

# **Factors Affecting Individual Equity Investor's Decision Making in Pakistan**

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## **Abstract**

Investor behavior is central concept in behavioral finance which analyzes the influence of various factors on individual equity investor decision making. The nature and significance of these variables on investor decision making can be different and interesting in various countries. This study therefore examines the influence of economic, and behavioral, factors in shaping the investment behavior of individual equity investors in Pakistan. The factor includes classical wealth maximization, accounting information, self-image/firm-image coincidence, neutral information, advocate recommendation and personal financial needs. The study found strong influence of self-image/firm-image coincidence, neutral information, and advocate recommendation on individual equity investor decision making. Whereas, no influences of factors like classic wealth maximization, accounting information and personal financial needs is found on individual equity investor's decision making in the context of Pakistan.

**Key Words:** Individual equity investor, behavioral finance, Pakistani equity markets.

**JEL Classification:** G10, G11, N20

## **1. Introduction**

Financial market diversification enables institutional and individual investors to invest in a greater range of financial products. It also facilitates investors to decide and choose among various investment options. To decide between different investments options, the decision of

investor is based on economics as well as behavioral factors. These behavioral factors are taken into consideration of the field of behavioral finance.

Behavioral finance gained remarkable attention in recent years in explaining investor behavior and its influence on investment decision making. Studies explaining the individual investor's behavior were firstly emerged about 1970's. Behavioral finance investigates the decision making process that deals in buying or selling of financial assets and provides the rational behind decision making process. Its main focus is on psychological principals used by investor to make investment decision. Theory which defines behavioral finance is given by Khneman and Tyevsky (1979); and Kahneman (1982). Khneman and Tyevsky (1979) states that investor may not always appear as rational for investment as supposed. These Behaviorists are of the opinion that investors may behave irrationally while making investment decisions. Behavioral finance is relatively a new concept that has challenged many old held beliefs of traditional finance. Shefrin (1999) defined behavioral finance as "a rapidly developing area that contracts with the influence of psychology on the behavior of financial professionals". Number of studies in behavioral finance has examined the factors that influence investor behavior. Different set of factors have been used in various studies that influence equity selection process of individual investor. For instance Meriks et al. (2004) used five categories namely: accounting information, subjective/personal, neutral information, advocate suggestion, and personal monetary needs to explain the factors that influence individual investor behavior. Nagy and Obenberger (1994) used seven classifications: social relevance, self-image/firm-image coincidence, neutral information, classic wealth maximization, accounting information, advocate recommendation, and personal financial needs. Whereas Al-Tamimi (2005) used five categories including: self and firm-image co-incidence, personal financial needs, neutral information, accounting information, and advocate recommendations to analyzed the individual investor behavior in UAE financial markets.

Major focuses of the previous studies are on institutional investor, and less attention has been give to retail equity investor behavior. Moreover, majority of these studies are in the context of on developed countries with limited focus on developing countries. This study fills this gap by

analyzing the factors that influence the decision making process of retails equity investors in Pakistan. This study will help to understand these factors and will enable the policy makers to understand the individual investor behavior and draw their future policies in the light of the findings of this study.

The following research questions will be addressed in this study:

- To what extent classic wealth maximization factors effects individual investor decision making in Pakistan?
- To what extent accounting information factors like financial statement condition and stock marketability effects individual investor decision making?
- To what extent self image/ firm image factors effects individual investor decision making of retails equity investors in Pakistan?
- To what extent neutral information factors effects individual investor decision making.
- To what extent advocate recommendation factors like opinions of the firm's majority stockholder and Broker's recommendation effects individual investor decision making?
- To what extent personal financial needs factors like diversification needs and attractiveness of non-stock investment effects individual investor decision making in Pakistan?

Rest of the paper is organized as follows; section 2 contains review of literature, conceptual model and research hypothesis. Section 3 elaborates the research methodology including sample and sampling, measurement and instrumentation and procedure. Section 4 provides results and discussions in the light of previous researches. Finally, conclusion is provided along-with .some policy implications.

