"THE BEHAVIORAL BIASES OF INDIVIDUALS"

FMP= Financial Market Participants

2. CATEGORIZATIONS OF BEHAVIORAL BIASES

Behavioral Biases

Cognitive Errors

- Mechanical or physical limitations (statistical, informational processing or memory errors).
- More easy to correct than emotional biases (moderated).

Emotional Biases

- Stem from impulse or intuition.
- Emotional biases are difficult to correct.
- Result of attitude & feelings.
- Can be adapted not moderated (decisions are made that adjust for it rather than reduce or eliminate it).

3. COGNITIVE ERRORS

Belief Perseverance Biases

- The tendency to cling to one's previously held beliefs irrationally or illogically.
- Closely related to cognitive dissonance ⇒ a conflict b/w beliefs or opinions & reality.
- To resolve this dissonance people may seek only selective exposure, selective perception & selective retention.

Processing Errors

Describe irrational or illogical information processing in financial decision making.

3.1.1 Conservatism Bias

Definition

- People place more emphasis on information they used to form their original forecast than on new information.
- In Bayesian term⇒ people overweight the base rates & under react to new information.

Consequences

- Slow to react new information.
- Tendency to hold winners or losers too long.
- Cognitive cost ⇒efforts required to analyze new information.
- ↑ Cognitive cost of new information, underweight new information.

Guidance for Overcoming

- Look carefully at new information to determine its value.
- Seek professional advice.

3.1.2 Confirmation Bias

Definition

- People tend to look for & notice what confirms their beliefs & undervalue the contradict views.
- It is a natural response to cognitive dissonance.

Consequences

- Consider only the +ve information & ignore –ve information.
- May be incorrect screening criteria.
- Under-diversified portfolios.
- Employees may overweight employer's stocks.

Guidance for Overcoming

- One should seek out information that challenges one's beliefs.
- Get corroborating support.
- Do additional research.

3.1.3 Representativeness Bias

Definition

- If-then heuristic where individuals classify information into subjective categories using heuristics.
- In Bayesian terms, investors tend to underweight the base rates & overweight the new information.

Types

i) Base-Rate Neglect

Too little weight to the base rate

ii) Sample Size Neglect

- Incorrect assumption ⇒ small sample sizes are representative of population.
- Too much weight to new information.

Consequences

- Emphasis is on new information.
- Use simple classification rather than deal with the mental stress of updating beliefs given complex data (low cognitive cost).

Guidance for Overcoming

- Under reliance on recent performance that results in excessive trading & ↓ return.
- Use a periodic table of investment returns that ensure diversification over return chasing.

3.1.4 Illusion of Control Bias

Definition

- Bias in which people tend to believe that they can control outcomes, when infact they can't.
- Subjective probability of personal success is ↑.

Consequences

- Excessive trading & inferior performance.
- Less diversified portfolio.

Guidance for Overcoming

- Investors should recognize that investing is a probabilistic activity.
- Seek contrary viewpoints.
- Keep records including reminders outlining the rationale behind each trade.

3.1.5 Hindsight Bias

Definition

- Individuals perceive outcomes (past events) as reasonable & expected.
- People overweigh their predictions because they are biased by the knowledge of what actually happened.

Consequences

- Excessive risk because of false sense of confidence.
- Unfair assessment of money managers & security performance.

Guidance for Overcoming

- Carefully record & examine investment decision.
- Markets move in cycles so expectations must be managed.
- Investment managers must be evaluated relative to appropriate benchmarks.

3.2 Information-Processing Biases

3.2.1 Anchoring and Adjustment Bias

Definition

- Individual seem to be anchored to a value or number & then adjust the number to reflect new information.

Consequences

Investors tend to remain focused on & stay close to their original forecasts.

Guidance for Overcoming

- Less weight to historical information.
- Look at the basis for any recommendations.

3.2.2 Mental Accounting Bias

Definition

- Individual place each goal & the wealth, that will be used to meet each goal, into a separate mental account.

