

Determinants of Share Prices of listed Commercial Banks in Pakistan

Zeeshan Arshad¹, Ali Raza Arshaad², Sohail Yousaf³, Sulaman Jamil⁴.

¹, Lecturer at UOG, ², Ms. Scholar, ³, Ms. Scholar, ⁴, Ms. Scholar
 Faculty of Management and Administration sciences (FMAS)
 University of Gujrat, Pakistan

Abstract: The focus of this paper is to identify the determinants of share prices for the listed commercial banks in Karachi stock exchange over the period 2007-2013. One of the unique features of this paper is to find out the impact of both internal and external factors on share price. Linear multiple regression analysis is used to determine whether the selected independent variables have influence on share prices or not. The results indicate that earning per share has more influence on share prices and it has positive and significant relationship with share prices, book to market value ratio and interest rate have also significant but negative relation with share prices while other variables (gross domestic product, price earnings ratio, dividend per share, leverage) have no relationship with share prices.

Keywords: Share prices, determinants, Linear multiple regression, earning per share, book to market value ratio, interest rate, gross domestic product, price earnings ratio, dividend per share, leverage

I. Introduction

Stock market plays a vital and massive role in the economy of any country. It also contributes in the economic development of country by promoting capital formation and raising economic growth. Fluctuation in stock prices are occurs due to the supply and demand forces. But there is no foolproof or perfect system that indicates the exact movement of stock prices. The factors are behind the increase or decrease in the demand and supply of stock prices can be categorized into three main types: technical factors, fundamental factors and market sentiments. In other words we can also say that the factors that influence the share prices are based on internal & external factors. Internal factors such as dividend per share, earnings per share, book value, leverage and size etc. External factors or macro-economic variables such as gross domestic product, interest rate, government regulation and foreign exchange rate etc.

Table-I: Summary of previous researches focusing on the determinants of share price

S.no	Authors/Researchers	Determinants of share price	Market
1	Tsoukalas & Sil (1999)	dividend price ratio, dividend growth rates and interest rate	Japan
2	Talla M. Al-Deehani (2005)	Earnings per share, Book value, Return on equity	Kuwait
3	Al-Omar & Al-Mutairi (2008)	Earnings per share, Book value per share	Kuwait
4	Khan et al. (2009)	Dividend	Bangladesh
5	Uddin (2009)	Net asset value per share, Earning per share, Dividend	Bangladesh
6	Nazir et al. (2010)	Dividend yield, Payout ratio, Leverage, Asset growth, Earnings volatility, Size	Pakistan
7	Nirmala et al. (2011)	Dividend, Price earnings ratio, Leverage, Profitability	India
8	Muhammad Numan Khan & Amanullah (2012)	book to market ratio, price earnings ratio, dividend, GDP, interest rate	Pakistan
9	Uwuigbe et al. (2012)	financial performance, dividend payout ratio, financial leverage	Nigeria
10	Muhammad Yasir Naveed & Muhammad Ramzan (2013)	Size, Dividend yield, Return on asset, asset growth	Pakistan
11	Nidhi Malhotra & Kamini Tandon (2013)	Book value, Earning per share, Dividend, Price earnings ratio	India
12	Mohammad Abdelkarim Almumani (2014)	dividend per share, earning per share, size, P/E ratio, book value, dividend payout ratio	Amman

The present study is emphasis on some internal factors and also as well as on some external factors. The focus of this paper is to investigate the determinants of stock prices of commercial banking sector in Pakistan. After the study of literature we selected these variables (book to market ratio, price earnings ratio, dividend, Leverage, earnings per share, gross domestic product and interest rate) as independent variables and share price as dependent variable. In this study annual data of 22 sample commercial banking are collect from the annual reports of commercial banking and macro-economic variables data collect from the official site of

state bank for the period of 2007-2013. Linear multiple regression models are used for investigating the effects of independent variables on dependent variable.

Objectives:

The main objectives of the study are:

- Determine different internal and external factors that influence the share prices of commercial banks in Pakistan.
- Check the relationship of these factors with the stock prices of KSE.

