Assessing the Performance of Public Sector Entities in Nepal: A Cash Flow Ratios Perspective

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Abstract

The aim of this study is to examine and analyze the financial performance of three Nepalese public enterprises - Nepal Electricity Authority (NEA), Nepal Oil Corporation (NOC) and Nepal Telecom (NTC) - using cash flow ratios as suggested by Giacomino & Mielke (1993). The study used judgmental sampling technique. Employing a descriptive and analytical research design, the study analyzes financial statements from 2020/2021 to 2022/2023. The analysis focus on sufficiency and efficiency ratios to assess the enterprises' cash generation and management. Results indicate diverse financial performances: NTC shows strong cash flow, NEA moderate efficiency, and NOC significant financial distress with negative cash flow ratios. This research emphasizes the applicability of cash flow ratio analysis in evaluating the financial health of public enterprises in Nepal.

Key words: Assessing performance, public enterprises, cash flow ratios.

Introduction

Cash flow statement as an integral component of financial statements, offering insights beyond traditional balance sheet and income statements. Financial performance refers to the degree to which financial objectivities being accomplished (Ravinder, 2015).Kroes & Manikas, (2014) and Bashir & Regupathi, (2021) expressed that efficient cash flow management is significant tool to enhance financial performance of the organization.According to the Financial Accounting Standard Board (FASB), the primary purpose of the cash flow statement is to assess a company's liquidity, solvency, viability and financial adaptability. Cash flow statement is particularly significant financial reports (Helen, 2002), to reflect the profitability and survival of the

organization. This statement is crucial for investors, lenders and assist managers to provideimportant information (Nguyen & Nguyen, 2020). Giacomino and Mielke (1993) demonstrated its value to enhance the usefulness of financial information for economic decision-making by proposing nine cash flow ratios for performance evaluation. . Along with traditional ratios, operating cash flow is also important when evaluating a company's performance. Everingham et al. (2003) further emphasized that the operating cash flow ratios are indicators of performance. They determine the extent to which a company has generated sufficient funds:

- To repay loans;
- To maintain operating capabilities;
- To pay dividends; and
- To make new investments without using external financing.

Figlewicz & Zeller (1991) highlighted that the absence of cash flow data can hinder problems for investors and analysts in assessing a company's performance, liquidity, financial flexibility and operating capability. Investigation on cash flows revealed that many authors (Carslaw & Mills 1991) (Mills & Yamamura 1998) (Mossman & Bell 1998) agree on the importance of cash flow information. Cash flow information viewed as the lifeblood of a company and the essence of its very existence (Rujoub, Cook & Hay 1995). The cash flow statement offers measures to evaluate performance. Zeller and Stanco (1994) found that the uniqueness and stability of operating cash flow ratios relative to accrual based financial ratios to measure a company's ability to pay. Giacomino and Mielke (1993) proposed nine cash flow ratios to evaluate a company's performance and suggested a set of cash flow ratios for relative performance evaluation using the operating activities that are the primary activities of a company as a component of each ratio.

Cash flows provides crucial insights into a firm's generation and utilization of financial resources over a specified period (Ross et al., 2007, Macve, 1997) by providing detail operating, investing, and financing activities, offering a more comprehensive view (Macve, 1997).Cash flow can expressed as the difference between receipts and disbursements as the actual movement of funds in and out of a company, (Albrecht, 2003; Cooke & Jepson, 1986; Kenley & Wilson, 1986). Operating cash flow ratios serves as a indicators of a firm's ability to repay debts, maintain operational capacity, distribute dividends, and fund investments without external financing (Everingham et al., 2003). These ratios offer a more accurate assessment of a company's

financial health and cash management efficiency compared to accrual-based profitability measures like net income (Palepu et al., 2000; Fabozzi & Markowitz, 2006).

Operating cash flows reflect the transactional cash effects that determine net income, while investing and financing cash flows represent the acquisition and disposal of long-term assets and changes in equity and borrowings, respectively (Berry et al., 2005; Gup et al., 1993). Despite the importance of cash flow information, its utilization in ratio analysis for performance assessment is less prevalent than traditional balance sheet and income statement analyses. This disparity may stem from the relatively recent adoption of the cash flow statement and the consequent lack of established analytical norms and more effective in forecasting future cash flows than traditional profitability measures (Farshadfar et al., 2008, Salehi et al., 2018; Atieh, 2014). Cash flow ratio analysis enhances the understanding of a firm's financial strengths and weaknesses, providing a more robust assessment of its solvency, liquidity, and viability (Hertenstein & McKinnon, 1997; Carslaw & Mills, 1991). Neill et al., (1998); and Catanach, (2000) emphasized the significance of cash flow analysis in evaluating financial performance and predicting business failures. Giacomino & Mielke, (1993); Mills & Yamamura, (1998) and Atieh, (2014) proposed operating cash flow for relative performance evaluation and liquidity assessment of the enterprises.

