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Investors' Perception Toward Stock Market: An Empirical Survey on Investors of Bangladesh

Md. Ashraful Islam Khan

Professor

Department of Population Science and Human Resource Development University of Rajshahi E-mail: khan75ru@ru.ac.bd

and

Md. Abid Hassan Mojkury

Post Graduate Researcher
Department of Population Science and Human Resource Development
University of Rajshahi
E-mail: anikmojkury@gmail.com

Abstract

Stock market is one of the key components of financial system which enable firms to raise capital that contribute to the acceleration of economic development of any country. Stock market has become globally an attractive investment platform for the investors. However, volatility is a common phenomenon of the stock market that make investment difficult to the investors. A remarkable number of investors in the least developed and developing countries are not enough informative about the inherent features of the stock market and thus face difficulties for their secure investment. As a results market become more volatile and investment decision become more critical. This study is conducted to understand the investors' perceptions towards the stock market and their investment. A well-structured questionnaire is designed to collect investors opinions towards different stock market related mechanisms and investment policies.

We collect data from 200 investors purposively from different broker house of Dhaka and Rajshahi city of Bangladesh. Descriptive statistical analysis and chi-square test are being used to assess the impact of different socio-economic determinants to investors' opinions.

We believe that this work will contribute to improve the investors awareness regarding stock market and investment mechanism that boost up investment atmosphere in Bangladesh.

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1. Introduction

Stock market is one of the most important financial institutions that opens the door for firms to raise fand. It is one of the most important sources for companies to raise money as "share capital" from individuals and institutions. Share market allows businesses to be publicly traded, or raise additional financial capital for balancing, modernizing, reconstruction or expansion by selling shares of ownership of the corresponding companies in a public market. And hence some companies actively increase liquidity by trading in their own shares. A stock market provides a central location for investors to come together to buy and sell shares of different companies. These transactions take place for listed companies that have to make public announcements of profit, loss and revenue figures. The individuals who own shares of these companies are its shareholders and they are entitled to have a yearly dividend set by the company. A stable stock market indicates healthy trading activity and strength in the country's economy. Increasing tendency of stock index and/or prices of stocks and other securities are the indicator or predictor to the level of economic growth. The performance of the stock market can also be seen as an indicator of public sentiment, and conversely, the general perception of investors about the economy can also influence the stock market significantly. A fall in stock prices indicates doubt among investors and an expectation of subdued industrial activity in the near future. Any uncertainty in the country, like an impending change or deviation in the policy and strategy of the government, central bank and other statutory bodies, political instability, can also restrain prices in the stock market.

Investors are the heart of stock market. They feel more comfortable to invest in stock market than other investment sectors. They participate willingly to buy ownership of a company in the public market. It is well accepted that the stock market is an intermediary institution to adjust a gap between surplus units and deficit units of an economy. However, Bangladesh stock market is one of the largest stock markets in south Asia. It has two automated stock exchanges, the Dhaka stock exchange (DSE) and the Chittagong stock exchange (CSE). We condensed our study to Dhaka stock exchange investors.

2. Review of Literature

Stock market is one of key components for economic acceleration. Both the investors and the firms gain from stock market. However, if the markets simply rose steadily upward every day, investing would be without risk. But in reality, markets are volatile with ups and downs that makes investment difficult. It is now widely accepted that expected returns, volatility and broader financial risk measures all vary over time. There is also a pronounced clustering in return volatility with occasional extreme return outliers (especially on the negative side for equities) and an increase in return correlations during market downturns. These characteristics make volatility more complicated for academics, regulators, and practitioners to understand and monitor, let alone act on and react to, in order to assess market conditions in real time. Understanding volatility is important when developing an investment strategy that manages the inherent risk associated with investing (see, e.g, Khan, 2011). Research on time varying volatility using time series models have been active ever since Engle (1982) introduces the Autoregressive Conditional Heteroskedastic (ARCH) model. Model based research extended in various extensions on the basis of researchers' empirical evidence of nonlinearity, asymmetry and long memory properties in the volatility process (see., e.g., Andersen and Bollerslev 1998; Baillie et al. 1996; Breidt et al. 1998; Dacorogna et al. 2001; Ding et al. 1993; Robinson, 1991; Schwert and Stanbaugh, 1987; Lamoureux and Lastrapes, 1990; Choudhry et al. 1996; De Santis and Imrohoroglu,1997; Mala and Raddy, 2007; Surachai et al. 2007; Goudarzi and Ramanarayanan, 2010; Mazin et al. 2010; Khan 2011).

