



FIRM-SPECIFIC FACTORS AND STOCK RETURNS: EVIDENCE FROM SELECTED PRIVATE COMMERCIAL BANKS LISTED ON THE DHAKA STOCK EXCHANGE



Jannatul Ferdaous¹

Senjuti Barua²⁺

^{1,2}Department of Finance and Banking, Bangladesh University of Professionals, Bangladesh.

¹Email: jannatul.ferdaous@bup.edu.bd Tel: +8801769021740

²Email: senjuti.barua@bup.edu.bd Tel: +8801769028330



(+ Corresponding author)

ABSTRACT

Article History

Received: 7 September 2020

Revised: 25 September 2020

Accepted: 21 October 2020

Published: 12 November 2020

Keywords

Private commercial banks

Dhaka Stock Exchange

Fixed-effect

Firm beta

Firm size

Volume of shares traded

Turnover by value.

JEL Classification:

C89, C10, G10, G21.

The purpose of this study is to examine how different firm-specific factors influence the stock returns of 29 private commercial banks (PCBs) listed on the Dhaka Stock Exchange (DSE) in Bangladesh. The research applied time series, cross-sectional and panel data models focusing on external and internal factors influencing the stock return of developed stock markets. Very little research has been conducted on how firm-specific factors influence the stock returns of developing or emerging stock markets. Considering the current scenario of the banking industry in Bangladesh, some major firm-specific factors must be taken into consideration to determine how these factors influence the stock returns of selected banks listed on DSE, while utilizing the panel data analysis to get more significant results. The study incorporates balanced panel data (3,712 observations) for the period 2009-2019 to investigate how firm beta (volatility), earnings per share (EPS), market to book value ratio (MTBV), firm size, volume of shares traded, and turnover by value influence the stock returns. The study incorporates the Hausman specification test and the Breusch-Pagan Lagrange Multiplier (LM) test, suggesting that fixed effect regression is more applicable than random effect regression. The findings show that the negative influence of firm beta and size is significant, whereas the positive influence of turnover by value and volume of shares traded on the stock returns is significant. The empirical analysis either supports or contradicts existing literature.

Contribution/Originality: This study is one of very few that has investigated and contributed to determine how firm-specific factors influence the stock returns of selected private commercial banks, which are increasingly affected during a stock price decline in the DSE Index, while incorporating panel data analysis.

1. INTRODUCTION

Compared to the structure and characteristics of developed stock markets, the stock market in Bangladesh is a small, less accessible and under-researched market, which has mostly developed since the 1980s. Taking this into consideration, investors be more interested in investing in an emerging market where they could determine whether the stock returns respond in a similar or different manner. To determine the variation in the markets, the effect of firm-specific factors has to be examined. Different factors influence stock returns both positively and negatively. To investigate the relationships among different factors and stock returns, many studies have been conducted in developed and developing countries. In most of these publications, either time series or cross-sectional estimations have been applied to analyze different significant relationships. For instance, one study examined the

'size effect' that exists in the DSE considering return and size-related risk (Shimon, 2008). Another study on the DSE applied Fama–MacBeth methodology to analyze how some factors influence the stock returns (Chowdhury & Sharmin, 2013). In line with this research, another study on the DSE also explained how the size and value influence the stock returns (Hasan, Alam, Amin, & Rahaman, 2015). The literature shows how specific time-series and cross-sectional estimations were applied in most of the earlier studies to show the effect of different factors influencing the stock returns, but the application of panel data analysis is hardly found in the literature.

2. LITERATURE REVIEW

One of the pioneering studies on the New York Stock Exchange (NYSE) examined whether smaller firms acquire greater returns compared to the returns of larger firms, explaining the 'size effect' (Banz, 1981). A study on Japanese stock returns investigated the differences in returns influenced by earnings yield, size, and book to market ratio from 1971 to 1988. This study used a univariate analysis and seemingly unrelated regressions (SUR), and explains that book to market ratio is positively related to expected returns (Chan, Hamao, & Lakonishok, 1991). Using an unobserved component panel data analysis, another study examined whether earnings surprises and volume are positively related (Maddala & Nimalendran, 1995).

