

Fundamental Determinants of Share Price in India: A Comparative Study of Shariah and Non-Shariah Compliant Companies

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Abstract

Share price determination is an antithetical task, influenced by several factors. The present study examines the fundamental determinants of Shariah and Non-Shariah share prices in India. The study employs panel data consisting of annual time series data over the period of 2011-2015. And also use the cross sectional data of 40-40 companies from Shariah and Non-Shariah Indices, which are selected on the basis of market capitalization. Selected companies are continuously working from last five years in CNX 500 and CNX 500 Shariah Index. After going through the literature review, various determinants have been identified namely Debt equity ratio (DER), Price earnings ratio (P/E) ratio, Net profit margin (NPM), Return on equity (ROE), which explained the market price of share (MPS). Fixed Effects and Random Effect models have been employed to fulfill the objective. The empirical results of Hausman specification test indicated that error correction model is appropriated. The study concluded that Random effect model is best fitted in Shariah Portfolio and FEM is best fitted model in Non-Shariah portfolio. The present study confirms that performance of fundamental ratio of the firm will be essential and immense helpful to the investors and analysts in accessing the better stock performance.

Keywords: Shariah Index, Fundamental Determinants, Share Prices, Fixed Effects Model, Random Effects Model.

JEL Classifications: C23, G10, G30, G32

Introduction

Shariah investment is unique form of socially responsible investment because Islam does not make difference between spirituality and secularism. It also works on the canonical aspects with efficacy and efficiency in business. Shariah objectives depend upon the faith, self, intellectual posterity and wealth. By considering these merits of Shariah investment NSE developed the S&P CNX Shariah 500 Index from S&P CNX 500.

Investors put their money where they get higher returns than that of savings and bonds. Stocks, Mutual funds, Shariah investment are the other available investment avenues in the market where investors can get higher returns than saving and bonds (Olawale & Lawal, 2015). Stock market functions between the saving surplus unit and saving deficit unit through pooling of funds, transferring of wealth and sharing risk (Almumani, 2014).

Stock market is dynamic and volatile in nature. That is why investors and fund managers try to predict the stock price in different market situations. The market movement is not only dependent on the intrinsic and extrinsic influence. There are some more reasons for sudden change in stock prices due to micro-economic variables or firm specific variables including dividend per share, earning per share, profitability ratio etc are more significant. The understanding of the share price determinant is important and as it will be helpful for the companies as well as investors. After determining the share prices the investors are in a position to make decision whether to invest money in stock market or not (Bhatia & Agarwal, 2016).

The first time work on determinants of share prices was done by Collins in 1957. Collins identified that in the US banks, dividend, net profit, operating earnings and book value as the factors influencing share prices. In determining the factors affecting share prices Collins used financial statements. After that the major work done on the determinants of share prices follows Collins. Hence, Financial Statement becomes central concern for the academicians and investors.

Review of Literature

The relationship between fundamental factors and share price changes has been extensively investigated in the financial literature. There are several studies conducted in India as well as abroad. This study has driven on Singapore from 1993-2012 and concluded that variables like, money supply, Interest rate and GDP have positive impact on the share price. On other hand Customer price index and Exchange rate shows a negative relation with share price, for this method used by them was ordinary Least square (OLS) Hui (2014), Srinivasan (2013) examined the data of Indian economy, basically carried 6 major industries like Heavy and Manufacturing, Pharmaceutical, Energy, IT and ITES, Infrastructure and Banking. The time period of this study is 2006-2011. Panel data techniques are applied like random effect model and fixed effect model to investigate the objectives. The empirical outcome reveals that DPS has negative and significant impact on the share price of manufacturing, pharmaceutical, Infrastructure and energy sectors. The outcomes are consistent with findings of Zahir & Khanna (1982), Malhotra (1987), Sharma (2011), that dividend has influenced market price of share significantly in negative direction. Final results indicate that size is significant factor in determine the share price of all sectors except the manufacturing sector. Book value is positive influence the share price of energy, pharmaceutical, infrastructure and IT & ITES. In the continuation same issues of Pakistani study narrated that the data of Karachi stock exchange from 1995-2006 and also used variables like stock price, GDP, Company size, Earning per share and share turnover shows a positive relationship, where

