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Effect of Overconfidence on Individual Investment Decision: Evidence from the Investment Services Sector in Kenya

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Abstract:

Investor behaviour has an influence on investment decisions. Hence, it does not matter how bright an investor is, how much research they have done or even how deep they have studied about the stock before investing. They always have tendencies to behave irrationally with the fear of making losses. The main objective of this study was to examine the effect of overconfidence behavior on investment decision making among individual investors in the Investment Services Sector in Kenya. The study adopted a descriptive and quantitative research design. The study population was 12,159 local individual investors per the NSE annual report of 2015. The sample used was 372 individual investors. Stratified random sampling was used to divide the data into 47 strata representing the 47 counties. Simple random sampling was then used to select 8 investors from each county. Response was received from 253 individual investors out of 372 who constituted the sample size, representing a response rate of 68%. Primary data was used for analysis using multiple linear regression model. The findings indicated that 50.1% of the individual investment decision in the Investment Services Sectors can be explained by overconfidence. This indicates that investors were overconfident in their investments ($R\text{-Squared}=0.501$) as measured by trading's done with prior information, number of trading's done in between accounting periods and the bid spread. Overconfidence had a statistically significant positive linear relationship on individual investment decision making ($p\text{-value}$ was 0.006). The study therefore recommends that investment factors and market statistics need to be analyzed by investors using sound business knowledge before any investment decision making. In addition, investors need to look into economic and market indicators and interpret them well as they have an influence the performance of the shares, rather than investing based on cognitive and psychological intuitions.

Keywords: Investors' behavior, overconfidence, individual investment decision, investment services sector

1. Introduction

Risks and uncertainties in investment pose complex processes of decision making in choosing whether to invest or not. This is as a result of the difficulty in predicting the future result amid several alternatives for the investor to choose from. In ideal situations, investors take decisions that meet their needs rather than pursuing optimizing alternatives. Studies done by Kahneman and Tversky (1979), Shefrin and Statman (1994), Shiller (1995) and Shleifer (2000) have shown proof of irrationality and inconsistency in the manner in which human beings make decisions when faced with uncertainty. This is because of the outstanding differences in individual investors' behavior in financial investments, which are bound in their psychological reasoning and capacities. Jureviciene and Jemakova (2012) suggest that cognitive and emotional biases are the two types of psychological factors determining individual investment decisions. In this, they relate cognitive bias with faulty reasoning while describing emotional part to be composed of impulses, intuition and even feelings. On the other hand, conventional financial theory describes the world and its occupants as rational "wealth maximizers". Nonetheless, emotions and psychology influence individuals thus making decisions in unpredictable or irrational manner. Behavioral Finance as a concept seeks to study the relationship between human behavior and cognitive psychological theory in the field of economics and finance. It is through this relationship that explanations for irrational financial decisions emanate. In addition, scientists describe individual investors as decision makers who rely on a situation's characteristics pegged on stereotypes and Behavioral Finance factors like herd instinct, fear, greed, optimism and social influences. These factors are captured by Fischer and Gerhardt (2007) in a model they developed highlighting the factors as basic behavioral factors determining investors' decisions.

Investor behaviour has an influence on investment decisions. Overconfidence among individual investors explains their tendency of overestimating their abilities in choosing the winning investments. Nyamute, Lishenga and Oloko (2015) look at overconfidence as a behavior where investors overestimate the accuracy of their forecasts due to an illusion of knowledge and control of future outcomes.

