Chapter – II

REVIEW OF LITERATURE

Many research studies have been carried out on different aspects of the working of the public and the private sector oil and gas companies by the researchers. Different authors have analyzed the financial performance of other industries in different perspective. A review of these studies is important for the development of an approach which can be employed in the context of the study of evaluation of financial performance of the select oil and gas companies in India. Therefore, the present chapter reviews the various previous studies on related areas. Review of previous studies has been made on the following heads, (i) Studies on petroleum industry in general; (ii) Studies on financial performance of firms other than petroleum industry; and (iii) Studies on financial analysis of petroleum industry.

Studies on petroleum industry in general:

Peter C. Reiss (2000)\(^1\), in his paper “Economic and financial determinants of oil and gas exploration activity” has studied the investment activities of 44 independent oil and gas firms from 1978 to 1986. The paper develops a dynamic model of oil and gas exploration and development. The model predicts less of a decline in exploration activity rather than what has actually occurred in 1985-86. They consider the extent to which financial factors may have affected firms' investment plans during the 1985-86 deflation. There is some evidence that credit contracts in this industry did place important limitations on firm's abilities to respond to the energy price deflation. These constraints were imposed because lenders could not distinguish separately between unfavorable industry developments and poor individual firm performance.

Virginia Lee Acha (2002)\(^2\), in his paper “Framing the past and future: The development and deployment of technological capabilities by the oil majors in the upstream petroleum industry” has discussed the relationship between technological
Capabilities and operational performance amongst a peer group of integrated oil companies in the upstream petroleum industry. Development and deployment of technological capabilities and their complex relationship with operational performance is conditioned by the interpretative frameworks or technology frames of the firm. The concept of a technology frame builds upon two theoretical flows: organizational sociology and the resource-based view of the firm. The technology frame is defined as the firm’s self-image of its technological resources, capabilities and opportunities. The technology frame should not be confused with strategy; the frame is comprised of the evident and latent beliefs that provide the context for determining strategy. The findings indicate that, not only is the relationship between technological capabilities and operational performance too complex to be modeled but also by simple variables and functions. The gearing ratio and R&D expenditures are used as indicators of the firm’s appraisal of the dynamics of the upstream industry, while the nature of the role for technology is proxies by the inclusion or absence of technology management at the executive board level and the positioning of technology within the annual report. The existence and value of the frame as a heuristic is then tested through panel data regressions on key expectations of strategic behavior and outcomes in the area of technological capabilities of firms. On this basis, they are able to interpret the data on technological capabilities and their complex relationship with operational performance in a more consistent and comprehensive manner.

Matteo Manera and Alessandro Lanza, (2003)\(^3\), has examined the “Long-run models of oil stock prices”. In this Paper, the identification of the forces that drive oil stock prices is extremely important given the size of the oil and gas industry and its links with the energy sector and the environment. In the next decade oil companies will have to deal with international policies to contrast the climate change. This issue is likely to affect companies’ shareholder values. In this paper, the analyzers focused
on the long-run financial determinants of the stock prices of six major oil companies are Bp, Chevron-Texaco, Eni, Exxon-Mobil, Royal Dutch Shell, and Total-Fina-Elf using multivariate co-integration techniques and vector error correction models. Weekly oil stock prices are analyzed together with the relevant stock market indexes, exchange rates, spot and future oil prices over the period January 1998-April 2003. The empirical results confirm the statistical significance of the major financial variables in explaining the long-run dynamics of oil companies' stock values.

Anne Marie Brook, et.al, (2004), analyzed the “Oil price developments: Drivers, economic consequences and policy responses”. This paper has identified the factors influencing the price of oil and its likely evolution over the next quarter century. It begins by investigating the fundamental forces shaping long-term oil price developments, highlighting the importance of growth-led demand for oil, particularly that emanates from fast-growing, energy-intensive developing countries, and the implications of increasingly geographically concentrated oil reserves. The paper presents oil price projections to 2030 and examines the sensitivity of the projections to the assumptions about growth and non-OPEC supply. While certain combinations of factors could lead to a significantly higher oil price, the projections also suggest that the optimal strategy of resource rich oil producers would be to prevent it from rising too far. Finally, the paper has assessed the effects of higher oil prices on OECD-area economic activity and inflation. It argues that these effects have diminished over time, but that monetary policy should remain vigilant in preventing second-round effects on inflation. At the same time, fiscal policy should remain orientated towards long-term goals while structural policies should assist in the development of greater transparency in oil markets.

Manoj Anand (2005) made a study on “Castrol India Limited: Managing in challenging times” has revealed that the difficult times have their own merits. This is
as truer for an individual as it is for an organization. These are the times when the entire organization gets an opportunity to display its resilience through its innovative skills and creative abilities. After the liberalization of the Indian economy in 1991 and the opening of the oil sector, CIL has focused on volume growth and has achieved a market share of 20 per cent. In the growth phase, cost efficiency and cost effectiveness of the operational aspects were ignored. In the late 1990, due to increased competition and acquisition of CIL by British Petroleum, the focus has shifted from high growth to efficient supply chain management. This brought about a sea change in the cost and performance management systems at CIL. It required a cultural change from chasing production volume targets to develop competitiveness through total quality management, business process reengineering, activity-based cost management system, and change in mindset. The focus of performance contract has changed from a few financial measures to a broad set of perspectives to achieve the company's corporate mission.

Agusman and Elis Deriantino (2005)\(^6\) in their study on "oil price and industry stock returns: Evidence from Indonesia" has examined the impact of oil price changes on stock returns of nine industry sectors in Indonesia using monthly data during the period January 1996 to June 2008. The results suggested that in general oil price changes do not have significant impacts on industry stock returns. However, the government decision to liberalize domestic oil price in October 2005 has a positive and significant impact on stock returns of the mining, but a negative and significant impact on stock returns of the trading sectors. Moreover, using a dummy interaction variable to observe the impact of oil price hikes following the oil price liberalization policy, they find a consistent result for the mining and trading sectors, although the impact is also negative and significant to the consumption and infrastructure sectors. Nevertheless, the sensitivity of stock returns of these sectors on oil price changes is asymmetric, given decreasing oil price does not have
significant effects on stock returns of any sector. This indicates the facts that decreasing oil price does not always bring good news to investors.

Jacqueline Lang Weaver (2006)\textsuperscript{7} in his article “The traditional petroleum-based economy’s eventful future: of Peak Oil, Big Oil, Chinese Oil, Flags and Open Doors”, has examined the future of our petroleum-based economy in light of the voluminous debates over Peak Oil and includes the perspectives of the Western multinational oil companies themselves. The article compares the analyses and forecasts of the Peak Oil debaters with the views of the major oil companies, primarily by examining the recent Exxon Mobil Energy Outlook through 2030. This outlook projects that the world will use 50 per cent more energy in 2030 than in 2005, even with energy efficiency improvements in both OECD and non-OECD countries. In 2030, oil and gas will still constitute 60 per cent of our energy supplies, the same percentage as in 2005, but the world has adequate remaining reserves to fuel this demand. The world’s dependence on OPEC crude oil will increase significantly and consuming countries will become increasingly reliant on imports of LNG. The article then addresses the six key factors or “events” that, in the author’s view, underlie much of the current Peak Oil discussion, such as the proposition that “Big Oil is not so big” and “China believes in Peak Oil”. The Shell Global Scenario of integrated capital markets, trade and market liberalization i.e. the “Open Doors” scenario is contrasted with its “Flags” scenario of national preferences, post-9-11 security concerns, and distrust of markets and corporate governance in a post-Enron world. The article concludes with policy implications of the “eventful” future facing the traditional petroleum-based economy today.

Amir Hossein Mabadi (2007)\textsuperscript{8} in the article on “Transfer of technology in oil and gas contracts” has examined the transfer of technology is one of the significant issues in oil and gas contracts. At one side, petroleum developing countries are concerned with the controlling and operating of all phases of their industry’s
operation which in turn, has led to their awareness of the need to acquire at least an adequate understanding of the related technology. At the other side, referring to old concession contracts, the physical and temporary imports of the machinery and the equipment and skilled expatriate personnel, have been sent back to the countries where they have come from or are maintained on the job as long as is necessary, without any effective transplanting of the know-how involved to the recipient countries. This article is in three main chapters to investigate the issue; in the first part we will try to clarify the concepts of ‘‘Technology’’ and ‘‘Transfer of technology’’. In the second chapter, the researcher has discussed ‘‘Transfer of technology through oil and gas contracts’’ as one of the main legal arrangements through the petroleum industry technology which has been transferred in three sections. Third chapter is related to the ‘‘Alternative channels for the transfer of technology in oil and gas industry’’ apart from the traditional ways in the oil and gas contracts. Finally it is concluded with due regard to all above mentioned issues.