Inflation and interest rate shows negative relationship with the share price Nishat & Mehr-un-Nisa (2012). Another paper written by Hosseini, Ahmad, & Lai, (2011) examined the data of microeconomic variables and share price. Where Industrial production and money supply shows a positive relationship with share price, In another way Inflation rate and Crude oil have negative relationship with share price of a country. Data were taken from 1999 to 2009. In the same scenario Al-Shubiri (2010) also discussed about the microeconomic variables and stock price of share. Data were collected from Amman stock exchange and period from 2005-2008. The results concluded that variables like GDP, Dividend, Earning per share and Net assets value per share shows a positive relationship with market price of share. Where as variable like market interest and inflation have negative relationship with the price of share. In the same direction, Somoye, Akintoye, & Osen (2009) have also given the same views of Nigerian stock market for the period of time 2005-2007. Simple linear regression model employed for the objectives. GDP, interest rate, oil price and, Dps are all the variables explain the market price of share. Other side of outcome shows the insignificant impact on the share price of GDP and Earning per share.

The objective of this study

To compare the Shariah and Non-Shariah portfolios in terms of fundamental determinants of share price.

For this purpose the present study applied the panel regression models on the data derived from the financial statements.

Hypothesis of the Study

To achieve the objective of this study, the following null hypothesis has been developed for the empirical testing.

H₀: There is no significant relationship between stocks return and Debt to Equity Ratio.

H₀: There is no significant relationship between stocks return and Earning per Share Ratio.

H₀: There is no significant relationship between stocks return and Price Earnings Ratio.

H₀: There is no significant relationship between stocks return and Net Profit Margin.

H₀: There is no significant relationship between stocks return and Return on Equity.

H₀: There is no significant relationship between stocks return and Price to book value.

H₀: All constants are same (homogeneous).

H₀: Random effects are consistent and efficient.

Methodology and Data

This research is completely based on the secondary data consisting of the monthly closing prices of Shariah and Non-Shariah stocks from NSEINDIA. Sample Design: Sample design was graze plan for obtaining the sample from the given population. Population: 1. Shariah Companies: Companies which are following Shariah Laws and listed with CNX Nifty 500 Shariah. 2. Non –Shariah Companies which are listed in CNX Nifty 500. Sampling Elements: 1. Shariah Companies: companies which are working for last five years with CNX Nifty 500 Shariah. 2. Non –Shariah Companies: companies which are working for last five years

with CNX Nifty 500. Sample Size: 1. Shariah Companies: 40. 2. Non –Shariah Companies: 40. Sampling Technique: CNX Nifty 500 index has five hundred listed companies out of it 113 companies were working from April 2011 to March 2015. CNX Shariah 500 index has 158 listed companies out of it 81 companies were working from April 2011 to March 2015. For the purpose of selecting companies stratified sampling has been applied.

First, Companies are categorized into nine strata on the basis of range analysis of market capitalization. Companies are selected from each stratum in proportion to the size of the strata.

Table 1, Categories of Market Capitalization of Selected Portfolio

Parts	Categories of Market Capitalization	Portfolio of Shariah Stocks		Portfolio of Non-Shariah Stocks	
		Total No. of Companies	Shariah Stocks	Total No. of Companies	Non-Shariah Stocks
1	More Than 10,00,000	5	2	3	1
2	10,00,000 - 5,00,000	5	2	3	1
3	5,00,000 - 3,00,000	6	3	2	1
4	3,00,000 - 1,00,000	16	8	13	5
5	1,00,000 – 50000	12	6	17	6
6	50000- 30000	10	5	16	6
7	30000- 10000	22	11	39	13
8	10000- 5000	5	3	16	6
9	5000- 0	0	0	4	1
Total		81	40	113	40

Sources: Researcher's Estimates

For Example: In the first strata of Shariah portfolio there 5 companies out of 81 companies. Hence the proportion comes out to be

$$= (5/81) * 40 = 2.4,$$

2.4 rounded off to 2, these two companies were selected on the basis of simple random process, in simple random process the 2 random numbers were generated between 1 to 5 and respective companies were selected.

After selection of portfolios of Shariah and Conventional stocks researcher select the companies from each categories of market capitalization on the basis of random table. Fundamental data of all selected companies were collected from the CMIE Prowess and Bloomberg (IIM-Culcutta). There are list of selected companies, selection criteria is already mentioned above.

