



LEVERAGE ANALYSIS: A STUDY ON WHIRLPOOL LTD

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Abstract

Finance is the life blood of every economic activity. Leverage, as a business term, refers to debt or to the borrowing of funds to finance the purchase of a company's assets. Business owners can use either Debt or Equity to finance or buy the company's assets. Using debt, or Leverage, increases the company's risk of bankruptcy. It also increases the company's returns; specifically its return on equity. This is true because, if debt financing is used rather than equity financing, then the owner's equity is not diluted by issuing more shares of stock.

This paper concentrates on leverage and its relationship between profitability in Whirlpool Ltd.

In this paper, an attempt is made to performance an Analysis on:

- *Financial Performance of Whirlpool Ltd*
- *Leverage of Whirlpool Ltd*
- *Study the relationship between leverage and profitability*

The financial statements of Whirlpool have been collected over a period of 9 years (2008 to 2016).

The exploratory research design is adopted in this study which employs secondary data. The data collected is analysed by the percentages, averages, ratios and Correlation analysis tools reveals that the research evidence of the study indicates that, that degree of operating leverage is statistically significant positive correlation with the EPS. The financial performance of Whirlpool is satisfactory.

The analysis has shown that Whirlpool has financed its activities mainly from its Net Worth and the amount of Debt has fallen over the years. It is suggested that Whirlpool must increase its Debt funding to take the advantage of Tax Shield. Moreover, Cost of Debt is cheaper than Cost of Equity.

Therefore Whirlpool has to revise its capital structure so that financial leverage will help to maximize the shareholders wealth

Keywords: *Leverage, Profitability, Degree of Financial Leverage, Degree of Operating Leverage, Combined Leverage, Correlation, Net Worth, ANOVA.*

Introduction

Finance is the life blood of every economic activity. Finance addresses the method wherein business entities used their financial resources on a certain period of time. It is the application of a set of techniques used by organizations in managing their financial affairs.

Financial management is making decision on various aspects like Financial Planning, Procurement of Funds and Financial Management.

The foremost objective of financial management is to increase the shareholder's wealth; in other words it can be called as increasing the profitability of the share holders. Increase in share holder's wealth increases the Market Value ie, the Net Worth of the Company.

Leverage means use of fund or employment of asset in the capital structure of the firm for which the firm has to pay fixed cost or fixed return. Employment of such fund will help the firm to increase its profitability. If the firm uses higher Leverage it will be riskier for the firm if it's earning gets decreased gradually because it has to pay fixed interest for the amount borrowed. In other words the Leverage effect will be favourable for the firm if it is able to earn more than the amount borrowed.

Investors in a business like for the business to use debt financing but only up to a point. Beyond a certain point, investors get nervous about too much debt financing as it drives up the company's default risk.

Leverage analysis is the methodical classification of the data given in the financial statement. It is the process of identifying the financial strength and weakness of a firm from the available accounting data and financial statements.



On the other hand, if the proportion of the shareholders' funds is more than the proportion of the borrowed funds in the capital structure of the company, the earnings as well the risk of the shareholders will be less. Thus, the debt-equity mix in the capital structure of a company has a significant effect on the shareholders' earnings and risk. So the management has to make an intelligent use of both operating Leverage in profit planning and financial Leverage in planning the capital structure.

Operating Leverage

Operating Leverage refers to the use of fixed cost in the operations of the firm. A firm has to bear the fixed cost expenses irrespective of output. Even if there is zero sales, the firm has to incur those expenses. The firm can use higher amount of operating Leverage i.e. using of higher amount of fixed cost when compared to variable cost only when the sales are rising because even a small change in sales will bring a proportionate change in operating profit.

Financial Leverage

The employment of fixed source of funds such as debt and preference share in the capital structure of the firm along with owner's equity is called financial Leverage or trading on equity. Financial Leverage may be favourable or unfavourable.

If a company is able to earn more return than the cost of borrowing, then the Leverage is said to be favourable. On the other hand, if the company earns a return which is less than the cost of borrowing then the Leverage is said to be unfavourable.

