







# Effect of Cognitive Biases on Investment Decision Making: A Case of Pokhara Valley, Nepal

Bharat Ram Dhungana<sup>1\*</sup> , Sandhya Bhandari<sup>2</sup> , Deepak Ojha<sup>1</sup> ,  
Laxmi Kanta Sharma<sup>3</sup> 

<sup>1</sup> School of Business, Pokhara University, Pokhara, Nepal

<sup>2</sup> Century Commercial Bank, Pokhara Nepal

<sup>3</sup> Centre for Economic Development and Administration, Tribhuvan University, Nepal

\*Corresponding Author  
([dhunganabharat.pu@gmail.com](mailto:dhunganabharat.pu@gmail.com))

Received: February 16, 2022

Revised: May 1, 2022

Accepted: May 26, 2022

Published: June 21, 2022

## How to cite this paper:

Dhungana B.R., Bhandari S, Ojha D & Sharma L.K. (2022). Effect of Cognitive Biases on Investment Decision Making: A Case of Pokhara Valley, Nepal. *Quest Journal of Management and Social Sciences*, 4(1), 69-82.

Copyright © 2020 by authors and Quest Journal of Management and Social Sciences.

This work is licensed under a Creative Commons Attribution-Non Commercial-No Derivatives 4.0 International License.

<https://creativecommons.org/licenses/by-nc-nd/4.0/>



Open Access

## Abstract

**Background:** Behavioral finance deals with the study of psychological influences on investors and financial markets. Investors commonly perform investment analysis through fundamental and technical analysis. The behavior of the investment market originates from the principles of psychological decision-making that explains the reasons behind buying and selling stocks.

**Objectives:** This paper aims to examine the effect of cognitive biases on investment decisions in Pokhara Valley, Nepal. The effect of five cognitive biases, such as availability, anchoring, overconfidence, herd instinct, and regret aversion, is measured on rational investment decision-making.

**Methods:** This study is based on primary data sources using non-probability (convenience method) sampling techniques. There are seven brokerage houses in Pokhara valley, and researchers selected 179 respondents involved in stock market investment. Both descriptive and inferential analyses were made to analyze the data.

**Results:** The study discovers a link between irrationality in financial decision-making and availability, overconfidence, and herd instinct biases, but anchoring and regret aversion biases had no effect on irrational investment decisions. However, though all the biases have a positive relationship with an irrational investment decision, overconfidence bias has the highest impact. Regret aversion bias has the least impact on investment decisions in comparison to the other four biases.

**Conclusion:** The investors and the policymakers should focus on finding the cognitive biases and various de-biasing methods to eradicate those biases throughout investment decision-making. The findings of this study have a number of implications for investors, brokers, and governments who aim to stimulate stock market investment.

**Keywords:** Behavioural finance, cognitive biases, financial markets, investment decisions

**Paper Type:** Research Paper

**JEL Classification:** G11, G14, O16

## Introduction

The conventional finance theory has considerable dominance in the market, which is based on the principle of the efficient market hypothesis (EMH), where people are not affected by biases and emotions ((Maheran & Muhammad, 2009; Subramaniam & Velnamby, 2017). EMH undertakes that the investors use rational investment decisions using all available information, and the market reflects all the available information (Latif et al., 2011). Behavioral finance is the sub-field of behavioral economics that challenges the traditional finance approach based on market efficiency and people's rationality in making decisions in the market (Chetty, 2015). Behavioral finance theory relies on the notion of individual investors who are likely to make judgments and decision-making errors (Rezaei, 2013). This theory appeals to the experimental indication of cognitive psychology. The beliefs and preferences of investor irrationality, investors' decision-making process, and the biases arise when decision making (Barberis & Thaler, 2003). The behavioral and unavoidable psychological biases prevent the investors from rational decision-making (Dangol & Manandhar, 2020). Behavioral finance is worthwhile for the investors while analyzing the psychological aspect of people to study people's behavior regarding buying or selling stocks. Researchers are more interested in learning behavioral finance because it is considered a good theory while understanding and explaining the feelings and cognitive errors that may affect investment decision-making (Dhungana et al., 2018).

Many empirical pieces of evidence such as Levine (1996), Demirgüç-Kunt and Levine (1996), Rajan and Zingales (2001), Sarma and Pais (2011), and Naz and Gulzar (2022) show that a healthy financial system facilitates the economic growth of a country. Financial institutions play an important role in capital formation and promote investment. Dhungana (2019) finds a long-run causality between financial institutions and economic growth in the context of Nepal. A developed financial system promotes economic growth in the long run (Puatwoe & Piabuo, 2017). The regulatory body should improve financial efficiency, which will help generate enough capital formation and investment in productive sectors (Ang, 2008; Gupta, 2021). Investors and investment managers make investment decisions. Fundamental analysis, technical analysis, and judgment are popular tools used by investors to do investment analysis (Jaiyeoba et al., 2018). Individual investing behavior concerns decisions concerning small-scale stock purchases for one's own account (Nofsinger & Richard, 2002). Decision tools are frequently used to aid investment decisions. It is thought that market structure and determinants impact individual investment decisions and market results systematically. Investor market behavior is based on psychological decision-making concepts to explain why people purchase or sell stocks (Jain, Walia & Gupta, 2019).

Behavioral finance theory aims to comprehend and forecast the systematic financial market consequences of psychological decision-making processes, impacting investor behavior and market efficiency (Chaffai & Medhioub, 2014). Cognitive biases emerge in the financial market because humans are not always flawless in making rational judgments (Winter, 2020).

