

Impact of Global Financial Crisis 2008 on Automobile Industry

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Abstract

Global financial crisis has formed bad impact on automobile industry in USA, like Suzuki, Hyundai and Honda from 2008-2010. The companies' sale decreased because of market situation and slump in world economy. Now economic conditions are getting better by having good financial policies and market exposure. This research study will explain the importance of debt to equity ratio in term of risk exposure being taken by the firm in market to finance the business and also analyze the importance and effectiveness of debt to equity for automobile sector. This study is based upon the three major players of industry to signify the risk exposure in term of debt and equity during a period of financial crisis and then how they manage it while looking at international financial regulations accordingly. Suzuki overcame this situation by keeping focus on R & D, marketing and manufacturing units. It has also changed its exposure of debt to equity, in the meantime of financial crisis it is having more financing through common stock. Hyundai overcame this situation by focusing on stakeholders like customers and employees. And due to this strategy the crisis has created the low effects on the Hyundai profitability and sales. The Honda after the recession they began to again paying keen attention on its performance and increased its sales by introducing the innovation in its different models by launching the hybrid fuel efficient models. And it also keeps on focusing common stock rather than lending from risky source. It also explained the role of Federal Reserve Bank to control financial crisis all over the world. In the end this paper will compare the market exposure of debt and equity of three companies and suggest some recommendations to be more secure in future if same crisis revert again.

Keywords: Financial Crisis, Automobile Sector, Debt-to-Equity Ratio, Federal Reserve Bank.

