



A Study on Accounting Ratios of NSE Companies

Suvarna P Panchal¹, Komal B Power², Soundarya Bilgundi³, Roshni Rathod⁴

¹Sri. Basavanappa Memorial Degree College Gulbarga

²Godutai Degree College

³SS Tegnoor Degree College

⁴SS Tegnoor Degree College

ABSTRACT

Financial performance analysis of five companies like, organic, Wipro, TCS, Vedanta, Tata consultancy. An accounting ratio companies two line items in a company's financial statements, namely made up of its income statements, balance sheet, & cash flow statements. These ratios can be used to evaluate a company's fundamentals and provide information about the performance of the company over the last quarter or fiscal year. Accounting ratios also work as an important tool in company comparison within an industry, for both the company itself and investors. Ratio analysis has been done to analysis and compare the performance trends over several years. Different ratios such as, Price to earnings ratio(P/E), Price to book value ratio(P/B), Return on equity(ROE), Return on assets (ROA), Earnings before interest and taxes(EBIT) are being calculated in order to study the financial position of the firms.

Keywords: financial performance accounting ratios analysis, correlation, and regression analysis, about WIPRO, TATA CONSULTENCY SERVICE, VEDANT, ORGANIC, TATA CONSUMER, scope of the study research methodology and independent variables.

Introduction

Wipro restricted may be a market leading data Technology, consulting and business method services company. Wipro utilizes the facility of analytics, robotics, cloud and alternative rising technologies facilitate to assist purchasers unfold across six completely different continents to adapt to the present digital trend and help them thrive to success. Wipro has over one,60,000 dedicated workers serving along and building a daring and new future. the number of revenue generated by Wipro within the yr 2017 is 848 crores USD.

Tata Consultancy Services (TCS) is Associate in Nursing Indian transnational data technology (IT) services and business firm headquartered in metropolis, geographical region, India with its largest field settled in metropolis, Tamil Nadu, India. As of Gregorian calendar month 2021, TCS is that the largest IT services company within the world by market capitalization (\$200 billion). it's a subsidiary of the Tata cluster and operates in 149 locations across forty six countries.

Vedanta (then referred to as Sterlite industries) began within the Nineteen Eighties, because the founder D.P.Agarwal based Sterlite Industries (India) restricted in metropolis and commenced to shop for mining concessions in several states of India. He was shortly joined by his 2 sons, Navin Agarwal and Sunil Agarwal, each of whom presently run the corporate. In 1992, they established Volcan investments in Nassau (Bahamas) because the main company for his or her mines. D.P.Agarwal had atiny low metallic element conductor business in Patna. His son Anil Agarwal had come back to metropolis to expand their business.

In the Nineties, because the Indian government began to unload sick (non-performing) corporations, Sterlite began to bid for them. They were able to bid with success for BALCO and geographic area Zn restricted, each bankrupt corporations that had been closed down for four years. Meanwhile, in January 1993, D. P. Agarwal based Twinstar Holdings restricted in Mauritius, that was largely in hand by Volcan investments. On twenty six could 2002, the social control board of directors filed a show cause notice with Sterlite, concerning the six-year amount between 1993 and 1999 once Twinstar nonheritable the shares of Sterlite and varied investment corporations – like Dwarka Prasad Anil Kumar Investments non-public restricted, Pravin Navin Investment & commercialism non-public restricted and Sterlite Copper Rolling Mills non-public restricted – that, in turn, had created substantial investments in Sterlite and another cluster company, Madras metallic element Company restricted (MALCO) once getting permission from the banking company of India (RBI). On twenty nine Apr 1999, several of those investment corporations were liquidated and every one the shares of Sterlite came back to Twinstar's possession. Twinstar became the 100 percent owner of shares in these investment corporations and received government approvals from the tally furthermore because the Foreign Investment Promotion Board (FIPB).

Organic food is food made by strategies obliging with the standards of organic farming. Standards vary worldwide, however organic farming options practices that cycle resources, promote ecological balance, and conserve multifariousness. Organizations regulation organic product could limit the

utilization of bound pesticides and fertilizers within the farming strategies accustomed turn out such product. Organic foods generally aren't processed exploitation irradiation, industrial solvents, or artificial food additives.

