CHAPTER I

INTRODUCTION AND DESIGN OF THE STUDY

1.1 INTRODUCTION

Creating Wealth is the main objective of any business. The company the one which is attaining the successful value creation never meets capital shortage, because, the company can make enough capital internally and attract more capital from the markets. The company needs an executive with leadership skills for consistent value creation. In most companies today, the search for value is being challenged by a seriously out of date financial management system. Often, the incorrect financial focus, cash strategies, operating goals, and valuation processes are emphasized. Balance sheets often provide the results of accounting rules rather than the focus of value creation. These problems need different approaches for analyzing the financial performance of the company. The financial decision should be helpful to maximize shareholder’s value and it becomes crucial to the achievement of the overall goal, that is, shareholder value maximization. Shareholder’s wealth is measured by the returns they receive on their investment. Value creation helps profitable and sustainable growth of the company.

Shareholders are the real owners of the company. Some businesses may have small number of shareholders, some may have a single shareholder and some businesses may have more than thousand shareholders. Shareholders are playing significant role in all aspects like finance, operations, governance and control of a company. The main objective of issuing shares is to raise funds from investors. Shareholders are playing both direct and indirect roles in a company's operation. All the directors, senior officers including the chief executive officer and the chief financial officer of a company are selected by the shareholders. And also they are playing indirect role through stock market. The shareholders of the company are always expecting more dividends from the earnings of the company. Any public company must give appropriate and complete information to the shareholders. Senior executives and Board of Directors are answerable to the shareholders and not to the management. Shareholders normally decide who should be the gearstick of the company. Institutional shareholders may openly call
on company management to consider strategic options, such as selling off the company or merging with another company. Shareholders are gaining this kind of importance from the company.

Shareholders’ wealth is calculated in conditions of the profits they obtain on their venture. The income can either be in the form of dividends or in the form of capital appreciation or both. Capital appreciation in turn depends on the subsequent changes in the market value of the shares. This market value of shares is influenced by a number of factors, which can be company specific, industry specific or macroeconomic in nature.¹

The value based management systems have been developed for value creation. In order to help corporate to generate value for shareholders, value-based management systems have been developed. Shareholders look forward to management to create worth to their shareholders greater than and above the costs of resources stimulated, together with the cost of using capital. If the shareholders are not receiving the fair return from the company, they may withdraw their capital and invest in some other stocks. Without value creation process, the company will always fight to get additional capital, since it will be restricted by a share price that stands at a discount to the underlying value of its assets and by higher interest rates on debt or bank loans demanded by creditors. The changes in the wealth on annual basis are called wealth creation. The firm has to make investment activities for positive Net Present Value. The value creation is measured on accounts based information and the wealth creation is measured on stock market information. Some Indian companies swallow capital, and most of it goes down the tubes. Not surprisingly, managements have been pleased to treat equity as free money on which no returns are due unless there is adequate profit. In fact, in such a situation, shareholder value is often the result of accidental circumstances rather than the outcome of genuine effort by professional management of corporate.²

For successful shareholder value creation, the company must have high quality proficient management or good corporate governance. All and sundry converse on the

subject within and outside the organization, but not many are aware of as what to do and what not to do with reference to this concept. Nevertheless, the concept of good corporate governance is here to stay in this country as shareholders and financial institutions turn more down to business, feels Tejpavan Gadhok, Country Manager, India, for Stern Stewart and Company. According to him, "Indian companies on the whole have a poor average in wealth creation." Over 400 companies globally implement the Economic Value Added program, but it is still relatively a new modern technique for corporate performance measurement in India. 

1.2 STATEMENT OF THE PROBLEM

Shareholder value creation is becoming the new corporate strategy in India. Shareholder value is measured by the returns they have received. The shareholders require at least minimum rate of return on their investment depending on the risk in the investment. The company may earn better profit than the competitor but it might not meet the shareholder’s minimum expectations. The reason is that the monetary performance of a business organization is measured from the shareholder’s point of view. Value added represents the value created by an enterprise during a specific period. The companies cannot run and grow, if it fails to create value to its shareholders. On the whole the value creation becomes the widely accepted goal for every organization. There are a number of value based measures. Shareholder Value Added is one of the value based performance measures and helps to find out the value of the shareholders. It focuses mainly on the operating performance of the company and it combines income statement and balance sheet data to determine the excess returns available to all shareholders. Economic Value Added and Market Value Added also has emerged as most popular and efficient tool to measure the performance of the company. EVA enlightens whether the economic profit is enough to cover the cost of capital or not. It is the most efficient tool to overcome the limitations of traditional financial measures. Stern Stewart and Co developed this tool to measure overall financial measure that encourage the company to concentrate on the delivery of shareholder value. Market Value Added is a measure of shareholder's wealth.

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MVA is the difference between the current total market value of a company and its invested capital. It is not a performance metric like EVA but it is a wealth metric, measuring the level of value of a company has accumulated over time. The company can be placed in BSE 100 Index only when it has traded for more than 95 percent of the days in the past three months. The companies in BSE 100 Index may earn better profit as their shares are traded highly, even though the value creation of those companies is questionable. By keeping this in mind, this study is an attempt to analyze the value creation of select manufacturing companies listed in BSE 100 Index

1.3 RESEARCH QUESTIONS

Based on the statement of the problem, the researcher has raised the following researchable questions:

1. Whether the select companies listed in BSE 100 Index maximize the value to their shareholders or not.

2. Whether the select companies listed in BSE 100 Index create economic profit and wealth to their shareholders or not.

3. Whether there is a relationship that exists between value based measures with Net Operating Profit, Return on Capital Employed and Earning Per Share of the select companies listed in BSE 100 Index or not.

4. Whether there is an impact of capital productivity and economic variables (Wholesale Price Index, GDP and Money supply) on value creation of the select companies listed in BSE 100 Index or not.

1.4 OBJECTIVES OF THE STUDY

Based on the researchable questions and the statement of the problem, the following objectives were made by the researcher.

1. To study the concept of shareholder value creation and the profile of BSE 100 Index.

2. To analyse the Shareholder Value Added, Economic Value Added and Market Value Added of select manufacturing companies listed in BSE 100 Index.
3. To analyse the relationship between the value based measures with Net Operating Profit After Tax, Return on Capital Employed and Earning per share of select manufacturing companies listed in BSE 100 Index.