Paper Type: Research Paper

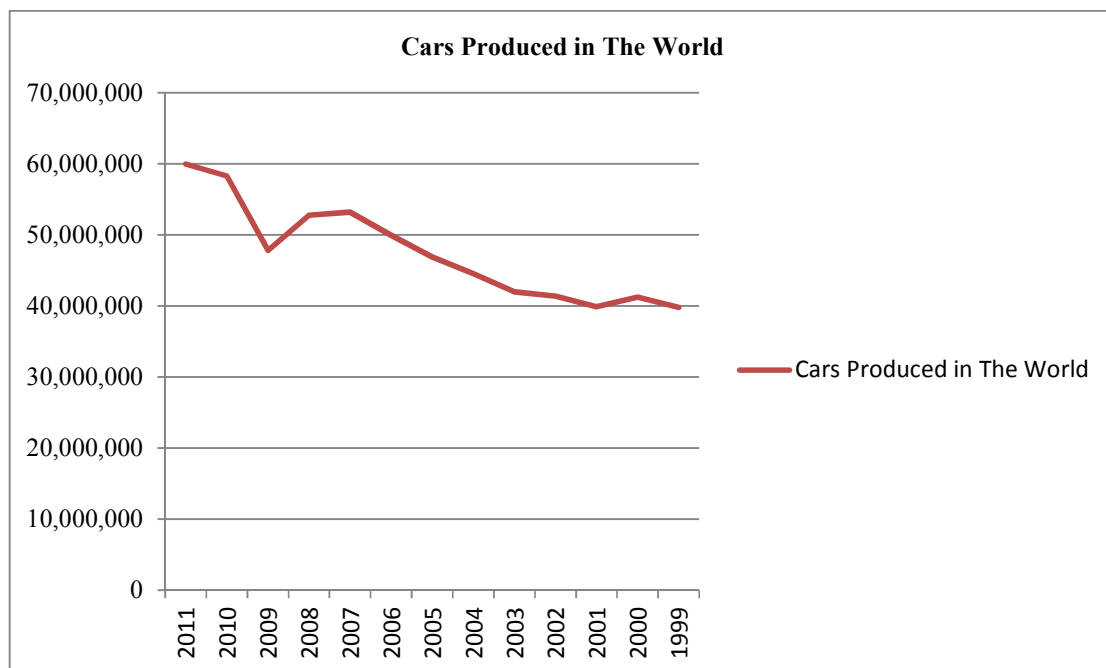
1. Introduction

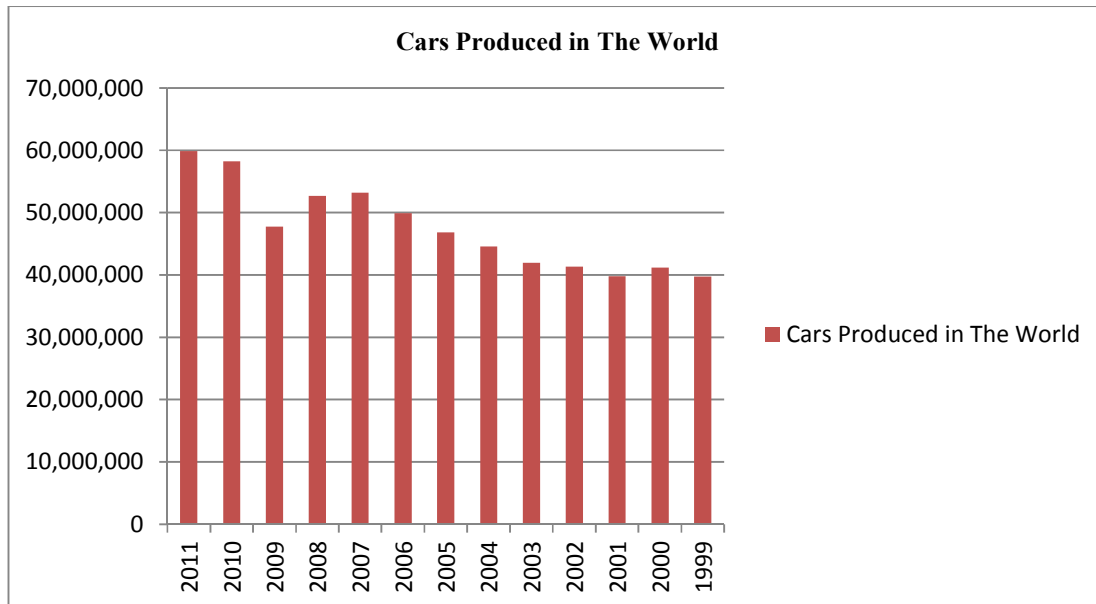
Global economic crisis started in December 2007 and took a sharp down turn in September 2008. That great crisis has affected the whole world's economy, with great harms in different countries. This recession separated into two senses of the word "recession": a less precise sense, referring broadly to an era that reduces the activities of the economy " because unemployment, inflation increases so the buying power of the buyers decreases and another sense is the scientific that used most frequently in economics, which is defined operationally, it refers specifically to the decline phase of a business cycle, increase in raw material prices and the fuel prices increase.

The automobile industry become very weak due to increase in the prices of fuel which is also cause to discouraged the purchases of sport utility vehicles (SUVs) and pickup trucks which have low fuel economy. The reputation and high profit margins of these vehicles has positively influence the American "Big Three" automakers, General Motors, Ford, and Chrysler to make them their primary focus, with fewer fuel-efficient models to offer to consumers, sales began to slide.

Car production trend all over the world is:

Year	Cars Produced in The World
2011	59,929,016
2010	58,264,852
2009	47,772,598
2008	52,726,117
2007	53,201,346
2006	49,918,578
2005	46,862,978
2004	44,554,268
2003	41,968,666
2002	41,358,394
2001	39,825,888
2000	41,215,653
1999	39,759,847





Car companies from Asia, Europe, North America, and in another place have implemented creative marketing strategies to attract unwilling consumers. In that era there is double digit decline in sales. In December, American automobile manufacturers sustained at 32 percent Ford and 31 per cent for General Motors. And Japanese demand also diminishes by 38% reported in February 2008 (Tom Krisher (2008)). Suzuki decreased the sales in those years by 21.97% and Honda decreased its sales by 13.72%, But Honda follow the strategy to offer fuel efficient models to boost up the sale and to survive in the recession, just two models of Honda posted positive trend for the month means boost up the sale of Honda; the fuel efficient Honda Fit and the new for 2009 Acura TSX. Due to more decline in sales of Japanese market and companies faces the heavy loss, by considering this Japanese government planned to offer the bailout package \$5 billion through semi-governmental organizations, Honda require bailout only \$100 million due to its fuel efficient models because they boost up the sales of Honda (Sturgeon, 2010).

