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Behavioural Factors and Investment Decisions of Bankers in Ghana

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Authors' contributions

This work was carried out in collaboration between all authors. Author JD designed the study, wrote the protocol and supervised the work. Authors VA and SA carried out all laboratories work and performed the statistical analysis. Author SA managed the analyses of the study. Author JD wrote the first draft of the manuscript. Author SA managed the literature searches and edited the manuscript. All authors read and approved the final manuscript.

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ABSTRACT

Behavioural finance attempts to investigate the psychological and sociological issues that influence investment decision making process of individuals and institutions. The study investigated the effects of behavioural factors on investment decisions making by bankers in Ghana. The study therefore sought to establish whether heuristics (overconfidence behaviour, herd behaviour, and anchoring behaviour) affect investment decisions of bankers in Ghana. Descriptive design study was used for the research. Questionnaire was used for data collection with 100% response rate being registered. Convenience sampling was used to select 150 bankers. Analysis was done using Microsoft Excel and Statistical Packages for Social Scientists. The study revealed that bankers' investment decisions are affected by anchoring, overconfidence, and herd behaviours. Bankers tend to be overconfident while making investment decisions. Their decisions are also affected by experience of their past performance suggesting the effect of anchoring. Herd behaviour is not common among the bankers as most of them prefer making their own decisions. The study recommends further research should be done on the remaining heuristic factors i.e.

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representativeness, aversion to ambiguity, and innumeracy to establish their effects on investment decision making by bankers.

Keywords: Behavioural finance; heuristic; anchoring; overconfidence; herd behaviour.

1. INTRODUCTION

Most of economics and financial theories presume that individuals act rationally and consider all available information in the investment decision making process. There is evidence to show repeated patterns of irrationality, inconsistency and incompetence in the way human beings arrive at decisions and choices when faced with uncertainty [1]. Inefficiency in the market that prompts practitioners to make use of forecasting techniques is caused by traders using simple, heuristical forecasting rules in preference to basing their expectations on an analysis of the fundamentals [2]. Behavioural finance seeks to understand and predict systematic financial market implications of psychological decision processes [3]. The contention of behavioural economics is that the level of complexity in the real world makes it impossible for agents to fully comprehend the markets in which they trade [4]. A basic question that arises from the literature is whether managers dealing with irrational market or whether rational market dealing with irrational managers or both [5].

Behavioural finance considers how various psychological traits affect how individuals or groups act as investors, analysts, and portfolio managers [6]. Heuristics can be defined as the use of experience and practical efforts to answer questions or to improve performance. Raines & Leathers [7] argue that when faced with uncertainty, people rely on heuristics or rules of thumb to subjectively assess risks of alternatives, which reduces the complex tasks of assessing probabilities and predicting values to simpler judgmental operations.

There is huge psychology literature documenting that people make systematic errors in the way that they think; they are overconfident, they put too much weight on recent experience etc. This preference may create distortion. Therefore, the field of behavioural finance attempts to investigate the psychological and sociological issues that influence investment decisions making process of individual and institutions [5]. In the recent years, the investment market has witnessed tremendous rise in the country. Investors on the other hand have responded positively as it is evidenced through repeated oversubscriptions for shares. However many investors have had to endure the pain of losses due to following the masses and being overconfident.

Individual investors have difficulties making investment decisions due to lack of financial difficulty [8]. Consequently they employ a team of investment professionals under the direction of fund managers to undertake investment decisions on their behalf. Researchers have however, proved that due to the market inefficiencies, the standard finance models employed by market practitioners have failed to account for the market anomalies. Intuitively one can presume that unit trust managers are rational and therefore strictly observe and follow the standard finance models in decision making. It is emerging from the literature that individual and even institutional investors have embraced heuristics or rule of thumb in their investment decision making. How does heuristics (overconfident, anchoring, and herd behaviour) of bankers affect investment decisions? This research paper attempts to analyse heuristical factors (overconfidence, anchoring, and herd behaviour) and their effects on investment decisions among bankers in Ghana.

2. LITERATURE REVIEW

2.1 Prospect Theory

Prospect theory according to Ritter [4] is a descriptive theory under uncertainty. It is a mathematically formulated alternative to the theory of expected utility maximization [9]. This theory was developed by Professor Daniel Kahneman and Amos Tversky in 1979. It focuses on changes in wealth, whereas expected utility theory focuses on level of wealth [4]. The theory describes how people frame and value decisions involving uncertainty by looking at choices in terms of potential gains or losses in relation to a specific reference point which is often the purchase price. Kahneman and Tversky [10] argue that Investors value gains/losses according to an S-shaped utility function.