Therefore, this study aims:

(1) To evaluate the financial performance of Nepalese public enterprises through the application of cash flow ratios.
(2) To identify and assess the components of cash sufficiency, and
(3) To measure the operational efficiency in generating cash.

Methodology and Results

The population of the study was the public enterprises in Nepal. Three public enterprises has taken as the sample of the study using judgmental sampling technique. Financial statementshas obtainedthrough the annual reports of the respective organizations. Based on secondary data, this study analyzed three years financial statements: 2020/2021 to 2022/2023. This study has followed descriptive as well as analytical research design. The cash flow ratios suggested by

Giacomino & Mielke (1993) has used for performance evaluation. The components and the interpretation of the ratios are summarized as follows;

Table 1

Name of ratio	Components of ratio	Interpretation of ratio
	Sufficiency Ratios	
Cash flow sufficiency	Cash flow from operating activity (CFOA)/Long term debt+ purchasing assets+ dividends paid	Evaluates an institutions ability to generate sufficient cash to meet primary obligations
Long term debt repayment	Long term debt repayment/ CFOA	Evaluates the sufficiency of cash flow to settle long term debt
Dividend pay out	Dividend paid/ CFOA	Evaluates the sufficiency of cash to pay dividends
Reinvestment	Purchasing assets/ CFOA	Evaluates the sufficiency of cash flow for reinvestment and maintaining assets structure
Debt cover	Total debt/CFOA	Estimates the number of years to repay debt at the current level of cash flow
Impact of depreciation and write offs	Depreciation + written off/ CFOA	Evaluates the percentages of cash from operating activities due to depreciation and written offs
	Efficiency ratios	
Cash flow to sales	CFOA/Sales	Indicates the percentage of sales from operation activities realized as cash flow
Operating index	CFOA/ Income from continued activities	Compares cash flow from operating activities with income from continued activities
Cash flow on assets	CFOA/ Total assets	Evaluates the cash flow from assets utilized

Source: Giacomino, D.E. & Mielke, D.E. (1993).

Table 2 Descriptive measures of financial performance ratios of Nepal Electricity Authority (NEA)

Year	2020/2021	2021/2022	2022/2023	Mean
Sufficiency Ratios				
Cash flow sufficiency	0.2826	0.5589	0.3116	0.3844
Long term debt repayment	0.00	0.00	0.2581	0.0860
Dividend pay out	0.00	0.00	0.00	0.00
Reinvestment	3.5382	1.7889	2.9506	2.7592
Debt cover	21.8647	12.8226	21.6643	18.7839
Impact of depreciation and write offs	0.4836	0.3042	0.5258	0.4379
Efficiency ratios				
Cash flow to sales	0.1846	0.2828	0.1544	0.2073
Operating index	0.1854	0.2912	0.1753	0.2173
Cash flow on assets	0.0273	0.0472	0.0268	0.0338

Source: NEA annual reports 2020/2021 to 2022/2023

Table 2 displays the sufficiency and efficiency ratios of NEA overthe study period. The mean cash flow sufficiencyindicatedthat NEA have 0.3844 times ability to generate cash from operation to meet primary obligations. Likewise, cash flow to settle long-term debtrepresented 25.81 percentage of the long-term debt repayment. Notably, the NEA paid no dividends during the study period. The sufficiency of cash flow for reinvestment and maintaining assets structure showed 2.759 times of CFOA. In an average, 18.7839 years revealed to repay total debt at the current level of cash flow from operation. The percentages of cash from operating activities due to depreciation and written offsrevealed43.79 percentage. Operating cash flow from sales and continued activities accounted 20.73 and 21.73percentage respectively. Asset utilization efficiency, as indicated by cash flow from operation revealed 0.0338 times of assets utilized.