4. To examine the impact of economic variables (Wholesale Price Index, Gross Domestic Product and Money Supply) on value based measures of select manufacturing companies listed in BSE 100 Index.

5. To analyses the impact of Capital Productivity on value based measures of select manufacturing companies listed in BSE 100 Index.

6. To offer summary of findings, suggestions and conclusion.

1.5 HYPOTHESES FRAMED

The following hypotheses were formulated based on the objectives of the study:

- There is no impact between the value based measures with Net Operating Profit After Tax, Return on Capital Employed and Earning per share of select manufacturing companies listed in BSE 100 Index.

- The economic variable does not influence the value creation of select manufacturing companies listed in BSE 100 Index.

- There is no impact of Capital Productivity on value based measures of select manufacturing companies listed in BSE 100 Index.

1.6 METHODOLOGY

1.6.1 DATA USED

Secondary data were used for this study. The data were collected from the Annual Reports of the select companies of BSE 100 which were collected from CMIE Prowess data base and the other related information were taken from Books, Journals, Magazines, Periodicals and Official websites.

1.6.2 PERIOD OF STUDY

The period of study covers ten years from 2002-03 to 2011-12

1.6.3 SAMPLING DESIGN

The researcher has selected sample companies from the companies listed in BSE 100 Index. During the study period from 2002-03 to 2011-12, 64 companies were listed continuously in BSE 100 Index without any exclusion. Out of 64 companies,
42 companies belong to the manufacturing sector and 22 companies belong to the service sector. The researcher has purposively selected all the 42 manufacturing companies for the study. The list of the 42 companies are as follows:

Table 1.1
List of Sample Companies

<table>
<thead>
<tr>
<th>S.No</th>
<th>Company Name</th>
<th>Industry Name</th>
<th>Scrip code in BSE</th>
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<tbody>
<tr>
<td>1</td>
<td>United Phosphorous Limited</td>
<td>Agriculture</td>
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<td>2</td>
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<td>Capital Goods</td>
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<td>3</td>
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<td>4</td>
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<td>Capital Goods</td>
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<td>5</td>
<td>Siemens Limited</td>
<td>Capital Goods</td>
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<td>6</td>
<td>Tata Chemicals Limited</td>
<td>Diversified</td>
<td>500770</td>
</tr>
<tr>
<td>7</td>
<td>Dabur India Limited</td>
<td>FMCG</td>
<td>500096</td>
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<td>8</td>
<td>Hindustan Unilever Limited</td>
<td>FMCG</td>
<td>500696</td>
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<td>9</td>
<td>ITC Limited</td>
<td>FMCG</td>
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<td>FMCG</td>
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<td>FMCG</td>
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<td>FMCG</td>
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<td>Cipla Limited</td>
<td>Health Care</td>
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<td>Dr Reddy's Laboratories Limited</td>
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<td>Ranbaxy Laboratories</td>
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<td>ACC Limited</td>
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<td>Coal India Limited</td>
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<td>Jindal Steel and Power Limited</td>
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<td>Reliance Infrastructure Limited</td>
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<td>33</td>
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<td>Asian Paints Limited</td>
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<td>35</td>
<td>Grasim Industries Limited</td>
<td>Textile</td>
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<td>36</td>
<td>Ashok Leyland Limited</td>
<td>Transport Equipments</td>
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<td>37</td>
<td>Bharat Forge Limited</td>
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<td>38</td>
<td>Cummins India Limited</td>
<td>Transport Equipments</td>
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<tr>
<td>39</td>
<td>Hero Honda Motors Limited</td>
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<tr>
<td>40</td>
<td>Mahindra and Mahindra Limited</td>
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<tr>
<td>41</td>
<td>Maruti Suzuki India Limited</td>
<td>Transport Equipments</td>
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<tr>
<td>42</td>
<td>Tata Motors Limited</td>
<td>Transport Equipments</td>
<td>500570</td>
</tr>
</tbody>
</table>

1.6.4 Profile of Sample companies

1. United Phosphorus Limited (UPL): United Phosphorus Limited (UPL) is a global generic crop production, chemicals and seeds company, headquartered in India (Mumbai). The UPL is the world's third largest generic agro chemical company and the seventh largest agro chemical company. The revenue of UPL has grown at a CAGR of 26% over the last 5 years. The UPL is the leading global producer and exporter of crop protection and post harvest agriculture chemicals. The group companies of UPL are UPI-USA, Advanta, RiceCo, UPL Brazil, United Phosphorus De Colombia Limiteda., Evofarms, Decco, Cequisa, UEL Online, AgriChem. UPL, Advanta and UEL are listed on the Indian stock exchange, with a combined market capitalization of approximately $2.5 billion.
2. ABB Limited: ABB Limited, chief in power and automation, was incorporated in the year 1949 as The Hindustan Electric Company Limited. The ABB Group of companies operate in around 100 countries and employs about 130,000 people. ABB operations in India include 12 manufacturing facilities with over 10,355 employees. Customers are served through an extensive countrywide operation with more than 23 marketing offices, 8 service centers, 3 logistics warehouses, 2 Power & Automation Engineering Centers and a network of over 550 channel partners.

3. Bharat Heavy Electricals Limited: Bharat Heavy Electricals Limited (BHEL) is an Indian-based integrated power plant equipment manufacturer and operates as an engineering and manufacturing company. BHEL operates in two segments: power and industry. BHEL is engaged in the design, engineering, manufacture, construction, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. power, transmission, industry, transportation, renewable energy, oil & gas and defense. The Company supplies steam turbines, generators, boilers and matching auxiliaries up to 800 megawatts ratings, including sets of 660/700/800 megawatts based on supercritical technology. In Power generation segment, it supplies range of products and systems for thermal, nuclear, gas and hydro-based utility and captive power plants.

