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Financial Performance Evaluation of Select Listed Companies of NSE-Emerge Using DuPont Analysis

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Abstract

The National Stock Exchange of India (NSE) Emerge is a platform launched by the NSE specifically designed for Small and Medium Enterprises (SMEs) to access the capital market. It was introduced to provide these companies with an avenue to raise funds and offer their shares to the public. From the year 2012 SMEs are granted to raise funds in the capital market through SME stock exchange platform (BSE & NSE). This study aims to analyse the financial performance of select consumer durable goods manufacturing companies listed in NSE-Emerge by using DuPont analysis. In this study, the financial performance of seven consumer durable goods companies listed on NSE-Emerge was analyzed during the period of 2017-18 to 2021-22. The study examined the impact of tax burden, interest burden, operating income margin, assets turnover ratio, and equity multiplier on ROE by using 5 step DuPont approach. Overall, the study provides valuable insights into the financial performance and stability of the studied companies.

Keywords: *DuPont Technique, Financial Performance, Interest Burden, Return on Equity, SME Exchange, Tax Burden*

1. Introduction

The DuPont analysis is a financial performance measurement tool that provides insight into the Return on Equity (ROE) of a company. It was developed by the DuPont Corporation in the early 20th century and has since become a widely used analytical framework in finance and accounting. The history of the DuPont analysis can be traced back to the 1910s when the DuPont Corporation, a chemical company, began experiencing rapid growth. As the company expanded, its management faced the challenge of assessing and improving the company's financial performance. In response to this challenge, the DuPont Corporation's finance department, led by Donaldson Brown, developed a systematic approach to analyze the company's Return on Investment (ROI). The objective was to identify the key drivers of profitability and find ways to optimize them. The DuPont Corporation used the framework to assess the efficiency of its operations, the effectiveness of its asset utilization, and the impact of financial leverage on its profitability. DuPont aimed to identify areas of improvement and make informed the financial decisions. Over time, the DuPont Analysis gained recognition and became a widely used financial tool in various industries. The simplicity and effectiveness of the framework made it popular among financial analysts, investors, and business managers. It provided a comprehensive understanding of a company's financial performance beyond just the ROE figure.

DuPont Analysis is a financial analysis method that provides a comprehensive view of a company's profitability by examining its Return on Equity (ROE). It breaks down ROE into three components: profit margin, asset turnover, and financial leverage. However, in addition to the three-step approach, a five-step approach can be used to further analyze a company's financial performance. Here's a breakdown of both approaches:

Three-Step DuPont Analysis:

Step 1: *Profit Margin (PM)* This step measures how effectively a company manages its costs and generates profits from its sales. It is calculated by dividing the net income by the total revenue.

Step 2: *Asset Turnover (AT)* This step evaluates how efficiently a company utilizes its assets to generate sales. It is calculated by dividing the total revenue by the average total assets.

Step 3: *Financial Leverage (FL)* This step assesses the impact of debt financing on a company's profitability. It is calculated by dividing the average total assets by the average shareholders' equity.

Finally, the overall ROE can be calculated by multiplying the results of the three steps together:

Return on Equity (ROE) = Profit Margin × Asset Turnover × Financial Leverage

Five-Step DuPont Analysis:

The five-step approach expands on the three-step method by breaking down the profit margin and asset turnover further:

Step 1: *Net Profit Margin (NPM)*

It measures the profitability of a company by determining the percentage of revenue that translates into net profit after deducting all expenses, including operating costs, taxes, and interest. It reflects a company's ability to generate profit from its operations and indicates its efficiency in managing costs and generating earnings. A higher net profit margin signifies better profitability and efficiency, while a lower margin may indicate challenges in controlling expenses or generating sufficient revenue.

Net Profit Margin = Net Income / Total Revenue

Step 2: *Tax Burden (TB)* This ratio shows the efficiency of the firm in tax payment. Each profit earning corporate firm has to pay tax to the government authority. On the other hand, loss occurring firm has no question of paying tax. Thus, how much efficient the profit creator firm is in paying tax, can be observed by computing this ratio. This step measures the impact of taxes on a company's net income.

