# THE QUEST FOR FINANCIAL PERFORMANCE METRIC HAVING SUPERIOR ASSOCIATION WITH SHARE PRICE

**Dr. Khushboo Vora** Chetana's Institute of Management and Research.

#### Abstract:

The purpose of this paper is to rank various performance measures in terms of information content and determine the best financial performance metric among the set of performance measures in explaining the variation in share price. For better exposition, a sample of 365 Indian listed companies, for a period of 5 years 2016-2020, have been divided into three sectors-manufacturing, financial services and non-financial services. After performing univariate regression analysis, the results of the study reveal that Earnings per share has a superior association with share price across all companies. Dividend payout ratio, long term debt to equity ratio, current ratio, fixed asset turnover ratio, debtor turnover ratio, interest coverage ratio and EBIT margin have a non-significant relationship with share price throughout the study period.

**Keywords** Performance measurement, Information content, explanatory power, traditional measures, accounting ratios, earning ratios, economic ratios, value ratios, panel regression, share price.

#### INTRODUCTION

In a famous article (Hunt, 1975) enunciated Professor Finagle's three laws of information:

- i. The information we have is not what we want,
- ii. The information we want is not what we need,
- iii. The information we need is not available.

What investors have is accounting information of firms and their share price variation. However, what investors or analysts want are not accounting information, but financial performance metrics w.r.t profitability, strength, liquidity and value creation that help us predict share price movement. The information that investors really need is whether the firm will create or destroy wealth for its shareholders in future so that he can take investment decisions? The really question now arise is what are the key drivers of shareholder's wealth? Various researches have been conducted to understand the key drivers of shareholder's wealth across various sectors and indices in India and the world over a period of varied time horizons. Graham & Dodd (1934) originated fundamental analysis (using financial performance metrics) for the share price valuation and identifying undervalued stocks thus capturing the opportunities of market mispricing to get better returns and create wealth.

The origin of using financial performance metrics for identifying stocks that will generate better returns and create wealth can be dated back to (Graham & Dodd, 1934). Chen & Shimerda (1981) inferred that financial ratios are a powerful tool evaluating performance and financial condition of an entity and Barnes (1987) added that financial ratios plays an important part in estimation of empirical relationships for predictive purposes. Pinches & Mingo (1973) classified ratios into seven factors namely: financial leverage, return on investment, short term capital intensiveness, long term capital intensiveness, size, earnings

stability and debt and debt coverage stability. Empirically Pinches, Mingo & Caruthers (1973) and Pinches et. al (1975) reclassified financial ratios into the following 7 factors; cash position, short term liquidity, receivable turnover, inventory turnover, return on investment, financial leverage and capital turnover and concluded that ratios can be used for predictive purposes. Alternatively, Stevens (1973) classified ratios into 3 factors namely, activity, profitability and liquidity. Libby (1975) classified ratios in 5 factors: asset balance, activity, profitability, liquidity and cash position. Finally, Chen & Shimerda (1981) reclassified the ratios into seven factors naming them as financial leverage, capital turnover, return on investment, inventory turnover, receivable turnover, short-term liquidity and cash position. Pecha, Noguera & White (2015) indicated that accounting ratios are usually classified in textbooks as profitability or margin ratios, asset turnover or efficiency ratios, liquidity, and leverage or solvency ratios.

Chen & Shimerda (1981) added a new perspective to the above discussion by stating that the ratios classified by the same factor are highly correlated, and the selection of one ratio to represent a factor can account for most of the information provided by all the ratios of that factor. Inclusion of more than one ratio from a factor leads to multi-collinearity among ratios and distorts the relationship between dependent and independent variables. Thus, it is important that minimum number of ratios, one ratio in most cases, be selected to represent each factor for further statistical analysis. Each ratio contains common as well as unique information. The common information contained in the ratio is represented by a factor. The unique information is not shared by any other ratio in that factor. Thus, the set of ratios selected for further analysis should be selected in such a way that the ratios capture most of the common information contained in their factor, and as a group, contains more of the unique information than any other set of ratios

White, Sondhi & Fried (2017) stated that financial analysis relies on an integrated use of many ratios, rather than a selected few, as all the four categories (activity, liquidity, profitability, long term debt and solvency) are interrelated rather than independent. Thus small subset of ratios to represent the whole set requires choosing ratios that are both highly correlated with those ratios excluded and not correlated with other ratios in the subset. Sophisticated users of financial information should either use a reduced set of financial ratios, as opposed to a large number of ratios used in practice to reduce over lapping information, or use new financial ratios that are not mentioned in financial textbooks but are widely used by equity analysts (Pecha, Noguera, & White, 2015).

The importance of financial accounting information in stock market growth can best be appreciated by examining the impact of accounting information numbers on stock prices and returns. Investors do fundamental analysis, using financial performance indicators, to select a company to invest in, and technical analysis to help make their sell decisions (Rejimon, Ashokkumar, & Madhusoodhanan, 2016).

One of the main objectives of financial performance analysis is precisely to identify a relationship between changes in the firm's market value trend and the firm's performance. Cootner (1964) stated that "the prices of securities are typically very sensitive, responsive to all events, both real and imagined". (Molodovsky, 1995) further refined that stock prices move around a computable value. Temporarily they sway from it, but always return. They remain bound by gravitational force to that sun of the economic system.

Both, accounting (earning) or economic (value) profit serve as a measures of financial performance. The association of financial performance measures with shareholder's wealth

has been analysed by several researchers. Kormendi & Lipe (1987); Ball & Brown (1968); Bernard & Thomas (1989) and Nichols & Wahlen (2004) confirms the strong association between earnings and return.

Various studies since then on the fundamental financial performance factors determining shareholder's value or wealth across various indices in India and the world over a period of varied time horizons have been conducted and they clearly exhibited many contradictory results.

#### **REVIEW OF THEORY AND EMPIRICS**

Bodie, Kane, & Marcus (2019); Block, Hirt, & Danielsen (2019); Brigham & Davies (2015); Brigham & Ehrhardt (2016); Brigham & Houston (2015); Cornett, Adair, & Nofsinger (2020); Gitman (2019); Keown, Martin, & Petty (2019); Lasher (2015); Melicher & Norton (2017); Pandey I. M. (2019); Chandra (2015); Ehrbar, Stewart III & Stern (1998); and Khan & Jain (2018) in their books in the discipline of finance confirmed that most of the analysis of financial performance of a company is predominantly based on ratios that are calculated through balance sheet and income statement data.

Ball & Brown (1968); Amir, Harris & Venuti (1993); Francis & Schipper (1999); Beaver (1968); Barth, Beaver, & Landsman (1998, 2001); Collins, Maydew & Weiss (1997); Lev & Zarowin (1999); Ohlson (1995), Khanna M. (2014), Gupta & Sikarwar (2016), Bhatia & Mulenga (2019) conducted studies to assess whether accounting information published in financial statements reflect relevant, valuable and incremental information which then can be used by investors in valuing equity and taking investment decisions to create wealth.

Beaver (1966); Latane & Tuttle (1967); Pinches et al. (1975); Bhole (1980); Banz (1981); Stewart III G. B. (1991, 2013); Dodd & Chen (1996); Gapenski (1996); Bacidore et al. (1997);Biddle, Bowen & Wallace (1997); Chen & Dodd (1997, 2001); Rees (1997); Rappaport (1998); Salvary (1998); Worthington & West (2001); Ray (2001); Griffin (2002); Trevino & Robertson (2002); Stanley (2002); Maditinos, Sevic & Theriou (2006, 2009); Ismail (2006); Palliam (2006); Singhania (2006); Kyriazis & Anastassis (2007); Koller, Goedhart & Wessels (2008); Nayak (2008); Tripathi (2008); Lee & Kim (2009); Sehgal & Pandey (2010); Al-Tamimi et al (2011); Kumar & Sharma (2011); Nirmala, Sanju & Ramachandran (2011); Sharma S. (2011); Alam & Nizamuddin (2012); Arabsalehi & Mahmoodi (2012); Bhattacharjee (2012); Gill, Biger & Mathur (2012); Dutta, Bandopadhyay & Sengupta (2012); Dawar, (2012); Jashav & Badade (2012); Placido & Menaje (2012); Srinivasan (2012); Venkates, Tyagi & Ganesh (2012); Das & Pattanayak (2013); Kumar & Mishra (2013); Malhotra & Tandon (2013); Raithatha & Bapat (2013); Sumiyana & Baridwan (2013); Uddin et al. (2013); Almumani, M. (2014); Sharma M. (2014); Karpagavalli & Nirmala (2014); Sukhija (2014); Ozlen (2014); Arshad et al. (2015); Challa & Chalam(2015); Geetha & Swaaminathan(2015); Hamidah (2015); Jeroh & Edesiri (2015); Laing & Dunbar (2015); Mulenga (2015); Nautiyal (2015); Balakrishnan, K. (2016); Balan, et al. (2016). Chashmi & Fadaee (2016); Enow & Brijlal (2016); Sundaram & Rajesh (2016); Titilayo et al. (2016); Avdalović & Milenković (2017); Iyappan & Ganesamoorthy (2017, 2017); Geetha & Kumar (2017); Jain & Bajaj (2017); Kumar, P. (2017); Om & Goel (2017); Velankar et al. (2017); Hall (2018); Mulenga & Bhatia (2018); Nautiyal & Kavidayal (2018); Vora, K. (2018, 2020); Bhatia & Mulenga (2019); Goyal & Gupta (2019); Jiet & Manual (2019); Singh & Tandon (2019); Ahmad et al. (2022) explained the significant and insignificant association between accounting fundamentals and stock price.

While some researchers pointed out that some critical variables like DPS, EPS, EVA, MVA, ROI, BVPS etc. greatly influenced the share prices, others have found the same set of

variables as minor elements having little impact on the share prices and do not drive the share price. Moreover, the sign and the magnitude of the impact also differed w.r.t time period, industry and sample size. The studies pertaining to Indian stock market vis-à-vis the other international stock markets have also shown vast differences existing among these markets. There can be many reasons for these differences, which can be attributed to factors like market efficiency, liquidity, transparency, volatility in the markets, the participation and confidence of retail investors in the markets, loopholes in the regulatory practices, standardization of accounting and auditing procedures, risk containment mechanisms, technological advancements, time period etc. (Das & Pattanayak, 2013).

Even then, it can safely be inferred that accounting (earning) and economic (value) variables do impact MPS and influence the way these stock markets behave over a period of time. Both accounting (earning) and economic (value) variables do drive the MPS, however the sign and the magnitude of the impact varies with the change in sample size, period of study, country, stock exchange, industry etc. However, the gap in the literature was raised as the above studies did not link the drivers of (determinants of) MPS with indicators that provides the highest information content on (have the biggest impact on) MPS.

#### **METHODOLOGY**

The present study is undertaken with an objective to determine the financial performance metric that has the superior association with market share price and to rank them based on variations explained by them in the dependent variable. Entire data for the study is collected from the Capitalline database.

In order to make our sample representative of the population, 500 companies have been chosen as sample being index contributors to the BSE 500 index. BSE 500 companies are spread across 76 industries giving due representation to all the industries and sectors of the Indian economy. In this study, a systematic deletion method of sampling has been followed to arrive at the final sample. First, out of 500 companies in BSE500 index, 48 companies were not grouped as either A or B and hence discarded. 87 companies were either not listed before 2016 or their fundamental data was not available. To summarize, it is a secondary panel data; i.e. a combination of cross-sectional data (365 companies) and time series data (5 years i.e. from 2016 to 2020) classified as manufacturing, financial service and non-financial service. The details of the companies, industry and category is given in appendix 1 and appendix 2. The data was purposely collected for a pre-covid era to rule out pandemic impact on fundamentals of the company. The data was compiled from capitaline database. Furthermore, the data for this study has been analyzed through a special econometric software SPSS.

17 variables are selected for this study, out of which, Closing Market Price Per Share (MPS) has been taken as the dependent variable. Adjusted Net Profit Margin (ANPM), Cash Profit Margin (Adjusted Net Profit + Depreciation Margin) (CPM), Current Ratio (CR), Debt Equity Ratio (DER), Dividends Paid (DIV), Dividend Payout Ratio (DPR), Debtors Turnover

Journal of Contemporary Issues in Business and Government Vol. 28, No. 04, 2022 <u>https://cibgp.com/</u>

P-ISSN: 2204-1990; E-ISSN: 1323-6903 DOI: 10.47750/cibg.2022.28.04.157



Ratio (DTR), Earnings Before Interest And Tax Margin (EBITM), Earnings Per Share (EPS), Fixed Assets Turnover Ratio (FATR), Interest Coverage Ratio (ICR), Inventory Turnover Ratio (ITR), Long Term Debt to Equity Ratio (LDER), Return On Capital Employed (ROCE) and Return On Net Worth (RONW) are the selected independent accounting based financial performance metrics and Enterprise Value Multiple (EVM) is the selected independent economic based financial performance metric. Each variable thus had 1825 observations.

Simple linear univariate regression analysis was performed to identify the strength of relationship between financial performance metric and market price per share as followed in (Altaf 2016). Simple linear regression was also used in order to identify financial performance metric that has the highest information content in the dependent variable. All 16 financial performance metrics were individually regressed for 6 time periods (5 individual years and all years together) and 4 classification (Manufacturing, financial services, non-financial services and all companies together) with regressand MPS. Thus, 384 (16\*6\*4) simple linear univariate regressions results are clubbed to identify financial performance metrics qualifying to have superior significant relationship with market price per share.

All the financial performance metrics that have level of significance above 10% are considered to have non-significant association with MPS and the one having highest  $R^2$  is considered to have the best explanatory prediction of MPS and hence allotted first rank.

