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# Factors Influencing Investors' Decisions in Stock Market Investment in Bangladesh [A Study on Khulna City]

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**Abstract:** This study investigates the factors that have influenced the share investment decisions of a sample of 270 investors in Khulna City. It is motivated by the observed significant investment in shares in DSE and CSE enlisted companies in recent years as well as the need to understand the behavioral aspects of the investors influenced by some socio-economic, cultural and psychological factors. The results obtained show that the examples of people attaining financial security through share investment have the maximum level of influence over the investors. Market factors, hedging factors and economic factors have greater influence on investing decision making. This result also shows that uses of corporate annual report indicating financial ratios also influence investors' decision making in share market.

**Keywords:** Market Influencing Factors, Hedging in the Share Market, Bangladeshi Investors, Stock Market Investment, Behavioral Finance, Investors' Psychology

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## 1. Introduction

Investment is typically referred by the allocation of savings funds to the available opportunities with an expected higher return in future. Due to the advancement of media and business world, today's people are much more knowledgeable and better informed about the availability of investment opportunities, but they are in short of adequate knowledge to manage them efficiently. Investment avenues are enlarging each and every day with both physical assets and financial assets. Newer types of instruments and securities are coming to the market that fit with the varied risk-return requirements of the investors that will enable them to invest their savings productively. Keeping idle assets in hand is just an unproductive wastage as those will lose their monetary value due to inflationary changes in time. The basic objective of a rational investor is to minimize risk and maximize return from his investment. If he cannot earn at par with the rise in prices, the real rate of return will be negative. The allocation of savings fund in the growth process is critical for the economic growth of a country. Growth occurs when savings are channeled into productive investments which in turn enhance the capacity of the economy to produce more goods and services that will have a reflexive impact on the standard of living of the society. Financial

market has a significant role in allocating savings fund to the financing sources in need of money that will run for the economic growth and development of the country. Financial market, characterized as capital market and money market, contains investment opportunities for individuals and businesses with surplus funds, at the same time it is the cheapest sources of financing for businesses with deficiency of capital. Capital market is composed of equity and long-term debt instruments of the companies. Money market represents securities with short-term maturity period that also meet up the working capital requirements of firms. Apart from banking system, financial market is a formal channel of loan able fund in the economy.

### 1.1. Statement of the Problem

This study aims to get into a critical diagnosis about the key factors influencing investment behavior, and ways these factors impact on trading-decision making process among people of different age groups, educational background and occupation which is concentrated only in the stock market. This study has good implication towards individual investors; companies enlisted in Dhaka Stock Exchange [DSE] and Chittagong Stock Exchange [CSE] and Government Policy makers. For investors, as decision makers, the most influencing factor or factors on their investment decision are

crucial because this would profile their future financial plans. Companies can concentrate on particular profitability ratios if they would know the level of influences over the customers, and shape up their future company policies and strategies. Government and Securities and Exchange Commission [SEC] should be taking care of a sound investing economic environment so that investors interest is safe guarded and ensures the sought after financial growth in the country.

### 1.2. Objective of the Study

This research has some special purposes to be accomplished. The broad objective is to describe the factors influencing investment policies of Bangladeshi investors and their trading approaches. The research question is if economic, social, cultural and psychological factors have influences on investors' decision making process. To attain the broad objective, some segmented issues are like these

- To determine if the identified factors influence individual investors decision in the share market investment
- To identify the ranking of the factors influencing investment decision making process and choosing company shares

## 2. Literature Review

Research in behavioral finance is relatively a new branch of study. According to scholars of behavioral finance, it is assumed that investor's market behavior derives from psychological principles of decision making to explain why people buy or sell stocks. Shefrin [1999] has defined behavioral finance as a rapidly growing area that deals with the influence of psychology on the behavior of financial practitioners.