This study is useful and provides several insights to individual investors in considering and analyzing the cognitive factors before making suitable investment decisions. This research aims to investigate the influence of cognitive biases on investors' investment decisions with reference to Pokhara Valley, Nepal. The impact of five cognitive biases on rational investment decision making: availability, anchoring, overconfidence, herd instinct, and regret aversion bias, has been investigated.

## Review of Literature

### *Theoretical Review*

Behavioral finance is a relatively new school of thought that studies human behavior in this modern era. Bikas and Jureviciene (2013) depicted that behavioral finance evolved as a result of studying the

psychology and sociology aspects of human beings through analyzing their processes of behavior and mind. Later, behavioral finance developed as the mechanism for studying investors' decisions towards buying and selling the securities in the market (Hirshleifer, 2015). Investors' decision-making cannot solely be based on conventional finance of an efficient market model (Sharma, 2016). Behavioral finance revolved as a new phenomenon for understanding the investors' decision-making tendency towards investments made in different areas such as banks and financial institutions, educational institutions, manufacturing, and service sectors (Grosse, 2012; Pompian, 2012).

Behavioral finance integrates cognitive psychology and limits arbitrage theory with traditional finance to explain why individuals make illogical decisions. According to Bhatt and Chauhan (2014), limitation in arbitrage depicts that rational investors cannot easily use arbitrage opportunities because of the requirement to accept some risks. In contrast, cognitive psychology examines the behavior and judgment of investors as well as errors made by people when they judge investment activities.

Heuristics are shortcuts that individuals use to make judgments in complex, uncertain situations in order to make things easier (Misuraca et al., 2022). Decision-making is not strictly rational because all relevant data is gathered and objectively analyzed; rather, the decision-maker employs mental shortcuts (Tversky & Kahneman, 1979). Kahneman and Tversky (1979) devised the prospect theory, sometimes known as the loss-aversion hypothesis. The prospect theory describes how psychological variables influence risk-taking decisions among investors. The herding effect is a term used in the financial market to describe the tendency of investors to follow the activities of others. In this circumstance, herding might assist with professional performance evaluation since low-ability individuals may copy the conduct of their high-ability peers to improve their professional reputation.

Ady (2018) finds cognitive bias and psychological bias behavior occur in nearly all informants; psychology bias can be divided into two types: expected emotion bias behavior and immediate emotion bias behavior; experience, capital market knowledge, and the management of positive emotions determine the level of psychological stability and reduce bias behavior, which could increase return. Emotional instability leads to irrational behavior among investors, resulting in sub-optimal returns and even inefficient portfolio selection, leading to sub-optimal returns and even losses (Ady et al., 2013). This led the researchers to investigate the behavior of investors in investing regarding the cognitive and psychological biases.

### ***Empirical Review***

Dangol and Manandhar (2020) investigated the influence of availability bias, representative bias, anchoring and adjustment bias, and overconfidence bias. Siraji (2019), Bakar and Yi (2016), and Khan et al. (2021) find that all four heuristic biases have a substantial link with irrationality in investing decisions. Based on the findings of these studies, we claim that heuristics impact Nepalese investors' investment behavior; even though a majority of Nepalese investors are educated, they choose stocks based on mental shortcuts rather than rational judgments.

Overconfidence substantially influences investors' investment decisions in the Nepalese stock market (Shrestha, 2019) study. Women are less overconfident in their investing decisions than males in terms of investment decisions (Kumar & Goyal, 2016).

According to Siraji (2019), the heuristics, anchoring, availability bias, and representational bias positively impact stock investment success. On the other hand, overconfidence has a significant detrimental influence on the success of stock investments at the Colombo Stock Exchange. Shah et al. (2018) found overconfidence, representativeness, availability, and anchoring affect investment decisions adversely in a study on individual investors actively trading on the Pakistan stock exchange (PSX) and perceived market efficiency. Javed et al. (2017), studying the example of the PSX, find herding effects, overconfidence bias, and representativeness have a favorable and substantial influence on perceived investment success.

In their study, Bakar and Yi (2016) revealed that overconfidence, conservatism, and availability bias affected investor decision-making substantially, but herding bias had no effect. Investigating how behavioral variables influence investing decisions, Donkor et al. (2016) discovered that anchoring had a beneficial impact. They also found that overconfidence and anchoring are the two most essential characteristics influencing investing decisions.

At the Colombo Stock Exchange, Kengatharan and Kengatharan (2014) found that individual investors' investing decisions at the Colombo Stock Exchange were influenced by herd instinct bias, overconfidence bias, and anchoring bias. Anchoring bias is the one that has the most significant impact on investing decisions.

Dhungana (2013) observed that a comprehensive investment environment, political stability, stable governance, and a practical regulatory framework are the primary elements that contribute to increased trust in the Nepalese stock market.

Lim (2012) found that overconfidence and regret aversion bias had a favorable influence on investors' decision-making. On the other hand, herding conduct was determined not to affect investors' decision-making.

Representative bias, anchoring, overconfidence bias, and risk aversion, according to Qureshi et al. (2012), have a strong positive impact on decision-making in Pakistan. According to Ramalaxmi et al. (2019), all four cognitive biases, namely representativeness, anchoring, herd instinct, and regret aversion bias, have a considerable impact on investment decision making.

Tversky and Kahneman (1974) undertook a subjective investigation of biases. According to the study, representative, availability, and adjustment from an anchor are three primary biases used while making decisions under ambiguity. Because stock investing is one of the most unpredictable industries, these heuristics impact stock investment decisions.