Significance of study:

There is a still gap about the relationship of determinants with share price. The results of this study will help the investors while making the investment decision to which security they invest or not. The present study will also tell to investors which determinants more affect the stock prices of commercial banking sector and due to this the procedure of analyzing the securities will become easier.

Contribution to existing literature:

In addition to previous studies the contribution of present study is that there was no study where commercial banking sector with greater sample size have been discussed in Pakistan. The unique feature of this paper is to find out the influence of both internal and external factors on share price.

This paper proceeds as follows:

In the next section, we present the literature review. The fourth sections are containing theoretical framework. The fifth section is consists on methodology and hypotheses, sixth section is based on data analysis. Seventh section is presented conclusion. Eighth section is consists on conclusion and recommendation. The last ninth section is about the references.

Literature Review:

Following literature was cited while conducting the study:

Almumani (2014) identified the quantitative factors that influence share prices for the listed banks in Amman Stock Exchange over the period of 2005-2011. In this study these variables (dividend per share, earning per share, size, price earnings ratio, book value, dividend payout ratio and Market price) were considered and ratio analysis, correlation and a linear multiple regression models were used to measure the individual as well as combined effects of explanatory variables on the dependent variables. The empirical results showed that there was a positive correlation between independent variables (dividend per share, earning per share, size, price earnings ratio and book value) and dependent variable (market price of share). Regression results showed that EPS, BV, P/E and S have significant and positive relationship with market price of share.

Gupta & Reid (2013) investigates the Macroeconomic surprises and stock returns in South Africa. They explore the sensitivity of industry-specific stock returns to monetary policy and macroeconomic news. The approach which is used by them was an event study, Bayesian vector autoregressive (BVAR) analysis. At last they reached at this conclusion CPI surprise plays a significant role, monetary surprise is the only variable that consistently negatively affects the stock returns significantly, both at the aggregate and sectoral levels. The BVAR model based on monthly data, however, indicates that, in addition to the monetary policy surprises, the CPI and PPI surprises also affect aggregate stock returns significantly. However, the effects of the CPI and PPI surprises are quite small in magnitude and are mainly experienced at shorter horizons immediately after the shock. Malhotra & Tandon (2013) investigated the factors influence stock prices in the context of National Stock exchanges (NSE) 100 companies. Total sample size was based on 95 companies for the period 2007-2012 and used linear regression model for data analysis. Their findings showed that firm's book value, price earnings ratio and earnings per share were having a significant positive relationship with firm's stock price, while dividend yield was having a significant inverse relationship with the market price of the firm's stock.

Naveed & Ramzan (2013) analyzed the relationship between different factors and stock exchange price. This study sample size was based on 15 listed banks of Karachi Stock exchange for the period of 2008-2011. In their study dependent variable was share price, independent variables were dividend yield, size, return on asset and asset growth. They employed fixed effect regression model and the result indicated that size has a positive significant relationship while the all other remaining variables have insignificant association with share price. Uwuigbe et al. (2012) investigated the determinants of share prices in the Nigerian stock exchange market. They basically studied the effects of financial performance, dividend payout ratio and financial leverage on the share price of 30 listed firms operating in the Nigerian stock exchange market. Five years (2006-2010) data were used in this study and used regression analysis method for data analysis. The results indicated that only firm's financial performance has significant and positive relationship with the market value of share prices.

Khan & Amanullah (2012) examined the relationship of determinants with the share prices of Karachi Stock Exchange (KSE) 100 index of Pakistan. They selected these independent variables (book to market ratio, price earnings ratio, dividend, GDP and interest rate) to find out the direction and strengthen of relationship. A sample of 34 companies was randomly selected from 34 sectors of Karachi stock exchange. They collected 10 years (2000-2009) data of sample companies and used linear multiple regression and correlation model for data analysis. The results showed that all the selected variable have positive and significant relationship with share price except interest rate and book to market ratio.

