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CASH FLOW ANALYSIS IN ASSESING BUSINESS OPERATIONS

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cash flow, cash flow ratios, liquidity, company performance

ANNOTATION

The paper utilized a mixed-method approach consisting of a literature review and financial reporting analysis to investigate the role of cash flow ratios to evaluate a company's financial health and make effective decisions. Empirical literatures studied do not suggest any standard collection of cash flow ratios, the ratios suggested in this article are provided by grouping them into four categories such as liquidity ratios, efficiency ratios, profitability ratios, and sufficiency ratios. Data used in this paper are selected from the financial statements of JSC UzAuto Motors between the consecutive years of 2018 and 2021. The liquidity ratios were the lowest ones with a decreasing trend. Meanwhile, sufficiency ratios generated results with increasing trends. Additionally, discussions and some possible solutions to cash flow problems are provided.

Introduction: Cash flow ratios are gaining more focus lately by investors despite of the fact that accounting textbooks rarely emphasize them. Since cash is the most liquid thing an entity may own, cash flow information can be a better indicator of the liquidity of a company. Investors can use the cash flow statement to determine a company's ability to generate cash. They can look at the company's operating cash flow to determine how much cash the company is generating from its operations (Ziyodinova N., 2023). The cash flow can be outlined as the amount of cash owned by a business entity, and it depicts the image of the business ensuring its efficiency, solvency, liquidity and financial stability. Maintaining the optimal amount of cash flows is crucial for every company. Accumulation of excess cash depreciates the financial resources of the company; inversely, deficiency of cash may indicate a bad financial condition of the business and consequently lead to its bankruptcy.

The primary objective of this paper is to state the importance of cash flow ratios in assessing companies' financial condition in the competitive markets. Companies nowadays should have a valid cash flow evaluation algorithm to prevent crises and maintain financial stability. Money is a limited recourse that require efficient management tools.

The second objective is to investigate the related literatures on cash flow ratios and recommend a list of cash flow ratios that can be incorporated to financial analysis. Financial statements of JSC UzAuto Motors for four-year period have been evaluated with the aid of suggested cash flow ratios.

The cash flow information was emphasized by Beaver as early as 1966, for its importance to predict financial failure (Jooste L., 2005). He suggested that net income before depreciation, depletion, and amortization as a function of total debt was the best univariate predictor of bankruptcy. Later other researchers utilized cash flow statements of companies to collect cash flow from operations directly from them (Barua S. and Saha A.K., 2015; Das S., 2019).

Figlewicz and Zeller conducted a research to determine whether cash flow ratios could be useful in bankruptcy prediction in 1991 (Herrick S., 1993). All of the ratios, including cash flow ratios and traditional ratios, were derived from financial statements of a bankrupt firm. The results depicted that traditional ratios displayed contradictory information to cash flow ratios and at most of the cases, traditional ratios did not indicate that a company was failing. Herrick S. (1993) performed similar research with the previous one, yet focused on non-bankrupt companies within the retail sales industry. He claims that cash flow ratios are helpful to management since they produce much precise results in the areas of liquidity and performance.

Unfortunately, not only professionals fail to utilize organizations' cash flow information, but also many of the auditing textbooks are limited with emphasizing traditional ratios that are based only on balance sheets and income statements. Yet, year-by-year cash flow measures are proving to be more relevant to the marketplace and an increasing number of creditors, investors and other stakeholders are employing cash flow ratios analysis to assess the performance of business entities (Amuzu M.S., 2010).

Many researches are conducted to compare usefulness of traditional ratios and cash flow ratios. R Kajananthan and T Velnampy (2014) examined the performance of telecommunication companies in Sri Lanka. Liquidity, solvency and operational efficiency indicators were measured with both types of ratios for a five-year period. They claim that results derived with traditional ratios strongly varied from cash flow ratios. Moreover, Barua S. and Saha A.K. (2015) conducted future cash flow prediction analysis of Bangladesh listed companies using cash flow and accrual accounting data. They were able to predict future cash flow with both methods, however cash flow ratios were able to provide better and accurate picture of companies' financial state. Majumdar A. and Majumdar D. (2020) are the other researchers, who stated analytical power of cash flow ratios over ordinary ratio analysis. They favored the use of cash flow ratios for determining liquidity and flexibility of companies' financial activities. They suggest creditors and investors to employ cash flow ratios in the area of adoption of investment or credit decisions.