4. Larsen & Toubro Limited: Larsen & Toubro Limited is a technology, engineering, construction and manufacturing company. It operates in three segments: Engineering & Construction Segment, Electrical & Electronics segment, Machinery & Industrial Products and others. Engineering & Construction Segment comprises execution of engineering and construction projects in India. Electrical & Electronics Segment comprises manufacture and sale of low and medium voltages Switchgear components, custom-built switchboards, custom built low and medium voltage switchboards, and electronic energy meters/protection (relays) systems. Machinery & Industrial Products Segment comprises manufacture and sale of industrial machinery and equipment, manufacture and marketing of industrial valves, construction equipment and welding/industrial products.

5. Siemens Limited: Siemens Limited provides technology-enabled solutions operating in the core business segments of industry, energy and healthcare. It operates in eleven

6. Tata Chemicals Limited: Tata Chemicals Limited (TCL) is engaged in four segments: Inorganic Chemicals consisting soda ash, salt, sodium bicarbonate, marine chemicals, caustic soda and cement; fertilizers segment consisting fertilizers and other traded products; other agri-inputs, including Rallis India Limited’s operations, and others consisting water purifier, bio-fuels and pulses. The production of soda ash at Mithapur is 690,181 metric tons. The production capacity of ordinary portland cement (OPC) is around 435,809 metric tons and sales is around 427,990 metric tons.

7. Dabur India Limited: Dabur India Limited (Dabur) is an ayurvedic and natural health care company. Dabur operates in consumer products categories, which includes hair care, oral care, health care, skin care, home care and food. Its Consumer Care Business, incorporates the fast-moving consumer goods (FMCG) business of Dabur which consists of health care and home and personal care verticals accounted for 56% of its consolidated revenues during the fiscal year ended March 31, 2012. Its Foods business consists of fruit-based beverages and culinary pastes business. It's out over-the-counter (OTC) portfolio offers a variety of products in sub-segments, such as women’s health care, baby care, cough and cold, rejuvenation, oils and products.

8. Hindustan Unilever Limited: Hindustan Unilever Limited is an India-based fast moving consumer goods company. The Company operates in seven business segments. Soaps and detergents include soaps, detergent bars, detergent powders and scourers. Personal products include products in the categories of oral care, skin care (excluding soaps), hair care, talcum powder and colour cosmetics. Beverages include tea and coffee. Packaged foods include staples (atta, salt and bread) and culinary products (tomato-based products, fruit-based products and soups), ice creams and frozen desserts. Others include Exports, Chemicals, Water business.
9. **ITC Limited:** ITC Limited operates in five business segments: **Fast Moving Consumer Goods (FMCG),** Hotels, Paperboards, **Paper & Packaging** and Agri Business. The FMCG segment includes Cigarettes, which consists of cigarettes, cigars and smoking mixtures, and others, which include branded packaged foods (staples, biscuits, confectionery and snack foods), garments, educational and other stationery products, matches, agarbattis and personal care products. The hotel segment includes hoteliering. The paperboards, paper and packaging segment includes paperboards, paper, including specialty paper, and packaging including flexibles. The Agri business segment includes agri commodities, such as soya, coffee and leaf tobacco. Its Agri Business markets agri commodities in the export and domestic markets.

10. **Nestle India Limited:** Nestle India Limited is engaged in food business. The food business incorporates product groups through milk **products and nutrition, beverages, prepared dishes and cooking aids, chocolates and confectionery.** The Company’s brands include MAGGI, NESCAFE, NESTLE a+, KIT KAT, MUNCH, POLO, NAN, LACTOGEN, CERELAC, MILKMAID and NESTEA. Its milk products include NESTLE MILKMAID, NESTLE ACTIPLUS, NESTLE Creamy Vanilla, NESTLE EVERYDAY Dairy Whitener and ghee and NESTLE Real Fruit Yoghurts. The Company’s beverages include NESCAFE CLASSIC, NESCAFE My First Cup, NESCAFE CAPPUCINO, NESCAFE SUNRISE Premium, NESCAFE SUNRISE and NESTEA ICED TEA. The Company has seven production factories at Goa, Punjab, Karnataka, Tamil Nadu, Haryana and Uttarakhand. The Company’s holding companies are Nestle S.A. and Maggi Enterprises Limited.

11. **Tata Tea Limited:** Tata Tea Limited also known as Tata-Tetley, is the world's second largest **manufacturer** and distributor of tea. Owned by Tata Group, India, The Tata Tea Limited markets tea under the following major brands — Tata Tea, Tetley, Good Earth Teas and JEMČA. While Tata Tea is the largest tea brand in India, Tetley is the largest tea company in the United Kingdom and Canada and the second largest in the United States by volume and JEMČA is Czech Republic's leading tea company. Tata Tea Limited along with its subsidiary companies manufactures 70 million kilograms of tea in India, has 54 tea estates, 10 tea blending and packaging factories, and employs around
59,000 people. The company owns 51 tea estates in India and Sri Lanka, especially in Assam, West Bengal and Kerala. The company is the largest manufacturer of Assam tea and Darjeeling tea and it is the second-largest manufacturer.

12. United Spirits Limited: United Spirits Limited is engaged in the business of manufacture, purchase and sale of beverage alcohol (Spirits and Wines), including through Tie-up units/brand franchise. The Company operates in two segments in India and Outside India. The India segment is engaged in the business of manufacture, purchase and sale of beverage alcohol, including through Tie-up units/brand franchisees within India. The Outside India segment is engaged in the business of manufacture, purchase and sale of beverage alcohol (Spirits and Wines), including through Tie-up units/brand franchisees outside India. Its products include whisky, brandy and rum. Its brands include Black Dog, Mcdowell's No.1 Platinum, Royal Challenge, Signature, Mcdowell's VSOP, Mcdowell's No.1 Celebration, Pinky, Romanov, Vladivar, White Mischief, Bouvet Ladubay and Four Seasons.

13. Cipla Limited: Cipla Limited is a pharmaceutical company. During the fiscal year ended March 31, 2012 (fiscal 2012), it introduced a number of new drugs and formulations, such as Adgain (vital nutritional supplement for hair loss); Capnea (caffeine citrate injection and oral solution) for apnoea of prematurity in infants; Caspogin (caspofungin acetate injection) for new antifungal for life-threatening fungal infections; Endobloc (ambrisentan tablets); Esomac (esomeprazole tablets); Evocort (formoterol and mometasone rotacaps)—new once-daily asthma controller therapy; Flavocip (flavoxate hydrochloride tablets) for relief of spasm of the urinary tract; Glatira (glatiramer acetate injection); HB Set (ferrous ascorbate and folic acid); Isablac (lactulose and isphaghula husk granules), and Ivabeat (ivabradine tablets) drug for coronary artery disease and chronic heart failure.