Combined Leverage

Combined Leverage is a use of operating Leverage and financial Leverage in an appropriate proportion in the business. Operating Leverage affects the firm's operating profit and financial Leverage affects the earnings of the shareholder or EPS. Firm has to use a correct mixture of both the Leverages to take the fullest possible advantage of growing business opportunities.

Earning Per Share (EPS)

The portion of a company's profit is allocated to each outstanding share of common stock. Earnings per share serve as an indicator of a company's profitability.

Leverage and Earning per Share

There is a close relationship between the financial leverage and Earning per Share of the company. If degree of financial leverage is high and the return on investment is greater than the cost of debt capital, then the impact of leverage on EPS will be favourable. The impact of financial leverage is unfavourable when the earning capacity of the firm is less than what is expected by the lenders (i.e.) the cost of debt.

Leverage and Return on Investments

The Return on Investment comes from leverage appreciation of the assets value which is normally based on income. It means assets are purchased with only a portion of the purchase price coming from the buyer and the balance coming from the lender. Any increases in the value of the entire assets represent a real return on the original amount invested and the investor will make profits in the long run.

Profitability

Profitability plays an essential role in leverage decision. In general, the profitable companies are able to tolerate high level of debt, by virtue of their ability to meet the financial obligations on time. The profit earning companies can easily add more debt in their capital structure. The study reveals that the leverage has a significant influence on profitability.

Objectives of the Study

The financial statement is a mirror, which reflects the financial position and operational strength and weakness of concern. But a mere look at the financial statement will not reveal some crucial information. To bring out the hidden information, financial statements over a period are to be studied.

Hence the study is conducted to evaluate the relationship between component parts of the financial statements of the Whirlpool Limited and to obtain better understanding of the company position and performance. Leverage analysis reveals the utilization of firm's debt into very effective way.

Objectives of the Study

- To know the overall operating efficiency and performance of the firm through financial analysis.
- To measure the growth of company.
- To offer suitable suggestions based on findings.



Scope of the Study

Scope of the study covers the area of study. The study concerned with analyses of leverage position of the company.

Sources of Data

The study is based on secondary data. It was a case study, studying particular unit, i.e. Whirlpool Ltd. For the purpose of analysis, the researcher has collected final accounts of Whirlpool Ltd. The researcher has gone through various journals, magazines, newspapers, publications and websites for obtaining information.

Period of Study

The study concerned with financial aspects of Whirlpool Ltd. The Study period is from 2008 to 2016.

Tools for Analysis

The researcher has analysed the financial statements of Whirlpool Ltd with the help of ratio analysis such as Leverage Analysis.

To analyse the impact of leverage on profitability of Whirlpool Ltd, the important statistical techniques such as arithmetic mean, standard deviation, correlation have been used for the study.

In this study various tools: Financial Tools – Ratio Analysis and Statistical Tools (i.e.) Mean and ANOVA test have been used for data analysis.

MEAN = Sum of variable/N

Standard Deviation (SD) = $\sqrt{\frac{\sum X^2}{N} - (\frac{\sum X}{N})^2}$

Coefficient of Variation (COV) = $\frac{SD}{MEAN} * 100$

Key Variables

The variable that have been adopted for the present study are sales, PBIT, PBT, Net Worth, Capital Employed, Interest, Loans.

Limitation of the Study

- This study is concentration on one particular company, not inter firm comparison.
- The study is based on secondary data to that extend it has limitations.
- Lack of availability to certain data due to confidentiality of information.
- Due to constraints of time cost and non-availability of data, the study was restricted to a period of 9 years.

