

## CHAPTER FIVE

### 5.0

### DISCUSSION

Investors are under burden to select from the many investment opportunities, the ones that will yield best returns and expose them to least risk. A potential investor can almost invest in everything he could lay his hands on; but his major consideration will be the possibility of recouping his investment at a gain. A lot of issues will be analyzed to arrive at the decision to invest in a particular portfolio; among them is getting credible information about the companies presenting themselves as investment windows (opportunities). There are different sources of getting credible information about a company; they include the company itself (annual reports, management bulletins, conferences, etc.), external bodies e.g., stock Exchanges, regulatory agencies, etc. Herein lies the importance of financial analysis and stock performance analysis to an investor.

Investors could get the required information about a company by carrying out financial statements analysis of the company from its annual reports over a period of time and stock performance analysis from the happenings in the stock market about the performance of a particular company. As the investor does this, he will almost all the time come up with informed decision before any investment.

Finance is known to be the nerve-center of any organization, especially, business organizations. The performance of a company is determined when there is a critical analysis of its financial statements. The most important financial statements for this purpose are 'Balance Sheet' and 'Profit and Loss Accounts' (otherwise known as Income Statement). Balance Sheet gives financial position of a company, while Profit and Loss Account tells of operating results of a company. These statements need to be analyzed to be abreast of the efficiency of management, liquidity status of the company, profitability potentiality of the firm, financial strength and weakness of the firm. Undoubtedly, these are the detail information an investor requires before any investment decision is finally made.

## 5.1 Financial Appraisal of the Indian and Japanese Automobile Sector

The automotive sector contributes to several important dimensions of nation's building: generating government revenue, creating economic development, encouraging manpower development, and fostering R/D and innovation.

**The Indian automobile sector** is one of the largest sectors in the country, and important for the rapid development of India. The automobile sector has made tremendous contributions to the Indian economy in terms of attracting Foreign Direct Investment (FDI), reduction in unemployment, contributes 7% to Gross Domestic Product (GDP) SIAM, 2012(119) and in other growth indicators of the economy. These success stories of the Indian auto sector is more prevalent after the de-licensing and deliberate liberal policy of the government of India. The sector-wise production figure of the Indian automobile sector shows growth that has been sustained over the years.

**Table 5.1 Category-wise production of automobiles in India (No. of Vehicles).**

Year	Passenger	Commercial	Three wheeler	Two-wheeler	TOTAL
2005	1,209,876	353,703	374,445	6,529,829	8,467,863
2006	1,309,300	391,083	434,423	7,608,697	9,743,503
2007	1,545,223	519,982	556,126	8,466,666	11,087,997
2008	1,777,583	549,006	500,660	8,026,681	10,853,930
2009	1,838,697	417,126	501,030	8,418,626	11,175,479
2010	2,357,411	567,556	619,194	512,903	14,057,064
2011	2,982,772	760,735	799,553	13,349,349	17,892,409
2012	3,123,528	911,574	877,711	15,453,619	20,366,432
2013	3,233,561	831,744	839,742	15,721,180	20,626,227
2014	3,072,651	698,864	830,120	16,879,891	21,481,626
2015					23,960,940

Source: Society of Indian Automobile Manufacturers (SIAM [www.siamindia.com/statistics.aspx](http://www.siamindia.com/statistics.aspx) (2015 figure))

The growth in production output in all the categories of automobiles in India is an evidence that the industry is contributing meaningfully to the development of the Indian economy. This outlook has impacted positively on the different growth indicators of the economy, especially in driving upwards GDP, influx of FDI, Employment generation. These indicators of sustainable growth has the tendency to spur growth in other areas such as innovation, technology transfer, increase in income, enhancement in export trade, etc.

There is also growth in sales and exports as indicated on table 5.2 below.

**Table 5.2 Sales of automobiles in India- Category-wise distribution.**

Year	Passenger	Commercial	Three-wheelers	Two-wheelers	Total
2005	1,061,572	318,430	307,862	6,209,765	7,897,629
2006	1,143,076	351,041	359,920	7,052,391	8,906,428
2007	1,379,979	467,765	403,910	7,872,334	10,123,988
2008	1,549,882	490,494	364,781	7,249,278	9,654,435
2009	1,551,880	384,122	349,719	7,437,670	9,723,391
2010	1,951,333	532,721	440,392	9,370,951	12,295,397
2011	2,501,542	684,905	526,024	11,768,910	15,481,381
2012	2,618,072	809,532	513,251	13,435,769	17,376,624
2013	2,686,429	793,150	538,291	13,797,748	17,815,618
2014	2,503,685	632,738	479,634	14,805,481	18,421,538

Source: Society of Indian Automobile Manufacturers (SIAM [www.siamindia.com/statistics.aspx](http://www.siamindia.com/statistics.aspx) (2015 figure)

Automobile sales in India show growth from FY2004/2005 TO FY2012/2013, but declined in FY2013/2014. The impact of this decline is erased by a marginal increase in sales of the three-wheeler category. Sales growth is projected to be on the increase in the next five years because of favourable conditions in the country in terms of increase in the number of the population coming within the middle-income group.

Production has been increasing after a sluggish start, and up-to the 1990s. Production has been doing so well that, three auto manufacturing companies in India have consistently been recorded among the fifty highest vehicles producers in the world; they are: Tata, Mahindra & Mahindra, and Ashok Leyland. Table below indicates their position on world auto production list as released by the International Organization of Motor Vehicle Manufacturers (OICA).

**Table 5.3 Production statistics of Indian Auto Manufacturers among the first fifty in the world.**

Year	Suzuki-Maruti		Tata Motors		Mahindra & Mahindra		Ashok Leyland	
	Prod.	Pot.	Prod.	Pot.	Prod.	Pot	Prod	pot
2005	2071707	11	419445	25	125994	32	-	-
2006	-	-	561761	21	136194	39	-	-
2007	NA	NA	588158	21	168556	36	-	-
2008	NA	NA	798265	19	162816	35	71485	49
2009	NA	NA	672045	19	223065	32	47694	50
2010	NA	NA	1011343	18	292149	32	-	-
2011	NA	NA	1197192	16	499808	28	96170	44
2012	NA	NA	1241239	16	606418	26	117738	39
2013	NA	NA	1062654	19	584534	23	91445	41
2014	NA	NA	945113	20	552912	26	96556	41

Source: OICA production statistics 2015.

Key= prod= production volume; pot= position in the world.

Indian automobile manufacturers have come of age and are favorably competing with leading automobile manufacturers all over the globe. And by volume of the individual companies, they have improved a lot. Tata Motors pattern of growth in motor vehicle production is commendable. In 2005, it was 4,19,445, went up in 2006 to 5,61,761, to 5,88,158 in 2007, and went on to 9,45,113 in 2014.

Mahindra & Mahindra also witnessed increase in production over the same period, rising from 1,25,994 units in 2005 to 1,36,194 units in 2006, further to 1,68,556 in 2007. It finally went up to 5,52,912 units in 2014. Indeed, India is one of the leading automobile manufacturers in the world.

Generally sales have also been on the rise, especially the domestic sales. It rose in 2011 of 1,54,81,381 units to 1,73,61,769 in 2012, to 1,77,93,701 in 2013, to 1,84,23,223 in 2014, and 1,97,24,371 units in 2015.

These two indicators (production and sales) are very important to every manufacturer, because they will to a large extent, determine liquidity, profitability and financial soundness of the manufacturing firm. They are certainly of immense interest to the investor.

**In Japan, the automobile sector** is a major driver of the economy. The sector involves an extremely wide range of industrial and related activities, from materials supply and vehicle production to sales, servicing, freight shipping and other auto-centered operations JAMA, 2015(120). It is a unique sector, it thrives on ‘perfectionist theory’, and safety first, is the rule in Japan automobile sector SGE-JAMA, 2015(121). The assessment of the performance of the sector over the years, could be done by considering some key indicators such as production growth, sales growth, Export growth, contribution to GDP, Employment generation, FDI, etc.

In terms of employment generation, the auto industry at present, contributes 5.29 million people, 8.3% of total employment of 63.76 million people-workforce JAMA, 2015(120).

**Table 5.4 Production of automobiles in Japan: Sector-wise**

Year	Passenger	trucks	Buses	Total
2005	9,016,735	1,706,611	76,313	10,799,659
2006	9,754,903	1,640,693	88,637	11,484,233
2007	9,944,637	1,538,020	113,670	11,596,327
2008	9,928,143	1,508,399	139,102	11,575,644
2009	6,862,161	985,101	86,795	7,934,057
2010	8,310,362	1,209,179	109,334	9,628,875
2011	7,158,525	1,135,996	104,109	8,398,630
2012	8,554,503	1,266,354	122,220	9,943,077
2013	8,189,323	1,308,177	132,681	9,630,181
2014	8,277,070	1,357,761	139,834	9,774,665
2015	7,830,722	1,309,749	137,850	9,278,321

Source: Japan Automobile Manufacturers Association. Inc. [www.jama.org](http://www.jama.org). 2015.

Automobile production increased in 2006 to 11,484,233 vehicles from 10,799,659 units in 2005, an increase of about 6.34%. It increased by 0.98% in 2007; but a decline in 2008 to 11,575,644, a decline of 0.18%. The decrease in production continued in 2009 to 7,934,057 units of vehicles. The industry improved its production in 2010 to 9,628,875 vehicles. The shortfall in production in 2011 is as a result of the impact of the earthquake that devastated Japan. Production finally settled in 2015 at 9,278,321 vehicles, which is a response to the increase to the used vehicles trade policy in the country. On the global stage, Japan auto manufacturers rank very high as it is revealed on table 5.5

**Table 5.5 Global production statistics of auto companies in Japan under study and their position in the world.**

Year	Toyota	Nissan	Honda	Suzuki	Mazda
2005	7,338,314(2)	3,494,274(6)	3,436,164(7)	-	1,287,561(
2006	8,036,010(2)	3,223,372(7)	3,669,514(5)	2,297,277(12)	1,396,412
2007	8,534,690(2)	3,431,398(7)	3,911,814(5)	2,596,316(11)	1,286,730
2008	9,237,780(1)	3,395,065(6)	3,912,700(5)	2,623,567(9)	1,349,274
2009	7,234,439(1)	2,744,562(8)	3,012,637(7)	2,387,537(10)	984,520
2010	8,557,351(1)	3,982,162(6)	3,643,057(7)	2,892,945(9)	1,307,540
2011	8,050,181(1)	4,631,673(6)	2,909,010(8)	2,725,899(10)	1,165,591
2012	10,104,424(1)	4,889,379(6)	4,110,857(7)	2,893,602(9)	1,189,283
2013	10,324,495(1)	4,950,924(6)	4,298,390(6)	2,842,133(9)	1,264,173
2014	10,475,346(1)	5,097,772(6)	4,513,769(8)	3,016,710(9)	1,328,426
2015	NA	NA	NA	NA	NA

Source: OICA Production Statistics

Table 5.5 indicates that Japan is a leading automobile production nation in the world, considering the position of its automobile companies in global ranking. Toyota, one of the Japanese automobile companies was the second highest producer of automobile in 2005, 2006 and 2007; then became the highest producer from 2008 to 2014.

**Table 5.6 Sales of automobiles in Japan: Sector-wise.**

Year	Passengers	Trucks	Buses	TOTAL
2005	4,748,409	1,085,904	17,754	5,852,067
2006	4,641,732	1,080,174	17,600	5,739,506
2007	4,400,299	937,732	15,617	5,353,648
2008	4,227,643	839,259	15,333	5,082,235
2009	3,923,741	672,943	12,572	4,609,246
2010	4,212,267	731,094	12,775	4,956,136
2011	3,524,788	674,780	10,651	4,210,219
2012	4,572,332	785,450	11,938	5,369,720
2013	4,562,282	801,975	11,256	5,375,513
2014	4,699,591	851,314	11,983	5,562,888
2015	4,215,889	817,234	13,387	5,046,510

Source: Japan Automobile Manufacturers Association. Inc. [www.jama.org](http://www.jama.org). 2015.

Trucks and Buses = Commercial Vehicles.

Sales of automobiles in Japan has been on the decrease, especially in relation to other countries (export), this is in direct reaction to an aggressive policy of overseas establishment of Japanese automobile manufacturing plants. A huge revenue of Japanese automobile manufacturers are from these overseas outlets. The same reason has reduced Japanese auto exports over the years.



**Table 5.7 Exports of automobiles in Japan: Sector-wise**

Year	Passengers	Trucks	Buses	Total
2005	4,363,168	611,956	77,937	5,053,061
2006	5,295,497	577,974	93,201	5,966,672
2007	5,811,959	616,450	121,531	6,549,940
2008	5,915,429	658,218	153,444	6,727,091
2009	3,208,639	315,507	92,022	3,616,168
2010	4,275,366	450,312	115,782	4,841,460
2011	3,929,904	423,767	110,742	4,464,413
2012	4,198,494	476,919	128,178	4,803,591
2013	4,065,519	472,179	136,935	4,674,633
2014	3,835,595	488,473	141,556	4,465,624
2015	3,970,003	466,776	141,299	4,578,078

Source: Japan Automobile Manufacturers Association. Inc. [www.jama.org](http://www.jama.org). 2015.

## 5.2. ANALYSIS OF DATA

Most data for the research were generated in chapter four, and this section of chapter five is devoted to analyzing those data. The essence of the data are made clear in this chapter. These data are analyzed in terms of ratios and performances of stock at the stock markets. The different ratios calculated and stock performances are analyzed and interpreted in subsequent sub-sections of this chapter. Thereafter, comparative performance of Indian automobile companies and Japanese automobile companies is made.

### **5.2.1 Leverage (Long-term Solvency) Analysis.**

Leverage applies to a firm that has debt in its capital structure and in financing its assets. In most cases, companies use a combination of debt and owners' equity to finance their operations. Any financial analysis that considers how much of debt form part of the capital of a company, belongs to the family of leverage ratio. Leverage ratio should not be too high, for that will indicate that a company has much debt, far above its ability to meet the obligation to settle when the time arises. It is dangerous to have high leverage ratio, because risk-averse investors will distance themselves from such companies; moreover, it may lead to downgrade of a company by rating agencies and may be a reason for refusing such companies credit facilities. Though the required level of leverage ratio for different industries are not the same, companies with high level capital requirement may need to borrow more, thereby increasing the leverage ratios. However, high leverage ratio may not be bad in all circumstances, especially if it is able to generate higher rate of return than the interest rate on debt, it will at this point improve profitability.

#### **5.2.1(a). Debt-to Equity ratio**

Among the several ratios under leverage, one of three most important ratios in the automobile se4ctor is the debt-to-equity ratio as stated by Maverick, 2015 (117). Generally, higher the ratio, higher is the risk to investors and vice versa. Researchers use debt-equity to illustrate the solvency position of the companies under investigation. Fig 5.1 depicts the debt equity of the automobile manufacturers from India under investigation in the research. It shows that generally, the debt-to-equity ratios of the companies are moderate, because they are all within an acceptable range of 1:1. However, Tata Motors has the highest ratio of 1.35 in 2015, and Eicher has the lowest of 0.001 in 2013 and 2014. In 2005, Ashok Leyland has the highest of 0.77, this is followed by Tata Motors, Eicher, M & M and lastly by Maruti Suzuki with 0.60; 0.53; 0.53; and 0.07 respectively. The position is different in 2006 as Tata has the highest of 0.53, followed by Ashok with 0.50 Eicher with 0.39, M & M with 0.31 and Maruti Suzuki with 0.01. Again, the figure of Tata was the highest in 2009 with 1.06; this is followed by Ashok Leyland with 0.93, M & M, with 0.77, Maruti with 0.07 and Eicher with 0.03. but in 2013 and 2014, Ashok Leyland records the highest figures with 1.11 and 1.19 respectively; while the other companies followed thus; Tata 0.75 and 0.76 for 2013 and 2014 respectively; M & M with 0.22 and 0.22 respectively; Maruti Suzuki with 0.07 and 0.08 each year; and Eicher with 0.001 and 0.001 each year. 2015 saw Tata having the highest D/E ratio

with 1.35 followed by Ashok with 0.63, M & M with 0.14 while Maruti Suzuki and Eicher has 0.01 apiece.

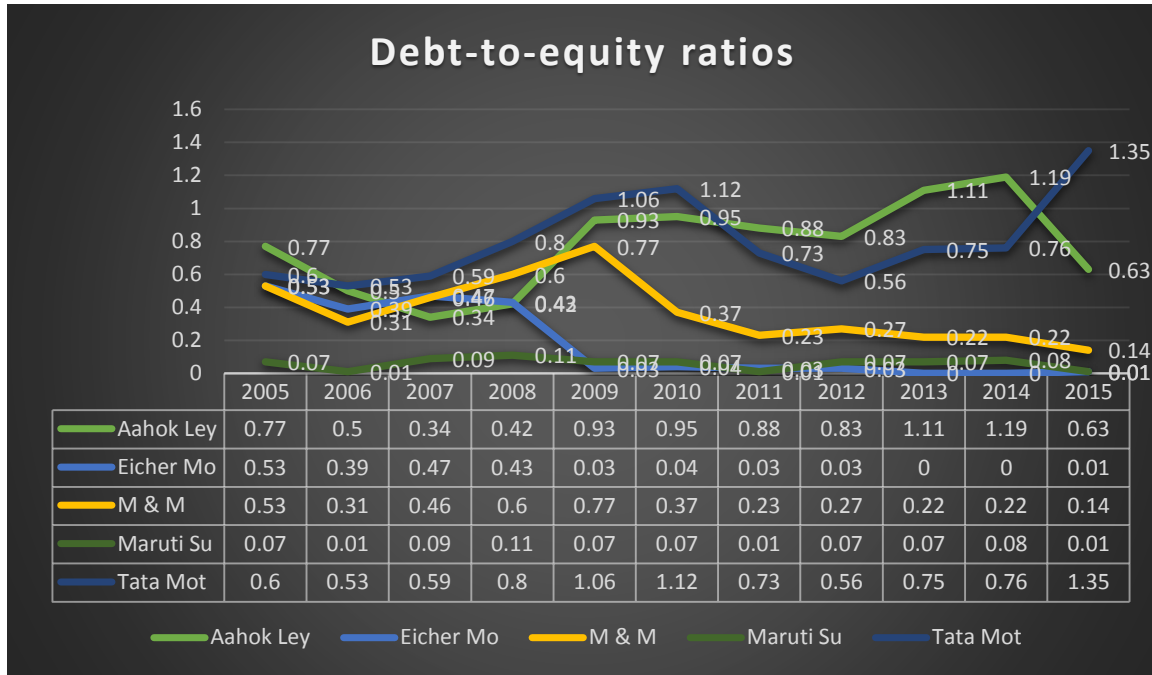


Fig.5.1 Debt-to-equity ratios of Ashok Leyland, Eicher Motors, M & M, Maruti Suzuki, and Tata Motor.

On the average, Tata Motors has the highest D/E ratio of 0.80, followed by Ashok Leyland with 0.78, M & M with 0.37, and Eicher with 0.18 and Maruti Suzuki with 0.06.

**Table 5.8 Average Debt-Equity ratio of Indian auto companies from 2004-2005 to 2014-2015**

Company	Average D/E ratio
Ashok Leyland	0.78
Eicher	0.18
M & M	0.37
Maruti-Suzuki	0.06
Tata Motors	0.80

Source: Calculated from Table 4.1

This shows that Maruti has the best debt-to-equity ratio of all the Indian companies under study in relation to solvency. It is also observed that there is no steady rise or decrease in the debt-equity ratios of all the companies, the ratio has been unsteady over the years. The investors of Tata Motors are exposed to more risk when compared to the others on the average and the margin of safety is more comfortable for the investors of Maruti Suzuki.

