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## **Factors Affecting Investment Decision Making of Equity Fund Managers**

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### **ABSTRACT**

Traditional theories of finance assume that investors use all available information and make rational investment decision but in reality the scenario is different. Based upon the growing importance of behavioral finance the present study is an attempt to investigate the effect of behavioral factors such as heuristics, risk aversion, use of financial tools and firm level corporate governance on the decision making of equity fund managers of Pakistan. The study collected response from 327 equity fund managers of insurance companies, commercial banks, and equity investment companies applying stratified random sampling technique. The results of the study demonstrate that a positive and significant relationship exist among heuristics, use of financial tools, risk aversion, firm-level corporate governance, and investment decision making. The results further demonstrate that firm-level corporate governance plays a pivotal role and is an important factor affecting investment decision making. Equity fund managers of institutions apply heuristics and financial tools while formulating their decisions. Equity fund managers of institutions are also found to be risk averse. Regulatory authorities and stock exchanges may use the results of the study. Regulatory authorities and exchanges may also use the results to create awareness by educating investors about the importance of behavioral factor and firm-level corporate governance. It may help to increase investors' confidence.

**Keywords:** investment decision making, equity fund managers, firm level corporate governance, heuristics, risk aversion.

### **INTRODUCTION**

Investors buy and sell equities of massive amount of money in stock market daily. Recent financial developments critically claim that financial markets are becoming more volatile and unstable. The volatility and instability in the stock markets increases the risk associated with investment. Stock market fluctuation has always remained the area of concern of professionals, academicians, and investors.

Efficient market hypothesis (EMH) explains that stock prices fully reflect all available information (Fama, 1970). Efficient market hypothesis is based on information and investor rationality. EMH assumes that the investors use all available information to make rational investment decision (Waweru, Munyoki & Uliana, 2008; Meditinos, Sevic & Theriou, 2007). In reality the investors do

not behave rationally. Even if EMH exist there is a variation in the perception of investors about the return and risk linked with the investment. Recent studies also support that investors' deviate from rationality and show repeated patterns of irrational behavior and variation due to greed, fear, emotions, speculation, and subjective thinking while making investment decisions (Meditinos et al, 2007; Evans, 2006; Gao and Schmidt, 2005; Warneryd, 2001). The important research studies in this field were made by Thaler (1980), DeBondt & Thaler (1985; 1987), Yaari (1987), Samuelson & Zeckhauser (1988). Finance name them as anomalies in stock market and the basis for naming them anomalies is that they could not be explained in classical financial framework (Szyszka, 2007). To deal with anomalies was a challenge for traditional finance theories and a new discipline, behavioral finance emerged. Behavioral Finance is the study of the influence of psychology on the behavior of financial practitioners' decision and the subsequent effect on markets (Sewell, 2010). The importance of psychological, emotional, and behavioral factors influencing the decision making of finance practitioners cannot be ignored. Behavioral finance is a relatively new developing field of study in academics which mainly focuses on the irrationality in decision making of market participants and its affect on stock prices (Morck, 2004).

Stock prices moves up and down on a daily basis without any change in the fundamentals of the company (Singh, 2009). Theoretically it is assumed that markets are efficient but in reality it is not the case. The behavior of the investors towards buying and selling in a particular stock of a company generates fluctuation in the price. Rather than focusing on the fundamentals the investors make mistakes in investment decision making due to their emotional, psychological, and behavioral factors. Investors deviate from the traditional models of finance while making investment decision under uncertainty.

Studies in the past explored different factors which could have impact on the decision making like heuristics (Shleifer, 2000; Evans, 2005; Waweru et al, 2008), and risk aversion (Von & Morgenstern, 1947; Mayfield et al, 2008; Pasewark & Riley, 2010). But these studies did not explore that the investment decision making could have possible affect due to firm-level corporate governance.

Studies done to find out the effect of firm-level corporate governance on investment decision making by McCahery et al, (2010), Leuz et al, (2008), Cremers & Nair, (2005), Klapper & Love, (2004), Becht et al, (2002), La porta et al, (1998). These studies were done in a different context to find out the preferences of institutional investors about firm-level corporate governance, which could possibly have influence on their investment decision making. Waweru et al (2008) investigated the effect of behavioral factors on the investment decision making of institutional investors and suggest including firm-level corporate governance along with other behavioral factors in future. Furthermore, they recommend conducting a similar research into a developing market. To the best of the author's knowledge, the suggested gap is still uncovered which provides a foundation to conduct this research.