Financial theories such as Malkiel and Fama's (1970) efficient market hypothesis, Markowitz's (1952) modern portfolio theory, and Modigliani and Miller's (1958) arbitrage principle argue that capital markets are fully efficient and that all investors make rational investment decisions. One of the most crucial decisions in the stock exchange is rational decision-making by the investors (Tanvir, Sufyan & Ahsan, 2016). When it comes to investing, a rational investor would often go for a low-risk investment with a high rate of return. When an investor is faced with an investment decision, however, they are more likely to engage in irrational conduct, which impacts their investment decision. The cognitive and emotional variables have an impact on an investor's investing decision (Alwahaibi, 2019).

Investors' intuition, perceptions, emotions, and thinking are used to make complex judgments in vast, unpredictable markets (Kahneman & Riepe, 1998). Still, these conclusions are frequently illogical due to cognitive biases and the omission of entire information (Du & Budescu, 2018). Investors have cognitive biases in the form of mental shortcuts known as heuristics, which cause them to overestimate their talents, competence, and knowledge (Simon Houghton & Aquino ., 2000), causing them to make rash judgments. Investors respond rapidly and make judgments based on the information available, implying that mental shortcuts influence irrationality and investing decisions (Bowers & Khorakian, 2014). Furthermore, experienced and inexperienced investors suffer from heuristic biases (Elliot, Rennekamp & White, 2018).

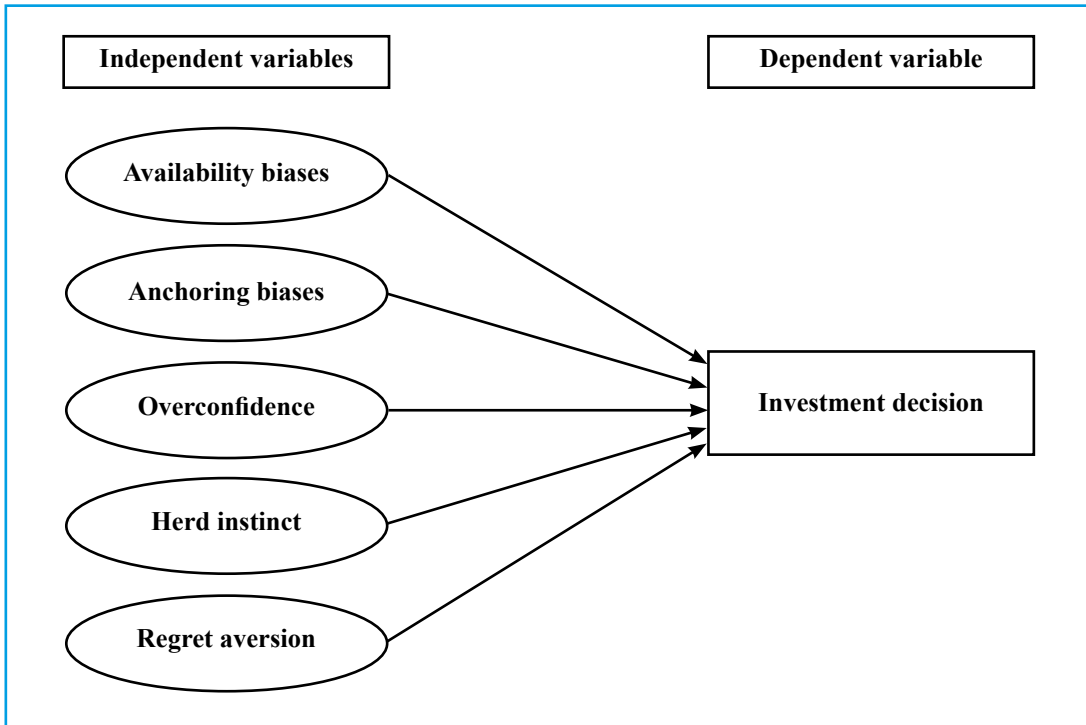
## **Research Methods**

### ***Conceptual Framework***

Several studies have shown that markets are inefficient in reality, as seen by the persistence of anomalies. Irrational conduct and inefficiency are attributed to bounded rationality, cognitive and emotional biases, underlying heuristics, intuitive reasoning, limited knowledge, and dependence on

historical performance, prior experiences, and expectations (Baker & Nofsinger, 2002; Shefrin, 2006; Ajmal et al., 2011; Bondt et al., 2013; Bakar & Ye, 2016). Based on the above literature, availability, anchoring, overconfidence, herd instinct, and regret aversion biases are taken as independent variables. The dependent variable is individual investors' investment decisions in the Nepalese stock market.

**Figure 1: Theoretical framework of the research**



A number of studies such as Chandra (2008), Ajmal et al. (2011), Bakar and Ye (2016), Shahid et al. (2018), Quaicoe and Eleke-Aboagye (2021) found the existence of key behavioural biases - availability, anchoring, overconfidence, herd instinct, and regret aversion that interact with the investment decisions. Based on the above literatures and conceptual framework, this study seeks to test the following alternative hypotheses:

- H<sub>1</sub>: The degree of irrationality in investing decisions is associated with availability bias.
- H<sub>2</sub>: The degree of irrationality in investing decisions is associated with anchoring bias.
- H<sub>3</sub>: The degree of irrationality in investing decisions is associated with overconfidence bias.
- H<sub>4</sub>: The degree of irrationality in investing decisions is associated with herd instinct bias.
- H<sub>5</sub>: The degree of irrationality in investing decisions is associated with regret aversion bias.