Review of Literature

1. Scholars in varied industries have extensively researched Leverage and profitability. These have motivated the corporate to identify and improvise upon their financial performance. In February, 2014, Bindiya Soni and Jigna Trivedi, in a research paper titled, "A Study on Leverage Analysis and Profitability for Selected Paint Companies in India¹" analyses the impact of both financial leverage as well as operating leverage on the profitability (measured through Earning Per Share "EPS") of the selected paint companies of India. Five listed paint companies of India were selected based upon the market capitalization for the research purpose. The study investigates the impact of degree of financial leverage and degree of operating leverage on EPS with the help of correlation analysis. Along with this analysis, the paper also investigates the impact of debt-equity ratio on the EPS of the said firms to see the impact of debt on the wealth of the firms. The findings suggest that financial leverage had no significant relationship on profitability while operating leverage had significant relationship on profitability.
2. Kumar Ramana, in a paper titled, "An Empirical Study on Relationship between Leverage and Profitability in Bata India Limited²", elaborates on leverage and its relationship between profitability in Bata India Limited. this research paper, analyzes the performance of Bata India Limited, The exploratory research design is adopted in this study which employs secondary data. The financial statements of Bata India Limited have been collected over a period of 7 years (2005-06 to 2012- 13). The data collected is analyzed by the percentages, averages, ratios and Correlation analysis tools reveals that the research evidence of the study indicates that, that degree of operating leverage is statistically significant positive correlation with the ROI. It is observed that degree of financial leverage is positively correlated with the ROI. It means that degree of financial leverage of Bata India was not at optimum level. It is suggested to Bata to revise its capital structure which should include the optimum blend of equity and borrowed funds so that it has positive impact on Return on Investment. More over degree of combined leverage is positively



correlated with ROI of Bata India. The financial performance of the Bata India is satisfactory. The Bata India is employing less debt funds so it can't get the financial leverage benefits. Therefore the Bata India has to revise its capital structure so that financial leverage will help to maximize shareholders wealth.

- Priyanka Sharma, Ankit Saxena and Karishma Choudhary, in a research paper titled, "Leverage Analysis Of Amul – Anand Milk Union Limited7", Ahmedabad, in February 2014, have conducted a comparative study and analysis of firms financial leverage, operating leverage and combined leverage has been done of five years i.e. from 2007-08 to 2011-12.
- Sanjay J. Bhayani and Butalal Ajmera in a research paper titled, "An Empirical Analysis Of Financial Leverage, Earnings And Dividend: A Case Study Of Maruti Suzuki India Ltd.6", have studied the theoretical approaches and practical application of financial leverage, earnings per share and dividend per share of Maruti Udyog Ltd. with data for the period of 2001-02 to 2008-09. For the purpose of analysis, researcher has used ratio techniques and to test hypothesis for correlation-co-efficient has been used. The result of the study indicates that there is a correlation between DFL and EPS and the difference is insignificant where as result of correlation coefficient at 5% level of significance showed that the diffidence is significant between DFL and DPS and EPS and DPS.

Whirlpool of India Ltd. (WHIRLPOOL) - Company History

Whirlpool of India Ltd is a leading manufacturer of home appliances. The company is primarily engaged in manufacturing and trading of Refrigerators, Washing Machines, Air Conditioners, Microwave Ovens and small appliances and caters to both domestic and international markets. They also provide services in the area of product development, information technology, accounting and procurement services to Whirlpool Corporation, USA and other group companies. The company owns three state-of-the-art manufacturing facilities at Faridabad, Pondicherry and Pune.

Risk Analysis

The variability of EBIT and EPS distinguish between two types of risk – (a) Operating Risk and (b) Financial Risk.

- Degree of Operating Leverage depends upon variability of sales and variability of expenses. The amount of revenue earned was Rs 1,786.18 in 2008 which increased to Rs 4,166.44 during 2015-16. The Compounded Annual Growth rate (CAGR) in Sale from 2008 to 2016 has been 11.17%. The Degree of Operating Leverage has been fluctuating over the years and negative in both 2013 & 2014. The steady growth in Sales over the years has lead to fall in DOL.
- Growth in Sales has also lead to growth in Operating Profit as well as EPS over the years. Change in EPS and change in PBIT is nearly same in 2015 which is reflected by unity DFL value. The firm was debt- free in 2010. The firm has always followed a near debt-free model. A positive DFL reflects the fact that the firm is above its financial breakeven. It also indicates that when operating profits increase, net profits are also increasing; when operating profits decrease, net profits are decreasing. In 2010 and 2013, interest exceeds Operating Profit, as a result of which there has been negative DFL.
- Combined risk, can be measured by its Degree of Combined Leverage (DCL). DCL has remained positive over the years (i.e. Revenue Generated > Total Costs) except in 2010 and 2014. Small negative value of DCL in 2014 could have proved a threat to solvency of the company. But it improved well in 2015 and 2016. Small DCL value in 2015 as compared to previous years indicates relatively low combined risk since fixed costs and interest would be relatively low when compared to revenue.

