

LIQUIDITY MANAGEMENT OF SELECTED PRIVATE WIND MILLS IN INDIA

Dr. A. Muthusamy

M.Com., MBA., M.Phil.,CGT., PGDCA., Ph.D.,

AssociateProfessor,

Department of International Business and Commerce

Alagappa University, Karaikudi.4 , Tamilnadu.

ABSTRACT

Wind power is the conversion of wind energy into a useful form of energy. The total amount of economically extractable power available from the wind is considerably more than present human power use from all sources. Liquidity is used to judge a business unit's ability to meet its short-term obligations. Liquidity is the basis of survival of any unit and the creditors are more interested in liquidity of the business. In liquidity management are concerned with how the business manager its short-term funds.Despite many favorable policies both by State and Central government Indian wind power Sector is not growing at a speed it should, because of many implementation and infrastructure problems. The Study primarily aims to identify those liquidity position of the wind power producer in India.

INTRODUCTION

Electricity shortage is very common in country like India where most of the population (i.e. over 40 present) has no access to modern energy service on an average, electricity demand is expected to rise 7.4 percent annually for next 25 years. The Indian wind energy sector has an installed capacity of 21,241.36 MW as on 2014. In terms of wind power installed capacity India is ranked 5th in the world. Today India is major player in the global wind energy market. The exponential growth in the rate of energy consumption is the main case of energy shortage, as well as energy resource depletion worldwide. According to international energy agency, more than 28 percent share of the world's total energy will be consumed in India and China for the year 2030. Therefore a significant amount of energy must come from renewable sources. National action plane on climate change (NAPCC) was formed in 2008 for climate change control, has also considered role of renewable energy in total energy production of India. In India, the strong south- west summer monsoon, starting in the month of May-influence the wind in October, cool dry air moves to towards the ocean. During the period from November to March, wind speed is relatively slow in the country. Except the eastern peninsular coast, Indian peninsula experience uniformly strong winds during the period from March toughest.

IMPORTANCE OF THE STUDY

Wing emery program was commenced in India by the end of the 6th five year plan during 1983-84 and in the last few years it has increased considerably. The main objective of the program was the commercialization of wind energy production, support research and development, provide help

to wind project and to create awareness among people Global installed wind power capacity shows India's better performance in wind energy sector. The five main wind power countries are

China, USA, Germany, Spain and India and they together represent a share of 73% of the global wind capacity. As per MNRE 2014, wind power accounts for the largest share of renewable power installed capacity (about 67%) as compared to the other renewable sources in India. The total installed wind power capacity in the country has increased from 19565MW in 2014.

The counter for wind energy technology (C-WET) in association with state agencies has launched wind resource assessment (WEA) program in which 789 wind monitoring stations, including 87 new stations have been commissioned in 28 states and 3 union territories of India during the year 2013-14. The ministry of new and renewable energy has taken up a new initiative for implementation of wind resource assessment in new areas with an aim to assess the realistic potential at 100m level in 500 new stations across the country under the national clean energy fund (NCEF) to be implemented through C-WET. In this research paper an attempt has been taken to find out the Liquidity management of selected wind mills in India.

TABLE 1
TOTAL GLOBAL INSTALLED CAPACITY OF WIND POWER GENERATION
(UP TO JUNE 2014)

COUNTRY	INSTALLED CEPACITY (MW)
China	80824
USA	60009
Germany	32422
Spain	22907
India	19565
UK	9610
Italy	8415
France	7821
Canada	6578
Denmark	4578
Portugal	4564
Sweden	4066
Brazil	3059
Japan	2788
Rest of the world	2655
TOTAL	296065

Source: WWEA,2014

PERIOD OF THE STUDY

The present study covers a period of five years taking from March 2010 to March 2014.

SAMPLE COMPANIES

The following sample Private Wind Mills have been selected for the study

1. Suzlon Energy Ltd
2. Orient Green Power Ltd
3. Indowind Energy Ltd
4. Inox Wind Ltd
5. NEPC

LIQUIDITY MANAGEMENT

Liquidity is used to judge a business unit's ability to meet its short-term obligations. Liquidity is the basis of survival of any unit and the creditors are more interested in liquidity of the business. In liquidity management are concerned with how the business manager its short-term funds. These are then funds which are continuously circulating through the business process.

CURRENT RATIO OF SELECTED PRIVATE WIND MILLS IN INDIA

The current ratio, one of the most commonly used financial ratios, measures the firm's ability to meet its short-term obligations. As current liabilities should technically be paid from current assets, this ratio highlights the firm's ability to meet its short-term liabilities from its short-term assets. The current ratio is expressed as the current assets divided by the current liabilities. A lower current ratio means that the company may not be able to pay its bills on time, while a higher ratio means that the company has money in cash or safe investments that could be put to better use in the business. It is important to note that a very high ratio of current assets to current liabilities may be indicative of slack management practices, as it might signal excessive inventories for the current requirements and poor credit management in terms of overextended accounts receivable. At the same time the firm may not be making full use of its current borrowing capacity.

