International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

A Study of Corporate Restructuring Through Demerger with Special Focus on Crompton Greaves Limited

Arundhati Mahapatra[1], Dr. Gouri Prava Samal[2]

[1]Research Scholar, P.G. Department of Commerce, Rama Devi Women's University, Odisha
[2]Assistant Professor, P.G. Department of Commerce, Rama Devi Women's University, Odisha

Abstract
Demerger is a corporate restructuring strategy wherein a company's business operations are segregated into one or more components in order to be able to concentrate on the central activity of the business. For this study, the demerger of Crompton Greaves Consumer Electricals Limited from Crompton Greaves Limited has been taken as a case study. CGL later altered its name to Crompton Greaves Power and Industrial Solutions Limited. This article studies the financial performance of Crompton Greaves Power and Industrial Solutions Limited in pre and post demerger period. The performance of Crompton Greaves Consumer Electricals Limited is also assessed post its incorporation. The study uses secondary data collected from annual reports of Crompton Greaves Power and Industrial Solutions Limited and Crompton Greaves Consumer Electricals Limited. The financial performance is analyzed by making use of the DuPont model of analysis. To analyze the data the study used student's t-test in order to estimate the significant differences in paired means of variables calculated for pre and post demerger period. Economic value added is calculated to indicate long run sustainability. So, the present study also emphasizes whether demerger as a corporate restructuring technique adds value for the stakeholders. Lastly a comparative analysis among the performances in pre demerger and post demerger period has been done.

Keywords: Corporate Restructuring, Demerger, Financial Performance, DuPont Analysis, Economic Value Added

1. Introduction

Enterprises are turning sharper than ever and promoters are trying to get benefits out of all possible situations. Be it unlocking value or corporate strategic rearrangement, the rich valuations demanded by certain industries have seen enterprises making a hustle to demerge the parts of their industries which are popular. Demerger is an arrangement by the means of which some undertaking of one enterprise is moved to another enterprise which functions entirely distinct from the original enterprise. Shareholders of the original enterprise are generally given an equal stake of ownership in the new enterprise. Demerger is initiated essentially with dual motives. The first as a tool in corporate restructuring and the next is to put into action the family partitions as regards the family-owned enterprises. A demerger is furthermore undertaken to assist each of the segment's function more efficiently, as they can now concentrate on a more specific task.

Crompton Greaves Limited (CGL) had been involved in 3 different lines of business i.e., Power Business, Industrial Systems Business, and Consumer Products Business. The risk and nature associated with each Power Business and Industrial Systems Business is different, requiring diverse management tactics and attention. Therefore, the parting of the Consumer Products Business from CGL would lead to substantial profits for the business. With the intention of achieving the development potential, Consumer Products Business of CGL has been restructured and separated. In 2015, the consumer business of the corporation was demerged to build a distinct body, which is currently known as Crompton Greaves Consumer Electricals Ltd. (CGCEL). CGL stimulated to demerge and list its utmost favourable business of consumer electricals at the stage when consumption stocks were demanding premium amidst economic decline. CGL later altered its name to CG Power and Industrial Solutions Ltd. (CGPISL) with effect from February 27, 2017.

In the present study, an effort has been made to observe whether the said demerger is an effective one with regard to sustainability. To analyse whether demerger improves sustainability, both DuPont analysis as well as Economic Value Added (EVA) is crucial. EVA approach states whether an entity is a value destroying unit or a value creating one. To study this, the financial data of the parent company (CGL) in pre-demerger period (2010-11 to 2014-15) have been analysed initially. Subsequently, financial data of both transferor (CGL) and transferee (CGCEL) company in post-demerger period (2016-17 to 2020-21) have been analysed. Finally, the conclusion has been drawn based on outcomes generated.

2. Review of Literature

Mehta and Kakani (2006) compared the logic behind M&A in India and the international field. To make comparison, a report by the Centre for European Policy Studies was analysed. The results showed that the primary drivers of M&A in India are not the same as the primary drivers of M&A in Europe. It was evident from the study that considering the changed environment settings, M&A in the Indian banking sector is a requisite. It was also observed that the latest developments in electronic know-how made the customary job of land theory redundant, thus raising the significance for the state to involve itself and form big sized banks by the M&A route. Therefore, it is crucial for the state to build a few big sized banks even at the expense of harming its stakeholder’s comprising consumers.

Panda and Rao (2012) studied the influence of demerger on the return and revenue performance of the demerged enterprises in India in the previous era by matching the return and revenue performance of the demerged enterprises post the demerger alongside their pre demerger positions. The population of research comprised of entities which were listed with BSE and filed their scheme of demerger with ROC during the period from 2000 to 2010. Four enterprises i.e. Great Eastern Shipping Company Ltd., Eveready Industries Ltd., Dabur India Ltd., and Zee Entertainment Enterprise Ltd. were considered to be the sample for the research on the basis of random sampling. The sampling design used was case study method. The study concluded that all the enterprises have performed well in the selected factors like Return on Capital Employed (ROCE), Return on Net worth (RONW), Earnings per Share (EPS), Net Profit Margin. It was observed that there was a significant progress in these factors in the period after demerger as compared to the period before demerger.

