

Corporate Restructuring of a Conglomerate: A Case of Arvind Limited

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Abstract

Arvind Limited, a conglomerate, exercised demerger as its preferred tool of corporate restructuring twice, first in the year 2015 when it demerged its real estate undertaking and second in the year 2018 when it demerged its branded apparel and two of its engineering undertakings. This is a company that carried forward its experience of restructuring through demerger and chose the same option again to restructure its business in just a span of three years. ‘Event study’ technique is used here to examine effect of announcement of demerger on the wealth of the shareholders and market model has been used in this study using log returns. Results of parametric and non-parametric tests have been compared with each other to check their consistency. Traditional and modern empirical tools have been used to measure the performance of Arvind Limited and compare them through the timeline. A glimpse of the performance of the companies carved out of the parent company, is also studied here to have a broader perspective of the impact of this corporate strategy. This form of restructuring is unique and its usage is on the rise with every passing year all around the world.

Key words: Corporate restructuring, demerger, parametric test, non-parametric test.

Introduction

In a demerger, which is also known as a spin-off, a parent company carves out its subsidiary or subsidiaries as a separate corporate entity or entities. A procedural scheme is formed that maps out how resources in the form of assets as well as liabilities of the organization should be reconfigured and what arrangement shall be framed-up for the existing shareholders of the main company, i.e. the parent company, which will be based upon pro-rata basis for the shares of demerging entities. Hite and Owers (1983) implied that divestitures, also known as spin-offs, and mergers are naturally mirrored images of each other and both of them increase aggregate market value. In simple arithmetic, it might be easy to understand how mergers increase aggregate market value. But, it might be difficult to understand in the same arithmetical logic as to how does splitting up a single company might create greater aggregate market value. The reasoning behind demerger is being understood as if a company has diverse operating units then demerging them will allow each of them to grow individually to their full potential which allows a conducive business ecosystem for them that produces greater gains for its shareholders. Venkiteswaran, N. (1997) studied restructuring in India post-globalization and made an observation that in the first five years of economic reforms restructuring by corporates was mostly done at the business portfolio level. Change in ownership pattern was done through the issue of preferential shares issued to promoters of the company and entrance of foreign institutional investors was significant. Restructuring as a concept was divided into two parts external restructuring and internal restructuring. The external restructuring included restructuring of resources that is asset-based, financial or

capital, and changes in ownership. The internal restructuring included two types of restructuring, portfolio, and organizational. Demerger or spin-off, as mentioned in the paper, was under asset-based restructuring.

In the Indian context, restructuring of companies has been mentioned under Section 230 to 240 of the Companies Act, 2013. Under these areas provisions on 'Compromises, Arrangements and Amalgamations' are stated. Demerger has been explicitly referred in Rule 15.31 of the Companies Act, 2013 covered by Chapter XV in which it has been mentioned that compromise or arrangement includes 'Demerger'. As per the Act, accounting treatment of divestiture must be done according to the prescribed Accounting Standards and in case the relevant Accounting Standard is not there then accounting treatment must be done according to Section 2(19AA), also as per conditions stipulated and covered by the Income Tax Act, 1961. Restructuring is done with the permission of the National Company Law Tribunal (NCLT) which is a constitutional body in India that settles matters related to corporate India. Although, before NCLT's authority as a constitutional body, Demerger, as a scheme of arrangement, was presented before the High Court of a state that approved it in accordance with Companies Act, 1956. But, there was no clear definition of demerger during that time and it was considered to be a part of the arrangement under the "scheme".

There are much pieces of evidence from the past studies that prove that demerger has acted as a tool for value creation, all around the world. A company by demerges its unrelated or underperforming subsidiaries, which will allow them to function as separate business units, to focus more on their core business activities which will help them to gain a competitive advantage in their individual markets. In the case of Arvind Limited (Parent Company), Arvind Infrastructure Limited (AIL), which was a real estate arm of the company, was completely unrelated to its textile business. The same was the case with its engineering arms, Anveshan Heavy Engineering Limited (AHEL) and The Anup Engineering Limited (TAEL). Whereas its branded apparel subsidiary, Arvind Fashions Limited (AFL) was believed to be underperforming and was valued very high individually by experts at that time.

Arvind Limited as a parent company was free to allocate resources within the organization as a whole to its different subsidiaries and to itself as a corporate entity, which must have affected the individual performance of its profit-making subsidiaries as they had to support other businesses. In 2017, when parent company announced that it will demerge its business of branded apparel unit and engineering unit, it was growing at a slow annual CAGR (compound annual growth rate) of 5% and had a net debt of Rs. 3,263.80 crore, as per Bloomberg data, at the end of September that year. Its branded apparel business included international brands like Tommy Hilfiger, Calvin Klein, and US Polo Association and was one of the highest valued part of the conglomerate as it was growing at a faster rate than other businesses. It was believed that the decision to demerge will unlock the value of AFL and engineering units of the conglomerate. The management at that time believed that this restructuring would help companies to align themselves according to their own objectives and they will be able to raise resources on their own. In 2014, the company had decided to demerge its real estate arm, AIL which was in itself a profit-generating business unit of the group that generated Rs. 91.65 crore in revenue and Rs. 21.71 segment profit. The reasons for

the demergers were quite similar to that in 2017 as it wanted its real estate business to deploy and raise resources independently for its core activities and to see an opportunity and strategic fit in the real estate sector. But, the conditions of the group company were different than in 2018. At the end of June 30, 2014, which was the end of a quarter, the group had recorded a consolidated growth in revenue of 19% and its PAT grew by 14%. This first-hand experience of divestiture was crucial as a conglomerate, that had restructured its business in 2015 when its growth as a company was good, went ahead with the similar corporate restructuring exercise in the year 2018 when the growth of the company was slowing down. Author studied the impact of the announcement of demerger in both the years of 2014 and 2017 on the share prices of parent company in their respective timeline.