Table 2

Current Ratio of Selected Private Wind Mills in India for the year 2009-2010 to 2013-2014

COMPANY NAME	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	CV%
Suzlon Energy	1.16	0.95	0.71	0.52	0.34	0.73	0.13	18.61
Orient Green	4.76	1.29	4.47	6.29	1.58	3.67	0.50	13.59
Indowind	1.15	2.48	2.02	8.26	8.56	4.47	1.08	24.11
Inox Wind	2.41	2.69	1.09	1.02	1.00	1.64	0.10	60.09
NEPC	1.47	1.50	1.44	1.00	1.00	1.28	0.22	78.57

Source: www.moneycontrol.com

The current ratio of Suzlon energy in the year 2009-2010 was 1.16. In the next three years 2010-2011 to 2012-2013 the current ratio decreased to 0.52. In the last year 2013-2014 the current ratio increased to 0.34. Thus the current ratio of the Suzlon energy is less than the standard norm. In the initial year 2009-2010, the Orient Green Power had the current ratio of 4.76. For 2012-2013 the current ratio increased to 6.29. In 2013-2014 and 2010-11 the current ratio decreased to 1.58 and 1.28. In the case of Indo wind energy the current ratio in 2009-2010 was 1.16. After that the current ratio figures year after year have increased continuously till the year 2012-2013. But the last year

current ratio of the renewable wind energy was decreased to 8.56. Thus the current ratio of the Indo wind energy ltd is less than the standard norm. In the case of Inox wind ltd the current ratio in 2009-2010 was 2.14. After that the current ratio figures year after year have decreased continuously till the year 2012-2013. In the last year current ratio of the Inox wind ltd was 1.02. Thus the current ratio of the Inox wind ltd is more than the standard norm. In the case of NEPC the current ratio in 2009-2010 was 1.47. After that the current ratio figures after year have decrease continuously till the year 2012-2013 in the last year current ratio of the NEPC was 1.00 thus the current ratio of the NEPC is more than standard norms.

The table also shows that Mean value is higher value of Indo wind energy and Co- Variance is better performance of Orient Green Power.

TEST OF HYPOTHESIS

Table 3 gives the relevant details whether the current ratio of the five private wind mills differed significantly and whether the ratio differed across the five years. Two way ANOVA was used.

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of current ratio of the Selected Private Wind mills.

Set-2: Ho: There is no significant difference in the values of current ratio during the different years.

Table 3
ANOVA – Current Ratio

	Sum of Degrees of Square	Degrees of Freedom	Mean Square	F-Ratio
Between Column	6.63	4	1.6574	0.3431
Within Row	9.11	4	2.2775	0.2497
Residual	9.1	16	0.5687	
Total	24.84	24		

Source: Computed

RESULT

Set-1: Ho: The table value of 'F' at 5% for $V_1=4$, $V_2=16$ is 3.26. Since the Calculated value is less than the table value the null hypothesis is accepted. Hence the value of current ratios of the five companies differs significantly.

Set-2: Ho: The table value of 'F' at 5% for $V_1=4$, $V_2=16$ is 3.49. Since the calculated value is less than the table value. Hence the Ho is accepted.

QUICK RATIO OF SELECTED PRIVATE WIND MILLS IN INDIA

The Quick (Acid-Test) ratio is similar to the current ratio except that it excludes inventory, which is generally the least liquid current asset. In this, the quick assets or liquid assets i.e. cash, marketable securities and account receivables are expressed as a proportion of current liabilities. This is to assess the ability of the business to meet the current liabilities without having to wait for the manufacturing cycle to be completed and sale to take place for inflow of cash.

Table 4
Quick Ratio of Selected Private Wind Mills for the year 2009-2010 to 2013-2014

COMPANY NAME	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	CV%
Suzlon Energy	0.94	0.66	0.51	0.27	0.23	0.46	0.20	42.71
Orient Green Power Ltd	4.71	1.29	4.45	6.27	1.58	3.66	0.50	13.66
Indowind Energy Ltd	1.11	2.49	1.97	7.48	5.49	3.70	1.84	22.70
Inox Wind Ltd	2.38	2.65	1.06	0.99	0.96	1.60	0.14	8.75
NEPC	1.47	1.50	1.44	1.00	1.00	1.28	0.14	10.93

