



ANALYSIS OF SALES TREND AND COST PATTERN OF CHENNAI PETROLEUM CORPORATION LIMITED, CHENNAI

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ABSTRACT

“Sales” is the life blood of any business and it is an important base for the survival and growth of the business. Every business requires an initial investment before it generates incomes. In addition, it incurs some of the expenses in every period for the purpose of manufacturing or sales. In order to manage such fixed periodic expenses as well as variable expenses, the company needs to reach a certain minimum level of sales. It is also important to understand the links between various costs and the volume of sales which ultimately contributes to the profit of the business. Sales Trend and Cost Pattern Analysis is a self-assessment tool for a company. The Trend of sales indicates the direction in which an organization is going on, and on the basis of which forecast for future can be made. India is the third largest energy and oil consumer in the world after China and the United States and the Oil and Gas occupied approximately 35% share in India's total energy consumption. Therefore, Oil Industry plays a vital role in developing the industry and also country. The aim of this paper is to study and analyze the Sales Trend and Cost Pattern of the Chennai Petroleum Corporation Limited (CPCL) which would be helpful to identify their impact on the profitability and performance of the organization.

The study revealed that there is no much increase in the Total Cost and Total Sales during the study period. The increase in the total cost is comparatively lesser than the increase in the Total Income during the period of study. The study concluded that the Sales Trend and Cost Structure of Chennai Petroleum Corporation Limited during the study period showed a fluctuating trend. The performance of the company with respect to sales and cost pattern is somewhat good and is not appreciable. It is suggested that the management of the CPCL should take more proactive steps to improve the present level of sales and reduce the cost by adopting appropriate strategies.

KEYWORDS: Sales Trend, Cost Pattern, Oil Industry, Cost of Sales, Manufacturing Cost, Fixed Costs.

INTRODUCTION

The term “Sales” is the value of output supplied to the customers and the life blood of an organization without which the organization cannot survive and growth. Cost Pattern is the form or structure of expenses that an organization should take into account when producing a product or delivering a service. The analysis of sales trend and cost pattern is the most important part of financial analysis irrespective of the purpose of the analysis. Analysis of sales forecast and



sales trend and the structure of cost incurred by the organization would provide the business with an assessment of past and current sales and cost levels and annual growth, and allow comparing the company to industry norms. The purpose of studying and analyzing the sales trend and cost pattern is to gain a better understanding of past performance in order to answer specific questions, to solve business problems and/or to predict future performance.

ANALYSIS OF SALES TREND AND COST PATTERN

A sale is the act of selling a product or delivering a service in return for money or money's worth. It is an act of completion of a commercial activity. 'Sales' is the indicator of the operational efficiency of management in how efficiently the management has used the assets of the business. Cost Structure is the expenses that a firm must take into account when manufacturing a product and selling and distributing the products and services to the customers. The term "trend analysis" refers to the concept of collecting information and attempting to spot a pattern, or *trend*, in the information. Predicting and analyzing the sales trend or sales growth in the coming year is at the heart of much analytical work. It is not just a numerical exercise, as the previous comments suggest, but much more an evaluation of management decisions and attitudes.

STATEMENT OF PROBLEM

In any type of industry, there are highly profitable units as well as loss making units. The profitability of the organization is purely depends upon its sales trend and cost structure. The higher the amount of sales and lower amount of cost, the more profitable the business is and vice versa. The matching of costs incurred during a certain period with sales generated during that period reveals the net income or net loss. The future direction of the company may rest on the accuracy of the analysis of sales trend and cost structure. Oil industry is one of the energy producing industry in the country which is running with huge capital and revenue expenditure. Nowadays, the companies in Oil Industry is facing a lot of financial issues like, hike in oil extraction/materials cost, labour cost, Government Policy regarding the Pricing of Oil, Global Oil Pricing fluctuation, etc. These issues and fluctuations affect the sales and costs of running the organization which ultimately lead to the fluctuation in the financial performance of the Oil Companies. Hence, the researcher's area of interest is to study and analyze the Sales Trend and Cost Pattern of Chennai Petroleum Corporation Limited (CPCL), Chennai.