Yilmaz H. (2021) investigated the utilization of cash flow ratios in financial management. He calculated 28 cash flow statements in total, extracting useful data from balance sheet, income statement and cash flow statement. Cash flow ratios were divided into seven categories, namely financial analysis, working capital management, capital budgeting, capital structure, valuation, leverage, and dividend policy that are main function of the financial management.

Methodology: According to literature review, most studies suggest cash flow ratios to measure financial statements to traditional ratios as they are considered to be more sensitive. In this article, suggested calculation methods of cash flow ratios can be categorized into four groups: liquidity ratios, efficiency ratios, profitability ratios, and sufficiency ratios.

- Liquidity ratios are employed to determine a company's ability to pay off its short-term debt obligations.

	Liquidity Ratio	
1.	Operating Cash Flow Ratio	CFFO / Short Term Debt
2.	Critical Needs Coverage	(CFFO + Interest paid) / (Interest paid + Short Term Debt + Dividend)

*CFFO- cash flow from operations.

Source: Authors

Operating Cash Flow Ratio presents genuine liquidity of a company to meet its current liabilities, since it eliminates the accruals. Critical needs coverage is another financial metric to measure a company's actual liquidity health.

- Efficiency ratios analyze how well a company utilizing its resources and the quality of a particular business's receivables.

	Efficiency Ratio	
1.	Cash Return on Fixed Assets	CFFO/Fixed Assets
2.	Cash Return on Assets	CFFO/Total Assets

Source: Authors

The ratios in the efficiency ratios category demonstrate the amount of cash generated by a company proportional to its fixed assets, total assets and capital invested.

- Profitability ratios assess the capability of a company to generate profit. These ratios are helpful to determine financial performance of business.

	Profitability Ratio	
1.	Cash to Sales	CFFO / Turnover
2.	Cash to Equity Employed	CFFO/(LTD+Equity)
3.	Cash to Net Profit	CFFO/Net Profit

Source: Authors

A company might be selling goods or services at the first glance. Yet, taking it into consideration the amount of sales happening on cash is essential to assess a company's performance. Cash to sales ratio can be employed to measure the proportion of cash sales.

Cash to equity employed ratio displays the cash making ability of a company. Whereas, cash to net profit ratio measures the quality of a company's earnings.

- Sufficiency ratios analyze the fund generating capacity of a company to meet its basic obligations.

	Sufficiency Ratio	
1.	Debt Coverage	Total Debt / CFFO
2.	Dividend Payout Ratio	Dividend paid / CFFO
3.	Repayment of Borrowing	Repayment of Borrowing / CFFO

Source: Authors

Debt coverage ratio and dividend payout ratio evaluate a company's ability to repay its total debt and dividends per share by its cash flow from operations and earnings per share respectively. Similarly, repayment of borrowing assesses a company's repayment of long term borrowing from its current year cash flow from operation activities.

Research results: Data are gathered from financial statements of JSC 'UZAUTO MOTORS'. Cash flow from operating activities are collected directly from the companies consolidated statement of cash flows. The other variables are derived from consolidated balance sheet, consolidated income statements, consolidated statement of cash flows and consolidated statement of change in equity.

	In thousands of US dollars			
Variables	2018	2019	2020	2021
CFFO	209,286	423,593	274,113	238,980
Short Term Debt	913,704	976,126	860,965	1,361,294
Interest paid	34,648	14,008	15,184	18,861
Dividend	-	-	11,999	8,443
Fixed Assets	527,797	348,161	427,313	733,969
Total Assets	1,121,850	1,293,475	1,296,905	2,229,720
Turnover	2,155,530	2,798,926	2,623,554	2,162,333
Long term debt	74,303	28,778	31,751	323,701
Equity	133,843	288,571	403,653	544,187
Net profit	47,443	291,795	199,636	199,031
Total debt	988,007	1,004,904	892,716	1,685,995
Repayment of borrowing	97,149	212,282	112,405	239,899

Source: Authors

The ratios stated in the research methodology are calculated with the data acquired from the financial statements. The results are presented in the table below within the allocated groups.

