



VIDHYAYANA

ISSN 2454-8596  
www.MyVedant.com

An International Multidisciplinary Research E-Journal

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**A STUDY ON PERFORMANCE EVALUATION OF HAVELLS  
COMPANY BY USING ALTMAN'S Z SCORE MODEL**

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**Abstract:**

It is necessary to evaluate the performance of companies to make investment in that particular company. So, in present research paper, researcher selected Havells Company for the performance evaluation by using Altman Z score model. Data Analysis is considered as the main part of any research. In a this research data analysis is be done using statistical tools like averages, ratios and by using Altman Z score model. The period of the study is 10 years i.e. from 2009 to 2018. Z score of Havells Company is 3.20, 3.19, 2.99, 3.25, 3.37, 3.50, 3.53, 4.12, 3.34 and 3.58 respectively during 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018. Havells Company during 2009 to 2018 in a safe zone because in all the years z score is more than 2.99.

**Key Words:** Performance Evaluation, Z score, Zone

**Introduction:**

All the business organizations and companies are carried out with an objective of making a good profit. All the stakeholders i.e. Shareholders, Debenture holders, Preference shareholders, creditors and investors of company or the business organization will want to know whether an organization will do well in future in order to keep their interest in that organization. Forensic Accounting is one of the forms of investing accounting that helps to examine the financial records of the company with respect to fraud and distress. In today's competitive world it is necessary to evaluate the performance of the firm or industry on the regular basis to sustain in the market. With the help of evaluation of performance we can find out the Zone of Company.

$$Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + .999X5$$

Where X1 = Working Capital / Total Assets

X2 = Retained Earning / Total Assets

X3 = EBIT / Total Assets

X4 = Market Value of Equity / Total Liabilities

X5= Sales / Total Assets

**Z Score Discrimination:**

$Z > 2.99$	Safe Zone
$1.81 < Z < 2.99$	Grey Zone
$< 1.81$	Distress Zone

**Research Gap:**

1. Study Period
2. Sample
3. Test

**Title of the Study:**

“A Comparative study of Performance Evaluation of Havells and HBL Power”

**Objectives of the Study:**

1. To measure the Performance of Havells Company
2. To know the profitability of Havells Company
3. To identify zone of Havells
4. To give suggestions



**Review of Literature:**

**Studies done with the help of Atman Z score Model**

- ❖ **Apoorva (2019)** Seven companies have been selected to check the efficiency and accuracy of this model. In conclusion it can be applied for Indian Companies but the same was not 100% accurate.
- ❖ **Rohini Sajjan (2016)** this study tries to apply the model to understand financial health of selected firms for the years 2011-2015 which are listed in BSE and NSE. Companies are selected from manufacturing and non manufacturing sector. It reveals that none of the companies completely belongs to safe zone except for few years. Most of the firms are in distress zone.
- ❖ **Setyani Dwi Lestari (2016)** the study was based on effect of z score to stock price is significantly 0.004. the study period was 2009 to 2014. Retained earning to total



assets have no significant effect. Ratio of z score only ebit to total assets and significantly affect stock price partially.

### **Research Methodology**

#### **Population / Universe of Study:**

The population of the study is all listed electronic manufacturing as well as non-manufacturing companies which are listed in BSE.

#### **Sample Size:**

From the whole population Havells Companies selected on the basis of Market capitalization and which is listed in BSE.

#### **Data Collection:**

There are basically 2 methods of data collection. They are Primary and Secondary data collection. This study will be based on secondary data collection in which data is collected from the Havells companies annual report, websites and magazines. For the calculation of various ratios money control and annual report of respective companies will be used.

#### **Period of the Study:**

The period of the study will be of 10 years i.e. from 2009 to 2018.

#### **Tools and Techniques:**

Data Analysis is considered as the main part of any research. In a this research data analysis is be done using statistical tools like