Basak (2016) analysed if corporate restructuring through demerger added value for investors. With this objective, case study on the demerger of Unilever India Exports Limited from Hindustan Unilever Limited was undertaken. The performance of HUL was assessed in pre and post demerger period in that order. Then performance of UIEL was assessed post its incorporation. The performances were assessed taking traditional measures like Return on Investment (ROI) and modern measures like Economic Value Added (EVA). Lastly, a comparative analysis was carried out between the performances in before and after demerger period based on which it was decided that the demerger of UIEL is a value creating demerger.
Bansal and Bansal (2016) analysed Corporate Restructuring with reference to Adani Enterprises. The outcomes from the study revealed that there can be significant change in profitability post restructuring. Most of the enterprises have reacted favourably to post corporate restructuring process. It was also observed that CRP in some enterprises did not help in reviving their position. While in certain other conditions it was found that the CRP helped the firms to revive in a positive way by increasing their profitability margin. The study concluded that restructuring process should be undertaken in case an enterprise faces difficulty.

Bao (2017) measured the effect of merger and demerger on the performance of ABN AMRO Bank from 2007-2013 by making use of the DuPont method of financial analysis. The statistical tools employed in the research are twofold; initially the pre and post demerger merger ratios were calculated and secondly the paired sample t-test was employed. On the basis of 3 years before and after demerger merger ratio analysis and figures of ABN AMRO Bank, the study concluded that the merger demerger incident did not have substantial impact on the bank's Total asset turnover, Net profit margin, Return on equity and Equity multiplier.

Bhadade and Chandak (2017) investigated the various financial restructuring alternatives accessible to corporates and which out of them is generating more value to shareholders by assessing fluctuations in level of shareholders' wealth prior to and post corporate financial restructuring. This was done by comparing four types of corporate restructuring methods i.e. stock split, buyback of shares, merger and demerger. The aim was also to examine the effect of corporate financial restructuring on shareholders' wealth with respect to enterprises that underwent restructuring in India for the period of 2011-14. The results showed that ordinarily used mechanisms like buyback of shares and stock split frequently yield poor returns and isn't preferred by stakeholders. Demerger is incompetent to create shareholders' value. Whereas merger though being a feasible alternative, it also suffers from diminishing returns.

Padmanabhan (2018) analysed the influence that announcement of demerger had on wealth of shareholders' by using event study method. Announcements of demerger made by 63 enterprises over 11 years from 2003 to 2014 were taken for the research. Two distinct models, viz. market model and mean-adjusted returns model were used. Log returns were applied in the research. The efficacy of Indian stock market was as well evaluated in the study. The findings showed positive abnormal returns in the course of the event window in both market model and mean-adjusted returns model. The findings also directed that stock market in India displays a semi-strong form of efficacy.

Singhal (2019) studied the extent to which demergers have led to improvement in the financial performance. To achieve this objective, financial performance of before and after demerger period was assessed, evaluated and compared with reference to carefully chosen cases. A sample of 18 demerged enterprises during 1996 to 2006 were selected for the study. For analysing the data, student's t-test was made use of to calculate the statistical significance of differences in paired means of variables calculated for two groups of samples, i.e., pre demerger and post demerger period. The research tools used were Ratio Analysis, Mean, Standard Deviation and T-test. The study concluded that shareholders experienced effectiveness of managing to run the business post demerger in two enterprises i.e., Godrej and HMT whereas demerged enterprises like SAIL, Zee and Nirma have displayed significant decrease in return on net worth which depicts that shareholder of these enterprises haven't earned adequate returns post demerger.

Metha et al. (2019) identified if there is any design that exists in returns from shares pre and post demerger announcement as share price too reveals sentiment. The study also identified variation in stakeholder sentiment after demerger announcement. The aim of the study was to examine the influence of demerger announcement of a company on its share price. The sample data compiled consisted of eleven enterprises individually having 120 days pre closing prices and 120 days closing prices post the demerger announcement. A combination of inferential and descriptive statistics was used for this research. The test statistic which was made use of in this study was paired t-test. It was noticed that in the long term viz. 120 days pre demerger news announcement and 120 days post demerger news announcement there was no significant variation in the mean. However, in the short period viz. the time period nearby the announcement of news there was a significant variation noticed in the daily returns of share price of enterprises.

Panday (2021) identified the cause and effect behind the demerger of the Hero Honda ltd., the capital structure and market value of the shares of Hero Moto corp. and also evaluated its operating performance. The study was based on secondary data. A financial report comprising of balance sheet, profit and loss, cash flow statement was used as research data. To analyse the financial and operating performance the basic financial ratios were used. The financial performance was determined by the analysis of the net operating profit ratio, net profitability ratio, earning per share ratio, price-earnings ratio, dividend per share ratio and return on equity. Operating performance was determined by analysing inventory turnover ratio, working capital turnover ratio, asset turnover ratio and the total capital employed ratio. The study concluded that today it is a more valuable company and evolving at a steady rate.

Duguleană (2021) analysed the ROA profitability ratio as per ROE, the degree of indebtedness and the net profit margin of the enterprises that opted for demerger in 2013, because of financial crisis which took place in Romania. The study considered a data panel comprising of 21 companies that fragmented in 2013. The main aim of the study was to identify whether the management strategy of the organization was useful for attaining improved financial and economic performance. The study emphasized on the stages of financial pointers of companies of Romania that had decided to split, in 2 periods i.e., 2005-2013, comprising the financial crisis of 2008 and 2014-2019, post the split. It was concluded that entire indicators changed for the better in the 2014-2019 period, proving that the split decision was the finest

approach. The study concluded that the motivation of regaining of economic activity of enterprises are inside them and not on outside.