In the twenty first century, the ecu Union, the u. s., Canada, Mexico, Japan, and lots of alternative countries need producers to get special certification to plug their food as organic. though the turn out of room gardens may very well be organic, merchandising food with Associate in Nursing organic label is regulated by governmental food safety authorities, like the National Organic Program of the North American nation Department of Agriculture (USDA) or European Commission (EC).

Tata shopper product may be a targeted shopper product company uniting the food and potable interests of the Tata cluster underneath one umbrella. it's home to key brands like Tata Tea, Tetley, Tata Salt and Tata Sampann. With a combined reach of over two hundred million households in India, it's Associate in Nursing unequaled ability to leverage the Tata whole in shopper product.

Objectives of the study

- To bring out the origin and growth of the companies in the country.
- To know the profit & loss of the company.
- To relate the financial performance and also investigate the financial changes past five years.
- To provide the information derived from financial statements useful for making projection and estimates for the future.

Scope of the study

Accounting ratios analysis helps in the identification of the strength and weaknesses of a business. Based on the financial reports it enables the business to measure its efficiency and profitability and provides a way of determining the relationship between one accounting variable to another on their financial statements.

Research methodology

In this present study an attempt has been made to evaluate the financial performance. The study is based on secondary data. Details collected from websites, magazines and journals. The time period of study is five years from 2016-2020. Accounting tools of ratios analysis is used to analyze the company

Following ratios are used for this study.

- Return on equity (ROE)
- Return on assets (ROA)
- Price to book value ratio (PB)
- Price to earning ratio (PE)
- Earning before interest and taxes (EBIT)

Data analysis and interpretation

Data analysis: accounting data is not only used to predict performance in future periods, but this information is also used to analyze business performance after the facts. Many small business owners review accounting information on a monthly basis by comparing actual sales, expense and profit performance to projected performance.

Descriptive statistical analysis

Arithmetic mean, standard deviation, co-efficient of variation, co-efficient of co-relation, regression and student t-test.

Independent variables

- Return on equity (ROE)

Is a financial ratio that tells you how much net income a company generates per dollar of invested capital. This percentage is key because it helps in investors understand how efficiently a firm uses its capital to generate profit.

$$ROE = \frac{\text{Net Income}}{\text{Average Shareholder's Equity}}$$

		ROE				
year	ongc	wipro	tcs	vedanta	tata consumers	ROE
2016	6.51	19.15	34.15	-27.86	-0.088	6.3724
2017	12.56	16.32	30.49	11.5	5.17	15.208
2018	10.9	16.58	30.34	16.33	6.18	16.066
2019	14.08	15.85	35.19	11.34	5.57	16.406
2020	5.77	17.44	38.44	-12.2	3.33	10.556

- **Return on assets(ROA)**

Is a profitability ratio that provides how much profit a company is able to generate from its assets. In other words, return on assets (ROA) measure how efficient a company's management is in generating earnings from their economic resources or assets on their balance sheet.

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

		ROA				
Year	ongc	wipro	tcs	vedanta	tata consumers	ROA
2016	3.76	12.3	27.24	-6.29	-0.555	7.291
2017	5.48	10.7	25.46	3.5	3.38	9.704
2018	4.83	10.53	24.3	5.6	4.1	9.872
2019	6.19	10.81	27.38	3.5	3.73	10.322
2020	2.16	11.9	26.75	-3.63	2.48	7.932

- **Price to book value ratio (P/B)**

Is the ratio of the market value of a company's shares over its book value of equity. The book value is defines as difference between the book value of assets and the book value of liabilities. Investors use the price to book value to gauge whether a stock is valued properly.

$$P/B\ Ratio = \frac{Market\ price\ per\ share}{Book\ value\ per\ share}$$

			PB			
Year	ongc	wipro	tcs	vedanta	tata consumers	PB
2016	0.617	1.12	3.49	0.605	1.22	1.4104
2017	1.22	2.4	5.56	1.35	1.52	2.41
2018	1.13	2.26	6.41	1.63	2.32	2.75
2019	0.926	2.69	8.4	1.1	1.76	2.9752
2020	0.415	2.02	8.15	0.44	1.79	2.563