OBJECTIVES OF THE STUDY

The objectives refer to the questions to be answered through the study. They indicate what researcher trying to get from the study. The following are the objectives of the study:

- To understand the concept of Sales Trend and Cost Pattern Analysis.
- To analyze the Sales Trend of Chennai Petroleum Corporation Limited.
- To analyze the Cost Pattern of Chennai Petroleum Corporation Limited.
- To understand the relationship of cost pattern and sales trend in Chennai Petroleum Corporation Limited.

SCOPE OF THE STUDY

The scope of the study is to ascertain the Sales Trend and Cost Pattern of the Chennai Petroleum Corporation Limited during the period of ten years from the year 2008-09 to 2017-18. The scope of the study has been confined to a particular company - Chennai Petroleum Corporation Limited, Chennai.

REVIEW OF LITERATURE

Kulkarni (2011) in his research article entitled, "A Study on fundamental Analysis of ONGC" investigated the economic factors which directly and indirectly influence the financial performance of ONGC. The study pointed out that 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. Muthusamy and Gauri (2012) conducted a study on "Performance Appraisal of Hindustan Petroleum Corporation Limited (HPCL)". The study underlined the effectiveness of long term and short term financial policies of the company. The study analyzed the financial performance by using various financial ratios like profitability ratios, solvency ratios, leverage etc.

Muthusamy and Gowri (2012) investigated the Sales Trend and Cost Structure of Indian Oil Industry. They studied the sales trend analysis and structure of the top oil companies of India like Oil and Natural Gas Corporation (ONGC), Bharat Petroleum Corporation Limited (BPCL), Hindustan Petroleum Corporation Limited (HPCL) and Indian Oil Corporation Limited (IOCL) during the four years of period. The study recommended that the profitability and cost management of the companies should be given focus and attention. Vijayakumar and Gomathi (2013) in their research article entitled, "Productivity Growth in Indian Oil Refineries: Efficiency Improvement or Technical Improvement" concentrated mainly on the Production parameter to measure the efficiency of the industry. From the study, it was found that a special index has been applied to identify the source of total factor productivity growth which might help the policy makers to know the performance of industry and take steps to improve the productivity and efficiency of the same. Valand (2014) in his research article titled "The challenges and Future Prospects of India's Petroleum Product Refineries" focused on key challenges of petroleum industry in India.

PROFILE OF OIL INDUSTRY IN INDIA

The oil and gas sector which is the major part of contributory to the energy sector, is considered one of the eight primary industries in India and plays a vital role in influencing decision making for all the other important sectors of the economy. The economic growth of India is mostly related to the demand of the energy. Hence, the need for the energy like oil and gas is estimated to grow more and making this industry relatively conducive for investment. The Indian Government has formulated and implemented many policies in order to fulfil the increasing demand for the consumption. Now, the Indian Government has permitted 100 per cent Foreign Direct Investment (FDI) in many segments of the sector, including natural gas, petroleum products, and refineries, among others.

India is expected to be one of the major contributors to non-OECD petroleum consumption growth internationally. Oil imports increased sharply to US\$ 87.37 billion in 2017-18 from US\$ 70.72 billion in 2016-17. India retained its spot as the third largest consumer of oil in the world in 2017 with consumption of 4.69 mbpd of oil in 2017, compared to 4.56 mbpd in 2016. There were 23 crude oil refineries in India, of which 18 were state-owned, 3 were privately owned and 2 were joint ventures as on 31 March 2017. The total oil refining capacity in India stood at 234 MMT, rising from 230 MT the previous year. Refineries in India processed 245.362 MMT of oil in 2016-17 achieving a capacity utilization of 106.6%. With a total refining capacity of 69.2 MMTY, the state-owned Indian Oil Corporation was the largest refiner in the country by capacity. Indian Oil's refineries processed 65.191 MMT of crude oil in 2016-17. (Source: Energy Statistics 2018, 25th Issue, Central Statistics Office, Government of India, New Delhi)

PROFILE OF CHENNAI PETROLEUM CORPORATION LIMITED

Chennai Petroleum Corporation Limited (CPCL), formerly known as Madras Refineries Limited (MRL). It is a group company of Indian Oil Corporation (IOCL). It is an Indian state-owned oil and gas corporation headquartered in Chennai, India. It was promoted as a joint venture in the year 1965 between the Government of India (GOI), AMOCO and National Iranian Oil Company (NIOC), having a shareholding in the ratio 74%: 13%: 13% respectively. Chennai Petroleum Corporation Limited is categorized as a Miniratna-I company by the Government. From the grassroots stage CPCL Refinery was set up with an installed capacity

of 2.5 million tonnes per annum (MMTPA) in a record time of 27 months at a cost of Rs. 430 million without any time or cost overrun.

