



## Compound Annual Growth Rate of Select Financial Variables in Indian Automobile Industry

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### Abstract

In India, the Automobile Industry is one of the largest industries. It is one of the key sectors of the economy. The industry has shown great progress since de-licensing and opening up of the sector to Foreign Direct Investment (FDI) in 1991-92. It has both forward and backward linkages with the rest of the economy, and hence has a strong multiplier effect. The Automobile Industry including manufacturing of component is estimated to provide employment directly to approximately five lakhs of people and indirectly to around 50 million people. This paper deals with analysis of select financial variable using Compound Annual Growth Rate.

**Keywords:** Compound Annual Growth Rate, Sales, Net Income, Current Assets, Fixed Assets, Working Capital, Equity and Debt, Indian Automobile Industry

### Introduction

Since 1992-93, the Automobile Sector has grown at the rate of about 6.9 per cent per annum (Automotive Mission Plan, 2006 - 2016), though there have been considerable fluctuations in its growth rate. Against this background, it is very important to analyze the growth of selected financial variable in automobile manufacturing sector to show how this has really led to an improvement in the performance of the sector.

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### Statement of the Problem

Many policy makers and academics contend that Foreign Direct Investment (FDI) can have positive effects on a host country's development. As per the data the FDI flow in 2005-06 was 143 million US\$ which in 2010-11 became 1331 million US\$ (RBI, FDI Statistics, 2011). Against this background, it is very important to analyze the growth of the Automobile sector has really led to an improvement in the performance of the sector. Therefore, this paper is undertaken to analyse growth of the Sales, Net Income, Current Assets, Working Capital, Fixed Assets, Equity and Debt of the Indian Automobile Industry during 1998 to 2012.

### Objectives of the Study

The objective of this paper is to measure and to examine the growth of selected financial variables of Indian Automobile Industry.

### Data Collection

The financial data and information required for the study were drawn the Prowess corporate databases developed by Centre for Monitoring Indian Economy (CMIE). The other relevant data were collected from Journals, Magazines, Websites and Dailies.

### Period of the Study

The period for this study covered fifteen years from 1998 to 2012

### Sampling Design

In the initial stage the researcher has decided to include all the 16 companies under Automobile Industry working before or from the year 1998 to 2012. But, owing to several constraints such as non-availability of financial statements or non-working of a company in a particular year etc., it is compelled to restrict the number of sample companies to 16 viz. Ashok Leyland Ltd, Atul Auto Ltd, Eicher Motors Ltd, Force Motors Ltd, Hero MotoCorp Ltd, Hindusthan Motors, HMT Ltd, Hyundai Motors, Kinetic Engineering Ltd, Maharashtra Scooters Ltd, Mahindra & Mahindra Ltd, Majestic Auto Ltd, Maruthi Suzuki, Scooters India Ltd, SML ISUZU Ltd and Tata Motors Ltd

The general performance of the Automobile industries can be analysed, more meaningfully and objectively for a given period of time, by comparing their growth patterns over a period of time rather than on a year-to-year basis. The best

measure available for such an exercise is the compound growth rates or exponential growth rates. The following financial variables were selected for assessing the annual growth and trend of Indian Automobile Industry during the study period,

- i. Sales
- ii. Net Income
- iii. Current Assets
- iv. Working Capital
- v. Fixed assets
- vi. Equity and
- vii. Debt