This study would contribute and facilitate equity fund managers to reduce errors and miscalculation in decision making due to behavioral factors and firm-level corporate governance. Furthermore, better understanding of behavioral factors and reduced irrationality of equity fund managers will decrease volatility in the capital markets. Regulatory bodies (SECP) can further use the results of the study to establish policies for the stock markets to be efficient in terms of availability of information and can educate equity fund mangers of institutions to understand the errors made by them based upon these factors.

The purpose of the present study is to find out the relationship among behavioral factors (Heuristics, Risk Aversion, Financial Tools, and Firm-level corporate governance) and Investment decision making. Further to propose and empirically test a model which is based on the relationship among behavioral factors, firm-level corporate governance and investment decision making.

## RESEARCH THEORY

Decision making is very complex processes and no doubt decisions are never made in a vacuum they are based on personal and technical factors. While making decisions investors consider variety of options in specific situations. In such circumstances investors evaluate the available sources (Mathews, 2005). To accomplish the desired objectives in challenging business atmosphere the decision makers must keep themselves update in multidimensional fields (Kannadhasan, 2010). However, studies done by Kahneman and Tversky, 1979, Evans, 2006, and Waweru et al, 2008 show that investment decision making is also affected by psychological, emotional and behavioral factors. Investment decisions are guided by their desires, goals, prejudices, and emotions. The behavioral finance literature is able to establish that heuristics, self-attribution bias, framing effect, representativeness, loss aversion, risk aversion, over and under reaction, etc., affect and alter decisions of investors (Pavabutr, 2002).

In complex and uncertain situation individuals use rules of thumb for making decisions and is referred to heuristics. Financial decision makers apply mental shortcuts rather than objectively assessing the available information. Limited time might be the practical explanation for implementing a heuristic decision process. However, application of heuristics may result in poor decisions (Kahneman and Tversky, 1979). Gambler's fallacy, Overconfidence, availability bias, representativeness, and anchoring are the components of heuristics. For instance, investor expects the high long term growth in earnings due to increase in earnings is reported by the companies (Barberis, 2001). Whereas, the gambler fallacy occurs due to improper anticipation that the trend will reverse subsequently leading to poor market returns. Status quo investors adopt the same pattern which was selected previously, even if it not the most favorable option (Kempf and Ruenzi, 2006). Anchoring occurs while the current observation is fixed as a reference point. Oftenly, the investors judge the buying value of a stock as a reference point (Kahneman and Riepe, 1998) and act to fluctuation in price comparative to the original purchase price. Excessive trading leads to overconfidence (Evans, 2006). Investors are overconfident in their own abilities and analysts are particularly overconfident in areas where they have some knowledge (Shiller, 1998; Evans, 2006). Another type of heuristics appears when investors give unnecessary weight to easily available information. Such type is referred to as availability bias (Barberis, 2001).

The effect of risk aversion on decision making behavior has long been studied. Investors are risk averse and they make investment decisions for maximizing their wealth and claim to be rational (von Neumann and Morgenstern, 1947) but contrary to this investors show various risk tendency in different scenarios. People have a propensity to be risk averse when having sure gains and tend to be risk seekers involving sure losses (Kahneman and Tversky, 1979). Some researchers studied risky choice behavior and recognize that risk aversion is a crucial determinant affecting decisions under uncertainty (Sitkin and Weingart, 1995; Weber et al, 2002). Therefore, it is believed that investors risk aversion or risk seeking is not consistent in different situations and they perceive risk after factoring out situations.