Exhibit – I

Growth & Leverage

| IN CRORES | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | CAG R |
|------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Net Sales | 1,786.18 | 1,933.98 | 2,544.10 | 3,081.67 | 3,036.61 | 3,167.60 | 3,228.06 | 3,887.25 | 4,166.44 | |
| Sales (Growth %) | | 8.3% | 31.5% | 21.1% | -1.5% | 4.3% | 1.9% | 20.4% | 7.2% | 29.16% |
| PBIT | 46.04 | 103.52 | 215.48 | 244.89 | 185.69 | 182.17 | 175.64 | 301.19 | 365.70 | |
| PBIT (Growth %) | | 124.8% | 108.2% | 13.6% | -24.2% | -1.9% | -3.6% | 71.5% | 21.4% | 99.29% |
| EPS (Rs) | 2.55 | 5.56 | 4.77 | 12.18 | 9.62 | 10.07 | 9.69 | 16.59 | 19.50 | |
| EPS (Growth %) | | 118.0% | -14.2% | 155.3% | -21.0% | 4.7% | -3.8% | 71.2% | 17.5% | 95.59% |
| %Change in Sales | | 8.27% | 31.55% | 21.13% | -1.46% | 4.31% | 1.91% | 20.42% | 7.18% | |
| % Change in PBIT | | 124.8% | 108.2% | 13.6% | -24.2% | -1.9% | -3.6% | 71.5% | 21.4% | |
| %Change in EPS | | 118% | -14.2% | 155.3% | -21.0% | 4.7% | -3.8% | 71.2% | 17.5% | |
| LEVERAGE | | | | | | | | | | |



| | | | | | | | | | |
|--|-------|-------|-------|-------|-------|-------|------|------|--|
| DOL = % Change in PBIT / % Change in Sales | 15.09 | 3.43 | 0.65 | 16.53 | -0.44 | -1.88 | 3.50 | 2.98 | |
| DFL = % Change in EPS / % Change in PBIT | 0.95 | -0.13 | 11.38 | 0.87 | -2.47 | 1.05 | 1 | 0.82 | |
| DCL = % Change in EPS / % Change in Sales | 14.27 | -0.45 | 7.35 | 14.37 | 1.08 | -1.98 | 3.49 | 2.44 | |

Exhibit-I depicts that the Net Sales of Whirlpool have increased over the years from Rs 1,786.18 Crores in 2008 to Rs 4,166.44 Crores in 2016. The increases in Revenue have made a positive impact on the companies Operating Profit as well as Earnings per Share. PBIT have grown at a CAGR of 29.16% as a result of which the operating profit have increased from Rs 46.04 Crores in 2008 to Rs 365.70 Crores in 2016. The Earnings per share of Whirlpool have increased from Rs 2.55 in 2008 to Rs 19.50 in 2016.