Baba et al. (2021) evaluated the influence that demerger had on the sustainable development of economic units in respect of financial performance and economic adeptness. To accomplish this objective, an analysis of profitability ratios pre and post demerger, along with a structural analysis of 268 demerger schemes during the period of April 2012 to April 2021 were carried out. The findings indicated that there wasn't any significant difference between the pre and post demerger financial performances. Though, demerger appeared to have a affirmative impact on the selected enterprises by assisting them to survive economic difficulties, reconsider their business tactics, and carry on their action in the medium and long span prospects.

3. Objectives of Study

- To measure the financial performance of CGL in pre-demerger period by using DuPont analysis and EVA approach.
- To measure the financial performance of CGL (now CGPISL) and CGCEL in post-demerger period using DuPont analysis and EVA approach.
- To evaluate the significant difference of financial ratios between Pre and Post Demerger period of CGL (now CGPISL) using paired sample T-test.
- To make a comparative analysis of performance in pre and post demerger period to examine the effectiveness of demerger decision.

4. Research Methodology

4.1 Sources of Data

The present study is based on secondary data. Financial data relating to CGL (now CGPISL) and CGCEL have been collected from published annual reports from 2010-11 to 2020-21. For this research some significant data of demerged enterprises for five years pre demerger and five years post demerger were taken into account. The FY of demerger which is 2015-16 though a transitional period, is treated as a benchmark year and its data are also used with the aim of comparison.

4.2 Sample

An engineering firm Crompton Greaves Ltd, part of Gautam Thapar-promoted Avantha Group that demerged its customer products industry into a distinct listed firm was taken as sample for the study to analyse the effect of demerger on financial performance of the business. Under the consumer business, it manufactures a range of products covering light sources and luminaires, pumps, fans and household apparatus like irons, geysers, electric lanterns, mixer grinders and toasters. The demerger was a part of the management's tactics to generate independent growth prospects for its 2 huge but considerably diverse industries i.e., power, industrial and automation that is a B2B business and customer products business that is B2C.

4.3 Research Tools and Methods

The methodologies followed in this study are threefold. Firstly, a comparison of DuPont ratio analysis is done for pre and post Demerger. Secondly, a paired sample t-test is undertaken to evaluate the

significant difference in financial performance among before and after Demerger. Thirdly, the EVA approach is used to determine long run sustainability of the firm.

4.3.1. DuPont analysis

In 1920s, the administration at DuPont Corporation advanced a framework called DuPont Model for a comprehensive valuation of the profitability of the company. The DuPont model is a technique of dissecting the unique equation of ROE into 3 parts i.e., asset efficiency, operating efficiency and leverage. Operating efficiency is determined by Net Profit Margin, Asset efficiency is assessed by Total Asset Turnover and lastly, financial leverage is measured by Equity Multiplier. The first two components measure the operations of the business. The greater the constituents, the highly productive the business is. The final element i.e., financial leverage, deals with the financial activities of the company. Higher the leverage of the company, higher is the possibility of defaulting.

3-step DuPont analysis

ROE = Net profit margin × Total asset turnover × Equity multiplier

$$ROE = \frac{\text{Net Income}}{\text{Revenue}} \times \frac{\text{Revenue}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Shareholders Equity}}$$

$$ROE = \frac{\text{Net Income}}{\text{Shareholders Equity}}$$

5-step DuPont analysis

ROE = Tax Burden ×Asset Turnover ×Equity Multiplier ×Interest Burden ×Operating Margin

$$ROE = \frac{\text{Net Income}}{\text{Pre Tax Income}} \times \frac{\text{Revenue}}{\text{Total Assets}} \times \frac{\text{Total Assets}}{\text{Shareholders Equity}} \times \frac{\text{Pre Tax Income}}{\text{Operating Income}} \times \frac{\text{Operating Income}}{\text{Revenue}}$$

There are 2 added elements in the five-step equation in comparison to the three-step equation. The added parts of this equation are tax burden that depicts the share of profits retained after paying taxes, interest burden that depicts the extent to which interest expense impacts profits, and operating margin also called as operating income or EBIT. All three of these new parts are extensions of the net profit margin calculation.

Net profit margin = EBIT margin × Tax burden × Interest burden

A simple computation of ROE might be easy and provide fairly considerable information, but it does not show the whole picture. A 5-step DuPont Analysis can display wherever the firm is lacking. It can furthermore reveal the way a concern is lifting or sustaining its ROE. Therefore, this study uses a 5-step DuPont Analysis so as to significantly encourage a better understanding of ROE.

ROE is a sign of how well an enterprise uses investment funds to make earnings grow. It is also ordinarily used as an object for executive compensation, as ratios such as ROE have a tendency to give management a motivation to perform better. ROE between 15% and 20% are normally considered to be satisfactory.

4.3.2. EVA Approach

The goal of most enterprises is to generate value for the shareholder. EVA, also recognized as economic profit, aims to determine the true economic profit of an enterprise. It is used to measure the value an enterprise creates from the funds invested in it. EVA is calculated by the formula:
EVA= NOPAT-COC
Where, NOPAT = Net Operating Profit after Tax = EBIT× (1-tax rate)
COC = Total Cost of Capital = (WACC× Average Capital Employed).

Cost of equity is commonly calculated by means of Capital Asset Pricing Model (CAPM) in case of EVA. In this study, cost of equity of CGL (now CGPISL) has been calculated under CAPM. In case of CGCEL also cost of equity has been calculated under CAPM.
The Sensex data are gathered from the BSE website. Sensex is highly unpredictable and dependent on political and socio-economic circumstances of the nation. To calculate market rate of return, all these conditions should be taken into account as they are fairly normal in capital market setting. But to standardize the abnormality in capital market as much as is feasible, a long period should be looked upon. Due to this, this study uses Sensex data for the period from 2010-11 to 2020-21.