Overconfidence creates a scenario of under-diversification and excessive risk taking where individual investors are very fast to either overweight or underweight securities immediately they display a signal. The investors lack time to analyze a large set of securities, thus depend on the identified few “winners”. Kelly (1995) studied this behavior using a portfolio composition of 3,000 U.S. individuals. Most of the individuals identified had no stocks, while for those who held stocks (more than 600) had the median number of stocks as only one. Kelly found that only about 5% of stock-holding individuals had 10 or more stocks. He says that one has to hold at least 11 different stocks distributed across different sectors of the economy in order to achieve a diversification level. This was enough evidence of the under-diversified individual investors in the study. For Groetzmann and Kumar (2005), least diversified individual investors are the ones who trade most, and are “led” by overconfidence. Moreover, higher frequency trading is excessive risk taking. Byrne and Utkus (2012) state that overconfidence has direct influence in investment. For Traditional Finance Theory, investors hold diversified portfolios to spread risk in particular areas. Individual investor’s conviction mostly weighs against this advice, and feels that they have abilities to be sure of the good prospects of a particular investment. This makes the investor’s ignore the role of diversification in investment. Shiller (2000) states that human beings have confidence beyond their own capabilities naturally, and investors and analysts are particularly overconfident in areas where they have some knowledge.

The capital market plays a fundamental role in stimulating economic growth and development through mobilization of resources in an economy. The market provides a platform for exchange of financial assets (stocks and bonds), following established regulations to provide continuous liquidity in the market. The Kenyan capital market is formalized by existence of a Securities Exchange, the Nairobi Securities Exchange (NSE), consisting of the primary and secondary sectors where investors participate. NSE as a secondary market provides a ready market for those who want to buy and sell thus making financial instruments liquid. It publishes valuable information in statistical and summary form about various listed companies for guidance to the investors with much of this information readily available on their website. It also keeps an eye on the financial affairs of every company whose shares are bought and sold through it. The Investment Services Sector comprises of the Nairobi Securities Exchange Ltd. The NSE is based in Nairobi, the capital of Kenya. Its history can be traced back to the 1920s when it started dealing in shares. The NSE is the largest securities exchange in East and Central Africa; the fifth largest market in Africa with an average market capitalization of USD 20 Billion per annum. Its performance is determined by a share index. NSE as the principal bourse in Kenya offers an automated platform for the listing and trading of multiple securities. NSE has consistently offered a well-regulated, robust and world-class platform for the trading of equities and bonds. It is the market of choice for local and international investors looking to gain exposure to the East African Capital Markets.

On 27 June 2014, The Capital Markets Authority proved the listing of the NSE stock through an IPO and subsequently self-list its shares on the Main Investment Market Segment. The IPO was set to open on 24 July 2014 and would run up to 12 August 2014. The listing makes NSE to be publicly traded hence the second self-listed exchange in Africa after Johannesburg Stock Exchange. The IPO saw more than the intended 66 Million new shares of the NSE purchased. Investors applied for 504 Million new shares at a price of KSh. 9.50/share. The bourse received 4.789 Billion Kenyan Shillings counter its target of 627 Million Kenyan Shillings garnering a subscription of 763.92%, making it the most oversubscribed share offer in the NSE’s 60-year history. As of December 2015, the NSE Ltd. had 13,018 investors (Individual 12,350 and Institutional 668). The NSE shares started trading on the Main Investment Market Segment of the exchange on 9 September 2014. In March 2015, the NSE officially joined the United Nations Sustainable Stock Exchanges (SSE) initiative whereby they made a voluntary pledge to inform their stakeholders of the importance of integrating sustainability in their capital markets. In October 2015, through its capital raised from the IPO, NSE launched the Real Estate Investment Trust (REITs) as a step towards financial inclusion in the capital markets that will enable average investors invest in large-scale commercial, residential and industrial properties without requiring large sums of money.

The NSE also received a formal approval to launch the derivatives market that will provide a platform for introduction of tradable contracts. It will therefore be the third exchange in Africa with a derivatives offering after Johannesburg Stock Exchange and Lusaka Stock Exchange. NSE Clear was set up as a subsidiary to operate as a central counterparty for the derivatives market. The Company has also applied for recognition as a Self-Regulatory Organization function from the Capital Markets Authority, which aims to make NSE a first line regulator of market participants. Currently NSE comprises of 65 listed companies with an approximate volume of USD 10 Million daily trading. The NSE trades in both equities and government and corporate bonds with a daily trading bond average of USD 10 Million. In a single trading session, the daily price movement for a security can only be at most 10%. The NSE introduced an Automated Trading System in 2000 to facilitate automatic matching of orders. However, the orders are executed directly by the brokers or first come/first serve basis. Currently, the NSE ownership is open to foreigners, who can own up to 75% of the NSE listed companies. NSE has a Capital Gain Tax of 5% and a withholding tax of 0.3% on all transactions. In addition, the foreigners pay a Dividend withholding tax of 10%.