Earlier studies have been carried out to determine the pattern of institutional investors' investment but studies dealing with investment pattern of investors are very few. Securities and Exchange Board of India [SEBI] and NCEAR [2000] "Survey of Indian Investors" has been reported that safety and liquidity are the primary considerations which determined the choice of asset. This paper is intended to identify the factors which influence individual investment decision, the difference in the perception of investors in the investing process on the basis of age and gender.

A number of theories have been developed to explain how and why people make decisions when they spend, invest, save and borrow money [Belsky and Gilovich, 1999] and the factors that influence shares investment decision making. Extensive reviews of the main theories range from theory of Risk tolerance by investors [Bernheim *et al.*, 2001], theory of Efficient market hypothesis [Fama, 1965, 1970; Fama and French, 1993, 1996], and modern portfolio theory [Markowitz, 1952; Lintner, 1965; Sharpe, 1964; Tobin, 1958].

The theory of risk tolerance following from the research of Bernheim *et al.* [2001] is a construct stipulating that the decision to invest depends on willingness to accept higher

risk or volatility in exchange for higher potential returns. Accordingly, investors are classified into two as risk tolerant investors and risk-averse investors. A risk tolerant investor will pursue higher potential reward investments even when there is a greater potential of loss. In addition, a risk tolerant person would seek out high-risk investments, even if they add little to his or her portfolio.

The theory of planned behavior is a theory about the link between attitudes and behavior. It was proposed by Ajzen [1985, 1991] as an extension of the theory of reasoned action. Essentially, the theory contends that both attitude and norms toward a behavior are the immediate determinants of intention to perform such behavior. The theory of planned behavior has since been widely applied as a very powerful and predictive model for explaining human behavior. The theory of efficient market hypothesis [EMH] holds that the prices of stocks and other assets automatically incorporate all available information and rapidly adjust to incorporate new information.

Market Portfolio Theory, which is also called as portfolio theory or portfolio management theory, is a sophisticated investment approach or strategy which is also a philosophical opposite of traditional stock picking. It is the creation of the economists who try to understand the market as a whole, rather than business analysts who look for what makes each investment opportunity unique. The key tenet of modern portfolio theory therefore is that if one wishes to increase the performance and reduce the risk in overall investment portfolio, he or she should combine investments that are non-correlated with one another. Simply put a diversified portfolio of non-correlated investments that can provide highest returns with the least amount of volatility given that the risk of loss in futures trading can be substantial and an investor could potentially lose more than the initial investment.

Warren *et al.* [1990] and Rajarajan [2000] determined individual investment selections [e.g., stocks, bonds, real estate] stranded on lifestyle and demographic attributes. These investors see rewards as contingent upon their own behavior. Nagy and Obenberger [1994] examined influencing factors of investors through a set of 34 questions, which found that classical wealth-maximization criteria are important to investors, although they are affected by a variety of decisive factors while choosing stocks.

Merikas, Andreas, George, and Prasad (2004) studied that the most important variables were related to classic wealth maximization criteria. Coverage in the press, statements from politicians and government officials, and political party affiliation were unimportant to most stock investors. Five important factors identified as Accounting Information, Personal Financial Needs, Subjective/Personal, Advocate Recommendation, and Neutral Information.

Falk and Matulich (1976) observed the relationship between some personal characteristics of a group of investors and a group of investment advisors, and the degree of risk attributed by them to various types of financial investments through their study in 1976.

In an expanded study by Williams [2007] surveyed on 5170 investors across five countries, namely Australia, Canada, United Kingdom and United States, to analyze determinants of socially responsible investments. The results showed that investors took company environmental and social behavior into consideration in making investment choices, which is actually reflected through the stakeholders' attitude toward the company from different sides of company performance.

Riley and Chow (1992) found that risk aversion increases with the increase of age which also decreases i.e. after 65 of age retirement. Hoffmann, Eije, and Jager (2006) researched of the needs and conformity behavior on investors. The results indicated that besides satisfying the financial needs investors also struggle to satisfy socially oriented needs.