According to the scheme in the year 2015, the composite scheme of arrangement which was demerger in nature was authorized by the High Court of Gujarat which was in accordance with Sections 391 to 394 read with sections 78, 100 and 103 of the Companies Act, 1956. Under the scheme, all the assets as well as liabilities under the books of parent company of AIL had to be transferred to AIL based on their respective book values. Allotment of shares was done in the proportion of 1:10 under which one fully paid-up equity share of Rupees ten each of AIL was apportioned for every ten fully paid-up equity shares of Rupees ten each of the company, to the shareholders of the company, the amount of Rs. 100.05 crores as an investment in AIL and difference between assets and liabilities transferred, 0.08 crores, had to be accommodated under Securities Premium Account.

According to the arrangement in the year 2018, the Composite Scheme was suggested under an plan which was worked on and agreed upon by the parent company, AFL, AHEL, their respective investors and creditors and all of it was under legal blanket of Sections 230 to 232 read with Section 66 and other relevant arrangements as per Companies Act, 2013 had been authorized by NCLT. As a part of the scheme, TAEL was amalgamated with AHEL, and further, the name of the amalgamated company had been substituted to 'The Anup Engineering Limited' pursuant to a change of name on 29th January 2019. Under the scheme, all the resources including all the assets as well as liabilities of all the subsidiaries, which were going to be demerged, in the books of parent company would be transferred to those separate entities at their respective book values. For AFL shareholders were entitled to be allotted in the proportion of 1:5 i.e. for every 5 fully paid-up equity shares of parent company of the Face value of Rs. 10 each they would be allotted 1 fully paid-up equity share of AFL of Face value Rs.4 each. For AHEL shareholders were entitled to be allotted in the proportion of 1:27 i.e. for every 27 fully paid-up equity shares of parent company of Face value Rs.10 they would be allotted 1 fully paid-up equity share of engineering unit. The existing investment in the demerging companies under the books of the parent company and differences in transfer of assets and liabilities was adjusted under Securities Premium Account.

In the year 2016, when Ind AS was not applicable, there was a debate as to how accounting treatment must be done for this significant event. In the past, it was argued that it must be dealt with AS-14 in which business combination was dealt with under amalgamations. But, in the year 2012, in the case of "Sony India Private Limited vs. Sony India Software Centre Private Limited" in Delhi High Court a decision was ruled that AS-14 was only applicable to

amalgamations. Demerger could not be treated under AS-14 and same was held by High Court of Gujarat in the case of “2010 1 CLJ 351 tiled Gallops Realty (P) Ltd.” In the case of the parent company when question arose as to how accounting of demerger had to be done, meetings were held and decision was taken that it would be done as per Income Tax Act, 1961 under which all of its balance sheet items i.e. assets as well as liabilities of the undertaking had to be delivered as per the book values only. Common loans and borrowings had to be delivered in the same fraction as reported under the book value of assets delivered prior to divestiture. This was in conformity with Companies Act, 1956. The same arrangement in the form of a scheme for parent company was presented to the High Court of Gujarat which gave a stamp of approval to ‘the scheme’.

In the year 2019, demerger was considered as a significant event for the year. Demerger required compliance of the scheme and Ind AS was the applicable accounting standard for the year. The auditor of the company assessed it in regard to business combination accounting in accordance with Appendix C to Ind AS 103 with demerger scheme. Ind AS 103, recognised even by the independent auditor, deals with the accounting for business combinations of undertakings or businesses that are under common control.

Both the technique of accounting used the same principle known as “*pooling of interest method*” under which assets and liabilities in the books of parent company and undertakings are presented at their carrying amounts, no changes are made to reflect fair values or recognize any new assets or liabilities and changes that are necessary to be made in the books of the companies, are only there to harmonize accounting policies.

Under Regulation 30 of Listing Obligations and Disclosure Requirements of SEBI, necessary framework about how a company which is listed on the bourses of the country, proposing demerger as an ‘arrangement of the scheme’ has to disclose details about divisions to be demerged, turnover of that demerging division as a percentage of the total turnover of the composite company for the year just preceding the event of demerger, rationale of demerger, brief details of the change in shareholding patterns, share exchange ratio and whether listing would be sought for the demerged entities. These are mandatory requirements that have to be followed by listed companies in India and the same was done by Arvind Limited on both occasions of the demerger. In the year 2018, an exemption was given from the compliance in case of the arrangement of scheme, however, such scheme had to be filed, to the stock exchanges in which the company was listed for disclosure to comply with the law. Further, in the year 2019 after listing AFL in the month of March, a lot of confusion was created among the investors related to the listing price of the demerged entity as the stock opened at price that was much lower than estimates and even complaints were made about it. SEBI brought clarity to the situation by bringing out a circular in which it said that according to SEBI rules, listed companies can issue shares as part of the scheme with an entitlement ratio recognized by their board of directors which would be based upon the report of audit committee recommending the scheme, the valuation report of independent chartered accountant and the fairness opinion of a merchant banker, who is registered with SEBI, on the valuation of listed and unlisted entities. Further, it was explained in the circular Valuation report is also only compulsory in situations where there are any modifications in the shareholding pattern or if

there is entry of new shareholder. SEBI also mentioned that the relevant date, prescribed under ICDR regulations for the purpose of computing price of shares should be the date of the board meeting of such company passing the arrangement.