On the other hand, the Japanese automobile companies present a different profile in respect to their debt-to-equity ratios. They employ more outsider's fund to finance their businesses. This is depicted in fig.5.2 below. It reveals that Nissan employs the highest debt in its capital structure in FY2004/2005 of 2.63 times, and this is followed by Toyota with 2.55 times, Suzuki with 2.05 times, Honda with 1.83 times, and the lowest is of Mazda with 0.47 times. This low use of debt by Mazda in its capital structure is further reduced after the global crisis of 2008, where it is seen to employ only 0.01, 0.03 and even 0.0 ratio in different years. In subsequent years, Nissan continues to adopt high debt-to-equity ratio, especially from FY2005/2006 to the end of the study period FY2014/2015; as follows; 3.46 times, 3.4 times, 3.9 times, 3.77 times, 3.65 times, 3.52 times, 3.43 times, 3.39 times, and 3.52 times respectively. Toyota is next on the high debt-equity ratio with 2.75 times, 2.71 times, 2.89 times, 2.91 times, 2.92 times 2.86 times, and 2.84 times, for 2005/2006, 2006/2007, FY2007/2008, FY2008/2009, 2009/2010, FY2010/2011, FY2011/2012, 2012/2013, FY2013/2014, FY2014/2015, respectively. An indication that Nissan has the highest risk factor in terms of solvency among the Japanese auto companies.

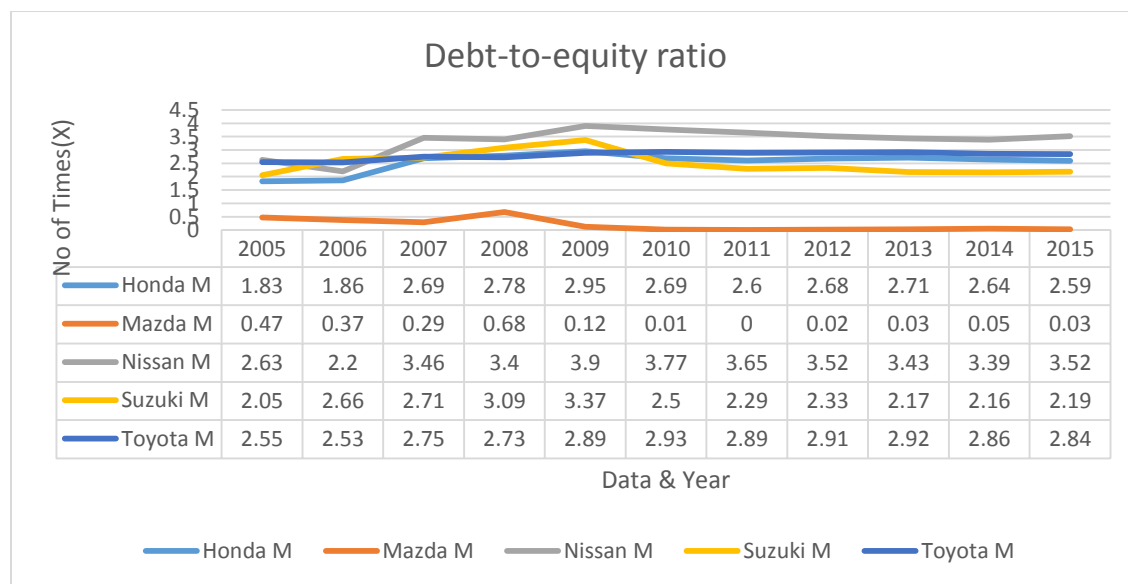


Fig. 5.2 Debt-to-equity ratios of Honda, Mazda, Nissan, Suzuki, and Toyota.

The stock of Toyota is also seen to be riskier when compared to Suzuki having D/E of 2.71 times in FY2006/2007, 2.5 times in FY2009/2010, 2.29 times in 2010/2011, 2.33 times in 2011/2012, 2.17 times in 2012/2013, 2.16 times in 2013/2014, 2.19 times in 2014/2015; Honda and Mazda. In fact, Mazda is the company that is safest to invest in among the Japanese companies when looked at from the point of view of risk on the part of investors. This position of Mazda may not be deliberate as they are confronted with series of challenges ranging from products recall, reduction in R/D expenditure, procurement of materials difficulties, to low income. And cash flow is not stable and as such, the company decides to play safe by curtailing on debt financing. On average, Honda has 2.52, Mazda 0.14, Nissan 3.35, Suzuki 2.18, and Toyota 2.64; therefore, Nissan has the highest debt-to-equity.

#### **5.2.1(b). Total Debt-Assets ratio**

This ratio reveals the component of total assets of a firm financed by debt. It is part of the test of solvency of a firm. A firm's total debt is a combination of its short-term and long-term debts. As was the case of debt-equity ratio, a low debt-assets ratio is usually a good sign of solvency and attractive margin of safety for investors.

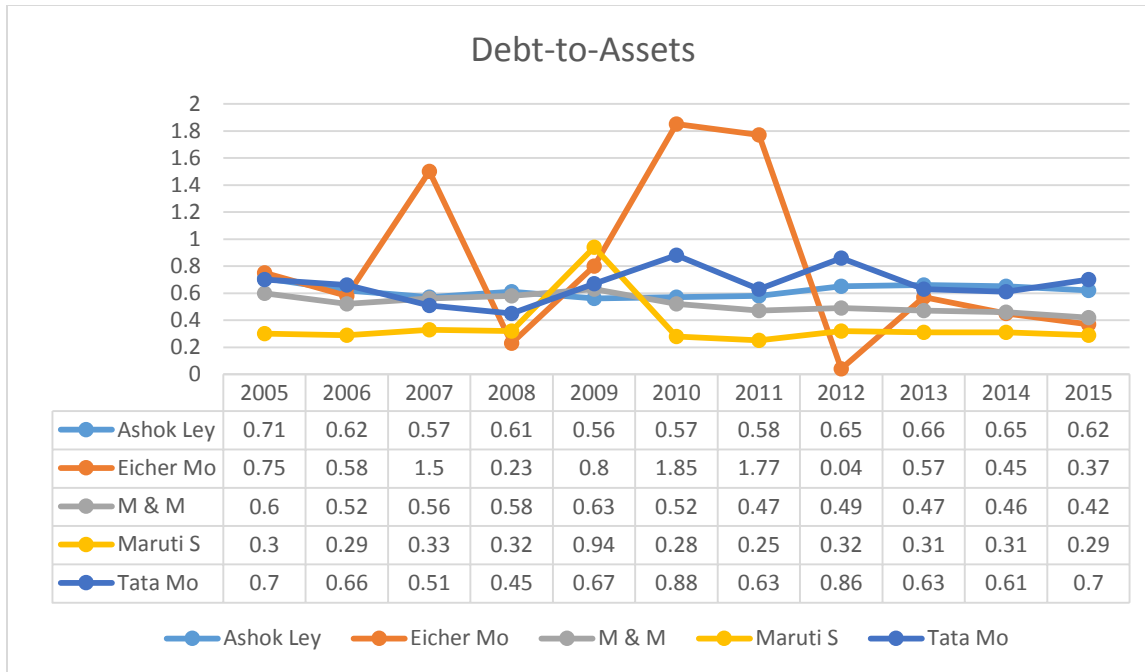


Fig. 5.3 Debt-to-Assets ratios of Ashok Leyland, Eicher, M & M, Maruti Suzuki, Tata.

The total debt-assets ratio as a solvency ratio of Indian companies in Fig.5.3 shows that Maruti-Suzuki is the least exposed to risk when compared to the other companies. It is consistently the lowest for the entire period, except in 2008, 2009 and 2012 when it records 0.32, 0.94, and 0.32 higher only to Eicher in 2008 with 0.23; it is the highest in 2009 as the others record 0.80(Ashok), 0.63(M&M), 0.67(0.67), and 0.56(Tata). And in 2012, it was the highest only to Eicher (0.04). The D/A ratio of Eicher is the highest in 2005(0.75), 2007(1.50), 2010(1.85), and in 2011(1.77).

On the average for the period of the study, Eicher has the highest D/A of 0.81 as against 0.62(Ashok), 0.52(M&M), 0.36(Maruti-Suzuki), and 0.66(Tata).

The D/A ratio of Maruti-Suzuki is the lowest at 0.36 on the average, signifying an advantageous margin of safety for investors, while Eicher has an opposite outlook.

**Table 5.9 Average Debt-to-Assets Ratios of Indian companies**

Company	Average ratio(X)
Ashok Leyland	0.62
Eicher Motors	0.81
M & M	0.52
Maruti-Suzuki	0.36
Tata Motors	0.66

Source: Table 4.1

The companies record moderately high D/A ratio in 2009 and 2010 to cushion the impact of the global recession of 2007-2008. They resorted to more debts to finance their assets, but still low when considered from the point of view of nature of the industry that requires heavy investment on R/D and other innovations.

Meanwhile, the debt-to-assets of the Japanese companies is depicted in figure 5.4,

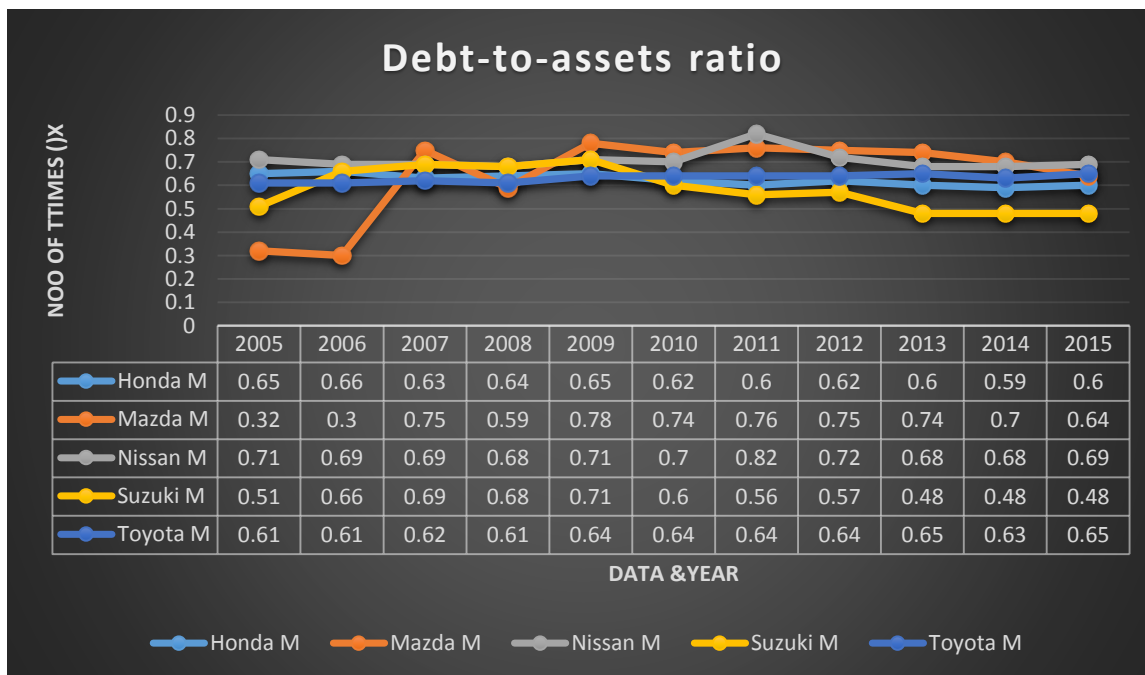


Fig.5.4 Debt-to-assets of Honda, Mazda, Nissan, Suzuki, and Toyota.

Nissan employed the highest proportion of debt in financing assets than the other auto companies in Japan with a figure of 0.82 times in 2010/2011. Mazda has a consistent debt-assets ratio of auto companies from Japan, starting from 2007/2008 to 2009/2010; 2011/2012 to 2013/2014. Earlier, the debt-assets of Mazda was the lowest, 0.32 times and 0.30 times in FY2004/2005 and FY2005/2006 respectively. Despite low debt-assets in the early years and the last four years, the other periods witnessed about the same number of times in debt-assets ratio. Mazda may be seen to have employed more debts to finance its assets, but this may be because of reduction in liabilities as a result of use of less debts. Suzuki has more years having the lowest debt –assets ratio. With this in view, we deduce that Suzuki has the best risk associated consideration for investment during those years it has the lowest debt-assets ratio. Honda has a moderate debt-assets ratio throughout the period; the same situation applies to Toyota. Japanese firms tend to believe in the use of moderate debts to finance assets, to expose the company to less risk of being able to pay fixed charges as they fall due on annual basis but large enough to drive innovations.

### **5.2.2 Liquidity Analysis**

Liquidity ratios are a class of financial indicators that determines a company's ability to settle its short term obligations when they become due. A company having poor liquidity position may not be able to negotiate a better credit terms with suppliers and other creditors, and this will worsen its financial position, and may finally lead to liquidation, if not properly managed. The higher the ratios, the larger the margin of safety the company enjoys. The common ratios under liquidity analysis are the Current ratio and the Quick ratio.

#### **5.2.2.(a) Current Ratio**

This ratio is used to assess the short-term soundness and ability of a company to settle its short term obligations. It is a balance sheet ratio since all the components are from the balance sheet. The ratio is calculated by dividing current assets by current liabilities. A high ratio guarantees that current liabilities would be settled as at when due. A low current ratio suggests that the company stands the risk of default in its short term obligations; this may lead to image and credibility issues. Current ratios of the Indian automobile companies are depicted in Figure 5.5 below.

Current ratio (CR) of Maruti-Suzuki is the highest in 2005 with 1.84 times as against the ones of Eicher (1.08), M & M (1.26), Tata (1.07), and Ashok Leyland (1.35). Maruti Suzuki continues to



be on top till 2007 with 1.89 times in 2006 and 1.52 times in 2007. This is compared with the figures of Eicher (0.98 times), M&M (1.31 times), Tata (1.25 times), and Ashok Leyland (1.24 times) in 2006; and in 2007 are Eicher (0.97 times), M&M (1.37 times), Tata (1.10 times), and Ashok Leyland (1.13 times). However, in 2008, Ashok Leyland records the highest CR of 1.21 times when compared with Eicher 0.99 times, M&M's 1.00 times, Maruti-Suzuki's 0.96 times, and Tata's 1.21 times. Maruti-Suzuki came on top again in 2009, having its CR as 1.59 times comparative to Eicher 1.28 times, M&M 0.99 times, Tata 0.54 times, and Ashok Leyland 1.46 times. Maruti-Suzuki came on top again in 2009, having its CR as 1.59 times comparative to Eicher 1.28 times, M&M 0.99 times, Tata 0.54 times, and Ashok Leyland 1.46 times. The highest CR of the entire period is seen in 2011 under Eicher with 2.73 times. Maruti Suzuki also had a high CR in 2011 of 2.39 times. Fig.5.5 shows this leadership position of Maruti Suzuki and sometimes by Eicher by the movements of the yellow and orange colored lines.

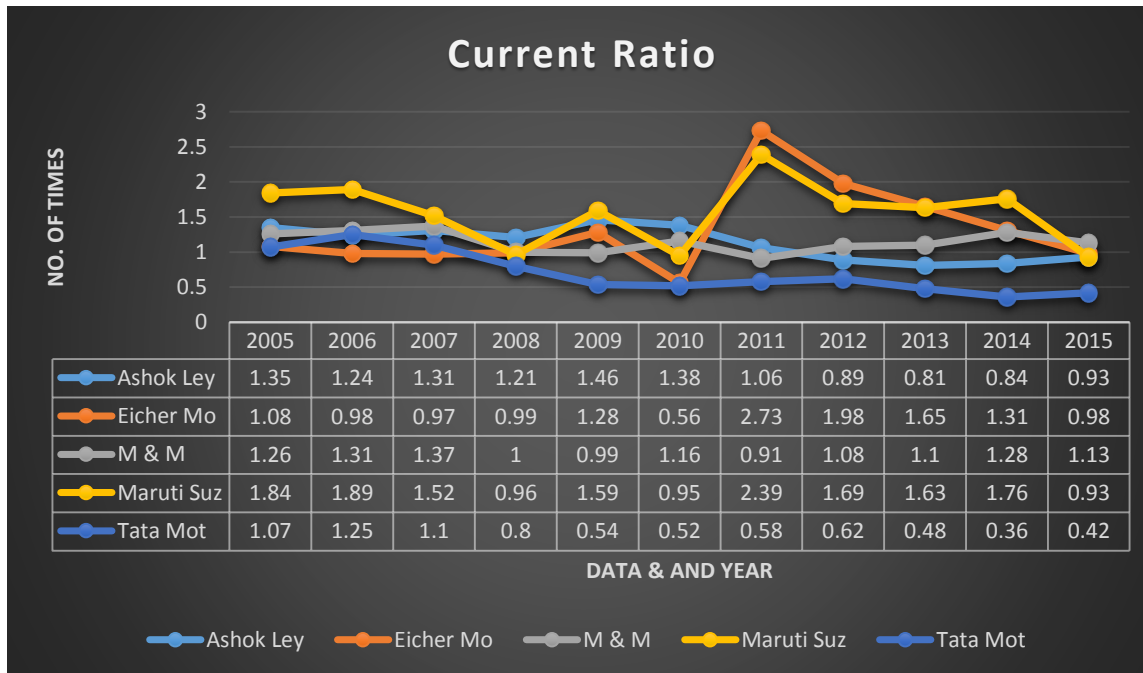


Fig.5.5 Current ratios of Ashok Leyland, Eicher Motors, M & M, Maruti Suzuki, and Tata Motors.

On the average, Maruti-Suzuki has the highest CR of 1.56 times, which still falls below the acceptable norm of 2.0. the other companies' average CR are Ashok Leyland 1.13 times, Eicher 1.32 times, M&M 1.14 times, and Tata 0.70 times. Invariably, Maruti Suzuki has the best liquidity status among the companies, while the least position is occupied by Tata.

Table 5.10 Average Current Ratios of the Indian companies

Company	Average Ratio
Ashok Leyland	1.13 times
Eicher Motors	1.32 times
M & M	1.14 times
Maruti Suzuki	1.56 times
Tata Motors	0.70 times

Source: Table 4.2

Investors are expected to take this situation of the companies in terms of their CR seriously before investing, however, this should be in conjunction to what happens under Quick or Acid ratio.

In the Japan auto sector, the Current ratios of the five companies are low as the highest of the companies is a mere 1.76 of Suzuki in 2013 which is even below the industry acceptable average of 2:1. The CR of Suzuki in FY2004/2005 IS 1.22 times, which declines to 0.81 times in FY2005/2006, increases to 1.04 times in 2006/2007. Another decline in CR is witnessed in 2007/2008 and 2009/2010. Thereafter, it steadily increases up-to the end of the period.

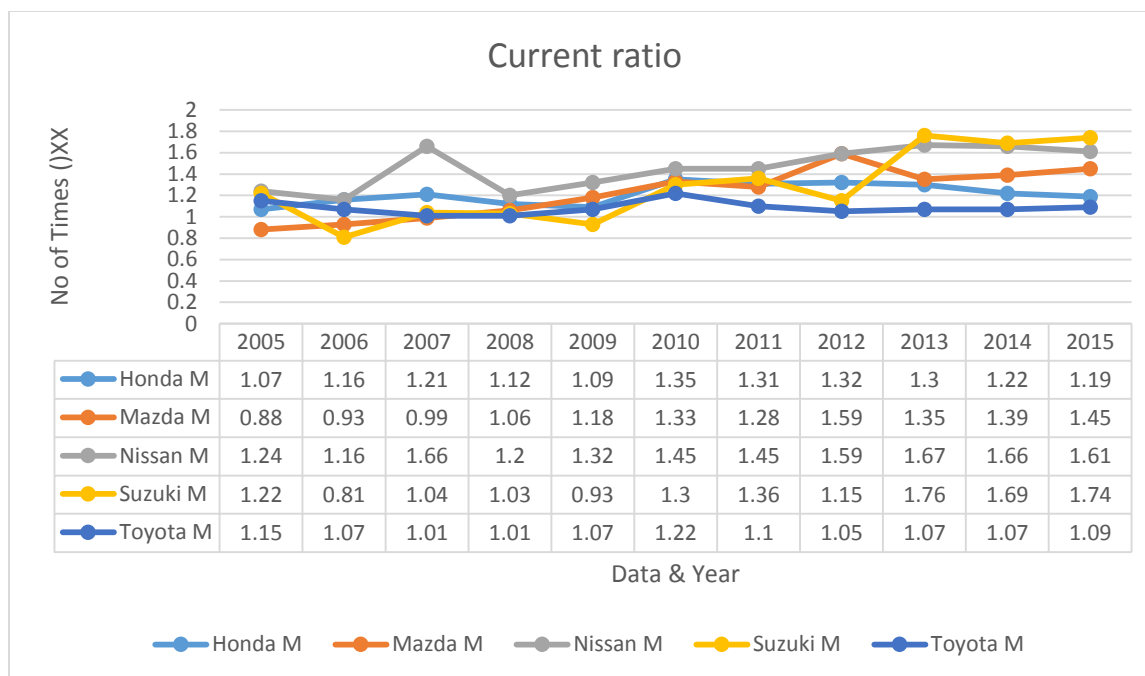


Fig.5.6 Current ratios of Honda, Mazda, Nissan, Suzuki, and Toyota.