Chennai Petroleum Corporation Limited owns two refineries with a combined refining capacity of 11.5 million tonnes per annum (MMTPA). The Manali Refinery in Chennai has a capacity of 10.5 MMTPA and is one of the most complex refineries in India with fuel, lube, wax and petrochemical feed stocks production facilities. CPCL's second refinery is Nagapattanam Refinery located at Cauvery basin at Nagapattanam in Panagudi. The main products of the company are LPG, Motor Spirit, Superior Kerosene, Aviation Turbine Fuel, High Speed Diesel, Naphtha, Bitumen, Lube Base Stocks, Paraffin Wax, Fuel Oil, Hexane and Petrochemical feed stocks. It also supplies Linear Alkyl Benzene Feedstock (LABFS) to a downstream unit for manufacture of Linear Alkyl Benzene.

CPCL plays the role of a mother industry supplying feed stocks to the neighbouring industries in Manali. CPCL's products are marketed through IOCL. CPCL's products are mostly consumed domestically except naphtha, fuel oil and lubes which are partly exported. The crude throughput for 2016-17 was 10.256 million metric tonnes (MMT). The company's turnover for 2016-17 was Rs.40586 crores and the profit after tax was Rs.1030 crores & the crude throughput for 2017-18 was 10.789 million metric tonnes (MMT). The Gross Sales of the CPCL for the year 2017-18 was Rs.44,135 crores and the Profit before tax was Rs.1,458 crores and Profit after tax was Rs.913 crores in the year 2017-18.

RESEARCH METHODOLOGY

Research Methodology is a way to systematically solve the research problem. As the nature of the study relates to analyzing the sales trend and cost pattern, and its impact on performance, the major part of the data used is secondary data. It includes the Financial Statements, i.e. Profit and Loss Account (Income Statement) and Balance Sheet, etc. The study is based on the published accounts, Magazines, Articles, Books, Web-sites and annual reports of Chennai Petroleum Corporation Limited from 2008-09 to 2017-18. The study is exploratory and analytical in nature. The Financial and Statistical tools like Percentage Analysis, Indices and Ratio Analysis are employed to analyze and give the proper interpretation of data.

DATA ANALYSIS AND INTERPRETATION

The data, after collection, has to be processed and analyzed in accordance with the outline laid down for the purpose at the time of developing the research plan. For the purpose of analysis of data, various components of Cost have been calculated as percentage of Total Cost and Net Sales and Sales and Total Income Analysis has been made through Trend. The major costs incurred by the company like Raw Materials consumed, Manufacturing Cost, Employees Cost, Other Expenses and Financial Cost (Interest) along with Total Cost are taken for study. In the present study, data has mostly been converted into relative measures such as Ratios, Percentages rather than the absolute data.

In order to study the trend of sales and total income, the year 2008-09 has been chosen as the base year and figure of sales in the base year have been taken equal to 100. Index numbers have been calculated for the remaining years based on the amount of sales for the base year (2008-09). Total Incomes includes other Incomes like Interest, Misc. Receipts and Stock Adjustments but before deduction of Excise Duty and Net Sales is taken after deducting the Excise Duty from the Gross Sales. Total Cost includes Depreciation and Amortization and Financial Cost indicates the Interest.

ANALYSIS OF SALES TREND OF CPCL**TABLE 1**
SALES TREND OF CPCL (Rs. in Crores)

YEAR	GROSS SALES		NET SALES		TOTAL INCOME	
	Amount Rs.	Trend (%)	Amount Rs.	Trend (%)	Amount Rs.	Trend (%)
2008 – 09	36489.67	100	32,040.90	100	35328.08	100
2009 - 10	29183.84	80	24,927.27	78	30076.92	85
2010 - 11	38128.26	104	33,102.32	103	38690.87	110
2011 – 12	45384.91	124	40,754.67	127	45998.55	130
2012 - 13	46842.46	128	42,846.73	134	47087.39	133
2013 - 14	53923.70	148	49,340.87	154	54067.65	153
2014 – 15	47877.82	131	41,867.71	131	46607.74	132
2015 - 16	34953.41	96	25,828.60	81	34798.41	99
2016 - 17	40585.90	111	27,669.92	86	40542.54	115
2017 – 18	44134.81	121	32,473.62	101	44833.94	127