Consequences

- Layered pyramid format portfolios ignoring correlations among assets.
- Consider income & capital gains separately.
- Too much risk in search of ↑ potential current income.

Guidance for Overcoming

- Create a portfolio strategy taking all assets into consideration.
- Total return consideration.

3.2.3 Framing Bias

Definition

- Bias in which a person answers a question differently based on the way in which it is asked.
- Narrow framing ⇒ investors use too narrow a frame of reference.

Consequences

- More risk averse when presented with a gain frame & more risk seeking when presented with a loss frame (sub optimal portfolios).
- Excessive trading.

Guidance for Overcoming

- Investors should focus on expected return & risk rather than on gain or losses.
- When interpreting investment situations, investor should be neutral & open minded.

3.2.4 Availability Bias

Definition

- Bias in which people estimate the probability of an outcome based on how easily the outcome comes to mind.
- Easily recalled outcomes are perceived as being more likely.

Consequences

- Advertisement based investment selection (retrievability).
- Limiting investment opportunity set (familiar categorizations).
- Fail to diversify (narrow range of experiences) & an appropriate asset allocation (resonance).

Guidance for Overcoming

- Follow a long-term strategic approach.
- Construct a suitable portfolio through developing an IPS rather than relying on more readily available information.

Sources of Availability Bias

Retrievability

- Refers to how easily an idea is recalled.
- The easier to retrieve a memory, the more likely the individuals will use it to classify new information.

Categorization

Individual categorize information using classification they are most familiar with.

Narrow Range of Experience

Limited experience of investor will lead to narrow focus to frame information.

Resonance

Individuals tend to estimate other's choices using their own choices.

3.3 Cognitive Errors: Conclusion

Systematic process to describe problems & objectives, to document decisions & the reasoning behind them& to compare the actual outcomes with expected results will help to reduce cognitive errors.

4. EMOTIONAL BIASES

- Harder to correct for than cognitive errors.
- Recognize these biases & adapt to them.

4.1 Loss-Aversion Bias

Definition

- Individuals focus on potential gains & losses relative to risk rather than returns relative to risk.
- Disposition effect ⇒ holding losing positions too long & selling gaining positions too quickly.

Consequences

- Hold investments in a loss (gain) position longer (shorter) than justified by fundamental analysis.
- Limited upside potential.
- Excessive trading & riskier portfolio holdings.
- Framing & loss aversion biases may affect FMPs simultaneously.
- House money effect ⇒ investors view profits as belonging to someone else & become less risk averse when investing it.
- Myopic loss aversion ⇒ investors overemphasize short-term gains & losses & weight losses more heavily than gains.
    - Combine aspects of time horizon based framing, mental accounting & loss aversion.
    - Higher than theoretically justified short-term equity risk premium.
    - If frequency of evaluation is ↑, the probability of observing a loss is ↑.

Guidance for Overcoming

- Disciplined approach of investment based on fundamentals.
- Base investment decisions on expectations rather than past performance.

4.2 Overconfidence Bias

Definition

- People feel they know more than they do because they feel they have more or better information or better at interpreting information.

Types

i) Prediction Overconfidence

- Too narrow confidence intervals.
- Poorly diversified portfolios.

ii) Certainty Overconfidence

- Assign too high probabilities to outcomes.
- Excessive trading.

Self-attribution bias ⇒combination of self enhancing bias (propensity to claim too much credit for success) & self-protection bias (place failure blame to someone or something else).

Overconfidence Bias

Consequences

- Underestimate risk & overestimate expected returns.
- Excessive trading & poor diversification.
- ↓Return than market.

Guidelines to Overcome

- Review trading records & calculate portfolio performance.
- Investors should be objective.

4.3 Self-Control Bias

Definition
- Individuals fail to balance the need for immediate satisfaction with long-term goals.
- Suboptimal saving-consumption patterns.
- Hyperbolic discounting ⇒ human tendency to prefer small payoff now compared to larger payoffs in the future.