Kumar, Rajesh Markeset, and Tore (2007) in their work on ‘‘Development of performance-based service strategies for the oil and gas industry’’ have presented a framework for the development of performance-based service strategies for the oil and gas industry in Norway. The framework considers various influencing factors and their attributes, as well as performance factors categorized as critical success factors, performance killers and cost drivers. A study has been conducted to map current practices, to validate the influencing factor attributes, and to suggest performance factors. Operators of complex oil and gas production facilities are becoming increasingly dependent on service providers to support their efforts to perform according to demands. When developing a performance-based service strategy one needs to consider influencing factors and attributes. Furthermore, one needs to measure the service delivery process performance and the gaps between required and delivered services, and to reassess periodically the service strategy
influencing factors. The research is based on a case study in the Norwegian oil and gas industry, but the results can be adapted for other industries as well.

John L. Simpson (2008)\textsuperscript{10} has studied “The major oil companies anticipate OPEC production allocations”. This paper has examined oil stock market and oil company stock price data in 30 and 60 day windows either side of OPEC production allocation meetings. The study continues to investigate co-integration and erogenity over the full period in the sample. The results justify asking the question as to whether or not oil companies anticipate and use information on the outcomes of these meetings. The study concludes that the pricing of crude oil has more to do with the behavior of oil market protagonists than freely interacting supply and demand forces. This continues to have implications for the health of the global economy and financial system.

Amir Hossein Mabadi (2008)\textsuperscript{11} has made a study on “Legal strategies in upstream oil and gas contracts to attract foreign investment: Iran's case”. Since oil and gas industry - as an Iran economic back bone - has a vital importance, financing in this sector has attracted huge amount of attention among economists and even owing to its inherent political character, politicians have involved in this crucial discussion. This study has been divided to three separate parts, each one includes several chapters. In part one, the researcher attempted to describe main elements of this dissertation i.e. two most important upstream oil and gas contracts which are buyback contracts and production sharing contracts and joint venture contracts. In part two, the study overviewed on some contractual clauses that have direct effects on foreign investors' decision making process on an oil and gas project and foreign investment attraction capacity of host country as a result. The last part of this study, based on aforesaid situation in upstream oil and gas contracts, it is suggested some amendments in contractual clauses to be more attractive for foreigners to invest their
capital in Iran investment and make Iran absorb required investment for developing
Iran oil and gas fields to the highest possible level.

Stephane Dees and Audrey Gasteuil (2008)\textsuperscript{12} in their paper “The factors
behind oil price changes” has examine the rapid rise in the price of crude oil
between 2004 and 2006 are the subject of debate. This paper investigates the
factors that might have contributed to the oil price increase in addition to demand
and supply for crude oil, by expanding a model for crude oil prices to include refinery
utilization rates, a nonlinear effect of OPEC capacity utilization, and conditions in
futures markets as explanatory variables. Together, these factors allow the model to
perform well related to forecasts implied by the far month contracts on the New York
Mercantile Exchange and are able to account for much of the $26 rise in crude oil
prices between 2004 and 2006.

Christian O. H. Wolf and Michael G. Pollitt (2008)\textsuperscript{13} in “Privatizing national oil
companies: Assessing the impact on firm performance” has investigated the impact
of privatization on firm performance in the global oil and gas industry, where
questions of resource control have regained widespread attention. Using a dataset
of 60 public share offerings by 28 national oil companies it is shown that privatization
is associated with comprehensive and sustained improvements in performance and
efficiency. Over the seven-year period around the initial privatization offering, return
on sales increases by 3.6 per cent points, total output by 40 per cent, capital
expenditure by 47 per cent, and employment intensity drops by 35 per cent. Many of
their observed performance improvements are already realized in anticipation of the
initial privatization date, accrue over time, and level off after the initial ownership
change rather than the acceleration. Details of residual government ownership,
control transfer, and size and timing of follow-on offerings provide limited
incremental explanatory power for the firm performance, except for the employment
intensity. Based on these results partial privatizations in the oil sector might be seen
to capture a significant part of the performance improvement associated with the private capital markets without the selling government having to cede majority control.

Sergei M. Guriev and Anton Kolotilin (2008)\textsuperscript{14} studied “Determinants of nationalization in the oil sector: A theory and evidence from panel data”. The researchers have studied nationalizations in the oil industry around the world in 1960-2002 and shows, both theoretically and empirically, that governments are more likely to nationalize when oil prices are high and when political institutions are weak. The analysts have considered a simple dynamic model of the interaction between a government and a foreign oil company. The government cannot commit to abstain from expropriation and the company cannot commit to pay high taxes. Even though nationalization is inefficient it does occur in equilibrium when oil prices are high. The model’s predictions are consistent with the panel analysis of a comprehensive dataset on nationalizations in the oil industry since 1960. Nationalization is more likely to happen when oil prices are high and the quality of institutions is low even when controlling for the country fixed effects.

Christian O. H. Wolf (2009)\textsuperscript{15} analyzed “The performance and value creation of national oil companies: An analytical framework”. This paper sets out an analytical framework for assessing the performance and value creation of national oil companies. NOCs differ greatly in their institutional environments, their corporate objectives and operations, and their domestic and international socio-economic linkages, which makes a comparative assessment of NOCs’ value creation far from trivial. But the petroleum sector is of significant importance to many countries around the world, the attempt of identifying, measuring, benchmarking and improving NOC value creation is vital for the broader effort to improve standards of living in these countries. A central contribution of this framework is the proposal of the “NOC Value Creation Index”, a composite indicator which attempts to integrate measurement of
NOC operational performance, financial performance and delivery on the national mission.

Sridhar and Gogineni (2010) have made a study on “Oil and the stock market: An industry level analysis”. They have investigated that the impact of daily oil price changes on the stock returns of a wide array of industries. They found out that the stock returns of the industries which depend heavily on oil, stock returns of some industries that use little oil also are sensitive to oil prices perhaps because their main customers are impacted by the oil price changes. Further, they present robust estimates of industries cost-side and demand-side dependence on oil. These measures can serve as reliable benchmarks when classifying industries into oil-intensive and nonoil intensive groups, a distinction widely used in studies and media without any quantitative justification so far. They have found that the sensitivity of industries returns to oil price changes depends on both the cost-side and demand-side dependence on oil and that the relative effects of these factors vary across the industries.

Varun Raj (2010) has analyzed “Adapting to Shifting Government Priorities: An assessment of the performance and strategy of India’s ONGC”. The researcher has stated that the state-owned company Oil and Natural Gas Corporation Limited is India’s largest company devoted to exploration and production. This paper attempts to unpack the dynamic of the government - ONGC relationship. Focusing specifically on how government ownership and control has influenced ONGC’s performance and strategy, this paper makes four main arguments. First, ONGC exists, just as with national oil companies in many other countries, because of a legacy of suspicion about outsiders. It has performed well when it was tasked with things that were not that difficult and when it had help for the more difficult ventures, such as frontier E&P and development. Second, ONGC has run into trouble as it matured, and the roots of its troubles are mainly in its
interactions with the Government and secondly in its management. Third, a slew of
reforms instituted since the mid-1990s have fundamentally changed the landscape
of the E&P sector in India and the dynamic of government - ONGC relationship.
They also highlight the difficulties which the government has faced in encouraging
higher efficiencies in ONGC and the oil and gas sector. Fourth, given the deep
interconnects of the oil and gas sector with India’s political economy, fixing the oil
and gas sector essentially entails fixing the larger political economy within which the
sector is embedded.

Anirvinna and Ravi (2011) who analyzed “The marketing and consumption
trends in Indian oil industry” has stated that the marketing strategies such as product
differentiation and marketing skills were some of the factors that help various public
sector oil companies and big private sector player to sustain their market share in
the cut-throat competition. Logistics or back-end support in terms of product
movement, pipeline infrastructure, tanks, depots and retain pump network was the
single biggest factor to differentiate the competing players. Another thing was the
government support which was enjoyed by the public sector companies which has a
big advantage of a tremendous back-end infrastructure. With very little to
differentiate the product of one refiner from another branded petrol and various value
added services were being promoted by the oil companies. Another factor for
success depends on having oil equity i.e., to be an independent oil and gas
exploration and production company. The era of easy oil finds was over so the
Indian companies have to train their sights on new oil discoveries in areas of
challenging locations like deep waters, frontier basins that have not caught the fancy
of the global oil companies yet. Other than new oil discoveries by marketing
companies they were on the forefront of acquiring equity oil and gas assets
overseas.
Onyekachi Wisdom Duru (2011) made a study on “An appraisal of the legal framework for the regulation of Nigerian oil and gas industry”. In this study, the researcher concluded that the oil and gas sector in Nigeria is undoubtedly going through serious crisis, due partly to a sharp reaction by the oil producing communities, which suffer grievous hardships resulting from the operations of the laws governing the sector. The various attempts to suppress these people through the gun have failed woefully. The only option clearly available to the key players in the industry are the government and the oil producing or servicing companies is to adopt fair and equitable laws as a framework for the exploitation of the oil and gas resources in Nigeria. This paper assesses the available laws regulating the oil and gas industry in Nigeria and recommends a progressive legal framework for the regulation of the Nigerian oil and gas sector, with a view to find remedy for the perceived lapses in the law.

