



THE RELATIONSHIP BETWEEN EQUITY PRICES AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS LISTED IN NSE

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1.1 ABSTRACT

The purpose of this study was to determine how the financial performance of commercial banks listed on the National Stock Exchange and stock prices relate to one another. In order to determine the business value, several financial firm valuation models employ various financial results metrics. In order to measure the company's financial health independently, this research incorporated capital to risk weighted assets (CRAR) and earnings per share. The goal of this study was to ascertain if the remarkable financial growth of Indian commercial banks has affected the pricing of their stock. The top 20 banks that were consistently listed at the NSE between 2020 and 2022 made up the research's population. The correlation coefficient among stock values and earnings per share was found to be strongly positive. Stock prices and the capital to total risk-weighted assets ratio, nevertheless, did not have a strong correlation. The results of multiple regression analysis indicated a favourable correlation between share prices and all performance metrics. But in the panel data regression model, only the correlation between share price and EPS was shown to be highly significant.

Keywords: Equity price, financial performance, EPS, CRAR

1.2 INTRODUCTION

Background of the research

All available information about a security is reflected in the present price of that security as prices in an effective capital market react quickly to fresh information. A market is considered effectively informational when data is disseminated promptly and shown in the price (Ahmad et al 2020).

A company's financial success is an arbitrary measure of how successfully it generates income from the assets it has in its main line of operation. This word may also be utilized for contrasting similar organizations within the same area or to compare segments of the economy collectively. It also serves as a broad indicator of how

well a company is doing financially over a certain time period.

India's commercial banks have had recent years of strong financial results. It is significant that the financial industry is growing more quickly than the economy as a whole. In 2020 and 2021, it experienced growth of 9% and 7.8%, correspondingly, while the country's GDP expanded by 5.8% and 4.4% in the same years (Koundal, 2022). Technology that made financial inclusion possible has been the driving force behind this.

1.3 STATEMENT OF THE PROBLEM

The significance of the financial health of commercial banks is heightened by their dual function as monetary intermediaries and deposit collectors in the economy as a whole. The primary objective of this research is to examine the link between stock valuation and the overall financial health of financial companies as determined by earnings per share and CRAR. Conversely, prior local studies only examined how the pay-out policy affected the worth of equities at the National Stock Exchange.

1.4 OBJECTIVE OF THE STUDY

The purpose of the research is to ascertain whether stock value and profitability of Indian commercial banks are correlated.

1.5 LITERATURE REVIEW

Bhatia & Mulenga (2019) have investigated, for all firms registered on the National Stock Exchange (NSE), the relationships between share market costs, sales revenue, as profit before taxes, and pay-outs from the year 2000 to 2004. The research findings indicate that the correlation between the value of stocks and revenue turnover, profit before tax, and pay-outs is not statistically significant and varies from year to year.

Sangmi & Nazir (2010) have also investigated, for firms listed at the NSE between 2005 and 2009, the link between pay-outs per share and business valuation. The findings shown that, when retained profits per share and dividend per share are the only two independent factors, the influence of dividend per share on businesses quoted at the NSE is often greater than that of the retained profits per share. The result came from the fact that not every sector showed a correlation between the two, and that in some cases, firm worth may be determined independently of the planned dividend announced by NSE-listed companies.

Lohia (2011) investigated the connection between the value of the companies listed on the National Stock Exchange and their dividend policy. The study found that firms registered at the NSE benefited from dividends per share. Businesses with high average pay-out per share over the research period also had high total asset values.

Das & Ghosh (2009) have conducted an empirical examination of the responsiveness of stock returns to earnings announcements for NSE-quoted businesses. Thirty firms were chosen as a representative group from the Main Investing Market Sector. According to the study, there is an important likelihood for returns on

stocks to rise gradually over the period of fifteen days leading up to the official announcement day, to spike right before the revelation day, and then to continue rising beyond the declaration day.

Salecha (2021) examined the details that are contained in the financial statements for 18 major corporations listed on the NSE. The movement of stock prices both prior to and following the publication of annual financial reports was the main topic of discussion. The research found that, on a typical basis, there was no information content in the financial statements of the selected firms across the study period.

Panchasara (2012) research on the influence of paying out dividends on investor wealth tried to determine if there was a link between dividend pay-outs and stock prices. They discovered that the payment of dividends significantly affected the wealth of investors.