The reference point is determined by each individual as a point of comparison. For wealth levels under the reference point investors are risk seekers i.e. they are prepared to make riskier bets in order to stay above their preferred target level of wealth. Whereas for wealth levels above this reference point, the value function is down ward sloping in line with conventional theories and investors are risks averse. Kahneman and Tversiky [11] asserted that people are risk lovers for losses [9]. The utility function is concave for gains meaning that people feel good when they gain, but twice the gain does not make them feel twice as good. The utility function is convex for loss meaning that people experience pain when they lose, but twice the loss does not mean twice the pain.

2.2 Loss Aversion and Cognitive Dissonance

Cognitive dissonance refers to the psychological conflict resulting from incongruous beliefs and attitudes held simultaneously. This concept was introduced by psychologist Leon Festinger in the late 1950s. He and other researchers showed that when confronted with challenging new information most people seek to preserve their current understanding of the world by rejecting, explaining away, or avoiding the new information or by convincing themselves that no conflict really existed [12]. Loss aversion and regret are often the underlying motivations for what appears to be irrational investment behaviour [13].

Kahneman and Tversky [11] sought to provide a theory that describes how decision makers actually behave when confronted with choices under uncertainty. Empirical tests indicate that losses are weighted about twice as heavily as gains-loosing $1 is about twice as painful as the pleasure of gaining $1 [9]. This can also be expressed as the phenomena in which people will tend to gamble in losses i.e. investors will tend to hold on to losing positions in the hope that prices will eventually recover. Gounaris and Prout [13] argue that as financial professionals rebuild client trust in the face of uncertainty and skepticism, loss aversion is likely to play a prominent role in the dialogue and subsequent decisions. Consequently, they note, advisors face two challenges: 1) the fear of further loss is more powerful than any objective logical data that minimizes the likelihood of loss, and 2) people are largely unaware of the dynamics operating between their feelings about loss and their emotional state or financial decisions.

2.3 Mental Accounting

Mental accounting describes the tendency of people to place particular events into different mental accounts based on superficial attributes [14]. Shiller [14] suggest that investors place their investments into arbitrarily separate mental compartments and react separately and in different ways to the investment based on which compartment they are in.

Thaler [15] argued that mental accounting includes three components. The first compartment captures how outcomes are perceived and experienced and then how decisions are made and subsequently evaluated. The second part of mental accounting assigns the activities to specific accounts. The third component is concerned with the frequency with which accounts are evaluated. Each of the components of mental accounting violates the economic principle of fungibility. Consequently, decision choices are influenced [12].

Mental accounting affects not only the personal finances but is common phenomenon in the complex world of investment. When an investor buys a new stock, he starts maintaining a new virtual account for this stock in his mind. Each decision, action, and outcome about that stock is placed in that account. So has each investment of its own. Once an outcome is assigned a mental account it is difficult to view that outcome in another way. When interacting among asset in different accounts are overlooked, this mental process can adversely affect investor wealth [12].

2.4 Overconfidence

Studies of the calibration of subjective probabilities find that people tend to overestimate the precision of their knowledge. Such overconfidence has been observed in many professional fields such as investment banking and management [16]. Ritter [4] argues that much overconfidence is related to a broader difficulty in making adequate allowance for the uncertainty in one's own view point. Overconfidence may explain why investment professionals hold actively managed portfolios with the intention of being able to choose the winners [9]. Managers overestimate the probability of success in particular when they think of themselves as experts [17]. Overconfidence according to Ritter [4] manifests itself when there is little diversification because of a tendency to invest too much in what one is familiar with. Selecting common stocks that will

outperform the market is a difficult task. Predictability is low; feedback is noisy. Thus, stock selection is the type of task for which people are most overconfident [16]. Overconfidence explains why portfolio managers trade so much, why pension funds hire active equity managers, and why even financial economists often hold actively managed portfolios-they all think they can pick winners [18]. Olsen [3] develops models in which overconfident investors overestimate the precision of their knowledge about the value of a financial security. He observes that they overestimate the probability that their personal assessments of the security's value are more accurate than the assessments of others.

2.5 Anchoring

Tversky and Kahneman [11] identified the systematic biases in judgment and their applied implications associated with three common biases: representativeness, availability and adjustment, and anchoring. Anchoring occurs as investors assume that current prices are about right, putting too much weight on recent experiences [19]. Gwily [2] observed that heterogeneous agents make portfolio choice based on expectations that are not rational in conventional sense, but based on one or two simple heuristical rules. Agents keep switching between the rules depending on how profitable the rule was in the preceding period. This according to him suggests some form of status quo bias as suggested by Tversky & Kahneman [11]. Investors often fail to do enough research because there is simply too much data to collect and analyse. Instead, they take action based on a single factor figure that should have little or no bearing on their decision, while ignoring more important information [12].