#### **RESULTS AND DISCUSSIONS**

It is evident from Table1 that EPS succeed to be the most significant associate of MPS at 1% level of significance throughout the study period and categories. Whereas, DIV qualify to be the most significant associate of MPS at 1% level of significance for only Manufacturing and non-financial service sector for all years. DIV remained non-significant variable for 4 years (2016, 2018, 2019, and 2020) and significant @10% level for 2017 year in case of financial service sector. Both EPS and DIV are significant predictors of MPS for the overall results as per table 2.

DPR, LDER, CR, FTR, DTR, ICR, EBITM turned out to have non-significant association with MPS across all time period, sectors and all companies together. DER had non-significant

association across all 3 sectors, however was significant at 10% level for only for all years together and 2016 for Manufacturing sector and all companies collectively.

ITR showed a non-significant relationship with MPS in manufacturing and financial services for all years. ITR did display a significant relationship at 5% level with non-financial services always.

CPM and ANPM exclusively showed significant relationship with MPS in financial service sector for 4 consecutive years from 2016-2019 and all years together. Whereas, Both, CPM and ANPM had non-significant association with MPS during 2020 in financial service sector. CPM and ANPM turned out to be non-significant associate of MPS for manufacturing, non-financial services and all companies together for all 5 years individually. ANPM ironically was significantly associated with MPS in 2018 for non-financial services.

ROCE and RONW qualified to be significant determinant of MPS at 1% level for nonfinancial services for all years. ROCE and RONW are significant predictors of MPS financial services also but at varied significance level. ROCE and RONW for most years had nonsignificant relations with MPS for manufacturing sector and all companies together.

2016		Manufa	octuring														
2016		Manufacturing					Financial Service				Non-Financial Service						
	2017	2018	2019	2020	All	2016	2017	2018	2019	2020	All	2016	2017	2018	2019	2020	All
√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√ *
√ *	√ *	√ *	√ *	√ *	√ *	x	√ ***	×	x	×	√ *	√ *	√ *	√ *	√ *	√ *	√ *
×	×	×	×	x	x	×	×	×	x	×	x	x	×	x	x	×	×
√***	×	×	x	×	√ ***	x	×	×	x	×	x	x	x	x	x	x	x
×	×	×	×	×	x	×	×	×	x	×	x	x	×	×	x	x	x
×	x	x	x	x	x	x	x	×	x	x	x	×	×	×	x	×	x
×	×	×	×	×	×	×	×	×	×	×	x	×	×	×	×	×	×
x	×	×	x	×	×	x	×	×	×	×	x	×	√ ***	√ ***	√ ***	√ *	√*
x	×	×	x	×	x	x	×	x	x	x	x	x	x	x	x	x	×
×	×	×	×	×	×	×	×	×	×	×	x	×	×	×	×	×	×
x	×	×	×	×	x	×	×	×	x	×	x	x	×	x	x	×	x
x	×	×	×	×	×	√ **	√ **	√ ***	√ ***	×	√*	×	×	×	×	×	x
x	×	×	x	×	x	√ **	√ **	√ ***	✓ ***	x	√ *	x	x	√ ***	x	x	√ *
×	×	×	x	x	x	√ **	×	√ ***	√ ***	√ ***	√ *	√ *	√ *	√ *	√ *	√ *	√ *
×	×	×	×	×	×	√ **	√ **	√ **	√ **	√ *	√ *	√ *	√ *	√ *	√ *	√ *	√*
x	x	×	x	x	x	√ *	x	√ *	√ *	√ *	√ *	x	x	x	√ **	√ *	x
	✓* × <	$\checkmark$ $\checkmark$ $\checkmark$ $\checkmark$ $\times$ $\times$ $\checkmark$ $\times$	$\checkmark$ $\times$ $\times$ $\checkmark$ $\times$	$\checkmark$ $×$ $×$ $×$ $×$ $\checkmark$ $×$	$\checkmark *$ $\land *$ $\land *$ $\land *$ $\checkmark * * *$ $\land *$ $\land *$ $\land *$ $\land * * *$ $\land$ $\land *$ $\land *$ $\land * * * * * * * * * * * * * * * * * * *$	$\checkmark *$ $\checkmark * * *$ $\checkmark *$ $\land *$ $\land *$ $\land *$ $\land *$ $\checkmark * * *$ $\land *$ $\land *$ $\land *$ $\land *$ $\land *$ $\land * * *$ $\land *$ $\land *$ $\land *$ $\land *$ $\land *$ $\land * * * * * * * * * * * * * * * * * * *$	$\checkmark$	$\checkmark$	$\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\chi$ <t< td=""><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>x</math> <t< td=""><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>x</math> <math>x</math></td><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math></td><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math></td><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math></td><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math></td><td><math>\sqrt{3}</math> <math>\sqrt{3}</math> <math>\sqrt{3}</math></td><td><math>\sqrt{x}</math> <math>\sqrt{x}</math> <math>\sqrt{x}</math></td></t<></td></t<>	$\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $x$ <t< td=""><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>x</math> <math>x</math></td><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math></td><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math></td><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math></td><td><math>\sqrt{*}</math> <math>\sqrt{*}</math> <math>\sqrt{*}</math></td><td><math>\sqrt{3}</math> <math>\sqrt{3}</math> <math>\sqrt{3}</math></td><td><math>\sqrt{x}</math> <math>\sqrt{x}</math> <math>\sqrt{x}</math></td></t<>	$\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $\sqrt{*}$ $x$	$\sqrt{*}$	$\sqrt{*}$	$\sqrt{*}$	$\sqrt{*}$	$\sqrt{3}$	$\sqrt{x}$

Table1: Summary of Univariate Regression Analysis for manufacturing, financial service &

Note: Table 1 reports empirical results estimated after running cross-section regression over each period from 2016 to 2020 and panel data regression for overall period of 5 years. The notation of all the variables is same as defined in Appendix 3. ' $\sqrt{}$ ' indicates significant and ' $\Box$ ' indicates non-significant association between MPS and the respective independent variable. Asterisks indicate significance at 1% (\*), 5% (\*\*) and 10% (\*\*\*).

EVM a value metric, proved to have a non-significant association with manufacturing sector. EVM results were varied w.r.t financial and non-financial services. Some years it was significant indicator and other years proved to be non-significant predictor.

	All Companies –All Sector									
	2016	2017	2018	2019	2020	All				
EPS	√ *	√ *	√ *	√ *	√ *	√ *				
DIV	√ *	√ *	√ *	√ *	√ *	√ *				
DPR	x	x	x	x	x	x				
DER	x	x	×	×	×	√ ***				
LDER	x	x	x	x	x	×				
CR	x	x	x	x	x	×				
FTR	x	x	x	x	x	×				
ITR	x	x	x	x	x	×				
DTR	x	×	x	x	x	×				
ICR	x	x	x	x	x	×				
EBITM	x	x	x	x	x	×				
СРМ	x	x	×	×	×	×				
ANPM	x	x	×	x	x	×				
ROCE	√ *	✓ ***	x	×	x	√ *				
RONW	√ *	x	×	×	×	√ *				
EVM	x	x	x	x	x	×				

Table2: Summary of	<b>Univariate Regression</b>	Analysis for all 365 d	companies collectively

Note: Table 2 reports empirical results estimated after running cross-section regression over each period from 2016 to 2020 and panel data regression for overall period of 5 years. The notation of all the variables is same as defined in Appendix 3. ' $\sqrt{}$ ' indicates significant and ' $\Box$ ' indicates non-significant association between MPS and the respective independent variable. Asterisks indicate significance at 1% (\*), 5% (\*\*) and 10% (\*\*\*).

When all companies together were regressed for each year individually and collectively, DPR, LDER, CR, FTR, ITR, DTR, ICR, EBITM, CPM, ANPM, EVM turned out to have non-significant association with MPS. EPS and DIV qualified to be significant indicator of variation in MPS at a significance level of 1%.

DER had non-significant relation with MPS for all 5 years individually; however when data regressed for 5 years collectively DER qualified to be significant predictor of MPS at 10% significance level. The results displayed ROCE has significant association with MPS only in 2016, 2017 and all years together. RONW displayed

The regression results mention in appendix4 reveal that ANPM, CPM, DIV, DTR, EPS, ICR, ROCE and RONW share positive association with MPS across all companies, manufacturing, financial services and non-financial services sectors. DER, LDER, DPR, EVM and ITR have a negative association with MPS in manufacturing sector. DER, FTR and LDER share negative association with MPS in non-financial services. DER, DPR, FTR and LDER share negative association with MPS across all companies. All the independent variables show positive association with MPS in financial service sector. CR, EVM, EBITM, ITR trun out to have positive association with MPS for some years and negative association with MPS for few years.

The results presented in Table 3 exemplify the explanatory power of the independent variables in explaining dependent variable. All the variables ranking is based on two criterial; highest  $R^2$  and greater Coefficient. If any two variables had same  $R^2$ , then the variable with superior association with MPS was given better rank.

### Table3: Ranking of explanatory power of independent variables.

	201		201	<u> </u>	201	• 1	201	<b>_</b>			All Y	ears
IV	R <sup>2</sup>	Rank	R <sup>2</sup>	Rank	<b>R</b> <sup>2</sup>	Rank	<b>R</b> <sup>2</sup>	Rank	R <sup>2</sup>	Rank	R <sup>2</sup>	Rank
						ufacturi						
EPS	0.8130	1	0.9600	1	0.9100	1	0.8240	1	0.9030	1	0.8210	1
DIV	0.0700	2	0.0830	2	0.0390	2	0.0340	2	0.0570	2	0.0530	2
DER	0.0130	4	0.0090	3	0.0030	3	0.0040	3	0.0030	4	0.0050	3
ROCE	0.0180	3	0.0070	4	0.0020	4	0.0000	9	0.0020	5	0.0030	4
LDER	0.0080	8	0.0070	5	0.0020	6	0.0030	4	0.0020	8	0.0030	5
RONW	0.0120	6	0.0020	8	0.0000	11	0.0000	14	0.0020	6	0.0010	6
СРМ	0.0080	7	0.0020	7	0.0000	10	0.0010	5	0.0030	3	0.0010	7
ANPM	0.0120	5	0.0030	6	0.0000	9	0.0000	8	0.0020	7	0.0010	8
ICR	0.0030	11	0.0010	10	0.0020	5	0.0010	6	0.0010	9	0.0010	9
CR	0.0030	10	0.0000	12	0.0000	16	0.0000	16	0.0000	12	0.0000	10
EBITM	0.0040	9	0.0000	13	0.0000	12	0.0000	15	0.0000	13	0.0000	11
DTR	0.0000	13	0.0010	9	0.0000	8	0.0000	10	0.0000	15	0.0000	12
DPR	0.0000	15	0.0010	11	0.0010	7	0.0010	7	0.0000	14	0.0000	13
ITR	0.0000	14	0.0000	15	0.0000	13	0.0000	12	0.0010	10	0.0000	14
EVM	0.0000	16	0.0000	16	0.0000	15	0.0000	11	0.0010	11	0.0000	15
FTR	0.0000	12	0.0000	14	0.0000	14	0.0000	13	0.0000	16	0.0000	16
					Finan	cial Serv	rices					
EPS	0.4130	1	0.8210	1	0.7760	1	0.7580	1	0.7720	1	0.7130	1
EVM	0.1840	2	0.0060	13	0.3040	2	0.2180	2	0.1840	2	0.1380	2
RONW	0.1290	4	0.1010	2	0.1010	3	0.0930	3	0.1470	3	0.1020	3
ROCE	0.0860	7	0.0460	7	0.0730	4	0.0750	4	0.0800	4	0.0600	4
СРМ	0.1050	6	0.0880	4	0.0700	6	0.0690	5	0.0380	7	0.0520	5
ANPM	0.1050	5	0.0910	3	0.0720	5	0.0690	6	0.0380	8	0.0520	6
DIV	0.0410	9	0.0690	5	0.0480	8	0.0190	8	0.0540	5	0.0370	7
FTR	0.0210	12	0.0120	11	0.0270	10	0.0180	9	0.0520	6	0.0240	8
EBITM	0.0230	11	0.0180	9	0.0210	11	0.0230	7	0.0220	9	0.0200	9
ITR	0.1510	3	0.0270	8	0.0440	9	0.0000	16	0.0100	10	0.0180	10
LDER	0.0010	14	0.0020	14	0.0020	13	0.0010	11	0.0010	13	0.0020	11
DER	0.0000	16	0.0010	15	0.0010	14	0.0000	14	0.0010	14	0.0010	12
DTR	0.0530	8	0.0170	10	0.0580	7	0.0050	10	0.0000	16	0.0010	13
CR	0.0040	13	0.0630	6	0.0080	12	0.0000	15	0.0030	12	0.0000	14
ICR	0.0010	15	0.0000	16	0.0000	16	0.0010	12	0.0030	11	0.0000	15
DPR	0.0390	10	0.0120	12	0.0000	15	0.0010	13	0.0000	15	0.0000	16
					Non-Fina				0.0010			
EPS	0.2940	1	0.3200	1	0.4790	1	0.5800	1	0.3210	1	0.3870	1
DIV	0.1240	4	0.2010	2	0.2550	2	0.1360	3	0.2720	2	0.1980	2
ROCE	0.1590	2	0.1470	3	0.1730	3	0.1900	2	0.1330	5	0.1570	3
RONW	0.1550	3	0.1390	4	0.1530	4	0.1030	4	0.0560	6	0.1130	4
ITR	0.0190	5	0.0330	7	0.0300	5	0.0410	5	0.1480	3	0.0540	5
ANPM	0.0180	6	0.0350	6	0.0290	6	0.0250	7	0.0090	11	0.0200	6
EBITM	0.0110	7	0.0220	8	0.0110	8	0.0100	10	0.0010	14	0.0090	7
	0.0010	13	0.0050	12	0.0070	11	0.0130	8	0.0050	12	0.0050	8
ICR	0.0020	12	0.0160	9	0.0080	10	0.0100	11	0.0150	9	0.0050	9
CPM DBB	0.0040	10	0.0120	10	0.0050	12	0.0020	13	0.0000	15	0.0040	10
DPR	0.0060	8	0.0510	5	0.0010	15	0.0110	9	0.0000	16	0.0040	11
EVM DED	0.0010	14	0.0060	11	0.0040	13	0.0400	6	0.1350	4	0.0030	12
DER	0.0050	9	0.0000	16	0.0150	7	0.0010	15	0.0500	7	0.0030	13