Literature Review

EMH (Efficient market hypothesis), which is still being studied after so many years, was initially recommended by Louis Bachelier in the year 1900. According to this theory, an efficient capital market is understood to be that reflects all complete and correct relevant information in determining security prices. Under it, levels have been distinguished to categorize three distinctive sets of information which were named to be weak, semi-strong, and a strong form of this theory and all these three forms derive information from stock prices.

Fama & MacBeth (1973) in their work analyzed risk and return of the stocks on the NYSE (New York Stock Exchange). In their study they mention about different methods to collate expected returns of stocks in the capital market. The theoretical basis for their test was two parameter portfolio model. A stochastic model was suggested in their work which was based on expected returns. They studied volatility of least squares residuals in the form of standard deviation from the market model to measure the non-beta risk of a security. Beta of the security was based on the covariance of the security and its standard deviation which was derived from previous studies. The data that was collected by them using the models helped them to provide results that were supporting testable implications of the two-factor model.

Landsman, W. R., & Magliolo, J. (1988) investigated the issue of model specification in the research of cross-sectional capital market. Study of The Market Model and its link to asset pricing, one-factor model with time-specific coefficients, systematic error measurement, constant (across time) coefficients, and unsystematic measurement error were tested and in conclusion, suggested compelling reasons for conducting cross sectional accounting capital market studies using a return based design.

Stone, M., & Brooks, R. J. (1990) in their study talked about how regression in least squares multiple with a single dependent variable had been called hard science but rather should be called 'hardened science' as a given linear model is known to be an adequate representation of the truth. In their study, they tested three separate techniques of OLS (Ordinary Least Squares), PLS (Partial Least Squares) and PCR (Principal component regression). OLS in particular was found to be optimally performing when compared with other predictors that were selected for the study.

Dyckman, Philbrick, & Stephan, (1984) considered five return models based on equation in which prediction error is calculated for a particular security by subtracting actual returns of that particular security for a particular day with the expected return for that day calculated by an equation similar to CAPM. Market model was also considered in their study in which they suggested that expected firm return when compared with the market return was in linear relationship utilizing OLS beta. For this situation, Alpha and beta are worked out and collated for the assesment period. Firm returns for 241 days centered on event day had been extracted and then under each model data for days -120 to -60 and +60 to +120 were estimated.

G. Skoulakis (2008) analysed four estimators: Least Squares (LS) and Fama Macbeth (FM) estimators and their summed up forms. As per the paper, summed up forms are increasingly efficient and productive but when we look at their corresponding standard errors we find that they might be poorly calculated and ineffective thus, resulting in inaccurate t-statistics. One comprehensive simulation study indicate that estimators viable of the investigation performed truly well in modestly little examples. It additionally demonstrated that LS and FM when appropriately applied delivered tantamount execution but most importantly they produced t-statistics that were reliable.

Armitage, S. (1995) in his work on event study techniques put forth evidences on their performances by testing broadly utilized techniques for determining abnormal returns and tested their significance. It has been recommended in the study that market model is utilized to create expected returns and no better option other than that has yet been found. In many cases under the study evidence indicated that the best methodology is to normalize abnormal returns as a result of market model with respect to their time-series standard errors of regression and use of the t-test.

Corrado & Zivney (1992) used non parametric sign test to evaluate abnormal performance of security prices utilizing event study in which symmetrical distribution of security returns was not required. Sign test performance had been measured first with parametric t-test and later, non-parametric rank test. In the study, observations from simulations were run with daily security prices and it was found that sign test is better indicated in the null hypothesis and more remarkable than a t-test. However, it was also found that rank test dominated sign test and thus was more preferable to get inferences.

Prabhala, N. R. (1997) provided justification and brought harmony among conventional event study strategies and how these basic methods may be utilized in combination with conditional methods to get better results that will enhance statistical power of an event. It is mentioned in his work that event study can be typically utilized for mainly two purposes. First, to estimate magnitude of 'information effect' and second to recognize factors that can clarify changes in the firm value because of an event. He suggested that conditional techniques offered an intriguing viewpoint of event studies and they are inferred with regard to a well-defined economic equilibrium which has a straightforward perception that they can associate announcement effects to the unexpected information that was observed during events. It was concluded that conditional methods are conceivably alluring means of conducting an event study, inferences should be based on conditional methods, cross sectional procedure that were traditional in nature must be utilized and the related t-statistics be deciphered as conservative lower limits on the genuine level of frameworks.

Kirchmaier, T. (2003) in his work on the performance effects of European divestitures studied effect of divestiture announcement on shareholder's wealth using event study technique. In this study a period of 21 days was considered in which event day was considered to be day 0. Centred on event day, 10 days earlier to the event day and 10 days after the event day were arranged in their respective sequence. This study in its sample had covered a set of 48 European companies and concluded that there was significant long term positive value creation because of the announcement but not for the parent firm.

Padmanabhan, P. A. (2018) contemplated the effect of divestiture announcement on the wealth of the shareholders of 63 Indian companies. He utilized two distinct models, mean

adjusted returns model and market model. It was found that positive and significant abnormal returns generated during the event window. Even on the event day just as on the days preceding the event day positive significant returns were recorded. It was also concluded that these results were found to be the same in both mean adjusted return and market models. AAR (Abnormal Average Returns) and CAAR (Cumulative Average Abnormal Returns) were measured in which an event window of 31 days was chosen centred around the event day which was marked as day 0 in the event window and 15 days prior and 15 days later abnormal returns were collated and then they were added that resulted in the form of CAAR (Cumulative Average Abnormal Returns).

Singh, Bhowal, & Bawari (2009) studied impact on wealth shareholders because of divestiture taking the case of 5 Indian companies. In it they calculated shareholder's wealth before and after the demerger, taking average share price in both the time period into account. It was found that except for one company all others had shown significant difference in the shareholder's wealth. It was suggested by them that investors should be aware of the company going through demerger and prefer those that have quality management and better corporate governance record.