## **2. Literature Review**

Numerous studies have focused on the importance of behavioral factors on the individual equity investor decision making process. To quote few, Cohn et al. (1975) provide tentative evidence on investors' risk assumption attitudes and hold that "as investor wealth increases his risk aversion

tend to decrease". Lewellen et al. (1977) found capital gain, overall return and dividend yield preferences of investor differs with age, education, sex and income levels. Blume and Friend (1978) gave good inferences about equity investor preferences. De Bondt et al. (1985) worked on behavioral finance and provided evidence in support of previous studies regarding cognitive bias resulting in stocks mis-pricing at NYSE. Barnwell (1987) provides that lifestyle characteristics: occupation, risk-aversion and control orientation are helpful in predicting individual investor behavior. Statman and Caldwell (1987) also connected behavioral factors to capital budgeting. Warren et al. (1990) also examined the investment choices of individual investors' based upon demographic characteristics and lifestyle attributes. Shleifer (1999) viewed market efficiency in the context of investor's behavioral factors. Riley and Chow (1992) hold that as income, age, education and wealth increases risk aversion tend to decrease. LeBaron et al. (1992) finds that risk aversion of individual investor is based on intuitive instead of rational reflections.

Nagy and Obenberger (1994) also analyzed factors affecting behavior of individual investor and provided that investor prefer wealth maximization. They also hold that attributes such as firm's ethical behavior, international and local business, track record relating to environment are given cursory attention by individual equity investors. Moreover, recommendations of family members, friends, coworkers, brokerage houses and stockbrokers are also not given much attention by investors. Epstein (1994) provided that individual investors consider social information given in the annual general report or CSR report regarding corporation product quality and safety information, and activities relate to environment in their investment decision making. Krishnan and Booker (2002) provided that investor's decision to make a decision to sell or retain stock using analyst's recommendations. Merikas et al. (2003) also checked the factors affecting behavior of investor on Athens equity market and concluded that individuals make their decisions of stock purchase using economic variables combined with other different variables. The results of Merikas et al. (2003) indicated that the factors are correlated to each other as provided in previous empirical studies on behavioral finance. Malmendier and Shanthikumar (2003) instituted that major investors of stock market create extraordinary volumes of trades using positive recommendations of associated analyst. Small investors apply irregular buying forces after all helpful recommendations, and also utilize affiliated analysts recommendations.

Hodge (2003) examined investor's insight of auditor independence, the benefits of audited financial statements, and earnings quality. He provided that lower observation of earnings is related with larger dependence on audited financial reports of the firm and analysis of reports when deciding about investment. Kadiyala and Rau (2004) analyzed traders' response to organization event declarations and provided that investors undervalue previous information and information provided. Al Tamimi (2005) conducted study on UAE stock market and provide that the wealth maximization and accounting information are the most preferable factors for the UAE equity trader's behavior. UAE investor behavior is least affected by neutral information, religious reasons and family members opinion.

Nagy and Obenberger (1994) explained that classic wealth maximization factors received normal ratings from investors, in spite of their supremacy of the economic basics of most theories of individual investor behavior in their study. Al Tamimi (2005) provides accounting information cause an influence on the UAE investors' behavior. So what is relative importance of these factors on individual investor behavior? Nagy and Obenberger (1994) provided that most of the investors in the model give importance to factors related to accounting information. Al Tamimi (2005) also used factors linked to self-image/firm-image co-occurrence to check influence on the UAE investor behavior. If it is, what relative importance these factors have? Nagy and Obenberger (1994) explained that most of the investors select stocks on the basis of qualitative criteria. This presents an alarming challenge to an investment society familiarized to quantitative analysis and announcement of the comparative prices of the securities. Al Tamimi (2005) used neutral information to check its influence on the UAE investor behavior. Al Tamimi (2005) provides advocate recommendations as a factor that influences the UAE investor behavior. Nagy and Obenberger (1994) concluded in their study that most of the investors rely on expertise of the professionals, but many investors are also cautious of this kind of information sources. Al Tamimi (2005) utilized personal financial factor to check its effect on the UAE investor behavior. Nagy and Obenberger (1994) provide that sophisticated individual investors take capital for investment and expenditures related to consumption as independent things. Merikas et al. (2003) also examined the influence of accounting information, subjective/personal, neutral information, advocate recommendation, and personal financial needs on investor behavior in the context of Greek investors. More recently Chandra and Kumar (2011) also hold that factors like

advocate recommendation, accounting information and neutral information influence individual investor behavior.