2. Background Information about the Companies

SUZUKI

The Suzuki Company was founded in 1909 by Michio Suzuki as the Suzuki Loom Works. With the success in looms for more than 3 decades, Suzuki diversified its potential to other products. In 1937, the company decided to make small cars as per consumer demand. In 1955, “the Suzulight”; the debut car was introduced after several years of Suzuki’s research and development. In the beginning of the 1960s, Suzuki introduced a new model, the “Suzulight Carry” to its light weight cars family. In the 1960’s decade, “Suzuki Fronte 800” and “Carry Van” were also introduced to extend the brand’s product line. In the beginning of 1970s, the brand introduced a new four wheel drive model, named “Jimmy.” At the end of the 1970’s decade, Suzuki became popular in the middle class consumers and its production also increased.

In 1980, General Motors took 5 percent of Suzuki stakes to get into more business and the small vehicle of this Japanese automaker became very popular in the American market. This joint venture lent General Motors the chance to sell Suzuki vehicles in the United States. In the middle of the 1980s, Suzuki established its American station and introduced its vehicles with its own brand. Suzuki “Samurai” was crowned as the first vehicle introduced, a compact SUV available with soft and hard tops. Suzuki’s struggle for production went on and it launched its new models “Swift” and the “Sidekick” SUV. With the passage of time, Suzuki focused to expand exports and its market scope. In

the beginning of the 1990s, Suzuki reached to the South African, European, and South Asian countries. Soon the brand introduced its new vehicles the Esteem, the X-90, "Vitara" and "Grand Vitara" models as a replacement for Samurai and Sidekick. In the year 2004, GM and Suzuki acquired the struggling Daewoo, and in a short time Suzuki introduced its two new models Suzuki "Forenze" and "Verona." Both vehicles were a rebadged version of Daewoo models. (Suzuki Motor, 2010)

HYUNDAI

Hyundai Motor Co. was established in Korea in 1967. The company's first model (Cotina) was released, in cooperation with Ford Motor Company, in 1968. In 1998, Hyundai acquired a 51% stake in KIA, but has since reduced its share to 37%. In 2004, Hyundai was South Korea's largest car maker and the world's seventh largest car maker selling 2.3 million units. Hyundai currently offers about a dozen cars and minivans, as well as trucks, buses, and other commercial vehicles. Some popular entries in their product lineup include the Accent, Sonata, Tucson, Elantra, Santa Fe, and Tiburon, which all earned the title "Best Bet" in Jack Gillis' The Car Book 2005. Hyundai's parent reflecting this trend of low prices and increased market share, in 2004 Hyundai reported a dramatic increase in annual revenues to 50.7 billion dollars and only a small gain in net income to 1.78 billion dollars.

Hyundai's growth is fueled by increasing international sales. From January-September 2005, sales in Russia increased 100% and sales in the U.S. increased 10% year-on-year. To meet this new demand, Hyundai has been investing in manufacturing plants in North America, India, China, Turkey and research and development centers in North America, Japan and Europe. In June 2004, Hyundai opened its first plant in the U.S. In 2006, Hyundai plans to start construction on a new production plant in Europe.

HONDA

Honda Motor Co. was established in 1946. It originally began producing motorcycles in the mid-20th century and began manufacturing automobiles in 1972. After the original Civics' launch, Honda produced many variants of this highly successful vehicle, such as the four-door sedan, wagons, hatchback, coupe, and more recently the hybrid. Honda currently has two automotive brands (Honda and Acura) and it produces over 20 other vehicle models, such as the Accord, Element, Insight, Odyssey Minivan, Pilot SUV, and Ridgeline Truck, in addition to producing motorcycles and power products. In 1977 and 1983, Civic models ranked first in U.S. fuel-economy tests. Honda has also introduced hybrid vehicles such as the Insight, Civic, and Accord, in 1999, 2002, and 2004, respectively, with the 2006 Insight being the most fuel efficient car of 2006.

Currently, Honda ranks sixth in sales within the automotive industry. They have overseas plants in over 12 countries including the U.K., Italy, Brazil, Taiwan, Indonesia, Malaysia, Thailand, Nigeria, U.S., and Canada. Honda has been increasing their production capacity worldwide in response to their steady growth in total sales over the last few years. From 2002 to 2003, Honda increased sales by 95,000 units, and from 2003 to 2004, sales increased by 259,000 units. In China, they saw approximately a 50% increase in sales from the fiscal years of 2003 to 2004, and they expect sales to keep increasing. In the future, Honda has stated that they will keep improving the fuel efficiency of all their vehicles. They will continue to expand their production capacity in Asia, due to the expected increases in demand in those regions.