Vyas, Pathak & Saraf (2015) share price reaction of demergers during the period 2012-2014 taking 51 companies into account. They analysed share price movements 10 days before and after the event day. Event day was recognized as the day on which announcement of the demerger was declared. They found that the securities as sample outperformed the benchmark index after demerger that ranges from 0.16% to 1.74% of average abnormal returns. Demergers were divided into two parts as large demerger and small demerger which was based upon the market capitalization of the companies. Company with greater than Rs. 5000 crores was considered to be large-cap and below that was small-cap. It was observed that small demergers were producing positive CAAR (cumulative average abnormal returns) whereas in case of large divestitures value produced was negative. In another classification, they compare demergers of private companies and listed companies and found that listed companies performed better than Private Limited companies.

Large number of studies on demerger has been conducted in American and European countries. They have tested demerger on a wide spectrum when compared with Indian studies. Although demerger as a part of corporate restructuring in India has been increasing for the past two decades but most of the studies in India have been focused majorly on just one criterion of shareholders wealth in which only event study has been utilized to appraise performance of the company that gives a picture from just one perspective. Outside India there have been extensive studies on demerger. Few comparative studies are also there but they are also mostly limited with fewer criteria to measure the performance of companies. There is a need to study demerger as a corporate strategy on a wider scale to bring a better understanding of the subject that will allow us to understand its impact on the framework of corporate entities.

Research Methodology

3.1 Objective of the Study

This paper is directed towards understanding corporate restructuring by demerger of Arvind Limited that happened twice on separate occasions. Demerger announcement and the actual event of the demerger is examined to find about the impact it had on wealth of the shareholder's and performance of the company. We also measure the results of parametric tests and non-parametric tests used to examine if there is any kind of irregularity between the results.

3.2 Methodology

We have chosen event study technique to review the effect of the announcement of demerger on the shares of an organization. To study that cumulative abnormal returns are calculated and then various statistical tests in the form of parametric test utilizing paired t-test and non-parametric test, utilizing Wilcoxon signed rank test, are performed. Further, Returns after the demerger of the company are calculated and a t-test is performed on them for analysis. To determine the performance of the companies traditional tools and modern tools are included. Traditional tools include Earnings per Share, Return on Assets, Return on Capital Employed, Return on Investments, and Return on Net Worth. Modern tools include Economic Value Added as per Capital Employed, Market Value Added as per Net Worth, Shareholders Value Added as per Net Worth and Earnings per Rupee Value of Share.

3.3 Data Sources

Data collected in this research study is mostly secondary in nature and has been collected from the database source of the BSE (Bombay Stock Exchange), published annual reports of the company and company website. Various newspaper, websites, and journals have also been used to gather information.

3.4 The Event

For this event study, announcement of the demerger of the company is taken as 'the event' in both the years separately. The decision of demerger is taken in board meetings of the company and this information has to be disclosed to the stock exchange as per SEBI guidelines. As per Seiler (2004), event study can be divided into window period data and clean period data. Clean period data is divided into two different categories estimation window and post-event window. Window period data consists of the event window. During both the demerger, data for the entire window has been centred on the date of the announcement of the divestiture. Estimation and post-event windows are taken 160 days preceding and there after the event window period respectively. The event window is of 81 days period inclusive of the event day.

3.5 The Sample

For the event study, the sample of share prices of parent company has been collected from the BSE website and divided broadly into 2014 demerger announcement period and 2017 demerger announcement period. For after demerger return study, share prices have been divided into two groups of 2015 demerger and 2018 demerger. To measure the performance of companies' data sample has been compiled from the published annual reports that has to be mandatorily produced by the companies and same has to be posted on their websites and these reports also have been shared with the stock exchange. For event study sample of 482 days share price for both the years. For Demerger, sample set of returns for the company of 12 months after demerger has been formed separately for both the years. Annual reports of Arvind Limited from 2011 to 2019 has been used to along with Annual reports for AIL from 2016 to 2019, for TAEL and AFL of 2019 for performance measurement for each of them and form sample sets on yearly basis.

3.6 Measurement of Returns

Daily returns have been used for the event study and monthly returns have been used to study effect after demerger on the company. Actual return of a day has been determined by using the natural log of stock price of that day and subtracting it with the natural log of the stock price on the previous trading day. Monthly returns have also been calculated by subtracting the natural logs of the stock price at the end of the month with the stock price on first day of the month. The difference of log gives percentage change for that particular day.

$$R = \ln(r_t) - \ln(r_{t-1}) \quad (I)$$

Where, R is the return, r_t is share price on a particular day and r_{t-1} is share price on the previous day. Logging actually converts absolute difference into the relative difference that can be expressed in percentage terms. When we use the same in the time series of event study and to calculate monthly returns, it gives us a percentage change in returns from period to period.

3.7 The Model

Warner, J. B., & Kothari, S. P. (2006) in their work mention that it is difficult to particularly point out which model is most suitable model to determine expected returns. They point out that Fama (1998) presumed that all models of expected returns are based on partial depictions of systematic patterns in average returns. As per them, CAPM as a model to determine expected returns is by and large disparaged as a result of voluminous abnormalities as proof. Regarding other models it was suggested that with respect to event study analysis it is fundamental to utilize them when estimating abnormal performance and flaws in them are not that fatal.