Consequences
- Insufficient savings for the future.
- Accept too much risk by putting capital base at risk.
- Asset allocation imbalance problem.

Guidance for Overcoming
- Proper investment plan should be in place.
- Budgets help deter the propensity to over consume.

4.4 Status Quo Bias

Definition
- Individual's tendency to stay in their current allocation rather than make value enhancing changes.
- Outcome of the bias may be similar to endowment & regret aversion bias but reasons differ among these biases.

Consequences
- Portfolio risk characteristics may differ from investors' circumstances.
- Fail to explore other opportunities.

Guidance for Overcoming
- Education about risk, return & diversification.
- Proper asset allocation.
- One of the more difficult biases to mitigate.

4.5 Endowment Bias

Definition
Bias in which people value an asset more when they hold the rights to it than when they don't.

Consequences
- Fail to replace certain assets when it is necessary.
- Inappropriate asset allocation.
- Investors hold familiar assets.

Guidance for Overcoming
- Inherited cash should be carefully invested.
- Research familiar as well as unfamiliar assets the investor may not hold.
- Familiar assets can be replaced gradually rather all at once.

4.6 Regret-Aversion Bias

Definition
- Regret can arise from taking or not taking action.
- Error of commission ⇒ investor feel regret from taking an action.
- Error of omission ⇒ investor feels regret for not taking action.
- Regret aversion can initiate herding behavior (invest in similar fashion & in the same stocks as others).

Consequences
- Too conservative attitude ⇒ long term under performance & potential failure to reach investment goals.
- Herding behavior.

Guidance for Overcoming
- Education is primary mitigation tool.
- Efficient frontier research & proper asset allocation.

4.7 Emotional Biases: Conclusion

- Focus should be on cognitive aspects of the biases than trying to alter an emotional response.
- Education about portfolio theory can be helpful.

5. INVESTMENT POLICY ANDASSET ALLOCATION

Two approaches to incorporate behavioral finance considerations into an IPS are:

Approaches

Goal-Based Investing Approach

- Identify an investor's specific goals & associated risk tolerance.
- Investors are assumed to be loss averse rather than risk averse.
- More attractive approach for investors⇒ focused on wealth preservation.
- Riskier than appropriate asset allocation.
- Diversification but not efficient portfolios from a traditional finance perspective.
- Risk may better understand but correlations among investments are not considered.

5.1 Behaviorally Modified Asset Allocation

- Standard asset allocation program ⇒ rational portfolio allocation (ignores behavioral biases).
- Investor's interest ⇒ asset allocation that suits the investor's psychological preferences.
- In creating a modified portfolio:
  - Distinguish b/w emotional & cognitive biases.
  - Consider investor's wealth level.
- If a bias is adapted, the resulting portfolio represents an alteration of rational portfolio.
- When a bias is moderated ⇒ resulting portfolio is similar to rational portfolio.

5.1.1 Guidelines for Determining a Behaviorally Modified Asset Allocation

Two Guidelines

Guideline1

- Decision to moderate or adapt biases depends on client's level of wealth.
- Wealthier the client, more likely it is to adapt the biases.

Guideline2

- Decision to moderate or adapt biases depends on the type of behavioral bias.
- Cognitive errors ⇒ moderated.
- Emotional biases ⇒ adapted.

- Wealth is determined based on level of assets & lifestyle.
- Standard of living risk ⇒ risk that a specified life style may not be sustainable.

5.1.2 How Much to Moderate or Adapt

- To modify an allocation, no of asset classes used in the allocation is important consideration.
- Least (most) adjustment to the rational portfolio ⇒ low (high) wealth level client with cognitive bias (emotional bias).
- Middle of the road ⇒ high (low) wealth with cognitive (emotional) biases (need to both adapt & moderate behavioral biases).
- Market participants may move up or down on efficient frontier after considering client's behavioral make up.