3. Literature Review

Debt to equity measures how much debt a company has compared to its equity. That means it looks at how much the company owes and divides it by the firm's equity. (Equity is just the opposite of debt -- it is ownership, including shares of stock in a corporation). To state it another way, the ratio compares long-term funds provided by creditors with funds provided by owners -- what a company owes versus the amount of money it has invested in it. It indicates what portion or percentage of equity and what portion or percentage of debt the company is using to finance its business. (Reeve, 2012)

Lot of research studies have been conducted on the issue of capital structure. The first scientific study conducted in the field of capital structure is of Franco Modigliani and Merton Miller (1958). In their study, on the basis of certain unrealistic assumptions like zero taxes, they concluded that a firm's value is unaffected by the level of debt used. In

their second article in 1963, MM considered the corporate taxes and concluded that due to tax deductibility of interest; the use of debt increases the value of the firm. So the firms can use 100% debt.

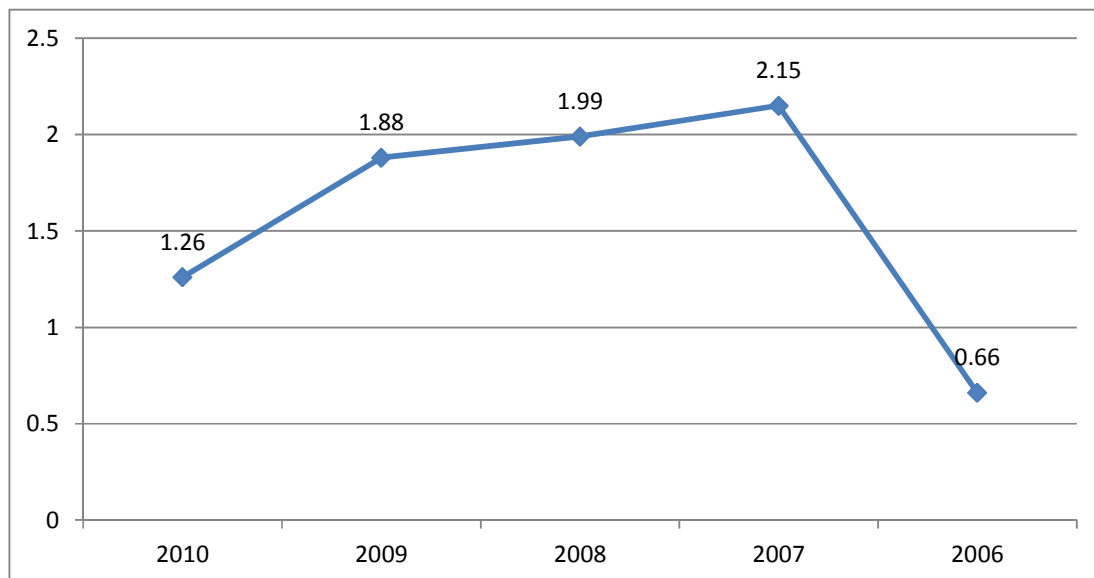
A high debt/equity ratio means that the company has been "aggressive" in financing its growth with debt and that it is carrying a sizable amount of interest expense. A ratio greater than 1 means assets are mainly financed with debt; ratio less than one means equity provides the majority of the financing. "Debt financing is more risky than equity financing because debt must be repaid at specific points in time, whether the company is performing well or not. Thus, higher the percentage of debt financing, the riskier the company would be" (Peterson, 1999).

Debt to equity ratio is pretty important to a firm during a crisis time when businesses face low growth and high cost element in its financial performance. J.H.Boyd explained the situation wher MNCs have to manage their financial ratio while looking at the market exposure in term of financial risk. He also discussed the ideal combination of debt to equity ratio of firm at the time of crisis. And suggested that firms need to rely on common stock rather than to have lending from banks at the time of crisis. Even though common stock in expensive but it provides a shelter not to be bankrupt on their financial exposure. (J.H.Boyd, 1998)

4. Results and Discussions

SUZUKI - Debt to Equity Ratio (Amount in 000)