14. Dr. Reddy’s Laboratories Limited: Dr. Reddy’s Laboratories Limited (DRL) is an integrated global pharmaceutical company. The Company operates in three segments: Global Generics segment, which includes its prescription and over-the-counter (OTC) drug products business; Pharmaceutical Services and Active Ingredients (PSAI) segment, which consists of its active pharmaceutical ingredients (API) business and custom
pharmaceutical services (CPS) business, and Proprietary Products segment, which consists of DRL’s new chemical entities (NCEs) business, its Differentiated Formulations business and its dermatology focused specialty business operated through Promius Pharma.

15. Ranbaxy Laboratories Limited: Ranbaxy Laboratories Limited is an integrated international pharmaceutical company. The Company is engaged in the marketing, production and distribution of pharmaceuticals products. It operates in two segments: pharmaceuticals and other business. Pharmaceuticals segment comprises manufacture and trading of formulations, active pharmaceuticals ingredients (API) and intermediate, generics, drug discovery and consumer health care products. Other business comprises rendering of financial services. The Company has manufacturing facilities in seven countries, namely India, the United States of America, Ireland, Malaysia, Nigeria, Romania and South Africa. Its major markets include the United States, India, Europe, Russia/Commonwealth of Independent States and South Africa. The research and development activities of the Company are principally carried out at its facilities in Gurgaon, near New Delhi, India.

16. Sun Pharmaceutical Industries Limited: Sun Pharmaceutical Industries Limited is an international specialty pharma company. The Company manufactures and markets pharmaceutical formulations as branded generics, as well as generics in India, the United states and several other markets across the world. The Company’s business is divided into four segments: Indian Branded Generics, US Generics, International Branded Generics (ROW) and Active Pharmaceutical Ingredients (API). Its brands are prescribed in chronic therapy areas like cardiology, psychiatry, neurology, gastroenterology, diabetology and respiratory. It makes specialty APIs, including peptides, steroids, hormones and anticancers. APIs and Dosage forms are made at 20 plants across India, Israel, the United States, Canada, Hungary, Brazil, Mexico and Bangladesh. Its API products include Acamprosate Calcium, Alendronate Sodium, Amifostine trihydrate, Budensonide and Carvedilol.

17. ACC Limited: ACC Limited (ACC) is engaged in manufacture of cement. The company is also engaged in the manufacture of ready mix concrete. During the year ended December 31, 2011, the company produced 201,954 metric tons of Portland Slag cement (PSC). During 2011, the company sold 233.07 lakh tons of cement and 2.41 lakh
tons of clinker. The company has grinding plants in Karnataka and clinkering line in Maharashtra. The company’s subsidiaries include ACC Mineral Resources Limited, Lucky Minmat Limited, Bulk Cement Corporation (India) Limited, National Limestone Company Private Limited and Encore Cement and Additives Private Limited.


19. Coal India Limited: Coal India Limited (CIL) is a holding company. CIL, through seven wholly owned coal producing subsidiaries and one mine planning and consultancy company, is operating in 81 mining areas spread over eight provincial states of India. It encompasses identification of coal reserves, detailed exploration followed by design and implementation and optimizing operations for coal extraction in its mines. Its producing companies are Eastern Coalfields Limited, Bharat Coking Coal Limited, Central Coalfields Limited, South Eastern Coalfields Limited, Western Coalfields Limited, Northern Coalfields Limited, Mahanadi Coalfields Limited and Coal India Africana Limited. The consultancy company is Central Mine Planning and Design Institute Limited. North Eastern Coalfields (NEC), a coal producing unit, operating in Margherita, Assam, is under direct operational control of CIL. The Company’s consumers are Power and Steel sectors. Others include cement, fertilizer, brick kilns, and small scale industries.

20. National Aluminum Company Limited: National Aluminium Company Limited (Nalco) is an India-based company. The Company is an integrated aluminum complex, encompassing bauxite mining, alumina refining, aluminium smelting and casting, power generation, rail and port operations. The Company operates in three segments: chemicals, aluminium and electricity. The Company’s products include aluminium metal, such as ingots, sows, billets, alloy wire rods, cast strips and Alumina & Hydrate, which include calcined alumina and alumina hydrate, and zeolite-A. The Company’s production units include Bauxite Mines, which has installed capacity of 63,00,000 tons per year (TPY); Alumina Refinery, which has installed capacity of 21,00,000 TPY;
Smelter Plant, which has an installed capacity of 4,60,000 TPY; Captive Power Plant, which has installed capacity of 1200 megawatts, and Port Facilities, which has an installed capacity of 10,00,000 TPY.

21. Hindalco Industries Limited: Hindalco Industries Limited (Hindalco) is an India-based company. The Company operates in two segments: aluminum and copper. Aluminum consists of power generation, hydrate and alumina, aluminum and aluminum products. Copper comprises continuous cast copper rods, copper cathode, sulphuric acid, DAP and Complexes, gold and silver. The Company’s aluminium units across India encompass the entire gamut of operations, from bauxite mining, alumina refining, aluminium smelting to downstream rolling, extrusions and recycling. Its product range includes rolled products, extrusions, foils, primary aluminium ingots, billets, wire rods and aluminium slabs. The Company’s projects include Greenfield projects and Brownfield projects. Greenfield expansion projects include Mahan Aluminium Project, Aditya Alumina and Aluminium Project, Utkal Alumina Project and the Jharkhand Aluminium Project. Hindalco's brownfield expansion projects include primary metal and alumina capacities.