5. Analysis and Findings

The results and discussion section should provide details of all findings that are required to support the conclusions of the paper. The discussion should be concise and tightly argued.

5.1 Measurement of Financial Performance of CGL (now CGPISL) Based on DuPont Analysis

First, the figures from which the results of financial performance of CGL (now CGPISL) will be derived are displayed in Table 1. All numbers are denoted in ₹ currency and are in crores. From 2010-11 to 2014-15 the figures relate to pre demerger period and from 2016-17 to 2020-21 the figures relate to post demerger period. The figures in 2015-16 relate to the base year of demerger. The figures relating to revenue, Pre-Tax Income, Operating Income, Net Income, Total Assets and Shareholder's Equity have all been retrieved from the consolidated balance sheet and statement of profit and loss of CGL later known as CGPISL. The consolidated balance sheet and statement of profit and loss were obtained from the annual reports retrieved from the official website of CGL (now CGPISL).

Table 1. Financial Profile of CGL (now CGPISL) (in Crore)

	Year	Revenue	Pre-Tax Income	Operating Income	Net Income	Total Assets	Shareholder's Equity
Pre-Demerger	2010-11	10,005.11	1,191.01	1250.06	881.02	7288.90	3290.4
	2011-12	11,248.58	549.74	596.08	367.6	8765.20	3626.6
	2012-13	12,094.44	64.04	255.68	-36.87	10152.78	3571
	2013-14	13,480.58	494.72	591.38	258.67	11015.85	3656.31
	2014-15	5800.15	356.84	507.80	22.12	11959.81	4307.80
Base Year	2015-16	5,594.95	178.81	370.04	-461.82	11038.42	4597.16

Post De-merger	**2016-17**	5516.51	108.18	388.92	-489.06	10188.10	4111.09
	2017-18	8,031.08	-561.98	-77.43	-712.84	10873.16	2921.49
	2018-19	7,997.91	-458.95	90.72	-507.13	10335.87	2185.37
	2019-20	5,109.88	-1399.91	-166.44	-1331.14	4652.19	-1956.13
	2020-21	2,963.95	1427.16	80.59	1279.60	4401.66	-84.29

Source: Compiled from different annual reports of CGL (now CGPISL)

Table 2. Financial Profile of CGL (now CGPISL) (in Crore)

	Year	Tax Burden	Interest Burden	Operating Margin (%)	Asset Turnover (%)	Equity Multiplier	ROE (%)
Pre-Demerger	**2010-11**	0.74	0.95	12.49	137.27	2.22	26.78
	2011-12	0.67	0.92	5.30	128.33	2.42	10.14
	2012-13	-0.58	0.25	2.11	119.12	2.84	-1.03
	2013-14	0.52	0.84	4.39	122.37	3.01	7.07
	2014-15	0.06	0.70	8.75	48.50	2.78	0.51
Base year	**2015-16**	-2.58	0.48	6.61	50.69	2.40	-10.05
Post Demerger	**2016-17**	-4.52	0.28	7.05	54.15	2.48	-11.90
	2017-18	1.27	7.26	-0.96	73.86	3.72	-24.40
	2018-19	1.10	-5.06	1.13	77.38	4.73	-23.21
	2019-20	0.95	8.41	-3.26	109.84	-2.38	68.05
	2020-21	0.90	17.71	2.72	67.34	-52.22	-1518.09

Source: Author's own compilation

Table 2 shows the different drivers of ROE as decomposed by DuPont analysis for CGL (now CGPISL). It reveals which financial events are the most causative to variations in ROE. From table it is clear that the tax burden has increased after demerger. A greater value for the tax burden indicates that company can retain a higher proportion of its pretax profits, signifying a low tax rate. The interest burden for the company has risen in the post demerger period indicating higher borrowing cost resulting in lower ROE. The operating margin assesses the impact of operating profitability on ROE. Since operating margin has reduced over the years in the period after demerger, the ROE has also seen downfall in the post demerger era. The changes in asset turnover ratio signal that sales are speeding up or slowing down. If a company's asset turnover rises, its ROE will improve. However, it is clear from the table that Asset turnover has fallen in the period after demerger as compared to the period before. This is reflected in ROE as the ROE has also dropped in the post demerger period. The equity multiplier has seen a rise in the first three years after demerger which signifies that the company has incorporated further debt in the capital structure, meaning higher leverage that could make a company a risky investment. However, the past two financial years have seen a decrease in financial leverage ratio which is a good sign for the company. Usually, once the ROE goes up it is a quite good indication for the enterprise. However, for CGL (now CGPISL) the ROE has been unfavorable for all years after demerger leaving FY 2019-20 aside.

5.2 T-test Analysis of CGL (now CGPISL)

Demerger has significant impact on performance of enterprises. This study is conducted on CGL (now CGPISL) to assess the effect of demerger on financial performance of the enterprise. Thus, these following assumptions are formulated towards the hypothesis of the study:

1. Testing the significant difference between pre and post demerger tax burden.

H_0: There is no significant difference between pre and post demerger tax burden.
H_1: There is a significant difference between pre and post demerger tax burden.

2. Testing the significant difference between pre and post demerger interest burden.

H_0: There is no significant difference between pre and post demerger interest burden.
H_1: There is a significant difference between pre and post demerger interest burden.

3. Testing the significant difference between pre and post demerger operating margin.

H_0: There is no significant difference between pre and post demerger operating margin.
H_1: There is a significant difference between pre and post demerger operating margin.