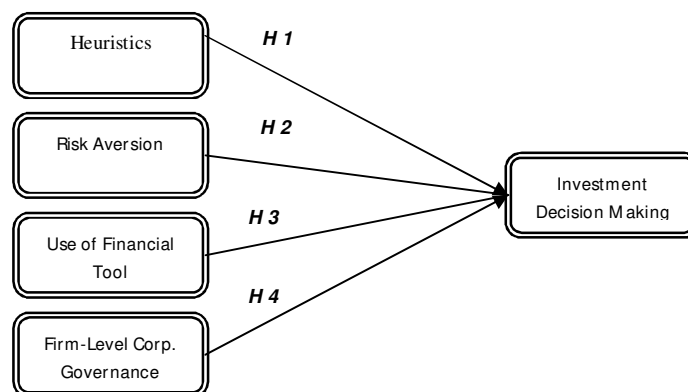
Financial practitioners employ variety of tools and methods to achieve better results of their decision making in investment. Mostly used tools are fundamental and technical analysis, and capital asset pricing model. Practitioners use them to measure risk and return in stock market. Lewellen et al (1977) explored that the major source for gathering information of investor is by the means of fundamental or technical analysis. Risk perception of an investor is comparatively low if the value of the stock increased recently (Antonides and Van Der Sar, 1990). Not only the risk and return components are observed but several other behavioral factors are considered at the time of purchase of shares (Fisher and Statman, 1997). In developed capital markets fundamental and technical analysis are focused more rather than portfolio analysis by institutional investors, such as Hong Kong (Lui and Mole, 1998; Wong and Cheung, 1999), UK (Taylor and Allen, 1992; Collison et al, 1996) and US (Frankel and Froot, 1990; Carter and Van Auken, 1990). It is evident from the literature that the professional investors deviate from the techniques in methods proposed by academia. The present study is an attempt to investigate the dominance of fundamental and technical analysis in the emerging financial markets.

Corporate governance is a concern of academics and capital market regulators. The interest in this area extended in the past two decades (Letza and Sun, 2002). Poor governance leads to harmful consequences which in turn increases the cost of the organization. However, if the organization is governed in a good manner a number of benefits can be achieved. In globalized economy product or service differentiation and competitive advantage can be achieved through good corporate governance (Rubach and Sebora, 1998). Furthermore, better governance makes sure that corporate structure and its processes are set up in a well manner. The better developed systems will help to make right and timely decisions to achieve the objectives of the corporation (Klapper and Love, 2004; Monks and Minow, 2004). The study of La Porta et al (2002) also supported this argument. Using firm level data from 27 developed countries and they find that better shareholder protection is associated with higher valuation of corporate assets. Poorly governed corporations are unable to attract investors (Leuz et al, 2008). Fourteen emerging stock markets firm level data has been investigated by Klapper and Love (2004) and found positive correlation among corporate governance and better performance of the market. The present study follows Klapper and Love (2004) dimensions of measuring firm level corporate governance which includes Discipline, Transparency, Independence, Accountability, Responsibility, Fairness, and Social Awareness. Based upon the literature corporate governance mechanism contributes towards the value of the firm (Shleifer and Vishny, 1997; Becht, Bolton, and Roell, 2002).

**Table 1: Summary of studies that used behavioral factors and corporate governance**

Heuristics	Kahneman & Tversky (1974); (1979); Hunter & Coggin (1988); Debondt and Thaler (1995); Statman (1999); Kahneman & Riepe (1998); Shiller (1998); Shleifer (2000); Barberis (2001); Evans (2006); Waweru et al (2008).
Risk Aversion	Von Neumann & Morgenstern (1947); Shefrin & Statman (1985); Nagy & Obenberger (1994); Thaler et al (1997); Fisher & Statman (1997); Weber & Milliman (1997); Weber et al (2002); Pennings & Smidts (2000); Marilyn & Soutar (2004); Shum & Faig (2006); Lee & Choe (2005); Waweru et al (2008); Mayfield et al (2008); Pasewark & Riley (2010)
Use of Financial Tools	Cartor & Auken (1990); Taylor & Allen (1992); Lui & Mole (1998); Collison et al (1996); Wong & Cheung (1999); Lai et al (2001); Waweru et al (2008)
Firm-Level Corporate Governance	La porta et al (1998); Himmelberg et al (2001); Balatbat et al (2004); Klapper & Love (2004); Suto & Toshino (2010); Yue Fang Wen (2010); McCahery et al (2010)

**Figure 1: Proposed Research Model**



**HYPOTHESES**

- H1: Heuristics has significant and positive effect on investment decision making.
- H2: Risk aversion has significant and positive effect on investment decision making.
- H3: Use of financial tool has significant and positive effect on investment decision making.
- H4: Firm-level corporate governance has significant and positive effect on the investment decision making.