### **Study Area**

This study is located in the Pokhara Valley of Nepal. The researcher has used non-probability sampling procedures since the whole sample frame for the study was not obtainable. There are altogether seven brokerage houses in Pokhara valley. Hence, from the overall population of the investors in the Pokhara valley, 196 samples have been selected for the data collection process keeping a 5% margin of error and a 95% confidence level. Out of the total 196 questionnaires distributed, 186 investors submitted their responses. Among them, four questionnaires were duplicated and three were invalid which makes 179 total valid responses for further analysis.

### Data Collection Techniques

The research uses first-hand information. Investors at brokerage businesses in the Pokhara Valley were surveyed for primary data. The study used questionnaires to collect data. The questionnaire had two sections: the first section asked for information on the respondents’ demographic profiles. In contrast, the second part includes measures to detect availability, anchoring, overconfidence, herd instinct, regret aversion bias, and tests to detect rationality in investment decision-making. Before administering the questionnaires, a pilot test was made on a small group of 14 respondents. Cronbach’s alpha measured the internal consistency. Cronbach’s coefficient is used to calculate the internal consistency coefficients of the items included in the questionnaire through a pilot study (Mansour, 2015). The Cronbach’s alpha for the independent variables (availability bias, anchoring bias, overconfidence bias, herd instinct bias, and regret aversion bias) and dependent variable (investment decision) are above 0.7 and found the acceptable level of reliability among the scale.

Regression shows the extent to which a variable depends on another. In order to analyze the effect of cognitive biases on the rational investment decision-making of investors, a multiple linear regression has been conducted.

The research model used in the study is represented as follows:

$$ID = \beta_0 + \beta_1AB + B_2AnB + \beta_3OB + \beta_4HB + \beta_5RB + e$$

Where,

- ID = Investment decision;  $\beta_x$  = Coefficient; AB = Availability bias;
- AnB= Anchoring bias; OB= Overconfidence bias; HB= Herd Instinct bias;
- RB= Regret Aversion bias;
- e = error term

The research was carried out between March 2021 and November 2021. The data were analyzed using both descriptive and inferential methods. One-way ANOVA, independent sample t-test, correlation analysis, and multiple regressions are all examples of inferential analysis.

## Data Analysis and Results

### Demographic Status

Gender, age, marital status, education level, employment, and stock market trading experience are some of the demographic factors included in the study.

**Table 1: Demographic profile**

Demographic variables		No. of respondents	Percentage
Gender	Male	116	64.8
	Female	63	35.2
Age	16-25	67	37.5
	26-35	86	48
	36- 45	15	8.4
	46- 55	9	5.0
Marital status	Above 55	2	1.1
	Single	118	66.0
	Married	61	34.0

Demographic variables	No. of respondents	Percentage	
<b>Education level</b>	Primary level and below	1	0.5
	S.L.C	4	2.2
	Intermediate	5	2.8
	Bachelors	81	45.3
	Masters and above	88	49.2
	Student	58	32.4
<b>Occupation</b>	Government employee	21	11.7
	Non-government employee	68	38.0
	Self- Employed	29	16.2
	Housewife	3	1.7
<b>Experience in the stock market</b>	0-1 year	96	53.6
	2-5 years	71	39.7
	6-10 years	12	6.7

Source: Field survey 2021 and authors' calculation.

The results show that female investors are less active in investing in the stock market than male investors (Table 1). Likewise, the adult population group (26 to 35 years) and young population (16 to 25 years) are primarily interested in investing in the stock market of Nepal. A large proportion of investors were married investors. A majority of them, about (94.5%), have bachelor's degrees and above qualifications. The major participants in the stock market investment are non-government employees (38%), students (32.4%), and self-employed (16.2%) people. The majority of the investors (53.6%) have below one year of experience, representing the new investors in the stock market. The study finds that most of the investors in the stock market are young age with a high academic degree. Liivamägi (2016) found that investors holding an academic degree are more engaged in the stock market. According to Campbell (2006), educated investors engage more actively in the stock market and make rational investment decisions than less-informed investors. Education is essential in determining investor performance, risk-taking, and stock market involvement.

### *Inferential Analysis*

The one-way ANOVA test was used to see a significant difference between demographic characteristics and investor cognitive biases. The demographic variables include education level, age, occupation, and investment experience. Cognitive biases have availability bias, anchoring bias, overconfidence bias, herd instinct bias, and regret aversion bias.

**Table 2: Cognitive factors across demographic characteristics**

Variables	Statistics	Availability	Anchoring	Overconfidence	Herd Instinct	Regret Aversion
<b>Education</b>	F-statistics	3.009	1.248	1.025	1.103	0.893
	sig.	0.020	0.292	0.396	0.357	0.469
<b>Age</b>	F-statistics	2.238	0.650	2.233	1.380	2.070
	sig.	0.067	0.628	0.067	0.243	0.087

Variables	Statistics	Availability	Anchoring	Overconfidence	Herd Instinct	Regret Aversion
<b>Occupation</b>	F-statistics	0.923	0.977	1.045	0.177	0.704
	sig.	0.452	0.422	0.385	0.950	0.590
<b>Experience</b>	F-statistics	1.240	0.536	5.200	0.171	1.415
	sig.	0.292	0.586	0.006	0.843	0.246

Source: Field survey 2021 and authors' calculation.

Results show that the anchoring, overconfidence, herd instinct, and regret aversion biases do not significantly differ across the education level. However, there is a significant difference between the education level and the availability bias (see Table 2). Dube-Rioux and Russo (1988) found that availability is an important cause, though possibly not the sole cause, of the underestimation bias.