Ariff et al. (2012) reported research findings on Friedman's proposition of a money supply effect on liquidity and they also analyzed liquidity effect on share price. They documented that liquidity has positive effect from money supply and after the controlling the effects of earnings, evidence was found of a significant positive effect from liquidity on share price.

Pal & Mittal (2011) examined long-run relationship between the Indian capital markets and key macroeconomic variables such as interest rates, inflation rate, and exchange rates and gross domestic savings (GDS) of Indian economy. They used data for analysis on Quarterly basis, time series data spanning the period from January 1995 to December 2008 has been used. The methodology used by them for analyzing the time series data were unit root test, the co-integration test and error correction mechanism (ECM). At last they found that there is co-integration between macroeconomic Variables and Indian stock indices which is indicative of a long-run relationship. The ECM shows that the rate of inflation has a significant impact on both the BSE Sensex and the S&P CNX Nifty. Interest rates on the other hand, have a significant impact on S&P CNX Nifty only. However, in case of foreign exchange rate, significant impact is seen only on BSE Sensex. The changing GDS is observed as insignificantly associated with both the BSE Sensex and the S&P CNX Nifty. The paper, on the whole, conclusively establishes that the capital markets indices are dependent on macroeconomic variables even though the same may not be statistically significant in all the cases.

Nisa & Nishat (2011) examined the empirical relationship between the stock prices, financial fundamentals and macroeconomic factors in Karachi Stock Exchange, collected data of 221 non-financial firms during 1995-2006. For data analysis they used dynamic panel generalized method of moments (GMM) technique. They found that previous behavior of stock prices, company size, previous earning per share were the most important factors. Macroeconomic variables like GDP, rate of interest and financial depth have significant relationship with share prices. In addition, market to book value ratio, inflation and share turnover ratio also influenced the stock prices behavior.

Nirmala et al. (2011) demonstrated the determinants of share prices in the Indian market, used panel data pertaining to three sectors (auto, health care and public sector undertakings) over the period of 2000-2009 and employed fully modified ordinary least squares methods. Their findings indicated that dividend, price-earnings ratio and leverage were significant determinants of share prices for all three sectors. Profitability variable influenced share prices only in the case of auto sector.

Nazir et al. (2010) investigated the role of corporate dividend policy in determining the volatility in the stock prices in Pakistan. A sample of 73 listed firms of KSE-100 indexed was used in this study. Five years (2003-2008) data were collected for the purpose of performing this study and applied fixed effect, random effect models and correlation on the panel data. The results found that dividend policy has a strong significant impact on the stock price volatility in Karachi Stock Exchange. The correlation results showed that correlation among explanatory variables affects the price volatility, both dividend yield and payout ratio were significantly and negatively correlated with price volatility and firm size and earning volatility have non-significant correlation with price volatility. Asset growth also has negative and non-significant correlation with price volatility and a low positive relationship exist between price volatility and leverage.

Hussainey & Ngoc (2009) examined the impact of macroeconomic indicators on Vietnamese stock prices. They investigate the effects of interest rate and industrial production on the stock prices. They use monthly time series data covering the period from January 2001 to April 2008. The methodology introduced by Nasseh, Strauss and Canova and de-Nicolo to investigate the linkage between stock prices and macroeconomic indicators. At last they found that there are statistically significant associations among the domestic production sector, money markets, and stock prices in Viet Nam. Another finding of this study is that the US macroeconomic fundamentals significantly affect Vietnamese stock prices.

Adjasi (2009) investigates the Macroeconomic uncertainty and conditional stock-price volatility in frontier African markets Evidence from Ghana. The methodology which is adopted by his was divided into two stages. The first stage is estimates univariate volatility models for each macroeconomic variable. The second stage was the volatility effect of macroeconomic variables on stock prices is estimated using the most recent squared residuals from the mean-conditional variance of macroeconomic variables as exogenous variables in the conditional variance equation of the stock price. At last they concluded that there is higher volatility in cocoa prices and interest rates increases volatility of the stock prices, whilst higher volatility in gold prices, oil prices, and money supply reduces volatility of stock prices.