A significant number of researches are available in literature on Bangladesh stock market. Basher et al. (2007)investigated the issue of market efficiency and time-varying risk-return relationship by using ARMA(p,q), GARCH(1,1)-M models for DSE stock returns. Chowdhury(1994) observed stock return behavior by using EGARCH-M model considering GED distribution. Imam and Amin (2004) showed that the return volatility of Bangladesh capital market follows a GARCH (1,1) process. Other models-based researches on DSE includesChowdhury et al. (2006),Molla (2009), Hossain and Uddin, (2011),Rayhan et al. (2011),Islam et al. (2012),Alam et al. (2013), Muktadir-al-Mukit (2013) and Islam et al. (2014).

Besides volatility, investors face many problems during investment due to their lack of knowledge, experience and awareness. Scholars investigate such phenomenon for several stock markets and a lot of information is now available in literature.

Sultana et. al., (2016) made a response survey on investing the present stock market crisis and recovery strategies in Bangladesh in Chittagong. They conclude that the central bank's "market-friendly" monetary policy would boost the investors' confidence. Wahab and Faruq, (2012)made a comprehensive study on analyzed the overall developments of the stock market of Bangladesh. Ghosh and Ghosh (2015)empirically concluded that stock market perfection in Bangladesh is quite impossible without enhancing awareness among retail investors and ensuring their rational behavior in stock trading.

Based on the above review, we set our main objective to assess investors perception towards DSE. Along with Ghosh and Ghosh (2015), we also believe that without sufficient awareness of investors regarding stock market business, Bangladeshi stock market would not achieve its grand success. We hope that this study will help the investors for risk management and the policy makers to uplift the reputation of Bangladeshi stock market business.

3. Data and Details

We collected 200 data from different broker house in Dhaka and Rajshahi purposively. As mentioned earlier, in Bangladesh, we have two automated stock exchange the Dhaka stock exchange (DSE) and the Chittagong stock exchange (CSE). Since our focus was on DSE, therefore, we ignored Chittagong city from out study. From the rest of the cities, we considered Dhaka as it is the capital of Bangladesh and the center of all economic activities, and economically expensive city for living. On the other hand, Rajshahi city is comparatively less crowded and less expensive city for living. Life style is so easy and peaceful in Rajshahi city. These factors made our choice to select Dhaka and Rajshahi city for conducting our survey.

A closed ended well-structured questionnaire is designed to cover the study objectives. The investors are being asked directly for different investment-oriented questions along with their socio-economics and educational status. A 5-point Likert scale (ranging from 1= highlydissatisfied to 5= Highly satisfied) is used to measure investors' satisfaction level. The descriptive statistics and chi-square test are used to analyse data. The analysis exhibits following outcomes.