Emma Ik Okoye (2011) in his study on “Overview of accounting in the Nigerian petroleum (upstream) industry” has concluded that the oil revenue has been and is still the main stay of the Nigerian economy and is likely to remain so for sometime to come. Total annual revenue from oil runs into several billions and the importance of ensuring that effective machinery exists for the collection of this massive wealth cannot therefore be overemphasized. They look at the history of exploration and production or upstream activities in Nigeria in order to appreciate the accounting aspects. The nature of the cost incurred and revenues earned from exploring for and revenues earned from exploring for and producing petroleum products will be examined and will consider issues involved in developing accounting policies in the upstream oil and gas industry. The impact of full cost and successful effort method on financial statements and high light their usability. The upstream petroleum industry is capital intensive necessitating the type of financing arrangement obtainable in the industry. An update in the financing arrangements will
be discussed in this paper. Oil and gas are two most important natural resources in
Nigeria. Taxation is one tool, the government can use to maximize the benefit of
these resources to the nation and will present the issues and problems of
assessment of tax in the industry will be presented.

Kyla Tienhaara (2011)\textsuperscript{21} has made a study on “Environmental aspects of
host government contracts in the upstream oil and gas sector”. In this study, the
literature on environmental regulation of the upstream oil and gas sector in
developing countries and economies in transition have focused largely on domestic
legislation as well as a number of intergovernmental agreements and, more recently,
voluntary industry initiatives. Much less notice has been taken of environmentally
relevant content of contracts negotiated between international oil companies and
petroleum producing states, which often have a significant if not dominant role in
shaping the regulatory regime for oil and gas operations. The only major study on
this subject, carried out by Zhiguo Gao, was published in 1994. Gao has concluded
that environmental issues had not received enough attention in the oil and gas
contracts which had reviewed by them. A limited survey indicates that oil and gas
contracts negotiated and signed in the last fifteen years generally give greater
attention to environmental protection than those signed previously, but the coverage
of specific topics vary widely as does the strength of terms. Additionally, concerns
that certain contractual provisions may actually undermine rather than bolster
environmental protection efforts have become more prominent in the period since
Gao’s study. Thus, there remains significant scope for the oil and gas contracts to
improve from an environmental governance perspective.

Surbhi Arora (2012)\textsuperscript{22} has made an analysis of on “Importing crude oil for
Indian refineries – Future strategies for tonnage requirements”. The researcher said
that India has opened up its regions of oil and gas exploration, production, refining
and marketing and is set to become a potential exporter in this multi-billion dollar
industry. India is well placed to be a major player in the hydrocarbon value chain as it has 20 refineries with a total refining capacity at over 179 MMTPA and is emerging as an international destination for oil refining. It is expected to enhance its refining competence by 45 per cent in the next 5 years and is becoming a significant exporter of petroleum products. India being the 4th and 6th largest consumer of oil and importer of oil respectively, imported about 72 per cent of our total oil consumption in the year 2004-05. During the year 2008-09, Indian refineries have imported 132 million metric tons and our import requirement is expected to increase to 91 per cent by 2003-04 as our demand for crude oil is increasing every year but production being stagnant since last five years, for importing more than seventy per cent of our crude oil requirement, our Indian refineries will have to take lot of vessels. This paper assesses/analyzes the crude oil import scenario, the number of vessels required for importing the crude oil from different countries and to estimate the tonnage requirement for shipping industry in the coming future so that the Indian shipping industry can take an advantage of this big emerging opportunity.

Mohammad Ahmed (2012)\textsuperscript{23} in his study on “Project management: Factors critical for success of projects in oil and gas sector of Kuwait” has concluded project management methodology is a set of established guidelines that are used for executing projects in every industry. They are broadly based on initiating, planning, organizing, executing, and monitoring and controlling process group. However, project management is carried out through nine project management knowledge areas i.e. integration, scope, time, cost, quality, human resource, communications, risk and procurement management. This research is carried out to identify the critical success factors in EPC projects in oil and gas industry of Kuwait and to compare the results with previous established success factors. The data was collected based on convenience sampling technique. Acquired data were analyzed through factor analysis technique and critical factors based on these data, acquired from the
selected organization, were identified. The findings indicate concurrence with three previously established success factors i.e. scope, time and cost. However, analysis also has identified two more factors namely integration and risk. To summarize, the analysis has resulted in identifying five critical success factors; Time, Cost, Scope, Communications, Human resource and Integration.

Giulio Greco (2012) has published a paper on “Ownership structures, corporate governance and earnings management in the European oil industry”. The researcher has used quarterly data and a panel data methodology. The findings show non-linear relationships among institutional investor’s ownership and governmental ownership with the magnitude of earnings management. For governmental ownership, the study found out that a positive association within lower levels of ownership, consistently with incentives for oil companies to avoid closer political scrutiny on the reported results. The researcher found out a negative association with earnings management magnitude in firms where governments control shareholders or large block holders. The findings also show that relevant governance variables, such as the proportion of independent directors, the audit committee’s size and meeting frequency, contribute to constrain earnings management. Overall, the results suggest that the key variables related to ownership and governance structures impact on earnings management across different national settings and governance systems. Moreover, the relationship of ownership structures with earnings management appears to be complex and vary at different levels of ownership.

Masami Kojima (2013) in his article “Petroleum product pricing and complementary policies: Experience of 65 developing countries since 2009” emphasized that many of the 65 countries reviewed in this paper have progressed slowly or even reversed the course to reform the pricing of petroleum products. The researcher found out that the end-user prices in July 2012 varied by
two orders of magnitude across the countries. More than two-fifths, including some that had only recently adopted automatic pricing mechanisms, froze the prices of gasoline, diesel, or both for months or even years on end during the study period. When the prices were finally adjusted, the increases were sometimes substantial, leading to large-scale protests, partial or full reversals of price adjustments, or softening of pricing reform policy. Governments’ attempts to keep domestic prices artificially low - through price control, export or quantity restrictions, or political pressure put on oil companies - have helped curb inflation in the short term. But frequently with serious negative consequences: flourishing black markets, smuggling, fuel adulteration, illegal diversion of subsidy funds, large financial losses suffered by fuel suppliers, deteriorating refining and other infrastructure, and acute fuel shortages causing economy-wide damage. In several countries, subsidies, price controls, and other restrictions have helped protect inefficient refineries and oil marketers. Mitigation responses have included fuel conservation programs; fuel diversification, particularly liquid bio-fuels to substitute gasoline and diesel; and efforts to lower costs of supply, including strengthening infrastructure, promoting price competition, hedging, negotiating price discounts with exporters, and bulk procurement. Various forms of assistance to consumers have also been offered, especially to households, agriculture, transport, and fisheries.

Bairi, et.al. (2013)26 have studied “Knowledge acquisition by outsourced service providers from aging workforce of oil and gas industry” an understanding of the major critical success factors involved in knowledge acquisition from an aging oil and gas workforce by outsourced service providers and find the outcome. The authors’ have shortlisted two outsourced firms for studying primarily because, they have delivered lots of service support work to oil and gas firms. A structured, open-ended interview was conducted for the exploratory nature of this case study. The results of this study indicate that both client and service providers can benefit by
following major critical success factors for knowledge acquisition. From the open-ended interview with the two companies, it can be concluded that the service providers are able to grow their technical and domain capability through knowledge acquisition from aging workforce and reduce the cost to client.

Sreeram R. Gopalakrishnan (2013) in his study on “Communicating a vision for image through CSR in oil industry” has revealed that the oil industry in India is mixture of public sector and private sector players. The prominent ones among these companies are ONGC, GAIL, IOCL, HPCL, BPCL, RIL and Essar Oil Ltd. All the companies are comparable with each other in terms of turnover, profits and the importance they have in ensuring the energy security of the nation. In fact, RIL has the biggest presence in the minds of investors, business community and institutional stakeholders. But for the retail customer, the millions of homemakers and the large consumer of bulk fuels, the three companies IOCL, BPCL and HPCL have a dominant presence too. Collectively known as the oil marketing companies these three have a triply of the downstream marketing segment of the industry. This segment is also affected by the policies of the Government.