2.6 Herd Behaviour

Due to the fact that more and more information is spread faster and faster, [20], life for decision makers in financial markets has become more complicated. According to Johnson et al. [10] the interpretation of new information may require heuristic decision-making rules. Research suggest that a herd mentality play an instrumental role on both sides of the equation, impacting institutional decision making and investors behaviour alike [13]. Keynes [21] argues that professional investors are only concerned with what the market will value it at, under the influence of mass psychology in three months to a year. In the context of professional money managers, [22] found that mutual fund managers are more likely to buy stocks that other managers in the same city are buying, suggesting that one factor impacting portfolio decisions is a word-of-mouth effect by way of social interaction between money managers. Gounaris and Prout [13] contents that in financial planning; there are situations in which herd investment is completely appropriate. While it would be unwise to make investment decisions in a vacuum, [13] argue that it is equally important that financial professionals employ a healthy dose of skepticism when herd is clearly moving the mass in a certain direction. Investors with no access to inside information [23] irrationally act on noise as if it were information that would give them an edge.

3. RESEARCH METHODOLOGY

The study employed descriptive research design. The reason for the use of descriptive research design is to describe the state of affairs as it is at present. Descriptive research according to [16] is a process of collecting data in order to answer questions concerning the status of the subjects in the study.

Data for the study was gathered from both primary and secondary sources. The primary source dealt with information gathered from selected bankers. Data collection was achieved by the use of questionnaire to solicit information from the bankers. And also, the secondary data dealt with other written documents which were meant for other purpose and not this research. The sample population of this study was all bankers in Ghana. In all, 150 bankers were chosen using convenience sampling. Information gathered from the bankers were first edited and tallied in frequency table. The values corresponding to frequencies were later converted in percentages to facilitate comparison between the responses. Microsoft Excel (spread sheet) and Statistical Packages for Social Scientists (SPSS) were employed for the analysis.

4. DATA ANALYSIS AND INTERPRETATION

4.1 Demographic Data of the Respondents

Most of the respondents (35%) were between the ages 18-29 followed by the 50 - 59 (29%) year olds. 17% were 30-39 years and the least (14%)

were between 40- 49. The above indicates that, majority of the respondents fall within the youth group who has more years ahead to work. The analysis also indicates that majority of the respondents in the study were male (103) which represent (69%) and female were 47 representing 31%.

4.2 Anchoring

In order to discern whether past history of portfolio performance influence investment decision making, the respondents were asked if their past history influence your present investment decisions.

From Table 1, 95 of respondents representing 63.6% reported that they are influenced by historical performance of their investments when making present investment decisions. 41 representing 27.3% reported that they are somehow affected by historical performance while 14 respondents representing 9.1% are not affected. This is line with [2] assertion that people past performance of their investment influence current investment decisions.

Table 1. Portfolio performance and investment decision making

Responses	Frequency	Percentage (%)
Yes	95	63.6
Somehow	41	27.3
No	14	9.1
Total	150	100.0

Table 2. Past performance and investment decisions

Response	Frequency	Percentage (%)
Yes	123	82
No	27	18
Total	150	100

When the respondents were asked if they are will base their decision on the past performance of various investments. To further discern the effect of anchor, 123 of the respondents representing 82% reported that they are influenced by the past performance of their portfolios while (27)18% are not. These results are consistent with [7]. They echoed that anchor affect investment decision making.

For an investment whose historical performance has been consistently excellent, how you treat it in the subsequent selection was posed to the respondents.

Table 3. Selection of performing portfolios

Response	Frequency	Percentage (%)
Retain it as part of your portfolio	123	82
Others	27	18
Total	150	100.0

Question sought to elicit how bankers will treat excellently performing portfolios in their subsequent selection decisions. The response rate was (123) 82% all of whom indicating that they would include it in their next portfolio choices. 27 representing 18% were indifferent to this question. This indicates that, bankers are not exempted from the influence of anchor in decision making. This is in agreement with [12] argument that every individual investment decision is influence by anchor behaviour.

4.3 Overconfidence

To establish whether overconfidence influence investment decisions among bankers, questions were asked relating to the effect of overconfidence. Based on your expertise you do not need advice from investment experts.

Table 4. Overconfidence and investment decisions

Response	Frequency	Percentage (%)
Yes	82	55
No	68	45
Total	150	100

When a statement was made for bankers to indicate whether they will still seek advice from other investment experts given their expertise before embark on investment decision. The response rate was 100% out of which 55% reported that they consult other experts while 45% do not. This is in line with [4] argues that much overconfidence is related to a broader difficulty in making adequate allowance for the uncertainty in one's own view point.