A study that focused on the UK expected returns provided evidence that average returns are positively related to beta and book-to-market ratio, respectively (Xu & Strong, 1997). Another study examined five emerging markets (Malaysia, Korea, Hong Kong, Thailand, and Taiwan) to explore how expected returns are influenced by market beta, book-to-market ratio, and size. It revealed that market beta is weakly related to the average stock return of all markets examined, whereas size is related to returns of all of these markets in a significant manner, except in Taiwan. On the other hand, a study using data from Singapore and Malaysia revealed that beta is positively related to stock returns during the months that have positive excess returns in the market, and negatively related during the months with negative excess returns (Sie, Lee, & McInish, 2002). Further research on the Malaysian stock exchange found that book to market ratio is a better determinant of stock returns than earning yield (Kheradyar, Ibrahim, & Nor, 2011).

Research on the Nigerian stock market investigated the determinants of stock returns using a panel approach to examine the panel dataset of 70 listed firms from 2000 to 2009. This approach included the Hausman test, which focused on the variation between fixed effect and random effect estimators. The study revealed that the size of a firm is positively related to stock return (Olowoniyi & Ojenike, 2012). Another study on non-financial firms listed on the Pakistani stock market revealed that the size of firms is positively related to stock returns, whereas dividend yield is negatively related to returns (Arslan, Zaman, & Phil, 2014).

The impact of both internal (MTBV, firm size, P/E ratio, management quality, firm age) and external (interest rate, inflation, and money supply) factors on stock returns of large size firms in Nigeria was investigated using panel data analysis. The study examined the insignificant negative effects of management quality and MBV ratio and indicated that firm size and firm age were positively related to stock returns which is significant (Akwé & Garba, 2019).

Most of the researches conducted on stock returns of developed stock markets focus on finding out its relationship with macroeconomic factors such as GDP, foreign exchange rate, interest rate, inflation, money supply etc. using various time series, cross-sectional and/or panel data models. Some major firm-specific factors must be incorporated to analyze how these factors influence the stock returns of the selected banks on the Dhaka Stock Exchange. The mostly affected industry during any major stock price fluctuations is the industry comprising the private commercial banks (PCBs) of Bangladesh. The literature also shows how specific time-series and cross-sectional estimations are applied in most of the earlier studies. For this reason, this study aims to determine any significant positive or negative influences by firm-specific factors on the stock returns of the selected banks while utilizing the panel data analysis to get more significant results.

3. CONCEPTUAL FRAMEWORK

Under-researched and emerging stock markets tend to attract special attention from academicians and practitioners. Compared to developed markets' stock returns, the returns of less accessible and developing or emerging stock markets are supposed to have different and unique characteristics, such as a lower correlation with the market returns from developed markets, higher volatility or average returns, etc. Thus, it has become a new field of interest for researchers to identify the specific determinants of the returns of emerging stock markets. These determinants can come from external (macroeconomic) or internal (firm-specific) sources of a particular company listed on the stock market.

In this research, the major focus is on how firm-specific factors influence the stock returns of 29 PCBs listed on the DSE. Six firm-specific factors were identified as explanatory variables to determine to what degree these factors are positively or negatively associated with stock returns. These factors are firm beta, earnings per share (EPS), market to book value (MTBV), firm size, volume of shares traded (VO), and turnover by value (VA). The influences of different factors on stock returns may be related to economic, sociological or political variations, which are equally valid for all securities, or may be diversifiable if they are unusual to specific firms or industries.

The capital asset pricing model (CAPM) considers beta as a single indicator of risk that represents systematic risk. While previous studies support the CAPM, studies conducted later revealed other variables that could describe expected returns from the stock market (Drew & Veeraraghavan, 2003). Beta indicates the volatility of a security or portfolio while being compared to the overall market. It is calculated by using the slope that exists between the excess return from a particular stock's total return index and the excess return from its value weighted index. *EPS* is defined as the earnings per outstanding share of a firm's stock (Masum, 2014). *MTBV* refers to the common equity's market value per share divided by the value of the common equity from the balance sheet of the company per share on a specific date (Kheradyar et al., 2011). Firm size refers to the multiplication of the market price per share and the total number of a firm's outstanding shares (Tahir, Sabir, Alam, & Ismail, 2013). Stock volume refers to the aggregate number of shares being traded over a specific time period (2019). *VO* is the trading volume over a given time period, which is also related to the number of outstanding shares (Maddala & Nimalendran, 1995). *VA* is defined as a measure of stock liquidity indicating the volume of shares transacted over a given time period represented in the form of that stock's home currency or value.