Table 1: Investors background characteristics

	Frequency		Percent		
	Public job	Public job 73			36.5
	Private job		35 39		17.5
Occupation	Business				19.5
	Student		34		17.0
	Others		19		9.5
	<25	10			5.0
	25-30	33	40.46	11.29	16.5
	31-35	25			12.5
	36-40	42	4	1	21.0
A	41-45	34			17.0
Age group	46-50 21		e	· ·	10.5
	51-55	11	Mean Age	Std. Dev.	5.5
	56-60	10		Std	5.0
	60+	14	~		7.0
Fail Ta	Nuclear	Nuclear 112			56.0
Family Type	Extended	88		44.0	
Education	Secondary and bellow		43		21.5
Education	Graduate and post Graduate	157		78.5	

	Union Porishod	4	2.0
Residence	Municipalities	11	5.5
	City Corporation	184	92.0

We observed majority (36.5%) of the investors having public job followed by business, private job, students and others (9.5%) activities including retired persons. 21% investors found in the age group 36 to 40 years followed by 41 to 45. Young aged peoples are also becoming investors. We found 5% investors in bellow 25 year of age and 16.5% in 25 to 30 age group. The average age of the respondents observed 40.46 years with std. deviation 11.29. Greater part (56.0%) of the investors is from nuclear family and 78.5% investors are educated. They have graduate and post graduate degree. 92.0% of them stay in city corporation areas.

4. Perception towards Stock Market

Empirical studies advocated that investors education, income, age, gender, financial learning, risk management have significant interaction with stock market participation (see. e.g., Christiansen, et al., 2008; Cole et al., 2012; Grindlatt, et al., 2011; Guiso and Jappelli 2005; Hong et al., 2004). As mentioned earlier, a lot of model-based researches have done on DSE for volatility forecasting and risk management. Few numbers of empirical studies are also conducted to observe Bangladesh stock market crisis. Our main focus is on investors perception towards stock market and goal is to know how much our investors are knowledgeable regarding stock market. Table 2 bellow focus on investors knowledge regarding share market and Figure 1 clarifies the findings.

Table 2: Investors knowledge regarding stock market

Knowledge regarding	Before	After	Significance
Primary and Secondary Share	Investment	Investment	Significance
Dhaka	66.82 %	34.18 %	$x^2 = 0.62$
Rajshahi	60.33 %	39.67 %	p = 0.43
Total	62.50 %	37.50 %	

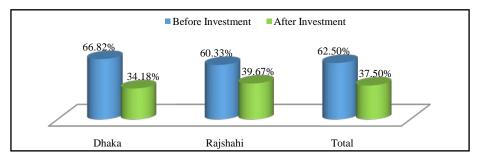


Figure 1: Knowledge about stock market

We found 62.5% investors overall having knowledge on stock market before investment but remarkable fact is 37.5% investors have no knowledge about the stock market but they

become investor, they even know nothing about primary and secondary share. The investors of Dhaka city are more knowledgeable compare to Rajshahi but the margin is not so big. No significant regional effect (p=0.43) observed for knowledge regarding stock market. This lack of knowledge of the investors could be a reason for the Bangladeshi stock market crisis.

Table 3 bellow shows the investors opinion to become interested for investment and their suggestions to overcome the stock market crisis. Perception