Tax Burden = Net Income / Earnings Before Taxes

Step 3: *Interest Burden (IB)* This step evaluates the impact of interest expenses on a company's net income. The interest burden is crucial for evaluating a company's ability to meet its interest obligations and to determine the risk associated with its debt levels. A high interest burden may indicate financial distress if a company's earnings are insufficient to cover interest expenses, potentially leading to difficulties in servicing debt or even bankruptcy.

Interest Burden = Earnings Before Taxes / Earnings Before Interest and Taxes

Step 4: *Asset Turnover (AT)* It measures a company's efficiency in utilizing its assets to generate revenue. It calculates the amount of sales generated for each unit of average total assets. A higher asset turnover ratio indicates that a company is generating more sales for each rupee invested in its assets, which suggests an efficient asset utilization. The asset turnover ratio is useful for assessing operational efficiency, identifying potential areas of improvement, and comparing a company's performance to industry peers.

Asset Turnover = Total Revenue / Average Total Assets

Step 5: *Financial Leverage (FL)* It refers to the use of borrowed funds or debt to finance a company's operations or investments. It measures the extent to which a company relies on debt to fund its activities. Financial leverage can amplify returns for a company's shareholders when its earnings exceed the cost of borrowing. This is because the company benefits from the difference between the return on its investments and the interest it pays on its debt.

Financial Leverage = Average Total Assets / Average Shareholders' Equity

Finally, the overall ROE is calculated by multiplying the results of the five steps together:

Return on Equity (ROE) = Net Profit Margin × Tax Burden × Interest Burden × Asset Turnover × Financial Leverage

Both the three-step and five-step approaches of DuPont Analysis provide valuable insights into a company's financial performance by examining different aspects of profitability and efficiency.

2. Literature Review

Dhruti G Jani (2022) conducted a study with the objective to evaluate and analyze the financial performance of Coal India Limited after disinvestment during the period from 2011-12 to 2019-20 using three step & five step DuPont model and assets utilization. The study identified that assets turnover ratio should be in increasing trend in general but it showed decreasing trend due to decrease in fixed turnover ratio while stock turnover ratio improved slightly but its debtor's turnover ratio decreased drastically. Its ROE was stable in initial years and was highest in the year 2018-19. Equity multiplier was the most stable factor within the DuPont framework while other factors were fluctuating which indicates that Coal India Limited had less financial leverage in the initial years of the study period.

K. Bhagyalakshmi & **Dr. S. Saraswathi (2019)**, studied about the performance evaluation using DuPont analysis in selected automobile companies through measuring Return on Common Stockholder's Equity (ROE). The analysis covered the years 2013 to 2017 and focused on 10 automobile manufacturers that are listed on the NSE. Their study analyzed using equity multiplier, net profit margin, asset turnover ratio to calculate return on equity. ROE, ROA, ROCE, the most comprehensive measures of profitability of a firm. Correlation and regression analysis is done to know whether the relationship among the above variables exists or not and to know the impact of ROA and EM on ROE. The Results revealed that there was a positive relationship among all the variables except EM and there was significant difference existing in the financial performance of selected companies with respect to Return on Equity and Return on Assets.

Doorasamy (2016) conducted a detailed analysis of all financial ratios which included share price analysis, DuPont ratio analysis, cash flow analysis with reference to the selected top three firms in the South African food industry to assess their financial performance. This paper was illustrative of how one can apply the DuPont analysis to get an excellent idea of how a company is performing and about their sources of financial troubles. By applying various financial ratios, the author recommended that long-term investors should invest in the companies which have continuously increasing share price attributable to growth initiatives. Short-term investors would prefer to invest in the companies which are receiving higher returns immediately.

Singhal & Narang (2016), in their research paper indicated that the effect of the global recession in India was not as severe as that of the US but it is also true that India as an economy was not completely shielded too. On the basis of 5 – point DuPont Analysis along with the support of T-test, they concluded that Oil and Gas sector was impacted and could not fully recover from the effects of global financial crisis of 2008 even until 2013. Two companies named ONGC Ltd and Reliance Industries Ltd had much larger impact to ROE of the whole sector as compared to other Oil and Gas companies. According to their T-test research, the tax burden and equity multiplier did not significantly affect the ROE during the recession, although the interest burden, operating profit margin, and asset turnover did.