In this study OLS (ordinary least squares) market model is used to determine daily abnormal returns of the security. Daily actual returns are determined for the market and for the security using the daily actual data. Return of security is considered to be the dependent variable and the return of the market is considered to be an independent variable. If we assume that Return

of security be represented by 'Y' and return of market be represented by 'X' then we can express them in an equation as $Y = \alpha + \beta X$. This equation can be used to find the fitted return of security on that day. We can calculate coefficients α and β as follows,

$$\beta = \text{Cov}(Y, X) / (\text{Var } x) \quad (\text{II})$$

$$\text{And } \alpha = Y - \beta x \quad (\text{III})$$

Where, Y is known to be the actual return of the security, X is the market return on a particular day, $\text{Cov}(Y, X)$ is the covariance between X and Y, x^2 is the difference between the market return on a trading day and mean of the market returns. Here, α is also known as the Y-axis intercept and β represents the slope of the security. Using the coefficients in the above equation we will get the value of fitted Y. The difference between the actual return of Y and fitted Y will result in abnormal returns for the day.

3.8 Measurement of Performance

To assess the financial performance of the organizations we have utilizes both traditional and modern tools. Earnings per share, return on capital employed, return on investment, return on assets and return on net worth has been used in traditional tools. In the case of Earnings per Share, we have calculated relative value as Earnings per rupee value of shares (EPRVS) which is determined by dividing EPS by face value of the share. This allows us to compare different companies by bringing them on the same footing. Return on investment (ROI) allows us to measure how effectively an organization is able to generate profit from its investment. It is measured by dividing net profit by investment made. Return on capital employed (ROCE) is helpful in measuring how effectively an organization utilizes its capital employed to generate profit. It helps us understand how assets are performing by taking long term financing into account. It's determined by dividing its EBIT (net operating profit) by its capital employed. Return on assets (ROA) will help us to measure how well an organization is utilizing its assets to generate profits. It is measured by dividing net income with average total assets of the firm. Return on net worth (RONW) also known as return on equity (ROE), helps us assess how much profit per unit of capital invested of common shareholder generate. It helps us look at the efficiency of management as to how they are able to grow the company by using equity.

Modern system consists of MVANW, EVACE, and SVANW. Economic value added (EVA) is considered to be efficient and effective to determine value generation by a company. It measures economic profit earned far beyond capital employed. Economic value added gives an absolute value and hence we express in terms of percentage of capital employed that allows us to compare different companies on same level. Market value added (MVA) scales the difference between the market capitalization of a company and the book value of capital. It helps us to study how demerger event played out for the resulting firms, as greater the value better the performance of company. To compare this with other companies we calculate it as a percentage value in terms of net worth. Shareholder's value added (SVA) measures the value addition of shareholders. It covers gains that are realized and gains that are unrealized. It is calculated by adding Market Value added with the realized gains. To make it comparable

with other firms we calculate it in terms of percentage with respect to the net worth of a company.

3.9 Statistical Test for Significance

In this study we are statistically testing variables that will allow us to measure and understand the effect of demerger on the company and its resulting entities. We are using paired t-test, which is suitable to measure before and after effect, to study abnormal returns (AR) as well as cumulative abnormal returns (CAR) of parent company, before and after the demerger. We use the independent t-test to study returns of parent company after demergers in both the years and compare the resulting outcome of the tests. Independent t-test will also be performed on the performance metric outcomes of the companies and we will compare them to know whether the impact has created a significant or insignificant impact on the companies. Both of them, paired t-test and independent t-test are parametric tests, we also perform a rank test, which is a non-parametric test, and its outcome will help us to understand differences if any, parametric and non-parametric tests with respect to the demerger event. We perform these test in IBM's SPSS statistical software and check the level of significance of the results to come to a conclusion that will allow us to make opinion based on significant results whereas it will be difficult to form conclusive opinions on insignificant results.

3.10 Limitations

This study is limited to two demerging events of Arvind Limited in the year 2015 and 2018, and the announcement of demergers in 2014 and 2017. It includes the study of share prices and data from annual reports of the company to examine them in their corresponding periods.

After the demerger of parent company in 2018, only one annual report has been published by the parent company and its demerging entities. Data for performances of 'Arvind Fashions Limited' and 'The Anup Engineering Limited' is only based on those reports of the respective companies.

To avoid any impact of lockdown because of Covid-19 in March, 2020, data related to the share prices have been collected before that period.

Results And Discussion

The results of the empirical study of how share price behaviour differed from each other because of demerger announcements, what was the difference in performance of the parent company after the demergers and how did the resulting entities differ from each other in their performance metrics after the demergers are being discussed here in this section.

4.1 Abnormal Returns

Abnormal returns after demerger announcements have been measured in the window period from -40 to -1 and +1 to +40, and then paired t-test and Wilcoxon signed rank test have been performed on abnormal returns taking periods of 10,20,30 and 40 days before and after

demerger announcement. For parametric tests, we take null hypothesis as " H_0 : There is no significant difference between means of abnormal returns before and after demerger" and alternative hypothesis as " H_1 : There is significant difference between means of abnormal returns before and after demerger". For non-parametric test our null hypothesis is " H_0 : There is no significant difference between medians of abnormal returns before and after demerger" and alternative hypothesis as " H_1 : There is significant difference between medians of abnormal returns before and after demerger".

Findings of paired t-test are as follows: In 2014, in table-I, only the period of 10 days has produced statistically significant results at 0.05 confidence level with a t-score of 2.289. For 2017, when we look at table-II, statistically there is no significant difference between abnormal returns previous to and there after demerger announcement. Therefore, we reject the null hypothesis for 10 days period only and accept it for the rest of the periods for the year 2014 and we accept the null hypothesis for all the periods of 2017.

When we performed Wilcoxon signed rank test, which is a widely accepted non-parametric test, our findings are as follows: For both the years 2014 and 2017, in table-III and table-IV respectively, based on z-statistics and at confidence level of 0.05, there was no significant difference between medians of abnormal returns before and after the announcement of demerger. Hence, we accept the null hypothesis for all the periods for both the years.