Table 2, Selected Portfolio of Shariah Stocks

S.N.	Portfolio of Shariah Stocks	S.N.	Portfolio of Shariah Stocks
1	3M India Ltd.	21	ElgiEquipments Ltd.
2	A C C Ltd.	22	Eveready Industries (India) Ltd.
3	Abbott India Ltd.	23	F A G Bearings India Ltd.
4	Agro Tech Foods Ltd.	24	Federal-Mogul Goetze (India) Ltd.
5	Amara Raja Batteries Ltd.	25	Geometric Ltd.
6	Astral Poly Technik Ltd.	26	Godrej Consumer Products Ltd.
7	AstrazenecaPharma India Ltd.	27	H C L Infosystems Ltd.
8	Automotive Axles Ltd.	28	Hindustan Unilever Ltd.
9	Bajaj Electricals Ltd.	29	Honeywell Automation India Ltd.
10	BalmerLawrie & Co. Ltd.	30	Indraprastha Gas Ltd.
11	Bata India Ltd.	31	JagranPrakashan Ltd.
12	Berger Paints India Ltd.	32	K E C International Ltd.
13	Blue Star Ltd.	33	Kalpataru Power Transmission Ltd.
14	Castrol India Ltd.	34	Lupin Ltd.
15	Clariant Chemicals (India) Ltd.	35	N I T Technologies Ltd.
16	Colgate-Palmolive (India) Ltd.	36	Nocil Ltd.
17	Crompton Greaves Ltd.	37	Reliance Industries Ltd.
18	Cummins India Ltd.	38	Tata Elxsi Ltd.
19	Dabur India Ltd.	39	Unichem Laboratories Ltd.
20	Dr. Reddy'S Laboratories Ltd.	40	V A Tech Wabag Ltd.

Sources: Researcher's Estimates

Table 3, Selected Portfolio of Non-Shariah Stocks

S.N.	Portfolio of Conventional Stocks	S.N.	Portfolio of Conventional Stocks
1	B F Utilities Ltd.	21	Great Eastern Shipping Co. Ltd.
2	Balkrishna Industries Ltd.	22	Gujarat State Petronet Ltd.
3	Bharat Electronics Ltd.	23	H E G Ltd.
4	Bhushan Steel Ltd.	24	HimatsingkaSeide Ltd.
5	Bombay Burmah Trdg. Corpn. Ltd.	25	Hindustan Petroleum Corpn. Ltd.
6	Bombay Dyeing & Mfg. Co. Ltd.	26	Hindustan Zinc Ltd.
7	Brigade Enterprises Ltd.	27	I L & F S Transportation Networks Ltd.
8	Century Plyboards (India) Ltd.	28	I R B Infrastructure Developers Ltd.
9	Century Textiles & Inds. Ltd.	29	I T D Cementation India Ltd.
10	Container Corpn. Of India Ltd.	30	Indian Oil Corpn. Ltd.
11	D L F Ltd.	31	J K Cement Ltd.
12	Deepak Fertilisers & Petrochemicals Corpn. Ltd.	32	J K Lakshmi Cement Ltd.
13	Dishman Pharmaceuticals & Chemicals Ltd.	33	J K Tyre & Inds. Ltd.
14	Dynomatic Technologies Ltd.	34	Jai Corp Ltd.
15	Electrosteel Castings Ltd.	35	Jaiprakash Associates Ltd.
16	Engineers India Ltd.	36	K C P Ltd.
17	Essel Propack Ltd.	37	Kitex Garments Ltd.
18	G T L Infrastructure Ltd.	38	M B L Infrastructures Ltd.
19	Gitanjali Gems Ltd.	39	M O I L Ltd.
20	Glaxosmithkline Pharmaceuticals Ltd.	40	N M D C Ltd.

Sources: Researcher's Estimates

Before investing in a company so many questions rise in the mind. How is the company being run? Is it generating profit? Is the performance getting better or worse? How does it compare to peers? All these answer to question is to analyses the profitability ratio. This ratio presents the performance the individual company.