**Table: 1 COMPOUND ANNUAL GROWTH RATE OF SELECTED FINANCIAL VARIABLES OF INDIAN AUTOMOBILE INDUSTRY**

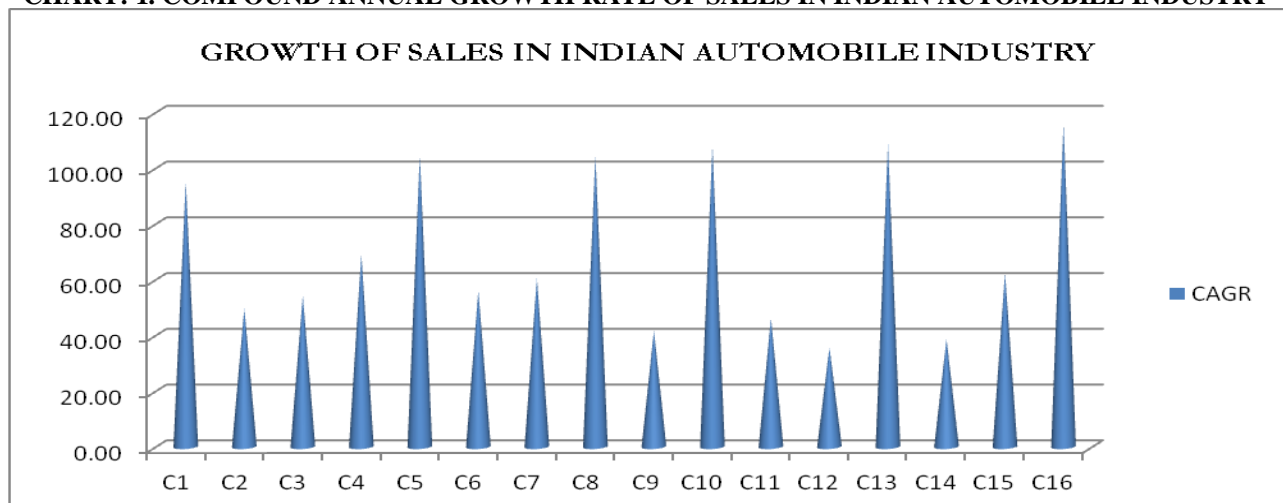
The following table shows the growth patterns over a period of the year from 1998 to 2012.

Company/ Year	SALES	NET INCOME	CURRENT ASSETS	WORKING CAPITAL	FIXED ASSETS	EQUITY	DEBT
C1	95.01	56.47	74.64	65.19	75.27	77.6	71.15
C2	49.64	19.92	29.43	17.02	19.85	31.15	6.55
C3	54.21	34.13	25.75	49.52	56.93	57.48	21.38
C4	69.14	28.43	60.75	56.55	47.05	63.43	22.51
C5	104.54	72.96	67.21	72.8	82.16	81.1	58.5
C6	56.05	42.29	53.17	50.8	45.27	49.22	50.86
C7	60.46	27.83	41.03	32.2	60	56.53	26.4
C8	104.32	60.72	86.8	76.25	28.4	80	73.66
C9	41.59	27.77	31.67	22.4	42.74	25.54	40.03
C10	108.09	113.66	40.89	11.72	47.08	36.48	14.27
C11	46.19	19.99	84.24	63.12	90.94	94.17	73.53
C12	35.57	22.63	26.74	12.47	37.66	28.48	25.34
C13	108.57	61.59	83.06	61.29	92.67	96.77	65.47
C14	38.61	27.08	23.25	24.82	27	38.24	36.85
C15	62.37	28.17	53.28	46.43	33.02	47.47	37.95
C16	116	66.37	88.22	84.63	105.6	99.55	96.34

(Fig. in Percentages)

The Table.1 describes the value of sales from 1998 to 2012 and their compound annual growth rate and estimated sales trend for the year 2015 for the Indian Automobile Industry. From the table 4.54, the compound annual growth rate shows that, the Sales was highest in C16 at 116 per cent and followed by C13 and C10 at 108.57 per cent and 108.09 per cent. It was lowest in C12 was 35.57 at per cent. The following chart shows the CAGR of sales in Indian Automobile Industry.