Source: Annual Reports of CPCL

INFERENCE

From the above table it is indicated that the Gross Sales, Net Sales and Total Income show an increasing trend from the year 2008-09 to 2013-14. But, Gross Sales, Net Sales and Total Income show a decreasing trend during the past four years when compared with previous six years. The Volume of Gross Sales and Total Income increased at marginal level (more than 20%) during the study period. There is no significant change in Net Sales during the same period. The marginal increase in the volume of Sales and Total Income is indicating normal profitability of the company.

COST STRUCTURE ANALYSIS OF CPCL**TABLE 2**
PERCENTAGE OF RAW MATERIALS COST ON TOTAL COST
AND NET SALES (Rs. in Crores)

YEAR	TOTAL COST	NET SALES	RAW MATERIALS CONSUMED	% OF RM COST ON TOTAL COST	% OF RM COST ON NET SALES
2008 – 09	31472.42	32,040.90	29803.50	94.70	93.02
2009 - 10	25136.59	24,927.27	23950.53	95.28	96.08
2010 - 11	32901.41	33,102.32	31556.35	95.91	95.33
2011 – 12	41526.52	40,754.67	39730.42	95.67	97.49
2012 - 13	44789.35	42,846.73	42708.88	95.35	99.68
2013 - 14	49815.78	49,340.87	47469.43	95.29	96.21
2014 – 15	41340.02	41,867.71	39558.05	95.69	94.48
2015 - 16	24914.96	25,828.60	23106.91	92.74	89.46
2016 - 17	26261.51	27,669.92	24441.96	93.07	88.33
2017 – 18	31714.51	32,473.62	29728.14	93.74	91.55

Source: Annual Reports of CPCL

INFERENCE

From the above table it is indicated that the Raw Materials consumed is more or less same during the study period. It also indicates that the percentage of Materials Consumed on Total Cost and Net Sales is more than 92% and 89% respectively during the study period. It also indicates that Raw Materials consumed is averagely 90% on the Total Cost and Net Sales during the period of study.

TABLE 3
PERCENTAGE OF MANUFACTURING COST ON TOTAL COST
AND NET SALES (Rs. in Crores)

YEAR	TOTAL COST	NET SALES	MANUFACTURING COST	% OF MFG. COST ON TOTAL COST	% OF MFG. COST ON NET SALES
2008 – 09	31472.42	32,040.90	244.06	0.78	0.76
2009 - 10	25136.59	24,927.27	273.53	1.09	1.10
2010 - 11	32901.41	33,102.32	216.78	0.66	0.65
2011 – 12	41526.52	40,754.67	223.35	0.54	0.55
2012 - 13	44789.35	42,846.73	296.38	0.66	0.69
2013 - 14	49815.78	49,340.87	305.83	0.61	0.62
2014 – 15	41340.02	41,867.71	277.10	0.67	0.66
2015 - 16	24914.96	25,828.60	310.16	1.24	1.20
2016 - 17	26261.51	27,669.92	315.03	1.20	1.14
2017 – 18	31714.51	32,473.62	321.19	1.01	0.99

Source: Annual Reports of CPCL

INFERENCE

From the above table it is indicated that the Manufacturing Cost has shown a fluctuating trend during the study period. It also indicates that the percentage of Manufacturing Cost on Total Cost and Net Sales is nearly 1% during the study period. The Manufacturing Cost is nearly increased about 20% during the period of study.