S. Christina Sheela & K. Karthikeyan (2012), made an attempt to measure the financial performance of the top three companies of the Pharmaceutical Industry in India like Cipla, Dr. Reddy's Laboratories and Ranbaxy for the period 2003-2012. Those companies' important ratios like ROE and ROA were calculated to determine their financial health. From their analysis it was found that Cipla pharmaceutical had highest Returns on Equity and Investment followed by Dr. Reddy's Laboratories ROE and ROI. The third position was secured by Ranbaxy Laboratories ROE. It can be said after referring the paper that DuPont analysis is an important tool for judging the earning power of the firm.

Objective of the study

The main objective of the present study is to analyse the financial performance of select NSE-Emerge listed companies by applying DuPont model using five factors testing.

3. Materials And Methods

The study attempts to analyse the financial performance of select listed companies of NSE-Emerge by using 5 step DuPont model. The present study is based on the secondary data i.e., annual reports of the companies selected for the study. A five-year period commencing from 2017-2018 to 2021-2022 has been considered for the study. Performance of the companies selected for study has been analyzed with the help of various ratios like assets turnover ratio, net profit margin ratio and return on capital employed. Statistical tools such as averages and standard deviation have been used to interpret the data. Hypothesis has been tested by using Two-way ANOVA.

Sampling Design

The population of the study consists of all the listed companies in NSE-EMERGE. As on 30thSeptember 2021, 96 companies were listed in NSE-Emerge exchange consisting of 14 sectors. The researcher selected only consumer goods sector. Out of 96 companies 17 companies are in consumer goods sector. In the consumer durable goods sector, the companies were first classified in to durable consumer goods and non-durable consumer goods companies, and in the present study only durable consumer goods manufacturing companies are chosen. Next the companies which had completed 5 years of listing period were taken into consideration. There were 12 durable consumer goods manufacturing companies listed in NSE-EMERGE out of which 7 completed 5 years listing period. At this stage the researcher had decided to take a sample of those 7 companies purposively, which were related to consumer durable goods sector of NSE-EMERGE.

List Of Select Companies

1. Brand Concepts Limited
2. Focus Lighting and Fixtures Limited
3. Lexus Granito (India) Limited
4. Marvel Decor Limited
5. Milton Industries Limited
6. Pulz Electronics Limited
7. Sonam Clock Limited

3. Results and Discussion

Performance Evaluation of Select Listed Companies of NSE-Emerge Using DuPont -An Analysis

Table 1 Tax Burden Ratio

The above table 1 shows the tax burden ratios for different companies over a period of five years, from 2017 to 2022. The tax burden ratio for Marvel decor Ltd ranged from 0.331 to 0.737 over the years. It seemed relatively consistent over the years, with no significant fluctuations. On an average, it had a lowest tax burden ratio of 0.620, indicating that, on an average, approximately 38% of its earnings were

Companies / years	Brand Concepts Limited	Focus Lighting and Fixtures Limited	Lexus Granito (India) Limited	Marvel Decor Limited	Milton Industries Limited	Pulz Electronics Limited	Sonam Clock Limited
2017-2018	0.741	0.605	0.642	0.737	0.973	0.693	0.724
2018-2019	0.707	0.726	0.636	0.712	0.711	0.689	0.712
2019-2020	0.795	0.529	1.682	0.445	0.711	0.763	0.710
2020-2021	0.726	0.849	0.989	0.331	0.709	0.926	0.739
2021-2022	0.726	0.766	1.159	0.876	0.764	0.780	0.811
Average	0.739	0.695	1.021	0.620	0.774	0.770	0.739
St. Dev	0.030	0.114	0.387	0.201	0.102	0.086	0.037

paid in taxes. Lexus Granito (India) Ltd was having highest average tax burden Ratio with 1.021 among all the Selected Companies during the study period because of huge losses and differed tax liability. Pulz Electronics Ltd and Sonam clock Ltd had average tax burden ratios of 0.770 and 0.739 respectively, which were similar to Milton Industries Ltd and Brand Concepts Ltd. Their standard deviations were relatively low as well, indicating a consistent tax burden for these brands.

Two-way ANOVA was applied to find the significant difference in respect of tax burden among the companies and in different time periods. The ANOVA results are presented in the below table 1 a.