Table 3 Descriptive measures of financial performance ratios of Nepal Oil Corporation Limited

Year	2020/2021	2021/2022	2022/2023	Mean
Sufficiency Ratios				
Cash flow sufficiency	-2.3710	-26.8640	-1.5218	-10.2523
Long term debt repayment	0.00	0.00	- 0.5136	-0.1712
Dividend pay out	- 0.2778	0.00	0.00	-0.0926
Reinvestment	- 0.1439	- 0.0372	- 0.1435	-0.1115
Debt cover	-3.5073	-2.1791	-5.9634	-3.8833
Impact of depreciation and write offs	-0.0117	-0.0047	-0.0272	-0.0145
Efficiency ratios				
Cash flow to sales	-0.0341	-0.0925	-0.0169	-0.0478
Operating index	-0.0352	-0.0954	-0.0171	-0.0492
Cash flow on assets	-0.1368	-0.5091	-0.1447	-0.2635

Source: NOC Ltd. annual reports 2020/2021 to 2022/2023

Table 3 presents NOC's cash flow sufficiency and efficiency ratios. The mean value ofcash flow sufficiency revealed10.2523 times negative ability to generate cash from operation to meet primary obligations. Cash flow to settle long-term debt indicated 17.12-percentagenegative of the long-term debt repayment due to negative CFOA of NOC. Due to negative CFOA,27.78 percentage negatively covered the dividend paid on 2020/2021. The sufficiency of cash flow for reinvestment and maintaining assets structure showed negative by 0.1115times. Due to negative CFOA, repay of total debt at the current level of cash flow from operation portrayed negative. The percentages of cash from operating activities due to depreciation and written offs showed 1.45 percentage. Operating cash flow from sales and continued activities revealed negative by 4.78 and 4.92 percentage respectively. Asset utilization efficiency, as indicated by cash flow from operation revealed negative by 0.2635 times of assets utilized. Due to negative CFOA of NOC, all the ratios resulted in uniformly negative sufficiency and efficiency ratios across all metrics.

Table 4 Descriptive measures of financial performance ratios of Nepal Telecom.

Year	2020/2021	2021/2022	2022/2023	Mean
Sufficiency Ratios				
Cash flow sufficiency	0.6383	0.9913	0.4458	0.6918
Long term debt repayment	0.00	0.00	0.00	0.00
Dividend pay out	0.6646	0.2374	1.2536	0.7185
Reinvestment	0.9021	0.7713	0.9895	0.8876
Debt cover	3.8999	3.1953	6.9695	4.6882
Impact of depreciation and write offs	1.0312	0.5355	1.2114	0.9260
Efficiency ratios				
Cash flow to sales	0.2524	0.3332	0.1576	0.2477
Operating index	0.2742	0.4531	0.1821	0.3031
Cash flow on assets	0.0608	0.0796	0.0358	0.0587

Source: NTC annual reports 2020/2021 to 2022/2023

Table 4 presents the sufficiency and efficiency ratios of NTC over the study period. The average cash flow sufficiency indicates thatNTC has a0.6918 times capacity to generate cash from operation to fulfillits primary obligations. Throughout the study period, NTC did not make any long-term debt repayment.However, NTC distributed dividends during this time, reflecting 71.85 percent of cash flow from operations (CFOA). The sufficiency of cash flow for reinvestment and maintaining assets structure showed 0.8876 times of CFOA. On an average, 4.6882years revealed to repay total debt at the current level of cash flow from operation. The proportion of cash generated from operating activities attributed to depreciation and write-offs was 92.60 percentage. The percentages of cash from operating activities due to depreciation and written offs showed 92.60 percentage. Operating cash flow derived from sales and continued activities accounted24.77 and 30.31 percentage respectively. The cash flow from operation revealed 0.0587 times of assets utilized.

Conclusion and Discussion

The study examined the financial performance of three Nepalese public enterprises - Nepal Electricity Authority (NEA), Nepal Oil Corporation (NOC) and Nepal Telecom (NTC) - using cash flow ratios over three fiscal years 2020/2021 to 2022/2023. The study focused on the analysis of sufficiency and efficiency ratios with regard to public enterprises ability to meet obligation and generate cash from operational activity. NEA and NTC demonstrated positive cash flow from operating activity (CFOA). However, NOC exhibited consistently negative cash flow from operating activity (CFOA) resulting in negative sufficiency and efficiency ratios across all metrics.NEA demonstrated a moderate ability to generate cash to cover its primary obligations, with a mean cash flow sufficiency of 0.3844 and NTC showed strong cash flow generation, with a mean cash flow sufficiency of 0.6918. The sufficiency ratios the performance of Nepalese public enterprises revealed good and lies in the line of Das, (2019) andKroes & Manikas, (2014).The reinvestment in assets in NEA was significant on ongoing infrastructure development. NEA and NTC showed a positive cash flow from sales, and operations.The debt cover ratio indicated a relatively long period to repay total debt in NEA compared with NTC. Operating cash flow was heavily influenced by depreciation and write-offs in NTC.

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