- **Price to earning ratio (P/E)**

Is the ratio for valuing a company that measures its current share price relative to its earning per share. P/E ratios are used by investors and analysts to determine the relative value of a company's shares in an apples-to-apple comparison.

$$P/E\ Ratio = \frac{Market\ value\ per\ share}{Earnings\ per\ share}$$

			PE			
year	ongc	wipro	tcs	vedanta	tata consumers	PE
2016	9.48	5.87	10.23	-2.17	-1386.25	-272.568
2017	9.72	14.68	18.23	11.7	29.32	16.73
2018	10.32	15.8	21.12	9.96	37.5	18.94
2019	6.58	17	23.87	9.67	31.53	17.73
2020	7.88	11.56	21.19	-3.61	59.1	19.224

- **Earning before interest and taxes (EBIT)**

In accounting and finance, earnings before interest and taxes is a measure of a firm's profit that includes all income and expenses except interest expenses and income tax expenses.

$$\text{EBIT} = \text{net income} + \text{interest} + \text{taxes}$$

	EBIT					
year	ongc	wipro	tcs	vedanta	tata consumers	EBIT
2016	3.69	4.49	7.22	24.68	10.83	10.182
2017	6.11	9.78	13.04	6.65	12.07	9.53
2018	4.95	10.76	14.9	6.38	17.73	10.944
2019	3.62	10.75	16.86	4.6	14.31	10.028
2020	3.76	7.22	14.47	9.02	23.35	11.564

- **Correlation analysis**

Is a method of statistical evaluation used to study the strength of relationship between two numerically measured, continuous variables. This particular type of analysis is useful when researcher wants to establish if there are possible connections between variables. It is often misunderstood that correlation analysis determines cause and effect; however, this is not the case because other variables that are not present in the research may have impacted on the results. The variables alter together over a certain period of time. If there is correlation found, depending upon the numerical values measured, this can be either positive or negative.

ROA		ROE		PE		PB		EBIT	
Mean	9.0242	Mean	12.92168	Mean	-39.9888	Mean	2.42172	Mean	400.4758
Standard E	0.594225	Standard E	1.946073	Standard E	58.14651	Standard E	0.269905	Standard E	12.19606
Median	9.704	Median	15.208	Median	17.73	Median	2.563	Median	412.2104
Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard D	1.328727	Standard D	4.351552	Standard D	130.0195	Standard D	0.603526	Standard D	27.27123
Sample Va	1.765515	Sample Va	18.936	Sample Va	16905.08	Sample Va	0.364243	Sample Va	743.7198
Kurtosis	-2.38012	Kurtosis	-0.52731	Kurtosis	4.998824	Kurtosis	2.852899	Kurtosis	4.992087
Skewness	-0.60389	Skewness	-1.05591	Skewness	-2.23574	Skewness	-1.56673	Skewness	-2.23386
Range	3.031	Range	10.0336	Range	291.792	Range	1.5648	Range	61.58548
Minimum	7.291	Minimum	6.3724	Minimum	-272.568	Minimum	1.4104	Minimum	351.7012
Maximum	10.322	Maximum	16.406	Maximum	19.224	Maximum	2.9752	Maximum	413.2866
Sum	45.121	Sum	64.6084	Sum	-199.944	Sum	12.1086	Sum	2002.379
Count	5	Count	5	Count	5	Count	5	Count	5
Largest(1)	10.322	Largest(1)	16.406	Largest(1)	19.224	Largest(1)	2.9752	Largest(1)	413.2866
Smallest(1)	7.291	Smallest(1)	6.3724	Smallest(1)	-272.568	Smallest(1)	1.4104	Smallest(1)	351.7012
Confidenc	1.649832	Confidenc	5.403165	Confidenc	161.4406	Confidenc	0.749376	Confidenc	33.8617

- **Regression analysis**

In statistical modeling, regression analysis is a set of statistical processes for estimating the relationships between a dependent variable and one or more independent variables. The most common form of regression analysis is a linear regression, in which one finds the line that most closely fits the data according to a specific mathematical criterion.