4.2 Cumulative Abnormal Returns

Cumulative abnormal returns after demerger announcements have been measured in the window period from -40 to -1 and +1 to +40, and then paired t-test and Wilcoxon signed rank test have been performed on abnormal returns taking a period of 10, 20, 30 and 40 days before and after demerger announcements. We take null hypothesis as " H_0 : There is no significant difference between means of cumulative abnormal returns before and after demerger" and alternative hypothesis as " H_1 : There is a significant difference between means of abnormal returns before and after demerger". For non-parametric tests our null hypothesis is " H_0 : There is no significant difference between medians of abnormal returns before and after demerger" and alternative hypothesis as " H_1 : There is a significant difference between medians of abnormal returns before and after demerger".

When we performed paired t-test, which is a parametric test, our findings are as follows: as per table-V and table-VI, based on t-statistics at 0.05 confidence level, we can say that there is significant difference between means of cumulative abnormal returns for all the periods in both the years. Therefore, we reject the null hypothesis for all the periods for both years, 2014 and 2017.

When we performed Wilcoxon signed rank test, which is a non-parametric test, our findings are as follows: as per table-VII and table-VIII, we observe that there is significant difference between the medians of cumulative abnormal returns for all the periods in both the years, 2014 and 2017, based on corresponding z-statistics at 0.05 confidence level. Therefore, we reject the null hypothesis and accept the alternative hypothesis.

4.3 Monthly Returns after Demerger

Monthly returns after demerger of parent company have been calculated to compare long term effect of the demerger on the returns of shareholders. Independent t-test and non-parametric Mann-Whitney U test have been performed on the sample returns of parent company for twelve months after demerger for both years of 2015 and 2018. Our null hypothesis is “ H_0 : There is no significant difference in means of monthly returns in both the years” and the alternative hypothesis is “ H_1 : There is a significant difference between means of monthly returns after demerger for both the years”. For non-parametric tests, our null hypothesis is “ H_0 : The distribution of monthly returns is the same across categories of both the years” and the alternative hypothesis is “ H_1 : The distribution of monthly returns is not the same across categories of both the years”.

The results of the Independent t-test from table-IX, when we compared twelve month's return of parent company for 2015 and 2018 after demerger are as follows: t-statistic for the test is 2.157 at a confidence level of 0.05 which is significant. We reject the null hypothesis based on the t-statistic and its corresponding critical value and accept the alternative hypothesis.

The results of the Mann-Whitney test from table-X, when we compared twelve month's return of Arvind Limited for 2015 and 2018 after demerger are as follows: z-statistic for the test is -2.194 at a confidence level of 0.05 which is significant. We reject the null hypothesis and accept the alternative hypothesis based on the results.

4.4 Performance of Arvind Limited

We have measured the performance of the parent company before and after the demerger of AIL in the year 2015 based on traditional tools and modern tools. We have performed a parametric test, independent t-test, and non-parametric test, Mann-Whitney U test, on each component used for performance measurement to test them statistically. The results of the tests have been presented in annexure II. The performance measurement component includes ROA, ROI, ROCE, RONW, and EPS under traditional tools. Under modern tools we have used EPRVS, EVACE, MVANW, and SVANW.

We can observe the results of the parametric test and non-parametric test for respective components in Annexure-II. For parametric tests, we can formulate a generalized null hypothesis as “ H_0 : There is no significant difference between means of the selected samples before and after demerger” and an alternative hypothesis as “ H_1 : There is significant difference between means of the selected samples before and after demerger”. For non-parametric tests, we can formulate a null hypothesis as “ H_0 : The distribution of performance measuring component is the same before and after demerger” and alternative hypothesis as “ H_1 : The distribution of performance measuring component is not the same before and after demerger”. Based on the results of both the statistical test we can observe that there is no difference in performance of the parent company before and after demerger in 2015. When we take corresponding t-statistic and z-statistic with a confidence level of 0.05, we accept the null hypothesis across all components of performance measurement in both parametric and non-parametric tests.

4.5 Comparative performance

We are comparing performances of parent company, and its demerging subsidiaries and as well as across themselves after the demerger. Demerging subsidiaries includes AIL, AFL, and TAEI. We are comparing them based on the results of traditional performance tools and modern performance tools. The results of performance tools have been presented in Annexure-III.