Source: www.moneycontrol.com

The data presented in the table 4 reveal that the quick ratio of Suzlon energy was 0.94 in 2009-2010. After that the quick ratio figures have decreased for the year 2010-2011. Next year 2011-2012, 2012-2013 and 2013-2014 decreased to 0.51, 0.27 and 0.23. The quick ratios of the Suzlon energy are less than the standard norm. As on 31st March 2010 quick ratio of Orient green power ltd was 4.71. In the next three years 2010-2011 to 2012-2013 quick ratios increased to 6.27. In the last year 2013-2014 the quick ratio decreased to 1.58. Thus the quick ratio of the win wind is less than the standard norm. For the Indo wind energy ltd quick ratio in the year 2009-2010 was 1.11. In the next four years from 2010-2011 to 2013-2014 the quick ratio increased to 5.49. The quick ratio of the Indo wind energy ltd is more than the standard norm 1:1. In the case of Inox wind ltd quick ratio in the year 2009-2010 was 2.38. After that the quick ratio figures decreased continuously till the year 2013-2014 was 0.96. The quick ratio of the Inox wind ltd is less than the standard norm 1:1. As on 31st march 2010 quick ratio of win wind was 1.47. In the next three year 2010-2011 to 2012-2013 quick ratios decreased 1.00. In the last year 2013-2014 the quick ratio 1.28. Thus the quick ratio of the NEPC is less than the standard norms

The table also shows that co-efficient of variation for quick ratio of 8.75% for Inox wind is better performance of other wind mill and Mean value is higher value of Indowind energy..

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of quick ratio of the selected Private wind mill Companies.

Set-2: Ho: There is no significant difference in the values of quick ratio during the different years.

Table 5

ANOVA – Quick Ratio

	Sum of Degrees of Square	Degrees of Freedom	Mean Square	F-Ratio
Between Column	2.39	4	0.5975	0.0539
Within Row	17.00	4	4.25	0.3838
Residual	177.16	16	11.0725	
Total	196.55	24		

Source: Computed

RESULT

Set-1: Ho: The table value of 'F' at 5% for V1=4, V2=16 is 3.26. Since the Calculated value is less than the table value. So the null hypothesis is accepted. There is no difference among the companies.

Set-2: Ho: The table value of 'F' at 5% for V1=4, V2=16 is 3.49. Since the calculated value is less than the table value. Hence the Ho is accepted

GROSS PROFIT MARGIN OF SELECTED PRIVATE WIND MILLS IN INDIA

Gross Profit is the result of the relationship between prices, sales volume and cost. The gross margin represents the limit beyond which fall in sales prices are outside the tolerance limit. The gross profit margin is a very important profitability measure for any business. It essentially measures the trading effectiveness and basic profit earning potential of a firm

Table6**Gross Profit Margin ratio of Private Wind Mills for the year 2009-2010 to 2013-14**

COMPANY NAME	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	CV%
Suzlon Energy	0.26	1.98	1.40	5.40	2.34	2.27	1.88	82.60
Orient Green	8.08	1.55	8.95	8.15	7.66	5.24	1.83	34.87
Indowind	1.14	6.55	6.51	3.59	2.34	4.02	1.71	42.53
Inox Wind	1.49	1.23	2.24	8.68	1.14	2.95	0.71	24.01
NEPC	1.43	3.52	1.20	1.90	4.80	2.57	0.43	16.73

Source: www.moneycontrol.com

The data presented in the table 6 reveals that the gross profit margin ratio of the Suzlon energy was 0.26 in 2009-2010. In the next two years 2010-2011 and 2011-2012 the gross profit margin ratio increased to 1.98 and 1.40. In the last two years 2012-2014 gross profit margin ratio increased to 2.34. In the case of Orient green power ltd the gross profit margin in 2009-2010 was 8.08. In the next year 2010-2011 the gross profit margin ratio decreased to 1.55. Next two years 2012-2013 gross profit margin ratio increased to 8.15. In the last year 2013-2014 gross profit margin ratio of Win wind was 7.66. In the case of Indo wind energy ltd the gross profit margin in

2009-2010 was 1.14. In the next year 2010-2011 the gross profit margin ratio increased to 6.55. Next two years 2012-2013 gross profit margin ratio decreased to 3.59. In the last year 2013-2014 gross profit margin ratio of Indo wind energy ltd was 2.34. For the Inox wind the gross profit ratio in the year 2009-2010 was 1.49. In the three next year 2012-2013 the gross profit margin ratio increased up to 8.68. After that the last year 2013-2014 gross profit margin ratio decreased to 1.14. In the case of NEPC the gross profit margin in 2009-2010 was 1.43. In the next year 2010-2011 the gross profit margin ratio increased 3.52. Next two years 2012-2013 gross profit margin ratio decreased 1.90. In the last year 2013-2014 gross profit margin ratio of NEPC was 4.80.

The table also shows that co-efficient of variation for gross profit margin ratio of 16.73% for NEPC is better performance of other Wind mills and Mean value is higher value of Orient Green Power.

TEST FOR SIGNIFICANCE OF GROSS PROFIT MARGIN

Table 7 gives the relevant details whether the gross profit margin ratio of the five Private Wind Mills differed significantly and whether the ratio differed across the five years. Two way ANOVA was used.