In the recent past, the Kenyan market has experienced a great rise in the number of companies applying to be listed on the Nairobi Securities Exchange. Investors on the other hand have responded positively as it is evinced through repeated oversubscriptions of shares, indicating investors’ confidence in the capital markets. However, many investors have had to bear the pain of losses due to following the masses and being overconfident as it was epitomized in the Safaricom and KenGen IPOs. The NSE IPO saw its shares subscribed up to 763.92%. This draws attention to investigate why the Investment Services Sector shares were subscribed to that much. Is overconfidence of the investors contributing to it? Therefore, it is necessary to examine whether the investors subscribed to this shares because they looked at the trends/actual information about the NSE Ltd or rather the noise since NSE is a known market.

1.1. Statement of the Problem

Overexcitement and overreaction in the rising and falling of security prices characterizes investor behavior. This accounts for individual investors' rationality or otherwise. Cognitive and emotional biases are psychological factors that highly determine individual investment decisions. The Kenyan market has experienced oversubscriptions for Initial Public Offers (IPO) by the investors with the Investment Services Sector recently recording a subscription of 763.92%. This is an indicator of confidence in the capital markets. This is with the hope of getting double returns as experienced in the previous IPOs like KenGen and overconfidence behaviour in terms of the returns such a company could eventually give. A study on the IPO market in Kenya has indicated that IPOs provided massive returns in the immediate aftermarket to investors who purchased at the initial offering. This for instance, has led to an oversubscription of IPOs, some of whose aftermarket performance has since been dismal. On the other hand, the Capital Investment Group in 2008 gave a snapshot of the unpredictability in IPO short run returns to investors. The investigation showed that investors expected massive returns as experienced in preceding IPOs like Ken Gen and dashed for IPOs like Safaricom, which led to an oversubscription.

The application of IPOs has not been rosy with most of the investors who subscribed to the IPOs yet to get substantial returns. Most investors have been left with depreciated stocks. This is as a result of these investors overestimating their abilities on choosing winning investments; and believing that they are in better position than others are at making decisions on when, what to, and how to enter or exit an investment. Investors use excess confidence to overlook of the broader factors that are likely to impact on their investments. Several studies have been carried out indicating market anomalies that cannot be elaborated further using financial theories. In most cases, investors do not react logically to new information. They tend to be over confident in altering their choices when given superficial changes in the presentation of investment information (Odean, 1998). These inconsistencies suggest that the fundamental principles of rational behavior governing the efficient market hypothesis are not fully correct, and hence need to look at other models of human behavior (Shiller, 1998). In fact, it has been suggested that there is no problem, which is more predominant and disastrous than overconfidence in the field of judgment and decision-making (Plous, 1993). Therefore, this research examines the effect of overconfidence behaviour on investment decision making among individual investors in the Investment Services Sector in Kenya.

1.2. Purpose of the Study

The purpose of this study was to examine the effect of overconfidence behavior on individual investment decision in the Investment Services Sector in Kenya.