Based on the knowledge from literature, the aforementioned explanatory variables (firm beta, EPS, MTBV, firm size, VO, and VA) and the dependent variable (stock return), the following conceptual framework has been developed (see Figure 1) to show the six hypotheses based on six firm-specific factors that influence the stock returns of selected PCBs listed on the Dhaka Stock Exchange.

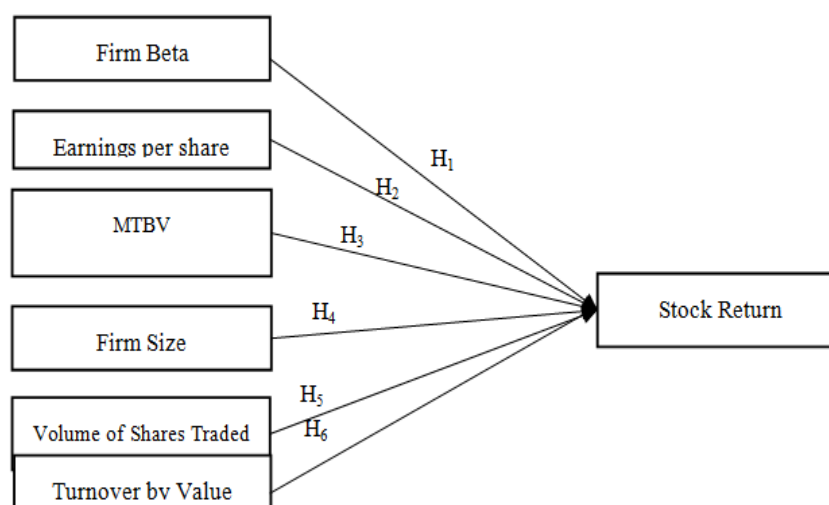


Figure 1. Conceptual framework of the study.

3.1. Hypotheses Development

Considering the literature and the conceptual framework, the following hypotheses have been developed to investigate how the aforementioned explanatory variables influence the stock returns of selected PCBs listed on the DSE.

H₁: Firm beta has a significant impact on stock return.

H₂: Earnings per share (EPS) has a significant impact on stock return.

H₃: Market to book value (MTBV) has significant impact on stock return.

H₄: Firm size has a significant impact on stock return.

H₅: Volume of shares traded has a significant impact on stock return.

H₆: Turnover by value has a significant impact on stock return.

4. RESEARCH METHODOLOGY

An ex post facto research design was followed while conducting this study. The justification behind using this design is that the analysis was based on panel data which included multiple indicators of 29 PCBs from 2009 to 2019. The analysis was conducted following secondary data that were collected from Thomson Reuters DataStream and analyzed using STATA. The selected PCBs are listed below in Table 1.

Table 1. Selected PCBs Listed on the DSE.

Serial No.	Name of the PCB	Serial No.	Name of the PCB	Serial No.	Name of the PCB
1.	ABBANK	11.	ICBIBANK	21.	PUBALIBANK
2.	ALARABANK	12.	IFIC	22.	RUPALIBANK
3.	BANKASIA	13.	ISLAMIBANK	23.	SHAHJABANK
4.	BRACBANK	14.	JAMUNABANK	24.	SIBL
5.	CITY BANK	15.	MERCANBANK	25.	SOUTHEASTB
6.	DHAKABANK	16.	MTB	26.	STANDBANKL
7.	DUTCHBANGL	17.	NBL	27.	TRUSTBANK
8.	EBL	18.	NCCBANK	28.	UCB
9.	EXIMBANK	19.	ONEBANKLTD	29.	UTTARABANK
10.	FIRSTSBANK	20.	PRIMEBANK		

Source: Authors' selected PCBs listed on the DSE.

Table 2. Measurements of Variables.