Likewise, there is a significant difference between investors' experience in the stock market and overconfidence bias. Kansal and Singh (2018) found more investment experience and investing in large-cap stocks are more subject to overconfidence.

### Relationship Between Variables

This study performs Bivariate Pearson Correlation to see the relationship between the variables. This correlation is done to determine the strength and direction of a linear relationship between two variables. Among the variables, investment decision making is the dependent variable, while availability bias, anchoring bias, overconfidence bias, herd instinct bias, and regret aversion bias are independent variables.

**Table 3: Relationship between variables**

Variables	Investment Decision making	Availability	Anchoring	Overconfidence	Herd Instinct	Regret Aversion
Investment Decision making	1					
Availability	.508** .000	1				
Anchoring	.435** .000	.566**	1			
Overconfidence	.446** .000	.291**	.275**	1		
Herd Instinct	.353** .000	.349**	.319**	.196**	1	
Regret Aversion	.325** .000	.427**	.424**	.239**	.439**	1

\*\*Correlation is significant at the 0.01 level (2- tailed)

Source: Field survey 2021 and authors' calculation.

The result indicates a positive connection coefficient between availability bias and investment decision-making (Table 3). Javed, Bagh and Razza (2017) found that the herding effects, overconfidence,



availability bias, and representativeness positively impact perceived investment performance. When availability bias increases, the irrationality of investment decision-making increases as well. Rasheed et al. (2018) found that both heuristics under study significantly cause investors to deviate from rational decision-making while the locus of control has no significant moderating effect. Anchoring bias and investing decisions have a good link. Kahneman, Lovallo, and Sibony (2011) found the awareness effects of biases have done little to improve the quality of business decisions at either the individual or the organizational level. As investors' risk of making irrational investing decisions rises, so does the likelihood of anchoring.

Similarly, overconfidence bias and investment decision-making have a favorable association. Herd instinct bias and irrational investment decision-making have a moderately clear association. The more investors look to others for investing advice, the more likely they make illogical decisions. There is a moderate positive association between regret aversion bias and investment decision making, which suggests that as regret aversion behavior increases, so does the likelihood of making irrational investment decisions. Waweru, Munyoki, and Uliana (2008) found behavioral factors such as representativeness, overconfidence, anchoring, gambler's fallacy, availability bias, loss aversion, regret aversion, and mental accounting affected the decisions of the institutional investors.

## Regression Analysis

The regression analysis and the model summary has been presented in Table 4.

**Table 4: Regression analysis**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Model summary		ANOVA	
	B	Std. Error	Beta			R <sup>2</sup>	Adjusted R <sup>2</sup>	F value	Sig.
(Constant)	0.438	0.279		1.567	0.119	0.393	0.375	22.39	0
AB	0.284	0.074	0.289	3.828	0.000				
AnB	0.135	0.072	0.14	1.879	0.062				
OB	0.339	0.073	0.293	4.648	0.000				
HB	0.145	0.067	0.147	2.17	0.031				
RB	0.008	0.073	0.008	0.106	0.916				

Source: Field survey 2021 and authors' calculation.

Table 4 shows that overconfidence bias has the most significant impact on individual investors' investing decisions in the Nepalese stock market. Bakar and Yi (2016) found that overconfidence, conservatism, and availability bias substantially affect investor decision-making, but herding behavior has little effect.

There is a positive association between each independent and dependent variable, investment decision-making, such as availability, anchoring, overconfidence, herd instinct, and regret aversion bias. Moreover, the availability bias, overconfidence, and herd instinct bias have statistically significant impacts on the investment decision. In other words, anchoring and regret aversion do not significantly impact irrational investment decision-making. Quaicoe and Eleke-Aboagye (2021) found herding bias is the most dominant factor influencing the investment decisions of respondents. Besides this, regret aversion and gambler's fallacy were also found to strongly influence the decisions of investors, along with mental accounting, overconfidence, and anchoring.

## Hypotheses Tests from Regression Analysis

The researcher has considered several cognitive biases impacting the individual investors' investment decisions and presented them in Table 5.

**Table 5: Hypotheses tests from regression analysis**

Variables		Impact		Hypothesis support
		Beta Coefficients	p-value	
Availability bias	Investment decision	0.284	0.000 ( $p < 0.05$ )	$H_1$ is accepted.
Anchoring bias	Investment decision	0.135	0.062 ( $p > 0.05$ )	$H_2$ is rejected.
Overconfidence bias	Investment decision	0.339	0.000 ( $p < 0.05$ )	$H_3$ is accepted.
Herd Instinct bias	Investment decision	0.145	0.031 ( $p < 0.05$ )	$H_4$ is accepted.
Regret Aversion bias	Investment decision	0.008	0.916 ( $p > 0.05$ )	$H_5$ is rejected.

Source: Field survey 2021 and authors' calculation.

The hypothesis table reveals that overconfidence bias appears to have the biggest beneficial influence on the irrationality of individual investor investment decisions, followed by availability bias and herd instinct bias. Investors believe that their knowledge and abilities will make them earn a good amount of profit. These emotions and self-assurance cause investors to make snap decisions without conducting thorough research. As a result, investors do not perform rationally in the market, and this irrationality may lead them to make expensive investment mistakes. The availability bias denotes that they tend to make investment decisions considering the information set on the top of their minds and that is easy to access without having to make any efforts to obtain reliable data. Investors follow others' decisions when making investment decisions, as seen by the findings of this study, which reveal that herd instinct bias has a large favorable influence on irrational investment decisions. However, anchoring and regret aversion biases appear to have no substantial impact on irrational investing decisions, indicating that anchoring and regret aversion biases have little influence on investors.