P-ISSN: 2204-1990; E-ISSN: 1323-6903
DOI: 10.47750/cibg.2022.28.04.157

	201	6	201	17	201	18	201	19	202	20	All Y	ears
IV	<b>R</b> <sup>2</sup>	Rank	R <sup>2</sup>	Rank	R <sup>2</sup>	Rank	R <sup>2</sup>	Rank	<b>R</b> <sup>2</sup>	Rank	R <sup>2</sup>	Rank
FTR	0.0000	16	0.0010	14	0.0020	14	0.0020	14	0.0030	13	0.0010	14
LDER	0.0040	11	0.0000	15	0.0100	9	0.0010	16	0.0260	8	0.0010	15
DTR	0.0000	15	0.0020	13	0.0010	16	0.0040	12	0.0100	10	0.0000	16
					All (	Compani	es					
EPS	0.8000	1	0.9160	1	0.9500	1	0.8210	1	0.9840	1	0.8170	1
DIV	0.0330	2	0.0400	2	0.0230	2	0.0240	2	0.0330	2	0.0290	2
ROCE	0.0200	3	0.0080	3	0.0040	3	0.0020	3	0.0040	3	0.0060	3
RONW	0.0160	4	0.0040	4	0.0020	4	0.0000	9	0.0040	4	0.0030	4
DER	0.0030	7	0.0030	5	0.0020	5	0.0010	7	0.0030	6	0.0020	5
ANPM	0.0050	5	0.0020	6	0.0000	8	0.0010	5	0.0020	8	0.0010	6
СРМ	0.0000	9	0.0010	8	0.0000	9	0.0010	6	0.0020	7	0.0010	7
LDER	0.0040	6	0.0020	7	0.0020	6	0.0010	8	0.0020	9	0.0010	8
EVM	0.0000	11	0.0000	11	0.0000	10	0.0020	4	0.0030	5	0.0000	9
EBITM	0.0000	10	0.0000	12	0.0000	14	0.0000	10	0.0000	12	0.0000	10
ITR	0.0000	12	0.0000	14	0.0000	13	0.0000	12	0.0010	11	0.0000	11
ICR	0.0000	14	0.0010	9	0.0000	12	0.0000	11	0.0010	10	0.0000	12
DTR	0.0000	13	0.0000	13	0.0000	11	0.0000	13	0.0000	13	0.0000	13
DPR	0.0000	15	0.0000	15	0.0010	7	0.0000	14	0.0000	14	0.0000	14
FTR	0.0000	16	0.0000	16	0.0000	15	0.0000	15	0.0000	15	0.0000	15
CR	0.0010	8	0.0000	10	0.0000	16	0.0000	16	0.0000	16	0.0000	16

This table reports the explanatory power and rank of all independent variables.  $R^2$  suggests the amount of variation in MPS, as explained by each independent variable. The notation of all the variables is same as defined in Appendix 3.

The results in table 3 reveal that EPS has the highest explanatory power over MPS across manufacturing, financial services, non-financial services and all companies collectively. DIV takes the second position in explaining variation in MPS for manufacturing, non-financial services and all companies collectively. EVM grabbed the second position (except in 2017) in explaining variation in MPS for financial services sector. It is important to note that DER has a non-significant association with MPS for all 5 years individually in manufacturing sector but has grabbed 3<sup>rd</sup> -4<sup>th</sup> position in explaining variation in MPS. The results for all the other positons are quite robust and it's not possible to draw a common conclusion

#### CONCLUSION

This research attempted to examine the financial performance metrics that have superior association with MSP by applying univariate analyses for manufacturing, financial services non-financial services and all companies of BSE 500 for a period of 2016-2020. DPR, LDER, CR, FTR, DTR, ICR, EBITM turned out to have non-significant association with MPS across all time period, sectors and companies.

The accounting (earning) ratio EPS stood at first position having positive, highest and significant association with MPS across manufacturing, financial services, non-financial services and all companies collectively. The result is similar to that of Singhania (2006); Vijayakumar (2010); Sharma S. (2011); Gill, Biger & Mathur (2012); Jashav & Badade (2012); Srinivasan (2012); Kumar & Mishra (2013); Malhotra & Tandon (2013); Raithatha & Bapat (2013); Uddin, Rahman, & Hossain (2013); Almumani (2014); Karpagavalli & Nirmala (2014); Khanna M. (2014); Sikdar (2014); Geetha & Swaaminathan (2015); Mulenga (2015); Arefin & Pervin (2016); Enow & Brijlal (2016); Sundaram & Rajesh (2016); Avdalović & Milenković (2017); Jain & Bajaj (2017); Kumar P. (2017); Iyappan &

Ganesamoorthy (2017); Vora (2018); Bhatia & Mulenga (2019); Goyal & Gupta (2019); Jiet & Manual (2019); Singh & Tandon (2019); Vora K. (2018, 2020)

Different sectors have different financial performance metrics having superior association with MPS; however, profitability ratios collectively have the highest association and explanatory power over MPS across all sectors and time. Similar to studies done by Dawar (2012); Sharma M. (2014); Titilayo, et al. (2016) this study also revealed that dividends has significant positive association with MPS for manufacturing, non-financial service and all companies together. Value ratio EVM has significant association with MPS only for financial service sectors. Financial strength and financial efficiency ratios show minimal association with MPS.

There are at least four ways in which this study could be extended. First, this study can be done in other capital markets and explore whether the results are maintained. Secondly, multivariate regression or pooled regression analysis tools could be used. Thirdly sample of other firms covering the specific industries and sectors. Finally, in this paper market price per share is used as dependent variable, other variables such as MVA, stock return, market capitalisation or Tobin's Q could be used.

### BIBLIOGRAPHY

- Alam, P., & Nizamuddin, M. (2012, Oct-Dec). Performance Measures Of Shareholders Wealth: An Application Of Economic Value Added (Eva). International Journal of Applied Financial Management Perspectives, 1(2), 160-166. Retrieved from https://www.researchgate.net/publication/256047356\_
- Almumani, M. A. (2014, Jan). Determinants of Equity Share Prices of the Listed Banks in Amman Stock Exchange: Quantitative Approach. International Journal of Business and Social Science, 5(1), 91-104.
- Al-Tamimi, H. A., Alwan, A., & Rahman, A. A. (2011, March). Factors Affecting Stock Prices in the UAE Financial Markets. Journal of Transnational Management, 16(1), 3-19. DOI:10.1080/15475778.2011.549441
- Altaf, N. (2016). Economic value added or earnings: What explains market value in Indian firms? Future Business Journal, 2, 152-166. DOI:http://dx.doi.org/10.1016/j.fbj.2016.11.001
- Ahmad Abdallah, Malik Abu Afifa, Isam Hamad Saleh and Fares Alsufy (2022 Mar). Determinants of Market Stock Price: New Evidence from an Emerging Market, Information Sciences Letters An International Journal, 11, No. 2, 549- 558. DOI: http://dx.doi.org/10.18576/isl/110223
- Amir, E., Harris, T. S., & Venuti, E. K. (1993). A Comparison of the Value-Relevance of U.S. Versus Non-U.S. GAAP Accounting Measures Using Form 20-F Reconciliations. Journal of Accounting Research, 31, 230-264. DOI:10.2307/2491172
- Arabsalehi, M., & Mahmoodi, I. (2012, February). The Quest for the Superior Financial Performance Measures. International Journal of Economics and Finance, 4(2), 116-126. Retrieved from www.ccsenet.org/ijef
- Arefin, S., & Pervin, T. (2016, Feb). Financial Ratios Analysis And The Impact Of Earning Potential Ratios Of A Company On Its Market Price Of Stock A Study On Pharmaceutical And Chemical Industries Of Bangladesh. IOSR Journal of Business and Management (IOSR-JBM), 18(2), 25-33. Retrieved from www.iosrjournals.org
- Arshad, Z., Arshaad, A. R., Yousaf, S., & Jamil., S. (2015, Mar-Apr). Determinants of Share Prices of listed Commercial Banks in Pakistan. IOSR Journal of Economics and Finance (IOSR-JEF), 6(2), 56-64. DOI:10.9790/5933-06235664

- Avdalović, S. M., & Milenković, I. (2017). Impact Of Company Performances On The Stock Price: An Empirical Analysis On Select Companies In Serbia. Economics of Agriculture, 64(2), 561-570. Retrieved from https://scindeksclanci.ceon.rs/data/pdf/0352-3462/2017/0352-34621702561M.pdf
- Bacidore, J. M., Boquist, J. A., Milbourn, T. T., & Thakor, A. V. (1997, May/Jun). The search for the best financial performance measure. Financial Analysts Journal, 53(3), 11-20. Retrieved from https://search.proquest.com/docview/219209299?accountid=184781
- Balakrishnan, K. (2016). A Study On Impact Of Earnings Per Share, Dividend Per Share Price Earning Ratio On Behaviour Of Share Market Price Movements(Pharma Sector) With Special Reference To Nse". IJARIIE, 2(1), 381-390. Retrieved from www.ijariie.com
- Balan, A., & K.M, A. L. (2016). Impact Of Fundamental Factors On Stock Prices With Special Referance To Automobile Sector In India. 1(4), 26-31. Retrieved From Http://Ijariie.Com/Adminuploadpdf/Impact\_Of\_Fundamental\_Factors\_On\_Stock\_Prices \_With\_Special\_Referance\_To\_Automobile\_Sector\_In\_India\_1312.Pdf
- Ball, R., & Brown, P. (1968, Autum). An Empirical Evaluation of Accounting Income Numbers. Journal of Accounting Research, 6(2), 159-178. DOI:10.2307/2490232
- Banz, R. W. (1981, Mar ). The Relationship Between Return and Market Value of Common Stocks. Journal of Financial Economics, 9(1), 3-18. Retrieved from http://www.business.unr.edu/faculty/liuc/files/BADM742/Banz\_sizeeffect\_1980.pdf
- Barnes, P. (1987). The Analysis and Use of Financial Ratios: A Review Article. Journal of Business Finance & Accounting, 14(4), 449. Retrieved from https://search.proquest.com/docview/237046988?accountid=184781
- Barth, M. E., Beaver, W. H., & Landsman, W. R. (2001, September). The Relevance of the Value Relevance Literature for Financial Accounting Standard Setting: Another View. Journal of Accounting & Economics, 31(1-3), 77-104. DOI: https://doi.org/10.1016/S0165-4101(01)00019-2
- Beaver, W. H. (1966). Financial Ratios As Predictors of Failure. Journal of Accounting Research, 4, 71-111. DOI:10.2307/2490171
- Beaver, W. H. (1968). The Information Content of Annual Earnings Announcements. Journal of Accounting Research, 6, 67-92. DOI:10.2307/2490070
- Bernard, V. L., & Thomas, J. K. (1989). Post-Earnings-Announcement Drift: Delayed Price Response or Risk Premium? Journal of Accounting Research, 27(Current Studies on The Information Content of Accounting Earnings (1989)), 1-36. DOI:10.2307/2491062
- Bhatia, M., & Mulenga, M. J. (2019, June). Do Accounting Numbers Have Any Relation with Stock Prices? A Case of Public and Private Sector Banks of India. Theoretical Economics Letters, 9, 1682-1698. DOI: https://doi.org/10.4236/tel.2019.95107
- Bhatia, M., & Mulenga, M. J. (2019, May). Value Relevance of Accounting Information: A Review of Empirical Evidence Across Continents. Jindal Journal of Business Research. DOI: https://doi.org/10.1177/2278682118823307
- Bhattacharjee, B. J. (2012, March). Market price of share of Indian companies: An interrelationship with companies' size, leverage, growth, liquidity, profitability and dividend decision. Asian Journal of Research in Banking and Finance, 2(3), 85-91. http://www.indianjournals.com/ijor.aspx?target=ijor:ajrbf&volume=2&issue=3&article =008
- Bhole, L. M. (1980). Retained Earnings, Dividends and Share Prices of Indian Joint-Stock Companies. Economic and Political Weekly, 15(35), 93-100. Retrieved from https://www.jstor.org/stable/4369018