## ***2.1 Hypothesis Development***

Based on research gap and research questions the following research hypotheses are constructed for this study:

**H1:** Individual equity investor decision making in Pakistan is influenced by classical wealth maximization theorem.

**H2:** Individual equity investor decision making in Pakistan is influenced by accounting information.

**H3:** Individual equity investor decision making in Pakistan is influenced by self-image/firm-image coincidence.

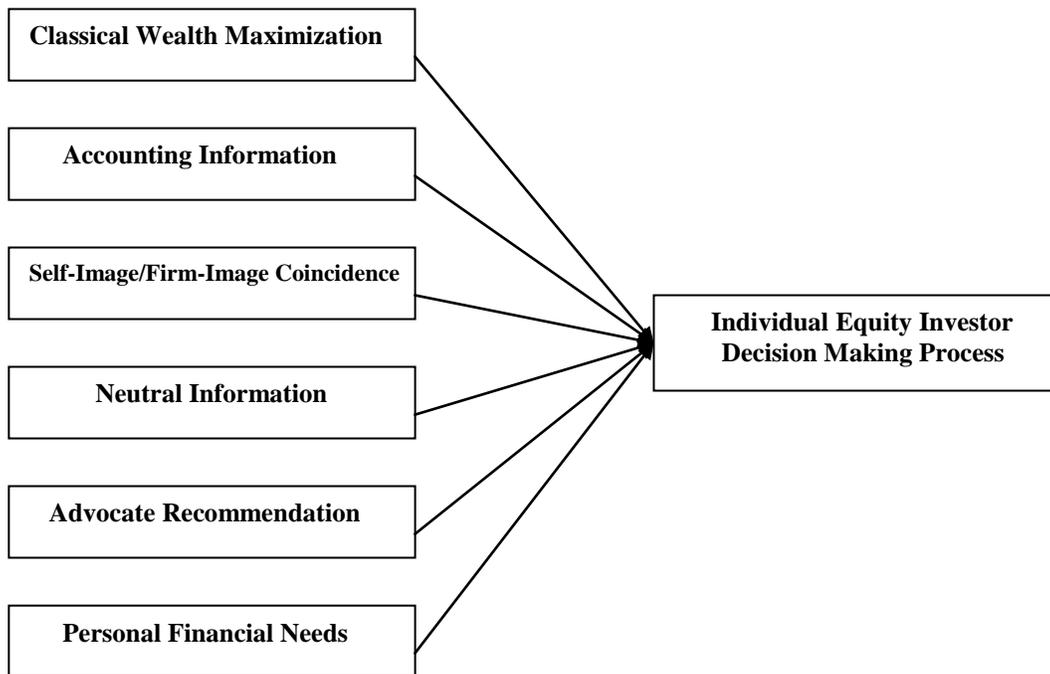
**H4:** Individual equity investor decision making in Pakistan is influenced by neutral information.

**H5:** Individual equity investor decision making in Pakistan is influenced by advocate recommendation.

**H6:** Individual equity investor decision making is influenced by personal financial needs in Pakistani equity markets.

**2.2 Research Model**

**Figure I:** Individual Equity Investor Decision Making Model



**3. Research Methodology**

**3.1 Sample and Sampling**

Target population in the study is the individual investor participating in three different stock exchanges of Pakistan. There are three stock markets in Pakistan namely; Karachi Stock Exchange (KSE), Lahore Stock Exchange (LSE) and Islamabad Stock Exchange (ISE). KSE is

the largest stock exchange of Pakistan, which was awarded best stock exchange of the world in 2004. In order to collect data 400 questionnaires were distributed to individual investors in all these three stock exchanges, 254 questionnaires were received and 239 questionnaires were usable leaving a response rate of around 60%. The lists of individual equity investors were obtained from stock brokers and survey questionnaires were mailed to the respondents. Personally administered survey was also conducted to enhance the response rate. Investors from diverse backgrounds were incorporated in order to generalize the findings of the study.