TABLE 4
PERCENTAGE OF EMPLOYEES COST ON TOTAL COST
AND NET SALES (Rs. in Crores)

YEAR	TOTAL COST	NET SALES	EMPLOYEES COST	% OF EMP. COST ON TOTAL COST	% OF EMP. COST ON NET SALES
2008 – 09	31472.42	32,040.90	192.94	0.61	0.60
2009 - 10	25136.59	24,927.27	272.32	1.08	1.09
2010 - 11	32901.41	33,102.32	240.22	0.73	0.73
2011 – 12	41526.52	40,754.67	253.21	0.61	0.62
2012 - 13	44789.35	42,846.73	315.43	0.70	0.74
2013 - 14	49815.78	49,340.87	291.86	0.59	0.59
2014 – 15	41340.02	41,867.71	338.71	0.82	0.81
2015 - 16	24914.96	25,828.60	357.00	1.43	1.38
2016 - 17	26261.51	27,669.92	512.88	1.95	1.85
2017 – 18	31714.51	32,473.62	581.76	1.83	1.79

Source: Annual Reports of CPCL

INFERENCE

From the above table it is indicated that the Employees Cost has shown a fluctuating trend during the study period. It also indicates that the percentage of Employees Cost on Total Cost and Net Sales is less than 2% on Total Cost and Net Sales during the study period. However, the Employees Cost is increased nearly three times from Rs.192.94 in the year 2008-09 to Rs.581.76 in the year 2017-18.

TABLE 5
PERCENTAGE OF OTHER EXPENSES ON TOTAL COST
AND NET SALES (Rs. in Crores)

YEAR	TOTAL COST	NET SALES	OTHER EXPENSES	% OF OTHER EXP. ON TOTAL COST	% OF OTHER EXP. ON NET SALES
2008 – 09	31472.42	32,040.90	751.09	2.39	2.34
2009 - 10	25136.59	24,927.27	235.70	0.94	0.95
2010 - 11	32901.41	33,102.32	319.13	0.97	0.96
2011 – 12	41526.52	40,754.67	704.74	1.70	1.73
2012 - 13	44789.35	42,846.73	625.37	1.40	1.46
2013 - 14	49815.78	49,340.87	791.11	1.59	1.60
2014 – 15	41340.02	41,867.71	536.31	1.30	1.28
2015 - 16	24914.96	25,828.60	515.48	2.07	2.00
2016 - 17	26261.51	27,669.92	378.44	1.44	1.37
2017 – 18	31714.51	32,473.62	418.03	1.32	1.29

Source: Annual Reports of CPCL

INFERENCE

From the above table it is indicated that the Other Expenses has shown a fluctuating trend during the study period. It also indicates that the percentage of Other Expenses on Total Cost and Net Sales is around 1.5% on Total Cost and Net Sales during the study period. However, the Other Expenses have been decreased more than 50% from Rs.751.09 in the year 2008-09 to Rs.418.03 in the year 2017-18. There is no much difference in the percentage of Other Expenses on Total Cost and Net Sales during the period of study.

TABLE 6
PERCENTAGE OF FINANCIAL COST ON TOTAL COST
AND NET SALES (Rs. in Crores)

YEAR	TOTAL COST	NET SALES	FINANCIAL COST	% OF FINANCIAL COST ON TOTAL COST	% OF FINANCIAL COST ON NET SALES
2008 – 09	31472.42	32,040.90	223.66	0.71	0.70
2009 - 10	25136.59	24,927.27	137.37	0.55	0.55
2010 - 11	32901.41	33,102.32	254.46	0.77	0.77
2011 – 12	41526.52	40,754.67	249.38	0.60	0.61
2012 - 13	44789.35	42,846.73	468.76	1.05	1.09
2013 - 14	49815.78	49,340.87	567.97	1.14	1.15
2014 – 15	41340.02	41,867.71	403.73	0.98	0.96
2015 - 16	24914.96	25,828.60	351.72	1.41	1.36
2016 - 17	26261.51	27,669.92	272.78	1.04	0.99
2017 – 18	31714.51	32,473.62	320.86	1.01	0.99

Source: Annual Reports of CPCL

INFERENCE

From the above table it is indicated that the Financial Cost (Interest) has shown a fluctuating trend during the study period. It also indicates that the percentage of Financial Cost on Total Cost and Net Sales is around 1% on Total Cost and Net Sales during the study period. However, the Financial Cost has been increased more than 40% from Rs.223.66 in the year 2008-09 to Rs.320.86 in the year 2017-18. There is no much difference in the percentage of Financial Cost on Total Cost and Net Sales during the period of study since they are fixed in nature.