2. Literature Review

2.1. Theoretical Literature

2.1.1. Heuristic Theory

Heuristics are the rules of thumb, which makes decision making easier, particularly in complex and uncertain environments (Ritter, 2003). Waweru *et.al.*(2008) introduces Overconfidence as one of the factors belonging to heuristic theory. Overconfidence among individual investors explains their tendency of overestimating their abilities in choosing the winning investments. Byrne and Utkus (2012) state that overconfidence has direct influence in investment. For Traditional Finance Theory, investors hold diversified portfolios to spread risk in particular areas. Individual investor's conviction mostly weighs against this advice, and feels that they have abilities to be sure of the good prospects of a particular investment. This makes the investor's ignore the role of diversification in investment. Shiller (2000) states that human beings have confidence beyond their own capabilities naturally, and investors and analysts are particularly overconfident in areas where they have some knowledge.

2.2. Empirical Literature Review

2.2.1. Overconfidence Behaviour and Investor Decision Making

Overconfidence as behavioral finance factor in individual investment decision making has been detrimental to some existing investors across various securities and stock exchange markets globally. This mostly happens in cases of individual's stock-picking ability, especially in the long run. Odean (1998) found that overconfidence makes individual investors to generally conduct more trades compared to their less-confident investors. He found out that, through overconfidence, the investors tend to believe that they are in better position than others are at making decisions on when, what to, and how to enter or exit an investment. However, the results also showed that most frequent investors, on average, tended to accumulate significantly lower gains than the market. In addition, Odean (1999) asserts that investors prefer buying to selling stocks that experience higher price changes during the past two years. His study also revealed that even professional fund managers with their common knowledge of rationality also still struggle at making investment decisions. Studies conducted by Qureshi *et al.* (2012) on Factors Affecting Investment Decision Making of Equity Fund Managers; Lim (2012) on the Relationship between Psychological Biases and the Decision Making of Investors in Malaysian Share Market; Qadri and Shabbir (2013) on Overconfidence and Illusion of Control Biases and the Impact on Investor's Decision Making and Bashir *et al.* (2013) who tested how Heuristics interrupt the Investor's Rational Decision Making have found overconfidence to have a positive and significant impact on investors' decision making.

Similarly, a study conducted by De Bondt and Thaler (1984); Shiller (2000); Benos (1998) and Caballe and Sakovics (2003) revealed that overconfidence causes excess trading volume and excess price volatility (Scheinkman & Xiong, 2003; Benos, 1998, Daniel *et al.*, 1998). Overconfidence increases investors' tendency to herd (Hirshleifer, Subrahmanyam & Titman, 1994) and makes them choose riskier and undiversified portfolios (Odean, 1998, 1999; Lakonishok, Shleifer & Vishny, 1992), overconfident investors trade more aggressively, i.e. their trading activity is too high (Odean, 1999; Gervais & Odean, 2001). One of the most influential programs of research on the trading behavior of individual investors has been conducted by Barber and Odean, who managed to obtain the trading records of 35,000 investors with accounts at a discount brokerage. The authors find evidence of excessive trading reducing returns (Barber & Odean 1999, 2000; Odean 1999) and attribute the result to overconfidence. Psychology research typically finds men are more overconfident than women, and consistent with this, Barber and Odean (2001) find that men trade more than women and earn lower returns. In addition, Luong and Thu Ha (2011) explored on the behavioral factors (overconfidence) influencing individual investors' decision-making and performance at the Ho Chi Minh stock exchange. The study involved a sample size of 200 investors in the Klang Valley and Pahang areas aged between 18-60 years who are involved in the Malaysian stock market and concluded that overconfidence has a moderate impact on decision-making.

While sometimes, heuristics play a scoring goal in making decisions, at other times heuristics become the cause of losses in investment through wrong making decisions. The explanations for this lies in the mixed concept that overconfidence acts faster than it would take a rational deliberation. As a speedy decision may make investors catch a fortune, sometimes heuristics mislead investors into systematic errors in decision-making. Overconfidence is sort of control where investors think that they have more control over their investments than what actually is. In a study conducted by Byrne and Utkus (2012), affluent investors felt that their own investment skills were determinants of their portfolio performance. However, the real situation showed that the investors were less sure about the performance of their chosen portfolios. In fact, the investors seemed to underestimate the influence of the overall market on their portfolio's performance. This was evidence over the investors use excess confidence to overlook of the broader factors that are likely to impact on investments. In fact, it has been suggested that in the field of judgment and decision-making, no problem is "more prevalent and more potentially catastrophic than overconfidence" (Plous, 1993).

