takes time to decide about the securities they will invest in, they are bound to feel that they have dodged risky ventures. Ideally, investors must only invest in securities they feel are less risky considering their circumstances. The investor must avoid anxiety as anxiety triggers an emotional action by the investor. Investors must retain a cool and logical mindset when chips are down. The investment decisions made by a cool and relaxed mind will result in logical decision-making.

Investors must overcome the general predispositions that lead to poor decision-making if they are to become successful in the stock market in the long run. The cognitive predispositions of humans are engraved inside the mind and are hard to overcome. They tend to make someone opt for shortcuts in an intricate situation and become over-optimistic of the decision taken by them. The investors must identify their biases and must overcome them. If they are efficacious, their decisions will result in lower risk and higher returns on investments.

The traditional economic theory states that the investor is rational: which is not true in every case and is hard to generalize. During the investment process investor goes through the ups and downs of fretfulness. The investor needs to have adequate knowledge of behavioral biases and by consciously avoiding those the investors can take a rational decision. This is related to and studied in behavioral finance, to study and understand financial behavior.

The economic and financial theory postulates that individuals make informed and consistent decisions. This theory assumes that the investors are rational. By rationality of the investors, it means that on receipt of new information a rational investor corrects the prior belief. Rationality may also mean that the choices they make are acceptable generally. The theory is simple; however, humans may not act rationally every time.

Sometimes external factors may prove counterproductive and force individuals to act irrationally. The statistics reveal that 80% of the individual investors and 30 % of institutional investors may act irrationally.

There are biases ingrained in our consciousness. They are useful when it comes to day-to-day decision-making, however, these biases may hinder rational decision-making. The biases involved in investment decision-making are cognitive and emotional. The basis of cognitive bias is memory errors, information processing errors, or statistical errors. Whereas emotional biases are intuitive and impulsive. The actions undertaken by investors because of these biases are feelings based rather than logic-based.

Investors must equip themselves with the basic knowledge of the stock market and the stocks before they invest in the stock market. The investors must know the following pertinent areas to be well informed about the stock market and the stocks. They should try to be aware of the following areas before initiation of their stock market activities.

Firstly, the jargon and important trading terms used in stock market trading should be known and well understood. The definitions of the shortlisted terms should be fully grasped. The calculation and definition of P/E ratio, earnings/share, growth rate, and return on equity must be fully comprehended. These metrics help investors compare companies with each other and hence are essential tools for successful stock market trading.

Secondly, the most pertinent step is to learn how to select stocks and the suitable time for selection. The techniques of fundamental and technical analysis are useful in the selection of stocks, as well as the suitable time to select them. The correlation of the stocks and covariance should be analyzed carefully before deciding on the stock selection. Investors must also educate themselves on the different types of stocks. Ample time must be utilized in evaluating the working of market orders, limit orders, stop market orders, stop-limit orders, and trailing stop-loss orders vary from each other.

Conclusively, the investor must learn all about the investment accounts available in the stock market. Cash accounts are prevalent in stock market trading and are mostly used by stock market traders. The stock market also has something known as margin accounts. They are highly regulated and are mostly required by traders when they wish to

trade. Traders must understand how to calculate margin accounts before they start trading. The investors must know the differences between initial and maintenance margin accounts prerequisites.

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