Table 1a

ANOVA						
Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Rows	0.091	4	0.023	0.532	0.714	2.776
Columns	0.466	6	0.078	1.815	0.139	2.508
Error	1.026	24	0.043			
Total	1.583	34				

The computed value of F between the rows represents different time periods. The F-statistic of 0.531543962 suggests that there was no significant difference between the means of the different time periods. As the calculated F-value was lower than the critical F-value (2.776289289), we fail to reject the null hypothesis, indicates that the time periods did not have a significant effect on the tax burden. The computed value of F between the columns represents different companies, The F-statistic of 1.815116571 suggests that there was no significant difference between the means of the different brands, Since the calculated F-value was lower than the critical F-value (2.508188823), we fail to reject the null hypothesis, indicating that there was not significant difference in tax burden among the companies

Table 2 Interest burden ratio

Companies / years	Brand Concepts Limited	Focus Lighting and Fixtures Limited	Lexus Granito (India) Limited	Marvel Decor Limited	Milton Industries Limited	Pulz Electronics Limited	Sonam Clock Limited
2017-2018	0.505	0.970	0.549	0.662	0.366	0.905	0.658
2018-2019	0.555	0.958	0.060	0.918	0.595	0.944	0.770
2019-2020	-0.586	0.857	-0.170	0.564	0.703	0.977	0.701
2020-2021	1.808	1.319	1.143	0.151	0.679	1.101	0.695
2021-2022	0.220	0.871	0.662	0.533	0.769	0.976	0.647
Average	0.500	0.995	0.449	0.565	0.623	0.981	0.694
St. Dev	0.771	0.168	0.463	0.248	0.140	0.066	0.043

The above table-2 shows the interest burden ratios for different companies over a period of five years, from 2017 to 2022. Focus lighting and fixtures Ltd has the highest average interest burden ratio of 0.995, indicating a strong ability to cover interest payments with EBIT. The standard deviation of 0.168 suggests a relatively stable interest burden ratio over the years. Lexus Granito (India) Ltd had the lowest average interest burden ratio of 0.449, suggesting that the company's EBIT might not always be enough to cover its interest expenses. However, the standard deviation of 0.463 indicates significant fluctuations in the interest burden ratio over time. Sonam clock Ltd recorded a lowest standard deviation of 0.043 among all the companies over the study period. companies like Focus lighting and fixtures Ltd, Pulz Electronics Ltd, and Sonam clock Ltd consistently demonstrated a strong ability to cover their interest payments with their earnings. However, other brands like Brand Concepts Ltd, Lexus Granito (India) Ltd, Marvel decor Ltd, and Milton industries Ltd exhibited varying levels of ability to meet interest obligations, with some fluctuations in their interest burden ratios.

Two-way ANOVA was applied to find the significant difference in respect of interest burden among the companies and in different time periods. The ANOVA results are presented in the below table 2 a.

Table 2 a

ANOVA						
Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Rows	1.074	4	0.268	1.816	0.159	2.776
Columns	1.457	6	0.243	1.643	0.179	2.508
Error	3.547	24	0.148			
Total	6.077	34				

The computed value of F between the rows represents different time periods. The F-statistic of 1.816 suggests that there was no significant difference between the means of the different time periods. As the calculated F-value was lower than the critical F-value (2.776), we fail to reject the null hypothesis, indicating that the time periods did not have a significant effect on the tax burden. the computed value of F between the columns represented different companies. The F-statistic of 1.642 suggests that there was no significant difference among the means of the different brands, Since the calculated F-value was lower than the critical F-value (2.508), we cannot be rejected null hypothesis, indicating that there was not significant difference in tax burden among the companies.