Praveen Agrawal and Artee Agrawal (2015), have made a study on “Employee retention in the oil and gas sector: A review of existing literature”. Objectives of the study was to study the challenges in the HR management in E&P sector in India and to understand the various factors which contributes in HR retention in E&P sector. This study concludes that existing academic institutes are not sufficient to ensure industry stability in terms of manpower supply. The gap between the demand for trained manpower and its supply widens annually. Some of the key issues include an aging workforce, retirement, attrition, and talent acquisition and supply.
Studies on financial performance of firms other than petroleum industry:

Rammohan Rao and et.al (1975) has examined “The performance of financial management in the corporate sector”. This study examines the decisions about internal and external finance as interrelated and consequent upon a choice of the structure of current and fixed assets. Secondly, they have analyzed the earnings pattern of different types of funds to see if the competitiveness hypothesis can sustain. They have concluded that a firm’s ability to borrow was constrained by the rise associated with the proportion of debt in the capital structure. The ratio was higher than internal funds which have improved the firm’s ability to borrow. Similarly if the financial leverage i.e. Debt or equity ratio was lower than the institutionally determined leverage. The borrowing was facilitated. But if the leverage was the institutionally determined maximum then there was inhibition of the borrowing.

Pany (1991) has sought to “Identify factors which influence corporate economic performance”. Important industrial characteristics which have been used by industrial organization researchers as the determinants of financial performance are concentration, market share, industry growth, research and development expenditure, advertisement intensity, and size of firms in the industry. These characteristics may allow firms to be in a better position to implement their strategies successfully and profitability. Consequently, firms may reflect better performance on account of favorable industrial characteristics.

Jagan Mohan Rao (1993) in “Financial appraisal of Indian automotive tyre industry” has studied the financial appraisal of Indian automotive tyre industry. The study was intended to probe into the financial condition-financial strength and weakness-of the Indian tyre industry. To this end a modest attempt has been made to measure and evaluate the financial performance through inter-company and inter-sectoral analysis over a given period of time (1981-1988). The main findings are that fixed assets utilization in many of the tyre undertakings was not as productive as
expected and inventory was managed fairly well. The tyre industry’s overall profit performance was subjected to inconsistency and ineffective.

Kallu Rao (1993) has made “A study on intercompany financial analysis of tea industry-retrospect and prospect”. An attempt has been made in this study to analyze the important variables of tea industry and projected future trends regarding sales and profit for the next 10 year periods, with a view to help the policy makers to take appropriate decisions. Various financial ratios have been calculated for the analysis of the financial health of the industry. The forecast of sales and profits of tea manufacturing companies shows that the Indian tea industry has bright prospects. The recent changes in the Indian economic policies will boost up the foreign exchange earnings, which will benefit those companies, which are exporting to hard currency areas.

Pillai, Vadivel and Kamal (1995) has studied “The diversified companies and their financial performance” An effort was made to study the relationship between diversified firms and their financial performance. Seven large firms having different products - both related and otherwise, in their portfolio and operating in diverse industries were analyzed. A set of performance measures and employed to determine the level of financial performance. The results reveal that the diversified firms studied have been healthy financial performance. However, variation in performance from one firm to another has been observed and established statistically.

Vijayakumar and Venkatachalam (1995) in “Working capital and profitability - An empirical analysis” have studied the impact of working capital on profitability in sugar industry of Tamil Nadu by selecting a sample of 13 companies; 6 companies in co-operative sector and 7 companies in private sector over the period 1982-83 to 1991-92. They have applied simple correlation and multiple regression analysis on working capital and profitability rations. They have concluded
through correlation and regression analysis that liquid ratio, inventory turnover ratio, receivables turnover ratio and cash turnover ratio had influenced the profitability of sugar industry in Tamil Nadu.

Vijayakumar (1996) in “Assessment of corporate liquidity – A discriminate analysis approach” has revealed that the growth rate of sales, leverage, current ratio, operating expenses to sales and vertical integration are the important variables which determine the profitability of companies in the sugar industry. Further, the author has studied the short-term liquidity position in twenty-eight selected sugar factories in co-operative and private sectors. A discriminate analysis has been undertaken to distinguish the good risk companies from poor risk companies based on current and liquidity ratios. Discriminating ‘Z’ scores have been calculated with the help of discriminate function and according to the ‘Z’ scores the companies are ranked in the order of liquidity.

Mohan. S (1997) has analyzed “Financial management of Cooperative Spinning Mills”. This study cover the period of nine years ranging from 1984-85 to 1992-93 has the objectives to assess the investment decision process and the effectiveness with the fixed assets have been managed by the CSMs, to analyze the capital structure in the CSMs and the factors which influence the planning of the capital structure. The study concluded that the mills have to take necessary steps to strengthen the fixed assets by modernization. Diversion of working capital is to be avoided, for which the long-term funds are to be enhanced to support at least the long-term requirements. The CSMs except Mill A have to enhance the equity base by issuing shares and by generating internal resources. The mills should improve their operational efficiency by taking various measures to yield the social surplus at least for the payment of taxes and interest and for absorbing the depreciation.

Key Sengupta (1998) has studied “The performance of the fertilizers industry in India”. Analysis of cost functions and cobb-douglas production function
have been made to study the performance of the industry, the results of which reveal that the industry is subject to the law of increasing costs. The findings get further support from the examination of the production function, which reveals that the average productivity of labor exceeds its marginal productivity. Analysis of shifting cost functions further highlight that the firms belonging to this industry expand capacities, even before fully exploiting the existing capacity conforming to the oligopolistic behavioral tendency of the firms belonging to the fertilizers industry.

Sidhu and Gurpreet Bhatia (1998) have studied “The factors affecting profitability in Indian textile industry”. In this study an attempt was made to identify the major determinants of profitability in Indian textile industry for the year 1983. To find out the factors affecting profitability, regression analysis had been applied. From the analysis, it was concluded that there was no clear-cut relationship between current profitability and capital intensity. The age of the firm was generally negative but statistically insignificant relationship with current profitability which points towards the fact that the firms in Indian textile industry are absolute and need modernization.

Vishnu Kanta Purohit (1998) in the study on “Profitability in Indian industries: An analysis of firm size and profitability” has examined the relation between size and profitability in Indian industries. The study highlights the following two common conclusions. Firstly, though the average profitability of firms does not seem to vary with their size and the variability of profit rates declines with size. Secondly, the average growth rates of firms do not seem to vary with their size but only the variability of growth rates. The study further explores the factors that determine profitability. Besides the size, the model also tests for the impact of age of the firm and growth in sales on profitability at both micro and macro levels. The study concludes that the selected industries and firms have made efforts to increase profitability through various means including increase in size through diversification and moving into higher technology.
Govinda Rao and Mohana Rao (1999) in the study on “Impact of working capital on profitability in cement industry – A correlation analysis” has analyzed the impact of profitability on working capital in cement industrial units in India. Ten variables on working capital ratios have a close interaction with profitability measures viz., current ratio, debt equity ratio, cash position ratio, Working capital turnover ratio, inventory turnover ratio, debtor’s turnover ratio, cash turnover ratio, current assets turnover ratio and average collection period are selected for analysis. The inter-relationship are to be studied with the help of Karl-Pearson’s co-efficient of correlation technique, by arranging the correlation of one variable with each other variable in the form of matrices which are a triangular and symmetrical about the principal diagonal. On overall basis out of ten variables three variables showed a significant co-efficient and seven exhibited insignificant relationships. Out of the ten variables, five variables have showed negative association and the others showed positive relationships.

Sardeesh Babu (1999) has made “A study on financial performance of Fertilizers and Chemicals Travancore Limited”. The cost on various overheads can be brought down by carefully scrutinizing each item and applying cost cutting techniques. The profitability of the company can be improved by reducing the expenses that do not contribute any productive use. The current assets can be managed efficiently by examining the material holding and stock holding procedure and pattern. If the company increases its turnover and reduces its cost, the profit will increase leading to an increase in the growth rate of sales, profit before tax and profit after tax.

Karthikeyan (2000) in his study “Financial performance of selected automobile companies - An analytical study” has tried to identify the relationship between the financial performance variables and to develop simple financial forecasting performance variables are analyzed, and a simple cross-section
regression analysis was made to forecast the financial performance. The financial analysis variables considered were net sales, total assets, gross profit, and profit before tax, dividend, retained earnings, cash flows and net worth. The researcher has concluded that the sales have been consistent in all the four year of study. Total asset have also been consistent in four years under the study.

Vijayakumar and Kadirvel (2003) have studied “The profitability and size of firm in Indian minerals and metals industry”. Generally, it is their opinion that the firm may be in a position to earn a higher rate of return on its investment larger than the smaller firm. Similarly, a counter argument is that the size breed inefficient and therefore profitability may decline with the size of firms. Thus, they found out that some theoretical arguments have suggested that the profitability should increase with the firm size, others suggest a negative relationship. It is in view of these contradictory suggestions, that it becomes necessary to study the relationship between size and profitability of the firms. For this purpose, Indian public sector minerals and metals industry has been selected. The study has revealed that the size is found out to be significantly associated with the profitability during the study period. It is also evident from the analysis that size is positively associated with the profitability. Thus, larger firm may be in a position to earn higher rate of return on investment through diversification and move into higher technology.