Table 3: Investors' motivation and perception regarding stock market

Attributes		TD . 4 . 1		Area	Area		
		Total -	Dhaka	Rajshahi	Significance		
Motivation to be investor	TV News Friends	5.0 % 57.0 %	6.3 % 68.0 %	4.1 % 49.6 %	$x^2 = 16.82$		
	Newspapers Self and Other	18.0 % 10.0 %	16.5% 8.9 %	19.6 % 10.7%			
otiva	TV News and friends TV News and Newspapers	1.5 % 2.5 %		2.5 % 4.1 %	p = 0.01		
Σ	Friends and Newspapers	6.0 %		9.9 %			
stock	Direct Govt. surveillance No surveillance Generate appropriate policies	41.0 % 10.5 % 3.0 %	55.7 % 7.6 % 6.3 %	31.4% 12.4 % 0.8 %			
How to improve stock market Atmosphere	Enhance investors awareness Surveillance and awareness Surveillance and policies	24.0 % 8.5 % 2.5 %	30.4 %	19.8% 14.0 % 4.1 %	$x^2 = 43.04$ $p = 0.00$		
How to marke	Surveillance, policies and awareness Policies and awareness	7.0 % 3.5%	J	11.6 % 5.8 %			
ble	Govt. Investors	37.0 % 3.0 %	38.0 % 5.1 %	36.4 % 1.7 %			
Who is responsible for good governance	Directors board Other	40.5 % 2.5 %	55.6 % 1.3 %	30.6 % 3.3 %	$x^2 = 32.33$		
	Govt and investors Govt, investors and directors board	1.5 % 1.5 %		2.5 % 2.5 %	p = 0.00		
	Govt and directors board Investors and directors board	0.5 % 13.5 %		0.8 % 22.3 %			
Satisfactio n level	Highly dissatisfied Dissatisfied Not bad Satisfied	36.0 % 42.0 % 20.0 % 2.0 %	24.1 % 41.8 % 31.6 % 2.5 %	43.8 % 42.1 % 12.4 % 1.7 %	$x^2 = 32.33$ $p = 0.00$		
Sa	Highly satisfied	2.0 70	2.3 70	1.7 70			

From the above Table, we observed that most of the investors motivated from their friends about stock market followed by Newspapers and self-motivation. The picture is almost similar for overall findings and area wise findings. However, we got a highly significant (p = 0.01) area effect on investors motivation to stock market. Majority of the investors think that government can easily handle and reduce the stock market crisis by their direct surveillance. The overall percentage is 41.0, for Dhaka it is 55.7 % and 31.4 % for Rajshahi area. A notable

number of investors think that the stock market crisis can be reduce to aware investors. The percentage of respondents are 24.0 overall, 30.4 for Dhaka and 19.8 for Rajshahi area. We had a highly significant (p=0.00) area effect on their opinion on reducing market crisis. When we asked them about the responsibility for good governance of the stock market, they mentioned that government and the directors board are responsible for good governance. 40.5% investor overall believed that the directors board are responsible for good governance. This percentage increased to 55.6% for Dhaka area's respondents but majority of Rajshahi area's investors (36.4%) believed that government is highly responsible for the good governance of the stock market. Here we also observed a highly significant (p=0.00) regional effect.

When we focused on investors satisfaction level regarding the current governance system and atmosphere of the stock market, we found overall 36.0% investors highly dissatisfied and 42.0% dissatisfied on the current market situation. Degree of dissatisfaction is much higher for Rajshahi area than Dhaka area. A highly significant (p = 0.00) area effect observed for the satisfaction level of our investors.

As mentioned above that the investors education, income, age, financial learning, risk management have significant interaction with stock market participation. We would know examine the determinants responsible for the investors' knowledge, awareness and perception. The table 4 bellow presenting the results.

The above Table 4 exhibits that the investors education, occupation and family type are highly significantly associated with their knowledge regarding the stock market. The factors are regionally significant as well accept occupation for Dhaka. Since Dhaka, the capital of Bangladesh, is the one of the expensive cities compared to Rajshahi, therefore, occupation may not influence more one investors' knowledge. Investors are all comparatively more informative there compare to the other cities.

Spotlighting on investors motivation, we found investors age, education, occupation and income play highly significant role for their motivation. Education plays significant role for investors' motivation of Dhaka while age and income play significant role for investors' motivation of Rajshahi.

Table 4: Determinants of investors' knowledge, awareness and perception

Attributes		Total	Area		
			Dhaka	Rajshahi	
Knowledge regarding stock market	Age	$x^2 = 4.04$	$x^2 = 8.62$	$x^2 = 3.28$	
		p = 0.85	p = 0.20	p = 0.92	
	Education	$x^2 = 9.96$	$x^2 = 5.16$	$x^2 = 6.44$	
		p = 0.00	p = 0.02	p = 0.01	
	Occupation	$x^2 = 18.75$	$x^2 = 5.91$	$x^2 = 14.30$	
		p = 0.00	p = 0.21	p = 0.01	