Yusof et al. (2009) estimated Long-run relationship between Islamic stock returns and macroeconomic variables. In this study monthly data from May 1999 to February 2006 were used and applied autoregressive distributed lag (ARDL) model to estimate the co integration. Their findings showed that when interest rates raise either domestically (TBR) or internationally (FFR) then the Muslim investors will buy more Shari'ah compliant stocks. The results also suggested that real effective exchange rate, money supply M3, federal fund rate (FFR) and Treasury bill rate (TBR) appear to be suitable targets for the government. The government must focus on these targets in order to stabilize the Islamic stock market and to encourage more capital flows into the market.

Rehman et al. (2009) explored the interactions between macroeconomic variables and stock prices for the case of Malaysia, for this purpose they used VAR frame work. The results showed that changes in Malaysian stock market index do perform a co-integrating relationship with changes in money supply, industrial production index, reserves, exchange rates and interest rate. They also found that all six variables contribute significantly to the co-integrating relationship.

Günsel et al. (2009) investigated the performance of the arbitrage pricing theory (APT) in the Istanbul Stock Exchange (ISE). In this study monthly data was used for the period January 2001 to September 2005. They applied the OLS technique and Durbin-Watson statistics on data and the results indicated that unanticipated inflation was statistically significant in explaining their dependent variable in seven portfolios and risk premium in three portfolios, term structure in one portfolio and money supply in two portfolios. But the unemployment rate and real exchange rate were statistically insignificant in all portfolios.

Shrestha et al. (2008) worked on Analysis of the long-term relationship between macro-economic variables and the Chinese stock market and used monthly data from January 1992 to December 2001 with sample size of 120 observations. In this paper they were used heteroscedastic co integration analysis and their findings demonstrated that the co integration relationship was exist between macro-economic variables in the highly speculative Chinese stock market and also Stock market performance was positively related to that of macro-economy in long term.

Wang et al. (2007) determine whether macroeconomic variables could subsume the size and the book-to-market anomalies for longer-return intervals. They used monthly data on common stocks. All sample firms were listed in Tokyo Stock Exchange during the period from 1975 to December 1997 and used Fama-MacBeth cross-sectional regressions models for the analysis of data. Findings of this empirical research were most macroeconomic variables explain short-term returns within six months. Firm size does bear significant risk premium, but its significance diminished for return-intervals beyond three months when macroeconomic variables are included in the regression. BM is the only variable that significantly accounts for the cross-section of stock returns for all horizons, regardless of the inclusion of macroeconomic variables.

Al-Deehani (2005) used traditional and relaxed extreme bound analysis to test the robustness of the determinants of stock prices for listed companies of Kuwait Stock Exchange and selected these three variables (Previous earning per share, previous cash flow and the price to book value ratio) out of 11 variables for checking the relationship with share price. Cross sectional method was used in this study. The regression equation results showed that earning per share and book value per share produced a very strong explanatory power.

Dimitrios & Tsoukalas (2003) examined Macroeconomic factors and stock prices in the emerging equity market of Cypriot. The quarterly data (time series) for the period 1975 to 1998 were collected and used VAR model to estimates Granger causality between stock return and the predictor variables (industrial production, the consumer price index, the money supply, and exchange rates). His findings showed that the strong evidence of predictability (which implies inefficiency) in stock return, which is also parallel to the developed stock market's pattern.

Ibrahim & Aziz (2003) analyzed the Macroeconomic Variables and the Malaysian Equity Market: A View through Rolling Subsamples. The variables which were used in this study are four in which real output, price level, money supply and exchange rate. The data are collected on monthly bases for the period from January 1977 to August 1998 for this study. The methodologies which are used by them for analyzing the data are co integration and vector auto regression. Finally they conclude that there is presence of a long-run relationship between these variables and the stock prices and substantial short-run interactions among them