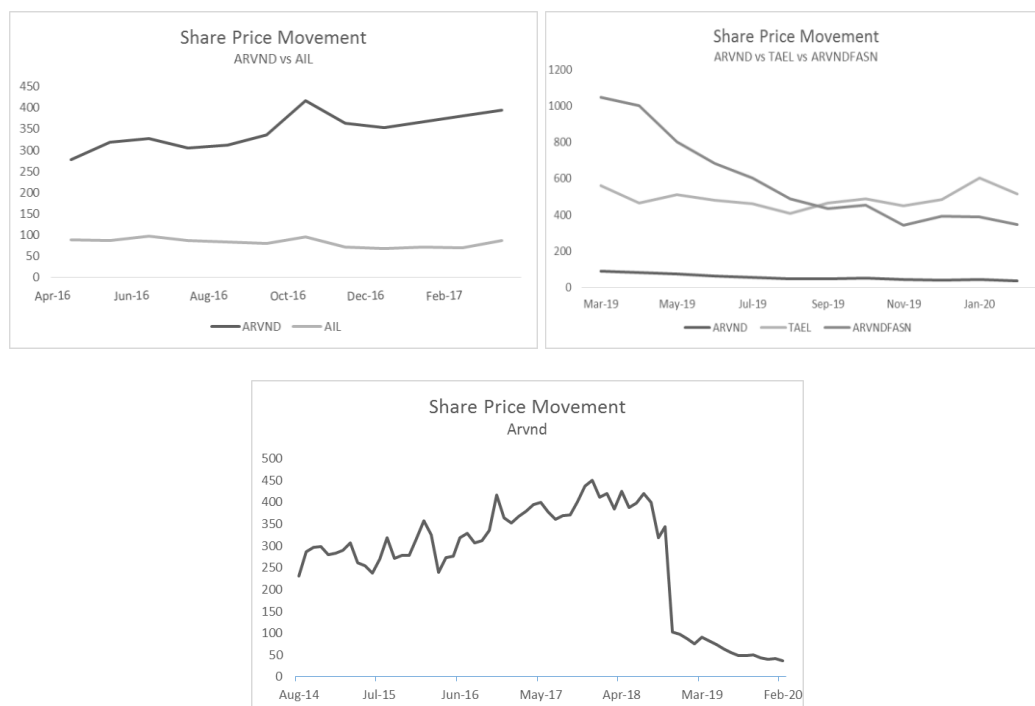
After the first demerger in 2015, when we look at the performances of AIL and parent company, our observations are as follows: AIL has performed better than its parent company based on return on assets, return on investment, and apart from 2016 AIL has fared better than the parent company based on return on capital employed and return on net worth. But, parent company has performed better than AIL in terms of earnings per share after demerger. When we look at economic value added as per capital employed we can observe that after demerger EVACE has been negative in all the years for parent company but, it has been positive for AIL for just two years after demerger and hence we can say that AIL performed better than parent company based on EVACE. Parent company had outperformed AIL based on market value-added as per net worth. There is greater amount of difference between MVANW of AIL and parent company. Although, AIL has performed better than parent company as it has positive share value added as per net worth for two years after demerger.

After demerger in 2018, when we look at the performances of AFL, TAEI and their parent company, our observations are as follows: As per the results of modern tools, parent company was outperformed by both of its demerging subsidiaries except in EPRVS where it performed better than AFL only. TAEI outperformed others by a much greater margin when we take EPRVS into account. In EVACE, all three of them has negative value but parent company has much less value than the other two and has not performed as per EVACE. TAEI, although, has a value closer to zero and thus has performed much better as per EVACE. AFL has outperformed TAEI and parent company with respect to MVANW and SVANW. TAEI has performed better than Arvind Limited and the later has negative values for both MVANW and SVANW.

When we compare performance of subsidiaries i.e. AIL TAEI and AFL, for the first year after the demerger, we can observe that better performance was of TAEI compared to other two Especially, when we consider modern tools of performance, TAEI has outperformed others by a much greater margin. AFL when compared to AIL hasn't performed well in terms of traditional tools. But when we compare them on modern tools, AFL has performed much better than AIL except in EVACE in which AFL has a negative value. Otherwise, EPRVS, MVANW and SVANW values are comparatively much higher for AFL than AIL. But, to compare 2015 and 2018 as demerger events we take average of TAEI and AFL to compare the outcomes of demerger based on the combined performance of demerging entities out of parent company. We find that in traditional tools, demerger has resulted in better results in 2018 as per return on assets and earnings per share otherwise in 2015 demerger resulted in better performance with respect to return on capital employed, return on investment and return on net worth. When we compared both on modern tools, we find that EVACE was

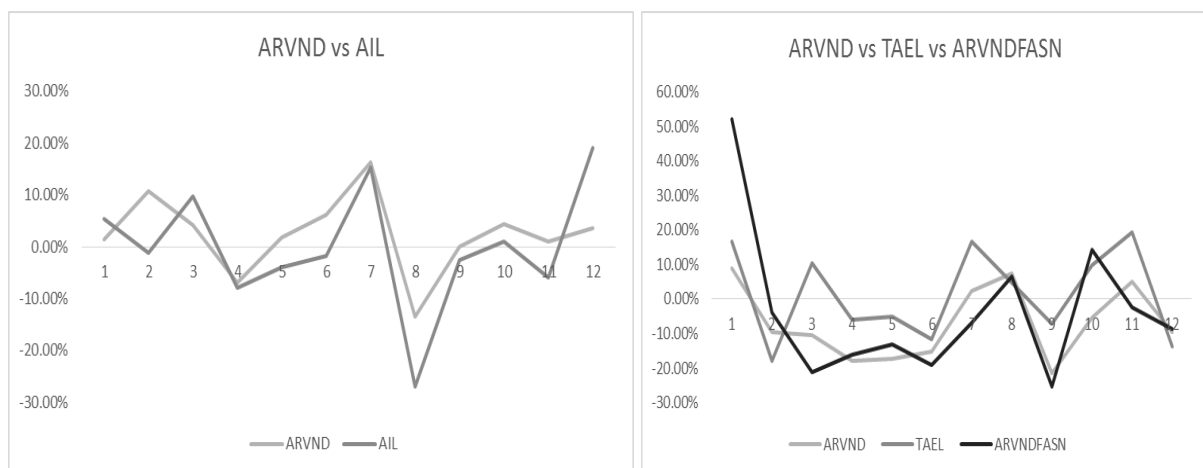
negative for both the events but in 2015 it was much better comparatively. But, 2018 resulted in greater and much better results in terms of EPRVS, MVANW, and SVANW. 2015 demerger even resulted in a negative value of SVANW.