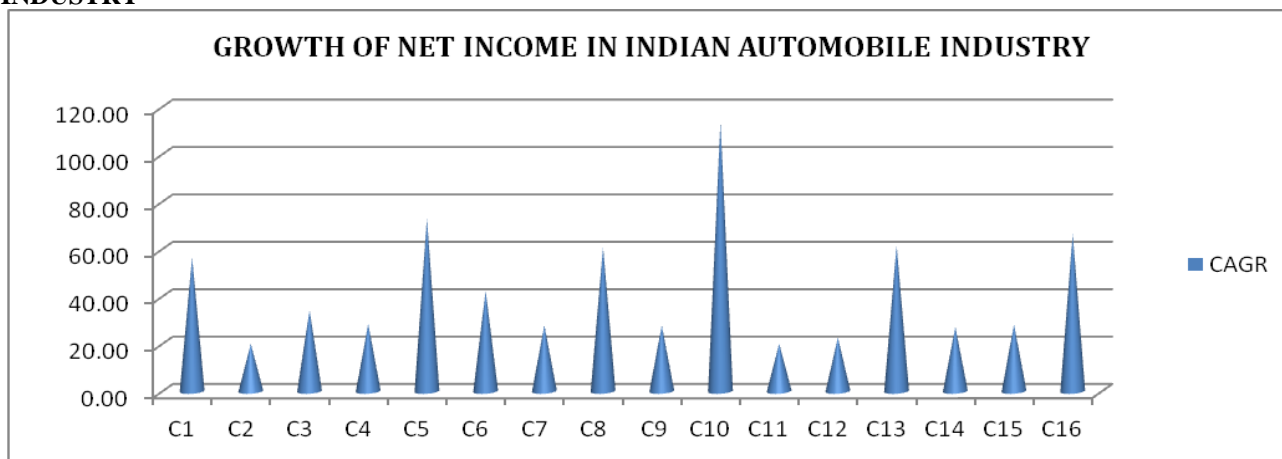
**CHART: 1. COMPOUND ANNUAL GROWTH RATE OF SALES IN INDIAN AUTOMOBILE INDUSTRY**



#### COMPOUND ANNUAL GROWTH RATE OF NET INCOME IN INDIAN AUTOMOBILE INDUSTRY

The Table.1 describes the value of Net Income from 1998 to 2012 and their compound annual growth rate and estimated trend of Net Income, for the year 2015 for the Indian Automobile Industry. From the table 4.55, the compound annual growth rate shows that, the Net Income was highest in C10 at 113.66 per cent and followed by C13 and C16 at 72.96 per cent and 66.37 per cent. It was lowest in C2 was at 19.92 per cent. The following chart shows the CAGR of Net Income in Indian Automobile Industry.

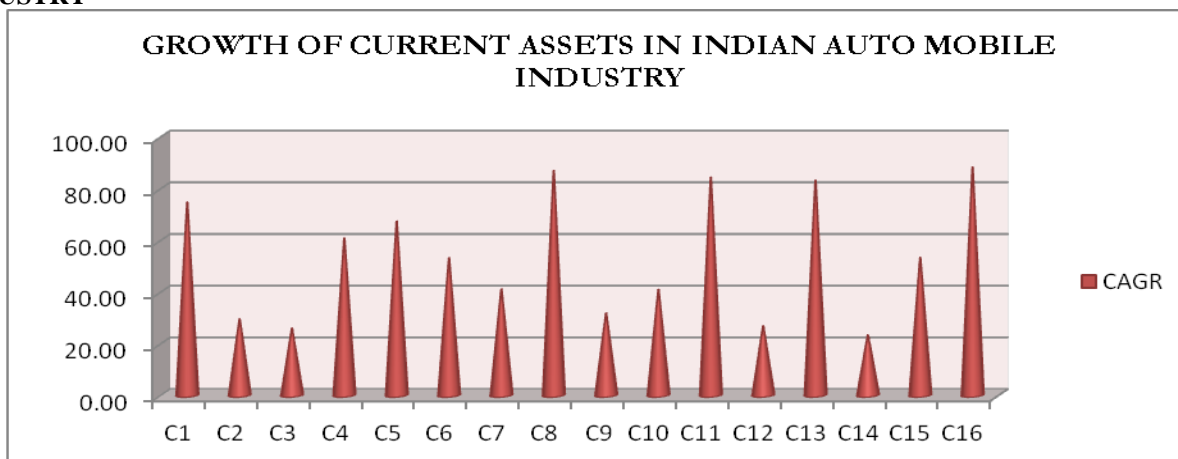
**CHART: 2. COMPOUND ANNUAL GROWTH RATE OF NET INCOME IN INDIAN AUTOMOBILE INDUSTRY**