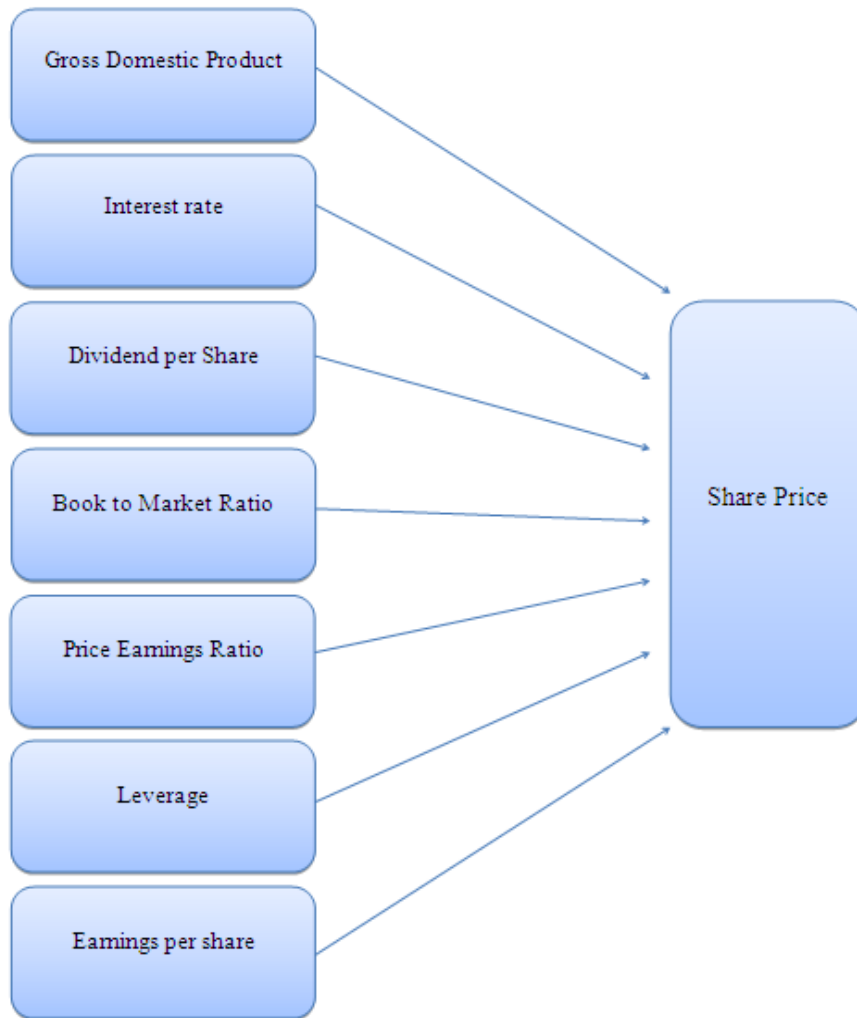
Sadorsky (2003) investigated the relationship of macroeconomic determinants of US technology with stock prices volatility. In this paper daily and monthly data from July 1986 to December 2000 was used and employed regression analysis. One of the innovative features of this paper was to analyze the technology stock price movement's link with oil prices movements. The empirical results indicated that the conditional volatilities of oil prices, the consumer price index and the term premium each have a significant impact on the conditional volatility of technology stock prices.

Grossman (2000) examined the determinants of share prices of two United States companies over a 14-year period during the late 19th century. For this purpose regression method was used and findings showed that interest rate changes were significant at 0.05, bank clearances were weakly significant (0.10), whereas the stock

market, though the correct sign, was not significant. The two news terms (bad news and positive news) were not significant.

Tsoukalas & Sil (1999) studied the relationship of stock returns and fundamental variables. They collected monthly data of Japan from 1955 to 1996 for stock prices, dividend price ratio, dividend growth rates and variables of the term structure of interest rate. After the collection of data they employed the vector autoregressive (VAR) approach on time series data. They found that their selected variables stationary and cannot be rejected and the combinations of all the variables pass the test since the t-statistics were below their critical value -3.46 at the 1% level.