4. Testing the significant difference between pre and post demerger total asset turnover.

H_0: There is no significant difference between the pre and post demerger total asset turnover.
H_1: There is a significant difference between the pre and post demerger total asset turnover.

5. Testing the significant difference between pre and post demerger equity multiplier.

H_0: There is no significant difference between the pre and post demerger equity multiplier.
H_1: There is a significant difference between the pre and post demerger equity multiplier.

6. Testing the significant difference between pre and post demerger return on equity.

H_0: There is no significant difference between the pre and post demerger return on equity.
H_1: There is a significant difference between the pre and post demerger return on equity.

T-test Analysis of Data

Table 3. T-test Data Analysis of pre demerger and post demerger ratios of CGL (now CGPISL)

		Mean	Std. Deviation	P-Value	Sig.
Tax Burden	Pre	0.28	0.55	0.80	0.27
	Post	-0.06	2.50		
Interest Burden	Pre	0.73	0.29	0.26	-1.31
	Post	5.72	8.65		
Operating Margin	Pre	6.61	4.06	0.01	4.65
	Post	1.34	3.91		
Asset Turnover	Pre	111.12	35.68	0.12	1.97
	Post	76.51	20.63		
Equity Multiplier	Pre	2.65	0.32	0.36	1.04
	Post	-8.73	24.46		
Return on Equity	Pre	8.69	11.11	0.36	1.03
	Post	-301.91	680.95		

Source: Author’s own compilation

Table 3 indicates mean, standard deviation, P-value and importance of financial ratios for the period of pre and post demerger era recorded individually. The accounting and financial ratios above were

calculated by the authors. The demerger of CGL (now CGPISL) is revealed and the financial performance among the pre and post demerger is matched based on fundamental financial ratios.

Tax Burden

A significant decrease in the mean of tax burden (0.28 vs -0.06) can be observed and the standard deviation is seen to have increased from 0.55 to 2.50. Standard deviation is one of the key measures in assessing the risk by portfolio managers and investment advisors. An increase in dispersion indicates a higher deviation of the return from the expected mean value. The application of T-test at 5% significance level reveals that tax burden got an insignificant T-value (P-value > 0.05) in which case H_0 i.e., there is no significant difference between pre and post demerger tax burden is accepted.

Interest Burden

The data also shows that the mean of interest burden has increased (0.73 vs 5.72) and the standard deviation has increased from 0.29 to 8.65. This higher value for standard deviation in the post demerger period indicates that the values in the sample are more spread out. The application of T-test at 5% significance level reveals that interest burden got an insignificant T-value (P-value > 0.05) in which case H_0 i.e., there is no significant difference between pre and post demerger interest burden is accepted.

Operating Margin

The data in the table shows that the mean of operating margin has decreased (6.61 vs 1.34) and the standard deviation has also dropped from 4.06 to 3.91. This decrease in standard deviation indicates that the data are clustered around the mean. The application of T-test at 5% significance level reveals that the operating margin got a significant T-value (P-value < 0.05) in which case H_0 i.e., there is no significant difference between pre and post demerger operating margin is rejected.

Asset Turnover

The data reveals that the mean of Asset Turnover has decreased (111.12 vs 76.51) and the standard deviation has also plunged from 35.68 to 20.63. This indicates that the values tend to be close to mean in the post demerger period as compared to the pre demerger period. The application of T-test at 5% significance level reveals that the asset turnover got a significant T-value (P-value < 0.05) in which case H_0 i.e., there is no significant difference between pre and post demerger asset turnover is rejected.

Equity Multiplier

The data also shows that the mean of interest burden has increased (0.73 vs 5.72) and the standard deviation has increased from 0.29 to 8.65. This higher value for standard deviation in the post demerger period indicates that the values in the sample are more spread out. The application of T-test at 5% significance level reveals that interest burden got an insignificant T-value (P-value > 0.05) in which case H_0 i.e., there is no significant difference between pre and post demerger interest burden is accepted.

Return on Equity

It is found from the data that the mean of equity multiplier has decreased (2.65 vs -8.73) and the standard deviation has increased from 0.32 to 24.46. This larger standard deviation in the post demerger era indicates more spread or variation in the data. The application of T-test at 5% significance level

reveals that the equity multiplier got a significant T-value (P-value < 0.05) in which case H_0 i.e., there is no significant difference between pre and post demerger equity multiplier is rejected.

5.3 Measurement of Performance of CGL (now CGPISL) based on EVA Approach

EVA is calculated by the formula:
EVA= NOPAT-COC
Where,
NOPAT = Net Operating Profit after Tax = EBIT× (1-tax rate)
COC = Total Cost of Capital = (WACC× Average Capital Employed)

Cost of Capital (K_0)

The capital structure of CGL (now CGPISL) comprises of only equity shares. So, cost of equity would be considered as the cost of capital in case of CGL (now CGPISL). In calculating EVA, commonly, Capital Asset Pricing Model (CAPM) is used. Cost of equity (K_e) under CAPM is as follows:
$K_e = R_f + \beta (R_m - R_f)$
Where, K_e = cost of equity, R_f = risk free rate of return, R_m = market rate of return, β = risk coefficient. Interest rate of freshly issued 10 years government bond is considered the risk-free rate of return and the rate is 7.14 % p.a. To compute market rate of return, BSE Sensex return has been computed at first from 1st April 2010 to 31st March 2021 on daily basis. The average of those daily returns has been computed subsequently. Then the average so computed has been annualized. This annualized rate has been taken as the market rate of return which is 13.56 %. To compute the risk coefficient β, the following formula used is:
$\beta = Cov (R_m, R_h) / \sigma^2 m = r_{mh} \times \sigma_h / \sigma_m$
Where, R_h = share price return of CGL, σ_m = standard deviation of daily market rate of return, σ_h = standard deviation of daily share price return of CGL, r_{mh} = correlation coefficient between daily market rate of return and daily share price return of CGL. Here, both the returns have been calculated from 1st April 2010 to 31st March 2021 on daily basis. Further, only the closing prices are taken into account for computing the daily returns because closing price denotes the sensation of the whole day. Lastly, the value of β comes to 1.83. Placing the values in the equation, K_e comes to 18.89 % p.a.