**Exhibit – II
 Leverage (DOL, DFL, DCL)**

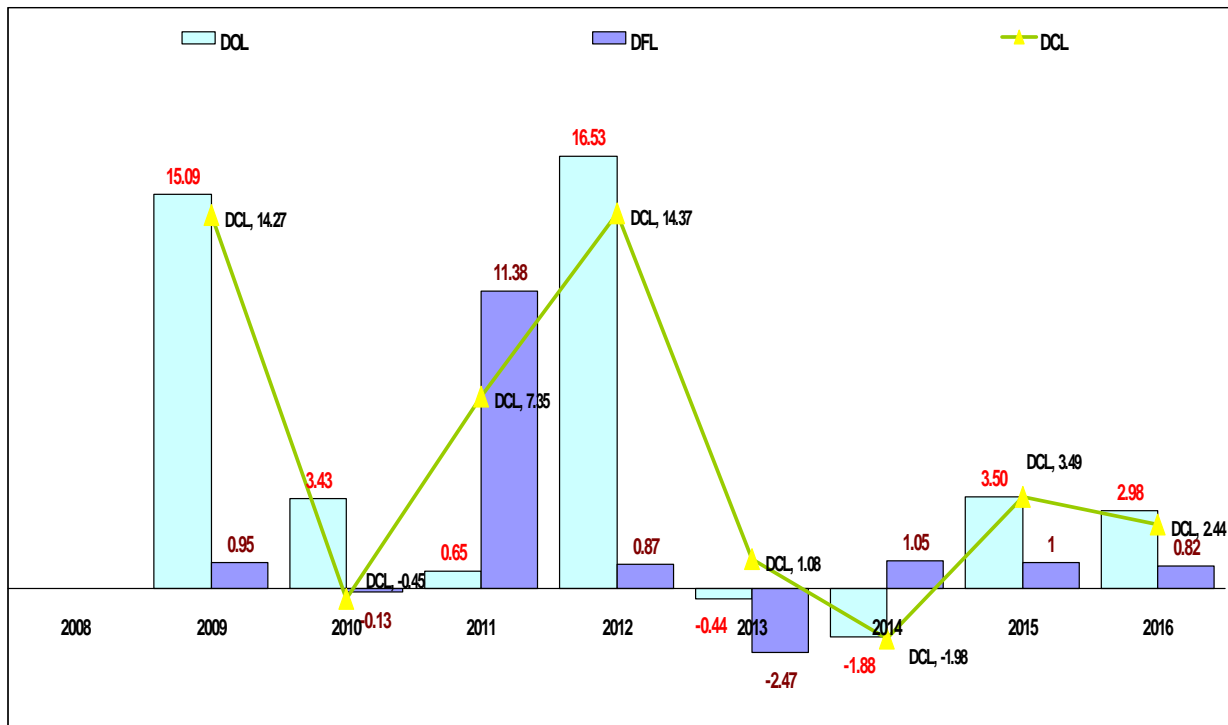


Exhibit-II depicts the Leverage ratios of Whirlpool Ltd. The Operating Leverage has fallen from 15.09 in 2008 to 2.98 in 2016 while the Financial Leverage has fallen from 0.95 in 2008 to 0.82. This fall is mainly due to the decrease in the level of Fixed Operating Cost as well as Fixed Financial Charges. Combined Leverage is the combination of both Operating and Financial Leverage. So, the total Leverage has declined from 14.27 in 2008 to 2.44 in 2016.

Capital Structure Analysis

Exhibit III represents the details of Sales, PBIT, PBT, Net Worth etc., from 2008 to 2016. There has been a steady growth in Sales as a result of which Operating Profit, PBT have increased. During the whole period of study, it is observed that sales performance of Whirlpool Ltd. was good as it increased in all the years but there was constant growth in sales. It is noted that the rate of interest as well as the amount have fallen over the years due to decrease in Loan amount. The firm has always followed a near debt-free model.

The net worth has increased from Rs. 236.47 Crores in 2008 to Rs 1,163.16 Crores in 2016. When the firm earns higher rate of return, it will pay lower dividends, hence, its retained earnings are an internal source of finance.