- Biddle, G. C., Bowen, R. M., & Wallace, J. (1997, Dec 31). Does EVA beat earnings? Evidence on associations with stock returns and firm values. Journal of Accounting & Economics, 24(3), 301-336. DOI: http://dx.doi.org/10.1016/S0165-4101(98)00010-X
- Block, S., Hirt, G., & Danielsen, B. (2019). Foundations of Financial Management (17th ed.). India: McGraw Hill Education Private Limited.
- Bodie, Z., Kane, A., & Marcus, A. (2019). Essentials of Investments (11th ed.). Indian Edition: McGraw hill Education (India) Private Limited.
- Brigham, E. F., & Davies, P. R. (2015). Intermediate Financial Management (13 ed.). Delhi, India: Cengage Learning India Private Limited.
- Brigham, E. F., & Ehrhardt, M. C. (2016). Finanicial Mangement (14 ed.). Delhi, India: Cengage Learning India Private Limited.
- Brigham, E. F., & Houston, J. F. (2015). Delhi, India: Cengage Learning India Private Limited.
- Challa, K., & Chalam, G. (2015, Jan). Equity Share Price Determinants An Empirical Analysis (An Empirical Analysis On Select Steel Companies In India). Indian Journal Of Applied Research, 5(1), 79-83. Retrieved from https://www.worldwidejournals.com/indian-journal-of-applied-research-(IJAR)/fileview/January\_2015\_1420089985\_21.pdf
- Chandra, Prasanna. (2015). Financial Management (9 ed.). Delhi, India: McGraw Hill Education Private Limited.
- Chashmi, N., & Fadaee, M. (2016). Impact of Financial Performance and Growth Opportunities on Success or Failure of Companies: Evidence from Tehran Stock Exchange. Journal of Accounting & Marketing, 5(2). DOI: 10.4172/2168-9601.1000166
- Chen, K. H., & Shimerda, T. A. (1981). An Empirical Analysis of Useful Financial Ratios. Financial Management, 10(1), 51-60. DOI:10.2307/3665113
- Chen, S., & Dodd, J. L. (1997). Economic Value Added (EVA): an empirical examination of a new Corporate performance measure. Journal of Managerial Issue, 9(3), 318-333. Retrieved June 24, 2019, from https://search.proquest.com/docview/194164544?accountid=184781
- Chen, S., & Dodd, J. L. (2001, Spring). Operating income, residual income and EVA: Which metric is more value relevant. Journal of Managerial Issues, 13(1), 65-86. Retrieved from https://search.proquest.com/docview/194164857?accountid=184781
- Collins, D. W., Maydew, E. L., & Weiss, I. S. (1997, Dec). Changes in the valuerelevance of earnings and book values over the past forty years. Journal of Accounting & Economics, 24(1), 39-67. Retrieved from https://search.proquest.com/docview/213080877?accountid=184781
- Cornett, M., Adair, T., & Nofsinger, J. (2020). Finance: Applications and Theory (5th ed.). Chennai, India: McGraw Hill Education Private Limited.
- Cootner, P.H. (1964) The Random Character of Stock Market Prices. MIT Press, Cambridge.
- Das, N., & Pattanayak, J. K. (2013). The Effect of Fundamental Factors on Indian Stock Market: A Case Study of Sensex and Nifty. The IUP Journal of Applied Finance, 19(2), 84-99. https://search.proquest.com/docview/1412867832/C85BB57FC0BE468BPQ/1
- Dawar, V. (2012, Sept). Determinants Of Share Prices In Indian Auto Industry. International Journal of Computing and Business Research (IJCBR), 3(3), 1-14. Retrieved from http://www.researchmanuscripts.com/september2012/2.pdf
- Dodd, J. L., & Chen, S. (1996, Jul-Sep). EVA: A new panacea? Business and Economic Review, 42(4), 26-28. Retrieved from https://search.proquest.com/docview/209590323?accountid=184781

- Dutta, A., Bandopadhyay, G., & Sengupta, S. (2012, Jun). Prediction of Stock Performance in the Indian Stock Market Using Logistic Regression. International Journal of Business and Information, 7(1), 105-136. Retrieved from https://search.proquest.com/docview/1069238195?accountid=184781
- Ehrbar, A., Stewart III, G. B., & Stern, J. M. (1998). EVA: The Real Key to Creating Wealth. Wiley. Retrieved from https://www.goodreads.com/book/show/352459.EVA
- Enow, S. T., & Brijlal, P. (2016). Determinants of Share Prices: The Case of Listed Firms on Johannesburg Stock Exchange. Journal of Accounting and Management, 6(1), 85-92. Retrieved from http://journals.univ-danubius.ro/index.php/jam/article/view/3181
- Francis, J., & Schipper, K. (1999, Autum). Have Financial Statements Lost Their Relevance? Journal of Accounting Research, 37(2), 319-352. DOI:10.2307/2491412
- Gapenski, L. C. (1996, Mar). Using MVA and EVA to measure financial performance. Healthcare Financial Management, 50(3), 56-59. Retrieved from https://search.proquest.com/docview/196375670?accountid=184781
- Geetha, E., & Kumar, S. (2017). Financial Performance Drives Market Performance-An Evidence from Indian Industries. International Journal of Pure and Applied Mathematics, 116(4-Special Issue)), 787-798. Retrieved from http://www.ijpam.eu
- Geetha, E., & Swaaminathan, T. M. (2015, March). A study on the factors influencing stock price A Comparative study of Automobile and Information Technology Industries stocks in India. (E. Publisher, Ed.) International Journal of Current Research and Academic Review, 3(3), 97-109. Retrieved from https://acadpubl.eu/jsi/2017-116-13-22/articles/21/94.pdf
- Gill, A., Biger, N., & Mathur, N. (2012). Determinants of Equity Share Prices Evidence from American Firms. International Research Journal of Finance and Economics (90), 176-192. http://www.internationalresearchjournaloffinanceandeconomics.com
- Gitman, L. J. (2019). Principles of managerial finance (14 ed.). New Delhi, India: Pearson.
- Goyal, A. K., & Gupta, A. (2019, April-Jun). Financial Determinants Of Stock Prices: A Study Of Bombay Stock Exchange (Bse). International Journal of Advance and Innovative Research, 6(2(XXII)). Retrieved from https://www.researchgate.net/publication/334416815
- Graham, B., & Dodd, D. L. (1934). Security Analysis (First ed.). New York: McGraw Hill.
- Griffin, J. M. (2002, Summer). Are the Fama and French Factors Global or Country-Specific? The Review of Financial Studies, 15(3), 783-803. Retrieved from https://search.proquest.com/docview/230016234?accountid=184781
- Gupta, V. K., & Sikarwar, E. (2016). Value creation of EVA and traditional accounting measures: Indian evidence. International Journal of Productivity and Performance Management (IJPPM), 65(4), 436-459. DOI:10.1108/IJPPM-01-2014-0008
- Hall, J. H. (2018). Value Creation Measures: An Industry-Based Study. International Journal of Productivity and Performance Management, 67(2), 426-444. DOI:http://dx.doi.org/10.1108/IJPPM-08-2016-0178
- Hamidah. (2015, February). EVA, ROCE, ROE, and EPS as Method of Assessment of Financial Performance and Its Effect on Shareholders' Wealth: Evidence From Bank Listed at Indonesian Stock Exchange in 2011 2013. International Journal of Scientific and Research Publications, 5(2), 1-7. Retrieved from www.ijsrp.org
- Hunt, P. (1975, May-June). Funds Position Keystone In Financial Planning. Harvard Business Review, 53(3), 106-107. Retrieved from https://search.proquest.com/docview/227842807?accountid=184781

- Ismail, A. (2006). Is economic value added more associated with stock return than accounting earnings? The UK evidence. International Journal of Managerial Finance, 2(4), 343-353. DOI: http://dx.doi.org/10.1108/17439130610705526
- Iyappan, R., & Ganesamoorthy, L. (2017, Oct-Dec). Accounting Information and Share Price Movements in SENSEX A Special Reference to Automobile Industry. Asian J. Management, 8(4), 957-961. DOI:10.5958/2321-5763.2017.00148.2
- Iyappan, R., & Ganesamoorthy, L. (2017, JULY). Determinants of Share Price Movements - Evidences from Earlier Studies. IJSART, 3(7), 41-43. Retrieved from http://ijsart.com/Content/PDFDocuments/IJSARTV3I715906.pdf
- Jain, N., & Bajaj, K. (2017, May-June). Impact of Earnings per Share on Market Price of Share with Special Reference to Selected Companies Listed on NSE. International Journal of Engineering and Management Research, 7(3), 1-9. Retrieved from http://www.ijemr.net/DOC/ImpactOfEarningsPerShareOnMarketPriceOfShareWithSpec ialReferenceToSelectedCompaniesListedOnNSE.PDF
- Jashav, J., & Badade, K. (2012, Sept). Determinants of Share Price (India)-Empirical Study on Stock Market. 02-80. DOI:10.13140/RG.2.1.3017.1041
- Jeroh, E., & Edesiri, G. O. (2015, April). An Empirical Analysis Of Share Price Determinants In Nigeria: A Dividend And Net Asset Replica. Scientific Papers of the University of Pardubice. Series D, 33, 46-54. Retrieved from https://search.proquest.com/docview/2265519441?accountid=184781
- Jiet, C. J., & Manual, V. (2019, January). An Empirical Examination of the Indicators Influencing Malaysian Listed Manufacturing Companies' Share Price Escalation. International Journal of Recent Technology and Engineering (IJRTE), 7(5S), 512-520. Retrieved from https://www.ijrte.org/wpcontent/uploads/papers/v7i5s/Es212001751919.pdf
- Karpagavalli, R., & Nirmala, S. (2014, April). Determination of Market Price of Select Banking Companies by Using Year Wise Y-X Correlation Analysis. Global Journal for Research Analysis, 3(4), 98-101. Retrieved from https://www.worldwidejournals.com/global-journal-for-research-analysis-GJRA/file.php?val=April\_2014\_1398752896\_65eff\_33.pdf
- Keown, A. J., Martin, J. D., & Petty, J. W. (2019). Foundations of Finance: The Logic and Practice of Financial Management (6th ed.). New Delhi, India: Pearson.
- Khan, M. Y., & Jain, P. K. (2018). Financial Management (8 ed.). Delhi: McGraw Hill Education Private Limited.
- Khanna, M. (2014, October). Value Relevance of Accounting Information: An Empirical Study of Selected Indian Firms. International Journal of Scientific and Research Publications, 4(10), 1-6. Retrieved from http://www.ijsrp.org/research-paper-1014/ijsrp-p3462.pdf
- Koller, T., Goedhart, M., & Wessels, D. (2008). Valuation: Measuring and Manging the Value of Companies (5th ed.). Mc Kinsey & company; John Wiley & Sons, Inc. Retrieved from http://www.wiley.com/go/permissions
- Kormendi, R., & Lipe, R. (1987, July). Earnings Innovations, Earnings Persistence, and Stock Returns. The Journal of Business, 60(3), 323-345. Retrieved from https://search.proquest.com/docview/236319196?accountid=184781
- Kumar, P. (2017, Feb). Impact Of Earning Per Share And Price Earnings Ratio On Market Price Of Share: A Study On Auto Sector In India. International Journal of Research - Granthaalayah, 5(2), 113-118. Retrieved from https://doi.org/10.5281/zenodo.345456

- Kumar, R., & Mishra, S. (2013, October). Impact of Financial Indicators on BSE Sensex. Journal of Commerce and Accounting Research, 2(4), 51-56. Retrieved from https://search.proquest.com/docview/1490674817?accountid=184781
- Kumar, S., & Sharma, A. K. (2011). Association of EVA and accounting earnings with market value: evidence from India. Asia Pacific Journal of Business Administration, 3(2), 83-96. DOI: http://dx.doi.org/10.1108/17574321111169795
- Kyriazis, D., & Anastassis, C. (2007, Jan). The Validity of the Economic Value Added Approach: An Empirical Application. European Financial Management, 13(1), 71-100. DOI: http://dx.doi.org/10.1111/j.1468-036X.2006.00286.x
- Laing, G., & Dunbar, K. (2015). EVA<sup>TM</sup>, EPS, ROA and ROE as Measures of Performance in Australian Banks: A Longitudinal Study. JAMAR, 13(2), 41-18. Retrieved July 17, 2019, from http://research.usc.edu.au/vital/access/manager/Repository/usc:16439
- Lasher, W. R. (2015). Practical Financial Management (8th ed.). New Delhi, India: CENGAGE Learning Custom Publishing.
- Latane, H. A., & Tuttle, D. L. (1967). An Analysis Of Common Stock Price Ratios. Southern Economic Journal (pre-1986), 33(3), 343-354. Retrieved from https://search.proquest.com/docview/217157929?accountid=184781
- Lee, S., & Kim, W. G. (2009, Sep). EVA, refined EVA, MVA, or traditional performance measures for the hospitality industry? International Journal of Hospitality Management, 28(3), 439-445. DOI: https://doi.org/10.1016/j.ijhm.2009.01.004
- Lev, B., & Zarowin, P. (1999, Autumn). The boundaries of financial reporting and how to extend them. Journal of Accounting Research, 353-385. Retrieved from https://search.proquest.com/docview/206726493?accountid=184781
- Libby, R. (1975). Accounting Ratios and the Prediction of Failure: Some Behavioral Evidence. Journal of Accounting Research, 13(1), 150-161. DOI: 10.2307/2490653
- Maditinos, D. I., Sevic, Z., & Theriou, G. N. (2006, Dec). The Introduction of Economic Value Added (EVA) in the Greek Corporate Sector. The Southeuropean Review of Business & Accounting, 4(2). Retrieved from https://www.researchgate.net/publication/287645917
- Maditinos, D. I., Sevic, Z., & Theriou, N. G. (2009). Modelling traditional accounting and modern value-based performance measures to explain stock market returns in the Athens Stock Exchange (ASE). Journal of Modelling in Management, 4(3), 182-201. DOI:10.1108/17465660911006431
- Malhotra, N., & Tandon, K. (2013, June). Determinants of Stock Prices: Empirical Evidence from NSE 100 Companies. International Journal of Research in Management & Technology (IJRMT),, 3(3). Retrieved from https://pdfs.semanticscholar.org/49dc/b0cc916ca28bb5c7f7d8dafd0873dfb00876.pdf
- Melicher, R. W., & Norton, E. A. (2017). Introduction to Finance: Markets, Investments, and Financial Management. USA: Wiley. Retrieved from www.wileystudentchoice.com
- Molodovsky, N. (1995, Jan/Feb). A theory of price-earnings ratios. Financial Analysts Journal, 51(1), 29-43. Retrieved from https://search.proquest.com/docview/219222652?accountid=184781
- Mulenga, M. J. (2015). Value Relevance of Accounting Information of Listed Public Sector Banks in Bombay Stock Exchange. Research Journal of Finance and Accounting, 6(8), 222-232. Retrieved from https://www.iiste.org/Journals/index.php/RJFA/article/viewFile/21991/22431
- Mulenga, M. J., & Bhatia, M. (2018, Jan-June). Review of Accounting Variables Affecting Stock Price Movements. Amity Business Review, 19(1), 91-105. Retrieved from https://www.amity.edu/abs/abr/pdf/ABR-Vol-19-No-1/9.pdf