Many individual investors use overconfidence to combat extreme complexity associated with investment. Heuristics as rules for information processing, help to find a rapid decision even if not optimal. Many financial theorists work with assumptions that people are good intuitive investors especially in regard to statistical information amid difficult market conditions. However, this is not the truth; people hardly calculate odds as appropriate when making investment decisions due to consistent errors. When people get market information, they react consciously to a small percentage of it, and when the statistical facts are overwhelming, they select a small part of them to make conclusions that are different from what the entire statistics would suggest. Researchers (Dreman, 2001; Sussen, 2002) have found that many investors react to avalanche of market data by using shortcuts rather than calculating the corresponding odds of a given market situation. Psychologists refer this situation to as judgmental heuristics in technical market scenarios. The shortcuts become learning and simplifying aspects that people adopt for managing large amounts of statistical information. The investors feel that by the experience of a lifetime, their judgments can work exceptionally well. This also helps them to cope with overwhelming data. The investor also becomes intuitive statisticians through the use selective processes with probabilistic forecasts in making decisions and judgments.

3. Research Methodology and Design

The study adopted a descriptive research design. Descriptive research design was appropriate since a wide range of data was collected necessary in establishing the effect of investors' behavior on individual investment decision (Kombo & Tromp, 2006). Considering the variability within the population, the study concentrated with only the local investors with a total population of 12,159 individuals (NSE, December 2015). The sample used was 372 individual investors. Stratified random sampling was used to divide the data into 47 strata representing the 47 counties. Simple random sampling was then used to select 8 investors from each county. The relationship between overconfidence behavior on investment decision making among individual investors in the Investment Services Sector followed a multiple linear regression model of the nature:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where:

Y	=	Dependent Variable (Investor Decision)
β_0	=	Constant or intercept which is the value of dependent variable when the independent variable is zero
β_1	=	Regression Coefficient for Overconfidence variable
X_1	=	Overconfidence Behaviour
ε	=	Stochastic or Disturbance term or Error term

The measures of the variables in the model above are as indicated in Table 1 below.

Proxy	Variable	Measures
Y	Investment Decision Making	<ul style="list-style-type: none"> • Informed decision • Uninformed decision • Investment based on personal and financial needs
X ₁	Overconfidence Behaviour	<ul style="list-style-type: none"> • Number of Transactions madewith prior information • Number of Trading's made in between accounting periods • Bid ask spread

Table 1: The Measures of the Variables

Source: Bryne and Brooks (2008); Hens and Caliskan (2013)

4. Research Findings and Discussions

4.1. Effect of Overconfidence Behavior on Individual Investment Decision

The study's objective was to examine the effect of overconfidence behaviour on individual investment decision in the Investment Services Sector at Nairobi Securities Exchange. It was measured by trading's done with prior information, number of trading's made in between accounting periods and bid spread. The study findings indicate that the intensity of overconfidence behaviour on individual investment decision in the Investment Services Sector at Nairobi Securities Exchange was considerably moderate with 65.7% (Mean of 3.285). The findings also indicate 88.5% of the respondents felt that they were always lucky to invest in best deals followed by 79.7% who felt that they had the ability to manipulate the investments in their favour. 77.4% were of the opinion that they conduct more trades in between accounting periods, which shows that they are overconfident. The study results concur with Odean (1998) who found that overconfidence makes individual investors to generally conduct more trades compared to their less-confident investors. He found out that, through overconfidence, the investors tend to believe that they are in better position than others at making decisions on when, what to, and how to enter or exit an investment. This also concurs with Shiller (2000) who found out that human beings have confidence beyond their own capabilities naturally, and investors and analysts are particularly overconfident in areas where they have some knowledge. In addition, 64.3% of the respondents indicated that they take least time possible to analyze and rely on the available market statistics while 60.5% felt that their skills and knowledge about the stock market could help them outperform the market. This indicates an aspect of overconfidence and concurs with Dreman (2001) and Sussen (2002) who found that many investors react to avalanche of market data by using shortcuts rather than calculating the corresponding odds of a given market situation. Lastly, 47.8% of the respondents indicated they had no control over the investment return flows whereas 41.7% indicated they were experienced enough to forecast the winning investments. The findings are as indicated in Table 2 below.