Exhibit – III
Profitability & Net Worth

| In INR Crores | Net Sales | PBIT | PBT | Net Worth | Loan | Capital Employed | Interest | Interest Rate (%) |
|-----------------|-----------|--------|--------|-----------|--------|------------------|----------|-------------------|
| 2008 | 1,786.18 | 83.39 | 28.80 | 236.47 | 207.97 | 444.44 | 17.24 | 8.3% |
| 2009 | 1,933.98 | 142.53 | 86.20 | 304.08 | 109.75 | 413.83 | 17.32 | 15.8% |
| 2010 | 2,544.10 | 255.16 | 207.21 | 366.70 | 0.00 | 366.70 | 8.27 | 0.0% |
| 2011 | 3,081.67 | 289.40 | 239.24 | 422.37 | 63.42 | 485.79 | 5.65 | 8.9% |
| 2012 | 3,036.61 | 235.39 | 181.31 | 490.19 | 55.99 | 546.18 | 4.38 | 7.8% |
| 2013 | 3,167.60 | 242.49 | 179.17 | 617.54 | 63.84 | 681.38 | 3.00 | 4.7% |
| 2014 | 3,228.06 | 239.45 | 174.20 | 740.05 | 62.22 | 802.27 | 1.42 | 2.3% |
| 2015 | 3,887.25 | 369.29 | 300.52 | 915.78 | 76.87 | 992.65 | 0.64 | 0.8% |
| 2016 | 4,166.44 | 434.38 | 364.81 | 1,163.16 | 89.36 | 1,252.52 | 0.88 | 1.0% |
| Mean | 2,981.32 | 254.61 | 195.72 | 584.04 | 81.05 | 665.08 | 6.53 | 5.5% |
| Median | 3,081.67 | 242.49 | 181.31 | 490.19 | 63.84 | 546.18 | 4.38 | 4.7% |
| SD | 794.54 | 105.65 | 101.49 | 306.65 | 56.10 | 299.71 | 6.56 | 5.2% |
| Kurtosis | -0.59 | 0.24 | 0.13 | -0.06 | 3.65 | 0.29 | -0.28 | 40.2% |
| Skewness | -0.16 | 0.13 | 0.01 | 0.87 | 1.37 | 1.07 | 1.09 | 88.3% |

Exhibit IV depicts the interest as a percentage of sales and interest coverage ratio. It is evident from the table that due to better performance in sales and almost constant interest during the study period, the interest rate as percentage of sales has shown a decreasing tendency and average interest as a percentage of sales has been 0.30%.

Interest Coverage Ratio is expressed as the number of times Operating Profit is more than Interest.

$$\text{Interest Coverage Ratio} = \text{PBIT} / \text{Interest Expenses}$$

The interest coverage ratio was 4.84 times in 2008 which have increased over the years due the fall in the Loan amount and it reached to 493.61 times during 2016.

The increase in number of times in Interest Coverage Ratio has happened due to increase in sales as operating fixed costs remained fixed.

Exhibit – IV

Interest Coverage

| In INR Crores | PBIT | Interest | Interest Coverage Ratio |
|---------------|--------|----------|-------------------------|
| 2008 | 83.39 | 17.24 | 4.84 |
| 2009 | 142.53 | 17.32 | 8.23 |
| 2010 | 255.16 | 8.27 | 30.85 |
| 2011 | 289.40 | 5.65 | 51.22 |
| 2012 | 235.39 | 4.38 | 53.74 |
| 2013 | 242.49 | 3.00 | 80.83 |
| 2014 | 239.45 | 1.42 | 168.63 |
| 2015 | 369.29 | 0.64 | 577.02 |
| 2016 | 434.38 | 0.88 | 493.61 |

The 1st part of **Exhibit - V** shows the Analysis of Capital Structure of Wipro Ltd, which reveals that Debt Equity Ratio has fallen over the years. The D/E ratio which was 0.88 during 2008 has fallen to 0.08 in 2016. This fall has been mainly due to the decrease in the amount of borrowing by Wipro Ltd as well as the increase in Net Worth due to increase in Profit.



The 2nd part of **Exhibit - V** depicts the percentage of Share Capital to Net Worth, percentage of Reserves & Surpluses to Net Worth. The contribution of Share Capital to net worth has decreased over time while the contribution of Reserve & Surplus has increased. This increase provides a positive signal because the increase in Retained Earning has actually increased the Equity Share holders Fund as well as Wealth.

The 3rd part of **Exhibit - V** shows the contributions made by Share Capital, Reserves and Surpluses and Debt to the total Capital Employed. The average contribution made by Share Capital to Capital Employed has decreased from 62.8% in 2008 to 10.1% in 2016. The contribution from Retained Earnings has increased over time from -9.6% in 2008 to 82.7% in 2016.

