# HEURISTICS AND BIASES

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# MEANING OF HEURISTICS

- A heuristic is a problem solving approach that employs practical easily available solution to achieve the goal. Heuristics allows people to use quickly available information which is derived from experience and helps in decision making and problem solving.
- In psychology this term is explained as efficient rules that are simple, that have been derived from how people make decisions or solve complex problems.
- Examples of Heuristics are using a rule of thumb, guess, an intuitive judgment or gut feeling, or common sense.

# USES OF HEURISTICS

- Heuristics help in decision making. In order to solve a problem or make a decision, people often turn to these mental shortcuts when a quick solution is required. The world is full of information, yet our brains are only capable of processing a certain amount.
- Decisions can be taken with relative ease on the basis of heuristics. For example, in a decision to whether drive a car or take a bus to the office, you may be recalled of the route where there is more traffic due to road construction going on, so you make immediately decide to take an alternate route or try to leave early. Thus, in simple words, heuristics allow us to arrive at solutions quickly.

# TYPES OF HEURISTICS

| | |
|---|---|
| **AVAILABILITY HEURISTICS** | • Availability heuristic is a mental shortcut that helps us make a decision based on easy and quick ideas which comes to our mind. |
| **REPRESENTATIVENESS HEURISTIC** | • Representative heuristic make use of most representative memory and try to compare it with present situation for making decisions. |
| **AFFECT HEURISTIC** | • In this heuristic, emotions, emotional response or affect plays a key factor while taking decisions. This heuristic allows people to take decision based on their current emotional state like happy, sad, fear, surprise etc. |
| **SIMILARITY HEURISTIC** | • The similarity heuristic is a lesser-known psychological heuristic pertaining to how people make judgments based on similarity. |

# HEURISTICS LEAD TO BIAS

- As heuristics allow you to rely on past experiences, and if something has worked in the past it may not work in future. It brings in stereotyping and leads to making permanent style of doing things. Individual who are affected by heuristics more or use them more often for decision making, end up developing them as permanent style as part of their attitude and behaviour. Then there emerges biases while taking decision. So, biases are developed from initial heuristics which become a part of one's decision making style, whether it is right or wrong.

# STRATEGIES TO OVERCOME HEURISTICS

To minimize the impact of heuristics, one should adopt the following strategies.

- One can identify for some irrelevant or discomforting evidence and keep it aside while taking decision.
- One should discuss with other friends, family members to get a diverse outside opinion, so that one's overconfidence can be managed.
- One can reward good results and penalize failure to make a lasting impact on mind.
- One should try to reframe the problem to find out that there should not be any positive or negative angle to it.
- Individuals can redefine the problem so that it may not be matched with previous experience of similar kind and can be independently handled.
- Develop systemic review processes that leave you a committed "out" possibility when trying to "cut the losses".

# TYPES OF BIASES

- **COGNITIVE BIAS**

  Cognitive bias are related to human mind, the way people process and interpret information around them and develop their logic. These biases become rule for thumb and helps in decision making, which can be wrong also. These biases are also related to memory.

- **EMOTIONAL BIAS**

  Emotional biases are more difficult to handle as compared to cognitive biases. Human beings are full of emotions and everyone is affected by one or the other bias. Clear understanding of these biases and their impact can help investors minimize its impact on decision making.

# OVERCONFIDENCE BIAS

- Overconfidence makes a person misjudge his beliefs and opinions about any situation as compared to his actual worth given the objective parameters of the situation.
- Overconfidence has been defined in three distinct ways:

(1) over-estimation of one's actual performance;

(2) over-placement of one's performance relative to others; and

(3) over-precision in expressing unwarranted certainty in the accuracy of one's beliefs.

# Types of Overconfidence

- **Prediction overconfidence -** In this case an investor does not take into consideration large gap in the variations of prices/ value of a stock whereas the actual standard deviation is high.
- **Certainty overconfidence –** In case of certainty overconfidence, investor is too much confident about his prediction so he is 100% sure about the outcome.

# Overconfidence Dynamics

Few terms that characterize overconfidence bias in people is discussed hereunder.

- **Overestimation**
- **Illusion of control**
- **Planning fallacy**
- **Contrary evidence**
- **Over-precision**
- **Over-placement**
- **Better-than-average effects**
- **Comparative-optimism effects**

# Implications of Overconfidence bias on Investor Decision Making

- Overconfident investor can ignore downside risk of their investment because they tend to give lesser prediction window on their investment returns. Also they may ignore historical statistics of a stock or market overall.
- They may believe that their investment portfolio choice is the best one, so can lead to excess trading and thus poor returns.
- They may be overconfident about their ability to evaluate a company for investment and may ignore negative information about a company or may not sell their stock by ignoring such information.
- They may not diversify their portfolio and may be taking higher risk in the market.
- Inexperienced investors can be more overconfident in the market.