Table 3 Operating Income Margin

Companies / years	Brand Concepts Limited	Focus Lighting and Fixtures Limited	Lexus Granito (India) Limited	Marvel Decor Limited	Milton Industries Limited	Pulz Electronics Limited	Sonam Clock Limited
2017-2018	0.088	0.110	0.108	0.198	0.095	0.139	0.115

2018-2019	0.083	0.115	0.063	0.199	0.084	0.153	0.103
2019-2020	0.033	0.051	0.063	0.094	0.102	0.090	0.095
2020-2021	-0.112	-0.028	-0.423	0.050	0.129	-0.032	0.081
2021-2022	0.055	0.064	0.116	0.078	0.092	0.085	0.074
Average	0.029	0.062	-0.015	0.124	0.100	0.087	0.094
St. Dev	0.073	0.052	0.205	0.063	0.015	0.065	0.015

The above table 3 shows the operating income margins for different companies over a period of five years, from 2017 to 2022. Marvel Decor Ltd had maintained the highest average positive operating income margin ratio throughout the years with 0.124. It had a relatively stable margin ratio, with a low standard deviation indicating consistent profitability. Except Lexus Granito (India) Ltd the remaining companies maintained a positive operating income margin ratio throughout the years. Based on the lower standard deviations such as Focus lighting and fixtures Ltd and Marvel decor Ltd had shown more consistent operating income margin ratios over the given period. On the other hand, companies with higher standard deviations, such as Lexus Granito (India) Ltd and Milton industries Ltd had experienced more variability in their profitability.

Two-way ANOVA was applied to find the significant difference in respect of operating income margin among the companies and in different time periods. The ANOVA results are presented in the below table- 3.a.

Table- 3.a

ANOVA						
Source of Variation	***SS***	***df***	***MS***	***F***	***P-value***	***F crit***
Rows	0.131	4	0.033	4.786	0.006	2.776
Columns	0.067	6	0.011	1.648	0.177	2.508
Error	0.164	24	0.007			
Total	0.362	34				

The computed value of F between the rows represents different time periods. The F-statistic of 4.785 suggests that there was a significant difference between the means of the different time periods. As the calculated F-value was higher than the critical F-value (2.776), we reject the null hypothesis, indicating that the time periods had a significant effect on the tax burden. the computed value of F between the columns represents different companies, The F-statistic of 1.647 suggests that there was no significant difference between the means of the different brands, Since the calculated F-value is lower than the critical F-value (2.508188823), we fail to reject the null hypothesis, indicating that there was not significant difference in tax burden among the companies.

Table 4 Assets Turnover Ratio

Companies / years	Brand Concepts Limited	Focus Lighting and Fixtures Limited	Lexus Granito (India) Limited	Marvel Decor Limited	Milton Industries Limited	Pulz Electronics Limited	Sonam Clock Limited
2017-2018	1.056	2.289	0.888	0.649	0.554	1.035	1.417
2018-2019	1.042	2.370	0.737	0.459	0.879	1.201	1.345
2019-2020	0.862	1.643	0.562	0.461	0.960	1.468	0.986
2020-2021	0.604	1.058	0.706	0.451	0.664	0.509	1.172
2021-2022	1.144	1.339	1.000	0.644	0.978	0.912	0.965
Average	0.941	1.740	0.779	0.533	0.807	1.025	1.177
St. Dev	0.192	0.516	0.152	0.093	0.169	0.318	0.183

The above table-4 shows the assets turnover ratio for different companies over a period of five years, from 2017 to 2022. Focus lighting and fixtures Ltd consistently maintained a high assets turnover ratio throughout the period, with values ranging from 1.058 to 2.370. The average assets turnover ratio was 1.740, indicating that it efficiently utilized its assets to generate sales revenue. It has the highest standard deviation of 0.516, implying that its performance or popularity has varied significantly from year to year. Milton Industries Ltd had the lowest standard deviation of 0.183, suggesting that its performance or popularity had been relatively stable over the years. Marvel decor Ltd recorded a lowest average of 0.533 among all the companies but it had the lowest standard deviation of 0.093 indicating performing consistently through the years. Brand Concepts Ltd and Marvel decor Ltd had consistently performed well over the years, Sonam clock Ltd had shown more fluctuating performance.

Two-way ANOVA was applied to find the significant difference in respect of assets turnover ratio among the companies and in different time periods. The ANOVA results are presented in the below table- 4.a.