22. Jindal Steel & Power Limited: Jindal Steel & Power Limited (JSPL) is a sponge iron manufacturer in India. JSPL produces 121 metre rails and large size parallel flange beams. JSPL operates coal-based sponge iron plant, with an installed steel manufacturing capacity of three metric tons per annum (MTPA) at Raigarh in Chhattisgarh. As of March 31, 2012, its installed capacity at its Raigarh Unit include 13,70,000 metric tons of sponge Iron; 30,00,000 metric tons of mild steel; 36,000 metric tons of ferro alloys; 893 megawatts of power; 16,70,000 metric tons of hot metal/pig iron; 7,50,000 metric tons of rail and universal beam mill; 10,00,000 metric tons of plate mill, 12,00,000 metric tons of fabricated structures; 5,00,000 metric tons of cement plant, and 6,00,000 metric tons of medium and light section mill. The Company operates in two segments: iron and steel, and power.

23. Steel Authority of India Limited: Steel Authority of India Limited (SAIL) is an India-based steel making company. Its business segments include five integrated steel plants and three alloy steel plants, which are manufacturing units. SAIL’s principal products include flat products, long products, rails and pipes, including branded products such as SAIL-TMT & SAIL JYOTI.
24. **Tata Steel Limited**: Tata Steel Limited is a manufacturer of steel. The Company’s segments include Steel, Ferro Alloys and Minerals, and Others. Its other segments include Tubes, Bearings, Refractories, Pigments, Port operations Town services and Investment activities. Its Ferro Alloys and Minerals Division is a non-steel business unit of Tata Steel. Its main brands include Galvano, Galvatite, Dual Phase steels, MagiZinc Auto, Precision Tubes, Vegter Model, Vegter Lite, Ymagine, Ympress, Tata Wiron, Tata Bearings and Tenform. The Company’s production facilities include those in India, the United Kingdom, the Netherlands, Thailand, Singapore, China and Australia.

25. **Bharat Petroleum Corporation Limited**: Bharat Petroleum Corporation Limited (BPCL) is an energy company. BPCL operates in two segments: downstream petroleum, is engaged in refining and marketing of petroleum products, and exploration and production of hydrocarbons (E&P). The Company’s refinery units include Mumbai Refinery, Kochi Refinery, Numaligarh Refinery and Bina Refinery. The Company’s products include gases, which includes poly propene feed stock, natural gas, liquefied petroleum gas (LPG) and bharat metal cutting gas; fuels, which includes marine fuels, white oils and black oils; solvents and special products; bitumen; lubricants, and sulphur. Its marketing infrastructure includes installations, depots, retail outlets, aviation service stations and LPG distributors.

26. **GAIL (India) Limited**: GAIL (India) Limited is a gas utility company in India. The Company’s products include natural gas, liquid hydrocarbons, liquid petroleum gas transmission, petrochemicals, city gas distribution and power. The Company serves the retail sector of natural gas by supplying green and clean fuel (CNG) and PNG to domestic and commercial sector. The Company has a joint venture with Vododara Mahanagar Sewa Sadan (VMSS). The Company’s operating segments include Natural Gas Transmission, natural gas trading, petrochemicals, LPG and other liquid hydrocarbons and other segments. Its supplies of natural gas include fuel power plants and feedstock for gas fertilizer plants.

27. **Hindustan Petroleum Corporation Limited**: Hindustan Petroleum Corporation Limited (HPCL) is an integrated oil refining and marketing company. HPCL operates in two segments: downstream, and exploration and production of hydrocarbons. The downstream segment is engaged in refining and marketing of petroleum products.
HPCL operates two refineries in Mumbai (West Coast) and Vishakapatnam. Its products and services include Refineries, aviation, bulk fuels & specialties, international trade, liquefied petroleum gas (LPG) (HP gas), Lubes (HP lubes), retail, exploration & production, joint ventures and alternate energy.

28. Indian Oil Corporation Limited: Indian Oil Corporation Limited (Indian Oil) is an oil company. The Company’s operations include refineries, pipelines, marketing, research and development (R&D) Centre and Business Development, enterprise and planning (E&P), petrochemicals and natural gas. Indian Oil and its subsidiaries own and operate 10 of India’s refineries and its cross-country network of crude oil, product and gas pipelines. Its portfolio of brands includes Indane LP Gas, SERVO lubricants, Xtra Premium petrol, XTRAMILE diesel and Propel Petrochemicals. In exploration and production, Indian Oil’s domestic portfolio includes 13 blocks, out of which in two blocks Indian Oil is having 100% participating interest as an operator. The overseas portfolio consists of nine blocks spread across Libya, Iran, Gabon, Nigeria, Yemen & Venezuela.

29. Oil and Natural Gas Corporation Limited (ONGC): Oil and Natural Gas Corporation Limited (ONGC) is an India-based company. The Company is mainly engaged in the oil exploration and production activities. The Company operates in two segments: exploration and production and refining. As of March 31, 2012, the Company had made 23 discoveries in domestic fields; 15 new prospects and eight new pool discoveries. Out of the 15 new prospect discoveries, 7 are in NELP blocks. It is operating in four coal bed methane (CBM), which includes Jharia, Bokaro, North Karanpura and Raniganj. During the fiscal year ended March 31, 2012 (fiscal 2012), the Company had a crude oil production of 38.09 million metric tons and natural gas production of 47.56 million metric tons. Its subsidiaries include ONGC Videsh Limited (OVL), Mangalore Refinery & Petrochemicals Limited., ONGC Nile Ganga BV (ONGBV), ONGC Nile Ganga (Cyprus) Limited., Jarpeno Limited, Imperial Energy Corporation Plc, Imperial Energy Limited and Imperial Energy Kostanai Limited.

30. Reliance Industries Limited: Reliance Industries Limited (RIL) is a conglomerate with business in the energy and materials value chain. The Company operates in three segments: petrochemicals, refining and oil & gas. The petrochemicals segment includes production and marketing operations of petrochemical products namely, polyethylene,
polypropylene, polyvinyl chloride, poly butadiene rubber, polyester yarn, polyester fibre, purified terephthalic acid, paraxylene, ethylene glycol, olefins, aromatics, linear alkyl benzene, butadiene, acrylonitrile, caustic soda and polyethylene terephthalate. The refining segment includes production and marketing operations of the petroleum products. The oil and gas segment includes exploration, development and production of crude oil and natural gas. It’s other segment includes textile, retail business, special economic zone (SEZ) development and telecom / broadband business.