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of gross profit margin ratio of the Selected Private Wind mills.

Set-2: Ho: There is no significant difference in the values of gross profit ratio margin during the different years.

Table7
ANOVA –Gross Profit Margin Ratio

	Sum of Degrees of Square	Degrees of Freedom	Mean Square	F-Ratio
Between Column	9.53	4	2.3825	4.59
Within Row	6.35	4	1.5275	3.06
Residual	8.29	16	0.5181	
Total	24.17	24		

Source: Computed

RESULT

Set-1: Ho: The table value of 'F' at 5% for $V_1=4$, $V_2=16$ is 3.26. Since the calculated value is more than the table value, so the null hypothesis is rejected. There is no difference among the companies.

Set-2: Ho: The table value of 'F' at 5% for $V_1=4$, $V_2=16$ is 3.49. Since the calculated value is less than the table value of Ho is accepted. Hence the values of gross profit margin there is no difference among the years.

NET PROFIT MARGIN RATIO OF SELECTED PRIVATE WIND MILLS IN INDIA

Net Profit Margin is also known as net margin. This ratio is the percentage of sales rupees left after subtracting the Cost of Goods sold and all expenses, except income taxes. It provides a good opportunity to compare the company's "return on sales" with the performance of other companies in the industry. It is calculated before income tax because tax rates and tax liabilities

vary from company to company for a wide variety of reasons, making comparisons after taxes much more difficult.

Table8

Net Profit Margin of Selected Private wind mills in India for the year 2009-2010 to 2013-14

COMPANY NAME	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	CV%
Suzlon Energy	2.61	1.98	1.40	5.40	2.34	2.74	0.91	33.21
Orient Green Power	7.66	1.42	8.64	7.88	7.54	6.62	0.88	13.29
Indowind Energy	9.07	6.73	5.32	3.03	1.96	5.22	0.87	16.66
Inox Wind	1.23	1.00	7.95	7.22	6.74	4.82	0.52	10.78
NEPC	1.43	3.52	1.20	1.90	4.80	2.57	0.43	16.73

Source: www.moneycontrol.com

The data presented in the table8 reveals that the net profit margin ratio of the Suzlon energy was 2.61. In the next three years 2010-2011 to 2012-2013 the net profit margin ratio increased to 5.40. In the last year net profit margin ratio of Suzlon energy was 2.34. During the year 2009-2010 the net profit margin ratio of Orient green power was 7.66. In the next three years the net profit margin ratio increased to 7.88. In the last year net profit margin ratio of the Orient Green Power was 7.54. In the case of Indo wind energy ltd the net profit margin in 2009-2010 was 9.07. In the next two years the net profit margin ratio continuously decreased to 6.73. In the last two years 2012-2013 and 2013-2014 the net profit margin ratio of the Indo wind energy ltd was 3.03 and 1.96. For the Inox wind ltd the gross profit ratio in the year 2009-2010 was 1.23. In the next three years from 2010-2011 to 2012-2013 the gross profit margin ratio increased up to 7.22. After that the last year 2013-2014 gross profit margin ratio decreased to 6.74. In the case of NEPC the net profit margin in 2009-2010 was 1.43. In the next four years the net profit margin ratio fluctuating trend.

The table also shows that co-efficient of variation for net profit margin ratio of 10.78% Inox wind for better performance of the other Wind mills and Mean Value of net profit margin ratio is higher value of 6.62 for Orient green power.

TEST FOR SIGNIFICANCE OF NET PROFIT MARGIN

Table 9 gives the relevant details whether the gross profit margin ratio of the five Private Wind mills differed significantly and whether the ratio differed across the five years. Two way ANOVA was used.

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of gross profit margin ratio of the Selected Wind mills.

Set-2: Ho: There is no significant difference in the values of gross profit ratio margin during the different years.

Table 9
ANOVA –Net Profit Margin Ratio

	Sum of Degrees of Square	Degrees of Freedom	Mean Square	F-Ratio
Between Column	5.69	4	1.4225	0.0561
Within Row	7.12	4	1.78	0.0703
Residual	405.09	16	25.318	
Total	417.9	24		

Source: Computed

RESULT

Set-1: Ho: The table value of 'F' at 5% for V1=4, V2=16 is 3.26. Since the calculated value is less than the table value, so the null hypothesis is accepted. There is no difference among the companies.

Set-2: Ho: The table value of 'F' at 5% for V1=4, V2=16 is 3.49. Since the calculated value is less than the table value of Ho is accepted. Hence the values of gross profit margin there is no difference among the years.

OPERATING PROFIT MARGIN OF PRIVATE WIND MILL COMPANIES IN INDIA

This ratio is a complementary of net profit ratio. In case the net profit ratio is 20% operating ratio all be 80% operating cost include direct materials, direct labour and other overheads.