Nissan records the highest CR from FY2004/2005 to FY2011/2012, and in FY2013/2014, this is depicted with the direction of the ash color line in Fig.5.6, an indication that it can settle more short-term obligations than the others within the periods specified. Mazda is the least favored in terms of CR as it records less than 1.0 times the first three years with 0.88 times, 0.93 times, and 0.99 times in FY2004/5, FY2005/2006, and FY2006/2007, respectively. This infers that Mazda will find it difficult to pay their short-term debts. It however improved after this period till the end of the period.

Toyota also has low CR, and will find it tough settling short term debts, because its CR did not go above 1.22 times throughout the period.

### 5.2.2 (b) Quick or Acid-test ratio

Quick ratio, QR is another ratio that tests the short-term liquidity of companies. Under the QR, the components of current assets is redefined to exclude inventory. However, current liability remains what it was under current ratio. The logic behind this ratio is that inventory takes the longest time to convert to cash; so it is better to exclude it and see how the outcome could settle short terms liabilities if, perhaps all the inventories are not converted to cash. This is a more conservative ratio in terms of short term test of solvency. The higher the ratio, the better for the image of the company

and safer for investors. Figure 5.7 is used to explain the liquidity position of the Indian companies in relation to their Quick ratios.

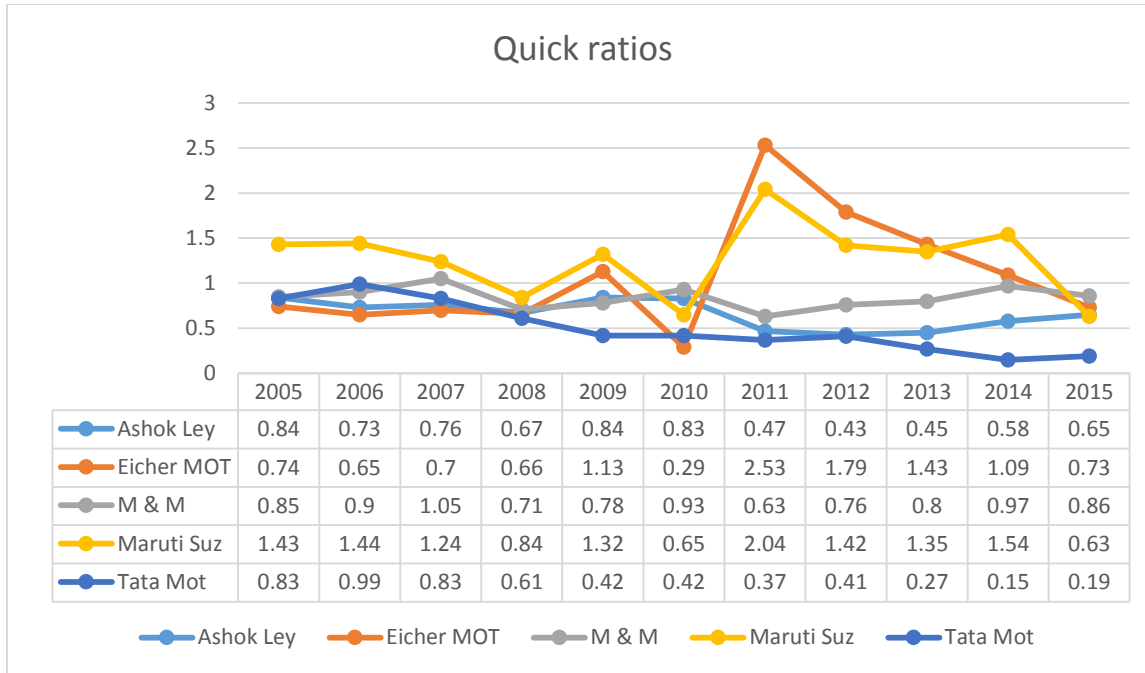


Fig. 5.7 Quick ratios of Ashok Leyland, Eicher, M & M, Maruti Suzuki, and Tata.

From the data given beneath the diagram above, Maruti Suzuki has the highest QR for 2005, 2006, 2007 2008 and 2009 with 1.43 times, 1.44 times, 1.24 times, 0.84 times and 1.32 times. Eicher during the same period records 0.74 times, 0.65 times, 0.70 times, 0.66 times, and 1.13 times; M&M has 0.85 times, 0.90 times. 1.05 times, 0.71 times, and 0.78 times; Tata 0.83 times, 0.99 times, 9.83 times, 0.61 times, and 0.42 times; and Ashok Leyland 0.99 times, 0.73 times, 0.76 times, 0.67 times, and 0.84 times. The highest and best of all period is noticed in 2011 as Eicher records 2.53 times and this is closely followed by Maruti Suzuki with 2.04 times.

As fig.5.7 depicts, the yellow line in proxy for Maruti Suzuki from 2005 to 2009 is on top of the others. And from 2010, the orange line representing Eicher Motor is on top until 2013 when the yellow line came on top again till the end. Tata Motor is the least liquid from the given data and diagram.

The average QR supports the earlier analysis as Maruti Suzuki is the most liquid with the highest of 1.26 times, followed by Eicher with 1.01 times, followed by M&M with 0.84 times, followed by Ashok Leyland with 0.61 times and by Tata by 0.50 times.

**Table 5.11 Average Quick Ratios of the Indian companies**

Company	Average ratio
Ashok Leyland	0.61 times
Eicher Motors	1.01 times
M & M	0.84 times
Maruti Suzuki	1.26 times
Tata Motors	0.50 times

Source: Table 4.2

We therefore note that Maruti Suzuki is most liquid among Indian firms, followed by Eicher.

To continue with the analysis of the QR, we consider the QR status of the Japanese auto companies, displayed with help of Fig.5 8 below. In 2004/2005, Nissan and Suzuki have the highest Quick Ratio of 1.06 apiece, against the ones of Honda, Mazda, and Toyota with 0.84 times, 0.59 times, and 0.99 times respectively, thereby making Mazda the least liquid in 2004/2005 as regards Quick Ratio, while Nissan and Suzuki are jointly the most liquid that year. Then from 2007/208 to 2009/2010 Nissan stands out as having the highest QR of 0.98 times, 1.0 times, 1.13 times, and 1.24 times respectively; 2011/2012 with 1.35 times and 1.44 times in 2013/2014, against the lower QR of the other companies. Suzuki has the highest QR in 2012/2013 with 1.47 times and 2014/2015 of 1.47 times; thereby having the best liquid status in these years. Honda happens to have the lowest overall QR among the Japanese companies. Toyota has a low QR though higher than the ones of Honda and Mazda.

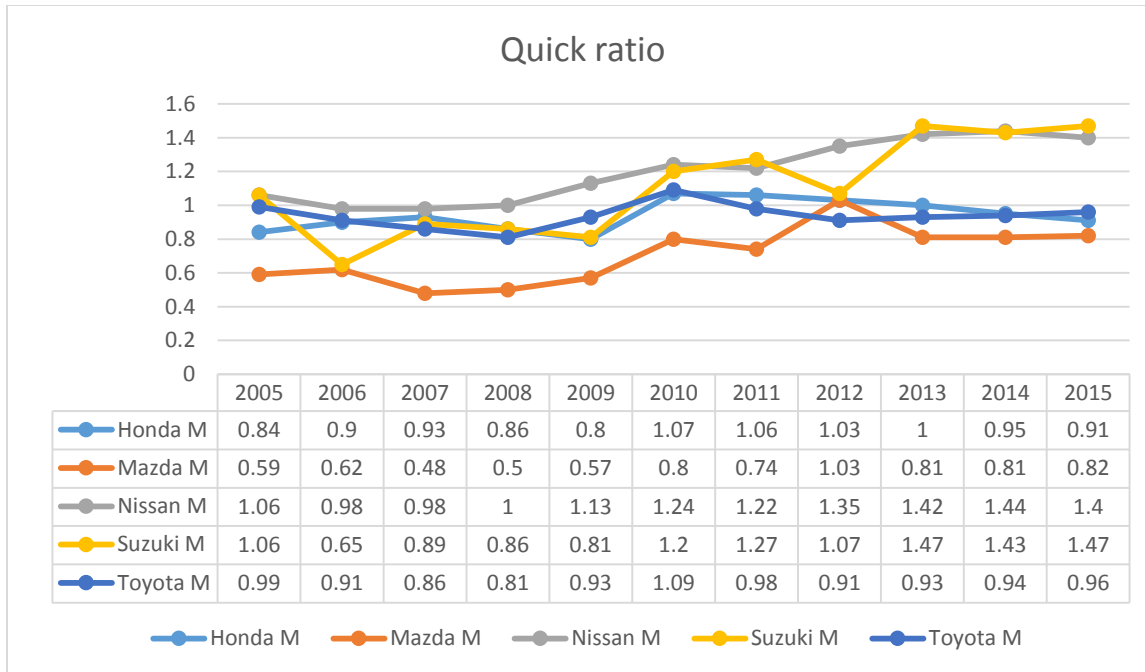


Fig.5.8 Quick ratios of Honda, Mazda, Nissan, Suzuki, and Toyota.

### 5.2.3 Profitability Ratios

Profitability ratios are financial measures used in assessing the ability of a company to generate revenue. This is ascertained after deducting expenses and other relevant costs from revenue. It shows a company's profit from operations. This class of ratios is of special interest to investors and other uses. The major ratios included under it are (a) Gross profit ratio, (b) Net profit ratio, (c) Return on Equity, and (d) Return on Assets.

#### 5.2.3(a) Gross profit ratio

Gross profit ratio measures a company's capacity to earn profit in relation to its sales. It shows how well the cost of goods sold is controlled by management. It determines how much profit is made before deducting overheads. A higher ratio is desirable because it indicates a reduction in costs or an increase in selling price and low ratio means a high cost or reduction in selling price. Gross profit ratio is of interest to the general well-being of a business. Figure 5.9 reveals how the Indian companies performed in terms of their gross profit ratios.

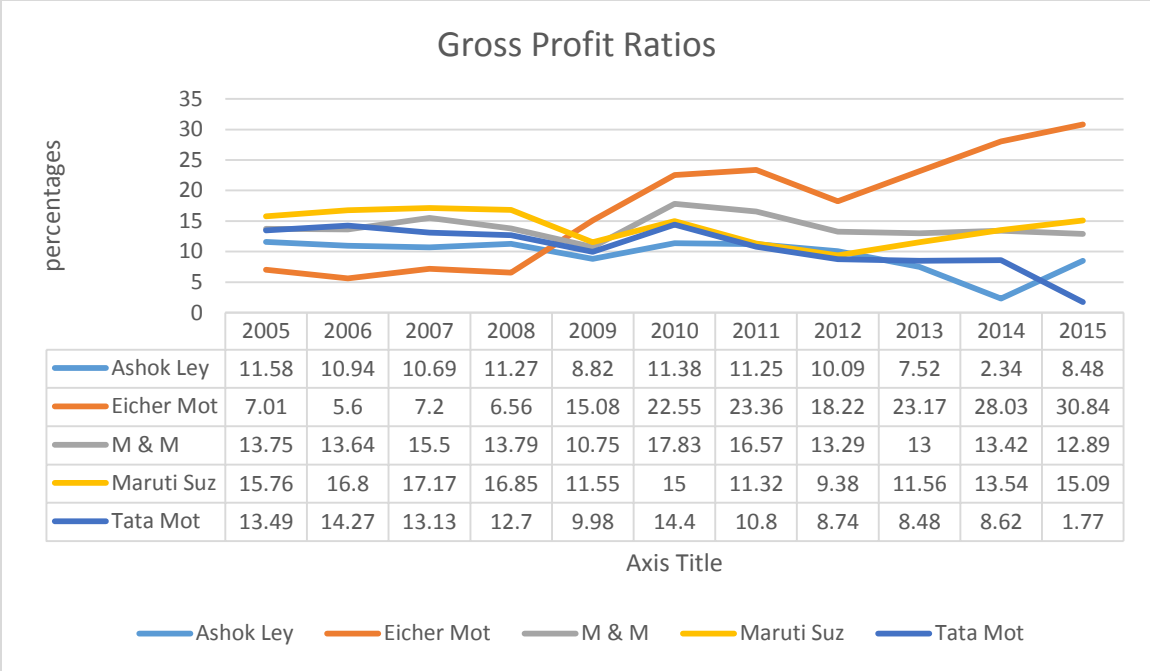


Fig. 5.9 Gross Profit Ratios of Ashok Leyland, Eicher, M & M, Maruti Suzuki, and Tata.

Maruti Suzuki has the highest gross profit ratio from 2005 to 2008 with 15.76%, 16.80%, 17.17%, and 16.85%, respectively. Eicher GPR in this same period are 7.01%, 5.60%, 7.20, and 6.56%; M & M has 13.75%, 13.64%, 15.50%, and 13.79% respectively; Tata has 13.49%, 14.27%, 13.13%, and 12.70%, respectively; and Ashok Leyland has 11.58%, 10.94%, 10.69% and 11.27%, respectively. This connotes that Maruti Suzuki has the best gross profit ratio in the first four years of the period under study. This could mean a better selling price or better control of cost than the other companies. However, from the FY2008-2009 to FY2014-2015, Eicher took the lead throughout the remaining years of the research period. The company posted a GPR of 15.08% in FY 2008/2009, 22.55% in FY 2009/2010, 23.36% in FY2010/2011, 18.22% in FY2011/2012, 23.17% in FY2012/2013, 28.03% in FY2013/2014, and 30.84% in FY2014/2015. This growth is very significant, because it had the lowest GPR in the first four months and leaped to the top after the global recession. It points to the fact that management took some decisive measures to control cost after a poor start, or innovations in their products triggered increase in selling price and a steady rise in turnover. The average GPR also shows that Eicher has the highest at 17.06%, followed by M&M with 14.04%, closely followed by Maruti Suzuki with 14.00%, Tata Motors with 10.58%, and Ashok Leyland with 9.48%. This is displayed on table 5.12.

**Table 5.12 Average Gross Profit Ratio of the Indian companies.**

Companies	Average Ratios
Ashok Leyland	9.48%
Eicher Motors	17.06%
M & M	14.04%
Maruti Suzuki	14.00%
Tata Motors	10.58%

Source: Table 4.3

In whichever circumstance, Eicher stands a better position to attract the attention of investors than the others.

The companies from Japan have their Gross profit ratio (GPR), shown in Fig.5.10 where level of performance of the companies is revealed.

Honda Motor Corp (HMC) has the highest and best GPR of all the Japanese auto companies from 2004/2005 to 2012/2013, hence the light blue line in the figure representing HMC is on top of the other colors representing different companies. A clear indication of a brilliant performance of HMC in terms of gross profit; however, the management's ability to control overheads and other costs and expenses will determine what will ultimately happen to profit (net). Mazda, represented by the orange colored line has the lowest GPR from 2004/2005 up-to 2007/2008, before rising above dark blue line representing Toyota and the ash colored line representing Nissan. An indication that the Gross profit position of Mazda is the lowest among the auto companies of Japan from 2004/2005 to 2007/2008, it improved thereafter, above the gross profits of Toyota and Nissan up-to 2010/2011, which remain to be temporal. This low gross profit ratio of Mazda is likely to continue because of low investment in income yielding assets, low investment in R/D-innovations and other limitations. Suzuki prevailed in 2014 and 2015 as having the highest gross profit ratio, and from 2005/2006, it was second to HMC in magnitude. Suzuki is therefore, the second best performed auto company from Japan in view of this study on the basis of gross profit ratio.



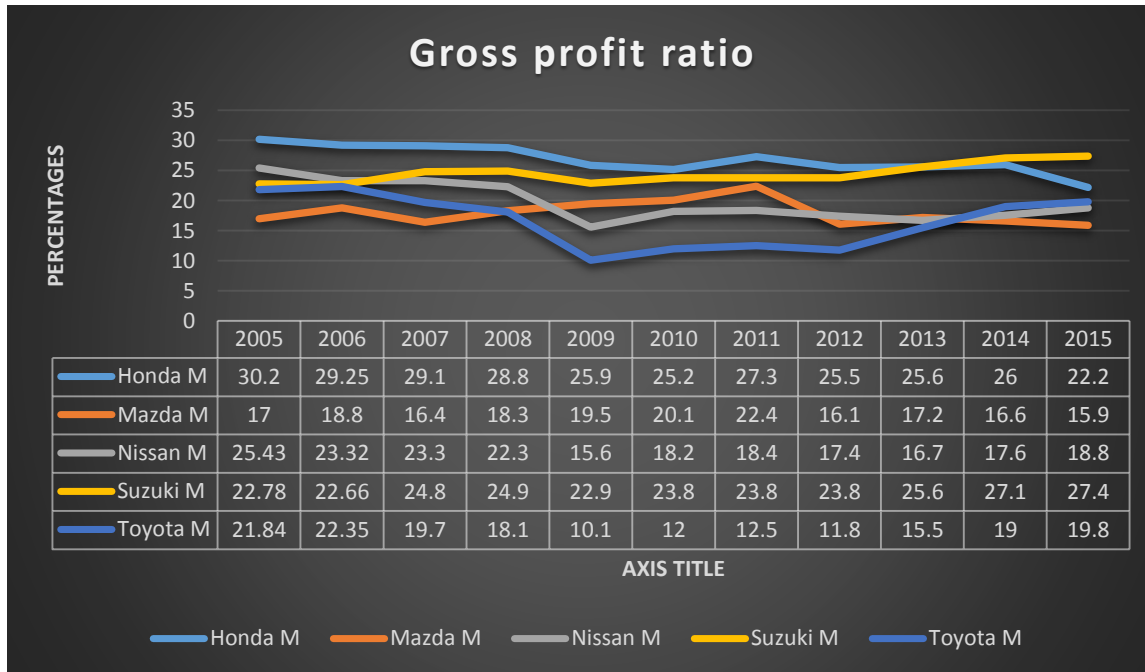


Fig.5.10 Gross profit ratio (GPR) of Honda, Mazda, Nissan, Suzuki, and Toyota.

### 5.2.3.(b) Net Profit Ratio

Net profit is the revenue remaining after all operating expenses, interests, taxes, and preferred stock dividends have been deducted from the company's total revenue. Net profit margin is the percentage of this revenue. It involves the deduction of overheads from the gross profit before calculating net profit margin. This ratio can also reveal how management is tactful in controlling overheads of the company, especially the selling and distribution overheads. It is useful in comparing companies in the same industry on the ability of management to convert sales into profit.