31. NTPC Limited: NTPC Limited (NTPC) is an India-based company engaged in the generation and sale of bulk power to state power. The Company’s other business includes providing consultancy, project management and supervision, oil and gas exploration, and coal mining. As of March 31, 2012, the Company was engaged in executing two projects: Lata Tapovan hydro electric project (171 mega-watts (MW)), located in Chamoli District of Uttarakhand and Rammam Hydro Electric Project, Stage III (120 MW) located in Darjeeling District of West Bengal and West Sikkim District of Sikkim.

32. Reliance Infrastructure Limited: Reliance Infrastructure Limited is a part of the Reliance Group involved in power generation. Reliance Infrastructure companies distributes about 36 billion units of electricity to over 30 million consumers across an area that spans over 1,24,300 square kilometers and includes India’s two cities, Mumbai and Delhi. The Company generates over 940 Megawatt of electricity through its power stations located in Maharashtra, Andhra Pradesh, Kerala, Karnataka and Goa. The Company operates in two business segments: Electrical Energy and Engineering, Procurement and Contracts (EPC). In the case of electrical energy, the Company operates a 500 megawatts thermal power station at Dahanu, a 220 megawatts combined cycle power plant at Samalkot, a 48 megawatts combined cycle power plant at Mormugao, a 7.59 megawatts Windfarm at Chitradurga and also purchases power from third parties and supplies the power through the Company’s own distribution grid. It supplies power to residential, industrial, commercial and other consumers.

33. Tata Power Company Limited: Tata Power Company Limited is an integrated power company. The Company operates in two segments: power, which are engaged in the generation, transmission and distribution of electricity, and others, which is engaged in the defense electronics, project contracts/infrastructure management services,
coal bed methane and property development. During the fiscal year ended March 31, 2012, the Company’s wind farms in Mumbai operations generated 232 mega units (MUs). As of March 31, 2012, Company’s installed wind power capacity outside Mumbai operations was Samana, Gujarat with an installed capacity of 50 megawatts; Gadag, Karnataka with a installed capacity of 50 megawatts; Nivede, Maharashtra with an installed capacity of 21 megawatts, and Poolavadi, Tamil Nadu with a installed capacity of 99 megawatts. On June 30, 2012, the Company purchased 51% interest in Tata BP Solar India Limited from BP Alternative Energy Holdings Limited.

34. **Asian Paints:** Asian Paints is India's largest paint company and Asia's third largest paint company, with a turnover of Rs 96.32 billion. The group has an enviable reputation in the corporate world for professionalism, fast track growth, and building shareholder equity. Asian Paints operates in 17 countries and has 24 paint manufacturing facilities in the world servicing consumers in over 65 countries. Besides Asian Paints, the group operates around the world through its subsidiaries Berger International Limited, Apco Coatings, SCIB Paints and Taubmans. The company has come a long way since its small beginnings in 1942.

35. **Grasim Industries Limited:** Grasim Industries Limited is a company of Aditya Birla Group. The Company is engaged primarily in two businesses: Viscose Staple Fibre (VSF) and in cement. It also produces caustic soda and allied chemicals and rayon grade pulp, which are used in the manufacture of VSF. The manufacturing plants of the Company are located in India, Middle East, Sri Lanka, Canada, Bangladesh and China. It operates in three segments: fibre and pulp, chemicals and others. Fibre and Pulp segment includes viscose staple fibre and rayon grade pulp. Chemicals segment includes caustic soda and allied chemicals. Others include mainly textiles. In cement, its subsidiary UltraTech Cement Limited, has a capacity of 52 million tons per annum. Cement segment includes grey cement, ready-mix concrete and white cement. Textile segment includes yarn.

36. **Ashok Leyland:** In 1948, Ashok Motors was set up in Madras (Chennai) for the assembly of Austin Cars. Soon, British Leyland acquired an equity stake in the company and the name of the company was changed from Ashok Motors to Ashok Leyland. In 1955, Ashok Leyland began to manufacture commercial vehicles. Since then, Ashok
Leyland has maintained its technological leadership in India's commercial vehicle industry. Ashok Leyland Limited is engaged in the manufacturing of commercial vehicles and related components. The Company’s products include buses, trucks, light vehicles, defense vehicles and powers solutions. It provides buses with 18 seats. More than 80% of the State Transport Undertaking buses are manufactured Ashok Leyland.

37. Bharat Forge Limited: Bharat Forge Limited (Bharat Forge) is an exporter of auto components from India and a manufacturer of chassis component. The Company has two business lines: component manufacturing, and capital goods and infrastructure. In component manufacturing, through its domestic operations and overseas subsidiaries, the Company caters to forging and machining requirements of the auto and the non-auto sectors. The capital goods and infrastructure business focuses on equipment manufacturing and project management in the energy and transportation sector. The Company’s products are of two types: automotive and non-automotive. Bharat Forge operates in two business segments:Forgings and General Engineering Trading. It focuses on non-automotive sectors, such as power, railways, oil and gas, rail and marine, aerospace, and construction and mining.

38. Cummins India Limited: Cummins India Limited is a manufacturer of diesel and natural gas engines. It is a manufacturer of Internal combustion engines, gensets and parts thereof (Engine Business segment). The Company operates in four business segments: Industrial, Automotive, Power Generation and Distribution. The Industrial Engine Business caters to the industrial sector with the Company's diesel engines ranging from 18 horse powers to 3,500 horse power. The Power Generation Business addresses standby and prime power needs through the design and manufacture of pre-integrated generator sets, transfer switches, paralleling equipment and controls. The Automotive Business integrates the Company’s diesel and natural gas engines with related technologies such as filtration, exhaust, turbo, fuel and coolant systems and lube oil to serve the commercial vehicle segment in India. The Distribution segment operates under the brand name Cummins Sales and Service India.

39. Honda Motor Co., Limited: Honda Motor Co., Limited(Honda) incorporated on 24 September, 1948, develops, produces and manufactures a variety of motor products, ranging from small general-purpose engines and scooters to specialty sports cars.
The Company’s business segments are the motorcycle business, automobile business, financial services business, and power product and other businesses. Honda conducts its operations in Japan and worldwide, including North America, Europe and Asia.