Multiple Regression Analysis

In order to estimate the relationship of Shariah and conventional returns to the chosen the variables, the correlation of the stock returns and financial ratios are examined by the multiple regression analysis. In another way multiple regression analysis aims to investigate how shariah and conventional stocks reaction to the same selected variables by testing and examining the linkage between stock returns and selected financial ratios as defined in the equation below. The formula is shown follows:

$$R_t = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e$$

Where:

R_t = Yearly return of the stocks

X_1 = Debt to Equity Ratio

X_2 = Earning Per Share Ratio

X_3 = Price Earning Ratio

X_4 = Net Profit Margin

X_5 = Return on Equity

X_6 = Price to book value

e = Random Error

Model Specification for the Panel Data

The panel data techniques, Fixed Effects model and Random Effects model have been employed to examine the objective.

Pooled OLS regression for Selected Portfolio

Researcher is using pooled OLS regression because have pool all 200 observations (40 x 5) and estimate a performance of valuation of the companies, where 40 represents the list of companies and 5 represent the years of individual company. Here researcher is denying the heterogeneity or individuality of all 40 companies that exist among 40 all companies. Polled OLS is neglecting the dual nature of time series and cross sectional data. Not only neglecting this runs the pooled model, but also polling assumes that the coefficients of the valuation performance remain constant across the time and cross section. The pooled OLS is also known as the constant coefficient model, for researcher assuming that coefficients across time and cross section remain the same (Gujrati, 2011).

The major problem with this model is that it does not distinguish various companies that have the in the list. In simple words researcher can say there is no existence heterogeneity in the all companies.

The Fixed Effects / Least Square Dummy Variables (LSDV) Model – Fixed effect model or LSDV model use for heterogeneity or individually among 40 companies by allowing having its own intercept value. One another way to take into account the heterogeneity that exist among 40 company is to allow each company to have own intercept, as in the following equation (1). Notice that we have added the subscript i to the intercept of the 40 companies may differ.

The difference may be due to company size, company assists, and industry wise (Gujrati D. N., 2004).

Random Effect Model - In this model, all the 40 companies have a common mean value for the intercept. Intercepts values in this method are assumed to be random as it is assumed that the sample has been drawn randomly from a large population.

Now researcher shall apply Hausman test to check which model (Fixed effect or Random effect) is suitable to accept.

Hausman Test - This test is used to check which model (fixed effect or random effect model) is suitable to use.

Null hypothesis: Random effect model is appropriate

Alternative hypothesis: Fixed effect model is appropriate

If get the statistical P-value (less than 5%). Researcher shall use fixed effect model, otherwise random effect model. Afterwards, I shall check which model is appropriate, fixed effect or pooled regression model?

Empirical Analysis and Discussion

This part of study narrated fundamental determinants of Shariah and Non-Shariah compliant companies in India.

Table 4, Pooled OLS Regression of Shariah Portfolio

Dependent Variable: MPS
Method: Panel Least Squares
Sample: 2011 2015
Total panel (balanced) observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-306.8738	127.7382	-2.4024	0.0172
DER	266.1525	228.3449	1.1656	0.2452
EPS	26.9887	1.7248	15.6473	0.0000
PER	1.9594	0.9983	1.9629	0.0511
NPM	38.9389	8.0136	4.8591	0.0000
ROE	-2605.6500	334.9443	-7.7794	0.0000
PBV	86.7222	10.7142	8.0941	0.0000
R-squared	0.6272	Mean dependent var		701.668
Adjusted R-squared	0.6156	S.D. dependent var		1110.24
S.E. of regression	688.318	Akaike info criterion		15.9408
Sum squared resid	91439943	Schwarz criterion		16.0562
Log likelihood	-1587.0750	Hannan-Quinn criter.		15.9875
F-statistic	54.1222	Durbin-Watson stat		0.61755
Prob(F-statistic)	0.0000			

Author's estimated

Using Eviews 7, researcher obtained the results of Table 4. The outcome shows that Earning per share (EPS), P/E ratio, Net profit margin (NPM) and Price to book value (PBV) have significant positive impact on market price of share (MPS). Return on equity (ROE) has negative but statistically significant impact on market price of share.

Debt to equity ratio (DER) has statistically insignificant impact on the market price of share. The low value of Durbin-Watson statistic shows serial correlation in variables. The Pooled OLS model does not show heterogeneity among the 40 companies.