The influence of five cognitive biases on investors' investing decisions has been measured: availability, anchoring, overconfidence, herd instinct, and regret aversion. Among the five factors, overconfidence bias appears to have the most considerable beneficial influence on the irrationality of individual investors' investment decisions, followed by availability bias and herd instinct prejudice. Silwal and Bajracharya (2021) found that herding, market factors, and heuristics such as overconfidence and anchoring bias positively linked to investing success. According to Khan, Nosheen, and Islam (2021), cognitive biases outperform emotional biases. Shrestha (2019) discovered that overconfidence significantly influences investors' investing decisions in the Nepalese stock market. Overconfidence and control illusion biases substantially influence investor decision-making (Qadri & Shabbir, 2014). Anchoring and regret aversion biases appear to have no substantial impact on irrational investing decisions, implying that anchoring and regret aversion biases have little influence on investors.

## Conclusion and Recommendations

The study finds that various psychological factors have a significant role in investment decisions. The impact of availability, anchoring, overconfidence, herd instinct, and regret aversion on investors'

investment decisions has been measured. Overconfidence bias appears to positively impact the irrationality of individual investor investment decisions, followed by availability bias and herd instinct prejudice, among the five components. On the other hand, anchoring and regret aversion bias have not influenced irrational investing decisions. This result is consistent with the findings of previous researchers such as Waweru, Munyoki and Uliana (2008), Bakar and Yi (2016), Silwal and Bajracharya (2021), Quaicoe and Eleke-Aboagye (2021) and Misuraca et al. (2022). The findings of this study have several implications for investors, brokers, and governments who aim to stimulate stock market investment. Investors and governments should identify cognitive biases and implement de-biasing strategies to mitigate them while making financial choices. This study is also significant for stockmarket regulators and policymakers better understand the impact of psychological variables on investor decision-making. This study focuses on individual investors, but future research may focus on institutional investors.

## Acknowledgment

We are thankful to the investors of the Pokhara Valley who participated in this study. We would like to express our sincere gratitude to the Editorial Board and anonymous referees for their thoughtful recommendations and input, which helped us improve the paper's content.

## Conflict of Interest

There is no conflict of interest while preparing this article.

## References

- Ady, S. U. (2018). The cognitive and psychological bias in investment decision-making behavior: Evidence from Indonesian investor's behavior. *Journal of Economics and Behavioral Studies*, 10(1), 86-100.
- Ady, S. U., Sudarma, M., Salim, U., & Aisyah, S. (2013). Psychology's factors of stock buying and selling behavior in Indonesia stock exchange. *Journal of Business and Management*, 7(3), 11–22. Retrieved from www.iosrjournals.org
- Ajmal, S., Mufti, M., & Shah, Z.A. (2011). Impact of illusion of control on perceived efficiency in Pakistani financial markets. *Abasyn Journal of Social Sciences*, 5(2), 100-110.
- Alwahaibi, S. S. O. (2019). Is demographic information influence risk tolerance/aversion in investment decisions? Evidence from the literature review. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 9(1), 111-122.
- Ang, J. B. (2008). A survey of recent developments in the literature of finance and growth. *Journal of Economic Surveys*, 22(3), 536-576.
- Bakar, S., & Yi, A.N.C. (2016). The impact of psychological factors on investors' decision making in Malaysian stock market: A case of Klang valley and Pahang. *Procedia Economics and Finance*, 35(1), 319-328.
- Baker, H. K., & Nofsinger, J. R. (2002). Psychological biases of investors. *Financial Services Review*, 11(2), 97-116.
- Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. *Handbook of the Economics of Finance*, 1(1), 1053-1128.
- Bhatt, B. K., & Chauhan, A. (2014). Behavioral finance: A new paradigm of finance. *International Journal of Application or Innovation in Engineering and Management*, 3(2), 359-362.
- Bikas, E., & Jureviciene, D. (2013). Behavioral finance: The emergence and development trends. *Procedia-Social and Behavioral Sciences*, 82(1), 870-876.
- Bondt, W. D., Mayoral, R. M., & Vallelado, E. (2013). Behavioral decision making in finance: An overview and assessment of selected research. *Spanish Journal of Finance and Accounting*, 42(157), 99-118. <https://doi.org/10.1080/02102412.2013.10779742>