### ***3.2 Measurement and Instruments***

A modified questionnaire is used to examine the influence of different economic, behavioral and demographic factors on individual investor equity selection process in Pakistan equity markets. Six factors included in the questionnaire are: classical wealth maximization, accounting information, self-image/firm-image coincidence, neutral information, advocates recommendation and personal financial needs. The independent variables used in this study are classic wealth maximization which consists of four items, accounting information consists of four items, self image/ firm image consists of eight items, neutral information consists of seven items, advocate recommendation consist of four items and personal finance needs consists of four items. All these items are measured on a 5-point Likert scale (1= least influential to 5= most influential). These items were taken from previous studies of (Nagy and Obenberger 1994, Merikas et al. 2003 and Al Tamimi 2005) Dependent variable used in this study is individual decision making which consists of five items measured on a 5-point Likert type scale (1= strongly disagree to 5 = strongly agree). The instrument to measure individual equity investor decision making is adopted from Muhammad and Ismail (2009).

### ***3.3 Procedure***

This is an exploratory study based on primary data. The data has been collected from individual equity investors. The data was collected through structured survey questionnaire which were mailed and personally administered. The collected data was entered into SPSS sheet for onward analysis. The reliability analysis was conducted through SPSS. Structural equation modeling

(SEM) technique is adopted to test the hypotheses. AMOS latest version is used for path analysis and structural equation modeling approach. SEM is very popular technique owing to its data sensitivity and objectivity. SEM allows development of conceptual model, development of hypotheses and testing of hypotheses to scientifically prove the study.

#### 4. Results and Discussions

This section contains the interpretation of data analysis and discussions of these results in the light of previous literature. The analysis used in this study includes, reliability analysis to check the health of data for analysis and, regression analysis to test hypotheses. The regression analysis is conducted through structural equation modeling technique. SEM technique incorporates results of model fit, path analysis and the model.

The result of reliability analysis shows the value of Cronbach's alpha .716, which is quite satisfactory. The data is considered reliable is the value of Cronbach's alpha is equal or greater than .70. The data for reliability analysis consisted on total of 36 items of both independent variables and the dependent variable.

The results of model fit analysis also produced satisfactory results. Although values of model fit do not meet all required standards, but model can be accepted overall. The results obtained from the model fit in this research depicts the probability level as .231, which confirms the model fit as adequate, as the value of P should be  $> 0.1$ . The Table II provides the regression weights and acceptance or rejection of the developed hypotheses. In order to accept any hypothesis the value of P should be  $< .05$ . Our *H1* states that individual investor's decision making is influenced by class wealth maximization factor, but analysis do not statistically approve this hypothesis. The value of P is .0239, which is far greater than .05 we, therefore reject our *H1*. Nagy and Obenberger (1994) also found the mediocre influence of classic wealth maximization on investor behavior. Accounting information also do not influence on investor behavior as value of P is .289, therefore, we reject our *H2* as well. This finding also depicts that investors do not behave rationally in the equity markets of Pakistan. Rational investors tend to incorporate accounting information such as financial statements, higher dividends, expected corporate earnings in their investment decision making. The study