Table 4. Computation of EVA of CGL (now CGPISL) (Unit of ₹ is in Crore)

Particulars	1.Net Operating Profit After Tax (NOPAT) (₹)	2.Average Capital Employed (₹)	3. COC (%)	4.Total cost of Capital Employed (2×3) (₹)	5.EVA (1-4) (₹)	6.EVA as percentage of Average Capital Employed (%) (5/2*100)
2010-11	881.02	3983.84*	18.89	752.55	128.47	3.22
2011-12	367.60	4298.82	18.89	812.05	-444.45	-10.34
2012-13	-36.87	5052.52	18.89	954.42	-991.29	-19.62
2013-14	258.67	5563.61	18.89	1050.97	-792.30	-14.24
2014-15	367.22	5993.7	18.89	1132.21	-764.99	-12.76
2015-16	112.08	5975.33	18.89	1128.74	-1016.66	-17.01

2016-17	80.07	5274.87	18.89	996.42	-916.35	-17.37
2017-18	-663.70	5113.99	18.89	966.03	-1629.73	-31.87
2018-19	-491.53	4765.88	18.89	900.27	-1391.80	-29.20
2019-20	-1324.10	1488.59	18.89	281.19	-1605.29	-107.84
2020-21	1279.54	-237.25	18.89	-44.82	1324.36	-558.21

*Closing amount

5.4 Measurement of financial performance of CGCEL based on DuPont Analysis

Secondly, the figures from which the results of financial performance of CGCEL will be derived are displayed in Table 5. All numbers are denoted in ₹ currency and are in crores. From 2016-17 to 2020-21 the figures relate to post demerger period. The figures in 2015-16 relate to the base year of demerger. The figures relating to revenue, Pre-Tax Income, Operating Income, Net Income, Total Assets and Shareholder's Equity have all been retrieved from the consolidated balance sheet and statement of profit and loss of CGCEL. Consolidated balance sheet and statement of profit and loss were obtained from the annual reports retrieved from the official website of CGCEL.

Table 5. Financial Profile of CGCEL (in Crore)

	Year	Revenue	Pre-Tax Income	Operating Income	Net Income	Total Assets	Shareholder's Equity
Base Year	**2015-16**	1,811.68	157.68	171.61	105.19	1,653.05	228.72
Post Demerger	**2016-17**	3,975.90	430.62	433.14	290.69	2,115	539.16
	2017-18	4079.66	485.44	549.18	323.79	2424.99	789.5
	2018-19	4478.91	559.84	619.44	401.39	2669.65	1097.34
	2019-20	4520.26	590.69	631.36	496.39	2751.82	1468.34
	2020-21	4803.51	723.63	766.54	616.65	3617.30	1931.43

Source: Compiled from different annual reports of CGCEL

Table 6. Financial Performance of CGCEL

	Year	Tax Burden	Interest Burden	Operating Margin (%)	Asset Turnover (%)	Equity Multiplier	ROE (%)
Base Year	**2015-16**	0.67	0.92	9.47	109.60	7.23	45.99
Post Demerger	**2016-17**	0.68	0.99	10.89	187.99	3.92	53.92
	2017-18	0.67	0.88	13.46	168.23	3.07	41.01
	2018-19	0.72	0.90	13.83	167.77	2.43	36.58
	2019-20	0.84	0.94	13.97	164.26	1.87	33.81
	2020-21	0.85	0.94	15.96	132.79	1.87	31.93

Source: Author's own compilation

Table 6 shows the different drivers of ROE as decomposed by DuPont analysis for CGCEL. It reveals which financial events are causing the most variations in ROE. From the table it is clear that the tax

burden for the company has increased steadily ever since the company was incorporated. A greater value for tax burden indicates that the enterprise can retain a higher part of its pre-tax profits, signifying a low tax rate. The data on interest burden has seen slight changes over the years thus directly affecting the ROE. The operating margin assesses the impact of operating profitability on ROE. Since operating margin has consistently improved over the years, the ROE has also seen positive changes in the post demerger era. The changes in asset turnover ratio signal that sales are speeding up or slowing down. If a company's asset turnover rises, its ROE will improve. However, it is clear from the table that Asset turnover has gradually declined over the years. This is reflected in ROE as the ROE despite of being positive, has fallen over time. The equity multiplier was comparatively on the higher side in the beginning years which signified that the company had incorporated further debt in its capital structure, meaning higher leverage that could make the company a risky investment. However, as time goes by it is visible that the financial leverage ratio has steadily decreased which is a good sign for the company. In general, at the time when ROE goes up it is a quite good indication for the enterprise. However, for CGCEL though the ROE has been favourable for all years after its incorporation but it has comparatively reduced to some extent in recent years. Nonetheless, ROEs of 15-20% are normally considered good and we can clearly visualize from the table that ROE for CGCEL has been above 30% for all the years which means that the company is undoubtedly in good shape.