Whirlpool has reduced the Debt amount over time and so the contribution from Debt has fallen from 46.8% to 7.1%.

On an average of the amount of total capital, 36% have been contributed by Equity Share Capital, 49.7% from Retained Earnings and the balance 14.3% from Loans.

Exhibit – V
Capital Structure & Contribution

| Year | In INR Crores | | | | Capital Employed | D/E Ratio | % of Net Worth | | % of Capital Employed | | |
|----------------|-----------------|-----------------|-----------------|---------------|------------------|-------------|----------------|---------------|-----------------------|---------------|---------------|
| | Share Capital | Reserves | Net Worth | DEBT | | | Share Capital | Reserves | Share Capital | Reserves | DEBT |
| 2008 | 279.21 | -42.74 | 236.47 | 207.97 | 444.44 | 0.88 | 118.1% | -18.1% | 62.8% | -9.6% | 46.8% |
| 2009 | 279.21 | 24.87 | 304.08 | 109.75 | 413.83 | 0.36 | 91.8% | 8.2% | 67.5% | 6.0% | 26.5% |
| 2010 | 279.21 | 87.49 | 366.70 | 0.00 | 366.70 | 0.00 | 76.1% | 23.9% | 76.1% | 23.9% | 0.0% |
| 2011 | 180.72 | 241.65 | 422.37 | 63.42 | 485.79 | 0.15 | 42.8% | 57.2% | 37.2% | 49.7% | 13.1% |
| 2012 | 126.87 | 363.32 | 490.19 | 55.99 | 546.18 | 0.11 | 25.9% | 74.1% | 23.2% | 66.5% | 10.3% |
| 2013 | 126.87 | 490.67 | 617.54 | 63.84 | 681.38 | 0.10 | 20.5% | 79.5% | 18.6% | 72.0% | 9.4% |
| 2014 | 126.87 | 613.18 | 740.05 | 62.22 | 802.27 | 0.08 | 17.1% | 82.9% | 15.8% | 76.4% | 7.8% |
| 2015 | 126.87 | 788.91 | 915.78 | 76.87 | 992.65 | 0.08 | 13.9% | 86.1% | 12.8% | 79.5% | 7.7% |
| 2016 | 126.87 | 1,036.29 | 1,163.16 | 89.36 | 1,252.52 | 0.08 | 10.9% | 89.1% | 10.1% | 82.7% | 7.1% |
| Total | 1,652.70 | 3,603.64 | 5,256.34 | 729.42 | 5,985.76 | 1.85 | 417% | 482.8% | 324.2% | 447.2% | 128.6% |
| Average | 183.63 | 400.40 | 584.04 | 81.05 | 665.08 | 0.21 | 46.4% | 53.6% | 36.0% | 49.7% | 14.3% |

Exhibit – VII
Descriptive Statistics

| Statistical Parameters | DOL | DFL | DCL | EPS |
|----------------------------|--------------|--------------|----------|----------|
| Mean | 3.53887381 | 1.788585195 | 3.758923 | 11.77429 |
| Standard Deviation | 6.092396333 | 4.411847028 | 5.555426 | 4.898846 |
| Kurtosis | 4.656571755 | 5.456213044 | 1.613691 | -0.08778 |
| Skewness | 2.009622043 | 2.163137062 | 1.303551 | 0.407335 |
| Range | 18.41078169 | 13.84947001 | 16.35137 | 14.73 |
| Minimum | -1.878012655 | -2.467648483 | -1.97704 | 4.77 |
| Maximum | 16.53276904 | 11.38182153 | 14.37433 | 19.5 |
| Coefficient of Correlation | 0.731037212 | 0.593673012 | 0.779728 | |

Descriptive Analysis



From the descriptive analysis it is clear that the DOL, DFL and DCL show a fluctuating trend based on the mean and standard deviation values of sample companies. The standard deviation of DOL is 6.09 which is more than the mean value of 3.53 while the SD of DFL is 4.41 while the mean value is 1.78 and that of DCL SD is 5.55 and Mean is 3.75.