Sudarsana Reddy (2003) has studied “The financial performance of paper industry in AP”. The main objectives set for the study are to evaluate the financing methods and practices to analyze the investment pattern and the utilization of fixed assets and to ascertain the working capital condition. The data collected have been examined through ratios, trend, common size, comparative financial statement analysis and statistical tests have been applied in appropriate context. The main findings of the study are that A.P. paper industry needs the introduction of additional
funds along with restructuring of finances and modernization of technology for better operating performance.

Ram Kumar Kakani, Biswatosh Saha and Reddy (2003) have attempted to provide an empirical validation of the widely held existing theories on the determinants of firm performance in the Indian context. The study uses financial statements and capital market data of 566 large Indian firms over a time from of eight years divided into two sub-periods (1992-96 and 1996-2000) and to study Indian firm’s financial performance across various dimensions viz., shareholder value, accounting profitability and its components, growth and risk of the sample firms. The study has found out that the size, marketing expenditure and international diversification had a positive relation with a firm’s market valuation. The study has also found that a firm’s ownership compositions, particularly the level of equity ownership by domestic financial institution and dispersed public shareholders, and the leverage of the firm were important factors which affect its financial performance.

Bardia (2004) in his study on “Liquidity and Management – A case study of Steel Authority of India Limited” has analyzed the management of liquidity position of Steel Authority of India Limited, one of the largest public sector steel manufacturing companies of India for the period 1991-92 to 2001-02. The study has assessed the liquidity maintained by the steel giant and examined the liquidity position of the company based on some important parameters mainly employed for measuring liquidity. The study has applied comprehensive rank test to compare the liquidity position of the company. Spearman’s rank correlation has been applied to the extent of relationship between liquidity and profitability. The study has concluded that the liquidity and profitability are more in the same direction and Spearman’s rank correlation co-efficient and students ‘t’ test showed a significant positive association between liquidity and profitability of the company during the period under study.
Clement and et.al (2005) in their study on “Automobile purchase: Peer influence in decision making”. Based on the study the objectives have analyzed the major factors influencing the purchase to find out the factors influencing peer groups in the purchase of car by its size to determine the most influencing peer group in the purchase process. The major findings are most of the sample respondents taken for the studies were in the age group of 30-40. Peer group ‘Friends’ are reported as the most infusing factor for purchase decision brand in able value, publicity and ‘defeats’ network after sales service and vehicle performance were found out to be significant factors influencing purchase decision of cars.

Susma Vishnani and Bhupesh Kr Shah (2006) have studied “The role of working capital in profit generating process”. If a company desires to take a greater risk for bigger profits and losses, it reduces the size of its working capital in relation to its sales. If it was interested in improving its liquidity, it increases the level of its working capital. However, this policy was likely to result in a reduction of the sales volume, therefore of profitability. Hence, a company should strike a balance between liquidity and profitability. In this study an effort has been made to make an empirical study of Indian consumer electronics industry for assessing the impact of working capital on profitability during the period 1994-95 to 2004-05. The impact of working capital on profitability had been examined by computing co-efficient of correlation and regression analysis between profitability and working capital ratio.

Manor Selvi and Vijayakumar (2007) in their study entitled “Structure of profit rates in Indian automobile industries – A comparison”, an attempt has been made to examine the trends in rates of profit of selected Indian Automobile Industries over the period 1991-92 to 2003-04. Further an attempt has also been made to capture the industry vise variation in the series of profit rates, which reveals the dispersion of the series for each industry over the study period. Findings of the study showed that the declining trend of profitability was proof of adverse effect of
various controls on prices, output, expansion and investment etc., exerted by
government on these industries over time.

Pandey. I.M (2009)\textsuperscript{50} has viewed that “The aims of the working capital
management are profitability and liquidity solvency” refers to the company ability to
meet their obligations. To ensure the solvency, the company should be very liquid
which means large amount of current assets holdings if the company maintains
relatively larger current assets than the requirements, the company’s profitability will
suffer to the extent the investment was idle to have higher profitability, the company
has to sacrifice the liquidity company and the liquidity position. Maintaining these two
in the same direction was challenging and a difficult task which the finance manages
encounter.

Ried Edwardj and et al. (2010)\textsuperscript{51}, in their study “Signaling firm performance
through financial statement presentation”, have investigated that the managers’
presentation of special items within the financial statements reflects the economic
performance or opportunism. Specifically, special items have presented as a
separate line item on the income statement to those aggregated within another line
item with disclosure only in the foot note presentation. The study was motivated by
standard-setting interest in performance reporting and financial statement
presentation, as well as prior research investigating managers’ presentation choices
in other contexts. Empirical results reveal that special items receiving income
statement presentation are less persistent, relative to those receiving footnote
presentations. These results are consistent across numerous alternative
specifications. Overall, the findings are consistent with managers using the income
statement versus footnote presentation to assist users to identify those special items
most likely to differ from other components of earnings - that is, for informational, as
opposed to opportunistic motivations.
Amalendu Bhunia (2010)\textsuperscript{52} has studied “The financial performance of selected pharmaceutical firm in India”. In this study, the liquid ratio is found out to be fluctuating every year and is also lower than its industry average. It may be due to overstocking. In this study overall performance and effectiveness of the firm was not satisfactory due to the ineffective working capital management. The study has suggested that the company should concentrate on working capital management and it should be managed effectively, and reviewed periodically and thereby optimum utilization of fixed asset is possible. The liquidity position of this company is comparatively good as it approaches the standard norms throughout the period of study. The ratios divulge that the company’s ability in managing the current assets is found out to be inadequate which require generation of more sales. It can be concluded that the company’s overall risk evaluation process is not at desired level for the improvement in operational and managerial efficiency of the company as to maintain and increase further by effective utilization and control of all the assets.

Mathivanan. B and Chilar. P (2010)\textsuperscript{53} made a “Comparative financial analysis of Indian IT”. During the study period 2008 to 2009, the study has found out that the wage bill has increased for the organizations biting the bottom lines significantly. And also the study has found out that IT companies are also considerably affected by the currency rate fluctuations and a rise in rupee against the dollar will hit the margins appreciably. IT companies have been forced to reduce their pricing rated due to pressure from clients and due to intense competition. The study has observed the Indian IT industry is facing an uphill battle in today’s troubling times. The challenge is to sustain their growth rate and keep on providing value to their shareholders. The key for survival would be the companies’ ability to diversify into global markets while getting more from their existing clients and initiating stringent cost optimization measures. Organizations who withstand this
onslaught will come out of this crisis stronger, leaner and ready to take on global giants and stamp their authority in this flat world.

Shurveer S. Bhanawat (2011)\textsuperscript{54} in his study “Impact of financial crisis on the financial performance of the Indian automobile industry” said that India is a country diverse in culture and religion, strong in will and manpower, large in size and opportunities has become a highly wooed automobile market. Despite the impact of the financial and economic crisis, India’s automobile economy is booming. Various sectors of industries were affected due to global financial crisis. In this connection here the researcher has tried to judge the impact of financial crisis on Indian automobile industries with the help of statistical significant techniques. On the analyses of the t-Test and analysis of variance, it is found out that the impact is not significant which proves that though the global economies are impacted by recession, the Indian automobile sector showed resilience and was not affected significantly by the recession. It goes to show that the Indian automobile market, though impacted by export income, did not crumble under recession, as the volumes were significantly met with by local demand, thereby proving that the Indian economy is a self sustaining economy, not significantly impacted by the financial crisis.

Prasanta Paul (2011)\textsuperscript{56} has made a study on “Financial performance evaluation – A comparative study of some selected NBFCs”. In this study, five listed NBFCs have been considered for the analysis of comparative financial performance. Different statistical tools like, Arithmetic mean, Standard Deviation, Coefficient of Variance, Correlation and Analysis of Variance have been used extensively. The study has concluded that the selected companies differ significantly in terms of their financial performance indicators from one to another, may be for the different services they provide. There are no significant differences in the last five years in the management of financial performance of each selected NBFCs, except marginal
deviation in some cases in the year 2006-07 may be for the effect of general recession in that period.

Muktha K. C and Mohan. B (2012) have analyzed “Financial health of select firms with reference to automobile industry in India”. In this study, the Z scores was used to evaluate the financial health of the company and different ratios like current ratio, quick ratio and debtor’s turnover ratio are calculated to know the financial soundness of select firms. In this study the data were collected from secondary sources. Both quantitative and qualitative data relating to the working of automobile units, financial performance and related aspects were collected from individual automobile units through their annual reports and annual accounts. The study is an analysis of predict and compare the financial performance of sample firms of Indian automobile industry. The study have revealed that the firms are financially sound during the study period of 2001-02 to 2009-10.