**METHOD**

The population of the study includes the equity fund managers of institutions that invest in Stock Exchanges of Pakistan (Karachi, Lahore, and Islamabad). This covers equity fund managers of equity investment companies, investment banks, mutual funds, insurance companies, and commercial banks. The study used stratified random sampling technique for the collection of data. The survey was administered in three sectors i.e. equity investment companies, insurance companies, and commercial banks due to homogeneous characteristics of respondents. The sample usable for analysis was three hundred and twenty seven (327). The overall response rate from all the sectors was 18.16%. The response from each sector and there details are: one hundred and forty three (143) responses were collected from equity investment companies i.e. 28.83%, ninety seven (97) from insurance companies i.e. 16.16%, and eighty seven (87) from banks i.e. 14.50%.

The scale for this research study was adapted after an extensive literature review. The total numbers of items in the scale were 37. The items for measuring heuristics and use of financial tools were adapted from Waweru et al (2008). The scale for measuring the risk aversion was adapted from the study of Mayfield et al (2008). To measure the firm level corporate governance the scale was adapted by the study of Klapper and Love (2004). Whereas, Pasewark and Riley (2010) scale was used to measure investment decision making. The items of the variables were measured on a 5 point likert scale (checks the level of frequency), where 5 indicates ‘Always’, 4 indicates ‘Very Often’, 3 indicates ‘Sometimes’, 2 indicates ‘Rarely’ and 1 indicates ‘Never’.

**Table 2: Cronbach’s alpha (N=327)**

<b>Variables</b>	<b>Alpha</b>
Investment Decision Making (IDM)	0.79
Heuristics (HST)	0.71
Risk Aversion (RA)	0.80
Use of Financial Tools (FT)	0.83
Firm-level Corporate Governance (FCG)	0.77

Table 2 provides the reliability (alpha) of the collected data. It shows the cronbach’s alpha of each variable. The alpha of investment decision making and heuristics is 0.79 and 0.71, respectively. It shows the reliability of collected data. While the alpha values of risk aversion, use of financial tools, and firm-level corporate governance are 0.80, 0.83, and 0.77, respectively.

**RESULTS AND DISCUSSION**

The present study is an attempt to capture the investment decision making by the equity fund managers of institutions investing in Pakistani stock exchanges (Karachi, Lahore, and Islamabad). It further analyzes the relationship of behavioral factors with investment decision making.

**Results**

**Table 3: Correlation matrix of Equity Fund Managers (N=327)**

Variables	IDM	HST	RA	FT	FCG
IDM	1				
HST	.421(**)	1			
RA	.403(**)	.396(**)	1		
FT	.539(**)	.608(**)	.290(**)	1	
FCG	.462(**)	.411(**)	.272(**)	.311(**)	1

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

The values in table 3 demonstrates the correlation matrix of investment decision making, heuristics, risk aversion, use of financial tools, and firm-level corporate governance. The correlation test is applied on the data set of all the three sectors and the sample was three hundred and twenty seven (N=327). The results in the table depict the level of co-relational significance between dependent and four independent variables by bridging coefficient values of Pearson. It is evident that at 1 % level of significance, investment decision making is confidently linked with all the behavioral factors. Use of financial tools is having figure of correlation coefficient 0.539. Firm-level corporate governance is the second important variable having 0.462 of coefficient of correlation at 1% significance level which is also significantly correlated with IDM. In case of heuristics, the analysis show positive relationship with correlation value of 0.421 at 0.01 levels. As far as risk aversion is concerned, the Pearson correlation value is 0.403 which shows convincing relationship with investment decision making. At the end, based on the results acquired through correlation analysis, it may be concluded that the investment decision making has optimistic and significant relationships with all the independent variables.