Regression is primarily used for two conceptually distinct purposes:

1. Regression analysis is widely used for prediction and forecasting, where its use has substantial overlap with the field of machine learning.
2. In some situations regression analysis can be used to infer causal relationships between the independent and dependent variables.

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	1
R Square	1
Adjusted R Square	65535
Standard Error	0
Observations	5

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	2974.879	743.7198	#NUM!	#NUM!
Residual	0	0	65535		
Total	4	2974.879			

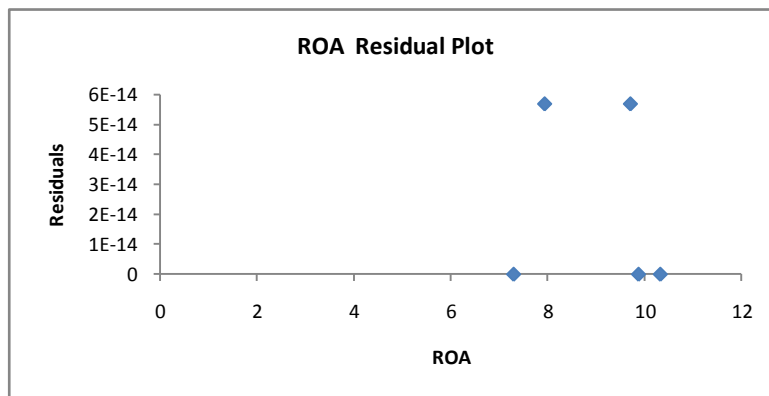
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	402.3243	0	65535	#NUM!	402.3243	402.3243	402.3243	402.3243
ROA	0.311881	0	65535	#NUM!	0.311881	0.311881	0.311881	0.311881
ROE	0.058051	0	65535	#NUM!	0.058051	0.058051	0.058051	0.058051
PE	0.201038	0	65535	#NUM!	0.201038	0.201038	0.201038	0.201038
PB	1.084422	0	65535	#NUM!	1.084422	1.084422	1.084422	1.084422