Sevil, Sen, and Yalama (2007) aimed at understanding the decision processes of small investors trading in Istanbul stock exchange and found that investors are not completely rational as perceived by traditional finance theories.

From psychological aspects of human being, it is observed that people are not always rational and their decisions are not always objective. Technically financial metrics like P/E ratio, EAT, Dividend payout ratio, etc. should be the basis of investment decisions, but such is not the case most of the times, because the prices of indices are also governed by various aspects and factors of human mindset expectations, sentiments and excitement to name a few. S. Usmani (2012) incorporated a study by taking 30 variables from diverse decision criteria including contemporary concerns. Results revealed seven homogenous groups among these 30 variables which were grouped into seven factors that address major investor considerations. The findings suggest that individual's base their stock purchase decisions on wealth-maximization criteria combined with past and present stock performance along with other diverse variables; they do not rely on a single approach.

Investors' high expectation and irrational behavior (Haque, & Faruquee, 2013) cause undue increase in market index and ultimately result in great fall in Stock market.

A number of accounting variables have been used to explain equity value and equity return. Bhatt & Sumangala (2012) conducted a study on 50 top-listed companies of India over 5 year's period data and they concluded that Earnings per Share (EPS) impact the market value of an equity share in the Indian context.

Halonon, Parlovic and Pearson (2012) investigated value relevance of financial reporting in Sweden after the introduction of the International Financial Reporting Standard in 2005. They found that value relevance of book values had increased but the value relevance of earnings had decreased over the period.

Makrani & Abdi (2014) observed the effects of book value, net earnings and cash flow on stock prices of 129 selected firms listed on Tehran Stock Exchange over the period 2007-2012, the study has determined that the effects of book value, net earnings as well as cash flow decreases over the time although the effects of book value is bigger

than net earnings and cash flow.

Other than risks involved associated with making investment in securities, stock market investment is involved with certain considerations. There can be no assurance that the fund will achieve its investment objectives. The value of the fund may go down as well as up and there can be no assurance that on redemption, or otherwise, investors will receive the amount originally invested. Accordingly, the fund is only suitable for investment by investors who understand the risk involved and who are willing and able to withstand the loss of their investments. Even with all mutual funds, an investment is not insured or guaranteed by the Government of Bangladesh or any other government agency. Stock and mutual fund prices generally fluctuate because of the interplay of the various market forces that may affect a single issuer, industry or the financial market of the country. Net asset value of the funds may move unpredictably through the movement of stock prices. Portfolio investment strategy, management decision on financial leverage, permissible level of dividend risk, liquidity of the assets in the secondary market, etc. combine in the risk factors of the investors, and influence the expectations of the investors.

Piotroski & Roulstone (2004) found that stock return synchronicity is positively associated with analyst forecasting activities, consistent with analysts increasing the amount of industry - level information in prices through intra - industry information transfers. Merikas, Andreas, George, and Prasad (2004) studied that the most important variables were related to classic wealth maximization criteria. Coverage in the press, statements from politicians and government officials, and political party affiliation were unimportant to most stock investors. Five important factors identified as Accounting Information, Personal Financial Needs, Subjective/Personal, Advocate Recommendation, and Neutral Information.

### 3. Research Methodology

This is a basic research descriptive in nature undertaken in Khulna, the third largest divisional city of Bangladesh. The total number of registered stock holders transacting in different stock houses are approximately 50,000 in Khulna City.

A web-based software Raosoft is used to determine the sample size accurately which was 269; here total population [N] is almost 50,000 which covers all the urban investors in Khulna city; marginal error 5% and confidence level 90%. Here the total number of interviewed respondents is 270. Non-probability convenience sampling technique was used to carry on the study. Respondents are picked from the brokerage houses operating in Khulna City including Investment Corporation of Bangladesh [ICB], the Royal Capital, The Island Securities, Mercantile Bank Brokerage House, Bank Asia, Ltd. Etc.