Item	2010	2009	2008	2007	2006
Total Liabilities(A)	13,881,738	14,404,298	15,034,138	12,413,962	6,114,043
Equity (B)	11,030,223	7,653,592	7,547,781	5,773,011	9,213,791
Debt-to-equity Ratio=A/B(times)	1.26	1.88	1.99	2.15	0.66



In 2006 the company is showing its good performance because its equity is more than its total liability. The company

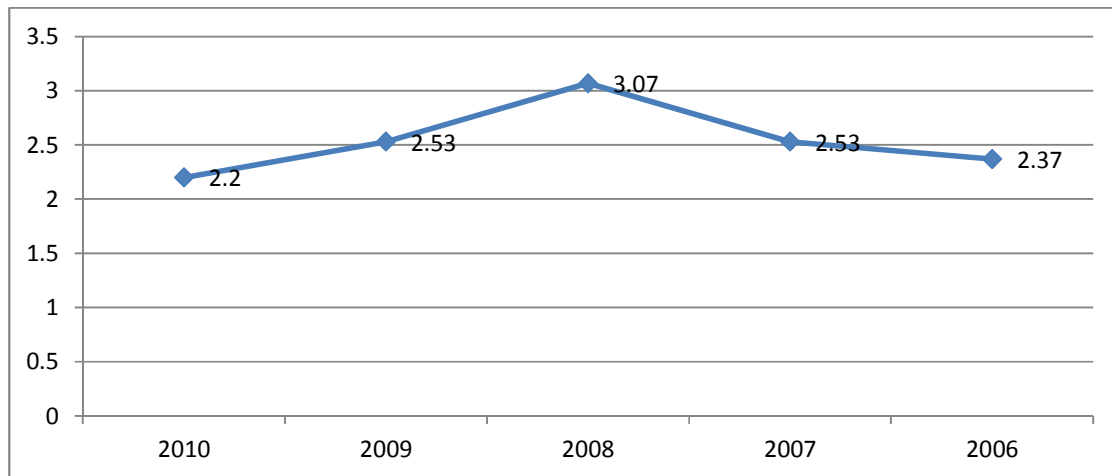
has more ability to pay its debts. Low debt-to-equity ratios may also indicate that a company is not taking advantage of the increased profits that may bring financial leverage. They are generating their liabilities through secured and unsecured loans. SUZUKI has completed the construction of a new manufacturing plant near Delhi in India, in which the SUZUKI has 74% share. In 2006 the SUZUKI's sales in Europe increased by 16% by capturing 2% market share. This all achievements are due to launching of new production in the market according to the changing needs of the customers. Suzuki gives special importance to its R&D in order to become the market champion. In 2007 the debt equity ratio is maximum as compare to other years, its liabilities are almost 100% increased. Here a lot of debt is used to finance increased operations; the company could potentially generate more earnings than it would have without this outside financing. The short term bank loans are \$1,416,657 in which the secured loan is \$6223 and unsecured is \$1,410,433 in this year there is major increase as compare to previous year 2006. In 2007 the long term debt is \$2,018,706 which is 69% more than the previous year. Capital-intensive industries tend to have higher debt-to-equity ratios. In late 2007 the global economic crisis has been started and the company is taking measures in order to prevent from the bad effects of such crisis, because this crisis has increase the overall prices such as raw material, fuel etc. in order to cover the cost and to maintain their sales level they started to generate its liabilities up to 100% as compared to previous year. In 2008 there equity is increased approximately with same proportion of debts, because the company wants to earn profit and to stabilize their position in the market. High debt to equity ratio increased the earnings but the risk behind is the cost of this debt financing may outweigh the return that the company generates on the debt through investment and business activities and become too much for the company to handle. This can lead to bankruptcy, which would leave shareholders with nothing. In 2008 the short term bank loan is \$1,960,178 and the long term liability is 2,537,831 these is a little increment in the liabilities of this year. By keeping this view in minds the company decides to reduce its debts and increase its equity through issuing additional capital in 2009 and 2010. In 2009 the company's sales decline as compare to 2008. SUZUKI faced tough business conditions in March 2009, a market slowdown in Europe and North America due to global financial crises. In 2009 Automobile sales have dropped in various parts of the world, however, on account of the world financial crisis, and they have to face with unprecedented crisis with the prospect of more than 30% fall in expected sales for the next year compared to previous fiscal year. To overcome this crisis, they have been making. Concerted efforts as a group with the slogan of

“Try our ingenuity to overcome difficulties.”