Suresha K.P and T. Rajendra Prasad (2012) have analyzed the “Performance of public sector enterprises in India” and has concluded that the performance of Indian industrial sector has stated with Great Spirit and has made a strong industrial base in our economy. No longer, the performance of public sector enterprises has a fruitful one. Due to various factors these sector incur continuous losses. Even the post reform studies have also revealed that performance of Indian economy and secondary sector in particular, has been dismal during the second half of the 1990’s, the removal of control relicensing, and reducing the role of public sector, has not resulted in the channelizing of available resources, financial, material, in the economically productive industries. Finally, the study has concluded that productive investment in the public sector has been sharply scaled down during 1990’s. In contrast to the net sector led by information communication and entertainment which create waves currently is among the least segments of the Indian industry.
Srinivas Reddy. P (2012) have studied the “Financial performance of Tobacco industry in India”. In this study the long term and short term financial position and also profitability of the Tobacco Industry was analyzed using various ratios during the study period 2005-06 to 2010-11. The study has observed that the financial position liquidity, solvency and profitability positions are not satisfactory. The researcher has found out that the companies are going to face serious financial problems in future. Firms could sustain even reasonable market shares. This appeared to be a significant departure from project forecasts. Many of the poor performers could not maintain commensurate personnel for achieving rising levels of market penetration. The study has suggested that the Indian Tobacco Industry should improve its products quality of cigarettes for competing the domestic and world market. For that install new updated machines instead of producing an old out dated machines and it has to give emphasis to increase sales performance has to increase its internal performance.

Angamuthu. R and Sivanandam. A (2012) have studied “Financial health of select cement industrial units in Tamil Nadu”. In this study, various statistical techniques like mean, standard deviation and coefficient of variations were used to measure the overall financial healthiness of the selected cement companies; modified Altman Z score model for non-listed firms is used. During the study period from 2000-01 to 2009-10, it is observed that the Z values for Dalmia cement was in distress zone from 2000-01 to 2003-04 and in 2008-09, and in Grey zone during the remaining years. Due to presence of TANCEM, the financial healthiness of the select cement companies was found out to be in financially distress for most of the years but became unpredictable overall during the period. Financial healthiness of Madras cements was better among units considered for the study.

Ankita Singh (2016) made a study on “Effect of capital structure on profitability of pharmaceutical companies”. The very crucial problem in every
business is financing the firm’s assets and every business wants optimum capital structure means which offers guarantee for optimum returns. But the determination of such an optimum capital structure is a formidable task in practice. So keeping in the mind the importance of capital structure, an attempt has been made in this study to analyse the impact of capital structure on profitability of selected pharmaceutical companies in India by using simple linear regression model. In this study, operating profit, profit after tax, return on capital employed, return on net worth and earnings per share were used as independent variables for this purpose and the data covered for 15 years from 2000-2001 to 2014-2015. The overall analysis of impact of profitability on capital structure reveals that there is a significant relationship between debt equity ratio and operating profit of the selected pharmaceutical companies in India in case of Lupin Ltd and Divis laboratories and when we talked about relationship with net profit ratio as well as return on capital employed it could be seen in Lupin Ltd, Cipla, Cadila Healthcare, Divis laboratories, Aurobindo pharma and Torrent Pharmaceuticals.

Sudipta Ghosh (2016) has made his article on “Does working capital policy affect profitability? – An introspection of central telecommunication companies in India” says a firm may adopt aggressive working capital policy, that low level of current assets in relation to total assets or it may also be used for financing decisions of the firm in the form of high level of current liabilities in relation to total assets. In this backdrop, the present study is an attempt to examine whether working capital policy affect profitability of the central telecommunication companies in India during the period 2004-05 to 2013-14. On the average, the study has found out that central telecommunication companies in India follow conservative financing policy and moderate investment policy during the period under study. Moreover, no significant relationship is observed between working capital investment policy and working capital financing policy. Finally, working capital investment policy has a
significant positive effect on profitability, while working capital financing policy has a significant negative effect on profitability.

**Studies on financial analysis of petroleum industry:**

Satyanarayana chary and Venkateshwarlu (2003)\(^6\) in their study “Estimation of working capital and its impact on profitability with special reference to Sri Venkata Narasimha Oils Limited” have made an attempt to examine sources and components for the period of six years from 1996-2002. The result showed that the company has not utilized its long term funds more effectively by investing them in fixed assets, impact of working capital and profitability ratio’s showed completely positive impact over the study period and the study suggested that correct estimation of working capital should be made and fluctuation in quantum of working capital in relation to sales should be avoided.

Balakrishnan. H. (2005)\(^6\) has attempted to evaluate the “Financial performance of public sector petroleum industry”. The study is confined to petroleum industry, that those corporations which are engaged in the refining, distribution and marketing that have been selected as the sample of study. They are BPCL, HPCL, and IOCL. The researcher has found out that the gross profit ratio of Indian Oil Corporation is very good compared to that of BPCL and HPCL during the study period 1992-93 to 2001-02. IOCL has got a good liquidity position compared to that of other two corporations. The utilization of sales for the working capital is low in case of BPCL and HPCL and high in the case of IOCL. There is a significant difference between the inventory values, net sales values, gross profit values, net profit values, net worth values, cost of goods sold, except working capital values of that three corporations. The study suggested that public sector must be given more capital, more autonomy to expand and grow to meet the global challenges. if positive steps are taken by the corporations and the government accepts the suggestions of
the study, it will not only be beneficial to the government and the corporations but also to the society at large.

Eramus. P.D (2010) in his study “Efficient working capital management” should contribute to the creation of shareholder’s value has investigated the relationship between working capital management and firm profitability for a sample containing both listed and delisted South African industrial firms. Survey of the existing literature indicates that so far no specific study has been carried out to examine the profitability analysis of Indian oil industry after liberalization in the manufacturing sector. The present study is an attempt in this direction and therefore, aims to enrich the literature of financial performance in relation to the Indian oil industry. The results obtained from the full sample revealed statistically significant negative relationships between a firm’s profitability and its net trade cycle, debt ratio and liquidity ratio. Similar results are observed if the listed firms are investigated separately. In the case of firms that delisted during the period under review, however, the liquidity and debt ratios appear to play a more important role than the NTC. Based on the results of this study, it would appear that management could attempt to improve firm profitability by decreasing the overall investment in net working capital.

Chatterjee. I. N. (2010), in “Assessing financial performance of Indian public sector companies engaged in the business of petroleum and natural gas during pre and post administered pricing mechanism system” says Indian oil and gas companies were constrained and handicapped during the period of APM vis-à-vis global oil majors and were not in a position to grow as fast as global majors. During APM period, as highlighted in the brief write-up on APM, the price of crude oil and petroleum products was controlled by the government by offering indigenous crude producers, namely ONGC and Oil India, 15 per cent post-tax returns on capital employed. Similarly, downstream refineries and marketing companies were
compensated on ‘cost plus’ formula with an assured 12 per cent post-tax return on net worth. The study has concluded that the performance of the companies has improved in the post-APM period. The comparative analysis carried out in this study has concluded that the target of Indian oil and gas companies were able to enhance their performance and it was reflected in their competitiveness and efficiency parameters with the increase of their competitiveness and efficiency parameters, the Indian oil and gas companies were able to reduce the gap in performance between target Indian oil and gas public sector units and target international companies thereby benefiting level playing field competitiveness.

Sarkar (2011) has made an attempt to analyze “The impact of liquidity management on profitability of ONGC Ltd.” for the study period from 2004-05 to 2009-10. The general perception is that top professional management is to design a policy so that the risk can be minimized and profitability can be maximized to strike a balance between risk and profitability. The article has concluded that out of eight ratios relating to working capital management selected during the study period, three ratios namely current assets to total assets ratio, current assets to sales ration and inventory turnover ratio registered positive associations with the selected profitability ratio viz. Return on capital employed and the remaining ratios like current ratio, quick ratio, working capital turnover ratio, debtors turnover ratio and cash turnover ratio have witnessed negative associations with the return on capital employed. Again, CR and ITR both have significant contributions towards the overall profitability of the company during the study period. The study of working capital leverage of the company registered fluctuating trends during the study period. The values of WCL all throughout the study period are always less than unity i.e. less than one. Hence, it is opined that the increase in the profitability of the company is less than the proportion of decrease in working capital throughout the entire study period.
Sugandharaj Kulkarni (2011) in his study entitled, “A Study on fundamental Analysis of ONGC” has examined the economic factors which directly or indirectly affect the performance of ONGC. According to his study fundamental means economic health of a company. The fundamental analysis has done into deep rather than day to day movement in its share price. Those who are equity investors, they are interested to know about the intrinsic value of a company stock. As per the study a logical and systematic approach to estimate the future profits and company performance depends not only on its own efforts but also on the industry and economic factors.