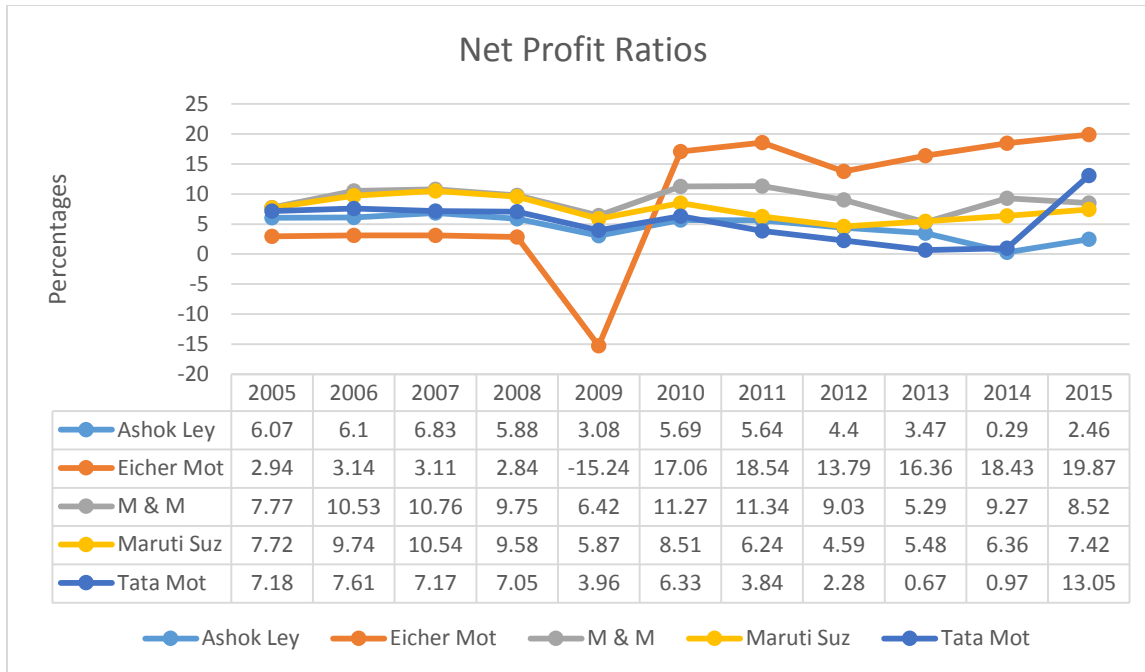


Fig. 5.11 Net Profit Ratios of Ashok Leyland, Eicher, M & M, Maruti Suzuki, and, Tata.

Eicher has the lowest NPR up-to FY2008/2009, then improved greatly to have the highest NPR from FY2009/2010 to FY2014/2015. The ratios as indicated by Fig.5.11 shows the following from FY2004/2005 to FY2014/2015: 2.94%, 3.14%, 3.11%, 2.84%, -15.24%, 17.06%, 18.54%, 13.79%, 16.36%, 18.43%, and 19.87%, respectively. This is indicative that the profitability of Eicher in the latter years are better than the rest companies, which is of interest to the management and investors, particularly. Maruti Suzuki records the highest NPR from FY2004/2005 to FY2007/2008, but it reduced to the third position behind Eicher Motors and M & M from FY2008/9 to 2014/2015. Tata Motor has the lowest from FY2008/2009 to 2014/2015, while Ashok Leyland is a little bit ahead of Tata Motors in terms of its NPR. Eicher average net profit is the best among the companies at 9.17%, while the others are M&M 9.09%, Maruti Suzuki 7.46%, Tata Motors 5.46%, and Ashok Leyland 4.54%.this is shown on table 5.13 below.

Table 5.13 Average Net Profit Ratio of the Indian companies.

Companies	Average NPR
Ashok Leyland	4.54%
Eicher Motors	9.17%
M & M	9.09%
Maruti Suzuki	7.46%
Tata Motors	5.46%

Source: Table 4.3

On the basis of Net Profit ratio (NPR), the standing of the Japanese automobile companies is depicted in Fig.5.12

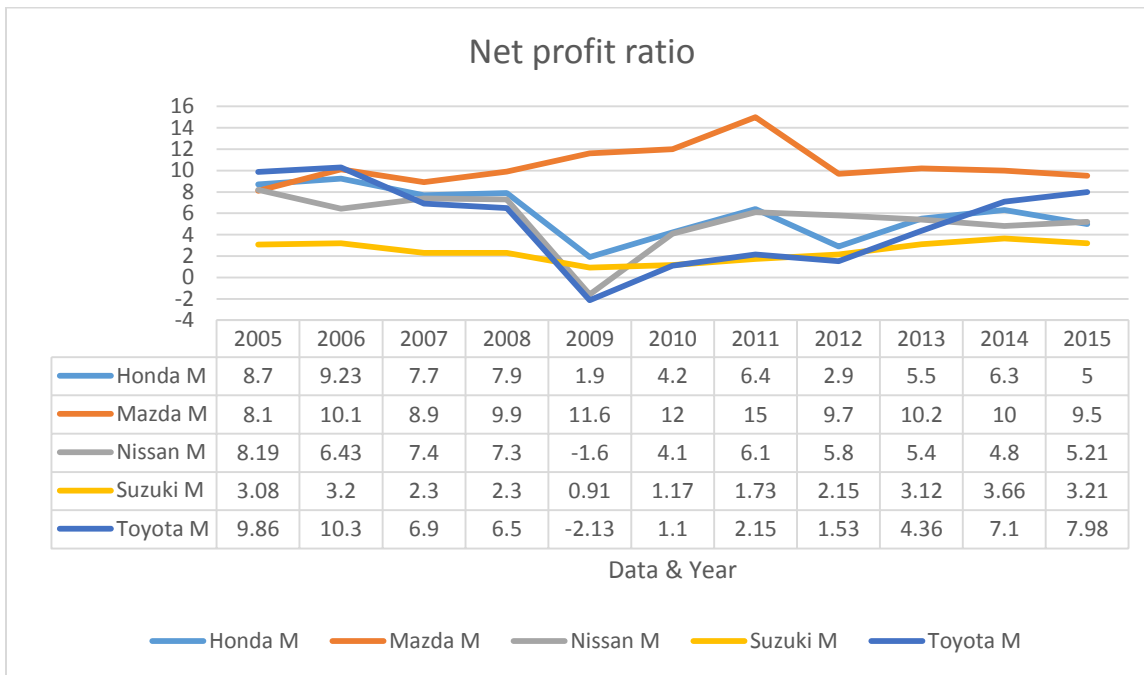


Fig. 5.12 Net profit ratios of Honda, Mazda, Nissan, Suzuki, and Toyota.

Fig.5.12 shows that Toyota has the highest NPR in 2004/2005 and 2005/2006 of 9.86% and 10.3%, respectively. This is indicative that Toyota made better profits than the rest of the companies after deducting overheads and other expenses; and this happened despite the fact that it was not the best in terms of GPR, it shows prudent and effective control of expenses on the part of Management.

Surprisingly, Mazda that had low GPR, becomes the star of the moment by posting the highest NPR from 2006/2007 to 2014/2015. This level of improvement and steadfastness in controlling expenses and costs for such a long time, far above some 'giants' in the industry should be taken seriously by investors; investors should however, not be in a haste to conclude this, because it might be incidental to other factors other than efficiency in expenses control. FY2008/2009 did not appear bright for Nissan and Toyota as they were in the red that financial year; Nissan -1.6% and Toyota -2.13%, and this occurred despite a good GPR that year, definitely, expenses went very high. Suzuki started lowest and also ended lowest, it calls for concerted efforts on the part of the company to improve performance as to generate more sales and profits.

### **5.2.3 (c). Return on Equity (ROE)**

It is obvious to say that equity shareholders are the real owners of the firm, as such, their interest is important in whatever the management does. They receive what is left out of profit after other interest groups have been settled (residue income). Return on Equity is a measure of performance of a firm from the point of view of equity shareholders. It measures profitability of the fund invested by equity shareholders. This ratio measures how a firm is able to utilize fund provided by shareholders to generate profit and enhance growth. As a profitability ratio, higher ratio is the delight of management and investors. It is appropriate to compare the ROE of current year with previous year(s), as to know whether return on shareholders' fund is increasing, decreasing, or just at the same level. Let us show the trend of the auto companies from India under study by means of diagram as in figure 5.13.

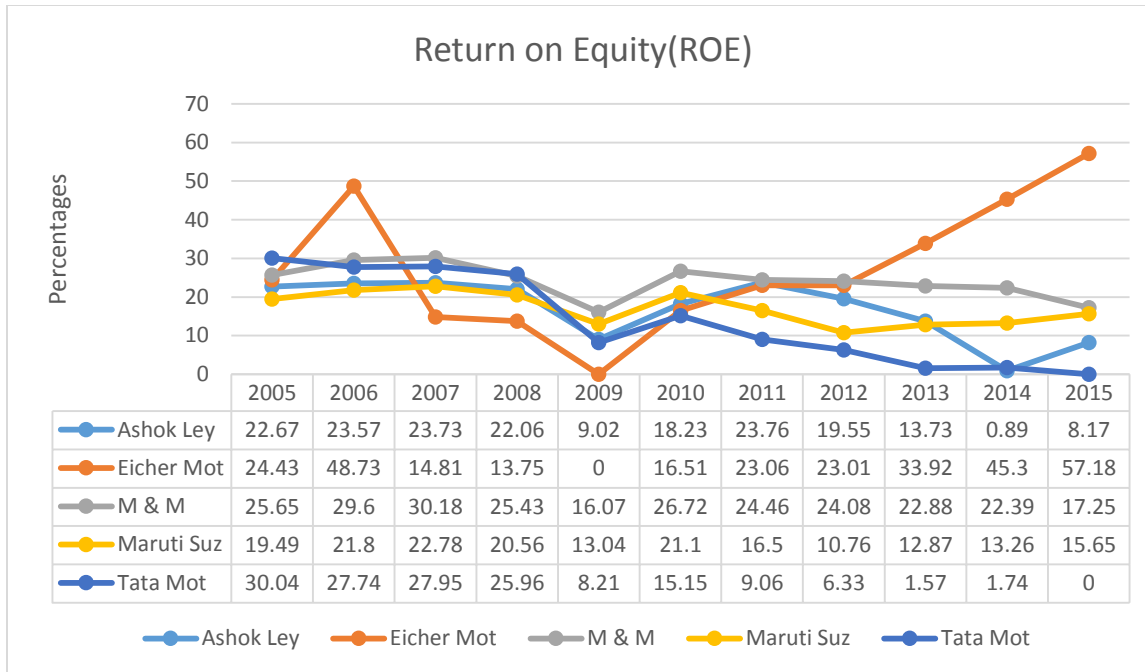


Fig. 5.13 Return on Equity (ROE) of Ashok Leyland, Eicher, M & M, Maruti Suzuki, and Tata.

The data in the diagram reveals how the companies performed over 11 years from 2004/5 to 2014/15. In FY2004/5, Tata records the highest ROE of 30.04%, ahead of M & M with 25.65%, Eicher with 24.43%, Ashok Leyland 22.67%, and Maruti Suzuki with 19.49%, the lowest in that year. This indicates that Tata performance was the best, and followed by the order they are presented above.

However, its (Tata) performance shows a continued decline through the remaining period of the research. In 2005/2006, Eicher did better than the rest of the companies, having 48.73% as compared to the performance of M&M 29.60%, Tata 27.74%, Ashok Leyland 23.57%, and Maruti Suzuki 21.80%; this is indicative of a better performance by Eicher in FY2005/2006. The performance of M & M is the best in FY2006/2007 with 30.18% ROE. Further, in FY2007/2008 Tata records the best ROE with 25.96%, slightly above the performance of M & M at 25.43%. Eicher has the lowest the same year (2007/2008). The data of fig.5.7 denotes that FY2008/2009 was particularly poor of all the companies, as the company that has the best performance has only 16.07 as ROE, when compared with the earlier years, it is obvious that there is decrease in performance. This could be attributed to starting effect of the recession in 2007/2008. Eicher records a brilliant performance from 2012/2013 to the end of the period, recording the highest

performance of the study period in 2015 with 57.18%, having a steady growth from FY2010 to FY2015.

In comparing this returns with the other companies, it suggests that management of Eicher efficiently and profitably utilized funds provided by the shareholders far above the others, especially after considering the poor performance in FY2008/2009. In the case of the other companies, none of them took a lead for a consecutive two years, however, they all made concerted efforts not to have negative ROE. The trend of their performance has been an increase one year and decrease the other year, and so on.

Average ROE performance still highlights the superiority of Eicher over Ashok Leyland, M & M, Maruti Suzuki, and Tata, as they stand as follows: Eicher 27.34%, M & M 24.06%, Ashok Leyland 16.85%, Maruti Suzuki 17.07%, and Tata 13.98%, this is shown on table 5.14

**Table 5.14 Average Return on Equity of the Indian companies**

Company	Average ROE
Ashok Leyland	16.85%
Eicher Motors	27.34%
M & M	24.06%
Maruti Suzuki	17.07%
Tata Motors	13.98%

Source: Table 4.4

And since a higher ratio is a sign of better performance in using shareholders' fund to generate profit, Eicher has done better than all others, followed by M & M, Ashok Leyland, Maruti Suzuki, and finally by Tata.

The performance of Japanese auto companies is viewed from the details shown in fig. 5.14 where it notes that Mazda has the best performance in respect to ROE from FY2004/2005 to FY2012/2013 with a performance of 25.3%, 25.3%, 22.6%, 23.0%, 27.3%, 22.6%, 32.7%, 15.2%, and 16.3%, respectively. The decision of Mazda to use less debt has impacted on ROE since there

is little or no interest to pay on debts financing. This performance is depicted in Fig.5.14 by the movement of the orange line in proxy of Mazda.

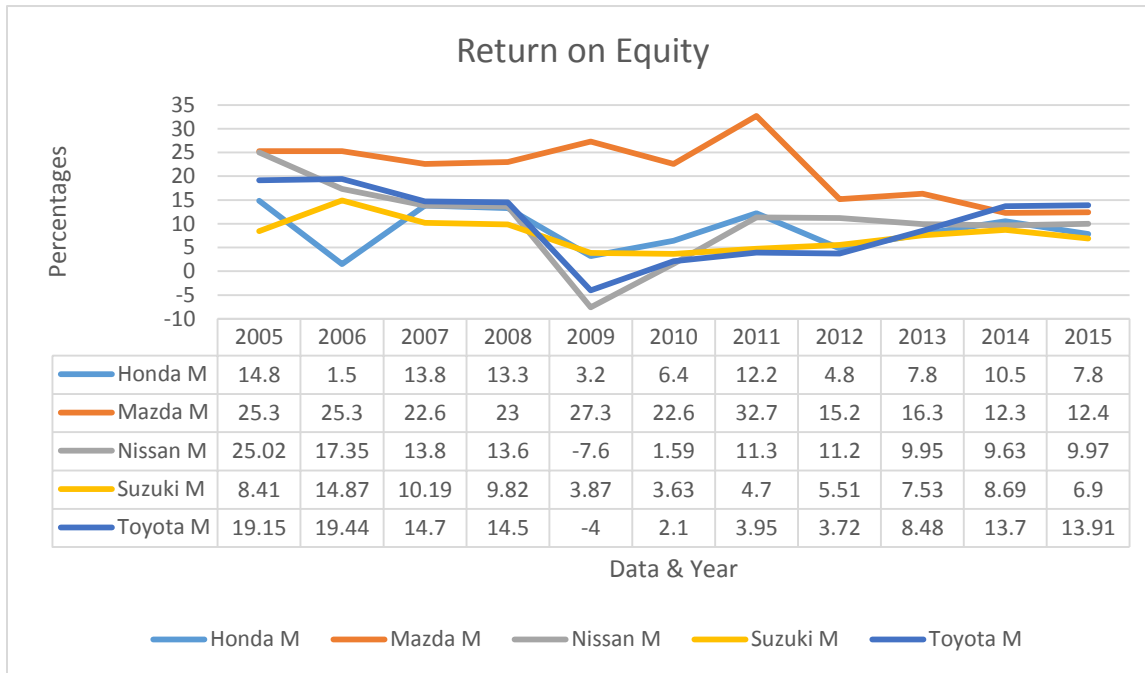


Fig.5.14 Return on equity (ROE) of Honda, Mazda, Nissan, Suzuki, and Toyota.

Toyota records the highest in FY2013/2014 and FY2014/2015 with 13.7% and 13.91% respectively, shown by the dark-blue line in proxy of Toyota. It is obvious that the shareholders of Mazda expect over a long period time the best return on their investment than any of the companies under study could possibly, afford. The strength of this performance, gives great confidence to the investors. This shows that Mazda is more efficient in utilization of funds provided by the equity shareholders to generate more revenue and profits. However, other variables that could influence ROE should be investigated and here, low fixed charges on debts may be responsible. The ROE of Nissan is the next to Mazda in 2004/5, it suffered negative performance in 2008/2009 may be due to global financial recession, and later improved to 11.3% in 2010/2011, 11.2% in 2011/2012. Toyota starts the period with 19.3% in 2004/2005, 19.44% in 2005/2006, but declined thereafter to 14.7% in 2006/2007, -4.0% in 2008/2009, and 2.1% in 2009/2010. This cannot be said to be an impressive performance, and may ward-off investors. Honda has a not too good performance in

terms of its ROE. It starts with 14.8% in 2004/2005, but starts declining to as low as 3.2% in 2008/2009, which is an indication of declining efficiency in the use of shareholders' funds, which results in declining sales and declining profit, or yet still, poor control of costs on the part of management. This is made worst when compared with ROE of the other companies.

### 5.2.3(d) Return on Assets (ROA)

Another profitability ratio adopted in this research is the Return on Assets ratio. This ratio measures how profitable a firm is, in relation to the employment of its assets. It therefore, measures overall efficiency of management in generating profit from the use of assets of the firm. The higher this ratio, the better for the company, since it indicates efficient utilization of assets. The fact that the assets of the firm are contributing greatly to profitability can encourage the employment of more assets to expand the operations of the firm, for better performance. The ROA of the auto companies from India under study are depicted in figure 5.15.

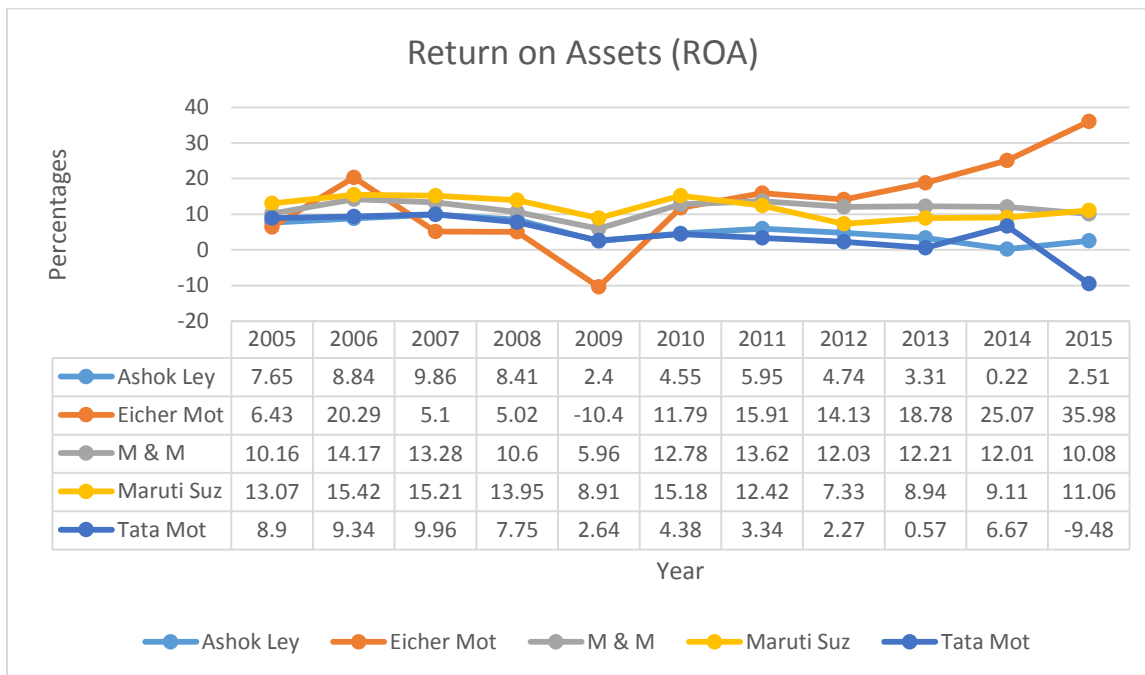


Fig. 5.15 Return on Assets (ROA) of Ashok Leyland, Eicher, Maruti Suzuki, and Tata.