# COGNITIVE DISSONANCE BIAS

- Cognition is attitude, values, beliefs and emotions. If there is a contradiction or disagreement in one's cognition it is known as cognitive dissonance.
- The main aspects of cognitive dissonance that affect decision making are,
  - **Selective perception**
  - **Selective decision making**

In general investors can affect their investment returns because of cognitive dissonance bias in following ways.

- Because of this bias investor will keep on holding losing securities, so that they are not in conflict with their previous decision.
- Investors affected by this bias may not revise their portfolio whenever required as they believe that their decision cannot be challenged.
- They ignore the latest news about their investment stocks if it does not confirm to their thought process and will reject those news, which may later on lead to losses.

# SELF ATTRIBUTION BIAS

- In this bias the tendency of humans is to assign the success to their skills and knowledge and failure to bad luck.
- This bias can affect the investors in following ways,
  - If one does not attribute the reason of failure to themselves, so they will not learn from their mistakes.
  - Attributing credit of success to themselves makes investors overconfident.
  - If someone gets less or negative returns on their portfolio, then it will cause less dissatisfaction if the burden can be attributed to financial advisor or the market scenario rather than oneself.
  - During bullish trend in the market if investor earns good returns and is affected by self-attribution bias will give all credit of his success to himself and become overconfident and later on when markets are more volatile he can be at risk.
  - This bias can bring more than recommended trading by investors thus posing them higher risk.
  - In this bias investors believes in “hear what they want to hear.”
  - They can hold less diversified portfolios which ultimately increases their risk.

# ILLUSION OF CONTROL BIAS

- The **illusion of control** is a cognitive bias wherein people overestimate their ability to control an event and they assume that the outcome in any situation is totally in their control.
- **Implication for Investors**
  - If an investor is affected by this bias he tends to believe that he possess more control over the outcome than they actually do, so this can result in excess trading and thus decreased returns.
  - The control that investors have on their investments is illusionary so an investor may concentrate his portfolio to few companies and have higher risk because of less diversified portfolio.
  - To have excess control over investments these investors use limit orders which make them miss overlooked opportunities.

# CONSERVATISM BIAS

- **Conservatism bias** is a cognitive bias in which a person does not process new information and use only their basic old information to take the decision.
- **Implications for Investors**
  - Conservatism bias can make investors non-responsive to new information and remain invested in a wrong stock and thus leading to less returns.
  - These investors react too slowly to new information like- when earning announcement leads to negative returns on a stock such investors become slow and earn losses.
  - There can be difficulty for these investors to process new information. Thus they miss opportunities to earn better returns.

# AMBIGUITY AVERSION BIAS

- **Ambiguity aversion** (also known as **uncertainty aversion**) is a cognitive bias where individuals prefer for known risks over unknown or uncertain risks.
- **Implications for Investors**
  - Ambiguity aversion leads to problem of insufficient diversification.
  - Because of competency effect there are two behaviour of investor namely trading frequency and home bias. As per trading frequency investors who feel more competent happen to trade. Home bias refers to the tendency to overweight domestic equities and underweight international equities in investment portfolios.

# ENDOWMENT BIAS

- Endowment bias is an *emotional bias*. This bias relates to when a person overvalues an asset owned by them than its market value as compared to those assets which we do not own.
- **Implication for Investment Decisions**
  - This bias leads to investors holding securities they have inherited even though it is not financially profitable or does not fit with their investment goals or have inverse impact on diversification.
  - The investor is holding endowed securities as they may not be interested in incurring transaction cost on these securities, even though that cost is small.

# SELF CONTROL BIAS

- Self-control bias is an emotional bias which forms human behaviour wherein people are not able to control their urge to save for tomorrow from investment perspective.
- **Implications for Investors**
  - Investors tend to spend more today as compared to save for tomorrow or retirement.
  - Self-control bias can cause asset-allocation imbalance problems. Like people can prefer regular income producing asset as compared to future capital gains.

# OPTIMISM BIAS

- The optimism bias which is also known as "unrealistic or comparative optimism" is an emotional bias. Under this bias individuals tend to believe that they will not experience any negative event as compared to others.
- **Implications for Investors**
  - Due to optimism bias an investor can buy more of one company stock where they are associated as they feel it is less risky.
  - Optimism bias can lead investors to ignore inflation, taxes and compounding effect and make them assume that they are getting high returns.
  - They tend to have more favourable forecasts and only look at rosy reports.
  - They assume that they will never have losses as they are above average in every aspect of life.
  - Optimism bias can lead to home bias in investors.