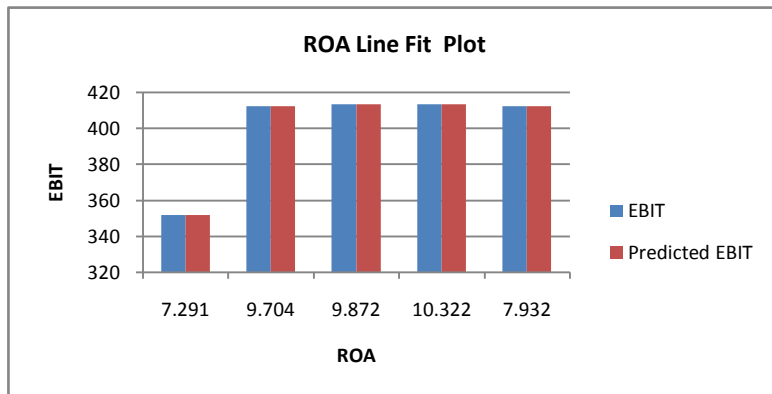
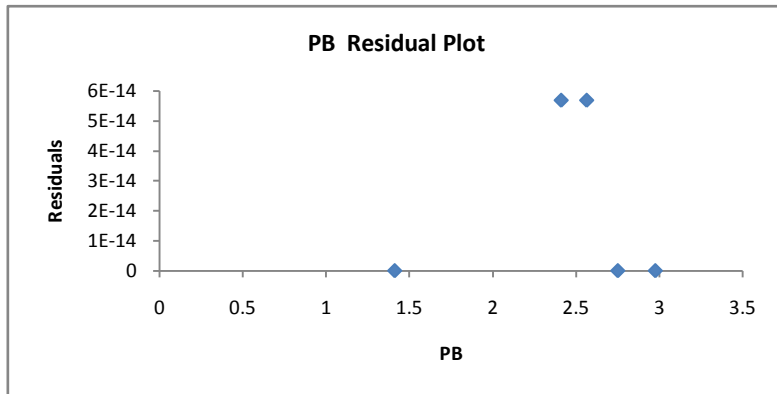
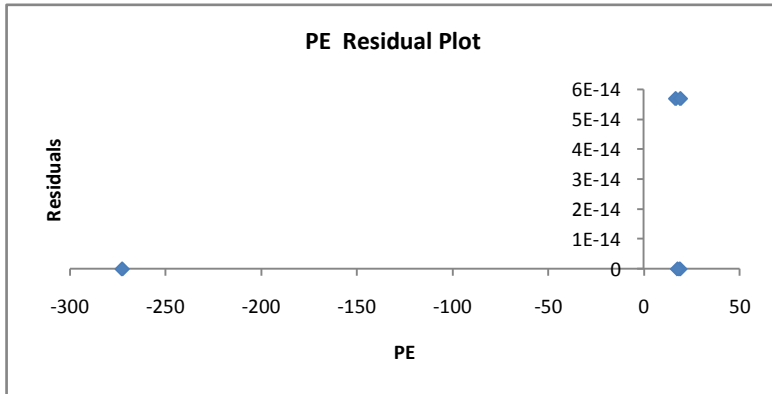
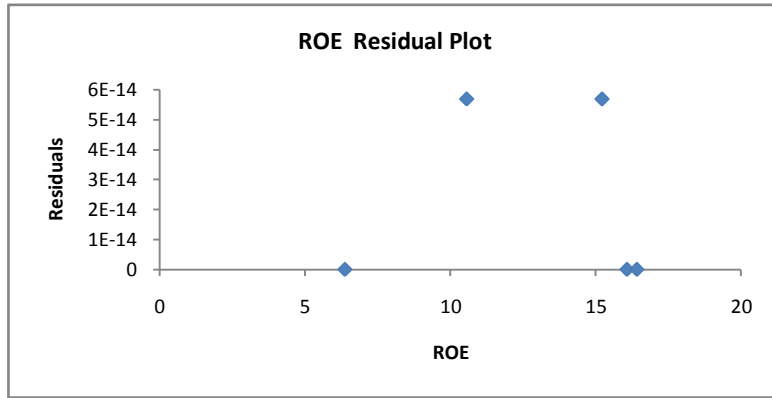
RESIDUAL OUTPUT