**COMPOUND ANNUAL GROWTH RATE OF CURRENT ASSETS IN INDIAN AUTOMOBILE INDUSTRY**

The Table.1 describes the value of Current Assets from 1998 to 2012 and their compound annual growth rate and estimated Current Asset’s trend for the year 2015 for the Indian Automobile Industry. From the table 4.56, the compound annual growth rate shows that, the Current Assets was highest in C16 at 88.22 per cent and followed by C8 and C11 at 86.80 per cent and 84.24 per cent. It was lowest in C14 was at 23.25 per cent. The following chart shows the CAGR of Current Assets in Indian Automobile Industry.

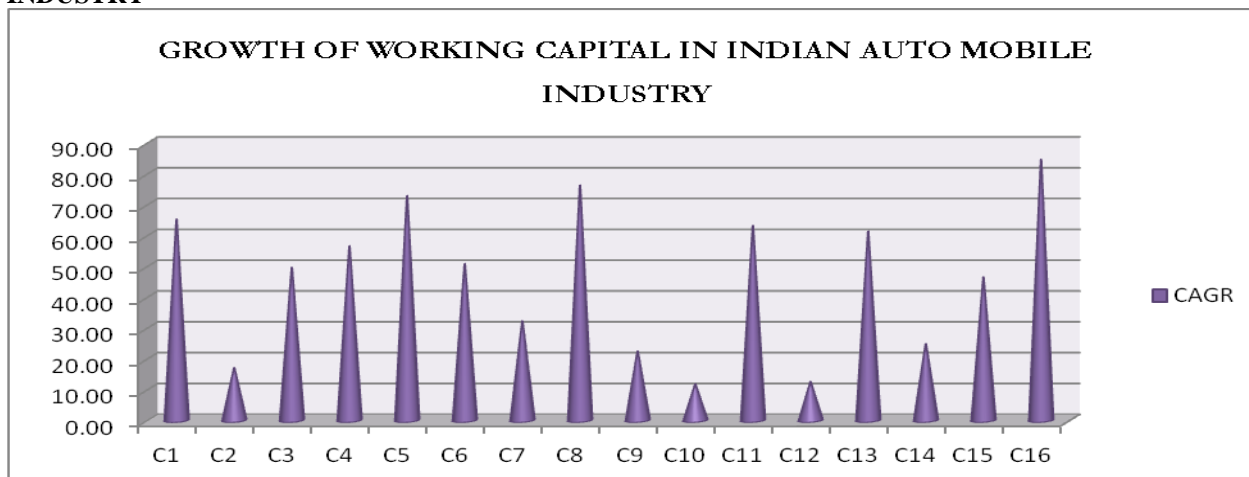
**CHART: 3 COMPOUND ANNUAL GROWTH RATE OF CURRENT ASSETS IN INDIAN AUTOMOBILE INDUSTRY**



**COMPOUND ANNUAL GROWTH RATE AND TREND ANALYSIS OF WORKING CAPITAL IN INDIAN AUTOMOBILE INDUSTRY**

The Table.1 describes the value of Working Capital from 1998 to 2012 and their compound annual growth rate and estimated Working Capital trend for the year 2015 for the Indian Automobile Industry. From the above table 4.57, the compound annual growth rate shows that, the Working Capital was highest in C16 at 84.63 per cent and followed by C8 and C5 at 76.25 per cent and 72.80 per cent. It was lowest in C10 was at 11.72 per cent. The following chart shows the CAGR of Working Capital in Indian Automobile Industry.