**Table 4: Regression coefficients (β), standard errors in parentheses, t-values in brackets and p-values in italic (N=327)**

Constant	Heuristic	Risk Aversion	Use of Financial Tools	Firm Level Corporate Governance	R-Square	F-Statistics
1.341	0.204	0.159	0.312	0.300	0.397	53.061
(0.261)	(0.051)	(0.032)	(0.052)	(0.042)		
[5.153]	[4.999]	[4.907]	[6.091]	[5.521]		
<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>	<i>0.000</i>		<i>0.000</i>

Table 4 illustrates the results of regression analysis for Investment decision making. Based on the results shown it may be determine that the model is significant with all the p-values <0.05. It further explains positive relationship between IDM and behavioral factors with R-Square 0.397 and the F-statistic value 53.061. The heuristics, risk aversion, use of financial tools, and firm-level corporate governance in the model account for 39.7% variation in investment decision making. However, if the variables are viewed separately, use of financial tools is appearing to be the most important variable causing variation in investment decision making with coefficients of regression as 0.312. Based upon the results we may conclude that it is bringing change up to 31.2% in

dependent variable. The regression value of firm-level corporate governance is 0.300, which put forward that it may bring 30.0% change in investment decision making. By viewing at the regression results of heuristics, it gives an impression that it is positively related with the dependent variable. Furthermore, it exhibit that it alters investment decision making up to 20.4%. Risk aversion shows the regression coefficient value of 0.159 and it tends to cause a change in dependent variable up to 15.9%. The results show the t-values of all the independent variables greater than 2.0, which improves the argument regarding the significance of beta ( $\beta$ ) values. All the independent variables show significant impact on the dependent variable but with different variation. Results reveal that use of financial tools and firm-level corporate governance are foremost variables in investment decision making by the equity fund managers of Pakistan.

The results of regression analysis suggest that all four independent variables have positive and significant impact on investment decision making and fund managers perceive them valuable for the decision making. These results validate all hypotheses (*H1, H2, H3, and H4*) and it establishes that Pakistani fund manager's practice heuristics, look into the firm-level corporate governance, apply financial tools, and focus on risk associated with the investment.

### **Discussion.**

Behavioral finance literature has provided sufficient evidence regarding the relationship of behavioral factors and investment decision making. Such studies have been conducted on different types of investors like individual, group, mutual funds, institutional, etc (Statman, 1999; Ricciardi and Simon, 2000; Shleifer, 2000; Lee and Choe, 2005; Pasewark and Riley, 2010). The present study considers the relationship and impact of heuristics, risk aversion, and use of financial tools on investment decision making and these factor relationship has been checked by previous studies like (Kahneman and Riepe, 1998; Waweru et al, 2008; Mayfield et al, 2008). In addition to these factors the study includes firm-level corporate governance and tests its relationship with investment decision making.

In the response of heuristics the present study finds that respondents very often use heuristics while making investment decision. There are 5 most important dimensions under taken in the present study are Representativeness, Gambler's fallacy, Anchoring, Overconfidence, and Availability bias. Previous research of DeBondt and Thaler, 1995 that representativeness can be explain in financial markets while making decisions regarding investment which may lead an example of overreaction of investor. The results about anchoring, overconfidence, and availability bias show that Investors use purchase price as a reference, over confidence occurs in investors when market rises and they become pessimistic when it falls, and due to availability biasness investors give unnecessary weight to easily available information (Kahneman and Riepe, 1998; Shiller, 1998 and Barberis, 2001). Moreover, the study concludes a positive and significant relationship between heuristics and investment decision making. The results are in line with the previous studies (Barberis, 2001; Evans, 2005 and Waweru et al, 2008) tested the relationship among heuristics and investor decision making.

The effect of risk aversion as a crucial determinant in investment decision making has been identified and studies highlight that Investors are risk averse and claim to be rational (von Neumann and Morgenstern, 1947; Sitkin and Weingart, 1995 and Weber et al, 2002). Risky investments are often avoided by such investors (Pennings and Smidts, 2000; Shum and Faig, 2006). In addition the study proves a significant and positive relationship between risk aversion and investment decision making.