Variable	Measurement	Expected Sign	Reference
LN SR	Stock return (SR) measured as the natural logarithm of total return index in a specific month divided by total return index of a previous month	Not applicable	
Beta	Slope that exists between the excess return from a particular stock's total return index and the excess return from its value weighted index	+/-	Chambers, Sezgin, and Karaaslan (2013); Pan (2012); Pandey (2001); Mollah and Mobarek (2005)
EPS	Amount of earnings per each outstanding share	+	Idris and Bala (2015); Safdar (2013)
MTBV	Market value of the common equity per share divided by the value of the common equity from the balance sheet	+	Pan (2012); Safdar (2013)
MV	Multiplication of the market price per share and the total number of a firm's outstanding shares	+/-	Safdar (2013); Pan (2012); Pandey (2001); Idris and Bala (2015)
VO	Total number of shares being traded over a specific time period	+	Pan (2012)
VA	Turnover by value over a given period in BDT	N/A	Nguyen & Lo (2013)

Note: Monthly data has been collected for all the above-mentioned variables.

Considering the current scenario of the industry consisting of banks of Bangladesh, this study identifies the indicators of stock returns of this specific industry. The percentage of non-performing loans in this industry is attracting the interests of both academicians and practitioners. Both internal and external factors influence the stock returns of these banks, which are also attracting the interest of researchers.

The sample banks for the study were selected based on specific features. These banks' data on the selected explanatory variables was mostly available for the period between 2009 and 2019. Also, all these banks' financial statements used the local currency (BDT) and are listed on the DSE. To attain the objectives of the research, a panel regression analysis was applied. Post-residual diagnostic tests, such as heteroskedasticity and multicollinearity, were conducted to investigate the validity of the model assumptions.

Table 2 describes the dependent variable and six independent variables used in the analysis while explaining their measurements and references in brief.

4.1. Panel Regression Model Development

While using panel data for analysis, usually three estimations, such as fixed effects (FE), random effects, and pooled ordinary least square (OLS), are applied with multiple assumptions. This study has used the Hausman specification test and the Breusch–Pagan Lagrange Multiplier (LM) test to select different assumptions of these estimates. The results of the tests suggest using the fixed effect model. Thus, the regression model considering fixed effects estimation to explain the impact of six firm-specific factors on the stock returns is specified as follows:

$$\text{LN SR} = \beta_0 + \beta_1 * \text{Beta}_{it} + \beta_2 * \text{EPS}_{it} + \beta_3 * \text{MTBV}_{it} + \beta_4 * \text{MV}_{it} + \beta_5 * \text{VO}_{it} + \beta_6 * \text{VA}_{it} + \epsilon_{it} \quad (1)$$

Where subscript (i) represents the dimension associated with cross-section, (t) represents the time series effect, and (ϵ_{it}) represents the error term.

5. RESULT

5.1. Preliminary Analysis

Table 3 displays the descriptive statistics summary explaining the patterns in the data. The variables include the natural logarithm of monthly stock return as the dependent variable, and beta, EPS, MTBV, firm size, VO, and VA as the independent variables.

Table 3. Descriptive Statistics of the Variables.

Variables	No. of Observations	Mean	Std. Dev.	Minimum	Maximum
LN SR	3,712	.0204141	.6532632	-18.53785	16.49622
Beta	3,712	1.025212	.4873755	-.4678805	6.979438
EPS	3,699	1.978757	2.059186	0	32.29
MTBV	3,560	1.26634	1.083965	-3.727826	15.97286
MV	3,712	17312.73	12198.06	317.12	94329.56
VO	3,692	40412.02	67233.35	68.76899	924735.5
VA	3,692	2.11e+09	8.11e+09	131	1.26e+11

Table 3 reveals that the natural logarithm of monthly stock return has a mean value of .0204141 over the time period considered in the study, having a minimum and maximum values of -18.53785 and 16.49622, respectively. This shows that the stock return faced an illiquid situation from 2009 to 2019. The minimum value indicates that the market faced a considerable amount of negative return during this period because it includes the period from 2009 to 2010 when the stock market crash occurred in Bangladesh.