Theoretical framework:



Research Methodology:

This study is analytical in nature and using secondary data for the purpose of empirical evaluation of determinants of stock prices for listed commercial banks in Pakistan. Sample size of this study was based on 22 listed banks of Karachi Stock Exchange (KSE) and we collected 7 years (2007-2013) annual data of all sample banks. Two banks were not included in this study because these banks were established after the period of 2007 and their data was not available.

Details of sample firms are listed below.

Table-2: Detail of sector

<u>Name of sector</u>	<u>No of Banks listed in KSE</u>	<u>No of Banks included in this study</u>
Banking	24	22

Details of variables Involved in this study is listed below in the form of table

Table-3: Details of variables

Variables	Short	Type	Unit	Source	Calculation
Share Price	SP	Dependent	Rupees	www.businessrecorder.com	Share price at the end of the year
Gross domestic product	GDP	Independent	%	www.worldbank.com	[(Current GDP-previous GDP/Previous GDP)*100
Interest Rate	IR	Independent	%	www.Sbp.gov.pk	Discount rates from state Bank of Pakistan
Leverage	LEV	Independent	%	www.KSE.com	Total Liabilities/Shareholder Equity
Earnings per Share	EPS	Independent	Rupees	www.KSE.com	[Net Profit After Tax-Preference Dividend]/Number of Equity Shares Outstanding
Dividend Per Share	DPS	Independent	Rupees	www.KSE.com	(% age of dividend/100)*Face Value
Book to market ratio	B/M Ratio	Independent	%	www.KSE.com	Book Value Per Share/Market Value Per Share
Price to earnings ratio	P/E Ratio	Independent	%	www.KSE.com	Market Value Per Share/Earnings Per Share

We used Eviews software for data analysis and employed linear multiple regression models in this study for the purpose of investigate the influence or effect of the independent variables on the dependent variable. We used linear multiple regression model to measure the mutual effects of independent variables on the dependent variable.

Model:

We used model in our research which is as follows:

$$Sp = \alpha_0 + \alpha_1 GDP + \alpha_2 IR + \alpha_3 DPS + \alpha_4 BMR + \alpha_5 PER + \alpha_6 LEV + \alpha_7 EPS + \epsilon$$

Where:

Sp = Share Price

α_0 = Intercept of regression line

α_1 GDP = Coefficient for Gross Domestic Product (GDP)

α_2 IR = Coefficient for Interest rate (IR)

α_3 DPS = Coefficient for Dividend per Share (DPS)

α_4 BMR = Coefficient for Book to Market Ratio (B/M Ratio)

α_5 PER = Coefficient for Price Earnings Ratio (P/E Ratio)

α_6 LEV = Coefficient for Leverage (LEV)

α_7 EPS = Coefficient for Earning per share (EPS)

ϵ = Random Error

Hypotheses:

H10: There is a relationship between B/M ratio and share price.

H11: There is no relationship between B/M ratio and share price.

H20: There is a relationship between P/E ratio and share prices.

H21: There is no relationship between P/E and share prices.

H30: There is a relationship between dividend payout ratio and share prices.

H31: There is no relationship between dividend payout ratio and share prices.

H40: There is a relationship between GDP growth rate and share prices.

H41: There is no relationship between GDP growth rate and share prices.

H50: There is a relationship between interest rate and share prices.

H51: There is no relationship between interest rate and share prices.

H60: There is a relationship between leverage and share prices.

H61: There is no relationship between leverage and share prices.

H70: There is a relationship between earning per share is positively related with share prices.

H71: There is no relationship between earning per share and share prices.

Analysis and results:

The **table-4** summarizing the descriptive statistics for the variables employ in the study.