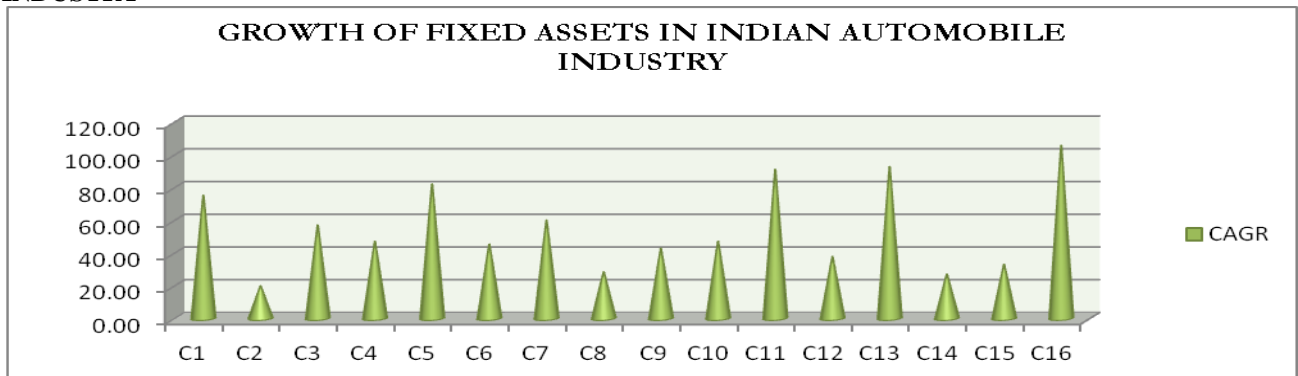
**CHART: 4. COMPOUND ANNUAL GROWTH RATE OF WORKING CAPITAL IN INDIAN AUTOMOBILE INDUSTRY**



**COMPOUND ANNUAL GROWTH RATE OF FIXED ASSETS IN INDIAN AUTOMOBILE INDUSTRY**

The Table.1 describes the value of Fixed Assets from 1998 to 2012 and their compound annual growth rate and estimated Fixed Assets trend for the year 2015 for the Indian Automobile Industry. From the table 4.58, the compound annual growth rate shows that, the Fixed Assets was highest in C16 at 105.60 per cent and followed by C13 and C11 at 92.67 per cent and 90.94 per cent. It was lowest in C2 was at 19.85 per cent. The following chart shows the CAGR of Fixed Assets in Indian Automobile Industry.

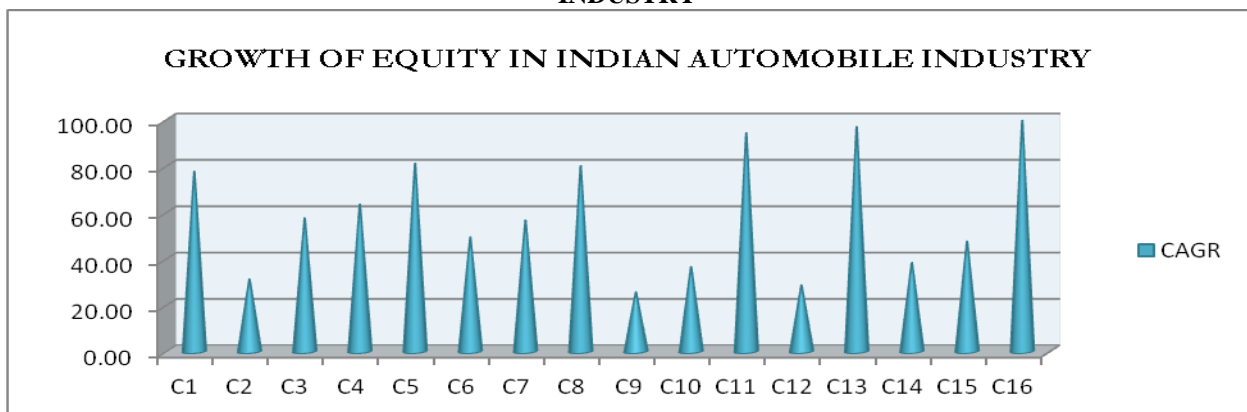
**CHART: 5. COMPOUND ANNUAL GROWTH RATE OF FIXED ASSETS IN INDIAN AUTOMOBILE INDUSTRY**



**COMPOUND ANNUAL GROWTH RATE OF EQUITY IN INDIAN AUTOMOBILE INDUSTRY**

The Table.1 describes the value of Equity from 1998 to 2012 and their compound annual growth rate and estimated Equity trend for the year 2015 for the Indian Automobile Industry. From the table 4.59, the compound annual growth rate shows that, the Equity was highest in C16 at 99.55 per cent and followed by C13 and C11 at 96.77 per cent and 94.17 per cent. It was lowest in C9 was at 25.54 per cent. The following chart shows the CAGR of Equity in Indian Automobile Industry.