Primary data was collected through a questionnaire survey among the investors with a structured questionnaire which was divided into three parts, i.e the first part contains some demographic queries and the rest two parts contain questions

to get their responses regarding the specific investment dimensions of different options from different factors. It contains some close-ended questions which is to be answered in a five-point Likert scale that was designed such as the more the score, the highest the factor influences significantly. The factor to which each factors have influenced investment decisions in shares was measured using a response scale of 5 very high to 1 very low.

SPSS 16.0 was used for calculating the statistical measures and preparing the charts presentation. Perception of the respondents about a particular factor was derived from calculating the mean scores of all the respondents related to that particular attribute, and the corresponding standard deviation represents the comparative variation in the responses of the interviewees.

**Table 1.** KMO and Bartlett's Test.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.754
Bartlett's Test of Sphericity	Approx. Chi-Square	2.576E3
	df	78
	Sig.	.000

[From Personal Survey Result February, 2015]

The result obtained from 270 respondents had been thoroughly analyzed and the outputs of the results had been clearly explained in this section. To analyze the strength of association among variables the Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy was applied. The KMO measure of sampling adequacy was computed to determine the suitability of using factor analysis. It certifies whether data are suitable to perform factor analysis. KMO score .754 indicates adequacy for testing.

**Table 2.** Reliability Statistics.

Cronbach's Alpha	N of Items
.924	26

**Table 3.** Frequency of the Respondents.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	188	69.6	69.6
	Female	82	30.4	100.0
	Total	270	100.0	100.0

The Cronbach alpha is the most widely used index for determining internal consistency (Kerlinger 1986). Nunnally (1978) suggested that Cronbach's Alpha should be more than 0.6. In the current survey, alpha coefficients

**Table 6.** Total Variance Explained.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.295	48.424	48.424	6.295	48.424	48.424	4.588	35.290	35.290
2	1.765	13.580	62.003	1.765	13.580	62.003	2.501	19.242	54.531
3	1.294	9.953	71.956	1.294	9.953	71.956	2.265	17.425	71.956
4	.766	5.893	77.849						

exceed 0.5 with an overall alpha value 0.924 for the entire questionnaire. The high alpha value confirms the homogeneity of the items comprising them, and indicates acceptable level of reliability.

Among total 270 respondents, 30% are female; all of them have investment in shares. And the rests 70% male respondents among whom 158 have investment in shares.

**Table 4.** Correspondence Table.

Gender	Investment		
	Have Investment	No Investment	Active Margin
Male	158	30	188
Female	82	0	82
Active Margin	240	30	270

[From Personal Survey Result February, 2015]

## 4. Data Analysis

The Primary data from the questionnaire survey is collected and sorted based on very high, high, moderate, low and very low.

**Table 5.** Descriptive Statistics.

	Mean	Std. Deviation	Analysis N
Industry Attractiveness	3.38	1.219	270
Firms Rank	3.77	1.363	270
Share Price	4.15	1.002	270
Historical Data	3.37	1.320	270
Expected Dividends	3.39	.867	270
Stock Index Status	4.02	1.252	270
Financial Indicators	3.41	1.037	270
Recent Price Fluctuation	3.49	1.206	270
Non-stock Attractiveness	2.41	1.065	270
Portfolio Diversification	2.30	1.084	270
Capital Gain	4.00	.983	270
Loss Minimization	3.30	1.274	270
Financial Statements	3.22	1.168	270

[From Personal Survey Result February, 2015]

Here, Table 5 consists of mean values and standard deviations of the prescribed factors, Share price, chance of capital gain and stock index status have greater mean values, it means that most of the respondents have given higher weight on these factors, whereas very few has been disagreed about the influence expected dividend and chances of capital gain on the investment decision making.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
5	.701	5.394	83.243						
6	.468	3.600	86.843						
7	.414	3.183	90.026						
8	.392	3.016	93.041						
9	.292	2.248	95.289						
10	.276	2.126	97.415						
11	.161	1.238	98.653						
12	.098	.755	99.408						
13	.077	.592	100.000						

Extraction Method: Principle Component Analysis

Applying SPSS, the principal component analysis (PCA) was carried out to explore the underlying factors associated with 13 factors. The above table shows that 71.956% of the influences level comes from the first three factors.