1.6 RESEARCH METHODOLOGY

1.6.1 Research Design

Descriptive statistical techniques were used to quantitatively characterize the main features of the collected data. The rationale is that statistical methods that are descriptive only aim to make clear what the data suggests, as opposed to inferential data analysis, which make an effort to deduce information about an entire group from an isolated group of individuals. The data were analysed using panel data regression analysis, regression analysis, and correlation analysis. Data was gathered on all banks listed on the National Stock Exchange of India (NSE); however, the findings were not extrapolated to other NSE-quoted businesses.

1.6.2 Population

For this study, the top 20 financial institutions listed on the NSE were the target group. The result will represent the whole population.

1.6.3 Data Collection

Secondary data were used in this investigation. Secondary data are those that were obtained by someone else and were not specifically meant for the present research problem. The three-year period, from 2020 to 2022, is when the data was gathered from Yahoo Finance.

1.7 DATA ANALYSIS

The collected data will be analysed with the help of STATA software. The pattern and degree of the association between the factors that were gathered have been determined by correlation. Panel data regression has been applied to analyse the trend of different banks over the different periods. Multiple regression model has been implemented to form a predictive model or equation.

The variables can be divided into dependent and independent. Share price has been treated as dependent variable. Any change in share price will be dependent on variations in EPS and CRAR (Independent

variables). Descriptive analysis has been employed to get general overview of the collected data.

1.8 DATA ANALYSIS AND DISCUSSION

1.8.1 Descriptive analysis

Share price

Share price				
Percentiles		Smallest		
1%	16.9	16.9		
5%	17.45	16.95		
10%	22.8	17.1	Obs	60
25%	53.125	17.8	Sum of Wgt.	60
			Mean	276.7908
50%	129.675	Largest	Std. Dev.	367.765
75%	292.875			
90%	733.7	1476.4	Variance	135251.1
95%	1170.2	1499.4	Skewness	2.18636
99%	1612	1612	Kurtosis	7.487911

The above descriptive table shows that lowest share price has been achieved at Rupees 16.9 from 2020 to 2022. On the other hand, highest share price has been achieved at Rupees 1,612 by HDFC Bank during 2022. The average share price of all 20 banks over the past three years has been recorded at Rupees 276.7908. The value of standard deviation is higher than the mean value at 367.765. This indicates that there is high variation within the dataset. The value of Skewness is higher than 0.5. Hence, it can be commented that the dataset for share price is non symmetric. The value of Kurtosis has been recorded at 7.49, which is higher than 2. Thus, the dataset of share price is heavily tailed towards lower value.

Earnings per share (EPS)

EPS				
Percentiles		Smallest		
1%	-1.73	-1.73		
5%	.645	.21		
10%	.915	.51	Obs	60
25%	2.97	.78	Sum of Wgt.	60
			Mean	17.276
50%	9.905	Largest	Std. Dev.	19.3888
75%	26.845			
90%	45.39	62.04	Variance	375.9256
95%	60.655	69.76	Skewness	1.636024
99%	89.02	89.02	Kurtosis	5.521619

The output indicates that lowest earnings per share (EPS) is -1.73 while the highest EPS is Rupees 89.02 per share. The average EPS has been recorded at Rupees 17.276 per share. Again, the value of standard deviation is higher than that of mean at 19.389. This signifies that there is high variance within the dataset of EPS. The value of Skewness is higher than 0.5 and is positive. This shows that maximum values are at lower EPS. Kurtosis is also high at 5.522. Hence, the collected dataset is non symmetric.

Capital to risk-weighted adequacy ratio (CRAR)

CRAR				
	Percentiles	Smallest		
1%	.087	.087		
5%	.1145	.09		
10%	.1165	.1145	Obs	60
25%	.1402	.1145	Sum of Wgt.	60
50%	.1649		Mean	.1993633
		Largest	Std. Dev.	.1654965
75%	.1927	.2547		
90%	.24155	.563	Variance	.0273891
95%	.40885	.6625	Skewness	4.96841
99%	1.256	1.256	Kurtosis	30.11981

The highest CRAR has been recorded at 1.256 or 125.6% while the lowest CRAR has been recorded at 0.087 or 8.7%. The average CRAR maintained by 20 banks is equivalent to 0.1994 or 19.94%. Since the value of average CRAR is higher than the standard CRAR of 12%, it can be commented that sample of 20 banks can be considered non risky. The value of standard deviation is lower than mean at 0.1655. This signifies that there is less variation within the collected dataset. Despite of this, due to high gap between smallest and largest CRAR, the value of Skewness is excessively high at 4.968. On the other hand, high value of Kurtosis at 30.1198 denotes that there is large number of outliers within the dataset of CRAR.