Third the study verifies positive and significant relationship among use of financial tools and investment decision making. The results of the present study are parallel with the study of Lewellen et al (1977) which show that investors use financial tools for making investment decisions. The other studies like Nassar & Rutherford (1996), Naser & Nuseibeh (2003), and Waweru et al (2008) also concluded that either individual or institutional investors employ fundamental analysis in decision making. In developed capital markets fundamental and technical



analysis are focused more rather than portfolio analysis by institutional investors (Lui and Mole, 1998; Wong and Cheung, 1999). Arnold et al (1984) conducted research in both US and UK during 1981 and 1982 and study shows that investors use financial tools rather than technical analysis. The findings of the present study support the application of financial tools in investment decision making.

Lastly, the study finds a positive and significant relation between the newly added firm-level corporate governance and investment decision making. McCahery et al (2010) found that firm level corporate governance has impact on the institutional investment decision making and these results are proved by present study. The results further supported that better firm level corporate governance may deliver high share holder value creating more interest for individual and institutional investors (Drobetz et al, 2004). The study of La Porta et al, 2002 also supports this argument. Their study used data of twenty seven developed countries and found association among investment decision making firm level corporate governance. The empirical studies of (Shleifer and Vishny, 1997; Becht et al, 2002) show that corporate governance enhances the firm value which ultimately influences the decision making of institutional investors. Furthermore, the studies of (Gompers et al, 2003; Cremers and Nair, 2005; Core et al, 2006; Bebchuk et al, 2009) explain that firm level corporate governance leads to debate regarding its influence on investment decision making.

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

The present study is an attempt to identify the deviation from established trends of efficient market hypothesis due to behavioral factors. It explores the decision making of equity fund managers. This study determines the relationship of behavioral factors, firm level corporate governance, and investment decision making. The results of the study reveal that behavioral factors (Heuristics, Risk aversion, Use of financial tools) are critical for making investment decisions. The second important factor causing influence on investment decisions is firm-level corporate governance. Heuristics are also found to be the vital factor causing influence on investment decision making. Equity fund managers have apprehensive behavior towards risk and they are exposed to risk according to the policy of their company. The overall response from the sample reveals that all the behavioral factors and firm-level corporate governance are contributing toward investment decision making. It further divulges that, use of financial tools and firm-level corporate governance, are the vital determinants of investment decision making. However, heuristic and risk aversion also play a significant role in investment decision making process.

On the basis of the results it is observed that the institutional equity fund managers do not possess uniformity in trading and investing behavior adding more to stock market volatility. Furthermore, deviation from the efficient market hypothesis is also observed. Base on the data analysis the study makes few suggestions for the improvement in investing activities of institutional investors. Firstly, the regulatory authorities must take into account the behavioral factors causing affect on the investment decision and proper regulations shall be incorporated which could help in reducing irrational behavior. The target of the policy makers may focus on creating awareness and conditions through which behavioral aspects shall have minimum impact on the stock prices and market behavior. Secondly, wider scale educational programs may come into action for institutional investors. So they can understand the psychological areas causing impact on their investment decision making like anchoring, gambler fallacy, and other heuristics. In this way they may understand the mispricing of securities and shape their decisions based on true fundamentals and information, this may lead in increasing their profits and market efficiency. Last but not least, investment advisers and finance professionals shall consider behavioral issues as risk factors for devising efficient investment strategies.

### Practical Implications and Future Directions

The research will be helpful for the regulatory authorities, stock exchanges operating in Pakistan, financial professionals, and investment advisors so they can focus on the behavioral factors causing stock market volatility. In addition, it will help the institutional and individual investors in understanding about the relationship and influence of firm-level corporate governance and behavioral dimensions taken in this study. It may help them to better judge investor's behavior towards risk, thus leading towards improved investment decisions.

Three behavioral factors and firm-level corporate governance were taken as independent variables in this study. Future research may be conducted incorporating other behavioral factors like group think theory, over and under reaction, panics, issues of knowledge, and herd behavior. Additionally, cultural differences and demographic dimensions like age, gender, education, income level, experience etc shall be included in the future research to better understand the behavior of institutional as well as individual investors. The study focused mainly on three sectors i.e., equity investment companies, insurance and banking sector further research shall include other respondents like investment firms, group of investors, mutual funds, corporations, and non-profit institutions.

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