TABLE 7
PERCENTAGE OF TOTAL COST ON TOTAL INCOME
(Rs. in Crores)

YEAR	TOTAL INCOME	TOTAL COST	
	Amount	Amount	(%)
2008 – 09	35328.08	31472.42	89.09
2009 – 10	30076.92	25136.59	83.57
2010 – 11	38690.87	32901.41	85.04
2011 – 12	45998.55	41526.52	90.28
2012 – 13	47087.39	44789.35	95.12
2013 – 14	54067.65	49815.78	92.14
2014 – 15	46607.74	41340.02	88.70
2015 – 16	34798.41	24914.96	71.60
2016 – 17	40542.54	26261.51	64.78
2017 – 18	44833.94	31714.51	70.74

Source: Annual Reports of CPCL

INFERENCE

From the above table it is indicated that the Total Cost has shown a fluctuating trend during the study period. It also indicates that the percentage of Total Cost on Total Income is 70% to 90% during the study period. During the past three years, the percentage of Total Cost to Total Income is around 70% which is better than the remaining period. However, there is an increasing trend in the Total Cost over the past two years. Overall, there is no much increase in the Total Cost during the study period. The increase in the total cost is comparatively lesser than the increase in the Total Income during the period of study.

SUMMARY OF FINDINGS

Based on the study, the summary of findings is provided below:

With respect to the Analysis of Sales Trend of Chennai Petroleum Corporation Limited (CPCL), the Volume of Gross Sales and Total Income increased at more than 20% during the study period. There is no significant change in Net Sales during the study period.

With respect to the Analysis of Cost Pattern of Chennai Petroleum Corporation Limited (CPCL), Raw Materials consumed is more or less same during the study period and it constitutes averagely 90% on the Total Cost and Net Sales during the period of study. The Manufacturing Cost (around 1% on Total Cost and Net Sales) is nearly increased about 20% during the period of study. The Employees Cost which is less than 2% on Total Cost and Net Sales, is increased nearly three times during the same period. The Other Expenses (1.5% on Total Cost and Net Sales) have been decreased more than 50%. Financial Cost (1% on Total Cost and Net Sales) has been increased more than 40% during the study period. Overall, there is no much increase in the Total Cost during the study period. The increase in the total cost is comparatively lesser than the increase in the Total Income during the period of study.

SUGGESTIONS FOR IMPROVEMENT

On the basis of the analyses and observations, the following few suggestions are offered:

- ❖ The Material Consumed is 90% on Sales and Total Cost. The management should follow the effective inventory control measures. The company can take prompt steps to avoid material wastages and strengthen the inventory management.
- ❖ The company has to take serious steps to reduce the Finance Expenses which increased greatly during the study period.
- ❖ Even though the company has taken severe steps to cut down the expenditure during the study period, it is not enough and the company should take further more concrete steps to reduce the overall cost of manufacture and sales.
- ❖ The company should take steps to utilize its fixed and current assets efficiently. The Assets Management policy should be created and reviewed periodically.
- ❖ The company is a profit seeking one and it has to commit all of its resources to achieve its goal as it is trying to enhance the value of its own and thereby to its shareholders.

LIMITATIONS OF THE STUDY

The study is limited to ten years (2008-09 to 2017-18) and also limited to the particular oil company - Chennai Petroleum Corporation Limited. The report exhibits the values based on Historical Costing and not taken into consideration of price level changes. Limitations that result out of the secondary data may also be possible.

CONCLUSION

The Sales shows a fluctuating trend and similar trend is also shown in Cost Structure in Chennai Petroleum Corporation Limited (CPCL) during the study period. The marginal increase in the volume of Sales and Total Income is indicating normal profitability of the company. The performance of Chennai Petroleum Corporation Limited during 2008-09 to 2017-18 reflects the normal or little improved business environment. The study revealed that there is no much increase in the Total Cost and Total Sales during the study period. The increase in the total cost is comparatively lesser than the increase in the Total Income during the period of study. The performance of the company with respect to sales and cost pattern is somewhat good and is not appreciable. Management of CPCL is focusing on improving the operational performance through various initiatives to achieve savings in both direct and indirect costs.

It is suggested that the management of the CPCL should take more proactive steps to improve the present level of sales and reduce the cost by adopting appropriate strategies. The study has made the realistic recommendation 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. The CPCL has better opportunity for the best performance in the near future.

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