Overconfidence Behaviour Measures	Mean	Standard Deviation	Percentage
You feel that you are always lucky to invest in the best deals	4.423	.560	88.5
You believe that your skills and knowledge of the stock market can help you to outperform the market	3.024	.738	60.5
You take least time possible to analyze and rely on available market statistics	3.217	.685	64.3
You conduct more trades in between the accounting periods	3.872	.603	77.4
You feel you have ability enough to manipulate the investments in your favour	3.986	.645	79.7
You feel you are experienced enough to forecast the winning investments	2.084	.432	41.7
You feel that you have control over the investment returns flows	2.391	.454	47.8
Average	3.285		65.7

Table 2: Effect of Overconfidence Behavior on Individual Investment Decision

Source: Author

The aggregate mean score of overconfidence behaviour measures were regressed against the mean score of measures of individual investment decision. The regression results show that there was an effect of Overconfidence behaviour on the individual investment decision in the Investment Services Sector at Nairobi Securities Exchange. 50.1 % of Individual Investment Decision can be explained by overconfidence behaviour (Rsquared = 0.501) as shown in Table 2. This concurs with Shiller (2000) who found out that naturally, people always believe beyond their own abilities, and investors and analysts are particularly overconfident in areas where they have some knowledge. The study result is also in agreement with Jureviciene and Jemakova (2012) who incorporated a five-way behavioral finance model that was developed byBailard, Biehl and Kaiser in 1978 to characterize investors are according to confidence as confident, adventurer, impetuous, celebrity, anxious, guardian, individualist and careful. Their study revealed that cognitive errors were the major factors affecting investment decisions among the Lithuanian residents.

The effect of overconfidence behaviour on the individual investment decision in the Investment Services Sector at Nairobi Securities Exchange was positive and significant in that its p-value was 0.006 as shown in Table 2. The study found out that there is a relationship between overconfidence behaviour and individual investment decision and this concurs with a study conducted by Lim (2012), Qureshi *et al.* (2012), Qadri and Shabbir (2013) and Bashir *et al.* (2013) who found overconfidence to have positive and

significant impact on investors’ decision making. This is also in line with Odean (1998) who found that overconfidence makes individual investors to generally conduct more trades compared to their less-confident investors. He found out that, through overconfidence, the investors tend to believe that they are in better position than others at making decisions on when, what to, and how to enter or exit an investment. However, the results also showed that most frequent investors, on average, tended to accumulate significantly lower gains than the market.

The regression results further shows that at individual significance, there was a statistically significant positive linear relationship between overconfidence behaviour and individual investment decision in the Investment Services Sector at Nairobi Securities Exchange ($\beta = 0.714$, p-value 0.014) in that the p-value is less than α ($0.014 < 0.05$). This means that investors are mostly overconfident with their decisions and they think that their decisions are right. They attribute the gains in their investment success to their competence as investors. This is in line with studies conducted by De Bondt and Thaler (1984); Benos (1998), Shiller (2000) and Caballe and Sakovics (2003) which revealed that overconfidence causes excess trading volume. Lakonishok, Shleifer and Vishny (1992) also found out that overconfident investors’ trade more aggressively, i.e. their trading activity is too high. A study conducted by Byrne and Utkus (2012) also found out that overconfidence has direct influence in investment decision making.