Table 5, Fixed Effect Model of Shariah Portfolio

Dependent Variable: MPS
Method: Panel Least Squares
Sample: 2011 2015
Total panel (balanced) observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-324.3126	177.7332	-1.8247	0.0700
DER	230.2142	449.2409	0.5125	0.6091
EPS	24.2658	3.5601	6.8160	0.0000
PER	0.6747	0.8869	0.7607	0.4480
NPM	51.7336	10.4949	4.9294	0.0000
ROE	-2387.0310	543.8735	-4.3889	0.0000
PBV	78.5071	15.3811	5.1041	0.0000

Effects Specification

Cross-section fixed (dummy variables)			
R-squared	0.8343	Mean dependent var	701.668
Adjusted R-squared	0.7859	S.D. dependent var	1110.24
S.E. of regression	513.761	Akaike info criterion	15.52
Sum squared resid	40648359	Schwarz criterion	16.2786
Log likelihood	-1506.0030	Hannan-Quinn criter.	15.827
F-statistic	17.2292	Durbin-Watson stat	1.25187
Prob(F-statistic)	0.0000		

Author's estimated

Using Eviews 7, the outcome shows that Earning per share (EPS), Net profit margin (NPM) and Price to book value (PBV) have significant positive impact on MPS. Return on equity (ROE) has negative but statistically significant impact on price of market share. Debt to equity ratio (DER) and P/E ratio have statistically insignificant impact on the market price of share. The value 1.25 of Durbin –Watson statistic shows no autocorrelation in variables of 40 companies. The Fixed Effects Model shows heterogeneity among the 40 companies.

By comparing the results of the two models i.e. the OLS pooled regression and FEM results it is found that there is a substantial difference between the value of coefficients and their signs. Fixed effects model is better than the OLS pooled model. Heterogeneity effects are explicitly taken into account in the fixed effect model. Therefore, researchers can use the restricted F test.

$$F = \frac{(R^2_{ur} - R^2_r) / m}{(1 - R^2_{ur}) / (n-k)}$$

Where R^2_{ur} and R^2_r are unrestricted (Fixed effect model) and restricted (Common Constant model) coefficient of determination, m is the number of parameters omitted from the restricted model (39 here), n is the number of observations (400), and k is the number of parameters estimated in the unrestricted regression (here a total of 46). The restricted and unrestricted R^2 values are obtained from Tables 4 and 5, respectively.

$$F = \frac{(0.8343 - 0.6272) / 39}{(1 - 0.8343) / 354} = 11.52$$

$$(1 - 0.8343) / 354$$

Here F-statistic is greater than the F-critical value hence the null hypothesis is rejected. The value of F is significant which shows that the fixed effects model is superior to the pooled regression model.

The term fixed effect shows intercept may differ across companies, but intercept does not vary over the time, i.e. it is time invariant. So that researcher has alternative method of estimation which handles the constants for each section as random parameters rather than fixed.

Table 6, Random Effect Model of Shariah Portfolio

Dependent Variable: MPS
Method: Panel EGLS (Cross-section random effects)
Sample: 2011 2015
Total panel (balanced) observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-340.0043	159.3785	-2.13313	0.0342
DER	271.3082	298.0086	0.910404	0.3637
EPS	25.88563	2.256896	11.46957	0.0000
PER	0.983305	0.840679	1.169655	0.2436
NPM	49.06376	8.176221	6.000787	0.0000
ROE	-2547.966	382.4533	-6.662162	0.0000
PBV	82.35004	11.94848	6.892096	0.0000

Effects Specification			
	S.D.	Rho	
Cross-section random	465.2689	0.4506	
Idiosyncratic random	513.761	0.5494	

Weighted Statistics			
R-squared	0.477007	Mean dependent var	310.683
Adjusted R-squared	0.460748	S.D. dependent var	701.8905
S.E. of regression	515.4249	Sum squared resid	5.1E+07
F-statistic	29.33826	Durbin-Watson stat	1.007533
Prob(F-statistic)	0.0000		

Unweighted Statistics			
R-squared	0.618231	Mean dependent var	701.6677
Sum squared resid	93645146	Durbin-Watson stat	0.551648

Author's estimated

Using Eviews 7, the outcome shows that EPS, NPM and PBV have significant positive impact on MPS. Return on equity has statistically significant negative impact on the market price of share. DER and P/E ratio have statistically insignificant positive relation with the market price of share.