Table 10
Operating Profit Margin of Private Wind Mills in India for the year 2009-10 to 2013-14

COMPANY NAME	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	CV%
Suzlon Energy	5.57	6.16	1.25	9.08	1.12	4.63	0.84	18.14
Orient Green Power Ltd	5.87	3.45	2.57	9.57	1.12	4.52	0.83	18.36
Indowind Energy Ltd	5.71	5.82	4.70	2.53	3.55	4.46	0.76	17.04
Inox Wind Ltd	6.91	1.05	1.52	1.28	1.40	2.43	1.65	67.90
NEPC	8.44	9.41	4.31	8.94	4.29	7.07	1.07	15.13

Source: www.moneycontrol.com

The data presented in the table 10 reveals that the operating profit margin ratio of the Suzlon energy was 5.57. After that the next three years from 2010-2011 to 2012-2013 the operating profit margin ratio increased to 9.08. In the last year operating profit margin ratio of Suzlon energy was decreased to 1.12. During the year 2009-2010 the operating profit margin ratio of Orient green power ltd was 5.87. After that the next two years 2010-2011 and 2011-2012 the operating profit margin ratio decreased to 3.45 and 2.57. In the last two years 2012-2013 and 2013-2014 the operating profit margin ratio of the Win wind was increased to 9.57 and 1.12. In the case of Indo wind energy ltd the operating profit margin in 2009-2010 was 5.71. In the next year the

operating profit margin ratio increased to 5.82. In the next three years 2011-2012 and 2013-2014 the operating profit margin ratios of the Indo wind energy ltd was 4.70, 2.53 and 3.55. In the initial year 2009-2010 the operating profit margin ratio of Inox wind ltd was 6.91. In the next year 2010-2011 the operating profit margin ratio was decreased to 1.05. After that the next year 2011-2012 the Inox wind ltd ratio decreased to 1.52. The performance is, year after year, decreasing trend. In the case of NEPC the operating profit margin in 2009-2010 was 8.44. In the next year the operating profit ratio increased to 9.41. In the last three years from 2011-2012 to 2013-2014 the operating profit margin ratio of the NEPC was 4.31, 8.94 and 4.29.

The table also shows that co-efficient of variation for operating profit margin ratio of 15.13% NEPC for better performance of other wind mill and Mean value of operating profit margin ratio is higher value of NEPC for 7.07.

TEST FOR SIGNIFICANCE OF OPERATING PROFIT MARGIN

Table 11 gives the relevant details whether the operating profit margin ratio of the five Private Wind mills differed significantly and whether the ratio differed across the five years. Two way ANOVA was used.

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of operating profit margin ratio of the Selected Private Wind mills companies.

Set-2: Ho: There is no significant difference in the values of operating profit margin ratio during the different years.

Table 11
ANOVA –Operating Profit Margin Ratio

	Sum of Degrees of Square	Degrees of Freedom	Mean Square	F-Ratio
Between Column	28.38	4	7.095	16.198
Within Row	39.53	4	9.882	22.56
Residual	7.01	16	0.438	
Total	74.92	25		

Source: Computed

RESULT

Set-1: Ho: The table value of 'F' at 5% for $V_1=4$, $V_2=16$ is 3.26. Since the Calculated value is more than the table value. Hence Ho is rejected. There is no longitudinal difference in the operating profit margin ratio.

Set-2: Ho: The table value of 'F' at 5% for $V_1=4$, $V_2=16$ is 3.49. The calculated value is more than the table value the null hypotheses is rejected. Hence the values of operating profit margin ratio are no different significantly during the study period.

RETURN ON EQUITY OF SELECTED PRIVATE WIND MILLS IN INDIA

The return on equity measures the return earned on the shareholder's investment in the firm. The ratio of net profit to shareholders funds shows the extent to which profitability objective is being achieved. Higher the ratio, the better it is.

Table 12

Return on Equity of Private Wind Mill in India for the year 2009-2010 to 2013-14

COMPANY NAME	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	CV%
Suzlon Energy	0.59	0.72	0.77	1.67	0.25	0.69	0.48	69.56
Orient Green Power	1.37	1.81	1.03	1.03	6.42	2.33	2.27	97.42
Indowind Energy	5.01	7.17	8.58	7.72	1.67	6.03	0.45	7.46
Inox Wind Ltd	0.07	0.06	0.10	0.16	0.13	0.10	0.60	60.00
NEPC	1.66	6.38	8.31	0.03	8.97	5.07	0.94	18.54