The relationship between overconfidence and individual investment decision in the Investment Services Sector at Nairobi Securities Exchange followed a simple regression model of the nature:

$$Y = 1.634 + 0.714X_1 + \varepsilon$$

Where:

- Y = Individual Investment Decision
- 1.634 = y- intercept constant ($\alpha = 1.634$).
- 0.714 = Beta ($\beta = 0.714$) or the slope coefficient.
- X_1 = Overconfidence
- ε = Error term

From the regression equation above, taking Overconfidence to be constant at zero, the investors’ decision-making would be 1.634. Overconfidence has a positive effect on the individual investment decision making with an estimated coefficient of 0.714. This implies that individually, a unit increase in Overconfidence will result to a 0.714 increase in risk taking in individual investment decision-making.

Goodness of Fit Analysis					
R	R Squared	Adjusted R Squared	Std. Error of the Estimate		
0.714	0.501	0.624	0.432		
Source: Author					
Significance: ANOVA (F-test)					
	Sum of Squares	Degree of Freedom	Mean Square	F	Sign. (p-value)
Regression	98.318	1	13.218	10.018	0.006
Residual	90.640	252	1.124		
Total	188.958	256			
Source: Author					
Individual Significance (T-test)					
	Unstandardized Coefficients		Standardized Coefficients	T	Significance(p-value)
	B	Std. Error	Beta (β)		
(Constant)	1.634	2.482		1.432	0.083
Overconfidence	0.342	0.402	0.714	1.162	0.014
Source: Author					

Table 3: Effect of Overconfidence Behaviour on Individual Investment Decision

4.2. Individual Investment Decision

The intensity of individual investment decision in the Investment Services Sector at Nairobi Securities Exchange was moderately high with 68.7% (Mean of 3.436). 76.6% of the respondents indicated that their experience in investment motivated them to purchase the company’s shares during listing implying that they based their investments on their abilities highlighting an aspect of overconfidence. This in agreement with a study conducted by Byrne and Utkus (2012), which shows affluent investors felt that their own investment skills were determinants of their portfolio performance. 73.4% had their investment based on financial needs and financial knowledge in shares while 66.5% had their investment based on personal needs. 65.8% sought expert opinion/advice in order to invest indicating they made an informed decision whereas 60.5% indicated their friends encouraged them to purchase the company’s shares during listing.

The findings were as shown on Table.4.

Individual Investment Decision	Mean	Standard Deviation	Percentage
You seek expert opinion/advice in order to invest	3.291	.259	65.8
Your friends encouraged you to purchase the company's shares during listing	3.024	.230	60.5
Your investment is based on personal needs	3.323	.325	66.5
Your experience in investment motivated you to purchase the company's shares during listing	3.729	.222	76.6
Your investment is based on financial needs/financial knowledge in shares	3.670	.382	73.4
Average	3.436		68.7

Table 4: Individual Investment Decision

Source: Author

5. Summary, Conclusion and Recommendations

The study found that 50.1 percent of the individual investment decision in the Investment Services Sector at Nairobi Securities Exchange can be explained by overconfidence (Rsquared = 0.501) hence there was an effect of overconfidence on the individual investment decision in the Investment Services Sector at Nairobi Securities Exchange. The study result is in agreement with a study conducted by Lim (2012), Qureshi *et al.* (2012), Qadri and Shabbir (2013) and Bashir *et al.* (2013) who found overconfidence to have positive significant impact on investors' decision-making.

Based on the study findings therefore, the study can conclude that overconfidence affects individual investment decision in the Investment Services Sector at Nairobi Securities Exchange. The study therefore recommends that investment factors and market statistics need to be analyzed by investors using sound business knowledge before any investment decision making. The study also recommends that since overconfidence affects individual investment decision in the Investment Services Sector at Nairobi Securities Exchange the management of Investment Services Sector at Nairobi Securities Exchange should make efforts to reduce it. This can be done by advising the investors to look into economic and market indicators and interpret them well as they have an influence the performance of the shares, rather than investing based on cognitive and psychological intuitions.

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