Maruti Suzuki has the highest ROA in 2005 than the other companies, at 13.07%, when compared to Ashok Leyland (7.65%), Eicher (6.43%), M&M (10.16%), and Tata (8.90%). Maruti Suzuki has therefore, put to more efficient use its assets to generate income than the other companies in



FY2004/2005. Maruti Suzuki's management continues with this efficient utilization of its assets in FY2005/6, FY2006/2007, FY2007/2008, FY2008/2009, 2009/2010. This efficiency of management however, did not continue after 2009/2010, as it was no longer having the best ROA among the companies. Management may have relaxed, and others over took it on efficiency in utilization of their assets. It could also be as a result of deficiency in innovations; because the rule of the game in the automobile industry is 'innovation'. Its ROA during the latter years are only better than Tata and Ashok Leyland. Eicher improved greatly in its ROA from FY2010/2011 to 2014/2015; the record of its ROA for the period are as follows: 2010/2011 (15.01%), 2011/2012 (14.13%), 2012/1013 (18.78%), FY2013/2014 (25.07%), and FY2014/2015 (35.98%). This is a recognition on the part of management of Eicher that it was doing well at the beginning and decided to change the style of the game for better achievements. In comparison with the other companies, Eicher did very well at this latter period.

Although, M&M was not having the highest ROA in any year during the period of the study, but the volatility in its ROA not steep enough to be scared of its ability to efficiently manage its assets in later years. The company (M&M) records 10.16%, 14.17%, 13.28%, 10.60%, 5.96%, 12.78%, 13.62%, 12.03%, 12.21% 12.01% and 10.08%, as in FY2004/5, FY2005/2006, FY2006/2007, FY2007/2008, FY2008/2009, FY2009/2010, FY2010/2011, FY2011/2012, 2012/2013, FY2013/2014, and FY2014/2015 respectively. There seem to be a form of consistency in their performance in terms of utilization of assets to generate profit, however, the company needs to improve on cost reduction and in other areas to boost its profits.

Ashok Leyland did not do well in their management of the assets when compared with other companies, the management need to double efforts on efficient utilization of its assets to be able to generate more income and profits.

Tata did badly on its management of assets, even as a company standing alone, then when compared with other companies, it is simply a disappointing performance. A company having, often times, the highest production and sales figures among the Indian automobile companies should do better if its assets are efficiently utilized.

Japan auto companies ROA is displayed in Fig.5.16. Mazda is having the highest ROA of the Japanese auto companies under study, as it has 11.1%, 10.4%, 10.4%, 11 2%, 14.8%, 13.3%,

24.9%, 11.1%, 13.0%, 8.8%, and 9.1%, for FY2004/2005 up-to 2014/2015 respectively, as compared to lower figures by the other companies. This shows that management has efficiently used its assets to increase profit potentiality of the company. Toyota has the next high ROA up-to 2006/2007, showing the company's efficiency in the use of assets of the company. But this show of efficiency declined from 2008/2009 to 2014/2015. It was the worst in 2008/2009, with ROA of -1.4%, the height of inefficiency on the part of Management on assets utilization, but this situation may be due to the crisis in 2008/9. Nissan has a better ROA than Honda and Suzuki Motor Corp in 2004/2005, but declined to 5.4%, 3.8%, 4.0%, and -2.1% in 2005/2006, 2006/2007, 2007.2008, and 2008/2009 respectively, below HMC and Suzuki. It indicates decline in efficiency of assets utilization by management.

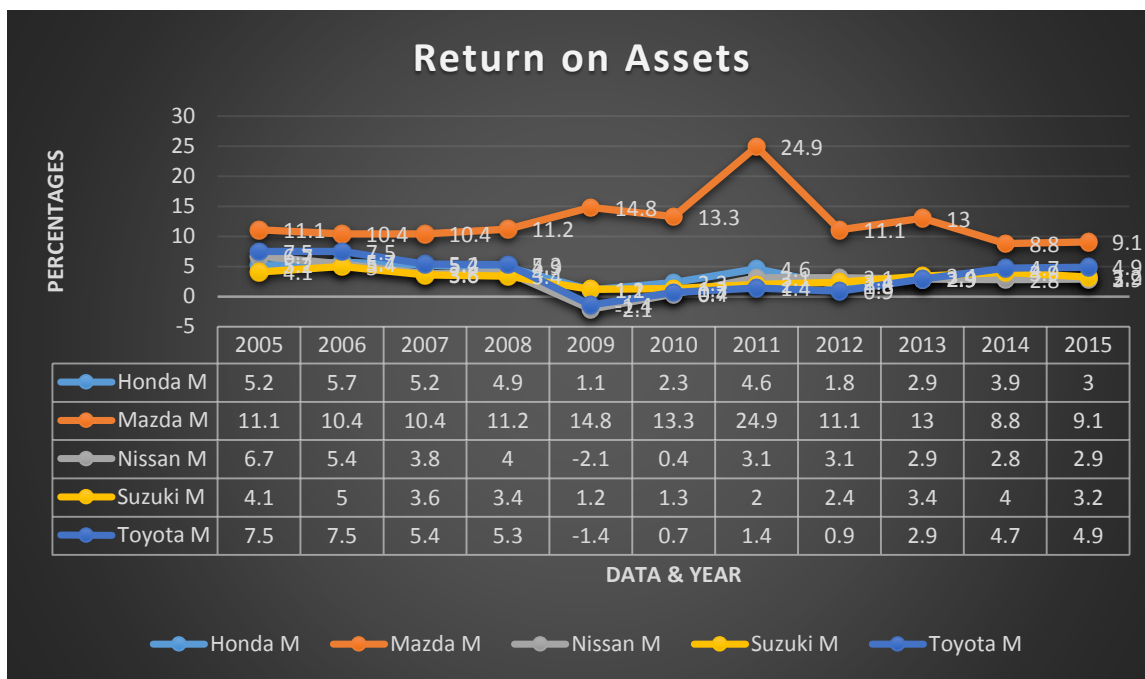


Fig.5.16 Return on Assets (ROA) of Honda, Mazda, Nissan, Suzuki, and Toyota.

### 5.2.4 Activity/Efficiency Analysis.

Activity ratio also called 'Efficiency' ratio measures how fast and often a company is able to translate its assets into cash with minimum loss. A company needs to determine quick and easy

way it can convert its assets into cash so it can pay its bills. The most common assets for the calculation of activity ratios are accounts receivable, inventory, and total assets.

#### **5.2.4 (a) Inventory Turnover ratio.**

Inventory turnover ratio is an indication of how many times inventory is sold and replaced in a financial year. It gives the frequency or velocity of conversion of inventory into cash in a year. In the words of Reddy (53), 'it measures number of times inventory were sold and replaced during an accounting period.' It is one of the key ratios to be calculated and analyzed in the automobile industry as in (122). It is calculated by:

**Inventory Turnover ratio = Cost of Goods Sold/Average Inventory.**

A higher ratio is considered good as it indicates a better and efficient management. When inventory turnover is rapid, it culminates to higher inventory turnover ratio, and this results to low cost of inventory management. Both low inventory turnover and high turnover inventory should be investigated to ensure that it is not as a result of low level of inventory and high inventory level; because they have their consequences for the firm.

Figure 5.17 shows the performance of the Indian automobile companies in relation to their Inventory Turnover ratio. It shows that Maruti Suzuki has the highest ITR in FY2004/2005 with 16.57 times. The other company trailed behind having, Ashok Leyland 7.52 times, Eicher 12.38 times, M & M 8.60 times, Tata 0.89 times. Maruti Suzuki sold and replaced their inventories more times than the other companies in FY2004/2005, this greater velocity will lead to more revenue and profit, turnover being the highest contributor to revenue of a company. Maruti Suzuki continues as the company with the highest ITR up-to 2013/2014 which is an impressive performance. This indicates an efficient inventory management. The company has 13.84 times, 20.76 times, 17.41 times, 22.97 times, 24.25 times, 25.88 times, 19.81 times, 23.68 times, and 25.62 times, in FY2005/2006, FY2006/2007, FY2007/2008, FY2008/2009, FY2009/2010, FY2010/2011, FY2011/2012, FY2012/2013, and FY2013/2014 respectively; Eicher records a better ITR in 2014/2015 with 20.60 times while Maruti Suzuki records 19.11 times. The sales and distribution departments must be working effectively. This is a sign of efficiency in inventory management.

Eicher ITR followed that of Maruti Suzuki closely by its records showing 12.38 times in FY2004/2005, 10.23 times, 11.65 times, 10.55 times, 17.18 times, 15.66 times, 14.83 times, 13.93 times, 11.94 times, 14.78 times, in FY2005/2006, FY2006/2007, FY2007/2008, FY2008/2009, FY2009/2010, FY2010/2011, FY2011/2012, FY2012/2013, FY2013/2014, respectively. There is some consistency in the data, though witnessing some increase and decrease movement. Its management is also efficient in the inventory management and sales activities than M & M, Tata, and Ashok Leyland. Tata ITR was low in FY2004/2005 and FY2005/2006, below that of Ashok Leyland, but improved from FY2006/7 up-to FY2013/2014. In comparison with the other companies, Ashok Leyland has the lowest ITR, except in the first two years when it was higher than Tata. The company needs to improve on its inventory management and sales activities.

High record of production will be meaningless with low inventory velocity, hence all the company should gear their efforts toward improving the inventory turnover inventory, because more revenue is generated as this happens.

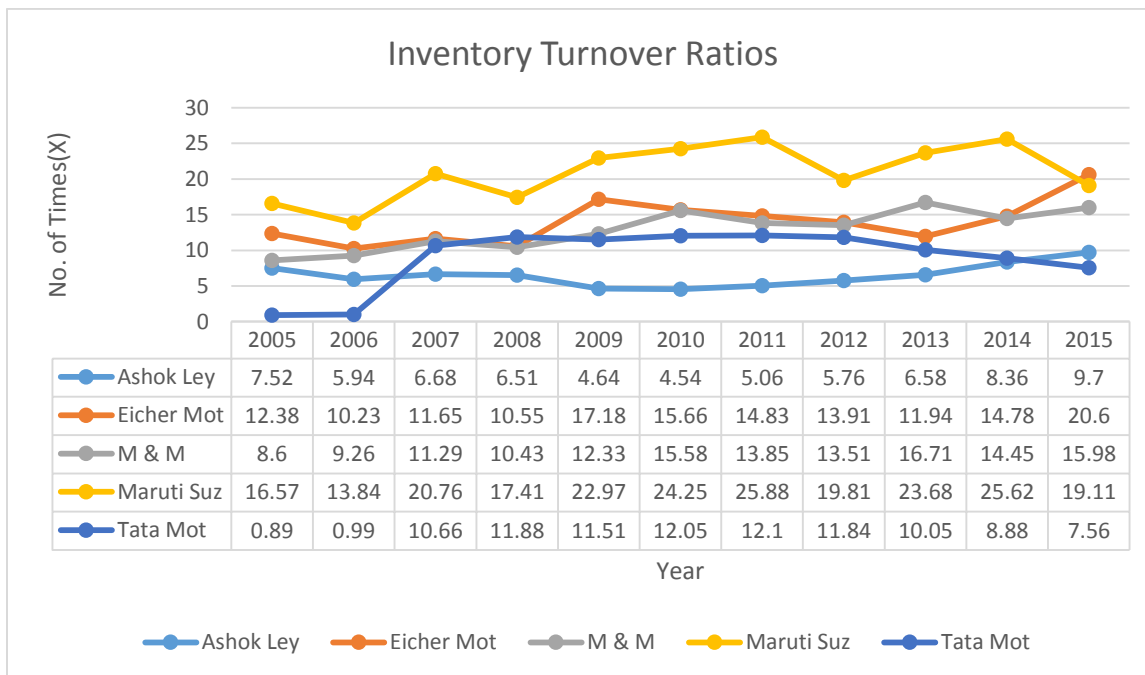


Fig. 5.17 Inventory turnover ratios of Ashok Leyland, Eicher, M & M, Maruti Suzuki, and Tata.

The inventory turnover of the auto companies from Japan are displayed in Fig.5.18. Suzuki records the highest ITR in 2004/2005 at 20.7 times when compared with the lower figures of the other companies. It tells that the company sells and replaces her inventory faster in the financial year.

But during 2005/2006 to 2006/2007, the ITR declined to 17.13 times and 6.29 times, meaning a slowdown in sales. But during 2005/2006 to 2006/2007, Toyota has 19.98 times and 11.21 times, compared to lower figures for the other companies. It again became the highest ITR from 2008/2009 to 2014/2015. This shows that the rapidity of sale of inventory and their replacements is more regular in the case of Toyota, than the other companies. This is a major contributor to total revenue and profitability that should be intensified. In 2007/2008, Suzuki records the highest of 17.1 times as against lower figures by the others. Mazda ITR is the lowest in the first two years, but improved marginally above HMC during the period up-to 2012/2013. Aggressiveness in sales and marketing functions can be factors that will enhance ITR of the company. Mazda Motor is experiencing some challenges that are inhibiting its growth in terms of sales, such as unstable supplies of components, instability in foreign exchange transactions, etc.

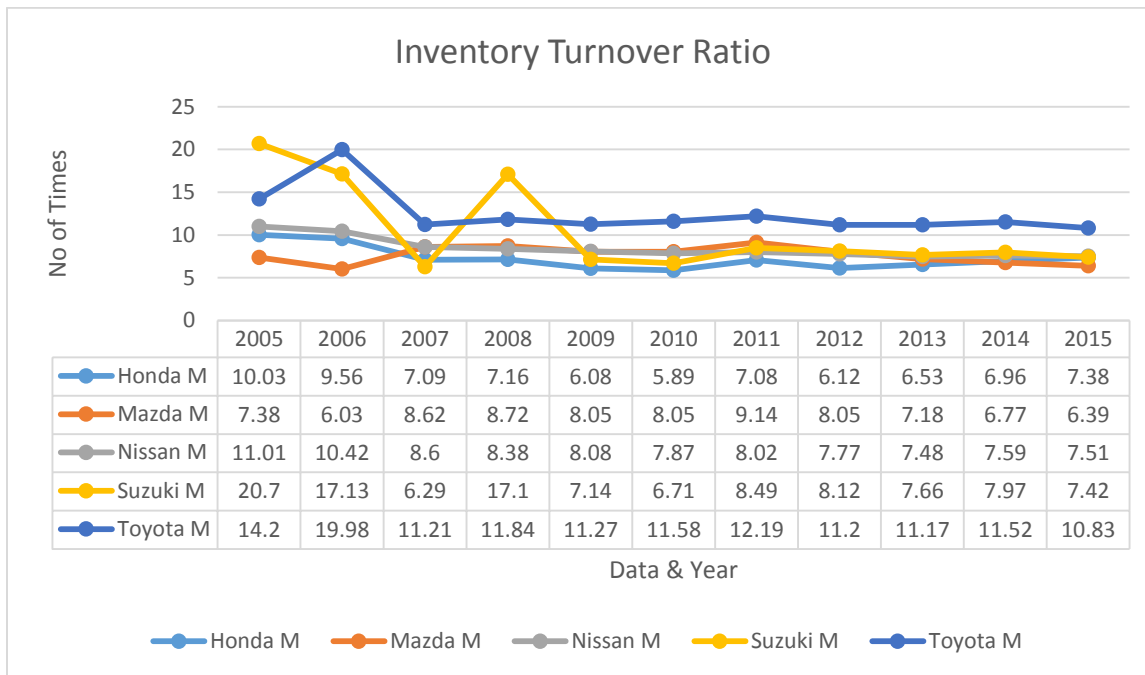


Fig.5.18 Inventory Turnover ratios of Honda, Mazda, Nissan, Suzuki, and Toyota.

### 5.2.4 (b) Assets Turnover Ratio (ATR)

Assets Turnover is another measure to determine efficiency on the part of Management in handling its assets to generate revenue. From this ratio, we know whether company is efficiently using its assets to generate sales. A high rate is desirable, because it indicates that the company is using its available assets to generate more sales; this means that company is using its assets

efficiently. Total assets turnover (ATR) is important variable in determining ROE by means of the DuPont analysis.

Figure 5.19 depicts the Assets Turnover ratio of the auto companies from India. Eicher has the highest ATR of 2.18 times in FY2004/2005, when compared to the figure for Ashok Leyland 1.26 times, M & M 1.31 times, Maruti Suzuki 1.69 times, and Tata 1.24 times. The ATR of Eicher declined in FY2005/2006 to 1.54 times; it improved in FY2006/2007 and 2007/2008 to 1.64 times and 1.77 times. It declined again up-to FY2010/2011, then it starts an upward movement again till the end in FY2014/2015 with 1.81 times. Within this period, it is observed that there is a more efficient utilization of the assets of Eicher to generate more sales, than the other companies, except in the few years between 2008/2009 and 2010/2011 when the company experienced a decline. Maruti Suzuki has a moderate ATR in FY2004/2005, but it declined in FY2005/2006 (though was the overall best that year), declined further in 2006/2007. An improvement only came from 2008/2009 to 2010/2011, having 1.52 times in 2008/2009, 1.78 times in 2009/2010, and 1.99 times in 2010/2011. The company has a personal decline in 2011/2012 to 1.60 times, though the highest when compared with other companies. It reveals a more efficient use of assets by Maruti Suzuki in those years than others. Its efficiency went down from 2011/2012 to the end of the period.

M & M started the period with a moderate ATR and continued moderately till the end of the period. This level of consistency points to the fact that management has been steadfast in its policy regarding assets. Throughout the period, its ATR did not fall below 1.0, except in 2008.2009 when it went down to 0.93 times.

Ashok Leyland ATR indicates a good start as it records 1.26 times in 2004/2005, increased to 1.45 times and 1.63 times in 2005/2006, and 2006/2007. It then declined to 1.43 times, 0.78 times 0.80 times in 2007/2008, 2008/2009, and 2009/2010. This is an indication of efficiency in some years and lack of it in others. It maybe that no particular standard is being followed. This performance is below the ones of the other companies except Tata Motors that is the lowest. There was increase in Ashok Leyland's performance in 2010/2011 and 2011/2012 at 1.06 times and 1.08 times respectively. Tata efficiency in assets utilization is the least among the companies, the company's management need to adopt strategies that will reverse this trend,

because it will surely affect overall performance efficiency and perception of investors to keep fate with management.

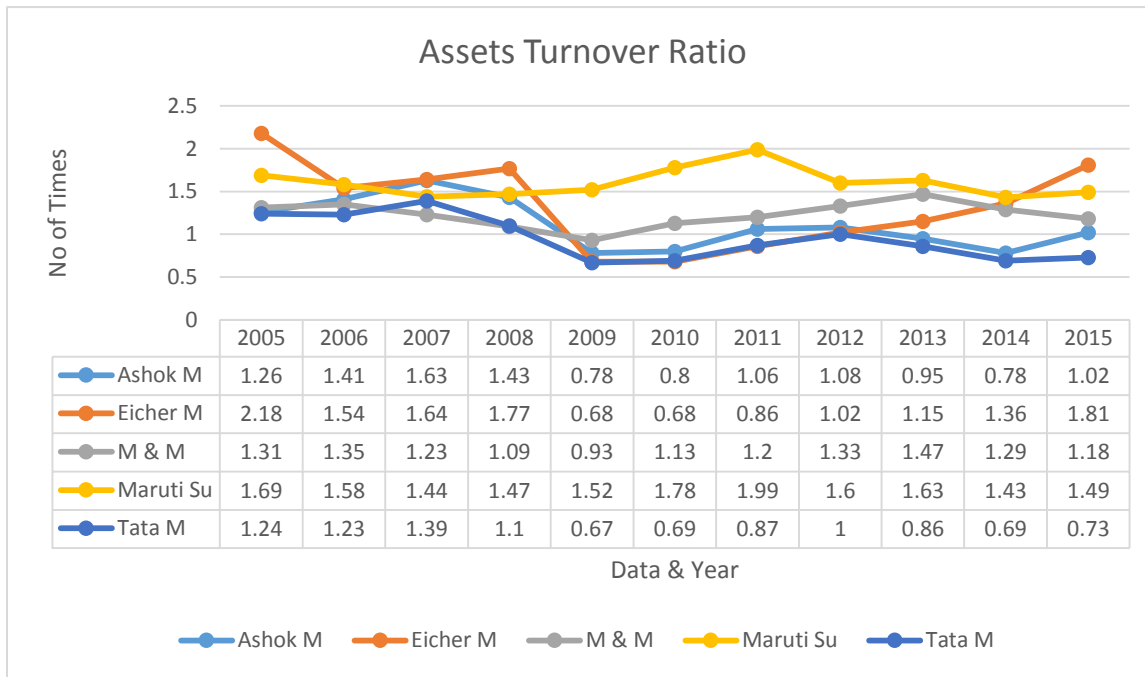


Fig.5.19 Assets Turnover Ratios of Ashok Leyland, Eicher, M & M, Maruti Suzuki, and Tata.