- Nautiyal, N. (2015). Determinants Of Share Prices In Indian. Dissertation, Kumaun University, Nainital.
- Nautiyal, N., & Kavidayal, P. C. (2018). Analysis of Institutional Factors Affecting Share Prices: The Case of National Stock Exchange. Global Business Review, 19(3), 707-721. DOI:10.1177/0972150917713865
- Nayak, M. K. (2008). An analysis of the determinants of equity share prices in India. Dissertation, Utkal University, Commerce, Bhubaneswar-7S 1004. Retrieved from http://hdl.handle.net/10603/119489
- Nichols, D. C., & Wahlen, J. M. (2004). How Do Earnings Numbers Relate to Stock Returns? A Review of Classic Accounting Research with Updated Evidence. Accounting Horizons, 18(4), 263-286. Retrieved from https://search.proquest.com/docview/208935389?accountid=184781
- Nirmala, P. S., Sanju, P. S., & Ramachandran, M. (2011). Determinants of Share Prices in India. Journal of Emerging Trends in Economics and Management Sciences (JETEMS), 2(2), 124-130. Retrieved from https://pdfs.semanticscholar.org/8fd8/c6bb44c95dc67088143b7821bcf2716b2a8a.pdf
- Ohlson, J. A. (1995, Spring). Earnings, book values, and dividends in equity valuation. Contemporary Accounting Research, 11(2), 661-687. Retrieved from https://search.proquest.com/docview/194209127?accountid=184781
- Om, H., & Goel, S. (2017). Analysis of Factors Affecting Stock Price Behaviour: A Study on Listed Companies in Bombay Stock Exchange. Imperial Journal of Interdisciplinary Research (IJIR), 3(3), 115-119. Retrieved from http://www.onlinejournal.in
- Ozlen, S. (2014). The Effect of Company Fundamentals on Stock Values. International Multidisciplinary Journal, 71(3-2), 595-602. Retrieved from http://www.erjournal.ru/journals\_n/1396365645.pdf
- Palliam, R. (2006). Further evidence on the information content of economic value added. Review of Accounting & Finance, 5(3), 204-215. DOI: http://dx.doi.org/10.1108/14757700610686417
- Pandey, I. M. (2019). Financial Management (10th ed.). India, Delhi: Vikas Publishing House Pvt Ltd.
- Pecha, C. O., Noguera, M., & White, S. (2015, June 26). Financial ratios used by equity analysts in Mexico and stock returns. Contaduría y Administración, 60(3), 578-592. Retrieved from http://dx.doi.org/10.1016/j.cya.2015.02.001
- Pinches, G. E., & Mingo, K. A. (1973, March). The Journal of Finance, 28(1), 1-18. DOI:10.2307/2978164
- Pinches, G. E., Eubank, A. A., Mingo, K. A., & Caruthers, J. K. (1975, October). The hierarchical classification of financial ratios. Journal of Business Research, 3(4), 295-310. Retrieved from https://doi.org/10.1016/0148-2963(75)90011-9
- Pinches, G. E., Mingo, K. A., & Caruthers, J. K. (1973, March). The Journal of Finance, 26(2 Papers and Proceedings of the Thirty-First Annual Meeting of the American Finance Association Toronto, Canada, December 28-30, 1972), 389-396. DOI:10.2307/2978312
- Placido M. Menaje, J. (2012, Sept). Impact of Selected Financial Variables on Share Price of Publicly Listed Firms in the Philippines. American International Journal of Contemporary Research, 2(9), 98-104. Retrieved from www.aijcrnet.com
- Raithatha, M., & Bapat, V. (2013, Nov). A Panel Data Analysis of Corporate Attributes and Stock Prices for Indian Manfacturing Sector. Journal of Modern Accounting and Auditing, 9(11), 1519-1525. Retrieved from https://docplayer.net/17521534-A-panel-

data-analysis-of-corporate-attributes-and-stock-prices-for-indian-manufacturing-sector.html

- Rappaport, A. (1998). Creating Shareholder Value A Guide For Managers And Investors (Revised & Updated ed.). New York: Free Press. Retrieved August 02, 2019, from https://books.google.co.in/
- Ray, R. (2001, Spring). Economic value added: Theory, evidence, a missing link. Review of Business, 22(1/2), 66-70. Retrieved from https://search.proquest.com/docview/220926550?accountid=184781
- Rees, W. P. (1997, Sept). The impact of dividends, debt and investment on valuation models. Journal of Business Finance & Accounting, 24(7/8), 1111-1140. Retrieved from https://search.proquest.com/docview/237034186?accountid=184781
- Rejimon, Ashokkumar, D., & Madhusoodhanan. (2016). Fundamental analysis of Pharma sector: An Empirical Analysis. IOSR Journal of Business and Management (IOSR-JBM), 28-37. Retrieved from www.iosrjournals.org
- Salvary, S. C. (1998). The accounting variable and stock price determination. Studies in Economics and Finance, 18(2), 26-61. Retrieved from https://search.proquest.com/docview/196393943?accountid=184781
- Sehgal, S., & Pandey, A. (2010). Equity Valuation Using Price Multiples: A Comparative Study for BRICKS. Asain Journal of Finance & Accounting, 2(1), 68-91. Retrieved from www.macrothink.org/ajfa
- Sharma, M. (2014, April). Value Relevance Of Accounting Information: A Comparative Study Of Public And Private Sector Companies In India. Asia Pacific Journal of Research, I(XII), 113-121. Retrieved from https://pdfs.semanticscholar.org/9e1f/cfa0177d023b1e1f4351b74a6a90f755e97d.pdf
- Sharma, S. (2011, Oct). Determinants Of Equity Share Prices In India. Journal of Arts, Science & Commerce, 51-60. Retrieved from http://www.researchersworld.com/vol2/issue4/Paper\_6.pdf
- Singh, N. P., & Tandon, A. (2019). The Effect of Dividend Policy on Stock Price: Evidence from the Indian Market. Asia-Pacific Journal of Management Research and Innovation, 15(1-2), 7-15. DOI:10.1177/2319510X19825729
- Singhania, M. (2006, Sept). Determinants of Equity Prices: A Study of Select Indian Companies. The IUP Journal of Applied Finance, 1-14. Retrieved from https://www.iupindia.in/906/IJAF\_Determinants\_of\_Equity\_Prices\_39.html
- Srinivasan, P. (2012, December). Determinants of Equity Share Prices in India: A Panel Data Approach. The Romanian Economic Journal, XV (46), 205-228. Retrieved from https://pdfs.semanticscholar.org/e6c1/34ecde370c6b5ab35b2417d22524a595ee8c.pdf
- Stanley, P. (2002, Winter). Operating income, residual income and EVA: Which metric is more value relevant--a comment. Journal of Managerial Issue, 14(4), 500-506. Retrieved from https://search.proquest.com/docview/194164745?accountid=184781
- Stevens, D. L. (1973, March). Financial Characteristics of Merged Firms: A Multivariate Analysis. The Journal of Financial and Quantitative Analysis, 8(2), 149-158. DOI:10.2307/2330007
- Stewart III, G. B. (1991). The Quest for Value: The EVA Management Guide. New York: Harper Business. Retrieved 07 10, 2019, from https://www.goodreads.com/book/show/1603721
- Stewart III, G. B. (2013). Best Practice EVA. Wiley. Retrieved from https://www.goodreads.com/book/show/19172507-best-practice-eva
- Sukhija, S. (2014). An Explicit Model on Fundamental Factors Affecting Stock Prices of BSE Listed Companies in India: An Inter Industry Approach. European Journal of Business and Management, 6(37), 196-203. Retrieved from

http://citeseerx.ist.psu.edu/viewdoc/download?DOI=10.1.1.736.2780&rep=rep1&type=pdf

- Sumiyana, & Baridwan, Z. (2013, Jan). Accounting Fundamentals And Variations Of Stock Price: Methodological Refinement With Recursive Simultaneous Model. Journal Of Indonesian Economy And Business, 28(1), 84-114.
- Sundaram, S., & Rajesh, M. (2016, May). Impact of Fundamental Factors on Share Price Movements. International Journal Of Scientific Research (IJSR), 5(5), 290-296. Retrieved from https://www.worldwidejournals.com/international-journal-of-scientificresearch-(IJSR)/recent\_issues\_pdf/2016/May/May\_2016\_1492763417\_\_97.pdf
- Titilayo, A. D., Salako, O. I., Folashade, O., & Obiamaka, N. (2016). Accounting Numbers and Stock Prices in the Nigerian Stock Market. Journal of Accounting and Auditing: Research & Practice, 2016(2016), 1-13. DOI:10.5171/2016.252697
- Trevino, R., & Robertson, F. (2002, Feb). P/E ratios and stock market returns. Journal of Financial Planning, 15(2), 76-84. Retrieved from https://search.proquest.com/docview/217543865?accountid=184781
- Tripathi, V. (2008). Investment Strategies in Indian Stock Market: A Survey. SSRN, 1-21. DOI:10.2139/ssrn.1134668
- Uddin, R., Rahman, Z., & Hossain, R. (2013, July). Determinants of Stock Prices in Financial Sector Companies in Bangladesh- A Study on Dhaka Stock Exchange (DSE). Interdisciplinary Journal Of Contemporary Research In Business, 5(3), 471-480. Retrieved from https://journal-archieves34.webs.com/471-480.pdf
- Velankar, N., Chandani, A., & Ahuja, A. K. (2017). Impact of EPS And DPS On Stock Price: A Study Of Selected Public Sector Banks Of India. Prestige International Journal of Management & IT-Sanchayan, 6(1), 111-121. Retrieved from https://www.researchgate.net/publication/322055670
- Venkates, C., Tyagi, M., & Ganesh. (2012, December). Fundamental analysis and stock returns: An Indian evidence. Global Advanced Research Journal of Economics, Accounting and Finance, 1(2), 33-39. Retrieved from http://garj.org/garjb/index.htm
- Vijayakumar, A. (2010, August). Effect of Financial Performance on Share Prices in the Indian Corporate Sector: An Empirical Study. Management and Labour Studies, 35(3).
- Vora, K. (2018, Feb). Influence of Financial Performance Indicators on Market Price of Shares of Nifty 50 Companies. International Journal of Advance Research in Computer Science and Management Studies, 6(2), 68-75. Retrieved from http://ijarcsms.com/docs/paper/volume6/issue2/V6I2-0016.pdf
- Vora, K. (2020, Dec). Financial performance and its impact on market capitalisation and shareholder's wealth a study of listed pharmaceutical companies in India [Doctoral dissertation, University of Mumbai]. Shodh Ganga Inflibnet Centre. Retrieved from http://hdl.handle.net/10603/359341
- White, G. I., Sondhi, A. C., & Fried, D. (2017). The Analysis and used of Financial Statements (3rd ed.). New Delhi: John Wiley & Sons (Asia) PTE. Ltd.
- Worthington, A. C., & West, T. (2001). Economic Value-Added: A Review of the Theoretical and Empirical Literature. Asian Review of Accounting, 9(1), 67-86. Retrieved from https://www.researchgate.net/publication/27464682

### **APPENDIX APPENDIX 1-List of Companies**

Sr. No.	Company Name	Industry-Main	Industry Classification
1	State Bank of India	Banks	Financial Services
2	Kotak Mahindra Bank Ltd	Banks	Financial Services
3	Federal Bank Ltd	Banks	Financial Services
4	HDFC Bank Ltd	Banks	Financial Services
5	ICICI Bank Ltd	Banks	Financial Services
6	IDBI Bank Ltd	Banks	Financial Services
7	Bank of Baroda	Banks	Financial Services
8	Canara Bank	Banks	Financial Services
9	Union Bank of India	Banks	Financial Services
10	IndusInd Bank Ltd	Banks	Financial Services
11	Central Bank of India	Banks	Financial Services
12	Axis Bank Ltd	Banks	Financial Services
13	Bank of Maharashtra	Banks	Financial Services
14	Bank of India	Banks	Financial Services
15	Indian Bank	Banks	Financial Services
16	Jammu and Kashmir Bank Ltd	Banks	Financial Services
17	Punjab National Bank	Banks	Financial Services
17	Housing Development Finance Corporation Ltd	Finance	Financial Services
19	Max Financial Services Ltd	Finance	Financial Services
20		Finance	Financial Services
	Cholamandalam Financial Holdings Ltd		Financial Services
21	Shriram Transport Finance Company Ltd	Finance	
22	Cholamandalam Investment & Finance Company Ltd	Finance	Financial Services
23	IFCI Ltd	Finance	Financial Services
24	Bajaj Finance Ltd	Finance	Financial Services
25	LIC Housing Finance Ltd	Finance	Financial Services
26	Manappuram Finance Ltd	Finance	Financial Services
27	Shriram City Union Finance Ltd	Finance	Financial Services
28	Power Finance Corporation Ltd	Finance	Financial Services
29	Capri Global Capital Ltd	Finance	Financial Services
30	Mahindra & Mahindra Financial Services Ltd	Finance	Financial Services
31	REC Ltd	Finance	Financial Services
32	IDFC Ltd	Finance	Financial Services
33	IIFL Finance Ltd	Finance	Financial Services
34	Muthoot Finance Ltd	Finance	Financial Services
35	Motilal Oswal Financial Services Ltd	Finance	Financial Services
36	Bajaj Finserv Ltd	Finance	Financial Services
37	Edelweiss Financial Services Ltd	Finance	Financial Services
38	Equitas Holdings Ltd	Finance	Financial Services
39	Indiabulls Housing Finance Ltd	Finance	Financial Services
40	L&T Finance Holdings Ltd	Finance	Financial Services
41	Firstsource Solutions Ltd	IT Enabled Services / BPO	Financial Services
42	eClerx Services Ltd	IT Enabled Services / BPO	Financial Services
43	ICICI Prudential Life Insurance Company Ltd	Life Insurance	Financial Services
44	Bajaj Holdings & Investment Ltd	NBFC	Financial Services
45	Tata Investment Corporation Ltd	NBFC	Financial Services
46	JM Financial Ltd	NBFC	Financial Services
40	Carborundum Universal Ltd	Abrasives and Grinding Wheels	Manufacturing
47	Grindwell Norton Ltd	Abrasives and Grinding Wheels	Manufacturing
48	Hindalco Industries Ltd	Abrasives and Grinding wheels	Manufacturing
49 50			
	National Aluminium Company Ltd	Aluminium	Manufacturing
51	Exide Industries Ltd	Auto Ancillaries	Manufacturing
52	Bosch Ltd	Auto Ancillaries	Manufacturing
53	JTEKT India Ltd	Auto Ancillaries	Manufacturing