- Bowers, J., & Khorakian, A. (2014). Integrating risk management in the innovation project. *European Journal of Innovation Management*, 17(1), 25–40. DOI: 10.1108/ejim-01-2013-0010
- Campbell, J. Y. (2006). Household finance. *The Journal of Finance*, 61(1), 1553–1604.
- Chaffai, M., & Medhioub, I. (2014). Behavioral finance: An empirical study of the Tunisian stock market. *International Journal of Economics and Financial Issues*, 4(3), 527-538.
- Chandra, A. (2008). Decision making in the stock market: incorporating psychology with finance. *National Conference: FFMI 2008 IIT Kharagpur*.
- Chetty, R. (2015). Behavioral economics and public policy: A pragmatic perspective. *American Economic Review*, 105(5), 1-33.
- Dangol, J., & Manandhar, R. (2020). Impact of heuristics on investment decisions: The moderating role of locus of control. *Journal of Business and Social Sciences Research*, 5(1), 1–14. <https://doi.org/10.3126/jbssr.v5i1.30195>.
- Demirgüç-Kunt, A., & Levine, R. (1996). Stock markets, corporate finance, and economic growth: an overview. *The World Bank Economic Review*, 10(2), 223-239.
- Dhungana, B. R. (2013). Performance of stock market and reforms in Nepal. *SEBON Journal*, 6(1), 43-53.
- Dhungana, B. R. (2019). Role of financial institutions in economic growth: A case of Nepal. *SEBON Journal*, 7(1), 53-66.
- Dhungana, B. R., Karmacharya, B., Chapagain, R. K., Neupane, D., Lammichhane, Y.R., Paudel, H. H., & Lamsal, B. (2018). Behavioral factors influencing individual investor's decision making and performance: A survey at Nepal Stock Exchange. *Journal of Management and Development Economics*, 7(1), 21-32.
- Donkor, J., Akohene, V., & Acheampong, S. (2016). Behavior factors and investment decisions of bankers in Ghana. *British Journal of Education, Society & Behavior Science*, 18(3), 1–8. <https://doi.org/10.9734/bjesbs/2016/23353>
- Du, N., & Budescu, D. V. (2018). How (over) confident are financial analysts? *Journal of Behaviour Finance*, 19(1), 308–318. doi: 10.1080/15427560.2018.1405004
- Dube-Rioux, L., & Russo, J. E. (1988). An availability bias in professional judgment. *Journal of Behavioral Decision Making*, 1(4), 223-237.
- Elliot, W. B., Rennekamp, K. M., & White, B. J. (2018). The paradoxical behavioral effects of a directional goal on investors' risk perceptions and valuation judgments. *Journal of Behaviour Finance*, 19(1), 271–290. DOI: 10.1080/15427560.2018.1381961
- Grosse, R. (2012). Bank regulation, governance and the crisis: a behavioral finance view. *Journal of Financial Regulation and Compliance*, 20(1), 4 - 25. <https://doi.org/10.1108/13581981211199399>
- Gupta, K. (2021). The importance of financial liberalisation for economic growth: The case of Indonesia. *Bulletin of Indonesian Economic Studies*, 57(2), 175-201.
- Hirshleifer, D. (2015). Behavioral finance. *Annual Review of Financial Economics*, 7(1), 133-159.
- Jain, J., Walia, N., & Gupta, S. (2019). Evaluation of behavioral biases affecting investment decision making of individual equity investors by fuzzy analytic hierarchy process. *Review of Behavioral Finance*, 12(3), 297-314. <https://doi.org/10.1108/RBF-03-2019-0044>
- Jaiyeoba, H. B., Adewale, A. A., Haron, R., & Ismail, C. M. H. C. (2018). Investment decision behaviour of the Malaysian retail investors and fund managers: A qualitative inquiry. *Qualitative Research in Financial Markets*. 10(2), 134-151.
- Javed, H., Bagh, T., & Razza, S. (2017). Herding effects, over confidence, availability bias and representativeness as behavioral determinants of perceived investment performance: An empirical evidence from Pakistan Stock Exchange (PSX). *Journal of Global Economics*, 5(4), 1-10. <https://dx.doi.org/10.4172/2375-4389>.
- Kahneman, D., & Riepe, M. W. (1998). Aspects of investor psychology. *Journal of Portfolio Management*, 24(1), 52–60. DOI: 10.3905/jpm.1998.409643
- Kahneman, D., Lovallo, D., & Sibony, O. (2011). Before you make that big decision. *Harvard Business Review*, 89(6), 50-60.

- Kansal, P. and Singh, S. (2018). Determinants of overconfidence bias in Indian stock market, *Qualitative Research in Financial Markets*, 10(4), 381-394. <https://doi.org/10.1108/QRFM-03-2017-0015>
- Kengatharan, L., & Kengatharan, N. (2014). The influence of behavioral factors in making investment decisions and performance: Study on investors of Colombo Stock Exchange, Sri Lanka. *Asian Journal of Finance & Accounting* 6(1), 1-23.
- Khan, I., Afeef, M., Jan, S. & Ihsan, A. (2021). The impact of heuristic biases on investors' investment decision in Pakistan stock market: Moderating role of long term orientation, *Qualitative Research in Financial Markets*, 13(2), 252-274. <https://doi.org/10.1108/QRFM-03-2020-0028>
- Khan, T. M., Nosheen, S., & Islam, M. U. (2021). Effect of behavioural biases on investment performance: A case of the emerging economy. *Global Management Journal for Academic & Corporate Studies (GMJACS)*, 11(1), 22-41.
- Kumar, S. & Goyal, N. (2016). Evidence on rationality and behavioural biases in investment decision making. *Qualitative Research in Financial Markets*, 8(4), 270-287. <https://doi.org/10.1108/QRFM-05-2016-0016>
- Latif, M., Arshad, S., Fatima, M., & Farooq, S. (2011). Market efficiency, market anomalies, causes, evidences, and some behavioral aspects of market anomalies. *Research Journal of Finance and Accounting*, 2(9), 1-13.
- Levine, R. (1996). Foreign banks, financial development, and economics. *International Financial Markets, Harmonization Versus Competition*, 2(1), 224.
- Liivamägi, K. (2016). Investor education and trading activity on the stock market. *Baltic Journal of Economics*, 16(2), 114-131.
- Lim, L.C., (2012). The relationship between psychological biases and the decision making of investor in Malaysian share market. *John Wiley & Sons Inc.*
- Maheran, N., & Muhammad, N. (2009). Behavioral finance verses traditional finance. *Advance Management Journal*, 2(6), 2-3.
- Malkiel, B. G., & Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance*, 25(6), 383-417. DOI: 10.2307/2325486
- Mansour, N. (2015). Science teachers' views and stereotypes of religion, scientists and scientific research: a call for scientist-science teacher partnerships to promote inquiry-based learning. *International Journal of Science Education*, 37(11), 1767-1794. doi:10.1080/09500693.2015.1049575.
- Markowitz, H. M. (1952). Portfolio selection. *Journal of Finance*, 7(3), 77-91.
- Misuraca, R., Teuscher, U., Scaffidi Abbate, C., Ceresia, F., Roccella, M., Parisi, L., ... & Miceli, S. (2022). Can we do better next time? Italians' response to the COVID-19 emergency through a heuristics and biases lens. *Behavioral Sciences*, 12(2), 39 - 50. <https://doi.org/10.3390/bs12020039>.
- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, 48(3), 261-297.
- Naz, S. A., & Gulzar, S. (2022). Impact of Islamic finance on economic growth: an empirical analysis of Muslim countries. *The Singapore Economic Review*, 67(1), 245-265.
- Nofsinger, E. & Richard, P. (2002). *Individual investments behavior*. New York, McGraw-Hill.
- Pompian, M. M. (2012). *Behavioral finance and investor types: Managing behavior to make better investment decisions*. John Wiley & Sons.
- Puatwoe, J. T., & Piabuo, S. M. (2017). Financial sector development and economic growth: evidence from Cameroon. *Financial Innovation*, 3(1), 1-18.
- Qadri, S. U., & Shabbir, M. (2014). An empirical study of overconfidence and illusion of control biases, impact on investor's decision making: An evidence from ISE. *European Journal of Business and Management*, 6(14), 38-44.
- Quaicoe, A., & Eleke-Aboagye, P.Q. (2021). Behavioral factors affecting investment decision-making in bank stocks on the Ghana stock exchange. *Qualitative Research in Financial Markets*, 13(4), 425-439. <https://doi.org/10.1108/QRFM-05-2020-0084>