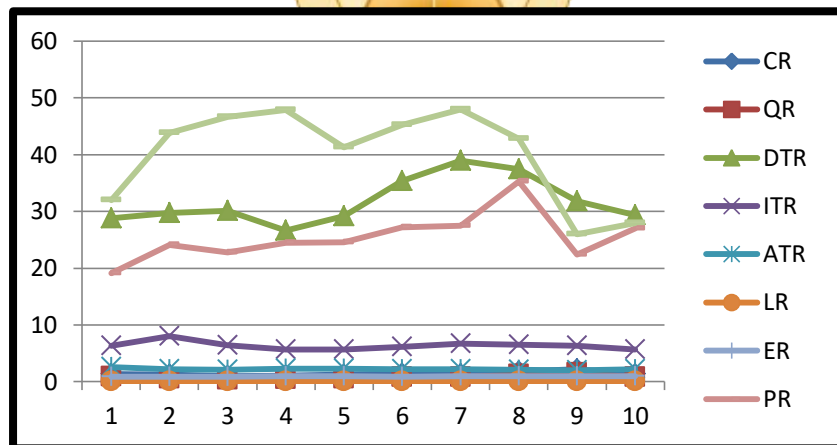
- Averages,
- Ratios
  - ✓ Current Ratio
  - ✓ Quick Ratio
  - ✓ Inventory Turnover Ratio
  - ✓ Assets Turnover Ratio
  - ✓ Leverage Ratio
  - ✓ Return on Assets Ratio
  - ✓ Return on Capital Employed and
- By using Altman Z score model

Data Analysis and Interpretation:

Ratio of Havells Company during 2009 to 2018

Ratio	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>CR</b>	1.36	1.25	0.99	1.10	1.31	1.42	1.32	1.81	2.20	1.36
<b>QR</b>	0.87	0.54	0.35	0.41	0.56	0.81	0.76	1.24	1.58	0.77
<b>DTR</b>	28.83	29.73	30.14	26.64	29.15	35.40	38.95	37.48	31.78	29.39
<b>ITR</b>	6.32	8.08	6.45	5.72	5.72	6.16	6.74	6.49	6.34	5.67
<b>ATR</b>	2.58	2.19	2.14	2.30	2.29	2.21	2.23	2.16	2.01	2.20
<b>LR</b>	0.07	0.09	0.07	0.06	0.05	0.07	0.02	0.00	0.06	0.03
<b>ER</b>	0.93	0.91	0.93	0.94	0.95	0.93	0.98	1.01	0.94	0.97
<b>ROA</b>	19.12	24.15	22.83	24.52	24.54	27.22	27.46	35.32	22.42	27.04
<b>ROCE</b>	31.96	43.81	46.67	47.85	41.26	45.24	47.99	42.84	25.95	27.91
<b>AVG.</b>	10.23	12.31	12.29	12.17	11.76	13.27	14.05	14.26	10.36	10.59

[Source: Computed with the help of Annual Report 2009 to 2018]



[Source: Computed with the help of Above Table]

Above table and chart represent Current Ratio, Quick Ratio, Debtor Turnover Ratio, Inventory Ratio, Leverage Ratio, Equity Ratio, Return on Assets Ratio and Return on Capital Ratio during 2009 to 2018. The average of all ratio is 10.23, 12.31, 12.29, 12.17, 11.76, 13.27, 14.05, 14.26, 10.36 and 10.59 respectively during 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018.

2014, 2015, 2016, 2017 and 2018. Highest average is in the year 2016 i.e. 14.26 and lowest average is in the year 2009 i.e. 10.23.

**Altman Z Score Model for Havells Company:**

Ratio	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>X1</b>	0.15	0.09	-0.001	0.06	0.13	0.20	0.16	0.41	0.52	0.26
<b>X2</b>	0.14	0.18	0.17	0.18	0.19	0.21	0.19	0.27	0.16	0.19
<b>X3</b>	0.19	0.24	0.23	0.25	0.25	0.27	0.27	0.35	0.22	0.27
<b>X4</b>	0	0	0	0	0	0	0	0	0	0
<b>X5</b>	2.19	1.97	1.99	2.12	2.13	2.07	2.17	2.07	1.76	2.12
<b><math>Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + .999X5</math></b>										
<b>Z score</b>	3.20	3.19	2.98	3.25	3.37	3.50	3.53	4.12	3.34	3.58
<b>Zone</b>	Safe	Safe	Safe	Safe	Safe	Safe	Safe	Safe	Safe	Safe

[Source: Computed with the help of Ratios.]

Z score of Havells Company is 3.20, 3.19, 2.99, 3.25, 3.37, 3.50, 3.53, 4.12, 3.34 and 3.58 respectively during 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018. Havells Company during 2009 to 2018 in a safe zone because in all the years z score is more than 2.99.

**Conclusion and Findings:**

With the help of this study a stakeholder can easily identify the company is in Safe Zone, Grey Zone and Distress Zone. Same way company also can know about the financial health and zone which it belongs to. Z score of Havells Company is 3.20, 3.19, 2.99, 3.25, 3.37, 3.50, 3.53, 4.12, 3.34 and 3.58 respectively during 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018. Havells Company during 2009 to 2018 in a safe zone because in all the years z score is more than 2.99.



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**Limitations of the Study:**

- Only one company is selected for the study
- Study period is only 10 years.

**Reference:**

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