1.9 CORRELATION ANALYSIS

The degree to which the two factors have a linear connection is determined by a correlation test. It quantifies the degree of correlation between them rather than suggesting causality. According to Makowski et al. (2020), a positive sign denotes a positive correlation when the two parameters shift in the same path, and a negative sign denotes a negative correlation when both factors move in opposing directions.

. correlate Shareprice EPS CRAR
(obs=60)

	Shareprice	EPS	CRAR
Shareprice	1.0000		
EPS	0.8221	1.0000	
CRAR	0.0703	-0.1034	1.0000

The correlation table above shows that there is negative correlation between EPS and CRAR. However, low value of correlation at -0.1034, which is near to zero, evident a weak relationship between both variables. Both share price and CRAR have shown weak correlation at 0.0703. on the other hand, both share price and EPS have shown strong correlation at 0.8221. The positive value of correlation further signifies direct relationship between the variables. In other words, rise in EPS is expected to improve the share price of commercial banks.

VIF Test

. vif

Variable	VIF	1/VIF
CRAR	1.01	0.989310
EPS	1.01	0.989310
Mean VIF	1.01	

The output of VIF test shows that the value of VIF is low at 1.01. Hence, it can be commented that there is no issue of multi-collinearity between independent variables (EPS and CRAR).

1.10 REGRESSION ANALYSIS**Linear regression model**

Shareprice	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
EPS	15.90089	1.383071	11.50	0.000	13.13134 18.67044
CRAR	348.7938	162.0342	2.15	0.036	24.32603 673.2617
_cons	-67.44966	49.73546	-1.36	0.180	-167.0432 32.14388

As per above linear regression table, both EPS and CRAR have significant impact on share price of the company. Since the data consists of more than 1 company for multiple years, developing prediction model based on panel data regression model would be more realistic.

Panel data regression*Hausman test*

In econometrics, the Hausman test is a statistical procedure that assesses the consistency and objectivity of coefficients obtained in regression models. It compares the coefficients obtained from two different estimators: the "efficient" estimator (usually the one derived from a more complicated model, such as the "consistent" approximation (often the one drawn from a more basic model, such the Random Effects model) and the Fixed Effects framework. The Hausman test's null hypothesis states that there is no discernible difference between the coefficients calculated by the reliable and efficient estimation tools (Papke & Wooldridge, 2023).

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) re	(B) fe		
EPS	4.959975	3.596904	1.363071	.4633828
Prob>chi2 = 0.0033				

As per above output, value of prob > chi2 is lower than 0.05 ($0.0033 < p < 0.05$). Hence, null hypothesis will be rejected and it is recommended to accept fixed effect model. The application of fixed-effect model further limits the result for the particular year and on selected sample only.

Fixed-effect model

Shareprice	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
EPS	3.596904	.8078735	4.45	0.000	1.962826	5.230983
_cons	214.6507	14.9907	14.32	0.000	184.3292	244.9723
sigma_u	316.47097					
sigma_e	42.375701					
rho	.98238639	(fraction of variance due to u_i)				

In the above regression table, the value of p of EPS is lower than 0.05 ($0.000 < p < 0.05$). Hence, null hypothesis will be rejected at 5% significance level. The rejection of null hypothesis further evident that there is significant impact of EPS on share price of commercial banks. Based on above table, following prediction equation can be formed:

$$\text{Share price} = 214.6507 + 3.596904 (\text{EPS}).$$

The above equation shows that there is direct impact of EPS on equity price. Furthermore, the value of coefficient signifies high sensitivity within the relationship. For instance, 1% rise in EPS will increase the share price by 359.6904%.

1.11 CONCLUSION

Financial performance and share price have a favourable correlation. However, multiple regression studies only demonstrated a highly significant connection among value of stocks and dividends per share. This suggests that the financial corporation investors of the National Securities Exchange compute their stock price based on earnings per share. This extends to earlier research on the impact of dividend policies on NSE share prices, including Sangmi & Nazir (2010) analysis of the relationship between dividend pay-outs and firm value and Das & Ghosh (2009) analysis of the effects of pay-outs of dividends on shareholder capital, which revealed a strong correlation between dividend instalments and a company's stock price.

The stock price and the second financial metric, capital to risk weighted assets (CRAR), did not significantly correlate. According to a research by Salecha (2021), there was inconsistent and non-significant correlation between stock values and profit before taxes, revenue, as and pay-outs year over year.

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