5.5 Measurement of Performance of CGCEL Based on EVA Approach

The process of calculating EVA is already mentioned above. The capital structure of CGCEL comprises of only equity shares. So, cost of equity would be considered the cost of capital in case of CGCEL. As already stated, in calculating EVA, commonly Capital Asset Pricing Model (CAPM) is used. As per our calculation earlier, risk free rate of return and market rate of return are 7.14% and 13.56 % in that order. To compute risk coefficient β, the following formula has been used:

$\beta = Cov(R_m, R_h) / \sigma^2 m = r_{mh} \times \sigma_h / \sigma_m$

Where, R_h = share price return of CGCEL, σ_m = standard deviation of daily market rate of return, σ_h = standard deviation of daily share price return of CGCEL, r_{mh} = correlation coefficient between daily market rate of return and daily share price return of CGCEL.

Here, both the returns have been calculated for 6 years from 2015-16 to 2020-21 to maintain uniformity as CGCEL came into existence since 2015. Further, only the closing prices are taken into account for computing the market returns because closing price denotes the sensation of the whole day. Finally, the value of β comes to 0.41. Putting the values in the equation, K_e comes to 9.77% p.a.

Table 7 shows the calculation of EVA by considering the NOPAT taken from the consolidated statement of profit & loss of CGCEL, average capital employed derived by adding the company's opening capital and closing capital with the resulting sum being divided by two, and the Cost of capital computed earlier. EVA is the incremental difference in the rate of return over the cost of capital of an enterprise. It is basically calculated to evaluate the value creation of a company out of capital financed in it. If the earnings of the company are able to meet the obligation and some earnings are left for exclusive use of the company, that leftover portion is called EVA, which is positive. From the table it is evident that the company shows positive EVA for all the years. The demerger took place in 2015-16 and post that the EVA has tremendously grown year after year. As we know, higher the EVA, better the level of resource deployment. High EVA of CGCEL indicates that the company has outperformed its rivals over time and will continue to do so in the times to come.

Table 7. Computation of EVA of CGCEL (Unit of ₹ is in Crore)

Particu-lars	1.Profit After Tax (NOPAT) (₹)	2.Average Capital Employed (₹)	3. COC (%)	4.Total cost of Capital Em-ployed (2×3) (₹)	5.EVA (1-4) (₹)	6.EVA as per-centage of Average Capital Employed (%) (5/2*100)
2015-16	105.19	750.48*	9.77	73.32	31.87	4.25
2016-17	283.17	978.60	9.77	95.61	187.56	19.17
2017-18	323.79	1331.12	9.77	130.05	193.74	14.55
2018-19	402.52	1459.71	9.77	142.61	259.91	17.81
2019-20	494.70	1565.53	9.77	152.95	341.75	21.83
2020-21	604.74	1959.42	9.77	191.44	413.30	21.09

*Closing amount

5.6 Comparative Analysis between Pre-Demerger and Post-demerger Period

Table 8 shows the mean ratios in the pre and post demerger period for CGPISL and post demerger period for CGCEL.

- The tax burden of the transferor company CGPISL has gone below and turned negative in post demerger period in comparison to the pre demerger period. Besides, the tax burden of transferee company CGCEL is comparatively higher which indicates that enterprise has retained higher part of its pre-tax income that has further resulted in a greater ROE.
- To attain a high ROE, a business needs to cut its interest expense so that EBT/EBIT ratio is high. Interest burden for transferor company CGPISL in the post demerger period was high. However, for the transferee company CGCEL the interest burden though has increased slightly but is comparatively much lower than CGPISL in the post demerger era.
- A worthy operating margin is the one which is positive and growing over time as it is taken to be an important measure of operational efficiency. Operating margin for the transferor company CGPISL has reduced after demerger but for the transferee company CGCEL it has drastically gone up.
- A greater asset turnover ratio is preferred as it means the corporation is effective in making sales or revenues out of its asset base. The asset turnover for the transferor company CGPISL has gone down after demerger. However, for the transferee company CGCEL the asset turnover has shown better results and is on the higher side.
- Generally, it is good to have lower equity multiplier as it indicates that a business is not experiencing undue debt to fund its assets. The equity multiplier has been negative for the transferor company CGPISL in the post demerger period. It has also slightly lowered for the transferee company CGCEL which is a good sign for the company.
- The higher a company’s ROE, the better it is. The ROE of the transferor company CGPISL in the period after demerger is very poor. However, the ROE of the transferee company CGCEL is very high indicating the strong performance of the company. Companies with ROE of more than 15% are normally considered to be performing well. However, the average ROE of CGCEL is almost 40% which shows how efficient the company is.

- EVA is effective in evaluating the performance of a company based on the principle that a business is only profitable if it generates returns and wealth for its shareholders. The EVA of transferor company CGPISL is negative both before and after demerger. This negative EVA denotes that the business is not generating value out of the capital invested in the business considering it as a poor investment. On the other hand, the positive EVA of the transferee company CGCEL indicates that the company is creating value from the invested funds considering it to be a good investment.