Robert Pirog (2012) has analyzed “Financial performance of the major oil companies”. This study has examined the financial performance of five major oil companies for the period 2007-2011. Both the sources and uses of revenue and profit were analyzed in this study. The study concludes that the oil industry tends to become highly profitable when there is the rise of the price of crude oil. Since increases in the world price of oil tend to reflect general economic conditions, political developments, and the emergence of new markets, the increases in company profitability can be viewed as windfall gains. Alternatively, the returns in periods of high oil prices could be looked at as the other side of the lower returns earned in periods of lower prices. The price of oil has not been permanently low, or high, since 1970s. Future changes will likely to change again the industry’s financial position. The capital expenditures of the companies have not succeeded in increasing their production of oil and natural gas. They have been successful in providing returns to their shareholders. To the extent that high oil prices can be expected to continue, the five major oil companies are likely to remain profitable and are able to carry out their business plans. Small changes in the companies’ net incomes or total revenues can be expected to only have small effects on their operations.
Asha Sharma (2012) has made an empirical study on “Financial analysis of oil and petroleum industry”. In this study, the researcher had analyzed the short term solvency and profitability position of leading oil and petroleum companies in India. The researcher has found out that ONGC is comparatively good with the other four companies. Its financial position is found out to be at satisfactory level in net profit growth on the profitability level, short term liquidity position, efficiency level, solvency capacity and investment analysis basis. Finally it is concluded that the performance of the selected five companies ONGC, RPL, HPCL and CAIRN INDIA LTD earning per share is high, current Assets is above standard, proprietary fund also found satisfactory. But the financial position of ONGC is found out to be highly satisfactory level. So the position of the ONGC was ranked on top among the selected units.

Vijakumar and Gomathi. P (2013) have made “An empirical analysis of the profitability of Indian oil refineries”. The data analyzed and interpreted in this study related to all companies selected are collected from “Capitaline” and “PROWESS” databases, which are the most reliable on the empowered corporate database of Bombay Stock Exchange and Centre for monitoring Indian economy respectively. It can be inferred from the study that operating efficiency of selected oil refineries in India was satisfactory and the management generally succeeded in investing capital funds. Further, owner’s funds were utilized profitably by all the selected oil refineries in India except Mangalore Refinery and Petrochemicals Ltd and Essar Oil Ltd. It is significant to note that the position regarding earnings per share and dividend payout ratio in all the selected oil refineries during the period under review shows better performance and prospects from the point of view of shareholders. Only in the case of Mangalore Refinery and Petrochemicals Ltd, Chennai Petroleum Corporation Ltd and Reliance Industries Ltd, the time trend co-efficient is positive implying the tendency of profit rate to rise over time. The study has concluded that the analysis of
profitability of the selected oil refineries reveals that majority of the companies under review have highlighted the better performance and the prospects from the point of view of owners.

Pawan Kumar (2013)\textsuperscript{71} has made “Financial analysis of Indian Oil Corporation Ltd”. In this research the data were collected for a period of seven years from 2005-06 to 2011-12. Various aspects of ratios are used in this analysis. The study has concluded that the profitability position of the company is not satisfactory. And also the company has failed to stable its gross profit ratio during the period of study which is not good for the company's financial health. In this study the researcher has analyzed that the company is unable to maintain earnings before interest and tax with respect to capital employed. The study has found out that the current assets were less than current liabilities which may result in the increase of liquidity risk and a matter of worry to creditors and short term lenders. And also the study has indicated that quick assets are not able to meet current liabilities. The earnings per share were increased slowly during the study period. It is a good position and shows that the company is able to increase shareholders' wealth. Finally the study has suggested the company is needed to improve the quality of financial decision so that there is the maximization of the wealth of equity share holder.

Aniruddha Sarkar (2013)\textsuperscript{72} has made an “Analysis of financial performance of selected public sector oil and gas companies in India”. The study has highlighted some relevant issues, which can be used for the formulation of appropriate policies and strategies in the light of the globalization and liberalization of the Indian economy. The analysis has observed that the selected public sector oil and gas companies in India have been rendering their commendable performances in the overall economic development of India to achieve self-reliant economy as far as possible. However, it is expected that the public sector oil and gas companies
should run and operate their business activities in a more compact manner to contribute significant to the central exchequer for raising necessary fund for public expenditure programmes to be undertaken by the Government of India to accelerate the pace of socio-economic growth process in the country to alleviate poverty and to eliminate the regional disparities in the economy, etc.

Durga Devi. S (2013) has researched “Financial performance of public sector oil companies: IOCL and HPCL”. In this study, the financial performance of IOCL and HPCL was measured over the 15 year period from 1997 to 2012. The researcher has found out that both the companies have adequate current assets to meet its current liabilities. Inventory management of IOCL and HPCL is efficient and it has resulted in good business operations. The concerns are able to meet its interest commitment and the companies are at lesser risk. The firm’s liquidity position is not good. Share price of the companies has reached its maximum due to the peak in profit. Gross profit of the company is more due to proportionate increase in sales. The study has suggested that the company has to decrease its manufacturing and other expenses, the oil prices must come down. The company has to decrease its manufacturing and other expenses, the oil prices must come down. IOCL is considered as a Giant of the companies and experienced a good investment in some years by maintaining considerable amount of profits. Inventory management is good. Increasing return on total assets indicates greater profitability. Increase in profit makes the company in a better position and the company is at lesser risk. HPCL is one of the major integrated oil refining and marketing companies in India. The creditors are placed in a good position and it is related that the company is at lesser risk. The company has experienced an effective usage of capital. As sales of the company increases the operating profit which in turn increases the gross profit. Operating profit of the company plays a major role in return on the investment. Efficient utilization is faced by the fixed assets. They have
reduced their expenditure to maintain their consistency in their long term debt. It is concluded that the financial performances of both the companies are good during the period of study.

Antoniammal and Govindarajan. K (2014)\textsuperscript{74} made a research on “Performance appraisal of Indian Oil Corporation Limited”. The researcher found out that EPS was more than the face value of the share in 2012-13; it has been reduced by two times compared with 2003-04. It showed the poor performance of IOCL. It is observed from the financial leverage that the financial risk has increased during the analysis period from 2003-04 to 2012-13, which is mainly caused by the decline in PBT. The study has found out that the operating leverage of IOCL is not stable. The researcher has found out that the solvency position of IOCL has declined over the years. It is noticed from the reserve to capital ratio that the IOCL plaguing back of profit in the business, which shows the strength of financial decision. From the proprietary ratio that the IOCL depends more on debt capital, which reveals that the company will face more risk.

Srikanth. V (2014)\textsuperscript{75} has studied “The financial performance evaluations throw cash flow statement of an Indian manufacturing company”. This study investigated the financial performance of an investment company in India for a three-year period from 2010 to 2013, which is assessed using cash flow statement. This study principally emphasizes on how accounting information aids budgetary decision-makers to evaluate the company financial performance, determine its future obligations, and make better investment decisions. In this study, the performance of a manufacturing company was measured over the three-year period from 2011 to 2013. According to resultant assessments, it can be interpreted that during 2011, shows that the cash flow from operating activities, has a negative balance which is an outflow of cash. It shows that the company didn’t maintain adequate cash balance. Company did not operate well, and overall firm’s performance in terms of
profitability, liquidity has declined due to deterioration in the company's operating environment. From the statement it is also observed that the fixed assets have been financed by the long term financial sources. The findings have pointed out that overall company performance has reduced remarkably in the last year of the analysis. The study has concluded the overall firm's performance in terms of profitability and liquidity has declined due to deterioration in the company's operating environment.

Harbinger Singh and Praveen Kumar (2014) in a study entitled, “Capital structure analysis of oil industry - An empirical study of HPCL, IOCL and BPCL” have pointed out that the researchers in the study have focused mainly on capital structure and examined the performance of debt and equity among the same companies. The researchers have found out that these companies performing well and have suggested to rise capital with the help of debt capital rather than share capital because these companies have high rate of earning and reserves as compared to the rate of interest. For the same study, these can maximize the shareholders wealth.

Kalaiselvi. G and Shunmugananda Vadivel (2015) have analyzed “Financial health of large scale oil and natural gas companies in India - With special reference to select oil and natural gas company”. The study highlights the financial health of selected companies for a period of 10 years from 2004-2014. The study has ascertained the working capital and leverage position of the selected oil and natural gas companies in India. This study has focused on only to large scale companies. So, it could not be generalized to small and medium size companies in India. It is ascertained that Gail, ONGC and OIL have registered decreasing trend over the period of analysis. OIC, BPCL and HPCL have increasing trend and also excellent financial position throughout the study. Despite this government policies OIL, ONGC and GAIL have grown and performed admirably. They have to improve
their working capital ratio, retained earnings ratio, profitability ratio and assets turnover ratio. It is suggested that the OIL, ONGC and GAIL should take adequate measure to reach and retain a healthy zone.