Table- 4.a

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	0.747	4	0.187	2.569	0.064	2.776
Columns	4.437	6	0.740	10.175	0.000	2.508
Error	1.744	24	0.073			
Total	6.929	34				

The computed value of F between the rows represents different time periods. The F-statistic of 2.569 suggests that there was no significant difference between the means of the different time periods. As the calculated F-value was lower than the critical F-value (2.776289289), we fail to reject the null hypothesis, indicating that the time periods did not have a significant effect on the tax burden. The computed value of F between the columns represents different companies. The F-statistic of 10.175 suggests that there was a significant difference between the means of the different companies. Since the calculated F-value was higher than the critical F-value (2.508188823), we reject the null hypothesis, indicating that there was a significant difference in tax burden among the companies.

Table 5 Equity multiplier

Companies / years	Brand Concepts Limited	Focus Lighting and Fixtures Limited	Lexus Granito (India) Limited	Marvel Decor Limited	Milton Industries Limited	Pulz Electronics Limited	Sonam Clock Limited
2017-2018	2.766	1.861	3.038	1.256	2.412	2.005	3.023
2018-2019	3.009	1.631	2.729	1.380	2.040	1.804	1.946
2019-2020	3.314	1.820	2.764	1.457	2.080	1.637	2.201
2020-2021	3.794	1.828	7.957	1.431	1.741	1.499	2.184
2021-2022	4.159	2.258	4.773	1.449	1.536	1.563	1.888
Average	3.409	1.880	4.252	1.395	1.962	1.702	2.248
St. Dev	0.508	0.206	2.000	0.074	0.301	0.183	0.407

The above table 5 shows the equity multiplier for different companies over a period of five years, from 2017 to 2022. The equity multiplier for the Lexus Granito (India) Ltd brand showed significant fluctuations over the years, ranging from 3.038 to 7.957. This indicates that it experienced substantial changes in its capital structure and financial leverage. The average equity multiplier was 4.252, suggesting a relatively high reliance on debt financing compared to shareholders' equity. The average equity multiplier for Focus lighting and fixtures Ltd was 1.880, indicating a moderate level of financial leverage. It maintained a consistent financial structure with a balanced mix of debt and equity financing, as reflected by its relatively steady equity multiplier. The equity multiplier for the Pulz Electronics Ltd brand consistently decreased over the years, indicating a reduced reliance on debt financing and improved financial stability and it had lowest variability of 0.183 among all the companies. Brand Concepts Ltd had shown a consistent increase in its equity multiplier over the years.

Two-way ANOVA was applied to find the significant difference in respect of Equity Multiplier among the companies and in different time periods. The ANOVA results are presented in the below table- 5.a.

Table- 5.a

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	3.074	4	0.768	0.926	0.465	2.776
Columns	32.165	6	5.361	6.463	0.000	2.508
Error	19.907	24	0.829			
Total	55.146	34				

The computed value of F between the rows represents different time periods. The F-statistic of 0.926 suggests that there was no significant difference between the means of the different time periods. As the calculated F-value was lower than the critical F-value (2.776), we fail to reject the null hypothesis, indicating that the time periods did not have a significant effect on the tax burden. The computed value of F between the columns represents different companies, The F-statistic of 6.463 suggests that there was a significant difference between the means of the different brands, Since the calculated F-value was higher than the critical F-value (2.508), we reject the null hypothesis, indicating that there was a significant difference in tax burden among the companies.

Table 6 Return on equity

Companies / years	Brand Concepts Limited	Focus Lighting and Fixtures Limited	Lexus Granito (India) Limited	Marvel Decor Limited	Milton Industries Limited	Pulz Electronics Limited	Sonam Clock Limited
2017-2018	0.096	0.274	0.102	0.078	0.045	0.181	0.235
2018-2019	0.102	0.310	0.005	0.082	0.064	0.215	0.148
2019-2020	-0.044	0.069	-0.028	0.016	0.101	0.162	0.103
2020-2021	-0.337	-0.060	-2.687	0.002	0.072	-0.025	0.107
2021-2022	0.042	0.129	0.425	0.034	0.081	0.092	0.070
Average	-0.028	0.144	-0.437	0.042	0.073	0.125	0.133
St. Dev	0.163	0.136	1.137	0.033	0.019	0.085	0.057