Mazda has the highest ATR of all the Japanese auto companies throughout the study period. There was a decline in 2008/2009 from 1.79 times in 2007/2008 to 1.34 times, a sign of inefficiency in the ability of assets to generate revenue. This decline trend continued up-to 2014/2015 when there was a marginal increase, though not as high as the earlier years. Suzuki has the next high velocity of assets. It was 1.34 times in 2004/2005, went up to 1.56 times in 2005/2006, but declined in 2006/2007 to 2009/2010, an indication of decline in efficiency in the usage of assets in generating sales. HMC has a moderate ATR from the beginning to the end, witnessing decline from 2008/2009 to 2011/2012. Nissan performance in terms of ATR is low, but experienced an increase from the figure of 0.82 times in 2004/2005 to 0.84 times in 2005/2006, 0.89 times in 2006/2007. This is an indication of efficient use of assets to generate sales progressively for three consecutive years. A decline in 2008/2009 and 2009/2010 to 0.76 times and 0.73 times respectively, a sign of a weaker or less efficient assets usage. Toyota has the lowest ATR of all the Japanese auto companies, but its rise and fall movement is only but marginal. It was 0.76 times in 2004/2005, declined to 0.73 times in 2005/2006, increased to 0.78 times in 2006/2007 and 0.81 times in

2007/2008, management is credited with an efficient assets usage, when there is an increase as this in a firm. This efficiency started to reduce in 2008/2009 to the end.

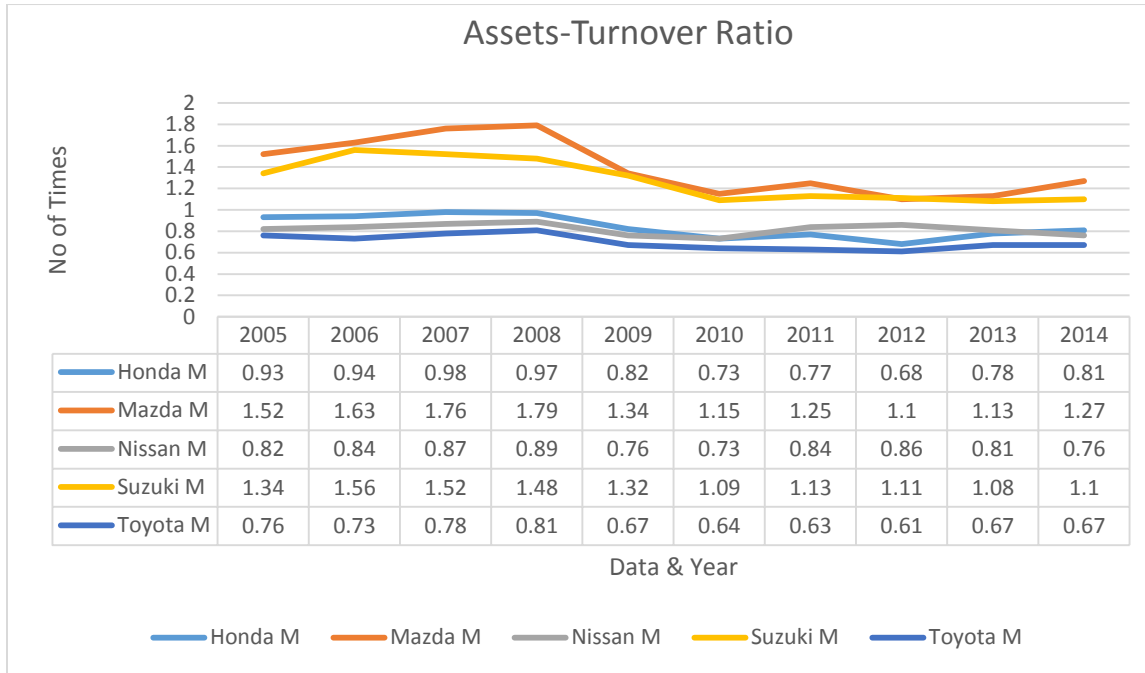


Fig. 5.20 Assets-Turnover ratio of Honda, Mazda, Nissan, Suzuki, and Toyota.

## 5.2.5 Other ratios

### 5.2.5 (a) Earnings per share (EPS)

Earnings per Share (EPS) is of great interest to investors (present and prospective), as this represents the number of dollars earned during the period in respect of outstanding shares of common stock. That is to say, this is the amount each outstanding share would earn if all the profits were distributed. So, it shows how a company is from the point of view of the shareholder.

This ratio is interpreted in terms of the fact that higher ratio would mean the company has higher amount to distribute to its shareholders as a result of high profit in the year. Investors may pay attention to this ratio because a high ratio also influences the rise in the stock price of the company.

The Indian auto companies' EPS are depicted in Fig. 5.21 as shown below. M & M has the highest amount of US\$0.44 in FY2004/2005, this means that it has the best expectation for shareholders



in the year. This position declined in 2005/2006 to US\$0.37, went up again in 2006/2007 to US\$0.44, down in 2007/2008 to US\$0.42, to US\$0.36 in 2008/2009 and US\$0.38 in 2009/2010. Which indicates that the shareholders should expect an upwards and downwards movement. However, from 2010/2011, the EPS of M & M shows a rising trend to the end of the period, showing that the company has improved from the shaky beginning to making more sales, more profits and earnings to shareholders. Investors will surely be interested with the rising profile towards improved earnings and as a sign of stability that will continue for a long time. Eicher records the highest EPS in 2005/2006 at US\$0.78, but declined in 2006/2007 to US\$0.22 which continued and was even negative in 2008/2009 at US\$-0.54. This is an indication of decline in revenue and profit that has affected shareholders' earnings. There is remarkable increase to the EPS of Eicher from 2010/2011 up-to the end of the period, recording the highest in 2014/2015 at US\$6.44. This increase was consistent and it is important to direct the minds of investors while deciding to invest. When this increase and consistency of increase is compared with other companies, surely, Eicher has an edge over them. In the case of Ashok Leyland, it has the lowest earnings for the shareholders, which will make investors to look at the direction of the other companies to make their investment decisions; unless other factors such as QR, ROE, and CR are in its favour.

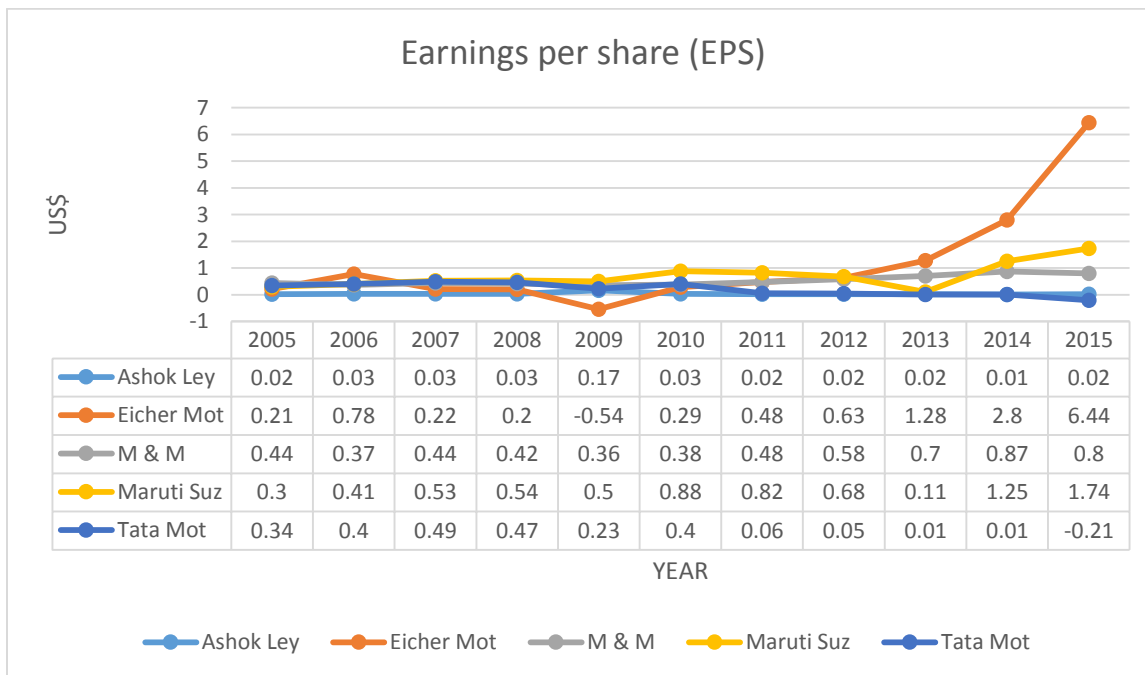


FIG.5.21 Earnings per share (EPS) of Ashok Leyland, Eicher, M & M, Maruti Suzuki, and Tata.

Maruti Suzuki has a moderate EPS from the start of the period and increased progressively until it got to US\$1.74 in 2014/2015 from US\$0.3 of 2004/2005. On the other hand, the case of Tata is not as bright, as it started moderately at US\$0.34 in 2004/2005 to US\$-0.21 in 2014/2015. This is not what shareholders expect of their investment, and surely will be weary to invest in its stock. Tata happens to be the least from the point of view of the shareholders earnings.

Details of EPS of Japanese auto companies are displayed in Fig.5.22.

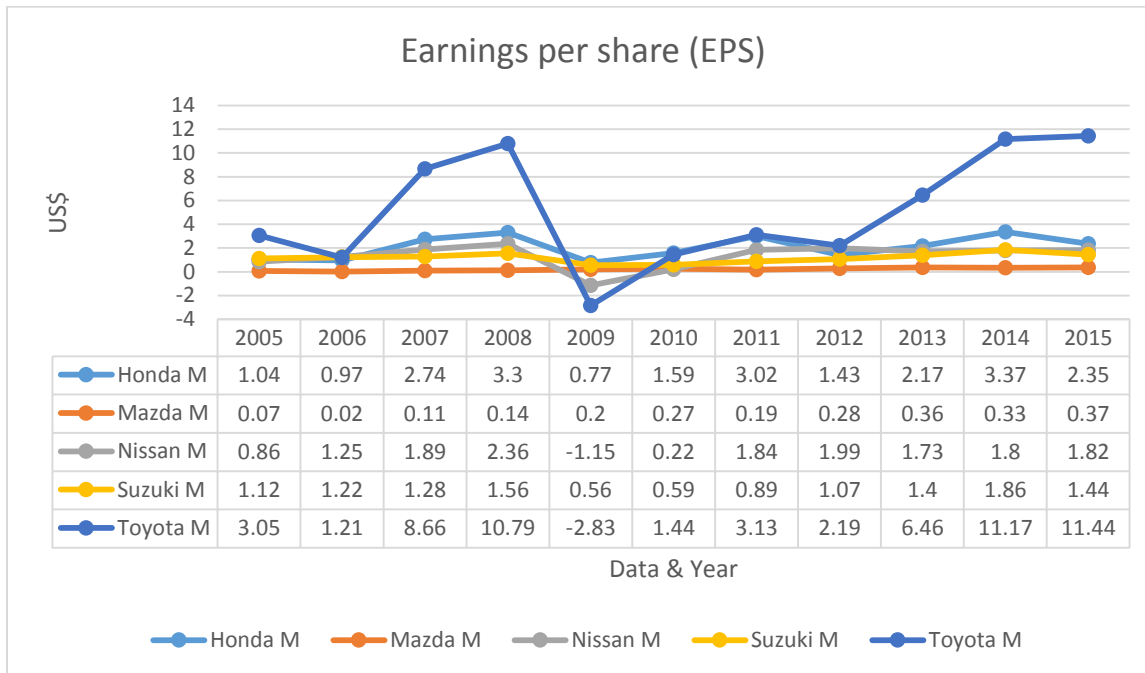


Fig. 5.22 Earnings per share (EPS) of Honda, Mazda, Nissan, Suzuki, and Toyota.

Toyota has shown it is a destination of choice to investors by having an impressive EPS when compared with the other companies. In 2004/2005, it starts with US\$3.05, declined in 2005/2006 to US\$1.21, rises to US\$8.66 in 2006/2007, and US\$10.79 in 2007/2008. But nose-dived in 2008/2009 to US\$-2.83, the effect of the global recession of 2007/2008, may be responsible for this poor performance; an indication that is revealed with a steady increase after 2008/2009 to US\$1.44 in 2009/2010, US\$3.413, and finally to US\$11.44 in 2014/2015. It is an indication that the shareholders of Toyota are in a better position than of the other companies. That means a continued expectation of better earnings to the equity shareholders.

Honda has the next fair EPS of the Japanese companies, especially from FY2006/2007 when it records an EPS of US\$2.74 which increased to US\$3.3 in 2007/2008. This shows that investors expect increased EPS that FY. However, as is the case of most companies in the auto industry, 2008/2009 was very low in earnings and HMC recorded US\$0.77, above the negative level of some companies. It shows determination on the part of management to make the shareholders to have something despite the effect of the previous year's recession. It improved from that point to US\$1.59 in 2009/2010, and ended the period with an impressive EPS of US\$2.85 in 2014/2015.

Suzuki was the second in the first month of 2004/2005 with US\$1.12, it steadily increased to US\$1.22, US\$1.28, and US\$1.56 in 2005/2006, 2006/2007, and 2007/2008, respectively. A decline in FY2008/2009 due to the impact of the recession of the previous year is also not unusual. The EPS of the company improved after this date and went up to US\$1.86 in 2013/2014. This is also the hard efforts of the management to impress the equity shareholders.

Mazda has the all-time low EPS, though posted a marginal positive of US\$0.2 in 2008/2009 when many companies had negative EPS. However, the company could not have an EPS of up to US\$1.0 throughout the period, showing poor performance when compared with the other companies

. Nissan started low at US\$0.86 in FY2004/2005, but steadily increased to US\$1.25, US\$1.89, and US\$2.36, in 2005/2006, 2006/2007, and 2007/2008. It also faced a hard time in FY2008/2009 as it had an EPS of US\$-1.13. The situation improved afterwards to US\$0.22, US\$1.84, and ended at US\$1.82 in 2009/2010, 2010/2011, and 2014/2015. There is a steady increase after the decline that occurred in 2008/2009, a sign of efforts to better the wealth of the shareholders by making available steady EPS.

As we noted earlier, the higher the EPS, the better for the company image and for a better value of the worth of shareholders. Comparison is therefore, made about each company's EPS with ones of the other companies, which places TMC as leading.

### **5.2.5 (b) Dividend per share (DPS)**

In most cases, all the incomes available to the common shareholders are not distributed to them, as a part of it is retained in the company to strengthen its financial base and for further investment in more profitable ventures. The portion distributed to the common stock shareholders is called,

*dividend.* The actual cash dividend per share (DPS), is the dollars amount of cash distributed during the period on behalf of each outstanding share of common stock Gitman, 2010(118).

DPS of Indian automobile companies are depicted in Fig.5 23, where it is shown that the highest expectation of dividend payments in FY 2004/2005 is from Tata and M & M with US\$0.13 apiece, when compared with the other companies. The DPS of Tata was the same in FY2005/2006, but increased in FY2006/2007 to US0.15. M & M records a more progressive DPS, its rise and fall is within US\$0.1 and US\$0.19, this is an indication that payment of dividend is consistent and the figure for the next year predictable, which is an important information needed before plunging into the investment arena. This stems from the fact of increase in sales revenue and profit. Eicher started very low at US\$0.04 in FY2004/2005, but grew up-to US\$0.29 in 2006/2007 and came to its climax of US\$0.68 in 2013/2014, an indication of real growth of DPS and financial strength to the shareholders. Ashok Leyland performed poorly in terms of dividend payments over the years. Which is a caution sign to investors.

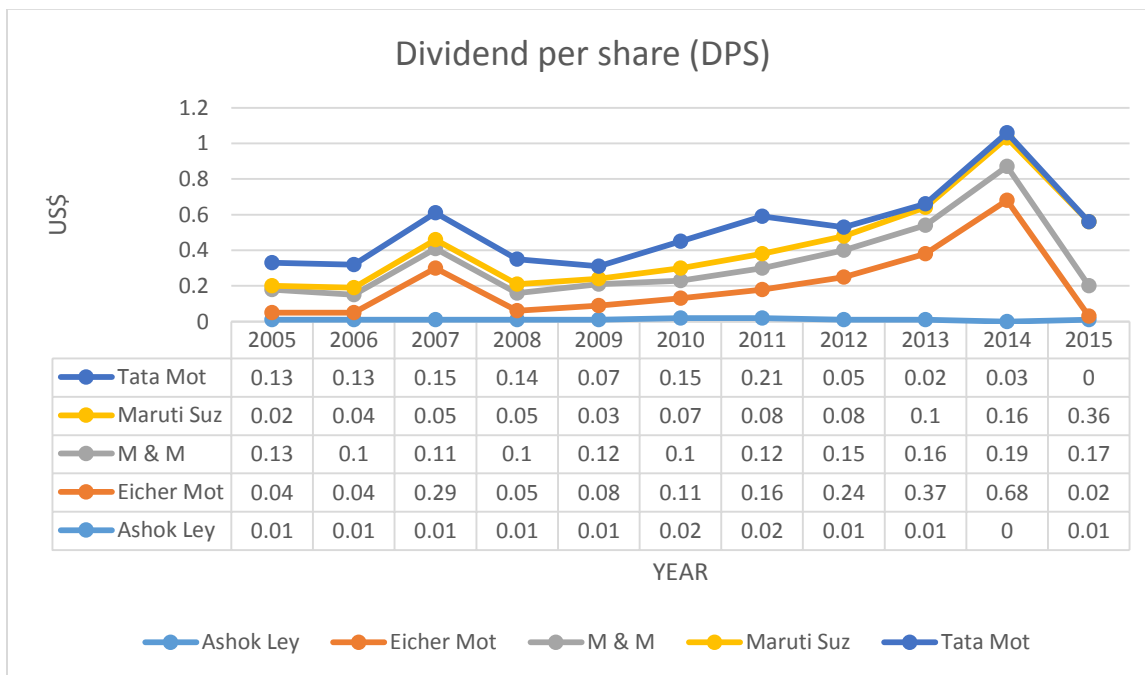


Fig.5.23 Dividend per share of Ashok Leyland, Eicher, M & M, Maruti Suzuki, Tata.

Among the Japanese auto companies, HMC and TMC has the highest DPS in FY2004/2005, with US\$0.61 apiece. There was growth in the one of TMC to US\$0.77, US\$1.91, and US\$2.81, in

FY2005/2006, FY2006/2007, and FY2007/2008 respectively. It went down to negative in FY2008/2009, then stated an upward movement again in FY2009/2010, rising to US\$3.16 in 2014/2015. This is good for investors, because it means more dividend to them over years. HMC did not sustain the good performance after FY2005/2006, there was a drop in DPS in FY2006/2007 to US\$0.57. It shows a decline in the amount available to the shareholders as dividends. The FY2008/2009 was particularly low, to reckon the impact of the global recession in the previous FY. But it improved immediately after that, and was on the part of growth again continuously up to FY2013/2014 at US0.8, being an indication of sustained growth by the company, especially as it relates to dividend payments. Mazda did not achieve much in terms of its DPS, in FY2004/2005 it records US\$0.02, which degenerated in FY 2005/2006 to US\$0.003. A significant increase in DPS is not guaranteed because of the extremely low amounts over the years, and poor when compared with performances of the other companies, suggesting decline in business activities.