Shenbagam Kannappan (2015)78 made “A study on effectiveness of cost of capital on Bharat Petroleum Corporation Limited” monitored the impact of supply and demand characteristics over the asset revenue and profitability. For a firm BPCL the main objective should be to maximize the shareholder’s wealth through its investment projects and to make the best use of its capital by reducing cost to sustain in the market more successfully. Thus this study takes into account the various ratios related to cost of capital to determine the current position of the firm. The study has found out that a low inventory turnover ratio indicates an inefficient management of inventory in cases of too high or too low inventory turnover. The current asset turnover ratio indicates a slack in the utilization of current assets for increasing sales. It indicates the better utilization of current asset. It is important the issue the companies make decisions of whether to issue new debt or issue new equity for financing. In this study the cost of capital on financial analysis of the company has showed that the firm’s liquidity positions and solvency position are considered satisfactory.

Indrani Hazarika (2015)79 has made her study on “Performance analysis of top oil and gas companies worldwide with reference to oil prices”. The researcher has estimated the financial performance of top five oil and gas companies worldwide based on revenue, net income and market value with reference to profitability, efficiency, financial health and liquidity from 2007 to 2014 considering global crisis and post global crisis period. The study has analyzed the impact of U.S. crude oil first purchase price i.e. Dollars per barrel on performance indicators. For this study financial data of the top oil and gas companies worldwide namely British Petroleum, Chevron, Exxon Mobil, Royal Dutch Shell, Gazprom, Sinopec and Petro China has
been collected from the company websites, annual reports and Morning Star, Inc (http://financials.morningstar.com/ratios). The crude oil price has been collected from the independent data analysis of U.S. Energy Information Administration. Simple linear regression analysis has been employed to determine the statistical significance and degree of dependence between fluctuating crude oil prices and financial performance indicators. The correlation coefficient between the independent variable crude oil and dependent variables for oil and gas companies' worldwide are all less than 0.5 except for the efficiency ratios in British Petroleum, Royal Dutch Shell, Gazprom, Petro China and Sinopec. In this study it is revealed that the fluctuating oil prices do not have the impact on the profitability, liquidity, efficiency and financial health of top oil and gas companies.

Brijeshs Patel (2015) has studied “The financial performance of Essar Oil Ltd based on profitability and liquidity ratios”. In this study, the data has been analyzed by applying the basic ratios of profitability and liquidity. From the analysis, it has been concluded that the financial performance of Essar Oil Limited is not stable. Moreover it has been found out that the financial position of this company is not good in the light of profitability and liquidity ratios. Gross profit ratio and net profit ratio are not looking good as these are the main indicators of the financial strength of the company. With respect to return on capital employed ratio, it has been concluded that the fluctuation in return on investment is because of the earnings before interest and tax. So the company is unable to maintain earnings before interest and tax. It has been also found that company has failed to stable its current ratio and quick ratio during the period of study which is not good for the company’s financial health and also be the bothered moment for the creditor and short term lenders. It has been found out that debt equity ratio remains all time up to the ideal ratio which represents the dangerous situation for the company. It has been also
found that the company has failed to stabilize its earnings per share during the period of study.

Karthick. C and Kasthuri. P (2015)\textsuperscript{61} made “A study on financial performance of Hindustan Petroleum Corporation Ltd”. This study has been made on the profitability, solvency and the liquidity position of Hindustan Petroleum Corporation Ltd. The study found out that there was an increase in the current assets of the company; have been increased. During the study period there was also the increase in the current liabilities of the company. Net Profits of the company have been increased and there was also the increase in the sales the company. The study has suggested that the company should maintain adequate current assets and liquid assets to meet its short term obligation. It should hold up the more funds in the current assets. The company should follow the standard norms for the maintaining of the short term solvency. The long term solvency position of the company was satisfactory. The company has to follow the standard norms to maintain a healthy solvency position. The company should minimize their expenses, so that they can maintain their liquidity position in a safe zone. Finally the researcher has concluded that India has been among the world’s fastest growing economies. With expanding economy comes an increasing demand for energy and, if current trends continue, India will be the world’s third largest energy consumer by 2020.

Dhivya. K (2015)\textsuperscript{82} in “A study on financial performance of selected oil and gas companies in India”, found out that the growth rate of sales and profits of selected oil and gas companies RPL, GAIL, HPCL, and BPCL are positive sign. This should be taken as a good signal among all companies. IOCL shows poor sign, so IOCL will take necessary efforts by way of efficient and effective utilization of financial and human resources for improving the sales and profits of the company. The trend analysis for sales for selected oil and gas companies shows increasing trend from year by year. It shows increasing trend. This should be taken as good
signal for all companies. It is concluded that the sales trend for selected oil and gas companies show better performance. And also the study has found out that statement of changes in working capital shows that most of the companies are considerably decreasing throughout the study period. It becomes necessary to suggest this companies to keep monetary their Working capital requirement and availability. A decline in working capital will also have a positive impact on the profitability. Finally it is concluded that the overall financial performance of oil and gas companies is satisfactory.

Jay Desai and Nisarg A Joshi (2015) in “A study on mergers and acquisition in oil and gas sector in India and their Impact on the operating performance and share holders' wealth” pre and post financial performance has been studied and the researcher has found out that in the Indian context mergers and acquisitions haven’t been able to create enough shareholder wealth post acquisition for the combined entity. In this study financial performance and acquiring company’s shareholders wealth gets deteriorated in post acquisition. The researcher has examined that the factors beyond financial analysis which shows that there is a lot of energy in the form of geographical spread, increased customer space, growth in size and scale, access to new markets, cutting costs in operational terms and reduction in areas where there was overlap. The study has concluded mergers and acquisitions do not create immediate shareholders wealth and margins for the acquiring firm in the immediate short term. However from a longer perspective a consolidated company would be able to cope with competition, increased pressure to cut costs and grow in the changing business environment.

Izar Ahamed, (2016) in “Analysis of financial performance of Hindustan Petroleum Corporation Ltd”, through using various ratios and by Multiple Regression analysis has revealed that HPCL came into existence with the objectives of earning profit on one side and rendering the services towards society on the other side. It
showed that the company's ability to meet its current obligations is not satisfactory. Meanwhile, the management of company should focus on profitability. In this case of profitability ratios researcher found very high fluctuations. The current and quick ratios were not found with the standards norms of the liquidity ratio. The company may either increase its current assets or reduce current liabilities. In order to enhance the profitability the management should focus on to control the cost of sales and other direct and indirect expenses.

Santosh Kumar Yadav, Rohit Kapoor and Amol S. Dhaigude (2016) made a study on “Financial performance ranking of oil and gas companies in India using TOPSIS Method”. In this study, Technique for order preference by positive ideal solution method was used to evaluate the financial performance of oil and gas companies for five years from 2011 to 2015. It is concluded that the financial performance of oil and gas companies, Hindustan Corporation have the first rank in the year 2011. Bharat Petroleum Corporation limited had second rank, Reliance Industries Ltd got third rank, GAIL Ltd fourth rank, Petronet fifth rank and Indian Oil had the last rank for the year 2011. Finally the researcher has found out that Hindustan Ltd has the highest ranking in the year 2011, BPCL for the year 2012, GAIL Ltd for the year 2013, and in the last two years Petronet had the highest ranking. Every year different companies had the lowest ranking.

Mahesh. R. and Thangaraj. N. (2016) in their study on “Profitability and liquidity management of selected companies of Indian petroleum industry” have made an attempt to analyze three major petroleum companies' profitability and liquidity management. This study has observed and has concluded that operating efficiency of the companies was comparatively better than their liquidity position. Net profit margin of all the three companies is not sufficient, so they should restructure their expenditure pattern to minimize the cost of production. Liquidity position of the companies are not satisfactory, so they take necessary steps to increase their
working capital by means of quick recovery of debts with suitable credit policies, proper inventory management, adequate cash maintenance etc. Effective utilization of asset plays vital role to increase the profitability of concern, so the companies make better utilization of their assets to increase their profit. EPS is the communicator of profit to the stock holders of the company. The companies should maintain stability in EPS to retain their market share. The operating efficiency of selected petroleum companies is satisfactory but their liquidity position during the study period was not adequate. Their growth rate for the study period has also declined during the study period. The companies should maintain stability in their overall performance.

Conclusion

Performance analysis of various companies has been made by various researchers. The critical analysis of national and international literature pertaining to financial performance of firms revealed that financial ratios are essential to analyze microscopically the financial performance. These studies did not address the specific financial ratios and their numerical significance related to financial performance. The studies reviewed in this research are all related to profitability performance and financial performance of various industries. While analyzing the review, it is found out that no attempt has been made by the previous researchers to compare the financial performance of four public and one private sector oil and gas companies. Hence this study may be considered as a different from the earlier studies. Further the review of different studies has helped the researcher to pursue the study in the right and useful direction and has initiated to proceed with the appropriate analytical tools. The comprehensive description of the literature on petroleum industry provides the various approaches employed by the authors. Thus this study evaluates the financial performance of five oil and gas companies in India from various angles viz.,
capital structure, fixed assets management, working capital management and profitability.

References