		2	2	2
	Income	$x^2 = 4.13$	$x^2 = 7.78$	$x^2 = 12.77$
	•	$p = 0.85$ $x^2 = 5.54$	$p = 0.35 x^2 = 3.10$	$p = 0.12 x^2 = 2.69$
	Family type			
		p = 0.02 $x^2 = 5.51$	p = 0.08 $x^2 = 3.58$	p = 0.10 $x^2 = 3.59$
	Residential area			
		$p = 0.14$ $x^2 = 72.27$	$p = 0.17$ $x^2 = 14.95$	p = 0.31 $x^2 = 72.89$
	Age			
0.		p = 0.01 $x^2 = 13.64$	p = 0.67 $x^2 = 8.59$	p = 0.01 $x^2 = 9.99$
est	Education			
iiv		$p = 0.03$ $x^2 = 37.52$	p = 0.04 $x^2 = 14.89$	$p = 0.13$ $x^2 = 32.89$
þe	Occupation			
\$	T	$p = 0.04$ $x^2 = 93.98$	$p = 0.28$ $x^2 = 18.11$	$p = 0.11 x^2 = 87.50$
Motivation to be investor	Income	p = 0.00	p = 0.64	
vati	E	p = 0.00 $x^2 = 7.19$	$p = 0.64 x^2 = 12.29$	p = 0.00 $x^2 = 10.45$
Oti,	Family type	$p = 0.30$ $x^2 = 14.77$	$p = 0.01$ $x^2 = 2.47$	p = 0.11
×	Residential area			$x^2 = 13.20$
	Residential alea	$p = 0.68$ $x^2 = 91.40$	$p = 0.87$ $x^2 = 32.17$	$p = 0.78$ $x^2 = 83.38$
	Age			
ket		p = 0.00 $x^2 = 7.68$	$p = 0.02$ $x^2 = 15.82$	p = 0.01 $x^2 = 3.82$
lar	Education			
k		$p = 0.36$ $x^2 = 56.42$	p = 0.00 $x^2 = 24.29$	$p = 0.80$ $x^2 = 34.26$
mprove stock Atmosphere	Occupation			
e si		$p = 0.00$ $x^2 = 120.10$	$p = 0.02$ $x^2 = 43.38$	$p = 0.19$ $x^2 = 76.67$
nos	Income			
np Atı		$p = 0.00$ $x^2 = 13.14$	$p = 0.00 x^2 = 16.66$	p = .04 $x^2 = 2.91$
How to improve stock market Atmosphere	Family type			
w t		$p = 0.07$ $x^2 = 28.71$	p = 0.00 $x^2 = 6.11$	$p = 0.89$ $x^2 = 26.34$
H ₀	Residential area			
		$p = 0.12$ $x^2 = 105.10$	$p = 0.41$ $x^2 = 22.20$	$p = 0.19$ $x^2 = 113.80$
	Age			
<u> </u>	770	$p = 0.00$ $x^2 = 5.73$	$p = 0.22$ $x^2 = 0.98$	p = 0.00 $x^2 = 6.04$
Who is responsible for good governance	Education			
ible	Occupation	$p = 0.57$ $x^2 = 44.75$	$p = 0.81 x^2 = 12.80$	$p = 0.54$ $x^2 = 34.88$
Suc	Occupation	p = 0.02 $x^2 = 63.10$	$p = 0.38$ $x^2 = 16.89$	$p = 0.17$ $x^2 = 59.04$
Spe	Income	$x^2 = 63.10$		
s re	Hiconic	p = 0.24	$p = 0.72$ $x^2 = 3.63$	$p = 0.37$ $x^2 = 8.20$
ho is responsible f good governance	Family type	$x^2 = 6.41$		
K		p = 0.49	p = 0.30	p = 0.32
	Residential area	$x^2 = 13.61$	$x^2 = 7.59$	$x^2 = 9.28$
		$p = 0.89$ $x^2 = 28.15$	$p = 0.27$ $x^2 = 16.75$	$p = 0.99$ $x^2 = 23.65$
	Age			
		p = 0.25 $x^2 = 11.60$	p = 0.54 $x^2 = 5.31$	p = 0.48 $x^2 = 13.08$
Satisfaction level	Education		W 0.01	
	Occupation	p = 0.01 $x^2 = 11.34$	$p = 0.15$ $x^2 = 13.90$	p = 0.00 $x^2 = 4.03$
	Income	$p = 0.50$ $x^2 = 45.12$	$p = 0.31$ $x^2 = 29.15$	$p = 0.98$ $x^2 = 29.01$
atis	Family type	$p = 0.01$ $x^2 = 11.20$	p = 0.11 $x^2 = 8.89$	$p = 0.22 x^2 = 19.00$
Š				
	Residential area	p = 0.01 $x^2 = 14.43$	p = 0.03 $x^2 = 5.76$	p = 0.00 $x^2 = 24.05$
		p = 0.11	p = 0.45	p = 0.00
•		-		_