As specific measures, facing the fact of a large reduction in sales directly, we promote the establishment of system to ensure profits in the declining sales by cost reduction. In 2010 the increase in equity is due to increase in the capital surplus and the retained earnings of the company. Now the company has strengthened its management practices placing “Let's Review the current practices and stay true to the basics in order to survive the competition.” As their basic policy is promoting the growth strategy in this year the company is implementing the previous year strategies in order to increase in sales. The equity in 2010 is increase due to the issuance of the shares of the company. Decrease in liabilities due the payment of the short term loans payables and accrued expenses.

HYUNDAI - Debt to Equity Ratio (Amount in 000)

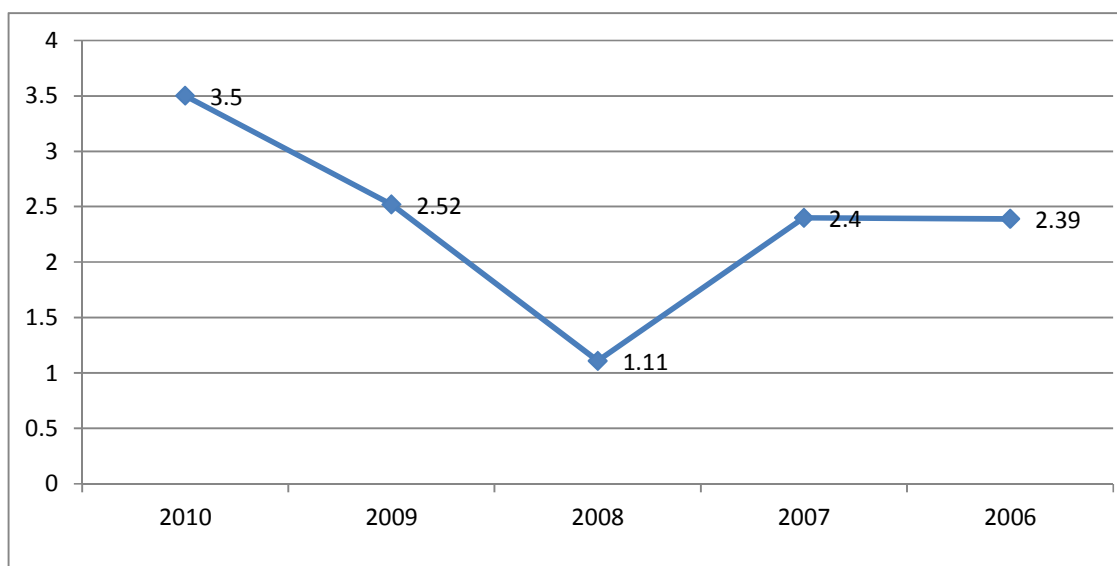
Item	2010	2009	2008	2007	2006
Total Liabilities(A)	71,421,738	62,832,541	61,911,639	64,094,958	53,510,662
Equity (B)	32,255,335	24,804,436	20,160,554	25,275,673	22,553,758
Debt-to-equity Ratio=A/B(times)	2.20	2.53	3.07	2.53	2.37