According to Table 4, the strongest positive relationship (0.2358) with the dependent variable (stock return) exists in case of volume of shares traded, and regarding the independent variables, the strongest positive relationship (0.4420) exists between firm size and MTBV per share. Regarding the explanatory variables, Pearson's

correlation coefficients range from -0.0373 to 0.4420. Since the difference indicated a lower value, it can be concluded that the model does not contain any multicollinearity problems.

Table 4. Pearson Correlation Matrices for Dependent and Independent Variables.

Variables	LN SR	Beta	EPS	MTBV	MV	VO	VA
LN SR	1.0000						
Beta	-0.0313	1.0000					
EPS	-0.0167	-0.0616	1.0000				
MTBV	0.0060	0.0558	0.0054	1.0000			
MV	-0.0812	-0.1047	0.2136	0.4420	1.0000		
VO	0.2358	0.0432	-0.1506	0.2425	0.0879	1.0000	
VA	0.0456	0.0694	-0.0373	-0.0987	-0.0386	0.0245	1.0000

Table 5. Hausman Specification Test.

Variables	(b)* Fixed effect	(B)** Random effect	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Beta	-.0775139	-.0740131	-.0035008	.0097767
EPS	.0113	.0143457	-.0030457	.0020565
MTBV	.0170775	.0028061	.0142715	.008139
MV	-.000012	-6.63e-06	-5.39e-06	1.18e-06
VO	2.83e-06	2.45e-06	3.87e-07	6.94e-08
VA	3.49e-12	3.23e-12	2.56e-13	2.62e-13

The Hausman specification test in Table 5 shows that the changes in coefficients were not systematic, which gives a chi-squared value of 9.53 and a probability value of 0.0231, which is less than 0.05. This p-value reveals that fixed effect regression is more applicable compared to random effect regression. The Breusch-Pagan Lagrange Multiplier test was also run to check whether the random effect model has any significance over the fixed effect model. The test showed that there was no statistically significant variance with a chi-squared value of 0.00 and a p-value of 1.0000. Thus, it can again be concluded that the fixed effect regression is more applicable compared to the random effect regression. It also recommends that an OLS regression should be run to demonstrate further effects. The summary of the fixed effect regression model is displayed in Table 6 below:

Table 6. Panel Regression (fixed effect model).

Variables	Fixed Effect Panel Regression		
	Coefficients	t-value	p-value
Constant	0.1447482	3.82	0.000
Beta	-.0775139	-3.19	0.001
EPS	.0113	1.96	0.050
MTBV	.0170775	1.08	0.279
MV	-.000012	-7.62	0.000
VO	2.83e-06	15.93	0.000
VA	3.49e-12	2.62	0.009
R ²	0.0723	-	-
Adj. R ²	0.0707	-	-
F-stat	2.64	-	0.0000

Following the Hausman specification test in Table 5, Table 6 above displays the fixed effect regression model, which suggests the regression line of LN SR = 0.1447 - .0775Beta + .0113EPS + .0170MTBV -.000012MV + (2.83e-06)VO + (3.49e-12)VA. This indicates that stock return increased as there was an increase in EPS, MTBV, volume of shares traded, and turnover by value. On the other hand, stock return decreased as there was a rise in firm beta and firm size. The p-values of 0.05 and 0.279 indicate that EPS and MTBV have insignificant effects on stock returns; whereas the other four independent variables (firm beta, firm size, monthly volume of shares transacted and turnover by value) are significantly related to the stock returns of the 29 PCBs listed on the DSE at

a significance level of 5%. The R^2 value of 0.0723 suggests that about 7.23% of the variation in stock returns of the 29 PCBs can be described by the firm-specific factors. The remaining percentage is accounted for by other variables (internal or external factors) that are not considered in the model and also by the related error term. The result also shows that the fitness of the model, or F-value, is 2.64 and the p-value is 0.0000. Therefore, the estimation revealed that the overall impact of the explanatory variables on the stock return of the selected companies is statistically significant at a 5% significance level.

Some post-diagnostic tests have been done to evaluate the problems associated with heteroskedasticity, multicollinearity or time fixed effect.

Table 7. Summary of Post-diagnostic Tests.