When the question of responsibility for improving the stock market's atmosphere came out, investors' age, occupation and family types significantly influenced them for making comment. For investors of Dhaka, education played an important role along with age, occupation and family types while significant role observed for investors from Rajshahi accept their age factor.

Education, income, family types and residential area played very significant role for investors satisfaction on the stock market atmosphere. Regionally we observed only family type's

significant role for investors of Dhaka while for Rajshahi education, family type and residential area played significant role for their satisfaction.

5Conclusion

Stock market is a dynamic platform for economic development. Recent literatures advocated that the development of stock market and economic growth are positively correlated (see, e.g., Atje and Jovanovic, 1993; Levine and Zervos, 1996; 1998; Minier, 2003; Adjasi and Biekpe, 2006; Masoud and Glenn Hardaker, 2012; Sehrawat and Giri, 2015). It provides market liquidity that helps investors for trading financial assets in a less risky manner while allowing companies to enjoy easy access to capital (see, Ho and NjindanIyke, 2017). Rapid crash of share market flashed violent protests from the investors. We observed such rapid crash in 2011 in Bangladesh. Still the market facing that effect. Market microstructure noise, bid-ask bounce and volatility clustering (Rafique and Rehman, 2011) always create big troubles for the investors. Beside that the noise trading is also create diverse environment for investment. Therefore, adequate knowledge, experience and awareness are very crucial for secure investment. Our study found a remarkable number of investors without having minimum knowledge regarding stock market and investment. We observed majority investors dissatisfied regarding the market atmosphere. The lack of their knowledge, awareness and experience might produce dissatisfactory profit. Many of investors became loser and the market index running with a flat trend or going down continuously.

We urge to financial researcher to conduct more productive research on Bangladeshi stock market as well as markets of developing countries to unveil the hidden barriers and limitations. We believe the research finding will boost up investors confidence and as a result the development of stock markets will be accelerate. Obviously, the development speed of the stock market will speed up the momentum of the economic development.

References

- Adjasi, C. K. D., Biekpe, N. B. (2006). Stock market development and economic growth: The case of selected African countries. *African Development Review* 18(1): 144-161.
- Alam, M. Z., Siddikee, M. N., & Masukujjaman, M. (2013). Forecasting Volatility of Stock Indices with ARCH Model. *International Journal of Financial Research*, 4(2), p126.
- Andersen, T.G., Bollerslev, T., (1998). Answering the skeptic: yes, standard volatility models do provide accurate forecasts. *International Economic Review*, 39, 885-905.
- Atje, R. and Jovanovic, B. (1993). Stock market and development. *European Economic Review*. 37: 623-640.