Descriptive statistics:	SP	P/E_RATIO	LEV	IR	GDP	EPS	DPS	B/M_Ratio
Mean	39.92325	12.82085	13.44955	13.20000	3.124916	3.803377	0.263019	1.311040
Median	15.97000	6.586085	10.62000	13.70000	2.831659	1.540000	0.000000	0.626304
Maximum	399.9500	657.5000	339.7600	15.00000	4.832817	24.30000	9.400000	9.090909
Minimum	1.100000	-124.6154	-51.01000	11.00000	1.606681	-19.04000	0.000000	0.025003
Std. Dev.	61.13317	60.65642	28.81938	1.308094	1.149782	7.252833	0.812616	1.622895
Skewness	2.879483	8.564445	9.427212	-0.338367	0.015936	0.841110	9.411053	2.000578
Kurtosis	12.92525	88.06939	108.4618	1.864014	1.613420	4.832290	105.2771	7.220556
Jarque-Bera	844.9232	48318.79	73648.45	11.21911	12.34323	39.70087	69395.52	217.0267
Probability	0.000000	0.000000	0.000000	0.003663	0.002088	0.000000	0.000000	0.000000
Sum	6148.180	1974.412	2071.230	2032.800	481.2371	585.7201	40.50500	201.9001
Sum Sq. Dev.	571801.5	562917.8	127075.2	261.8000	202.2659	8048.348	101.0327	402.9695
Observations	154	154	154	154	154	154	154	154

The table 01 summarizes the descriptive details for 7 variables influencing share prices of 22 commercial banks and results shows that average share price is 39.92325 with a standard deviation of 61.13317 with regard to all 22 banks observed and has a range from 1.100000 to 399.9500. The mean value of price to earnings ratio is 12.82085 with a standard deviation of 60.65642 and has a range from -124.6154 to 657.5000. Leverage variable has a range from -51.01000 to 339.7600 and its average 13.44955 with a standard deviation of 28.81938. Interest rate average is 13.20000 and its range lies from 11.00000 to 15.00000 with a standard deviation of 1.308094.

Fifth variable gross domestic product, its ranges from 1.606681 to 4.832718 with mean value 3.124916 and standard deviation 1.149782. Earnings per share range from -19.04000 to 24.30000 with a standard deviation of 7.252833 and its mean value is 3.803377. Dividend per share has range from 0.000000 to 9.400000 and its mean value is 0.263019 with a standard deviation of 0.812616. This table also shows that the mean of book to market value ratio is 1.311040 with a standard deviation of 1.622895 and have a range from 0.025003 to 9.090909.

Table-5

Dependent Variable: SHARE_PRICE	
Method: Least Squares	
Date: 07/18/14 Time: 12:25	
Sample (adjusted): 4 154	
Included observations: 151 after adjustments	
Convergence achieved after 16 iterations	

Variable	Coefficient	Std. Error	t-Statistic	Prob.
P/E_RATIO	0.015536	0.044578	0.348515	0.7280
LEV	0.120300	0.093258	1.289979	0.1992
IR	-5.052467	2.386581	-2.117032	0.0360
GDP	3.618567	2.621036	1.380587	0.1696
EPS	5.974213	0.493002	12.11804	0.0000
DPS	-0.712749	3.530554	-0.201880	0.8403
B/M_RATIO	-4.661766	1.935927	-2.408028	0.0173
C	76.89671	36.40543	2.112232	0.0364
AR(3)	0.250099	0.084418	2.962627	0.0036
R-squared	0.707651	Mean dependent var		39.25815
Adjusted R-squared	0.691181	S.D. dependent var		61.27349
S.E. of regression	34.05059	Akaike info criterion		9.951324
Sum squared resid	164640.9	Schwarz criterion		10.13116
Log likelihood	-742.3250	Hannan-Quinn criter.		10.02438
F-statistic	42.96518	Durbin-Watson stat		1.787819
Prob(F-statistic)	0.000000			
Inverted AR Roots	.63	-.32+.55i	-.32-.55i	

Regression line:

$$\text{Share price} = 76.8967 + 3.618567 \text{ GDP} - 5.052467 \text{ IR} - 0.712749 \text{ DPS} - 4.661766 \text{ BMR} + 0.015536 \text{ PER} + 0.120300 \text{ LEV} + 5.974213 \text{ EPS}$$