Mazda has a policy of consistency in dividend payment, and ensured that this was adhered to even in critically poor years of activities. The DPS of the company is low but consistent, making investors hopeful of dividend payment each year.

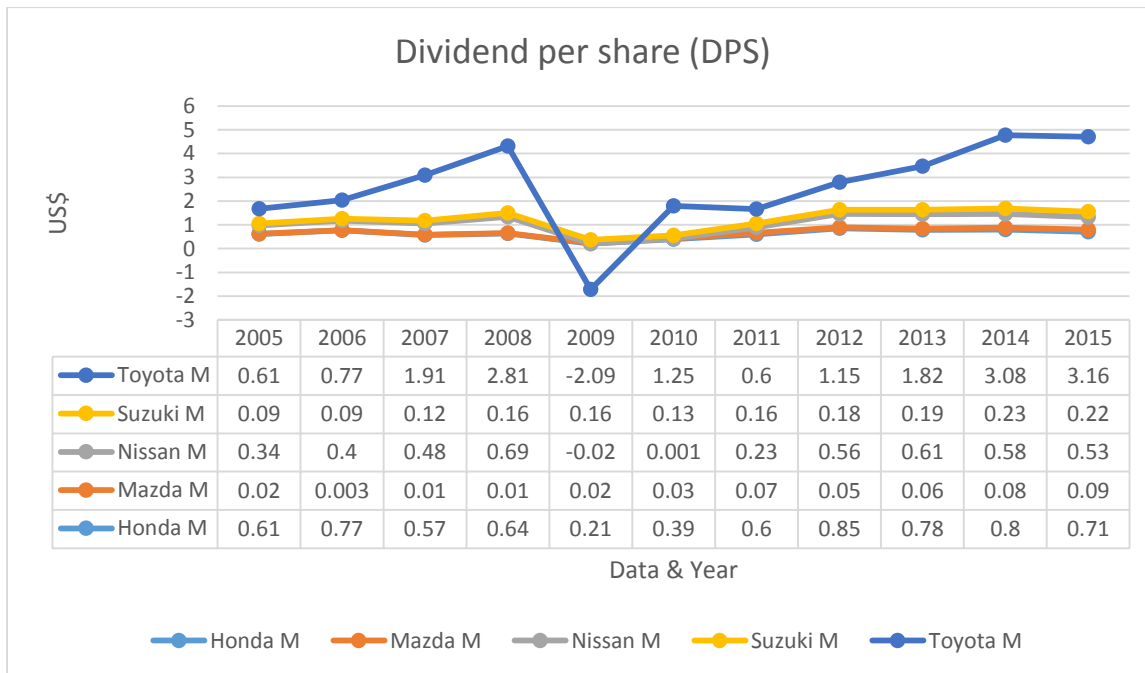


Fig.5.24 Dividend per share (DPS) of Honda, Mazda, Nissan, Suzuki, and Toyota.

### 5.2.5 (c) Dividend Payout ratio (DPR)

Dividend payout ratio (DPR) is the percentage of net income that is distributed to shareholders as dividend. While dividend per share (DPS) is in value of dollar (or any currency, as the case may be), DPR is usually expressed as a percentage. Investors are interested in this ratio because they want to know if the company is paying out a good portion of their earnings to the shareholders as dividend.

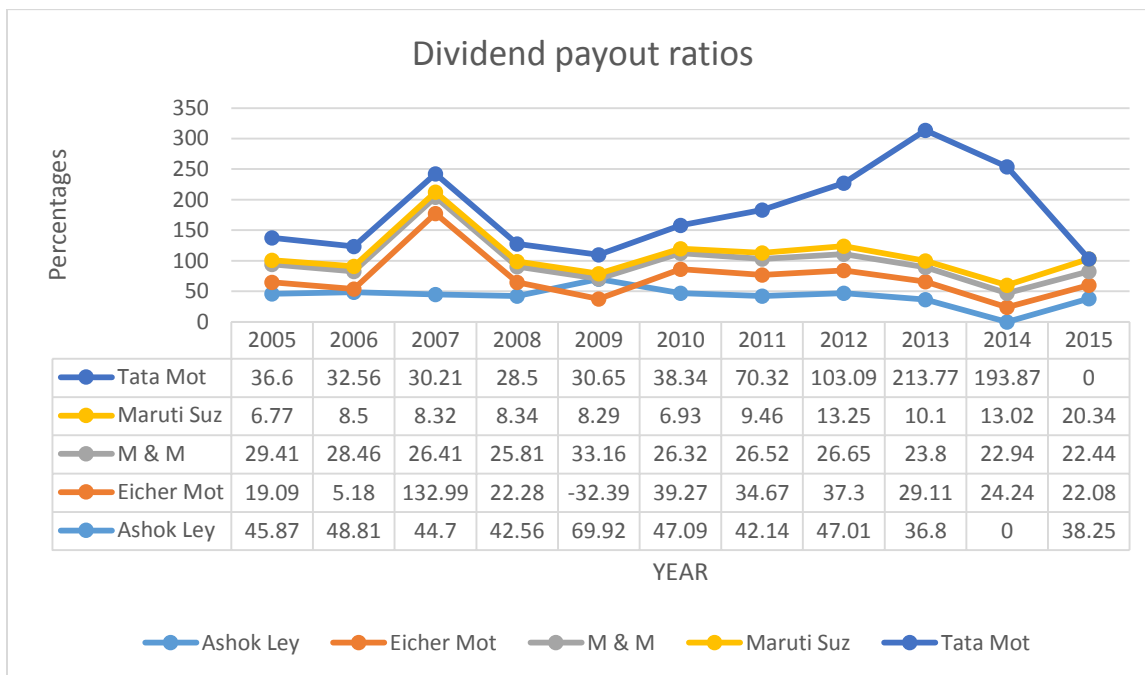


Fig.5.25 Dividend payout ratios of Ashok Leyland, Eicher, M & M, Maruti Suzuki, and Tata

The Dividend payout ratio (DPR) of Ashok Leyland is the highest among the auto companies of India in 2004/2005 and 2005/2006 at 43.87% and 48.81% respectively as compared to the lower DPR of the other companies.

This indicates that Ashok Leyland pays higher dividend in the first two years. It is a deliberate policy of the company to pay high dividend, though with a higher retention. It reduced in 2007/2007 and 2007/2008 to 44.7% and 42.16% respectively.

However, in 2006/2007 Eicher is disposed to pay the highest DPR of 132.99% above the other companies, with retention of -32.99% to indicate payment of 100% of earnings as dividend, a policy that cannot be sustained for a long time as it is shown in subsequent years. Ashok Leyland

continues to pay a higher dividend than the other companies from 2007/2008 to 2009/2010; it paid more than the percentage retained in 2008/2009 at 69.92%. This is evidence of regular payment of dividend in a proportion higher than other companies in the industry, which shows a determination to satisfy the desire of shareholders. In later years it was needful to strengthen the financial base of the company, hence a 100% retention in 2013/2014 by the company.

Then, from the FY2010/2011, Tata records the highest DPR up-to 2013/2014, thereafter retaining 100% in FY2014/2015. It is only a sign of good performance in terms of profits, because dividend is part of profit distributed to shareholders as a reward for investing in the company.

All the Indian companies pay dividend but at varying ratios. Maruti Suzuki paid the least dividends all through the period of the study, meaning they have a policy of low payout but high retention. This policy will only be of interest to wealthy shareholders, but the average shareholders desire more dividends than retention.

The DPR of Japan auto companies are depicted in Fig.5.25. Nissan paid the highest dividend in 2004/2005 to 2007/2008 at 20.4%, 28.4%, 33.5%, and 29.3% respectively. The company had 100% retention in 2008/2009 and 2009/2010, which implies that dividend were not paid in those years. HMC paid the highest dividend in 2011/2012 and 2013/20 at 50.1% and 29.3% respectively. The companies tried to pay dividends at one point or the other, except in few years they had to do 100% retention.

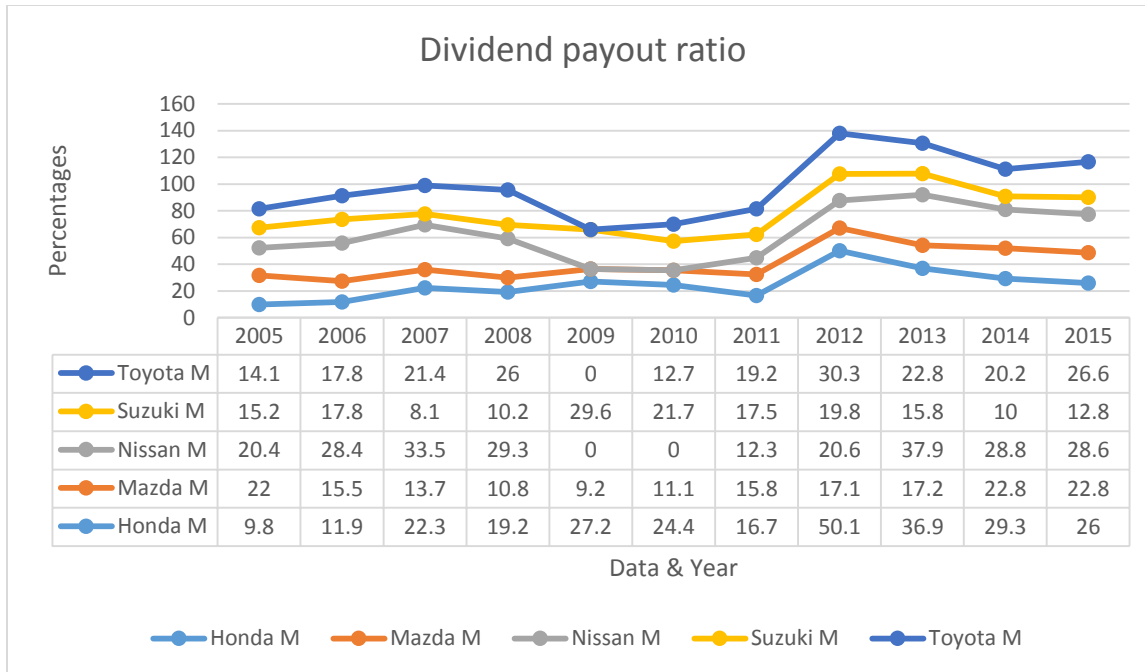


Fig.5.26 Dividend payout ratios (DPR) of Honda, Mazda, Nissan, Suzuki, and Toyota.

### 5.3. Analysis of stock performance

Performance of stocks at the capital market is an indication of ability of firms to be competitive, an allurements to investors. The stock exchange market is characterized by volatility of stock prices; it is therefore necessary to observe this movement of stock prices of firms over time before deciding which one(s) to invest in.

#### 5.3.1 Stock performance analysis of Indian Companies

Fig 5.27 depicts closing stock price movement for the Indian automobile firms under study. It shows a high volatility of the stock price of the firms. Tata price movement show that it was US\$107.71 in 2006 but crashed to US\$-19.23 in 2007, US\$-14.32 in 2008, and US\$75.08 in 2009. It rose in 2010 to US\$414.47, a rise that is very high to be sustainable as is seen in the following three years. This tells that the high price in 2010 cannot be seen as allurements to investors, rather, it is a period to watch because what follows after a sudden rise in price is crash in price. At that high point, which is the reversal point, investors are advised to wait because what will follow is down swing in price. Usually, when this occurs ‘smart money’ will exit and the ‘uneducated money’ stays and suffers greatly. The period between 2011 and 2014 is a clear invitation to buy or hold because subsequent move will bring about a rise in price.



The close price of Maruti Suzuki records a fall in price in 2007 and 2008; this improved in 2009 but could not be sustained, hence a decline again in 2011, 2012, and 2013. This portrays a period of more decline in price than a rise in price. However, it is noted that the decline is not too sharp as was the case of Tata. But the rise in 2015 should not be seen as fantastic performance of the firm, but could be attributed to other factors such as noise at the market place, greed of investors etc., it is the year that requires selling of stock rather than investing.

The trend of Mahindra & Mahindra also resembles the earlier two firms, except that the fluctuation of price between 2011 and 2015 is only moderate such that a steadier price outlook can be anticipated in the future, showing that investors should put their investment in the company and an attraction to new investors.

The year 2006 is particularly bright for all the firms except Eicher that experienced a negative price. And the year after the global economic crisis was also very smooth for all, which implies that investors should be watchful to make any investment that year, it is not clear to distinguish between good and bad stock as they all seem to be doing well. Eicher shows a good outlook from 2011 to 2015. This trend is important because consistency in upward movement of price is an indication of good performance, but if it becomes too high, then we have to exit fast as not to be caught in a web of losses.

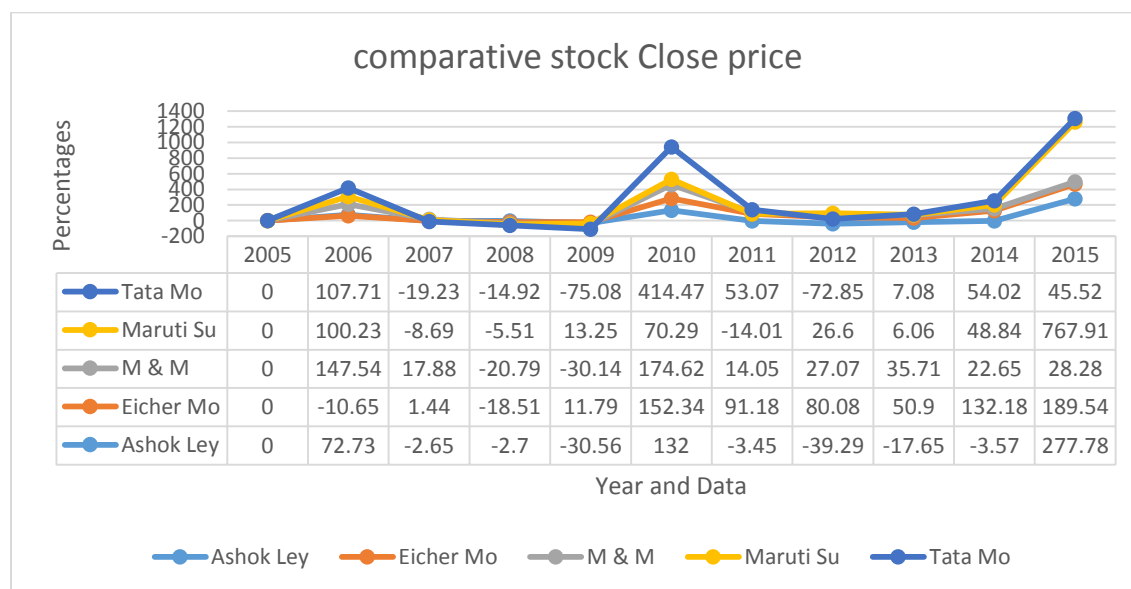


Fig.5.27 Comparative stock close price(percentage increase/-decrease) from 2005 to 2015 of Ashok Leyland, Eicher, M & M, Maruti Suzuki, and Tata.

The close stock price of Ashok Leyland does not show an impressive performance that should attract investors; after posting a negative price for seven years, it surprisingly rose to a record high of UA\$277.78, this however should not bother a smart investor for it is triggered by other factors than performance.

Generally, in the Indian automobile industry and among the firms under investigation, Eicher has a better market performance than the rest firms, its stock price is moderately high and consistent; this is followed by Maruti Suzuki and M & M, in that order. The worst hit is Ashok Leyland, that investors are advised to tread carefully before the thought of investing in their stock at the moment.

### **5.3.2 Stock performance analysis of Japanese Companies**

In respect to the Japanese companies under study, fig 5.28 show their stock close price performance.

Toyota shows a decline in price in 2008 from the figure of 2007, a decline of 21.28%. This decline in stock price continued until 2015, though there is stability in price after 2011 pointing upward, the general decline recorded from the base of 2007 notwithstanding. The indication of this trend is that the performance of Toyota at the stock market stands out to be good and investors are encouraged to invest or hold their investments.

The case of Suzuki is different from the scenario noted above of Toyota. Suzuki has a low stock price, but volatility is minimal throughout the study period, which is a good signal for investors to invest. Investment is made not necessarily because of high price but stability in price. It is an indication of investors' confidence over years. This performance is good, especially for new investors.

Honda is having a stock price movement that should interest investors. The general stock close price is moderate, and with less volatility. A rise for two years, and a decline for two years; then a continuous rise for some years and marginal downward movement towards the end. Holding the stock of this firm for a long period, like Buffett usually does, will enhance wealth of shareholders.

The performance of Mazda is the least among the automobile firms from Japan selected for the study. The volatility is quite significant, as the differences in prices are wide. The apathy of investors towards the stock of Mazda is reflected in the volume traded, which is zero most of the

years. Smart money should exit at the moment and potential investors may decide to look elsewhere before plunging their hard earned incomes.

Nissan records a low performance at the stock market throughout the period, though better than the performance of Mazda. Price is generally low and volatile; decline started from 2008 to the end. The price never got the level of the 2007 price of US\$21.4 till the end of the period. Though in-between, there are downwards and upwards intermittent fluctuations. Investors may decide to stay away from this stock meanwhile until there is improvement; but be watchful because what follows a long period of low price is rise in price, so it may be the right time to invest.

On a general note in the Japanese automobile sector and among the firms under study, Toyota has the best performance at the stock market, followed by Honda, Suzuki, Nissan and the least, being Mazda.

We conclude this sub-section by noting that stock of Japanese automobile firms are better in the stock market, especially in terms of volatility. Although, Eicher from India has a good performance. In other words, investors could consider the Japanese automobile firms for investment than their Indian counterparts, though to watch closely, Mazda and Nissan. Eicher, Maruti Suzuki, M & M, and Tata are also good at the India side.

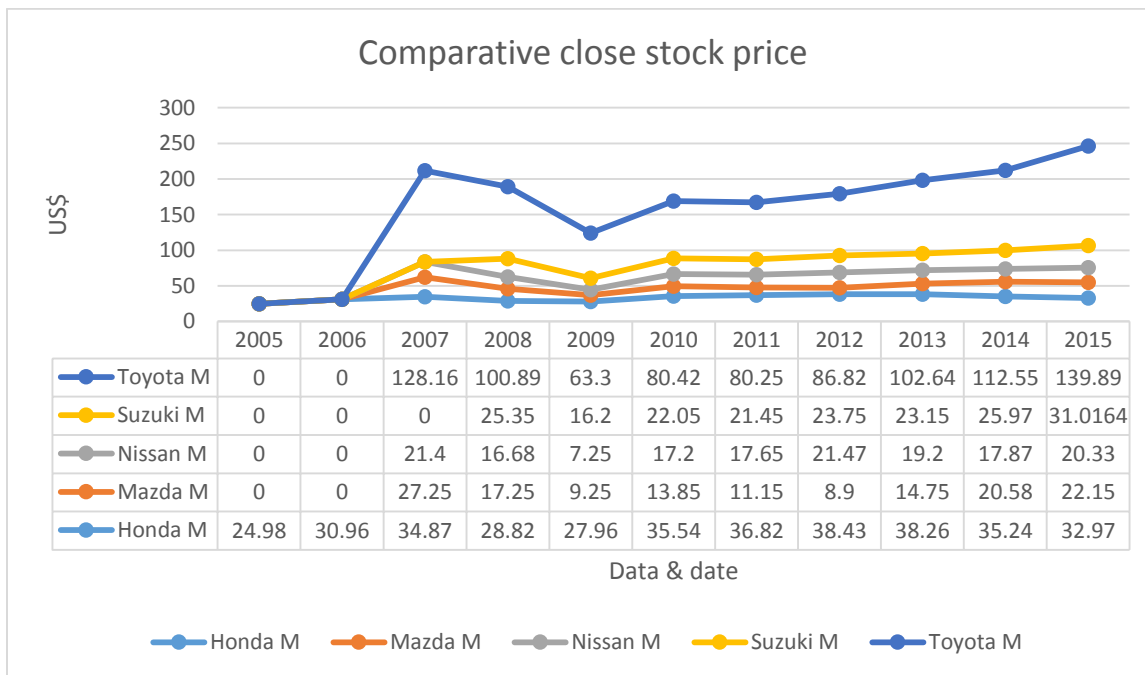


Fig.5.28 Comparative stock close price of Honda, Mazda, Nissan, Suzuki, and Toyota.