- Baillie, R.T., Chung, C., Tieslau, M.A., (1996), Analysing inflation by the fractionally integrated ARFIMA-GARCH model. *Journal of Applied Econometrics*. 11, 23-40.
- Breidt, F. J., Crato, N., Lima, P. de, (1998). The Detection and Estimation of Long Memory in Stochastic Volatility, *Journal of Econometrics*, 83, 325-348.
- Chowdhury, A. R. (1994). Statistical properties of daily returns from the Dhaka Stock Exchange. *The Bangladesh Development Studies*, 61-76.
- Chowdhury, S., Mollik, A. T., & Akhter, M. S. (2006). Does Predicted Macroeconomic Volatility Influence Stock Market Volatility? Evidence from the Bangladesh Capital Market (Doctoral dissertation, University of South Australia).
- Christiansen, C., Joensen, J. and Rangvid, J. (2008). Are economists more likely to hold stocks? Review of Finance, 12(3), 465-496.
- Cole, S., Paulson, A.L. and Shastry, G. (2012). Smart Money: The Effect of Education on Financial Behavior, Harvard Business School Publication Corp., Boston, MA. Available at :http://academics.wellesley.edu/Economics/gshastry/cps-smart money-2012.pdf(accessed21 May 2014).
- Dacorogna, M.M., R. Gencay, U.A. Müller, O.V. Pictet and R.B. Olsen, (2001). *An Introduction to High-Frequency Finance*. San Diego: Academic Press.
- De Santis, G., Imrohoroglu, S., (1997). Stock returns and volatility in emerging financial markets. *Journal of International Money and Finance*.16, 561-579.
- Ding, Z.C., Granger, W.J., and Engle, R.F., (1993). A long memory property of stock market returns and a new model. *Journal of Empirical Finance*, 1, 83-106.
- French, K. R., Schwert, G., & Stambaugh, R. F. (1987). Expected Stock Returns and Volatility. *Journal of Financial Economics*. 19 (1), 3-29.
- Ghosh, P. K., & Ghosh, S. K. (2015). Retail Investors' Responsibilities in Stock Market Imperfection in Bangladesh: An Empirical Study. *Asian Journal of Finance & Accounting*. 7(2), 78-92.
- Ghosh, P.K. and Ghosh, S.K., (2015), Retail Investors' Responsibilities in Stock Market Imperfection in Bangladesh: An Empirical Study, Asian Journal of Finance & Accounting. Vol 7(2)
- Goudarzi, H. and C. S. Ramanarayanan. 2010. Modeling and estimation of volatility in the Indian stock market. *International Journal of Business and Management*. 5(2): 85-98.
- Grinblatt, M., Keloharju, M. and Linnainmaa, J. (2011). IQ and stock market participation. The Journal of Finance. 66(6), 2121-2164.
- Guiso, L. and Jappelli, T. (2006). Information acquisition and portfolio performance, Discussion Paper No. 5901, CEPR, Vol. 235. Available at: https://ssrn.com/abstract=954121
- Ho, S.-Y. and NjindanIyke, B. (2017). Determinants of stock market development: a review of the literature. *Studies in Economics and Finance*. 34 (1), 143-164.
- Hong, H., Kubik, J. and Stein, J.C. (2004), "Social interaction and stock market participation", The Journal of Finance, Vol. LIX No. 1, pp. 137-163.
- Imam, M. O. and Amin, A. S. M. M. (2004). Volatility in the Stock Return: Evidence from Dhaka Stock Exchange", Journal of The Institute of Bankers Bangladesh, Vol. 51, No. 1, pp. 1-28.
- Islam, M. A., Islam, M. R., & Siddiqui, M. H. (2014). Stock Market Volatility: Comparison Between Dhaka Stock Exchange and Chittagong Stock Exchange. *International Journal of Economics, Finance and Management Sciences*, 2(1), 43.