Linear multiple Regression analysis employed in table 2 and it indicates that all independent variables have effect on share price. On the basis of results earning per share has more influence the share price and it has positive and significant impact with share price, so accepted H70. It means if a firm has high value of earning per share than its share price will be high. Price earnings ratio, leverage and gross domestic product have positive but non-significant impact on share price Hypotheses H20, H40 and H60 are rejected because p-value is greater than α . Dividend per share has no relationship with share price because it has negative but non-significant relationship with share prices so hypotheses H30 rejected. Remaining two variables (Interest rate and book to market value ratio) have negative and significant relationship with share prices so on the basis of result H10 and H50 are accepted because p-value is less than α . Probability F-statistics is 0.000000 (less than 5%) which means our results are jointly significant. The Durbin-Watson stat is good because it is near about 2. R-square value is 0.70 which means that the independent variable explains about 70% of the value of share price. This shows that our model is fairly good.

Residual diagnostics:

After estimating the results we applied some test for the purpose of figuring out adequacy of model.

Table-6: Heteroskedasticity Test: Breusch-Pagan-Godfrey:

F-statistic	1.416351	Prob. F(7,143)	0.2031
Obs*R-squared	9.790330	Prob. Chi-Square(7)	0.2008
Scaled explained SS	62.74703	Prob. Chi-Square(7)	0.0000

Breusch-Pagan-Godfrey test employed for Heteroskedasticity. The results shows that Prob. Chi-Square (7) value is 0.2008, it is greater than 5% so it means there is no Heteroskedasticity.

Table-7: Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.572496	Prob. F(2,140)	0.2112
Obs*R-squared	3.317572	Prob. Chi-Square(2)	0.1904

Another test used is the Breusch-Godfrey LM for Serial Correlation and high p values indicates that we fail to reject null hypothesis at 5% significant level. According to results Prob. Chi-Square value is greater than 5% so we conclude that there is no serial correlation. On the behalf of results we conclude that the model is adequate.

II. Conclusion & Recommendations

The objective of the study was to examine the determinants of stock prices of banking sector in Pakistan. The findings showed that EPS has positive and significant relationship with share prices. The previous literature support this finding like the studies of Almunani (2014) and Malhotra & Tandon (2013), both findings showed that EPS has positive and significant relationship with the stock prices. Interest rate has negative and significant relation with share price. Similar results were found by Grossman (2000), Pal & Mittal (2011) and Nisa & Nishat (2011). The results are against the study of Khan & Amanullah (2012) because they did not find significant relation of interest rate and share price but has negative relationship with share price. Results showed that B/M ratio negatively and significantly related with share prices. This result was against the research of Khan & Amanullah (2012) found no relationship between B/M ratio and share prices. Dividend per share and price earnings ratio has insignificant relationship with share price while dividend per share has negative and earnings per share has positive relation with stock prices. These results refute the findings of Khan & Amanullah (2012) and Irmala et al. (2010), they found no relationship of dividend per share and price earnings ratio with share prices. GDP has positive but insignificant relationship with share prices. The result of GDP is in contrast the studies of Khan & Amanullah (2012) and Nisa & Nishat (2011), both found significant relation of GDP and share prices. Findings showed that Leverage has positive but insignificant relation with share prices, the result is against the research of Irmala et al. (2010) found leverage was significant determinants of share prices. On the behalf of results these hypotheses (H50, H70 and H10) were accepted and these (H20, H30, H40 and H60) were rejected in this study.

Stock price of companies reflect the value of anticipated future profits. So listed banks of Pakistan should take correct measurement for the increase of its stock prices like try to improve earnings per share and try to decrease book to market ratio. Due to increase in industrial production the growth of capital markets will massively increase in Pakistan. So it is suggested that government should take steps to increase the industrial production in country and established such policies which support stock prices like control the inflation in country because inflation has negative impact on share prices.

Future research could be conducted by taking into consideration some other variable like money supply, consumer price index, return on equity, net asset value per share, size and profitability etc. Additional research on this topic might be conducted with longer time period.

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