# MENTAL ACCOUNTING BIAS

- Mental accounting is a cognitive bias. Mental accounting is a process where individuals categorise their financial decisions into mental accounts or heads and evaluates them from time to time, but these heads are not interchangeable.
- **Implications for Investors:**
  - Based on mental accounting people put their money in separate accounts. But while designing a portfolio for their overall investment objective, they may end up getting less than optimum performance because of not able to correlate across mental accounts.
  - Many a times, investors try to preserve capital and plan to spend interest. So, investors may plan to irrationally keep income and capital appreciation separately in different mental accounts. This can ultimately erode their principal due to interest rate fluctuations or any other reason.
  - Mental accounting bias make investors not look at their total income and investment in totality, which makes them difficult to diversify and reduce their overall risk. For example people who get ESOPs do not count them in their investment portfolio and thus increase their overall risk of equity investment.

# CONFIRMATION BIAS

- Confirmation bias is a cognitive bias also known as confirmatory bias or myside bias. It is a type of selective perception wherein a person emphasize on those information which confirms their beliefs and devalue whatever contradicts their thoughts.
- **Implications for Investors**
  - The selective perception of information about any company can lead to wrong selection of stocks and holding wrong portfolio as trends and performance of companies keep on changing. So, to earn good returns from the market investor should take decisions to change the portfolio based on trend of the market.
  - This bias can cause employees to over invest in company’s stock.
  - Due to this bias, investors may hold less diversified portfolios leading to low returns.

# HINDSIGHT BIAS

- **Hindsight bias** is a cognitive bias where people tend to perceive that they had predicted the event.
- **Implications for Investors**
  - Hindsight biased investors write their own memories and portray that they had predicted the event so, can lead to excessive risk taking attitude.
  - Hindsight-biased investors put blame of poor performance on their investment advisor or unduly praise them when they earn profit for them.

# RECENCY BIAS

- **Recency Bias** is a cognitive bias which makes people recall the most recent events, objects and actions as compared to those that happened in the past and based on that make their decisions or judgments.
- **Implications for Investors**
  - Recency bias can lead to making projections based on small historical samples which can lead to purchasing stocks at peak prices or end up experiencing losses.
  - Recency bias can make investors to ignore fundamental value and focus only on recent price performance or news about a company.

# REGRET AVERSION BIAS

- **Regret aversion bias** is an emotional bias wherein an investor seeks to forestall the pain of regret associated with poor decision making.
- **Implications for Investors**
  - Regret aversion can make investors to be conservative in their investment choices if they have suffered loss in the past.
  - Regret aversion can lead to holding onto losing positions for very long time by investors.
  - It can cause “herding behaviour” as investors may feel that they can limit their future regret by following the mass.
  - Regret aversion leads investors to prefer stocks which are popularly known as good companies and will end up getting normal returns.
  - Regret aversion can lead to holding on winning stocks for too long by the investors.

# STATUS QUO BIAS

- **Status Quo Bias** term was given by William Samuelson and Richard Zeckhauser in 1988 is an emotional bias. In this bias people tend to ignore or not choose any of the alternative but try to maintain the existing condition i.e. status quo as any new option will bring about changes.
- **Implications for Investors**
  - Investors make not change their portfolio and might end up taking high risk or very conservatively.
  - Status quo bias can operate because of familiarity or emotional attachment, so investor may hold some securities for which he may get poor returns.
  - Inheritance of financial assets or emdownment bias can also lead to status quo bias for investor.
  - Status quo bias can be seen in combination with loss aversion bias, as investors may also hold his position so that he may not have to realize the losses.

# FRAMING BIAS

- Framing bias is a cognitive bias that takes into consideration the context in which a choice is presented or framed as a basis of taking decision.
- **Implications for Investors**
  - It depends how questions are framed, investor risk tolerance can be either conservative or aggressive.
  - If investment advise is framed using optimistic words, phrases, or contexts they will get affirmative response of investors and the reverse is also true. Thus framing affects judgment of investors.
  - Framing and loss aversion both explain excessive risk aversion. An investor who chooses risky investment may incur losses as compared to those investors who have gained chooses less risky investments.

# STRATEGIES TO OVERCOME BIASES

- When an investor wants to invest in stock market they should know their objective, time horizon of investment.
- When an investor is putting their money in mutual fund then they should look at operating cost of fund.
- There are rule of thumb which exist and can help provide shortcut solutions to investment problems.
- To avoid framing bias one can think of formulating the problem differently and use more logical analysis to solve the problem.
- To avoid over-optimism bias one should try to be conservative with calculating the probabilities of outcome.

# Thank You

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  OVERREACTION AND OPTIMISM

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