Tests	Statistics	p-value
Time Fixed Effect	1.35	0.1069
Modified Wald Test	1171.75	0.0000
Mean Variance Inflation Factors	1.15	-

According to [Table 7](#), the F-value of 1.35 along with the p-value of 0.1069 (more than 0.05) indicates that there is no presence of a time fixed effect. A modified Wald test for group-wise heteroskedasticity reveals a chi-squared value of 1171.75 while having a p-value of 0.0000. This p-value shows the presence of heteroskedasticity, which indicates that this may cause the standard errors to be biased, and errors are both identically assigned and independent. To control this, regression with the robust option has been run. Comparing the result of this fixed effect regression with the robust option with the fixed effect panel regression held earlier, it can be concluded that none of the coefficients have any changes in value, but the standard errors and the t-values are slightly different. These t-values do not contradict the fixed effect regression results obtained earlier, therefore the fixed effect regression with the robust option relaxes the presence of heteroskedasticity because if there had been more heteroskedasticity in the data, bigger changes in the results would have been seen. After the fixed effect regression with the robust option, the t-values indicate that the effect of firm beta, firm size, volume of shares transacted, and turnover by value on stock returns is statistically significant, whereas the influence of EPS and MTBV per share is insignificant.

Table 8. Variance Inflation Factors Test.

Variable	VIF	1/VIF
MTBV	1.35	0.742505
MV	1.34	0.745722
VO	1.09	0.915677
EPS	1.09	0.920209
Beta	1.03	0.969226
VA	1.02	0.981159
Mean VIF	1.15	

[Table 8](#) shows the results of the VIF test, which was run to further explain the degree of multicollinearity among the explanatory variables. This test gave a mean VIF of 1.15, which is less than 2 and indicates that there is no existence of multicollinearity in the data set.

6. DISCUSSION

6.1. Firm Beta and Stock Returns

Firm beta has a coefficient value of -0.0775 while having a t-value of -3.19 and a p-value of 0.001. These values indicate that firm beta is negatively correlated with stock return, which is significant. This finding contradicts the concept of CAPM in which beta is supposed to be positively correlated with stock return. Studies on the Kuala Lumpur Stock Exchange and Istanbul Stock Exchange also indicate that beta is positively correlated with stock

return (Chambers et al., 2013; Pandey, 2001). However, according to other research, this relationship can be negative in other emerging markets (Mollah & Mobarek, 2005). A study on the Shanghai Stock Exchange also supports the fact that beta is negatively correlated with stock return (Pan, 2012). This study on the DSE has shown that firm beta influences the stock returns of the selected PCBs listed on the DSE negatively.

6.2. Earnings per share and Stock Returns

Earnings per share have a coefficient value of 0.0113 with a t-value and a p-value of 1.96 and 0.050, respectively. Regarding the p-value, it can be said that earnings per share is positively correlated with the stock returns of the selected PCBs, but that its impact is insignificant. This finding contradicts the studies conducted on non-financial companies in Pakistan, and food and beverages firms listed on the Nigerian stock market in which EPS influences the stock returns positively in a significant manner (Idris & Bala, 2015; Safdar, 2013).

6.3. MTBV and Stock Returns

The coefficient value of MTBV per share is 0.0170775, which has a t-value of 1.08 and a p-value of 0.279. These values indicate that MTBV per share influences the stock returns in a positive direction, but this relation is insignificant. Some other studies on the Shanghai Stock Exchange and selected companies listed on the Pakistan stock market reveal that book to market value influences stock return in a positive direction (Pan, 2012; Safdar, 2013). Thus, this study does not support the results of the aforementioned studies on other stock markets, but a study on Malaysian firms revealed that book to market ratio is not persistently significant while having an impact on stock return (Pandey, 2001).

6.4. Firm Size and Stock Return

Firm size has a beta coefficient of -0.000012 with a t-value of -7.62 and a p-value of 0.000. These values indicate that firm size significantly influences the stock returns of the selected PCBs in a negative direction. This finding does not support those of other studies on the Pakistan Stock Exchange in which firm size was seen to influence stock returns in a positive direction (Safdar, 2013). However, the findings of this study support that of a few selected firms listed on the Nigerian stock market, Shanghai Stock Exchange and Malaysian firms in which firm size influences the stock return negatively while being a significant determinant (Idris & Bala, 2015; Pan, 2012; Pandey, 2001).