40. **Mahindra & Mahindra Limited**: Mahindra & Mahindra Limited operates in nine segments. The automotive segment includes manufacture, sales of automobiles, spare parts and related services. Farm equipment segment includes sales of tractors, spare parts and related services; information technology (IT) services, which consists of services rendered for IT and telecom; financial services includes services relating to financing, leasing and hire purchase of automobiles and tractors; steel trading and processing includes trading and processing of steel; infrastructure includes operating of commercial complexes, project management and development; hospitality segment includes sale of timeshare; Systech segment includes automotive components and other related products and services, and its others segment includes logistics, after-market, two wheelers and investment.

41. **Maruti Suzuki India Limited**: Maruti Suzuki India Limited (MSIL) is primarily in the business of manufacture, purchase and sale of motor vehicles and spare parts (automobiles). The other activities of the Company consist of facilitation of pre-owned car sales, fleet management and car financing. The Company offers a range of cars across different segments. It offers 14 models with over 200 variants across the industry segments like Passenger cars, utility vehicles and vans. The Company has five plants in Gurgaon and Manesar areas of Haryana equip Maruti Suzuki with a production capability of 1.55 million units per annum. The Company passenger car includes Alto, Alto-K10, A-star, WagonR, Swift, Ritz and Estilo, off-roader Gypsy, SUV Grand Vitara, sedans SX4, Swift DZire and Kizashi. During the fiscal year ended March 31, 2012 (fiscal 2012), the Company sold over 1.13 million vehicles, including 127,379 units of exports. The Company is a subsidiary of Suzuki Motor Corporation.

42. **Tata Motors Limited**: Tata Motors Limited is an automobile company. Through its other subsidiary, the Company is engaged in providing engineering and automotive solutions, construction equipment manufacturing, automotive vehicle components manufacturing and supply chain activities, machine tools and factory automation solutions, high-precision tooling and plastic and electronic components for automotive and computer applications, and automotive retailing and service operations. It operates in
two segments: automotive operations and all other subsidiary operations. Its automotive operations include all activities relating to development, design, manufacture, assembly and sale of vehicles, including financing thereof, as well as sale of related parts and accessories. Its other operations like business segment includes information technology (IT) services and machine tools and factory automation solutions.

1.7 TOOLS FOR ANALYSIS

The researcher has used Mean, Standard Deviation, Coefficient of variation to know the central tendency and the homogeneity of the data were analysed for the study and LGR was used to know the growth rate of SVA, EVA and MVA. The SVA, EVA and MVA was calculated to know the value creation of the select manufacturing companies listed in BSE 100 Index. The Multivariate techniques is used for this study to know the impact of select financial, economic variables and capital productivity on value creation. The list of tools and formulae are given below.

Mean (\( \bar{X} \))

\[
\bar{X} = \frac{\sum X_i}{n}
\]

Standard Deviation (\( \sigma \))

\[
\sigma = \sqrt{\frac{\sum X_i^2}{n} - (\bar{X})^2}
\]

Coefficient of Variation

\[
CV = \left( \frac{\sigma}{\bar{X}} \right)
\]

Skewness

Skewness Coefficient = 3 (mean - median) / \( \sigma \)

Where,

\( \sigma \) = Standard deviation.

Kurtosis

\[
\frac{n(n+1) \sum_{i=1}^{n}(x_i - \bar{x})^4}{(n-1)(n-2)(n-3)s^4} - \frac{3(n-1)^2}{(n-2)(n-3)}
\]

\( x \) is the mean; \( s \) is the Standard Deviation; \( n \) is the number of data points.
Shareholder Value Added

\[ SVA = NOPAT - \text{Cost of Capital} \]

Economic Value Added

\[ EVA = NOPAT - (\text{WACC} \times \text{Invested Capital}) \]

where,

NOPAT = Net Operating Profit After Tax

Invested Capital = Net worth + Total borrowing (all interest bear debt)

WACC = \( \frac{E}{V} \times Ke + \frac{D}{V} \times Kd \times (1 - \text{tax rate}) \)

where,

\[ E = \text{Market Value of the firm's equity} \]
\[ D = \text{Market value of the firm's debt} \]
\[ V = E + D = \text{the firm value} \]
\[ Ke = Rf + Bj (Km - Rf) \]

where,

\[ Ke = \text{required or expected rate of return on market portfolio for the jth security} \]
\[ Rf = \text{Risk free rate of return} \]
\[ Bj = \text{Beta coefficient of security j;} \]
\[ Km = \text{Expected rate of return from market portfolio.} \]
\[ Kd = \left( \frac{\text{Total Interest Expended}}{\text{total borrowings}} \right) \times (1 - t) \times 100 \]

Market Value Added

Market Value Added = Market Value of the firm - Capital Invested.

Linear Growth Rate

\[ y = f(x) = mx + b \]

Correlation

\[ \text{Correlation}(r) = \frac{\Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{[\Sigma X^2 - (\Sigma X)^2][\Sigma Y^2 - (\Sigma Y)^2]}} \]

where

\[ N = \text{Number of values or elements} \]
\[ X = \text{First Score} \]
\[ Y = \text{Second Score} \]
$\Sigma XY = \text{Sum of the product of first and Second Scores}$

$\Sigma X = \text{Sum of First Scores}$

$\Sigma Y = \text{Sum of Second Scores}$

$\Sigma X^2 = \text{Sum of square First Scores}$

$\Sigma Y^2 = \text{Sum of square Second Scores}$

**Multiple Regression Model**

The following Regression Models were used by the researcher in the study

1) $Y_i (SVA) = \alpha + \beta_1 \text{ROCE} + \beta_2 \text{NOPAT} + \beta_3 \text{EPS} + \varepsilon$

2) $Y_i (EVA) = \alpha + \beta_1 \text{ROCE} + \beta_2 \text{NOPAT} + \beta_3 \text{EPS} + \varepsilon$

3) $Y_i (MVA) = \alpha + \beta_1 \text{ROCE} + \beta_2 \text{NOPAT} + \beta_3 \text{EPS} + \varepsilon$

4) $Y_i (SVA) = \alpha + \beta_1 \text{GDP} + \beta_2 \text{WPI} + \beta_3 \text{MONEYSUPPLY} + \varepsilon$