After analyzing the data with the above three models, researcher has to decide which model is good to accept. To

check it the Hausman test will be applied.

Hausman test will decide which model (Fixed effect model or Random effect model) is suitable to accept. Here, Null hypothesis is

H₀: Random effects model appropriate.

H₁: Fixed effects model appropriate.

Table 7, Hausman Test of Shariah Portfolio

Correlated Random Effects - Hausman Test

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	7.252106	6	0.2982

Here, P- value is statistically insignificant i.e. P-value is more than 5% meaning that null hypothesis is accepted. This

shows Random effect model is more appropriate.

Table 8, Pooled OLS Regression of Portfolio of Non-Shariah Stocks

Dependent Variable: MPS

Sample: 2011 2015

Cross-sections included: 40

Total panel (balanced) observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	134.9094	48.3486	2.7903	0.0058
DER	-3.3736	2.0464	-1.6485	0.1009
EPS	0.5852	1.4850	0.3941	0.6939
PER	0.0306	0.0049	6.2605	0.0000
NPM	1.6462	2.7928	0.5894	0.5563
ROE	1.8117	3.0190	0.6001	0.5492
PBV	7.2795	1.3940	5.2220	0.0000
R-squared	0.50661	Mean dependent var		264.578
Adjusted R-squared	0.4835	S.D. dependent var		541.089
S.E. of regression	473.7238	Akaike info criterion		15.1935
Sum squared resid	43311939	Schwarz criterion		15.3089
Log likelihood	-1512.35	Hannan-Quinn criter.		15.2402
F-statistic	36.1036	Durbin-Watson stat		0.7472
Prob(F-statistic)	0.0000			

Author's estimated

Using Eviews 7, researcher acquired the results of Table 8. The outcome shows that EPS, P/E ratio, NPM and PBV have significant positive impact on market price of share, Return on equity has negative but statistically significant relation with market price of share. DER has statistically

insignificant positive impact on the MPS. The low value of Durbin –Watson statistic shows serial correlation in variables. The Pooled OLS model does not show heterogeneity among the 40 companies.

Table 9, Fixed Effect Model of Non-Shariah Portfolio

Dependent Variable: MPS

Method: Panel Least Squares

Sample: 2011 2015

Total panel (balanced) observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	208.377	48.35608	4.30922	0.0000
DER	-2.418113	1.232384	-1.962143	0.0515
EPS	1.699889	1.581056	1.07516	0.2840
PER	-0.007047	0.003239	-2.17564	0.0311
NPM	2.135104	4.808684	0.44401	0.6577
ROE	-1.127121	3.066077	-0.36761	0.7137
PBV	4.471317	0.912045	4.902517	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.84557	Mean dependent var		264.578
Adjusted R-squared	0.800445	S.D. dependent var		541.089
S.E. of regression	241.7134	Akaike info criterion		14.012
Sum squared resid	8997507	Schwarz criterion		14.7706
Log likelihood	-1355.202	Hannan-Quinn criter.		14.319
F-statistic	20.73815	Durbin-Watson stat		1.24063
Prob(F-statistic)	0.0000			

Author's estimated

Table 9 the results show that DER and PER have negative but statistically significant impact on MPS. Price to book value is positively significant to the market price of share. Rests of variables (EPS, NPM and ROE) are insignificant relation with MPS. The value 1.24 of Durbin –Watson statistic shows no autocorrelation in variables of 40 companies. The Fixed Effects Model shows heterogeneity among the 40 companies.

By comparing the results of the two models i.e. the OLS pooled regression and FEM results it is found that there is a substantial difference between the value of coefficients and their signs. Fixed effects model is better than the OLS pooled model. Heterogeneity effects are explicitly taken into account in the fixed effect model. Therefore, researchers can use the restricted F test.

Fixed effects model is better than the OLS pooled model. Heterogeneity effects are explicitly taken into account in the fixed effect model. Therefore, researchers can use the restricted F test.

$$F = \frac{(0.84557-0.50661)/39}{(1-0.84557)/354} = 19.93$$

Here F-statistic is greater than the F-critical value hence the null hypothesis is rejected. The value of F is significant which shows that the fixed effects model is superior to the pooled regression model.