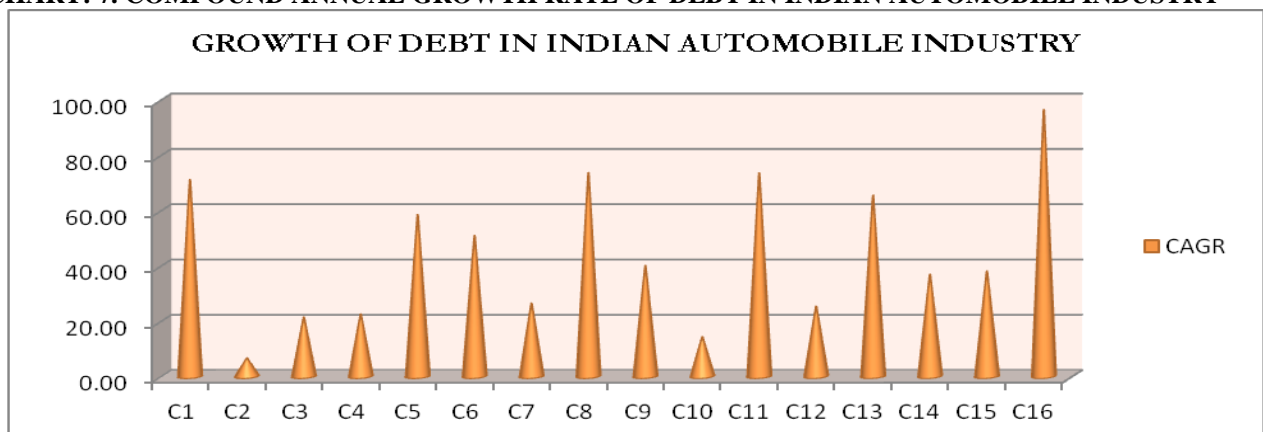
**CHART: 6. COMPOUND ANNUAL GROWTH RATE OF EQUITY IN INDIAN AUTOMOBILE INDUSTRY**



**COMPOUND ANNUAL GROWTH RATE AND TREND ANALYSIS OF DEBT IN INDIAN AUTOMOBILE INDUSTRY**

The Table.1 describes the value of Debt from 1998 to 2012 and their compound annual growth rate and estimated Debt trend for the year 2015 for the Indian Automobile Industry. From the table 4.60, the compound annual growth rate shows that, the Debt was highest in C16 at 96.34 per cent and followed by C8 and C11 at 73.66 per cent and 73.53 per cent respectively. It was lowest in C2 was at 6.55 per cent. The following chart shows the CAGR of Debt in Indian Automobile Industry.

**CHART: 7. COMPOUND ANNUAL GROWTH RATE OF DEBT IN INDIAN AUTOMOBILE INDUSTRY**



## Conclusion

Compound Annual Growth Rate of Sales in Companies namely Ashok Leyland Ltd, Hero Motocorp Ltd, Hyundai Motors Ltd, Maharashtra Scooters Ltd, Maruthi Suzuki Ltd, and Tata Motors Ltd were highly increased. Automobile sector has huge demand in our country. This demand also attracts the giant automobile suppliers throughout the world to come and invest in the Indian automotive industry.

Due to the contribution of many different factors like sales incentives, introduction of new models as well as variants coupled with easy availability of low cost finance with comfortable repayment options, demand and sales of automobiles are rising continuously. Today, this sector has emerged as a sunrise sector. However, the overcapacity problem is haunting many of the players as demand may not go up significantly. Hence, many players are looking for an external market for Indian automobiles.

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