6.5. Volume of Shares Traded and Stock Returns

Volume of shares traded has a coefficient value of $2.83e-06$ with a t-value of 15.93 and a p-value of 0.000. This indicates that monthly volume of shares transacted is a significant determinant that influences the stock returns of the selected PCBs in a positive direction. This supports the finding of another study conducted on the stock returns of the Shanghai Stock Exchange in which volume of shares transacted over a given time period is positively related to stock return (Pan, 2012).

6.6. Turnover by Value and Stock Return

Turnover by value has a coefficient value of $3.49e-12$ with a t-value of 2.62 and a p-value of 0.009. No other study has considered this variable to be an indicator of stock returns, which is represented in the form of a currency. It includes the volume of shares transacted, but in terms of that stock's home currency, for instance in this study it was collected in the form of BDT, considering the value of the volume of shares transacted over a month. It revealed that turnover by value (as a liquidity proxy) influenced the stock returns of the selected PCBs in a positive direction, which can be considered as a significant determinant.

The overall results from this study indicate that four out of the six mentioned firm-specific factors (firm beta, firm size, volume of shares transacted, and turnover by value) have a significant effect on stock return, whereas the impact of other two variables (EPS and MTBV) is insignificant. The regression result explains the fitness of the model through the F-value of 2.64 and a p-value of 0.0000. The overall effect of the independent variables on the dependent variable is statistically significant at a 5% level with a 95% level of confidence. Therefore, it can be concluded that, apart from other external factors, there are some firm-specific factors that have significant impacts while explaining the stock returns of the selected PCBs listed on the DSE.

7. CONCLUSION AND RECOMMENDATION

The findings of the study indicate that firm beta and firm size have significant negative impacts on the stock returns, whereas volume of shares traded and turnover by value have significant positive impacts on the stock returns of the selected private commercial banks listed on the DSE. These four firm-specific factors are valuable determinants of the stock returns of the selected banks. It also revealed that the positive effect of EPS and MTBV per share on stock returns is insignificant. This study recommends determination of accurate MTBV and EPS for significant investment analysis and portfolio management by investors or investment analysts because both MTBV and EPS have comparatively insignificant effects on stock return. Further research can be conducted to identify more internal factors determining stock returns.

The incidents of stock price manipulation need to be minimized so that the stock prices of firms listed on the DSE can be determined through specific internal factors, otherwise it would be difficult to determine the stock returns considering the major determinants. To ensure this, the Securities and Exchange Commission should monitor the overall trading activities held by the Dhaka Stock Exchange, which could result in a more transparent market where investors can trade efficiently and follow the analyses based on the major determinants or firm-specific factors.

Funding: This study received no specific financial support.

Competing Interests: The authors declare that they have no competing interests.

Acknowledgement: Both authors contributed equally to the conception and design of the study.

REFERENCES

- Akwe, J. A., & Garba, S. B. (2019). Effects of internal and external factors on stock returns of large size firms in Nigeria. *Global Journal of Accounting*, 5(1), 44-56.
- Arslan, M., Zaman, R., & Phil, M. (2014). Impact of dividend yield and price earnings ratio on stock returns: A study of non-financial listed firms of Pakistan. *Research Journal of Finance and Accounting*, 5(19), 68-74.
- Banz, R. W. (1981). The relationship between return and market value of common stocks. *Journal of Financial Economics*, 9(1), 3-18. Available at: [https://doi.org/10.1016/0304-405x\(81\)90018-0](https://doi.org/10.1016/0304-405x(81)90018-0).
- Chambers, N., Sezgin, F. H., & Karaaslan, B. (2013). An analysis of the effects of capital structure and the beta coefficient on stock returns: A case study of the Istanbul Stock Exchange (ISE) - Manufacturing Industry. *International Journal of Business and Social Science*, 4(7), 279-290.
- Chan, L. K., Hamao, Y., & Lakonishok, J. (1991). Fundamentals and stock returns in Japan. *The Journal of Finance*, 46(5), 1739-1764.
- Chowdhury, S. S. H., & Sharmin, R. (2013). Relevant factors to explain cross-section of expected returns of the firms listed in the Dhaka Stock Exchange. *International Business Research*, 6(3), 165-173. Available at: <https://doi.org/10.5539/ibr.v6n3p165>.
- Drew, M. E., & Veeraghavan, M. (2003). Beta, firm size, book-to-market equity and stock returns- further evidence from emerging markets. *Journal of the Asia Pacific Economy*, 8(3), 354-379.