Sr. No.	Company Name	Industry-Main	Industry Classification
54	Jamna Auto Industries Ltd	Auto Ancillaries	Manufacturing
55	Motherson Sumi Systems Ltd	Auto Ancillaries	Manufacturing
56	Suprajit Engineering Ltd	Auto Ancillaries	Manufacturing
57	Minda Industries Ltd	Auto Ancillaries	Manufacturing
58	Minda Corporation Ltd	Auto Ancillaries	Manufacturing
59	Endurance Technologies Ltd	Auto Ancillaries	Manufacturing
60	Ashok Leyland Ltd	Automobiles	Manufacturing
61	Force Motors Ltd	Automobiles	Manufacturing
62	Eicher Motors Ltd	Automobiles	Manufacturing
63	Escorts Ltd	Automobiles	Manufacturing
64	Hero MotoCorp Ltd	Automobiles	Manufacturing
65	Mahindra & Mahindra Ltd	Automobiles	Manufacturing
66	Tata Motors Ltd	Automobiles	Manufacturing
67	Maruti Suzuki India Ltd	Automobiles	Manufacturing
68	TVS Motor Company Ltd	Automobiles	Manufacturing
69	Bajaj Auto Ltd	Automobiles	Manufacturing
70	Biocon Ltd	Biotechnology	Manufacturing
71	United Breweries Ltd	Breweries	Manufacturing
72	Finolex Cables Ltd	Cables	Manufacturing
73	KEI Industries Ltd	Cables	Manufacturing
74	Sterlite Technologies Ltd	Cables	Manufacturing
75	Phillips Carbon Black Ltd	Carbon Black	Manufacturing
76	AIA Engineering Ltd	Castings	Manufacturing
77	ACC Ltd	Cement	Manufacturing
78	Birla Corporation Ltd	Cement	Manufacturing
79	Ambuja Cements Ltd	Cement	Manufacturing
80	India Cements Ltd	Cement	Manufacturing
81	The Ramco Cements Ltd	Cement	Manufacturing
82	Shree Cement Ltd	Cement	Manufacturing
83	JK Lakshmi Cement Ltd	Cement	Manufacturing
83	Prism Johnson Ltd	Cement	Manufacturing
85	J K Cements Ltd		•
85	UltraTech Cement Ltd	Cement	Manufacturing
		Cement	Manufacturing
87	Kajaria Ceramics Ltd	Ceramics	Manufacturing
88	Cera Sanitaryware Ltd	Ceramics	Manufacturing
89	Deepak Fertilizers & Petrochemicals Corp Ltd	Chemicals	Manufacturing
90	Deepak Nitrite Ltd	Chemicals	Manufacturing
91	NOCIL Ltd	Chemicals	Manufacturing
92	Tata Chemicals Ltd	Chemicals	Manufacturing
93	Alkyl Amines Chemicals Ltd	Chemicals	Manufacturing
94	GHCL Ltd	Chemicals	Manufacturing
95	Godrej Industries Ltd	Chemicals	Manufacturing
96	Aarti Industries Ltd	Chemicals	Manufacturing
97	Himadri Speciality Chemical Ltd	Chemicals	Manufacturing
98	Pidilite Industries Ltd	Chemicals	Manufacturing
99	Advanced Enzyme Technologies Ltd	Chemicals	Manufacturing
100	S H Kelkar & Company Ltd	Chemicals	Manufacturing
101	Navin Fluorine International Limited	Chemicals	Manufacturing
102	Gujarat Alkalies & Chemicals Ltd	Chlor	Manufacturing
103	ITC Ltd	Cigarettes	Manufacturing
104	Godfrey Phillips India Ltd	Cigarettes	Manufacturing
105	Tata Coffee Ltd	Coffee	Manufacturing
106	CCL Products (India) Ltd	Coffee	Manufacturing
107	Century Plyboards (India) Ltd	Decoratives	Manufacturing
108	Titan Company Ltd	Diamond Cutting / Jewellery	Manufacturing

Sr. No.	Company Name	Industry-Main	Industry Classification
109	Rajesh Exports Ltd	Diamond Cutting / Jewellery	Manufacturing
110	Vaibhav Global Ltd	Diamond Cutting / Jewellery	Manufacturing
111	Radico Khaitan Ltd	Distilleries	Manufacturing
112	Voltas Ltd	Diversified	Manufacturing
113	Balmer Lawrie & Company Ltd	Diversified	Manufacturing
114	DCM Shriram Ltd	Diversified	Manufacturing
115	Nava Bharat Ventures Ltd	Diversified	Manufacturing
116	Quess Corp Ltd	Diversified	Manufacturing
117	Bajaj Electricals Ltd	Domestic Appliances	Manufacturing
118	Symphony Ltd	Domestic Appliances	Manufacturing
119	TTK Prestige Ltd	Domestic Appliances	Manufacturing
120	Atul Ltd	Dyes And Pigments	Manufacturing
121	Sudarshan Chemical Industries Ltd	Dyes And Pigments	Manufacturing
122	Bharat Heavy Electricals Ltd	Electric Equipment	Manufacturing
123	Havells India Ltd	Electric Equipment	Manufacturing
124	Suzlon Energy Ltd	Electric Equipment	Manufacturing
125	Triveni Turbine Ltd	Electric Equipment	Manufacturing
126	Graphite India Ltd	Electrodes	Manufacturing
127	HEG Ltd	Electrodes	Manufacturing
128	Bharat Electronics Ltd	Electronics	Manufacturing
129	Larsen & Toubro Ltd	Engineering	Manufacturing
130	GMM Pfaudler Ltd	Engineering	Manufacturing
131	BEML Ltd	Engineering	Manufacturing
132	Thermax Ltd	Engineering	Manufacturing
133	Engineers India Ltd	Engineering	Manufacturing
134	GE Power India Ltd	Engineering	Manufacturing
135	GMR Infrastructure Ltd	Engineering	Manufacturing
136	Ashoka Buildcon Ltd	Engineering	Manufacturing
137	Greaves Cotton Ltd	Engines	Manufacturing
138	Cummins India Ltd	Engines	Manufacturing
139	Sundram Fasteners Ltd	Fasteners	Manufacturing
140	Coromandel International Ltd	Fertilizers	Manufacturing
141	Gujarat Narmada Valley Fertilizers & Chemicals Ltd	Fertilizers	Manufacturing
142	Gujarat State Fertilizers & Chemicals Ltd	Fertilizers	Manufacturing
143	Rashtriya Chemicals & Fertilizers Ltd	Fertilizers	Manufacturing
144	Chambal Fertilisers & Chemicals Ltd	Fertilizers	Manufacturing
145	Britannia Industries Ltd	Food And Dairy Products	Manufacturing
146	Heritage Foods Ltd	Food And Dairy Products	Manufacturing
147	Zydus Wellness Ltd	Food and Dairy Products	Manufacturing
148	Jubilant Foodworks Ltd	Food And Dairy Products	Manufacturing
149	Bharat Forge Ltd	Forgings	Manufacturing
150	Mahindra CIE Automotive Ltd	Forgings	Manufacturing
151	Solar Industries India Ltd	Industrial Explosives	Manufacturing
152	Bata India Ltd	Leather / Synthetic Footware	Manufacturing Manufacturing
153	Poly Medicure Ltd	Medical Accessories / Disposables	Manufacturing
154	V I P Industries Ltd	Moulded Luggage	Manufacturing Manufacturing
155	EPL Ltd	Packaging	Manufacturing Manufacturing
156 157	Uflex Ltd Asian Paints Ltd	Packaging Paints / Varnishes	Manufacturing Manufacturing
157	Asian Paints Ltd Berger Paints India Ltd	Paints / Varnishes Paints / Varnishes	Manufacturing
158	Kansai Nerolac Paints Ltd	Paints / Varnishes Paints / Varnishes	Manufacturing
159	Akzo Nobel India Ltd	Paints / Varnishes Paints / Varnishes	Manufacturing
160	JK Paper Ltd	Paints / Varmisnes Paper	Manufacturing
161	Rallis India Ltd	Paper Pesticides / Agrochemicals	Manufacturing
102	Nams mula Liu	Pesticides / Agrochemicals	Manufacturing

Sr. No.	Company Name	Industry-Main	Industry Classification
164	UPL Ltd	Pesticides / Agrochemicals	Manufacturing
165	P I Industries Ltd	Pesticides / Agrochemicals	Manufacturing
166	Meghmani Organics Ltd	Pesticides / Agrochemicals	Manufacturing
167	Bliss GVS Pharma Ltd	Pharmaceuticals	Manufacturing
168	Cipla Ltd	Pharmaceuticals	Manufacturing
169	Glaxosmithkline Pharmaceuticals Ltd	Pharmaceuticals	Manufacturing
170	J B Chemicals & Pharmaceuticals Ltd	Pharmaceuticals	Manufacturing
171	Piramal Enterprises Ltd	Pharmaceuticals	Manufacturing
172	Dr Reddys Laboratories Ltd	Pharmaceuticals	Manufacturing
173	Sequent Scientific Ltd	Pharmaceuticals	Manufacturing
174	Aarti Drugs Ltd	Pharmaceuticals	Manufacturing
175	Lupin Ltd	Pharmaceuticals	Manufacturing
176	Torrent Pharmaceuticals Ltd	Pharmaceuticals	Manufacturing
177	Ipca Laboratories Ltd	Pharmaceuticals	Manufacturing
178	Sun Pharmaceuticals Industries Ltd	Pharmaceuticals	Manufacturing
179	Caplin Point Laboratories Ltd	Pharmaceuticals	Manufacturing
180	Aurobindo Pharma Ltd	Pharmaceuticals	Manufacturing
181	Natco Pharma Ltd	Pharmaceuticals	Manufacturing
182	Shilpa Medicare Ltd	Pharmaceuticals	Manufacturing
183	Wockhardt Ltd	Pharmaceuticals	Manufacturing
184	Indoco Remedies Ltd	Pharmaceuticals	Manufacturing
185	Granules India Ltd	Pharmaceuticals	Manufacturing
186	Ajanta Pharma Ltd	Pharmaceuticals	Manufacturing
187	FDC Ltd	Pharmaceuticals	Manufacturing
188	Strides Pharma Science Ltd	Pharmaceuticals	Manufacturing
189	Alkem Laboratories Ltd	Pharmaceuticals	Manufacturing
190	Glenmark Pharmaceuticals Ltd	Pharmaceuticals	Manufacturing
191	Cadila Healthcare Ltd	Pharmaceuticals	Manufacturing
192	Divis Laboratories Ltd	Pharmaceuticals	Manufacturing
193	Alembic Pharmaceuticals Ltd	Pharmaceuticals	Manufacturing
194	Laurus Labs Ltd	Pharmaceuticals	Manufacturing
195	Supreme Industries Ltd	Plastics	Manufacturing
196	Finolex Industries Ltd	Plastics	Manufacturing
197	Jai Corp Ltd	Plastics	Manufacturing
198	Nilkamal Ltd	Plastics	Manufacturing
199	Responsive Industries Ltd	Plastics	Manufacturing
200	Astral Poly Technik Ltd	Plastics	Manufacturing
201	Time Technoplast Ltd	Plastics	Manufacturing
202	CESC Ltd	Power Generation And Supply	Manufacturing
203	Tata Power Company Ltd	Power Generation And Supply	Manufacturing
204	NLC India Ltd	Power Generation And Supply	Manufacturing
205	Power Grid Corporation of India Ltd	Power Generation And Supply	Manufacturing
206	NTPC Ltd	Power Generation And Supply	Manufacturing
207	SJVN Ltd	Power Generation And Supply	Manufacturing
208	NHPC Ltd	Power Generation And Supply	Manufacturing
209	Adani Power Ltd	Power Generation And Supply	Manufacturing
210	Torrent Power Ltd	Power Generation And Supply	Manufacturing
211	JSW Energy Ltd	Power Generation And Supply	Manufacturing
212	Adani Transmission Ltd	Power Generation And Supply	Manufacturing
213	Navneet Education Ltd	Printing & Stationery	Manufacturing
214	KSB Ltd	Pumps	Manufacturing
215	Reliance Industries Ltd	Refineries	Manufacturing
216	Bharat Petroleum Corporation Ltd	Refineries	Manufacturing
217	Hindustan Petroleum Corporation Ltd	Refineries	Manufacturing
218	Chennai Petroleum Corporation Ltd	Refineries	Manufacturing