Table 7. Component Matrix<sup>a</sup>.

	Component		
	1	2	3
Financial Indicators	.862		
Share price	.856		
Stock Index Status	.827		
Firms Rank	.811		
Financial Statements	.770		
Recent Price Fluctuation	.767		
Industrial Attractiveness	.765		
Loss Minimization	.716		
Historical Data	.685		
Capital Gain	.670	-.584	
Non-stock Attractiveness		.801	
Expected Dividends		.653	
Portfolio Diversification			.782

Extraction Method: Principal Component Analysis.  
a. 3 components extracted.

Table 8. Rotated Component Matrix<sup>a</sup>.

	Component		
	Industrial Factors	Investors Factors	Economic Factors
Industry Attractiveness	.853		
Share Price	.736		
Firms Rank	.734		
Historical Data	.718		
Expected Dividends	.705		
Financial Statements	.704		
Financial Indicators	.685		
Portfolio Diversification		.886	
Loss Minimization		.708	
Recent Price Fluctuation		.526	
Non-stock Attractiveness			-.844
Capital Gain			.822
Stock Index Status	.517		.562

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.  
a. Rotation converged in 7 iterations.

Naming of Factors, industrial factors, investors factors

and economic factors.

This study has identified three important factors those have been named based on the variables clustered under a particular factor. The first component based factor is named as market factor. This factor explains the highest percentage of total variance which is 90.23 percent. Investors' make most of their decisions of share investment by considering Industry Attractiveness, Share Price, Financial Indicators, Historical Data, Expected Dividends, Financial Statements, Firms Rank in the industry. Secondly, portfolio diversification, loss minimization and price risk-these three items can be named as Hedging Factor which consists of 7.19% of total variance. And finally the rest 2.58 of total variance is named as the Economic Factors which consist of availability of non-stock option, chances of capital gain and stock index status.

Table 9. Naming of Factors.

Factorno.	Name of the factors	Item No.	Variables	Factor Loading
F1	Market Factors		Industry Attractiveness	.853
			Share Price	.736
			Firms Rank	.734
			Historical Data	.718
			Expected Dividends	.705
			Financial Statements	.704
F2	Hedging Factors		Portfolio Diversification	.886
			Loss Minimization	.708
			Recent Price Fluctuation	.526
F3	Economic Factors		Non-stock Attractiveness	-.844
			Capital Gain	.822
			Stock Index Status	.562

[From Personal Survey Result February, 2015]

## 5. Conclusion

The objective of the research was to find out the underlying factors those have a role to determine the best share in the market for the investors. There are various factors those influence investors from different aspects. Some of these factors greatly influence investors to put his or her

money into a particular security, while some factors are under consideration while moderately attracting investors. Some of these factors are inherent to a particular security, while imposed of the market risk, and some factors are used as some hedging techniques to reduce the risk level. At the time of survey, it was observed that investors in Khulna region are deprived of various facilities like limitations of margin loan, lack of information about company's performance, attending company's annual general meeting, etc. But this research work does not deal with investors' expectation. Rather it has tried to focus on the issues that the investors judge as important in the existing market scenario.

This research has identified several factors in the selection process of security to invest in, Not necessarily that all the variables will influence the person in the same way and same extent. But motivational factors such as industry attractiveness, historical data, expected dividends, financial indicators, loss minimization, chances of capital gain, etc. has a great influence over the investment decision making.

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