Correlation Analysis

The coefficient of correlation between DFL and EPS, DOL and EPS and DCL and EPS are presented in Exhibit VI to assess the closeness of relation between each other. This table reveals that a correlation of 0.73 between DOL and EPS, 0.59 between DFL and EPS and 0.77 between DCL and EPS.

Exhibit – VI Leverage & EPS

| Period | DOL | DFL | DCL | EPS |
|--------|-------|-------|-------|-------|
| 2009 | 15.09 | 0.95 | 14.27 | 5.56 |
| 2010 | 3.43 | -0.13 | -0.45 | 4.77 |
| 2011 | 0.65 | 11.38 | 7.35 | 12.18 |
| 2012 | 16.53 | 0.87 | 14.37 | 9.62 |
| 2013 | -0.44 | -2.47 | 1.08 | 10.07 |
| 2014 | -1.88 | 1.05 | -1.98 | 9.69 |
| 2015 | 3.50 | 1 | 3.49 | 16.59 |
| 2016 | 2.98 | 0.82 | 2.44 | 19.50 |

Hypothesis

An ANOVA is statistical hypothesis in which the sampling distribution of test statistic when null hypotheses is true. Null hypotheses have been set and adopted for the analysis of data. The null hypotheses are represented by H_0 . It is a negative statement which avoids personal bias of investigator during data collection as well as the time of drawing conclusion.

Hypothesis

H0: $\mu_1 = \mu_2 = \mu_3 = \mu_4$ (There is no significant relationship between DOL, DFL, DCL and EPS of Whirlpool Ltd.)

H1: $\mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4$ (There is significant relationship between DOL, DFL, DCL and EPS of Whirlpool Ltd.)

Anova: Single Factor

| Groups | Count | Sum | Average | Variance |
|--------|-------|-------|---------|----------|
| DOL | 8 | 39.86 | 4.98 | 48.49 |
| DFL | 8 | 13.47 | 1.68 | 16.77 |
| DCL | 8 | 40.58 | 5.07 | 40.25 |
| EPS | 8 | 87.98 | 11.00 | 25.40 |

ANOVA: Variation

| Source of Variation | SS | df | MS | F | P-value | F crit |
|---------------------|---------|----|---------|-------|---------|--------|
| Between Groups | 360.85 | 3 | 120.283 | 3.675 | 0.024 | 2.947 |
| Within Groups | 916.36 | 28 | 32.727 | | | |
| Total | 1277.21 | 31 | | | | |

Above analysis shows that the F value (3.675) is more than F Critical value of 2.947, therefore null hypothesis is rejected. Therefore it is concluded that there is significant relationship between the Composite Capital Adequacy ratios of the above Banks.

Conclusion

- Whirlpool is an almost a zero-debt company and in 2016 D/E ratio is 0.08 or 7.1% of Capital Employed
- Being a zero debt company, whirlpool does not get any tax shield. But considering its huge retained earnings and 85% promoter's funds in overall shareholder's fund, not leveraging its assets is more profitable option for the company.
- Net sales and assets of the company have increased a lot in recent years.



- Although there no long term debts, but it has taken some loans for operational expenditures which are very less as compared to the PBIT of the company which is indicated by the huge interest coverage ratio
- To maximize the wealth of shareholders, leverage plays a positive role when rate of return is higher than the fixed rate of interest which is paid on loans borrowed.
- The long-term debt is positively related with the firms' gross profitability. This can be explained by the aggressive output and investment strategies adopted by the firms with higher long-term debts, combined with their technology up gradation efforts.
- The structure of the debt of the firms is therefore found to have an important bearing on the firms' choice of product market related strategies and thereby influencing the performance of the firms as well.
- Whirlpool Ltd. is also using the financial leverage effectively thereby increasing the earning of the shareholders. Finally, it is concluded that the company should improve its debt equity ratio in order to have better trading on equity position and reframe its capital structure for further development.

References

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