Sr. No.	Company Name	Industry-Main	Industry Classification
219	Mangalore Refinery And Petrochemicals Ltd	Refineries	Manufacturing
220	Indian Oil Corporation Ltd	Refineries	Manufacturing
221	Tata Steel Ltd	Steel	Manufacturing
222	Jindal Saw Ltd	Steel	Manufacturing
223	Maharashtra Seamless Ltd	Steel	Manufacturing
224	Steel Authority of India Ltd	Steel	Manufacturing
225	Ratnamani Metals & Tubes Ltd	Steel	Manufacturing
226	JSW Steel Ltd	Steel	Manufacturing
227	Welspun Corp Ltd	Steel	Manufacturing
228	APL Apollo Tubes Ltd	Steel	Manufacturing
229	Jindal Steel & Power Ltd	Steel	Manufacturing
230	Jindal Stainless Ltd	Steel	Manufacturing
231	Jindal Stainless (Hisar) Ltd	Steel	Manufacturing
232	EID Parry (India) Ltd	Sugar	Manufacturing
233	Balrampur Chini Mills Ltd	Sugar	Manufacturing
234	Bombay Burmah Trading Corporation Ltd	Tea	Manufacturing
235	Tata Consumer Products Ltd	Tea	Manufacturing
236	Lakshmi Machine Works Ltd	Textile machinery	Manufacturing
237	Bombay Dyeing & Manufacturing Company Ltd	Textiles	Manufacturing
238	Garware Technical Fibres Ltd	Textiles	Manufacturing
239	Grasim Industries Ltd	Textiles	Manufacturing
240	Raymond Ltd	Textiles	Manufacturing
241	SRF Ltd	Textiles	Manufacturing
242	Vardhman Textiles Ltd	Textiles	Manufacturing
243	Swan Energy Ltd	Textiles	Manufacturing
244	Welspun India Ltd	Textiles	Manufacturing
245	Trident Ltd	Textiles	Manufacturing
246	Alok Industries Ltd	Textiles	Manufacturing
247	Sheela Foam Ltd	Textiles	Manufacturing
248	K P R Mill Ltd	Textiles	Manufacturing
249	Kalpataru Power Transmission Ltd	Transmisson Line Towers / Equipment	Manufacturing
250	K E C International Ltd	Transmisson Line Towers / Equipment	Manufacturing
251	Indus Towers Ltd	Transmisson Line Towers / Equipment	Manufacturing
252	Apollo Tyres Ltd	Tyres	Manufacturing
253	Balkrishna Industries Ltd	Tyres	Manufacturing
254	CEAT Ltd	Tyres	Manufacturing
255	JK Tyre & Industries Ltd	Tyres	Manufacturing
256	MRF Ltd	Tyres	Manufacturing
257	TVS Srichakra Ltd	Tyres	Manufacturing
258	Blue Star Ltd	Air	Non-Financial Services
259	Zensar Technologies Ltd	Computers	Non-Financial Services
260	Wipro Ltd	Computers	Non-Financial Services
261	Infosys Ltd	Computers	Non-Financial Services
262	Mphasis Ltd	Computers	Non-Financial Services
263	Vakrangee Ltd	Computers	Non-Financial Services
264	Tata Consultancy Services Ltd	Computers	Non-Financial Services
265	HCL Technologies Ltd	Computers	Non-Financial Services
266	Sonata Software Ltd	Computers	Non-Financial Services
267	Oracle Financial Services Software Ltd	Computers	Non-Financial Services
268	Cyient Ltd	Computers	Non-Financial Services
269	Birlasoft Ltd	Computers	Non-Financial Services
270	Tech Mahindra Ltd	Computers	Non-Financial Services
271	Larsen & Toubro Infotech Ltd	Computers	
272	Persistent Systems Ltd	Computers	Non-Financial Services
273	Mindtree Ltd	Computers	Non-Financial Services

Sr. No.	Company Name	Industry-Main	Industry Classification
274	Tanla Platforms Ltd	Computers	Non-Financial Services
275	Coforge Ltd	Computers	Non-Financial Services
276	L&T Technology Services Ltd	Computers	Non-Financial Services
277	NCC Ltd	Construction	Non-Financial Services
278	Phoenix Mills Ltd	Construction	Non-Financial Services
279	Sunteck Realty Ltd	Construction	Non-Financial Services
280	DLF Ltd	Construction	Non-Financial Services
281	Prestige Estates Projects Ltd	Construction	Non-Financial Services
282	Godrej Properties Ltd	Construction	Non-Financial Services
282	Mahindra Lifespace Developers Ltd	Construction	Non-Financial Services
283	Sobha Ltd	Construction	Non-Financial Services
285	Omaxe Ltd	Construction	Non-Financial Services
285	Indiabulls Real Estate Ltd	Construction	Non-Financial Services
			Non-Financial Services
287	Brigade Enterprises Ltd	Construction	
288	KNR Constructions Ltd	Construction	Non-Financial Services
289	IRB Infrastructure Developers Ltd	Construction	Non-Financial Services
290	PNC Infratech Ltd	Construction	Non-Financial Services
291	Dilip Buildcon Ltd	Construction	Non-Financial Services
292	Oberoi Realty Ltd	Construction	Non-Financial Services
293	Blue Dart Express Ltd	Couriers	Non-Financial Services
294	Dr Lal Pathlabs Ltd	Diagnostic Services	Non-Financial Services
295	Thyrocare Technologies Ltd	Diagnostic Services	Non-Financial Services
296	Info Edge (India) Ltd	Е	Non-Financial Services
297	Just Dial Ltd	Е	Non-Financial Services
298	Zee Entertainment Enterprises Ltd	Entertainment	Non-Financial Services
299	PVR Ltd	Entertainment	Non-Financial Services
300	Sun TV Network Ltd	Entertainment	Non-Financial Services
301	Dish TV India Ltd	Entertainment	Non-Financial Services
302	Hathway Cable & Datacom Ltd	Entertainment	Non-Financial Services
303	Jagran Prakashan Ltd	Entertainment	Non-Financial Services
304	Inox Leisure Ltd	Entertainment	Non-Financial Services
305	T.V. Today Network Ltd	Entertainment	Non-Financial Services
305	TV18 Broadcast Ltd	Entertainment	Non-Financial Services
307	D B Corp Ltd	Entertainment	Non-Financial Services
			Non-Financial Services
308 309	Avanti Feeds Ltd KRBL Ltd	Food Food	Non-Financial Services
310	Varun Beverages Ltd	Food	Non-Financial Services
311	GAIL (India) Ltd	Gas Distribution	Non-Financial Services
312	Petronet LNG Ltd	Gas Distribution	Non-Financial Services
313	Indraprastha Gas Ltd	Gas Distribution	Non-Financial Services
314	Gujarat State Petronet Ltd	Gas Distribution	Non-Financial Services
315	Gujarat Gas Ltd	Gas Distribution	Non-Financial Services
316	Apollo Hospitals Enterprise Ltd	Hospitals / Medical Services	Non-Financial Services
317	Fortis Healthcare Ltd	Hospitals / Medical Services	Non-Financial Services
318	Narayana Hrudayalaya Ltd	Hospitals / Medical Services	Non-Financial Services
319	EIH Ltd	Hotels	Non-Financial Services
320	Indian Hotels Co Ltd	Hotels	Non-Financial Services
321	Westlife Development Ltd	Hotels	Non-Financial Services
322	India Tourism Development Corporation Ltd	Hotels	Non-Financial Services
323	Mahindra Holidays & Resorts India Ltd	Hotels	Non-Financial Services
323	Vedanta Ltd	Mining / Minerals	Non-Financial Services
324	Coal India Ltd	Mining / Minerals	Non-Financial Services
325	NMDC Ltd	Mining / Minerals	Non-Financial Services
320		-	
3/1	MOIL Ltd	Mining / Minerals	Non-Financial Services

Sr. No.	Company Name	Industry-Main	Industry Classification
329	NESCO Ltd	Miscellaneous	Non-Financial Services
330	CRISIL Ltd	Miscellaneous	Non-Financial Services
331	Gujarat Pipavav Port Ltd	Miscellaneous	Non-Financial Services
332	CARE Ratings Ltd	Miscellaneous	Non-Financial Services
333	Gateway Distriparks Ltd	Miscellaneous	Non-Financial Services
334	Delta Corp Ltd	Miscellaneous	Non-Financial Services
335	Adani Ports & Special Economic Zone Ltd	Miscellaneous	Non-Financial Services
336	Team Lease Services Ltd	Miscellaneous	Non-Financial Services
337	Multi Commodity Exchange of India Ltd	Miscellaneous	Non-Financial Services
338	Network 18 Media & Investments Ltd	Miscellaneous	Non-Financial Services
339	Kaveri Seed Company Ltd	Miscellaneous	Non-Financial Services
340	Oil India Ltd	Oil Exploration / Allied Services	Non-Financial Services
341	Oil & Natural Gas Corpn Ltd	Oil Exploration / Allied Services	Non-Financial Services
342	Hindustan Unilever Ltd	Personal Care	Non-Financial Services
343	Dabur India Ltd	Personal Care	Non-Financial Services
344	Emami Ltd	Personal Care	Non-Financial Services
345	Marico Ltd	Personal Care	Non-Financial Services
346	Jyothy Labs Ltd	Personal Care	Non-Financial Services
347	Godrej Consumer Products Ltd	Personal Care	Non-Financial Services
348	Bajaj Consumer Care Ltd	Personal Care	Non-Financial Services
349	Shoppers Stop Ltd	Retailing	Non-Financial Services
350	Great Eastern Shipping Company Ltd	Shipping	Non-Financial Services
351	Shipping Corporation of India Ltd	Shipping	Non-Financial Services
352	HFCL Ltd	Telecommunications	Non-Financial Services
353	Tata Communications Ltd	Telecommunications	Non-Financial Services
354	Bharti Airtel Ltd	Telecommunications	Non-Financial Services
355	Vodafone Idea Ltd	Telecommunications	Non-Financial Services
356	Aegis Logistics Ltd	Trading	Non-Financial Services
357	Trent Ltd	Trading	Non-Financial Services
358	Rain Industries Ltd	Trading	Non-Financial Services
359	MMTC Ltd	Trading	Non-Financial Services
360	Adani Enterprises Ltd	Trading	Non-Financial Services
361	Redington India Ltd	Trading	Non-Financial Services
362	PTC India Ltd	Trading	Non-Financial Services
363	SpiceJet Ltd	Transport	Non-Financial Services
364	Container Corporation Of India Ltd	Transport	Non-Financial Services
365	Allcargo Logistics Ltd	Transport	Non-Financial Services

### **APPENDIX 2-List of Industries in each Category**

Industry in Manufacturing Sector	211 Cos	Industry in Financial Services Sector	46 Cos	Industry in Non-Financial Services Sector	108 Cos
Abrasives and Grinding Wheels	2	Banks	17	Air	1
Aluminium	2	Finance	23	Computers	18
Auto Ancillaries	9	IT Enabled Services / Business Process Outsourcing	2	Construction	16
Automobiles	10	Life Insurance	1	Couriers	1
Biotechnology	1	NBFC	3	Diagnostic Services	2
Breweries	1			E	2
Cables	3			Entertainment	10
Carbon Black	1			Food	3
Castings	1			Gas Distribution	5
Cement	10			Hospitals / Medical Services	3
Ceramics	2			Hotels	5
Chemicals	13			Mining / Minerals	5
Chlor	1			Miscellaneous	11
Cigarettes	2			Oil Exploration / Allied Services	2
Coffee	2			Personal Care	7
Decoratives	1			Retailing	1
Diamond Cutting / Jewellery	3			Shipping	2
Distilleries	1			Telecommunications	4
Diversified	5			Trading	7
Domestic Appliances	3			Transport	3
Dyes And Pigments	2				
Electric Equipment	4				
Electrodes	2				
Electronics	1				
Engineering	8				
Engines	2				
Fasteners	1				
Fertilizers	5				
Food And Dairy Products	4				
Forgings	2				
Industrial Explosives	1				
Leather / Synthetic Footware	1				
Medical Accessories / Disposables	1				
Moulded Luggage	1				
Packaging	2				
Paints / Varnishes	4				
Paper	1				
Pesticides / Agrochemicals	5				
Pharmaceuticals	28				
Plastics	7				
Power Generation And Supply	11				
Printing & Stationery	1				
Pumps	1				
Refineries	6				
Steel	11				
Sugar	2				
Tea Teatile marchine ma	2				
Textile machinery	1				
Textiles           Transmisson         Line         Towers         /	12 3				
Equipment Tyres	6				

### **APPENDIX 3-List of Abbreviation**

Abbreviation	Full Form
EPS	Earnings Per Share
DIV	Dividends Paid
DPR	Dividend Payout Ratio
DER	Debt Equity ratio
LDER	Long Term Debt To Equity Ratio
CR	Current Ratio
FAR	Fixed Assets Turnover Ratio
INVR	Inventory Turnover Ratio
DR	Debtors Ratio
ICR	Interest Coverage Ratio
PBITM	Earnings Before Interest And Tax Margin
СРМ	Adjusted Net Profit + Depreciation Margin
APATM	Adjusted Net Profit Margin
ROCE	Return On Capital Employed
RONW	Return On Net Worth
EVM	Enterprise Value Multiple
MPS	Market Price Per Share, Closing Price