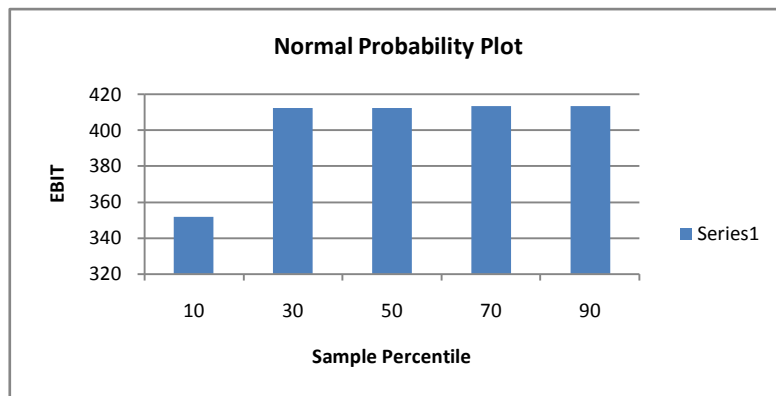
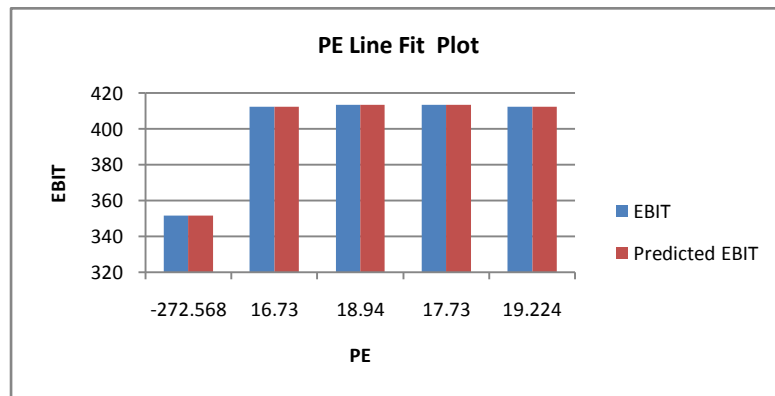
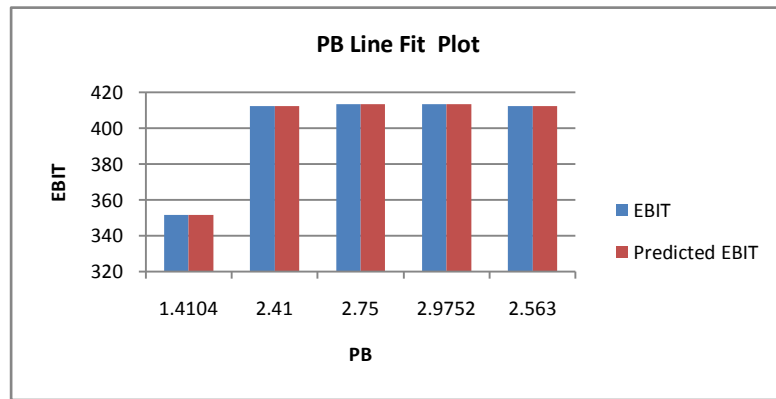
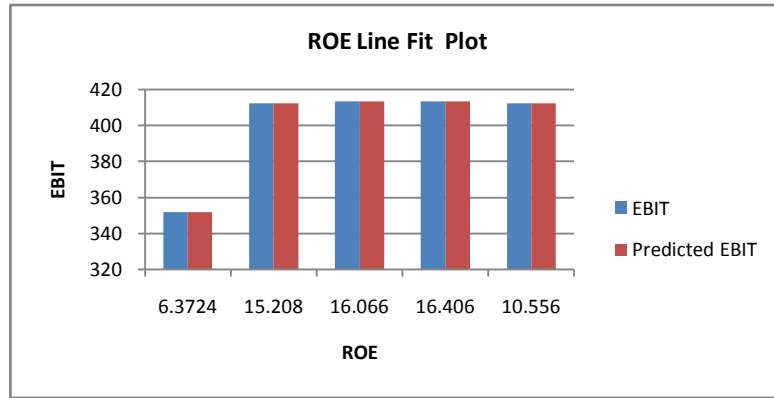
<i>Observation</i>	<i>Predicted EBIT</i>	<i>Residuals</i>	<i>Standard Residuals</i>
1	351.7012	0	0
2	412.2104	5.68E-14	1.414214
3	413.1256	0	0
4	413.2866	0	0
5	412.055	5.68E-14	1.414214

PROBABILITY OUTPUT

<i>Percentile</i>	<i>EBIT</i>
10	351.7012
30	412.055
50	412.2104
70	413.1256
90	413.2866







year	ROA	ROE	PE	PB	EBIT
2016	7.291	6.3724	-272.568	1.4104	351.7012
2017	9.704	15.208	16.73	2.41	412.2104
2018	9.872	16.066	18.94	2.75	413.1256
2019	10.322	16.406	17.73	2.9752	413.2866
2020	7.932	10.556	19.224	2.563	412.055

Limitations of the study

- The study was limited to only five years financial data.
- The study is based on only on the past records.
- The study covers a multiple (five) organization.
- The study is completely based on secondary data.
- Lack of research Experience.
- Rigid obligations.

Conclusion :

Accounting ratios are very helpful in analyzing any company's performance but on the flip side, these ratios calculated using balance sheet on a specific date. May not reflect the financial position of the company during other periods of the year . The study highlighted that only two independent variables are showed a positive and significant impact on the EBIT, PV, for the whole study and other three variables are reluctant to explain with the ratios. The ROE shows that profit earned by the shareholders for the year. In case of price to book value (PB) shows that how optimistically the company is engaged in utilization the company assets to the sales for the year.

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