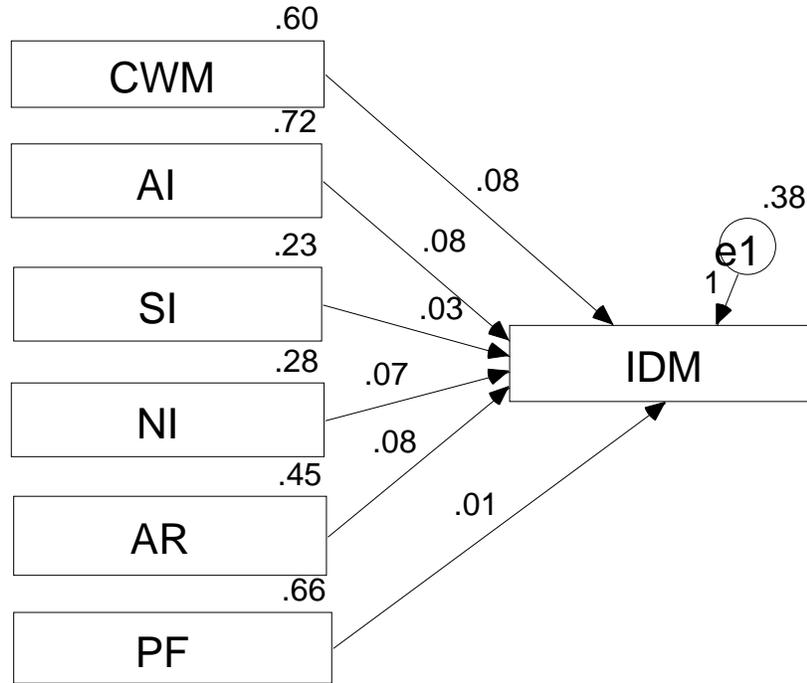
found significant influence of self image/firm image coincidence on investor decision making as value of P is .029, we therefore accept our *H3*. Neutral information like current economic conditions, financial press reports, price trends of securities and corporations' and commitment towards social responsibility is also having significantly positive influence on investor's decision making. Nagy and Obenberger (1994) also found neutral information having strong influence on investor behavior in their study. The value of P is .021, leaving our *H4* as accepted. Interestingly advocate's recommendations including recommendations from family members, friends and co-workers and stock brokers is also having strongest and significant influence on individual investor's decision making. The value of P in this case is .019, resulting acceptance of our *H5* as well. Al Tamimi (2005) provides advocate recommendations as a factor that influences the UAE investor behavior. Chandra and Kumar (2011) also hold that investor behavior is influenced by advocate's recommendation. Finally, personal financial need is having no influence on individual equity investor's decision making with value of P .815; we reject our *H6*, therefore. Merikas et al. (2003) also hold that individual investor considers themselves quite independent of personal financial needs variable. The results are quite logical and are in line with many of previous studies on investor behavior.

**Table II:** Regression Analysis

Hypotheses	DV	Direction	IV	Estimate	S.E.	C.R.	P	Decision
<i>H1</i>	IDM	<---	CWM	.130	.111	1.178	.239	Reject
<i>H2</i>	IDM	<---	AI	.107	.101	1.061	.289	Reject
<i>H3</i>	IDM	<---	SI	.392	.179	2.190	.029	Accept
<i>H4</i>	IDM	<---	NI	.403	.185	2.179	.021	Accept
<i>H5</i>	IDM	<---	AR	.299	.128	2.345	.019	Accept
<i>H6</i>	IDM	<---	PF	-.025	.105	-.233	.815	Reject

Figure II shows the structural model of this study, the model shows the nature of relationship between the independent variables i.e. the factors affecting individual equity investor’s decision making, the dependent variable of this study.

**Figure II:** Structural Equation Model



## 5. Conclusion

The main objective of this research is to examine the influence of prescribes factors on individual investor’s decision making process. The factor includes classical wealth maximization, accounting information, self-image/firm-image coincidence, neutral information, advocate recommendation and personal financial needs. There is very less amount of literature available on investor behavior in the context of Pakistan. Therefore, this study provides a guideline for future researchers in this field. It also provides some policy implications for

corporations, and investment professionals and the investors of course. The study found significantly positive influence of self-image/firm-image coincidence, neutral information, and advocate recommendation on individual investor's decision making process. Whereas, no influence is found for classical wealth maximization, accounting information, and personal financial needs. This depicts that individual equity investors' in Pakistan are not rationale as they base on their decision making on the recommendations of family, friends, co-workers and stock brokers rather on accounting information. This finding is having certain implication, for stock exchange authorities, who should actively work for investors' education regarding investment. The higher the investor's inclination towards recommendations of others, the higher will be chances of market manipulation and speculation. Similarly, the higher the speculation in the market the less the chances that ordinary person invest in such stock market. In order to make stock exchange a true representative of the economy that bridges the gap between saver and the borrower. The speculative image of stock exchange prohibits ordinary citizens of the country to invest their savings in such stock market.

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