Table 5. Experts' opinion before investment decisions

Response	Frequency	Percentage (%)
Yes	81	55
On a few options	69	45
Total	150	100

When the question was asked was posed to the respondents whether they will consult experts before investing in particular options. 81 of the respondents representing 55% reported that the consult experts while 69 representing 45% reported they do not. This appears to support the theory that investors both individuals and institutions are at times overconfident of themselves when making decisions depending on the kind of information they possess. Some bankers also tend to be overconfident in their decisions, which can partly be attributed to their skills and expertise as well as their ability to digest and understand financial information.

Table 6. Source of information for investment decisions

Response	Frequency	Percentage (%)
Advice from market analysts	55	37
Own assessment of financial markets	95	63
Total	150	100

Regarding the source of information for investment decisions, most bankers (63%) prefer their own assessment and analysis of the financial market instead of relying on advices from market analysts while 37% relied on advice from market analysts. This can be attributed to the effect of overconfidence by bankers arising from their knowledge and expertise. This is in line with [6] models in which overconfident investors overestimate the precision of their knowledge about the value of a financial security. He observes that they overestimate the probability that their personal assessments of the security's value are more accurate than the assessments of others.

4.4 Herd Behaviour

To establish whether bankers follow the masses in investment decision, a question was asked to that effect. 46% of the bankers felt it is true some make decisions based on information available to others, while 54% disagreed. This suggests some level of herd behaviour among bankers in decision making though the majority would prefer to take their own course. This is supported by [9] that the interpretation of new information may require heuristic decision-making rules. Research suggest that a herd mentality play an instrumental role on both sides of the equation, impacting institutional decision making and investors behaviour alike [24].

Table 7. Herd behaviour

Response	Frequency	Percentage (%)
True	69	46
False	84	54
Total	150	100

4.5 Analysis of the Relationships

To establish the relationships between the variables under study, correlation analysis was used to measure both the strength and direction of the relationships.

This was aimed at establishing the nature of the relationship between overconfidence and herd behaviour witnessed in the study. A correlation coefficient of 0.842 was obtained suggesting a strong positive relationship between the two variables that is overconfidence and herd behaviour.

Table 8. Relationship between overconfidence and herd behaviour

Pearson correlation	1	.842(**)
N	150	150
Pearson Correlation	.842(**)	1
N	150	150

Table 9. Relationship between herd behaviour and anchoring

Pearson correlation	1	.486
N	150	150
Pearson Correlation	.486	1
N	150	150

This was aimed at establishing the nature of the relationship between relationship between herd and anchoring behaviour witnessed in the study. A correlation coefficient of 0.486 was obtained suggesting a weak positive relationship between the two variables. This implies that those bankers who follow the mass are likely at minimal to have anchoring tendencies in their decision making.

Table 10. Relationship between anchoring and overconfidence

Pearson correlation	1	-.465
N	150	150
Pearson Correlation	-.465	1
N	150	150

The study also sought to establish the relationship between anchoring and overconfidence. A correlation coefficient of -0.465 was obtained suggesting a weak negative relationship between the two variables. This implies that bankers with anchoring tendencies in their decision making are not likely to be overconfidence.

5. CONCLUSION

The purpose of this study was to establish the effects of behavioural factors on investment decision-making processes of bankers in Ghana. More specifically, the objective was to study the effects of heuristics, namely; overconfidence, anchoring, and herd behaviour on investment decisions of bankers. Behavioural finance, which seeks to supplement the standard theories of finance by introducing behavioural aspects to the decision-making process, provided the theoretical framework for the study.

From the findings, the study concludes that investment decisions in bankers are influenced by behavioural biases of the individual. Specifically, heuristics, a process by which people find things out for themselves usually by trial and error significantly influence investment decisions in bankers. Overconfidence, herd, and anchoring behaviour affect bankers' portfolio choices. Anchor and overconfidence are found to be the most dominant factors affecting bankers' investment decisions.

Bankers chose to retain the best performing portfolios in their current investments in anticipation of continuous better returns suggesting the effect of anchor in their decisions. This also implies that after forming an opinion about a particular investment option on the basis of information available, bankers are unlikely to change as long as they do not receive any new relevant information.

The study also concludes that overconfidence affects investment decisions in bankers. This can be inferred from the bankers' decision not to consult other experts in the market when making investment decisions. The study also established that bankers prefer information gathered from their own assessment of the market rather than seek advice from experts. Overconfidence of the bankers can be attributed to strong belief in their own knowledge and skills. However, this knowledge and skills may not be adequate to develop an accurate forecast in uncertain situations. Overconfidence can easily lead to the underestimating of the likelihood of bad outcomes thus resulting in poor returns. The study recommends further research should be done on the remaining heuristic factors i.e. representativeness, aversion to ambiguity, and innumeracy to establish their effects on investment decision making by bankers.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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