When we look at the share price movement of parent company we can compare the two demergers. If we look at the first demerger event that occurred in 2016 we can observe that over the time share prices of parent company was moving in the upward direction and if we put up a regression line it will be sloping upwards. But after the second demerger event we can see that share prices of parent company bottomed out and continued to move downwards. This shows that there must have been great loss in market capitalization of the company. When we look at the share price movement of parent company and AIL, we can see that after demerger share price of parent company was still growing and AIL was growing at almost neutral pace with its share price moving in between the same range. Whereas, in 2019 parent company's share prices were sliding down continuing the downward momentum after demerger but share prices of AFL were moving down gradually and even in the end of second quarter was below TAEI. TAEI maintained steady pace of growth and performed much better than other two companies.



Below are the two charts that show the share price returns of the different entities for the first twelve months after being listed on the bourses after demerger. When we take a look at the share price returns of the entities after demerger we can observe that AFL was the most volatile of them all with a standard deviation of 20.98% for 12 months after its listing. Response to the stocks of branded apparel company was immensely positive but that lasted only for a few days and its share price began to fall quickly after being listed. When we compare its share price performance of 12 months with parent company and TAEI after being listed we can see that it had most negative returns period of 9 months but still better average returns of -3.70% compared to parent company that had average return of -6.93% in

the same period. Although, higher negative returns were produced by parent company but volatility of branded apparel company was almost twice the volatility of the former. As average returns for branded apparel company are better than parent company that can be actually attributed to the initial gains and if we consider the first month as outlier and exclude that then we observe that average returns of both the companies are almost identical, -8.37% for parent company and -8.78% for branded apparel company. Whereas, TAEI performed much better than the other two companies and had positive average returns of 1.32% in the twelve months despite having higher volatility of 13.11% than 10.55% volatility of parent company. AIL after being listed on the exchange showed greater volatility of 11.96% when compared to parent company. Even the average returns of AIL for the twelve months were overall nil whereas parent company performed much better than AIL and produced positive average returns of 2.41% . When we compare performance of parent company after two demergers it is quite clear that it managed to perform much better after first demerger. But, we can attribute poor performance of parent company to the demerger of its branded apparel in 2018. Whereas the engineering undertaking, which was unrelated to the core business of the parent company, outperformed other two and even AIL, if we compare it to its first twelve month share price performance.



Conclusion

The main reason for demerger of Arvind Limited on both the occasion was to strategically realign itself and its demerging entities. In 2015 it demerged its real estate arm, AIL which was basically unrelated to its textile business. In 2018, it demerged its engineering undertakings and its branded apparel business. The engineering business was unrelated to the core business of parent company but branded apparel was related to its textile business. Results have shown us that announcement of demerger of parent company had apparently a significant effect on abnormal returns only in a period of 10 days previous to and there after the announcement. So for a brief course of time, the announcement of demerger had an impact on shareholder's wealth. But, for the rest of the periods and even in 2017 there was no significant impact on abnormal returns of parent company. When we look at cumulative abnormal returns, which gives us a broader picture with respect to longer time period, there has been significant difference between the CAR, during the event window, because of the announcement of the demerger. Therefore, we can say that announcement of demerger had an

impact on cumulative abnormal returns of parent company. There is a difference between monthly returns of parent company after demerger in 2015 and 2018. After the 2018 demerger, parent company produced more negative monthly returns for shareholders than the 2015 demerger when compared with each other for a period of 12 months. Based on the outcomes we can suggest that monthly returns after the second demerger had a much deeper and negative impact on parent company. Even when we look at the results of the comparative performance of parent company, we can say that its demerged entities performed much better than the parent company and even unlocked the value for shareholders. Even as we look at the unrelated business undertakings that demerged from the company their performances have been much better and have achieved the aim of strategically realigning and making themselves more competitive and sustain their growth for a longer period of time. Whereas AFL, which initially was valued much higher, was not able to sustain its growth and its market value declined over a period of time. When we compare the results of parametric tests and non-parametric tests, it is very much clear that they produced almost identical results except in the case of 10 days of abnormal returns in 2014. The parametric test resulted in significant results showing us that there was a significant difference in abnormal returns previous to and there after the demerger announcement. But, the non-parametric test gave us insignificant results.

Looking at the comparative better performance of the companies that were unrelated to the core business we observe that shareholding pattern in those companies after divestiture also changed with exit of the original owner of the companies. We can differentiate the performances of the companies after divestiture based on the management style. Here, we have a case of family management and professional management. Under professional management, professionals are hired to manage the business and in most situations are even given stock options based on their performance in the company but still they are minor owner of the company. Stock options are given so that best professionals can be recruited and retained to provide continuity of the business. Family owner of the business are born with that incentive i.e. equity and stock of the company that also makes them majority owner of the company. Family owner might not leave the business to look for other opportunities elsewhere unlike a professional who might consider to leave the company for a 200% or 300% increase in salary. These opportunities arise when a professional works to the best their potential that makes them being sought for and this increases competition and productivity among professionals and also allows business to grow just like in the case of AIL and TAIL. It's the difference in approach of managing the business. Unlike professionals owner of a company has a long term plan for their business just like how owners of parent company want each of the demerged companies to grow on their own and allow them to arrange resources to run the business on their own merit. Although, we cannot compare corporate governance standards here as that requires study of a lot more factors and thus corporate governance cannot be solely based on performance of the company. Therefore, we cannot compare corporate governance among the companies in our study.

There is a need to further study topic of demerger in context of India. To study impact of demerging unrelated business requires a sample of greater number of companies and later

they can be compared with a sample of demerged companies that were related to the parent company. Corporate governance of companies after demerger also needs to be studied as to how sustainable growth can be achieved because of this corporate restructuring exercise. Size of demergers also needs to be categorized and compared with each other. To study differences and accuracy of results between parametric and non-parametric tests larger data set samples are required to be tested and compared with each other.

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