The above table-6 shows the return on equity ratio for different companies over a period of five years, from 2017 to 2022. The Focus lighting and fixtures Ltd brand experienced consistent growth from 2017 to 2021, with a highest average increase of 14.4% each year. It showed steady performance compared to other brands, as indicated by its relatively low standard deviation of 0.136. The brand "Sonam clock Ltd" had shown consistent positive growth from 2017 to 2022, with a second highest average yearly growth rate of 0.133 among all the companies. Based on the available data, focus lighting and fixtures Ltd, Marvel decor Ltd, Milton industries Ltd, Pulz Electronics Ltd, and Sonam clock Ltd seemed to have shown positive growth over the analyzed period. Brand Concepts Ltd.'s performance remained relatively stable, although slightly negative, while Lexus Granito (India) Ltd experienced a significant decline in performance. Lexus Granito (India) Ltd exhibited a significantly negative average performance (-0.437), suggesting a substantial decline in performance.

Two-way ANOVA was applied to find the significant difference in respect of return on equity among the companies and in different time periods. The ANOVA results are presented in the below table- 6.a.

Table- 6. A

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	1.623	4	0.406	1.900	0.143	2.776
Columns	1.261	6	0.210	0.984	0.458	2.508
Error	5.123	24	0.213			
Total	8.006	34				

The computed value of F between the rows represents different time periods. The F-statistic of 1.900 suggests that there was no significant difference between the means of the different time periods. As the calculated F-value was lower than the critical F-value (2.776), we fail to reject the null hypothesis, indicating that the time periods did not have a significant effect on the tax burden. the computed value of F between the columns represents different companies. The F-statistic of 0.984 suggests that there was no significant difference among the means of the different brands, Since the calculated F-value was lower than the critical F-value (2.508), we fail to reject the null hypothesis, indicating that there was not significant difference in tax burden among the companies.

4. Conclusion

In conclusion, the analysis of various financial ratios for different companies over a five-year period provides valuable insights into their financial performance and stability. Regarding the tax burden ratio, the companies in the study did not exhibit significant differences in their tax burdens. The tax burden remained consistent over the years for most companies, with only minor fluctuations. Lexus Granito (India) LTD had the highest average tax burden ratio due to significant losses and differed tax liability. Pulz Electronics Ltd and Sonam clock Ltd had relatively stable tax burden ratios, indicating consistent tax payments. Examining the interest burden ratio, focus lighting and fixtures Ltd stood with a consistently high ratio, demonstrating a strong ability to cover interest payments with its earnings. Other companies, such as Marvel decor Ltd and Pulz Electronics Ltd, also exhibited stable interest burden ratios, indicating their ability to meet interest obligations. However, some brands, like Lexus Granito (India) Ltd and Milton industries Ltd, experienced fluctuations in their interest burden ratios, suggesting varying levels of ability to cover interest expenses. The analysis of operating income margin revealed that Marvel decor Ltd consistently maintained the highest average positive margin ratio, indicating consistent profitability. Focus lighting and fixtures Ltd also exhibited a stable margin ratio, while companies like Lexus Granito (India) Ltd and Milton industries Ltd experienced more variability in their profitability. In terms of assets turnover ratio, focus lighting and fixtures Ltd consistently achieved a high turnover, utilizing its assets efficiently to generate sales revenue. However, focus lighting and fixtures Ltd also had the highest variability in performance among the companies. Companies like Pulz Electronics Ltd and Marvel decor Ltd exhibited more consistent asset turnover ratios, while others experienced fluctuations. The equity multiplier analysis highlighted the significant fluctuations in Lexus Granito (India) Ltd' capital structure and financial leverage. Focus lighting and fixtures Ltd maintained a relatively steady financial structure, while Pulz Electronics Ltd displayed reduced reliance on debt financing and improved stability. Brand Concepts Ltd and Milton industries Ltd experienced opposite trends in their equity multipliers. Lastly, the return on equity analysis showed Focus lighting and fixtures Ltd.'s consistent growth and relatively low volatility. Sonam clock Ltd also demonstrated positive growth, while Lexus Granito (India) Ltd experienced a significant decline in performance. Overall, the findings suggest that Focus lighting and fixtures Ltd, Marvel decor Ltd, Pulz Electronics Ltd, and Sonam clock Ltd had shown consistent or positive performance in various financial aspects. However, there are notable differences among the companies in terms of stability, ability to cover interest expenses, and financial leverage. These insights can guide investors and stakeholders in evaluating the financial performance and risk profiles of the studied brands.

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