- Qureshi, S. A., Rehman, K., & Hunjra, A. I. (2012). Factors affecting investment decision making of equity fund managers. *Wulfenia Journal*, 19(10), 280-291.
- Rajan, R. G., & Zingales, L. (2001). Financial systems, industrial structure, and growth. *Oxford Review of Economic Policy*, 17(4), 467-482.
- Ramalakshmi, V., Pathak, V. J. Christeena M. J., & Elwin B. (2019). Impact of cognitive biases on investment decision making. *Journal of Critical Reviews*, 6(6), 59-64.
- Rasheed, M.H., Rafique, A., Zahid, T. & Akhtar, M.W. (2018). Factors influencing investor's decision making in Pakistan: Moderating the role of locus of control. *Review of Behavioral Finance*, 10(1), 70-87. <https://doi.org/10.1108/RBF-05-2016-0028>
- Rezaei, Z. (2013). The study of behavioral finance effect on individual investment. *European Online Journal of Natural and Social Sciences*, 2(3), 232-233.
- Sarma, M., & Pais, J. (2011). Financial inclusion and development. *Journal of International Development*, 23(5), 613-628.
- Shah, S. Z., Ahmad, M., & Mahmood, F. (2018). Heuristic biases in investment decision-making and perceived market efficiency: A survey at the Pakistan stock exchange. *Qualitative Research in Financial Markets*, 10(1), 85-110.
- Shahid, M. N., Aftab, F., Latif, K. & Mahmood, Z. (2018). Behavioral finance, investors' psychology and investment decision making in capital markets: an evidence through ethnography and semistructured interviews. *Asia Pacific Journal of Emerging Markets*, 2(1), 14-37.
- Sharma, A. J. (2016). Role of behavioral finance in the financial market. *International Journal of Business and Management Invention*, 5(1), 1-5.
- Shefrin, H. (2006). *Beyond greed and fear: Understanding behavioral finance and the psychology of investing*. Oxford University Press, Oxford.
- Shrestha, N. R. (2019). Overconfidence and investment decisions in Nepalese stock market. *PYC Nepal Journal of Management*, 12(1), 27–36. <https://doi.org/10.3126/pycnjm.v12i1.30583>.
- Silwal, P. P. & Bajracharya, S. (2021). Behavioral factors influencing investment decision of individuals. *International Research Journal of Management Science*, 6(1), 53-73.
- Simon, M., Houghton, S. M., & Aquino, K. (2000). Cognitive biases, risk perception, and venture formation: How individuals decide to start companies. *Journal of Business Venturing*, 15(2), 113-134.
- Siraji, M. (2019). Heuristics bias and investment performance: Does age matter? Evidence from Colombo stock exchange. *Asian Journal of Economics, Business and Accounting*, 12(4), 1-14. <https://doi.org/10.9734/ajeaba/2019/v12i430156>.
- Subramaniam, V., & Velnampy, T. (2017). Rationality: A central point between traditional finance and behavioral finance. *International Journal of Research- Granthaalayah*, 5(6), 389-390.
- Tanvir, M., Sufyan, M., & Ahsan, A. (2016). Investor's emotional intelligence and impact on investment decision. *International Journal of Academic Research in Economics and Management Sciences*, 5(3), 12-28.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185 (4157), 1124-1131. <https://doi.org/10.1126/science.185.4157.1124>.
- Tversky, A., & Kahneman, D. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263- 292. [https://dx.doi.org/00129682\(197903\)47:2%3C](https://dx.doi.org/00129682(197903)47:2%3C).
- Waweru, N. M., Munyoki, E., & Uliana, E. (2008). The effects of behavioural factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange. *International Journal of Business and Emerging Markets*, 1(1), 24-41.
- Winter, C. K. (2020). The value of behavioral economics for EU judicial decision-making. *German Law Journal*, 21(2), 240-264.