In 2006 the Company and its subsidiaries have entered into lease agreements for certain machinery. The capital lease obligations are included in long-term debt in the accompanying balance sheets. The company's mostly loans are secured. The Company's and its domestic subsidiaries' property, plant and equipment, certain bank deposits and investment securities are pledged as collateral for various loans. In 2007 the debt to equity ratio increased as compare to 2006 due to increase in liabilities and equity. One of our biggest achievements in 2007 was 4.4 percent rise in production from 2006. The Company entered into derivative instrument contracts including forwards, options and swaps to hedge the exposure to changes in foreign exchange rate. Accrued warranties also increases in 2007 which shows that in 2007 company paid more warranties on its increases vehicles. The company uses the options like forward, future and call options or contracts to enter in the derivative markets for hedging. In the transaction of currency option and forward company invested in US Dollar and Euro currencies and the company purchased the shares of KIA Motors. The contract was on the base of difference between fair value and contract initial price. As of December 31, 2007 and 2006, the Company deferred the net gain of US\$30,405 thousand and US\$21,390 thousand respectively, on valuation of the effective portion of derivative instruments for cash flow hedging purposes from forecasted exports as accumulated other comprehensive income. The year 2007 marked a significant milestone in the history of this company. Hyundai has completed its second production plant in the China and India with doubling our production capacity. Hyundai Motor Company expects to continue its growth record in 2008 despite the uncertain economic climate in the Unites States and the rising cost of oil and raw materials. In 2008 there is a maximum debt to equity ratio as compare to all years. Despite the difficult economic environment in Korea and abroad, the company continued to drive the setup of global management structure and improve the quality of their products by putting the customers first. Hyundai Motor maintained growth in production and sales amidst the global economic crisis alongside remarkable improvements in quality and technological advancements. In 2008 there is a major increase in the long term accounts payables and derivative liabilities because the company wants to maintain its present position, and there is also decrease in the long term accrued but warranties and in the provision for other liabilities. In 2009 the debt to equity ratio decreased from 3.07 to 2.53 because the company is paying attention to increase their equity and on decreasing their liabilities. This because is due to increase in its ability to pay the debts. They accomplished great things despite the difficult economic environment both at home and abroad, bringing Hyundai Motor Company one step closer to becoming a leading global company. The year 2009 was a particularly difficult year for the automobile market due to the downturn in the global economy. However, despite the adverse conditions, they managed to attain the highest production and sales recording our history as well as achieving excellent results in terms of technology, quality and brand equity. In 2009 there is a major decrease in short term borrowings and derivatives liabilities. This year the company has to face the loss in the derivative market. The equity is increased due to increase in the capital surplus and retained earnings. In 2010 the minimum debt to equity ratio as compare to the all previous years. It is a positive sign for the company. In 2010, Hyundai recorded remarkable growth to 3.61 million vehicles sold in the global market; they took over place as a global corporation worthy of the name, 65th among the top 100 world brands with a brand value of \$5 billion.

HONDA - Debt to Equity Ratio (Amount in 000)

Items	2010	2009	2008	2007	2006
Total Liabilities(A)	6,985,622	7,114,243	3,587,066	5,864,449	6,469,067
Equity (B)	1,975,645	2,827,845	3,229,678	2,440,668	2,705,208
Debt-to-equity Ratio=A/B(times)	3.54	2.52	1.11	2.40	2.39



According to data there is difference between 2006 and 2007 equity. In 2007 company issued the more shares as compared to 2006. In non-current liabilities there long term finance- secured. In 2006 this long term loan Company taken from Bank of Tokyo-Mitsubishi Ltd. By mortgaging the assets value 1335 million. The effective mark-up charged during the year was 9.93%. In 2007 company also took loan as syndicated loan from different banks on different mark-up rate and paid in different modes of installments. In 2007 there is little bit decrease in liabilities because in 2007 the company avoid from the short term debt. Its means that in 2007 company paid its debts through long term loans, company take more long term loans to increase its operations. In 2007 the long term liabilities was 1,958,334 as compared to 672,095 in 2006. In 2007 company avoid from the short term borrowing and focus on long term liabilities and paid almost all debts through long term secured loans so in this way the amount of short term loans in 2007 remained zero. Due to high long term loans the mark up amount was also high has as compared to 2006. In 2006 and 2007 the mark up accrued on loans and other payables was 15,719 and 39,627 respectively. In 2008 company issued more shares as compared to 2007 and also decreased its long term loans and as well as short term loans because instead to taking the loans from outside company issued its more shares, through issuing the more shares the company generated more finance and invested that finance in its new models production and other reason is that on issuing more shares the company has not the fear to paid the outside loan. In 2008 company increased its shares capital amount approximately 32.32% as compared to 2007. In 2008 and 2007 amount of long term loans was 500,000 and 1,958,334 respectively. The loan in 2008 has taken from bank of Tokyo- Mitsubishi UFJ, Ltd. The economic crises also influenced on all sectors and the economic crises can also be the reason of low ratio of long or short borrowing. If we check the data 2009 and 2010 both years the liabilities increased as compared to equities. The

amount of long term secured loans in 2009 and 2008 was 1500,000 and 500,000 respectively. The amount of short term loans in 2009 was 2,151,601 which was zero in 2008. In 2010 due to the economic crisis the some liabilities increased like trade and other payables 5,448,222 and 3,387,594 in 2010 and 2009 respectively. Honda also introduced the hybrid vehicles like Civic, Insight and Accord and in 2006 Insight was the more fuel efficient car of the year. So due to increase in demand from last few years the company increased its operations and in all plants company increased its production and to meet the expenses company focus on outside loans instead of issued more shares because might be possible that very high ratio of issued shares decrease the price of per share.