Table 8. Comparison of Mean ratios between Pre-Demerger and Post-demerger Period

Particulars	Pre-Demerger Average (CGPISL)	Post Demerger Average (CGPISL)	Post Demerger Average (CGCEL)
Tax Burden	0.28	- 0.06	0.75
Interest Burden	0.73	5.72	0.93
Operating Margin (%)	6.61	1.34	13.62
Asset Turnover (%)	111.12	76.51	164.21
Equity Multiplier	2.65	- 8.73	2.63
Return on Equity (%)	8.69	- 301.91	39.45
EVA on Average Capital Employed (%)	-10.75	-148.90	18.89

Source: Author's own compilation

6. Conclusion

CGL (now CGPISL), one of the leading Indian brands with a legacy of over 85 years has at present become a renowned name in the category of electricals. The corporation was functioning steadily in order to adhere to B2B and customer demands altogether. The B2B section has been vital in firm's progress, however to enhance its customer business, that was yielding 25-30% of the revenue, the organization resolved to demerge the 2 businesses. In 2015, the customer industry of the concern was demerged to set up a distinct unit that is currently known as CGCEL. At present, CGCEL has been one of the firmest developing electrical consumer durables businesses, has a progressive net income and a positive return on equity. The equity shares of the company are listed on BSE and NSE. Although CGPISL was hit by financial irregularities after demerger but CGCEL had revenues of ₹ 1811.68 crore for the second half of FY 2015-16 and a net profit of ₹ 105.19 crore. For FY 2020-21, CGCEL saw revenues at ₹ 4803.51 crore and a net profit of ₹ 616.65 crore. The achievement is the result of getting into new management from consumer businesses, taking premiumization to the next level, and a focused entry into new group of products. To go along with it, focus was kept on the cost structure and some smart decisions were taken. Due to the cost savings initiative, the margins of CGCEL have improved. With market leading margins and a valuable brand equity, it is in an advantageous position as compared to its peers. Although there are challenges on the way taking into account the cut-throat competition in the market, but until now CGCEL has been able to outgrow its competitors and it will continue to do so hereafter. The use of EVA as a tool has also helped in taking more effective and result oriented

decisions. The negative EVA of CGPISL has revealed that the earnings available to shareholders are less than the market determined rate of returns. On the other hand, the positive EVA of CGCEL has revealed that the company has been able to absorb the market rate of return to equity shareholders fully. Even after charging all costs, there is excess earning leftover. Hence, CGCEL is not only a profitable company but is also a flourishing company with high prospects. Therefore, the managers should along with continuing with the same strategic operations should also think about how to improve it more. DuPont analysis helps to trace those parts of the company that are underperforming but EVA calculation is essential because we not just have to know about the profitability but also understand the impact of capital structure on value creation. Therefore, instead of using DuPont analysis in isolation, this study used the EVA approach too to come up with better results.

References

1. Baba, C. M., Duguleană, C., Dincă, M. S., Duguleană, L., and Dincă, G. (2021), “The Demerger Impact upon Sustainable Development of Economic Entities: Evidence from Romania.”, Sustainability, Vol. 13, No. 15, pp. 8316.
2. Bansal, N. and Bansal, M. S. (2016), “Corporate Restructuring: A Case Study of Adani Enterprises, India”, International Research Journal of Management Sociology & Humanity, Vol. 07, No. 01, pp. 108-121.
3. Bao, H. (2017), “Evaluation of pre and post Demerger-Merger performance: Using ABN AMRO Bank as an example.”, International Journal of Economics and Finance, Vol. 09, No. 02, pp. 196-204.
4. Basak, R. (2016), “Corporate restructuring through demerger: a case study on Hindustan Unilever Limited.”, International Journal of Business Ethics in Developing Economies, Vol. 05, No. 02.
5. Bhadade, P. and Chandak, S. (2017), AN ANALYTICAL STUDY OF CORPORATE FINANCIAL RESTRUCTURING OF SELECTED COMPANIES AND ITS IMPACT ON WEALTH OF SHAREHOLDERS, International Research Journal of Management Science & Technology, Vol. 08, No. 11, pp. 187-195.
6. Duguleana, C. and Duguleana, L. (2021), “Financial Profitability of Demerged Companies”, Bulletin of the Transilvania University of Brasov. Series V: Economic Sciences, Vol. 14(63), No. 02, pp. 173-182.
7. Kakani, R. K. and Mehta, J. (2006), “Motives for Mergers and Acquisitions in the Indian Banking Sector-A Note on Opportunities & Imperatives”, working paper, SPJCM Singapore Working Paper No. 06-13, November.
8. Metha, R., Haria, R., Dholaria, S., Bharucha, E., Tarphe, Y. and Shah, H. (2019), “IMPACT OF DEMERGER’S NEWS ON SHARE PRICE.”, International Journal of Engineering Applied Sciences and Technology, Vol. 04, No. 06, pp. 133-137.
9. Padmanabhan, P. A. (2018), “Do Demerger Announcements Impact Shareholders Wealth? An Empirical Analysis Using Event Study.”, Vision, Vol. 2, No. 01, pp. 22-31.
10. Panda, B. and Rao, P. H. (2012), “Corporate restructuring: Demerging impact.”, SCMS Journal of Indian Management, Vol. 09, No. 01, pp. 80-87.
11. Panday, K. K. (2021), “DEMERGER AND IT’S IMPACT ON PERFORMANCE: A CASE STUDY OF HERO HONDA LTD.”, International Journal of Management and Social Science Research Review, Vol. 08, No. 12, pp. 66-73.

12. Singhal, S. (2019), "Does Break Up Lead to Break Down? Effect of Demerger on financial Firm Performance: The cases of Demerger", International journal of Management, IT and Engineering, Vol. 09, No. 01, pp. 322-333.
13. Annual Reports of CGCEL, available at: https://www.crompton.co.in/investors/annual-report/ (accessed July, 2022).
14. Annual reports of CGPISL, available at: https://www.cgglobal.com/financials#annual_report (accessed July, 2022).