Source: www.moneycontrol.com

The data presented in the table 12 reveals that the Return on equity of the Sulzon energy was 0.59. After that the next three years from 2010-2011 to 2012-2013 the Return on equity slightly increased to 0.72, 0.77 and 1.67. In the last year Return on equity of Suzlon energy performance is decreased to 0.25. During the year 2009-2010 the Return on equity of Orient green power ltd was 1.37. After that the next year 2010-2011 the Return on equity increased to 1.81. In the next two years 2011-2012 and 2012-2013 the Return on equity of the Orient green power ltd was equal value in 1.03 and 1.03. In the last year Return on equity of Orient green power ltd was 6.42. In the case of Indo wind energy ltd the Return on equity in 2009-2010 was 5.01. In the three next years from 2010-2011 to 2012-2013 the Return on equity increased to 7.17, 8.58 and 7.72. In the last year 2013-2014 the Return on equity of the Indo wind energy ltd was 1.67. In the first two years 2009-2010 and 2010-2011 the Return on equity of was 0.07 and 0.06. In the next three years from 2011-2012 to 2013-2014 the Return on equity was continuously increased to 0.10, 0.16 and 0.13. During the year 2009-2010 the Return on equity of NEPC ltd was 1.66. After that the next two years 2010-2011 and 2011-2012 the Return on equity increased to 6.38 and 8.31. In the next two years 2012-2013 and 2013-2014 the Return on equity of the NEPC ltd was fluctuated in 0.03 and 8.97.

The table also shows that co-efficient of variation for Return on equity of 7.46% for Indo wind is the better performance of others Wind mills and the Mean value for Return on equity of 6.03 for Indo wind ltd is the higher value.

TEST FOR SIGNIFICANCE OF RETURN ON EQUITY

Table 13 gives the relevant details whether the return on equity of the five Private Wind mills differed significantly and whether the ratio differed across the five years. Two way ANOVA was used.

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of return on equity of the Selected Private Wind mill companies.

Set-2: Ho: There is no significant difference in the values of return on equity during the different years.

Table 13
ANOVA – Return on Equity

	Sum of Degrees of Square	Degrees of Freedom	Mean Square	F-Ratio
Between Column	12.70	4	3.175	3.082
Within Row	9.99	4	2.497	2.424
Residual	1.66	16	0.103	
Total	24.35	24		

Source: Computed

RESULT

Set-1: Ho: The table value of 'F' at 5% for V1=4, V2=12 is 3.26. Since the Calculated value is less than the table value, the null hypothesis is accepted.

Set-2: Ho: The table value of 'F' at 5% for V1=3, V2=12 is 3.49. The calculated value is less than the table value. Hence the Ho is accepted. There is no longitudinal difference in the return on equity.

EARNINGS PER SHARE OF SELECTED PRIVATE WIND MILLS IN INDIA

Earnings per share measures the profit available to the equity shareholders on a per share basis, that is, the amount that they can get on every share held. It is calculated by the profits available to the equity shareholders by the number of the outstanding shares. The profits available to the ordinary shareholders are represented by net profits after taxes and Preference dividend.

Table 14
Earnings perShare of Private Wind Mills in India for the year 2009-2010 to 2013-2014

COMPANY NAME	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	CV%
Suzlon Energy	0.30	0.36	2.20	1.23	0.29	0.87	0.40	45.97
OrientGreen Power	2.60	6.23	6.75	7.88	7.54	6.20	0.33	5.32
IndowindEnergy	1.99	7.47	1.54	1.45	1.24	1.54	4.69	30.45
Inox Wind	3.13	3.39	3.33	5.52	5.86	4.24	0.53	12.50
NEPC	0.03	0.01	0.01	0.02	0.04	0.02	0.45	22.50

Source: www.moneycontrol.com

The data presented in the table 14 reveals that the Earning per share of the Suzlon energy was 0.30. After that the next year 2010-2011 Earning per share slightly increased to 0.36. In the next two years 2010-2012 and 2012-2013 Earning per share of Suzlon energy was increased to 1.23. In the last year 2013-2014 Earning per share decreased to 0.29. During the year 2009-2010 the Earning per share of Orient green power ltd was 2.60. After that the next four years from 2010-2011 to 2013-2014 the Earning per share increased up to 7.54. In the case of Indo wind energy ltd the Earning per share of 2009-2010 was 1.99. In the next year the Earning per share increased to 7.47. In the next three years from 2011-2012 to 2012-2013 the Earning per share of the Indo wind energy ltd performance was year after year decreasing trend. In the initial year 2009-2010 the Earning per share of Inox wind ltd was 3.13. In the next year 2010-2011 the Earning per share was increased to 3.39. After that the next two years 2011-2012 and 2012-2013 Inox wind earning per Share was increased to 5.52. In the last year 2013-2014 Earning per share was 5.86. During the year

2009-2010 the earning per share of NEPC was 0.03. After that the next three years from 2010-2011 to 2012-2013 the Earning per share decreased to 0.01, 0.01 and 0.02. For the last year 2013-2014 the Earning per share is 0.04.

The table also shows that co-efficient of variation for Earning per share of 5.32% for Orient green power ltd is the better performance of others Wind mills and the Mean value of 6.20 for is the Orient green power ltd higher value.