#### 5.4 Comparative performance of Indian companies and Japanese companies

This study is poised to compare the performance of automobile companies of India and the ones of Japan so that investors would be guided on their destination to invest.

In terms of **leverage ratio** which serves as an indicator of solvency, performance of the two groups are quite different. Indian companies employed low debt to finance capital and assets, averaging less than 1:1. The least being 0.06(Maruti Suzuki) while the highest is only 0.80(Tata). The significance of this is that the Indian companies are safer for investors regarding their ability to repay long term debts when they become due without strangulating the companies. This is usually beneficial to investors whose risk level is seen as low and tolerable. On the other hand, the Japanese companies employed more debt capital and more debts in acquiring assets. On average, Nissan has the highest debt-equity ratio of 3.35times and the least is Mazda having 0.14 times, and thereby exposed to higher risk than their Indian counterparts. It is to be noted from the analysis that since the Indian companies employed less debt in their capital structure, they should be ready to tolerate control dilution since they have to use more equity financing. Then, Japanese companies will contend with high risk to investors but will hold grip of control.

However, since the automobile sector requires intensive capital investment for innovations and research & development which is critical in the sector, it will amount to huge gamble to underestimate the massive fund that could be raised through debt than through equity. Hence it is seen that the Japanese companies do better in terms of advanced technologies in the industry due to huge investment. This idea may have been responsible for the high production output, higher sales, high profits, and high performance in other indicators of the Japanese companies. And it is observed that Mazda which has the lowest debt-equity under the Japanese companies, is only struggling to stay in business in terms of production output, sales, etc. if the cost of debt can be off-set by better sales income and profit and robust cash flows, then it is worth the risk to use more debts.

**Liquidity ratios.** On the basis of liquidity, both Indian companies and Japanese companies did not perform well. The Current ratios were below the required standard of 2:1; Indian companies has an overall average of 1.17times while Japanese companies has 1.24 times, the difference is only marginal and cannot be said to attract remarkable advantage. But on the basis of Quick ratio, the outlook is different. On India side, two companies were able to have an average above the minimum of 1:1 (Eicher 1.01 and Maruti Suzuki 1.26), which was also applicable on the Japanese side, where two companies made the minimum average (Nissan 1.11 and Suzuki 1.11). Maruti therefore is the most liquid on the basis of QR, followed by Nissan, Suzuki, Eicher, and etc. Quick ratio is a more conservative method of determining liquidity, having eliminated a slow moving asset (stock) from list of current assets. With the situation of the companies in respect to liquidity, investors should consider the stability of cash flows before the final decision to invest in any of the companies and in any country.

**Profitability ratios:** The different profitability ratios give different interpretations about the performance of companies, and should not be considered in isolation in making investment decision.

Gross profit ratios of the companies from Japan performed better than the companies from India because their GPRs are higher. The average of the Japanese companies are: Honda 26.85%, Mazda 18.03%, Nissan 19.73%, Suzuki 24.51% and Toyota 16.61%; whereas on the Indian side they are: Ashok Leyland 9.49%, Eicher 17.06%, M & M 14.04%, Maruti Suzuki 14.0%, and Tata 10.58%. It clearly shows that Japanese companies did better than Indian companies in terms of their GPR, even the least from Japan is higher than most of the companies from India at 16.61% of Toyota, only less to that of Eicher 17.06%, other components of profitability ratios have to be considered also for a better guide.

Net profit ratio considers profitability after deduction of expenses incurred in the gross profit, which is a pointer to better control of expenditures and other variables that affect profit by Management. In some years, Japanese companies record higher NPR than the Indian companies and vice versa. For instance, in 2005, Toyota records the highest NPR while in 2006, M & M records the highest NPR. However, on the average, Indian companies stand as: Ashok Leyland 4.54%, Eicher 9.17%, M & M 9.09%, Maruti 7.46%, and Tata 5.46%; while Japanese companies record Honda 5.97%, Mazda 10.45%, Nissan 5.36%, Suzuki 2.45%, and Toyota 5.07%. It is appreciated that the Indian companies have better performance in respect to NPR. This is not unconnected with the high debt financing profile of the Japanese companies that bear the high burden of fixed annual interest and other charges which is a charge against profit. This is evident from the fact that, Mazda from Japan that employs less debt has the highest NPR among the Japanese companies, thereby establishing a relationship between high debt utilization and less NPR. The extent this high NPR translates to higher growth, productivity, and higher dividend is another consideration.

Return on equity enables potential investors to have an insight on what they expect from their equity investment in particular companies. As a profitability indicator, a higher ROE is the desire of investors. ROE of Japanese companies are: Honda 9.9%, Mazda 21.36%, Nissan 10.53%, Suzuki 7.65%, and Toyota 9.97%; while those of Indian companies are: Ashok Leyland 16.85%, Eicher 27.34%, M & M 24.06%, Maruti 17.07%, and Tata 13.98%. Indian companies in the study

have better ROE than their Japanese counterparts which is an indication of better utilization of shareholders' fund to generate income. Most profitability ratios tied to net income will have this type of trend because of huge debt financing on the part of Japanese companies which is very important in the automobile industry, however, the study is not suggesting that Indian companies did not finance using debt, but that Japanese companies invested more. Even in the case of ROA, the trend is the same. It will be appreciated how this huge investments by the Japanese companies, impact on them when consideration is given to other indicators, including innovativeness, output and other variables.

Earnings per share is important to investors, as this states the figure in value of the prevalent currency, so that what they expect from their investment is quantified in dollar or rupees as the case might be. What the investor will earn per unit of his share encourages or discourages him to or from investing. The average EPS of the Indian companies are lower than the ones of their Japanese counterparts. They are: Indian companies: Ashok Leyland \$0.036, Eicher \$1.16, M & M \$0.53, Maruti \$0.71, and Tata \$0.20; while Japanese companies have Honda \$2.07, Mazda \$0.21, Nissan \$1.33, Suzuki \$1.18, and Toyota \$5.16. This result is quite interesting as the impact of huge debt financing as against equity financing is playing out here with a higher EPS for higher debt financing companies.. The totality of it is that since there is increase in equity financing on the part of Indian companies, what is due to the equity shareholders in terms of earning per unit of their share will be smaller when compared with those who employ more debt financing. This is so because the number of equity shares increases with more equity financing, leaving what is available in the form of net income for more to partake in sharing. Hence EPS for Japanese companies look better and brighter since they would have lesser shareholders who participate in sharing the net income. This indicator is so important that IFRS requires companies to state their EPS below in the Income Statement.

This trend is also noticed in the Dividend per share (DPS) of the companies, whereby more dividend is available to the Japanese companies' shareholders than the Indian companies' shareholders as below: Honda \$0.63, Mazda \$0.04, Nissan \$0.4, Suzuki \$0.16, and Toyota \$1.37; whereas Indian companies have Ashok Leyland \$0.01, Eicher \$0.19, M & M \$0.13, Maruti \$0.08, and Tata \$0.09. It is asserted that Mazda has the least DPS among the Japanese companies because of very low employment of debt financing.

Dividend payout ratio is another ratio tied to net income. It provides information on how much of the total dividend that is eventually paid to the shareholders in terms of percentage, this is important because some companies follow a policy of more retention than payment of dividend. Dividend payout ratio of the Indian companies are: Ashok Leyland 42.11%, Eicher 30.35%, M & M 26.54%, Maruti 10.3%, and Tata 70.72%; while the ones of Japanese companies are: Honda 24.89%, Mazda 16.18%, Nissan 21.80%, Suzuki 16.22%, and Toyota 19.19%, the figures being averages of the various companies. The conclusion to be asserted here is that Indian companies pay more percentage of their earning as dividend than the Japanese companies. In both countries, there are years when dividends are not paid at all and entire earnings retained to strengthen the companies financially.

Further, they all on average retain more of their earnings than are being paid out, but the basic issue here is that the proportion paid out is higher in the case of Indian companies. The two groups have good dividend policies that should not scare investors, since higher retention improves on wealth of shareholders.

**Activity ratios:** Inventory soundness and prowess of Management in the management and control of assets is made clear as a result of activity ratios. Inventory turnover ratio is an important component of activity ratios. It measures how many times inventory is sold and replaced within a given period. The position of the companies in this regard is as follows: Indian companies; Ashok Leyland 6.48 times, Eicher 13.97 times, M & M 12.91 times, Maruti 20.9 times, and Tata 8.95 times. And Japanese companies; Honda 7.26 times, Mazda 7.67 times, Nissan 8.43 times, Suzuki 10.43 times, and Toyota 12.45 times. The above data shows that on the average, Maruti from India has the highest ITR of all the sampled companies. ITR of the Indian companies are higher and better than those of the Japanese companies, indicating a better inventory management on their part. In each country, we notice that company having highest ITR is likely the leader in that country in terms of market share and penetration. In India Maruti appears to have the greater market share with the highest ITR, while in Japan, it is Toyota. The data for Japanese companies shows that sales have been on the decline which has affected the outlook of their ITR.

And as it relates to assets turnover ratio (ATR), the data are: Indian companies, Ashok Leyland 1.13 times, Eicher 1.34 times, M & M 1.28 times Maruti 1.6 times, and Tata 0.95 times; while Japanese companies have: 0.84 times, Mazda 1.39 times, Nissan 0.73 times, Suzuki 1.25 times,

and Toyota 0.69 times. As this ratio indicates efficiency or lack of it in assets usage, it would be obvious to deduce that Indian companies are more efficient in utilization of their assets having higher ATR. And this could bring confidence in investors to put in their money since it is believed that their investment is in the hands of efficient and prudent management.

**Stock performance:** Stock price movement at close of trading of Indian companies for the period under study show wide range volatility for all the firms characterized by rising and falling prices. A considerable high price at the beginning and a decline the next year which remained low for three years (from 2007-2009), witnessing an increase in 2010 and plummeted again in 2011 continuing to 2014; again rising in 2015. This indeed is difficult to predict stock price movement, but it can be established that when there is decline in price, it takes at least two years to witness an increase; whereas an increase does not last beyond a year before another decline. On the other hand, volatility of stock price of the Japanese companies are not as steep as those of the Indian companies. After the initial rise in price, it decline and remained almost horizontal for a long time, except in the case of Toyota that witnessed an increase after three years and continued on a marginal level increase over the rest of the period. It is therefore easier to predict the stock price of Japanese companies. Volume traded over a period plays important role in the buying and selling of stock; this should be considered in addition to the prices of stock over a period to have a better decision on whether to buy or sell or abstain. Volume traded in respect to the Indian companies' stocks are higher than those of Japanese companies. In fact, during the period under study, some Japanese companies had zero volume (e.g., Mazda, Suzuki), and others have unsteady volume of rise and fall. However, the Indian companies continued to have traded volume throughout the period and witnessing upsurge in some years, especially in the National Stock Exchange (NSE). The Indian stocks are better patronized by investors than the Japanese companies, this may be due to growth in the economy, more people coming into the middle income bracket, political and economic stability, and the fact that India is an emerging economy attracts investors from outside the country.

### **5.5 Beyond the Ratios.**

Having analyzed most of the ratios that their interpretations will influence investment decisions of investors, we now discuss some other factors that are likely to influence investors' decision to invest in a particular company.



### **5.5.1 Research and Development**

The treatment of this item in accounting continues to generate controversy, despite the provision of IAS-38 where it is recommended to be expensed in the Income Statement, some practitioners strongly feel it should be amortized over some reasonable period, its treatment by IFRS stands acceptable, until further stand is initiated. What should concern the investor is not the method of treatment, rather the volume of it in a particular industry. It is argued by some that high R/D cost is not desirable if we need to identify a company that has competitive advantage Buffett, Clark(2). The necessity to have high R/D cost depends largely on the industry. In the automobile industry high R/D is considered important element to stay competitive. Automobile companies go into vigorous innovation activities to stay in business; they have to improve on designs, performance efficiency in terms of speed, fuel consumption economy, environmental safety, safety devices of users, etc. in other words, investors should be weary of companies spending insignificantly on R/D because such companies will not be competitive enough to make enough profit that would guarantee adequate return on equity. Whether Intellectual Property is acquired or created, it is an important and necessary cost that stimulates growth in the automobile sector. This is the position of the Japanese companies as this study reveals; the Indian companies are trying but need to improve.

### **5.5.2 Stock Buybacks**

The performance of a company doing well is reflected in various indicators of financial health and profitability. Most of these indicators have been discussed already under Ratio analysis, however, one other salient indicator is the ability of a company to buy back its stock. This definitely is an indication of good accumulation of cash not being immediately needed for deployment. The company uses such idle cash to buy-back its stock, which is a financing outflow. A company having a sluggish growth will not contemplate such policy. Investors should also consider this indicator and if present in a company's Cash flow statement, then consider the company for investment.

### **5.5.3 Cash flow**

Cash flow statement is important in determining liquidity ability and potential of a company. The cash flow statement, unlike the income statement is only concerned with coming in and going out

of actual cash. It is divided into three segments: - i. cash flow from operating activities, ii. Cash flow from investing activities, and iii. Cash flow from financing activities. You need to determine the component of operating activities which is regularly contributing to operating cash flow of the company. A company that gets its net cash more from operation has more stability in providing the needed working capital.

In this study the ratio is considered a veritable tool in the hands of the investor for the purpose of investment decision; the performance of stocks in the capital market is equally important to the investor. The study therefore, applies ratio analysis and stock performance analysis to provide the needed information by investors for their investment decisions. Every investor is concerned about the safety of his investment, having worked so hard to accumulate the money he wants to invest. He also wants to be sure of the financial soundness of the company he intends to invest; and he wishes to assure himself of the continuity of the firm by having the ability to constantly earn profit. These issues and many more are resolved when financial analysis is carried out about a firm.

In addition to financial analysis, investors are also interested about how firms are performing in the capital market. The capital market is the platform where stocks, bonds, and other capital assets are traded. In this market, the open stock price, high price, low price, and close price, of stock are made available for a period of time. Investors will ascertain the viability of a firm in relation to its price at the market and volume traded each day. Invariably, stock performance analysis is another excellent idea to guide investors before plunging into any investment decision. Therefore, a combination of financial analysis and stock performance analysis will make for a wise decision for the investor; thus culminating to fundamental and technical analysis.

### **5.6. Investment Behavior as influenced by Financial Statement Analysis**

Financial analysis is a means whereby we establish a meaningful relationship between different component items of financial statements, especially the income statement and balance sheet, in such a way that conclusion is drawn about them by interested parties.

The purposes of making financial statement analysis are: determination of profitability, to show trend of achievement of a particular firm, estimate growth potential of the business, compare one company with other companies, determine overall financial strength, assess soundness of the firm.

Bearing this in mind, how do we say that financial statements analysis has influenced investors in making financial decisions?

The decision to invest or not is in the domain of the investor, but analyst will get the facts before him so as to make wise decision, as a direct effect of the financial statements analysis.

On the basis of solvency, investor's behavior is influenced in that he sees from the analysis that the firm he intends to invest in is having sound financial state of health, because the indices of solvency are prevalent in a company's figures. For example, total-debt ratio is comfortably low-about 1:1; debt-equity is good-assets is financed more from owners' fund than outsiders' fund, etc. however, if the debt burden is high, then the investor will display some reluctance in investing. How many suitors will go for a beautiful girl with a terminal sickness at advanced stage? This is how investors behave on seeing an unhealthy business by its financial statements analysis.

Activity ratios tell how efficient the business is able to utilize its assets in a particular period. This financial barometer is important in assessing prudent management, without which a company hardly survives. Efficiency in utilization of assets implies more sales which nets more income to boost profit, as such investor is keen in knowing how management will be able to put to profitable use his investment in assets by generating more sales. The assurance of this will definitely influence investment behavior. High activity ratios is desirable and a comparison should be made over years to establish a trend of performance. Turnover is the major source of revenue and high velocity of stock guarantees this.

Illiquidity is a serious ailment in business-short term obligation will be defaulted, credibility will suffer, loss of confidence, inability to meet customers demand, etc. Liquidity ratios indicate the ability of business to pay short term debts as they fall due without stress. The status of a company's liquidity ratios could also improve on the hidden earnings power of a company, because it is all about good name that will boost confidence. A high ratio is desirable as this guarantees investors of their regular receipt of what is due them without recourse to litigation. It could also prompt expansion in business, a liquidity saturated company that is efficiently managed is able to attract best trade conditions. Investment behavior will obviously be influenced by this analysis, a high ratio will be an invitation to invest and vice-versa.

Earning profits is at the heart of any business, all the activities of a business is directed towards making more and more profits. The profit making abilities of a company is revealed from the calculation and analysis of profitability ratios. As these ratios are high and show an upward trend over a long period, then the investor can estimate the future profit potential of the firm. Comparative analysis is made among firms in the same industry and those with higher profitability ratios are always preferred for investment.

Financial statement analysis should not be the only source of information that is needed by investors to make investment decisions, other sources should also be explored, especially considering the fact that there are limitations attached to financial statements analysis. Getting information from different credible sources is key to making rewarding investment decisions.

### **5.7. Investment behavior as influenced by stock performance analysis**

Stock performance is done to ascertain the direction of trend of stocks of firms in the capital market and take a decision whether to invest, hold, or sell. Investment is made with the hope of reaping from the firm's positive performance in terms of profitability.

Investors look out for the stock prices over a time period-whether it is up-trend, down-trend, or sideways price; they also look at the volume of stock traded, and percentage of change in each case. It is believed by many that stock of firms that are not doing very well at the market are always snubbed by investors, so high volume may indicate that the firm is viable in the future.

A careful technical analysis will put at the disposal of investors the needed information for investment decisions. Investors are able to predict future prices of stocks based on their trend lines over some period of time. This implies that past movement of prices is a sure guide to predict future course of action. Penitent questions are asked here; what is the price? Where has it been? Where is it going? On accurately or sincerely answering the questions, the direction of movement of future price is almost guaranteed.

Can this position ever influence the investor while making his investment decision? When a bullish outlook is perceived and for a long time, the investors' behavior will likely be to believe that the next move will be fall in price, as such he is unlikely to invest. And when price is low

(bearish), he will be ready to invest, believing that price will go up soon. So that investors monitor the resistance level and support level as to determine whether to buy or sell or hold.

Investors are ultimately going to behave in a manner that will be supportive of the trend in the stock market. An investor initially may be interested watching as events unfold in the market and decides his next line of action.

The activities in the stock market are propelled by greed and fear. Greed makes investor stay on when the market is bullish, believing that it will last a long time, but this seldom happens so- rather the reverse is usually the case.

Fear on the other hand prevents the investor from deciding to invest when he is not sure of the direction of trend. They are the chickens in the stock market who are full with fear of losing money, so will exit the market on the slightest indication of bearish market. But the pigs out of greed do not take due diligence before investing.

When the market is bullish for sometimes, it calls for caution on further investment, the smart money will sell and wait when the market becomes bearish as to invest again. Either of the conditions do not last for too long a time, each moment is a phase in the market which is usually temporary.

### **5.8. Understanding company's performance through the analysis**

There are indicators of performance and growth in a company. A company is expected to make enough income that will boost profit, ultimately increase the wealth of stockholders. The performance indicators are highlighted through both fundamental and technical analysis.

On the basis of fundamental analysis, we rely on analyzing performance in relation to solvency, liquidity, efficiency, and profitability vis-à-vis what is the situation in the national economy, the industry, the individual company, and other variables that may be important. Thus, a company having a lower debt-equity, lower debt-assets is considered better in terms of prevalent risk. A better and more efficient utilization of assets will prove that such a company will earn more income and by extension increase profit. A more liquid company has better safety net for investors, than company with liquidity crisis. And most importantly, higher earnings is an indication of better performance that is revealed during analysis of financial statements.

Stock performance analysis leads to determining the direction of future price as a result of empirical prices of the past. The sustenance in up trend of a company's stock price indicates a positive performance, which if properly analyzed and taking other variables into consideration, will enable investors to be attracted to the company.