- Islam, M., Ali, L. E., &Afroz, N. (2012). Forecasting volatility of Dhaka Stock Exchange: Linear vs non-linear models. *International Journal of Science and Engineering*, 3(2), 4-8.
- Khan, M.A.I. (2011), "Financial Volatility Forecasting by Nonlinear Support Vector MachineHeterogeneous Autoregressive Model: Evidence from Nikkei 225 Stock Index", International Journal of Economics and Finance, Vol.3(4), 138.
- Lamoureux, C. G., & Lastrapes, W. D. (1990). Persistence in variance, structural change, and the GARCH model. *Journal of Business & Economic Statistics*, 8(2), 225-234.
- Levine, R., Zervos S. (1996). Stock market development and long-run growth. *World Bank Economic Review* 10 (2): 323-340.
- Levine, R., Zervos S. (1998). Stock markets, banks, and economic growth. *American Economic Review* 88(3): 537–58.
- M. S. Hossain, and M.G.S. Uddin, Efficiency Analysis and Volatility Effect of Bangladesh Stock Market, Working Paper. 2011
- Mala, R., & Reddy, M. (2007). Measuring stock market volatility in an emerging economy. International Research Journal of Finance and Economics, 8, 126–133.
- Masoud, N., Hardaker, G. (2012). The impact of financial development on economic growth. *Studies in Economics and Finance* 29(3): 148 173.
- Mazin, A. V., Mazina, O. M., Bugreev, D. V., and Rossi, M. J. (2010) *DNA Repair (Amst.)*, 9, 286–302.
- Mobarek, A., &Keasey, K. (2000, May). Weak-form market efficiency of an emerging Market: Evidence from Dhaka Stock Market of Bangladesh. In *ENBS Conference held on Oslo* (pp. 1-30).
- Mollah, S., & Mobarek, A. (2009). Market volatility across countries-evidence from international markets. *Studies in Economics and Finance*, 26(4), 257-274.
- Mostafa, M. S. (2016). The Impact of Foreign Direct Investment Inflows on the Economic Growth of Bangladesh. The Roles of Infrastructural Facilities.
- Muktadir-al-Mukit, D. (2013). Effects of Interest Rate and Exchange Rate on Volatility of Market Index at Dhaka Stock Exchange. *Journal of Business and Technology* (*Dhaka*), 7(2), 1-18.
- Rafique, A., & Rehman, K. U. (2011). Comparing the Volatility Clustering of Different Frequencies of Stock Returns in an Emerging Market: A Case Study of Pakistan. *Journal of Economics & Behavioral Studies*, 3(6).
- Raquib, M., & Alom, K. (2015). Are the Emerging Capital Markets Weak Form Efficient? Evidence from the Model of the Dhaka Stock Exchange.
- Rayhan, M. A., Sarker, S. A. M. E., &Sayem, S. M. (2011). The Volatility of Dhaka Stock Exchange (DSE) Returns: Evidence and Implications. *ASA University Review*, 5(2).
- Robinson, P.M., (1991), "Testing for Strong Serial Correlation and Dynamic Conditional Heteroskedasticity in Multiple Regressions," *Journal of Econometrics*, 47, 67-84.
- Sarwar, M. S., & Darwin, C. (2016). Investors Attitude towards the Stock Market: A Study in Dhaka City, Bangladesh. *Int. J. of Multidisciplinary and Current research*, 4.
- Sehrawat, M., Giri, A. K. (2015). Financial development and economic growth: empirical evidence from India. *Studies in Economics and Finance* 32(3): 340 356.

- Sultana, I., Hossain, M. E., & Uddin, M. (2016). INVESTIGATING THE PRESENT CAPITAL MARKET CRISIS AND RECOVERY STRATEGIES IN BANGLADESH. Asian Journal of Management Sciences & Education Vol. 5, 1.
- Wahab, A and Faruq, O., (2012), 'A Comprehensive Study on Capital Market Developments in Bangladesh', Working Paper Series: WP1203, Research Department, Bangladesh Bank