## **Appendix 4a- Regression Results:** R<sup>2</sup> and Level of Significance

	2016	2017	2018		1		1	2017	2018	2019	2020	All
IV	2010	2017	F	2019	2020	All	2016		Level of Si			All
11			r	<u> </u>	Ms	nufacturi	no		Level of SI	gimeanee		
ANPM	0.0120	0.0030	0.0000	0.0000	0.0020	0.0010	0.1120	0.4530	0.7610	0.7670	0.4980	0.2490
CPM	0.0020	0.0030	0.0000	0.0000	0.0020	0.0010	0.1120	0.4330	0.7700	0.6970	0.4900	0.2270
CR	0.0030	0.0000	0.0000	0.0000	0.0000	0.0000	0.4340	0.8760	0.8840	0.9510	0.8920	0.7410
DER	0.0130	0.0090	0.0030	0.0040	0.0030	0.0050	0.0940	0.1710	0.4250	0.3540	0.4150	0.0260
DIV	0.0700	0.0830	0.0390	0.0340	0.0570	0.0530	0.0000	0.0000	0.0040	0.0070	0.0000	0.0000
DPR	0.0000	0.0010	0.0010	0.0010	0.0000	0.0000	0.9490	0.7010	0.6010	0.7240	0.8620	0.7590
DTR	0.0000	0.0010	0.0000	0.0000	0.0000	0.0000	0.9890	0.7250	0.7580	0.8560	0.9600	0.7150
EBITM	0.0040	0.0000	0.0000	0.0000	0.0000	0.0000	0.3770	0.7770	0.9110	0.8310	0.9600	0.6990
EPS	0.8130	0.9600	0.9100	0.8240	0.9030	0.8210	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EVM	0.0000	0.0000	0.0000	0.0000	0.0010	0.0000	0.8680	0.7840	0.9120	0.9260	0.7340	0.9230
FTR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.9520	0.9900	0.9600	0.9310	0.8520	0.9410
ICR	0.0030	0.0010	0.0020	0.0010	0.0010	0.0010	0.4020	0.5960	0.5520	0.7110	0.6320	0.2270
ITR	0.0000	0.0000	0.0000	0.0000	0.0010	0.0000	0.8410	0.8190	0.8200	0.7780	0.7370	0.6490
LDER	0.0080	0.0070	0.0020	0.0030	0.0020	0.0030	0.1980	0.2340	0.4870	0.4610	0.5040	0.0750
ROCE	0.0180	0.0070	0.0020	0.0000	0.0020	0.0030	0.1710	0.2210	0.5140	0.7980	0.4740	0.4150
RONW	0.0120	0.0020	0.0000	0.0000	0.0020	0.0010	0.1100	0.5190	0.9270	0.8180	0.5090	0.2570
					Fina	ncial Serv	vices					
ANPM	0.1050	0.0910	0.0720	0.0690	0.0380	0.0520	0.0280	0.0410	0.0720	0.0780	0.1970	0.0010
СРМ	0.1050	0.0880	0.0700	0.0690	0.0380	0.0520	0.0280	0.0450	0.0760	0.0780	0.1950	0.0000
CR	0.0040	0.0630	0.0080	0.0000	0.0030	0.0000	0.6820	0.0910	0.5660	0.9530	0.7200	0.7730
DER	0.0000	0.0010	0.0010	0.0000	0.0010	0.0010	0.9380	0.8520	0.8480	0.8980	0.8600	0.6900
DIV	0.0410	0.0690	0.0480	0.0190	0.0540	0.0370	0.1770	0.0780	0.1430	0.3630	0.1190	0.0040
DPR	0.0390	0.0120	0.0000	0.0010	0.0000	0.0000	0.1890	0.4770	0.9940	0.8120	0.9240	0.9210
DTR	0.0530	0.0170	0.0580	0.0050	0.0000	0.0010	0.1250	0.3890	0.1080	0.6460	0.9710	0.7040
EBITM	0.0230	0.0180	0.0210	0.0230	0.0220	0.0200	0.3140	0.3740	0.3330	0.3140	0.3230	0.3320
EPS	0.4130	0.8210	0.7760	0.7580	0.7720	0.7130	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EVM	0.1840	0.0060	0.3040	0.2180	0.1840	0.1380	0.0030	0.6240	0.0000	0.0010	0.0030	0.0000
FTR	0.0210	0.0120	0.0270	0.0180	0.0520	0.0240	0.3400	0.4710	0.2760	0.3730	0.1260	0.0180
ICR	0.0010	0.0000	0.0000	0.0010	0.0030	0.0000	0.8770	0.9050	0.9980	0.8220	0.7010	0.8420
ITR	0.1510	0.0270	0.0440	0.0000	0.0100	0.0180	0.1540	0.2800	0.1600	0.9610	0.5030	0.1450
LDER	0.0010	0.0020	0.0020	0.0010	0.0010	0.0020	0.8620	0.7820	0.7810	0.8440	0.8290	0.5230
ROCE	0.0860	0.0460	0.0730	0.0750	0.0800	0.0600	0.0480	0.1540	0.0690	0.0650	0.0560	0.0000
RONW	0.1290	0.1010	0.1010	0.0930	0.1470	0.1020	0.0140	0.0310	0.0310	0.0390	0.0090	0.0000

	2016	2017	2018	2019	2020	All	2016	2017	2018	2019	2020	All
IV			R	2					Level of Si	ignificance	9	
					Non-Fi	inancial Se	ervices					
ANPM	0.0180	0.0350	0.0290	0.0250	0.0090	0.0200	0.1610	0.0510	0.0790	0.1040	0.3350	0.0010
СРМ	0.0040	0.0120	0.0050	0.0020	0.0000	0.0040	0.4960	0.2560	0.4460	0.6250	0.8250	0.1570
CR	0.0010	0.0050	0.0070	0.0130	0.0050	0.0050	0.7000	0.4540	0.3900	0.2440	0.4870	0.0990
DER	0.0050	0.0000	0.0150	0.0010	0.0500	0.0030	0.4710	0.8270	0.2020	0.7280	0.1190	0.2240
DIV	0.1240	0.2010	0.2550	0.1360	0.2720	0.1980	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
DPR	0.0060	0.0510	0.0010	0.0110	0.0000	0.0040	0.4340	0.0190	0.7110	0.2850	0.8340	0.1450
DTR	0.0000	0.0020	0.0010	0.0040	0.0100	0.0000	0.8390	0.6730	0.8100	0.5370	0.3100	0.9080
EBITM	0.0110	0.0220	0.0110	0.0100	0.0010	0.0090	0.2720	0.1270	0.2850	0.2970	0.7800	0.0270
EPS	0.2940	0.3200	0.4790	0.5800	0.3210	0.3870	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EVM	0.0010	0.0060	0.0040	0.0400	0.1350	0.0030	0.8060	0.4140	0.5070	0.0380	0.0000	0.1890
FTR	0.0000	0.0010	0.0020	0.0020	0.0030	0.0010	0.9270	0.7580	0.6080	0.6100	0.5640	0.3760
ICR	0.0020	0.0160	0.0080	0.0100	0.0150	0.0050	0.6250	0.1990	0.3720	0.3150	0.2120	0.0860
ITR	0.0190	0.0330	0.0300	0.0410	0.1480	0.0540	0.0950	0.0600	0.0710	0.0360	0.0000	0.0000
LDER	0.0040	0.0000	0.0100	0.0010	0.0260	0.0010	0.5220	0.9550	0.2960	0.7760	0.0960	0.3870
ROCE	0.1590	0.1470	0.1730	0.1900	0.1330	0.1570	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
RONW	0.1550	0.1390	0.1530	0.1030	0.0560	0.1130	0.0000	0.0000	0.0000	0.0010	0.0140	0.0000
					Al	l Compani	es		•		•	
ANPM	0.0050	0.0020	0.0000	0.0010	0.0020	0.0010	0.1750	0.4310	0.6740	0.5320	0.4430	0.1280
СРМ	0.0000	0.0010	0.0000	0.0010	0.0020	0.0010	0.2720	0.5110	0.7230	0.5510	0.4310	0.1600
CR	0.0010	0.0000	0.0000	0.0000	0.0000	0.0000	0.6700	0.8350	0.9230	0.9050	0.7770	0.8970
DER	0.0030	0.0030	0.0020	0.0010	0.0030	0.0020	0.2630	0.2870	0.3650	0.5340	0.3350	0.0570
DIV	0.0330	0.0400	0.0230	0.0240	0.0330	0.0290	0.0010	0.0000	0.0040	0.0030	0.0010	0.0000
DPR	0.0000	0.0000	0.0010	0.0000	0.0000	0.0000	0.9790	0.9270	0.5360	0.8380	0.9150	0.8000
DTR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.9610	0.9390	0.7660	0.8190	0.8740	0.8320
EBITM	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7730	0.9830	0.9950	0.9750	0.9500	0.8890
EPS	0.8000	0.9160	0.9500	0.8210	0.9840	0.8170	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
EVM	0.0000	0.0000	0.0000	0.0020	0.0030	0.0000	0.9690	0.7480	0.7470	0.3760	0.3360	0.4710
FTR	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.9830	0.9290	0.8630	0.8600	0.8130	0.7490
ICR	0.0000	0.0010	0.0000	0.0000	0.0010	0.0000	0.9670	0.6160	0.8470	0.9130	0.5820	0.7370
ITR	0.0000	0.0000	0.0000	0.0000	0.0010	0.0000	0.8060	0.8900	0.8130	0.9120	0.5990	0.4990
LDER	0.0040	0.0020	0.0020	0.0010	0.0020	0.0010	0.2570	0.3730	0.4350	0.5890	0.4350	0.1080
ROCE	0.0200	0.0080	0.0040	0.0020	0.0040	0.0060	0.0070	0.0820	0.2120	0.3620	0.2050	0.0010
RONW	0.0160	0.0040	0.0020	0.0000	0.0040	0.0030	0.0170	0.2010	0.4390	0.7200	0.2520	0.0130

### Appendix 4b- Regression <u>Results: Level of Association</u>

IV	2016	2017	2018	2019	2020	All						
	Manufacturing											
ANPM	40.33	28.81	4.39	6.65	20.31	10.95						
СРМ	28.21	21.01	4.20	8.67	22.91	11.03						
CR	225.92	69.02	-75.55	-28.50	64.44	64.58						
DER	-290.22	-359.69	-135.69	-149.38	-118.02	-171.21						
DIV	2.66	3.67	2.63	1.94	2.39	2.60						
DPR	-0.20	-4.53	-5.87	-3.11	-0.22	-0.34						
DTR	0.13	5.98	4.95	3.12	-0.74	2.29						
EBITM	17.53	8.76	1.90	-5.60	1.42	3.88						
EPS	10.63	18.74	25.40	19.95	19.15	17.69						
EVM	-0.98	-3.19	-3.09	-0.91	-6.08	-0.49						
FTR	0.92	0.31	-1.73	-3.69	-10.04	-0.97						
ICR	0.48	0.56	0.55	0.64	1.04	0.56						
ITR	-0.19	-0.66	-0.66	-1.53	-2.52	-0.48						
LDER	-290.22	-474.94	-161.08	-139.67	-114.42	-172.53						
ROCE	33.18	35.24	20.83	5.51	26.49	22.10						
RONW	22.56	19.59	3.21	-5.56	20.78	12.88						

IV	2016	2017	2018	2019	2020	All
		Fina	ncial Serv	ices		
ANPM	10.87	16.67	14.08	13.32	5.03	8.64
СРМ	10.72	16.17	13.81	13.39	5.17	8.76
CR	19.88	112.96	35.93	2.32	-7.46	4.03
DER	2.24	8.10	10.01	7.45	8.94	8.53
DIV	0.32	0.87	0.63	0.51	0.94	0.60
DPR	4.02	-6.68	0.06	-2.51	0.59	-0.29
DTR	0.42	0.15	0.14	0.00	0.00	0.00
EBITM	2.31	3.22	4.26	4.52	3.17	3.45
EPS	7.45	20.69	15.46	16.85	13.98	14.68
EVM	10.72	1.22	6.78	8.99	24.84	6.71
FTR	6.97	6.94	12.37	10.46	26.06	11.94
ICR	0.00	0.10	0.00	1.08	0.27	0.01
ITR	0.24	0.04	0.04	0.01	0.08	0.05
LDER	7.03	17.42	17.58	12.81	12.07	16.44
ROCE	18.78	24.31	39.57	54.64	50.41	34.38
RONW	20.15	24.82	26.55	39.80	46.83	30.73
		Non-Fi	inancial Se	ervices		
ANPM	7.55	9.60	8.67	8.07	3.91	6.94
СРМ	3.27	5.15	3.71	2.38	0.97	2.93
CR	16.64	32.62	44.73	54.16	27.31	32.32
DER	-11.87	-6.67	-75.95	-3.63	-182.23	-10.21
DIV	0.36	0.39	0.46	0.39	0.39	0.40
DPR	0.29	2.63	0.68	1.09	-0.29	0.44
DTR	0.01	0.71	0.42	1.10	1.62	0.00
EBITM	4.24	5.54	3.97	3.96	1.22	3.80
EPS	16.72	14.26	17.65	20.03	15.16	16.68
EVM	0.38	1.91	-0.90	7.64	16.05	1.14
FTR	-0.47	-0.97	-1.30	-0.77	-1.13	-0.89
ICR	0.05	0.15	0.09	0.04	0.46	0.06
ITR	0.07	0.04	0.09	0.04	0.04	0.04
LDER	-24.14	-2.17	-82.13	-3.91	-190.17	-10.58
ROCE	16.44	16.14	17.57	19.01	18.25	17.27
RONW	17.16	18.66	19.65	14.82	11.30	15.91
		Al	l Compani	es	•	
ANPM	16.11	14.29	4.14	7.35	7.51	7.69
СРМ	11.67	10.62	3.46	6.91	7.73	6.92
CR	48.02	35.52	-16.66	-10.26	-16.68	-5.39
DER	-57.44	-113.53	-91.45	-30.45	-82.76	-60.91
DIV	1.02	1.54	1.21	1.13	1.07	1.19
DPR	-0.03	-0.49	-4.13	-0.88	-0.10	-0.19
DTR	0.01	0.06	0.10	0.00	0.03	0.00
EBITM	1.98	0.23	-0.06	0.27	0.53	0.54
EPS	10.65	18.74	25.15	19.87	19.03	17.66
EVM	0.14	1.98	1.68	4.47	10.35	1.76
FTR	-0.21	-1.15	-2.23	-1.37	-2.40	-1.49
ICR	0.00	0.27	0.04	0.02	0.62	0.02
ITR	0.04	0.01	0.03	0.01	0.03	0.02
LDER	-105.17	-133.12	-102.87	-33.23	-77.24	-68.23
ROCE	25.47	26.93	20.82	11.67	22.91	20.85
RONW	20.93	21.84	14.41	5.10	19.12	16.23