TEST FOR SIGNIFICANCE OF EARNINGS PER SHARE

Table 15 gives the relevant details whether the Earnings per share of the five Private Wind mills differed significantly and whether the ratio differed across the five years. Two way ANOVA was used.

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of Earnings per share of the selected Private Wind mill companies.

Set-2: Ho: There is no significant difference in the values of Earnings per share during the different years.

Table 15
ANOVA – Earnings per share

	Sum of Degrees of Square	Degrees of Freedom	Mean Square	F-Ratio
Between Column	5.37	4	1.3425	3.9777
Within Row	1.91	4	0.4775	1.4148
Residual	5.40	16	0.3375	
Total	12.64	24		

Source: Computed

RESULT

Set-1: Ho: The table value of 'F' at 5% for $V_1=4$, $V_2=12$ is 3.26. Since the Calculated value is more than the table value the null hypothesis is rejected.

Set-2: Ho: The table value of 'F' at 5% for $V_1=3$, $V_2=12$ is 3.49. The calculated value is less than the table value null hypothesis is accepted. Hence the value of earnings per share is no different significantly during the study period.

RETURN ON INVESTMENT OF SELECTED PRIVATE WIND MILLS IN INDIA

Return on investment (ROI) is considered to be one of the best indicators of profitability. It is also a good figure to compare against competitors or an industry average. Experts suggest that companies usually need at least 10 to 14 percent ROI in order to fund future growth. If this ratio is too low, it can indicate poor management performance or a highly conservative business approach. On the other hand, a high ROI can mean that management is doing a good job, or that the firm is undercapitalized.

Table 16

Return on Investment of Private Wind Mills in India for the year 2009-2010 to 2013-14

COMPANY NAME	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	CV%
Suzlon Energy	9.84	1.36	1.87	3.32	6.48	4.54	1.34	29.51
Orient Green Power	4.86	6.10	3.04	9.76	5.64	5.86	0.28	4.77
Indowind Energy	2.39	2.43	3.21	5.03	6.58	4.56	0.72	15.78
Inox Wind	2.09	3.01	3.54	6.64	7.46	4.54	0.53	11.67
NEPC	0.06	0.01	4.10	0.05	0.07	0.85	1.34	15.76

Source: www.moneycontrol.com

The data presented in the table 16 reveals that the Return on investment of the Suzlon energy was 9.84. After that the next year 2010-2011 the Return on investment decreased to 1.36. In the next two years 2011-2012 and 2012-2013 Return on investment of Suzlon energy was increased to 1.87 and 3.32. In the last year 2013-2014 Return on investment was increased to 6.48. During the year 2009-2010 the Return on investment of Orient green power ltd was 4.86. After that the next three years 2010-2011 to 2012-2013 the Return on investment continuously increased to 9.76. In the last year 2013-2014 the Return on investment of the Orient green power ltd was decreased to 5.64. In the case of Indo wind energy ltd the Return on investment of 2009-2010 was 2.39. In the next four years from 2010-2011 to 2013-2014 the Return on investment increased up to 6.48. In the initial year 2009-2010 the Return on investment of inoxwind ltd was 2.09. In the next two years 2010-2011 to 2011-2012 the Return on investment was slightly increased to 3.01 and 3.54. After that the next year of inox wind ltd performance is increased to 6.64. In the last year 2013-2014 Return on investment was increased to 7.46. During the year 2009-2010 the Return on investment of NEPC was 0.06. After that the next year 2010-2011 the Return on investment decreased to 0.01. In the year 2011-2012 the Return on investment of the NEPC was increased to 4.10. In the last two years 2012-2013 and 2013-2014 the Return on investment decreased to 0.05 and 0.07.

The table also shows that co-efficient of variation for Return on investment of 4.77% for Orient green power ltd is the better performance of others Wind mills and the Orient green power ltd Mean value of 5.86 for better average result.

TEST FOR SIGNIFICANCE OF RETURN ON INVESTMENT

Table 17 gives the relevant details whether the Return on investment of the five Private Wind mills differed significantly and whether the ratio differed across the five years. Two way ANOVA was used.

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of Return on investment of the selected Private Wind mills companies.

Set-2: Ho: There is no significant difference in the values of Return on investment during the different years.

Table 17
ANOVA –Return on Investment

	Sum of Degrees of Square	Degrees of Freedom	Mean Square	F-Ratio
Between Column	6.78	4	1.695	0.055
Within Row	13.73	4	3.432	0.111
Residual	491.42	16	30.713	
Total	511.93	24		

Source: Computed

RESULT

Set-1: Ho: The table value of 'F' at 5% for V1=4, V2=16 is 3.26. Since the difference among the companies.

Set-2: Ho: The table value of 'F' at 5% for V1=4, V2=16 is 3.49. The calculated value is less than the table value null hypothesis is accepted. Hence the values of return on investment differ significantly during the study period.