- Hasan, M. B., Alam, M. N., Amin, M. R., & Rahaman, M. A. (2015). The size and value effect to explain cross-section of expected stock returns in Dhaka stock exchange. *International Journal of Economics and Finance*, 7(1), 14-23. Available at: <https://doi.org/10.5539/ijef.v7n1p14>.
- Idris, I., & Bala, H. (2015). Firms' specific characteristics and stock market returns (evidence from listed food and beverages firms in Nigeria). *Research Journal of Finance and Accounting*, 6(16), 188-201.
- Kheradyar, S., Ibrahim, I., & Nor, F. M. (2011). Stock return predictability with financial ratios. *International Journal of Trade, Economics and Finance*, 2(5), 391-396. Available at: <https://doi.org/10.7763/ijtef.2011.v2.137>.
- Maddala, G., & Nimalendran, M. (1995). An unobserved component panel data model to study the effect of earnings surprises on stock prices, trading volumes, and spreads. *Journal of Econometrics*, 68(1), 229-242. Available at: [https://doi.org/10.1016/0304-4076\(94\)01650-o](https://doi.org/10.1016/0304-4076(94)01650-o).
- Masum, A. (2014). Dividend policy and its impact on stock price—A study on commercial banks listed in Dhaka stock exchange. *Global Disclosure of Economics and Business*, 3(1), 9-17.
- Mollah, A. S., & Mobarek, A. (2005). The general determinants of share returns: An empirical investigation on the Dhaka stock exchange. *Review of Pacific Basin Financial Markets and Policies*, 8(04), 593-612. Available at: <https://doi.org/10.1142/s0219091505000518>.
- Nguyen, N. H., & Lo, K. H. (2013). Asset returns and liquidity effects: Evidence from a developed but small market. *Pacific-Basin Finance Journal*, 21(1), 1175-1190. Available at: <https://doi.org/10.1016/j.pacfin.2012.05.002>.
- Olowoniyi, A., & Ojenike, J. (2012). Determinants of stock return of Nigerian-listed firms. *Journal of Emerging trends in Economics and Management Sciences*, 3(4), 389-392.
- Pan, L. (2012). *Which Factors explain stock returns on the Shanghai Stock exchange market?* Stockholm, Sweden: KTH Industrial Engineering and Management.
- Pandey, I. M. (2001). The expected stock returns of Malaysian firms: A panel data analysis. *SSRN Electronic Journal*, 1-26. Available at: 10.2139/ssrn.299913.
- Safdar, H. T., H. M. (2013). Impact of firm's characteristics on stock return: A case of non-financial listed companies in Pakistan. *Asian Economic and Financial Review*, 3(1), 51-61.
- Shimon, S. S. (2008). A closer look at the size effect in the Dhaka stock exchange (DSE). *Independent Business Review*, 1(2), 42-53.
- Sie, L. T., Lee, C. T., & McInish, T. H. (2002). Stock returns and beta, firms size, E/P, CF/P, book-to-market, and sales growth: evidence from Singapore and Malaysia. *Journal of Multinational Financial Management*, 12(3), 207-222.
- Tahir, S. H., Sabir, H. M., Alam, T., & Ismail, A. (2013). impact of firm's characteristics on stock return: A case of non-financial listed companies in Pakistan. *Asian Economic and Financial Review*, 3(1), 51-61.
- Xu, X. G., & Strong, N. (1997). Explaining the cross-section of UK expected stock returns. *The British Accounting Review*, 29(1), 1-23.

Views and opinions expressed in this article are the views and opinions of the author(s), Asian Economic and Financial Review shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.