The term fixed effect shows intercept may differ across companies, but intercept does not vary over the time, i.e. it is time invariant. So that researcher has alternative method of estimation which handles the constants for each section as random parameters rather than fixed.

Table 10, Random Effect Model of Non-Shariah Portfolio

Dependent Variable: MPS
Method: Panel EGLS (Cross-section random effects)
Sample: 2011 2015
Cross-sections included: 40
Total panel (balanced) observations: 200

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	193.6747	57.79682	3.350958	0.0010
DER	-2.687509	1.198464	-2.242461	0.0261
EPS	1.215764	1.290125	0.942361	0.3472
PER	0.000695	0.003099	0.224405	0.8227
NPM	1.887092	3.101449	0.608455	0.5436
ROE	-0.179276	2.563568	-0.069932	0.9443
PBV	5.179505	0.873197	5.931658	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			279.0391	0.5713
Idiosyncratic random			241.7134	0.4287
Weighted Statistics				
R-squared	0.141073	Mean dependent var	95.57427	
Adjusted R-squared	0.11437	S.D. dependent var	295.3414	
S.E. of regression	277.9396	Sum squared resid	14909330	
F-statistic	5.283152	Durbin-Watson stat	0.898124	
Prob(F-statistic)	0.000046			
Unweighted Statistics				
R-squared	0.107455	Mean dependent var	264.5775	
Sum squared resid	52002131	Durbin-Watson stat	0.257498	

Author's estimated

Table 10, The result shows that Debt to equity ratio (DER) has negative but statistically significant on the impact on the market price of share. Price to book value (PBV) has significant positive relation with MPS. Rest of all variables (EPS, PER and NPM) are positive but not statistical

insignificant. ROE has negative insignificant impact on MPS. Here researchers apply the Hausman test to diagnose, which model (Fixed effect model and Random effects model) is suitable to accept.

Table 11, Hausman Test of Non-Shariah Portfolio

Correlated Random Effects - Hausman Test
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	68.1859	6	0.0000

Author's estimated

Here, P-value is statistically significant i.e. P-value is less than 5% meaning that researcher reject the null hypothesis, means fixed effect model is appropriate.

Conclusion

The present study concludes that the fundamental determinants of share Price of Shariah and Non-Shariah index in India. The study employs panel data consisting of annual time series data over the period 2011-2015 and also cross-section data pertaining to 6 major fundamentals variables. The panel data techniques includes Fixed Effects model and Random Effects model has been deployed to investigate the objective. The empirical results of Fixed Effect model reveal that the Earning per share (EPS), P/E ratio, Net profit margin (NPM) and Price to book value (PBV) have significant positive impact on market price of share (MPS), and Return on equity (ROE) has negative but statistically significant effect on price of market share. Surprisingly, Debt to equity ratio (DER) has positive but statistically insignificant on the impact on the market price of share. These results are consistent with findings of (Zahir & Khanna, 1982), Malhotra (1987), (Sharma, 2011), that outcome of the Random Effect Model that shows that Earning per share (EPS), Net profit margin (NPM) and Price to book value (PBV) have significant positive impact on market price of share (MPS), and Return on equity (ROE) has negative but statistically significant effect on price of market share. Surprisingly, Debt to equity ratio (DER) and P/E ratio have positive but statistically insignificant on the impact on the market price of share. These results are consistent with the findings of (Srinivasan, 2013), (Malik, Qureshi, & Azeem, 2012). Hausman test justified the best fitted model in determination of share price in Shariah and Non Shariah portfolios. In the case of Shariah portfolio, Null is accepted that means the Random Effect model is appropriate. Meaning that, all the 40 companies have a common mean value for the intercept. Other side Non-Shariah portfolio, Null is rejected that means the Fixed Effect model is appropriate. Fixed effect model or LSDV model shows that heterogeneity or individually among 40 companies by allowing having its own intercept value. The present study confirms that performance of fundamental ratio of the firm will be essential and immense helpful to the investors and analysts in accessing the better stocks. On overall basis some of the implications can be inferred from this study. Price determination models are used in this study, which is relevant to the Indian capital market. Basically security analysis is pertinent in India. Financial information reported by the companies is of sufficient quality accounting

and reporting standard. Most of the regulatory activities are helpful for the investors. However get the full advantage and awareness of fundamental analyses. By which the government and regulatory authorities will take rational and informed financial decisions.

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