WORKING CAPITAL TURNOVER RATIO OF PRIVATE WIND MILLS IN INDIA

Working Capital, also known as circulating capital is the amount of money which a business needs to survive on a day- today basis. Working capital represents the money available to a business to run its daily operations and, as such, it is used to measure of the efficiency and the short-term financial health of a company.

Table 18

Working Capital Turnover Ratio of Private Wind Mills for the year 2009-2010 to 2013-14

COMPANY NAME	2009-10	2010-11	2011-12	2012-13	2013-14	Mean	SD	CV%
Suzlon Energy	3.02	4.55	2.67	3.37	8.01	4.32	0.37	8.56
Orient Green Power	7.14	3.40	1.74	6.29	1.58	4.03	0.52	12.90
Indowind Energy	1.91	8.84	1.43	5.77	6.60	4.91	0.74	15.07
Inox Wind	1.05	1.25	1.84	7.50	8.68	4.06	1.28	31.52
NEPC	1.74	0.68	0.20	0.18	0.71	0.70	0.33	47.14

Source: www.moneycontrol.com

The data presented in the table 18 reveals that the Working capital turnover ratio of the Suzlon energy was 3.02. In the next year 2010-2011 Working capital turnover ratios of Suzlon energy was increased to 4.55. After that the next three years 2011-2012 to 2013-2014 Working capital turnover ratio was slightly increased to 8.01. During the year 2009-2010 the Working capital turnover ratio of Orient green power ltd was 7.14. After that the next year 2010-2011 the Working capital turnover ratio decreased to 3.40. Next three years performance is year Orient green power ltd after year fluctuating trend. In the case of indo wind energy ltd the Working capital turnover ratio of 2009-2010 was 1.91. In the next three years 2010-2011 to 2012-2013 the working capital turnover ratio was increased to 5.77. After that the last year 2013-2014 the Working capital turnover ratio of the Indo wind energy ltd was to 6.60. In the initial year 2009-2010 the Working capital turnover ratio

of Inox wind ltd was 1.05. In the next year 2010-2011 the Working capital turnover ratio was increased to 1.25. After that the next year 2011-2012 Inox wind ltd performance is increased to 1.84. In the next two years 2012-2013 and 2013-2014 Working capital turnover ratios was increased to 7.50 and 8.68. During the year 2009-2010 the Working capital turnover ratio of NEPC was 1.74. After that the next year 2010-2011 the Working capital turnover ratio decreased to 0.68. After that the next year 2012-2013 the Working capital turnover ratio of the NEPC was decreased to 0.18. Next two years NEPC performance is year after year fluctuating trend.

The table also shows that co-efficient of variation for Working capital turnover ratio of 8.56% for Suzlon energy ltd is the better performance of other Wind mills and Mean value of 4.91 for Indo wind energy ltd is the greater than value of other Wind mills.

TEST FOR SIGNIFICANCE OF WORKING CAPITAL TURNOVER RATIO

Table 19 gives the relevant details whether the Working capital turnover ratio of the four Private Wind mills differed significantly and whether the ratio differed across the five years. Two way ANOVA was used.

Two sets of Null Hypothesis

Set-1: Ho: There is no significant difference in the values of Working capital turnover ratio of the selected Private Wind mill companies.

Set-2: Ho: There is no significant difference in the values of Working capital turnover ratio during the different years.

Table 19
ANOVA –Working Capital Turnover Ratio

	Sum of Degrees of Square	Degrees of Freedom	Mean Square	F-Ratio
Between Column	13.32	4	3.33	0.2231
Within Row	8.66	4	2.165	0.1450
Residual	238.77	16	134.923	
Total	267.50	24		

Source: Computed

RESULT

Set-1: Ho: The table value of 'F' at 5% for $V_1=4$, $V_2=16$ is 3.26. Since the Calculated value is less than the table value the null hypothesis is accepted. Hence the ratio differs significantly among the companies.

Set-2: Ho: The table value of 'F' at 5% for $V_1=4$, $V_2=16$ is 3.49. The calculated value is less than the table value. Hence the Ho is accepted.

CONCLUSION

Suzlon Energy Limited and Orient Green Power Limited have higher profitable performance when compared to other selected Private Wind Mill companies in India. As far as the liquidity and turnover are concerned Suzlon Energy and Orient Green Power are at high level performance and other companies are to improve their liquidity and turnover performance. The operating profit of the Orient Green Power has high growth rate during the study period. Indian wind power sector is unable to achieve its full potential, especially if we compare it with developed countries like US and China has made in this sector. The reason lies in faulty implementation of policy, inadequate infrastructure for evacuation, poor financial health of utilities and lack of investor education.

Government should take these matters on priority basis if it is serious on achieving NAPCC target of fulfilling 15% of its energy needs from renewable sector by 2020.

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