5. Conclusion

The global economic crisis has created the bad effect on the all automobile industry, as well as SUZUKI, Hyundai and Honda from 2008-2010. The companies' sale decreased due to the bad market conditions and also due to the slump in the overall world economy. As the economic condition become better and due to these companies good policies the company is now earning the profits by increasing in its sales. The Suzuki overcomes this situation by keep focusing the research and development department, marketing and most importantly on manufacturing units. They have also made the strategy about their manufacturing units. The company has manufactured the low units due to this they have to bear low cost related to their manufacturing. Behind the adoption of this strategy the reason is that the company has forecasted the expected decline in the sale and due to this they have manufactured low units. The Hyundai overcome this situation by keep focusing their stakeholders mostly their employees. Because they consider their customer most important and the company prefer the needs and wants of their customer. And due to this strategy the crisis has created the low effects on the Hyundai profitability and sales. The Honda after the recession they began to again paying keen attention on its performance and increased its sales by introducing the innovation in its different models by launching the hybrid fuel efficient models. With the help competitive management company overcome its deficiencies which occurred due to recession. The global economic crises have created the bad effects on these companies but not as much large. All these companies management has the ability to face and find the solution of it as early as possible (Wad, 2010).

Further because of rapid decrease in financial performance of automobile sector, it was great pressure on the risk exposure in financial market to control the debt to equity ratio. During crisis companies decided to increase common stock equity rather than to finance assets through borrowing money. Meanwhile the trend of investment of automobile sector showed a decline in risky financial instrument. Such a measures on financial positioning is carried a financial leverage in a better ways. Federal Reserve Bank of USA also took major step to control the wave of global financial crisis by giving a bailout package to the companies being bankrupt on its financial strength. This crisis put these companies into market competition in term of technology and product performance. FRB had made new regulations for such crisis if I does so in future again. It was a lesson for all multinational firm regarding the financial leverage and management of debt to equity ratio in future.

Over the years the decline that had damaged it somehow came forward with a positive impact after 2010 and this was because of technological innovation. It was primarily because of the newly found innovations like introduction of Hybrid Models and Toyota-Prius being a newly introduced product made the wave of constructive destruction for competitors like Honda, Suzuki and Hyundai. Moreover, the new models with better functions and less production costs were introduced in the market to further make way for better financial position for these companies in future.

References:

Capital market imperfections in a monetary growth model [Book]/auth. J.H.Boyd. - [s.l.]: Capital market imperfections in a monetary growth model, 1998. - Vol. 11: pp. 241-273.

Effects of the Crisis on the Automotive Industry in Developing Countries [Book] / auth. Sturgeon Timothy J. - USA: WORLD BANK, 2010.

"Fortune - Detroit's Downfall". Money.cnn.com. Retrieved 2010-05-01.

Impact of the Global Economic and Financial Crisis over auto mobile industry in developing countries [Book]/auth. Wad Peter.-USA: united nations industrial development organization, 2010.

Miller, Merton H. 1977. "Debt and Taxes." Journal of Finance, vol. 32, May, pp. 261-275. 1986. "Financial

Innovation: The Last Twenty Years and the Next." *Journal of Financial and Quantitative Analysis*, vol. 21, pp. 459-471.

Max Abelson, "[Wall Street's Wrist Slap](#)" *The New York Observer* (July 20, 2010)

Peterson, Pamela (1999). *Analysis of Financial Statements*. New York: Wiley. p. 92. ISBN 1-883249-59-7.

Reeve, Elspeth (February 23, 2012). Most Americans Now Think Auto Bailout Was a Good Idea. *The Atlantic Wire*.

Tom Krisher (2008-07-03). "Why Honda is growing as Detroit falls behind". Associated Press. SFGate. Archived from the original on 15 February 2009. Retrieved 2009-01-12.