5) $Y_i (EVA) = \alpha + \beta_1 \text{GDP} + \beta_2 \text{WPI} + \beta_3 \text{MONEYSUPPLY} + \varepsilon$

6) $Y_i (MVA) = \alpha + \beta_1 \text{GDP} + \beta_2 \text{WPI} + \beta_3 \text{MONEYSUPPLY} + \varepsilon$

7) $Y_i (SVA) = \alpha + \beta \text{Capl Prod.} + \varepsilon$

8) $Y_i (EVA) = \alpha + \beta \text{Capl Prod.} + \varepsilon$

9) $Y_i (MVA) = \alpha + \beta \text{Capl Prod.} + \varepsilon$

**1.8 OPERATIONAL DEFINITIONS**

**Value creation:** From the economist's viewpoint, value is created when management generates revenues over and above the economic costs to generate these revenues. Costs come from four sources: employee wages and benefits; material, supplies, and economic depreciation of physical assets; taxes; and the opportunity cost of using the capital.

**Shareholder Value Added:** Shareholder Value added is a measure of shareholder value. It helps in understanding the drivers of the business that are most critical to value creation and it enables the management to focus its analysis more efficiently on key elements of a strategy. It is a value based performance measure of a company's worth to shareholders. The basic calculation is net operating profit after tax (NOPAT) minus the cost of capital from the issuance of debt and equity, based on the company's weighted average cost of capital.
**Economic Value Added:** It is an economic profit of the firm, being the value created in excess the required return of the company's investors or the amount by which earnings exceed or fall short of the required minimum rate of return that shareholders and lenders could get by investing capital in other securities of analogous risk.

**Market Value Added:** Market Value Added is the difference between the current market value of a firm and the capital contributed by the investors.

**Manufacturing Companies:** Manufacturing industry refers to any business that transforms raw materials into finished or semi-finished goods using machines, tools and labor. Manufacturing sectors include production of food, chemicals, textiles, gas, machines and equipment.

### 1.9 VARIABLES USED

The researcher has used financial and economic variables for this study.

**Financial Variables Used:**

**Net Operating Profit After Tax:** Net Operating Profit After Tax is the amount of net profit remaining in the business after the tax paid by the company. It is quiet nature. The profit of the company influence the share price and consequently on the value based measures. Thus, the NOPAT as an independent variable is quite understandable.

**Return on Capital Employed:** A ratio that indicates the efficiency and profitability of a company's capital investments is Return on Capital Employed. It is calculated as: $\frac{\text{EBIT}}{\text{Total Assets} - \text{Current Liabilities}}$

It is the best tool measure for the long term profitability of a company. The logic is that, the company can sustain in the market based on the long term profitability. So the researcher has taken ROCE as an independent variable is quite understandable.

**Earning Per share:** The portion of a company's profit allocated to each outstanding share of common stock is Earning Per Share. Earnings per share serves as an indicator of a company's profitability.

$$\text{EPS} = \frac{\text{Net Income} - \text{Dividends on Preferred Stock}}{\text{Average Outstanding shares}}$$

Earnings per Share has direct relationship with the share prices and consequently on value based measures.
Economic Variables Used for the Study

**Wholesale Price Index:** This is an index number. It shows how the whole set of related variables has changed over time or from one place to another. It shows the overall changes the overall change in a set of prices paid by a consumer or a producer. This index is the most used tool to measure inflation in India. It is published by the Ministry of Commerce and Industry. It is in use since 1939 and is being published since 1947 regularly. Thus, since 1939, the base year of WPI has been revised on number of occasions. Latest revision of WPI has been done by shifting the base year from 1993-94 to 2004-05. The current series of Wholesale Price Index has 2004-05 as the base year.

**Gross Domestic Product:** GDP is an index that measures and tracks the changes in price of goods in the stages before the retail level. Wholesale price index (WPIs) reports every month, to show the average price changes of goods sold in bulk, and they are a group of indicators that follow growth in the economy. GDP is one of the important to the stock market in that it is used as a measure of the health of the economy. For rational investor, a rise in the level of GDP in positive, would suggests that a firm is performing in positive growth. This would lead to the aggregate performance of firms allowing for more reinvesting which should ultimately lead to higher future earnings and stock prices. An increase in GDP would result in increase in the level of the stock market because the consumers in general have more purchasing power and would like to devote their income towards stock market investing. According to this point, GDP acts as proxy to the purchasing power ability of the investors.

**Money Supply:** Money Supply normally includes coins and notes in circulation and other money equivalents that are easily convertible into cash. M2 includes M1 plus short-term time deposits in banks and 24-hour money market funds. M3 includes M2 plus longer-term time deposits and money market funds with more than 24-hour maturity. The exact definitions of the three measures depend on the country. M4 includes M3 plus other deposits

**Capital Productivity:** Capital productivity derives from the Net sales + Change in stock - Stock consumed - Direct manufacturing expenses/Net Fixed assets. It highlights the efficiency of the company and productivity of the fixed assets of the company. In short, if fixed assets are efficiently used, the company can create more wealth for their shareholders.
1.10 LIMITATIONS OF THE STUDY

1. The researcher has not taken the service sector companies listed in BSE 100 Index during the study period.

2. The study is limited to the period of ten years from 2002-03 to 2011-12 only.

3. The required data for the study were collected from the CMIE PROWESS database. Hence the trustworthiness of the data depends on the accurateness of the data available in the CMIE PROWESS data base.

1.11 CHAPTER SCHEME

The researcher has presented the work in the following chapters

**Chapter I** deals with Introduction and Design of the study.

**Chapter II** presents the Theoretical background of the study, Profile of BSE 100 and the Review of Literature.

**Chapter III** analyses the Shareholder Value Added, Economic Value Added and Market Value Added of the select manufacturing companies listed in BSE 100 Index.

**Chapter IV** examines the relationship of Value based measures with Net Operating Profit After Tax, Return on Capital Employed and Earning per share of select manufacturing companies listed in BSE 100 Index.

**Chapter V** is committed to highlight the impact of economic variables and Capital Productivity on value based measures of select manufacturing companies listed in BSE 100 Index.

**Chapter VI** brings out the summary of findings, suggestions and conclusion.