Groups	Ratios	2018	2019	2020	2021
Liquidity Ratio	Operating Cash Flow Ratio	0.2291	0.4340	0.3184	0.1756
	Critical Needs Coverage	0.2572	0.4420	0.3257	0.1857
Efficiency Ratio	Cash Return on Fixed Assets	0.3965	1.2167	0.6415	0.3256
	Cash Return on Total Assets	0.1866	0.3275	0.2114	0.1072
Profitability Ratio	Cash to Sales	0.0971	0.1513	0.1045	0.1105
	Cash to Equity Employed	1.0055	1.3348	0.6296	0.2754
	Cash to Net Profit	4.4113	1.4517	1.3731	1.2007
Sufficiency Ratio	Debt Coverage	4.7208	2.3723	3.2567	7.0550
	Dividend Payout Ratio	-	-	0.0438	0.0353
	Repayment of Borrowing	0.4642	0.5011	0.4101	1.0038

Source: Authors

Liquidity ratios: Operating cash flow ratio and critical needs coverage of UzAuto Motors produced similar results, indicating to the highest liquidity of 43.4% and 44.2% in 2019 and the lowest liquidity of 17.56% and 18.57% in 2021, respectively.

Efficiency ratios

Cash return on fixed assets ratio was approximately three times higher than cash return on total assets ratio each year. It was 39.65%, 121.67%, 64.15%, and 32.56% in the years of 2018, 2019, 2020, and 2021. Meanwhile, cash return on total assets ratio was 18.66%, 32.75%, 21.14%, and 10.72% in the respective years.

Profitability ratios: UzAuto Motors' cash to sales ratio was too low. CFFO was 9.71%, 15.13%, 10.45%, and 11.05% of the sales in the years. Whereas, cash to equity employed ratio was over 100% in the former years, then decreased to just over 27% in the latest year. Cash to net profit ratio also dropped from 441.13% to 120.07% in four years, yet it was still over than 100%.

Sufficiency ratios: Debt coverage rate was noticeably high, bringing 472.08%, 237.23%, 325.67%, and 705.5% in the four selected years, respectively. Is simply means that company can not meet its total debt with its CFFO. It seems from the sufficiency ratios, the company did not have any problem with meeting its repayment of borrowing over the four years. Repayment of borrowing ratio was 0.4642, 0.5011, 0.4101, and 1.0038 in the 2018-2021, respectively. Although, it moved from 46.42% to 100.38%. Exceptionally, dividend payout ratio was very low and in the former years, the company did not payout dividend.

Discussions and suggestions: Operating cash flow ratio and critical needs coverage ratio, which were used to evaluate liquidity of JSC UzAuto Motors, were relatively low and presented a decreasing trend. There is a high probability that the company might have severe liquidity concerns in the short run. Moreover, the company is believed to be not solvent to pay its long-term debts with CFFO of any given year, based on the results of debt coverage ratio. In 2021, more than 7 times of the company's CFFO were needed to pay out its total debt.

Similarly, JSC UzAuto Motors is utilizing its long-term assets much efficiently comparing to its short-term assets. According to the cash return on fixed assets ratio and cash return on total assets, the company is handling its fixed assets three times better than its total assets, implying that there is a need for proper use of current assets.

Cash flow problems are likely to occur with any company, even with giant corporations. Though, a cash flow statement can be one of the best ways of observing cash flow and predicting future trends, any business process are not protected from potential turning of the direction. A number of ways can be applied remedy cash flow problems, yet businesses should ensure that adopted methods do not have an adverse effect on profitability.

- Attraction of investments. Being financed from outside funds not only provide additional cash balances but effect positively companies health overall.
- Improving profitability. Sometimes cash flow problems imitate the symptom of low profitability. In such cases, it is better to solve the core problem.
- Renting or leasing. Buying long-term assets such as land, building, and machinery in cash may lead to cash outflow, unless the company has excess cash retained. Therefore, renting or leasing long-term assets prevents them being heavy burden to the cash flow.
- Refinancing. The poor management of balancing between short-term and long-term debts can sometimes lead to cash flow problems. Short-term debts can be used to finance long-term debts to cover temporary cash flow shortage.
- Liquidating assets. Although it sounds dramatic, selling unprofitable assets is also a method of enquiring liquidity. If a company's financial state comes close to bankruptcy, it might sell useful assets to recover from the hardship.

Conclusion: Application of these cash flow models to any business is limited to a certain extent, since their results are highly dependent on the quality of financial statements. However, auditors and accountants assess the trustworthiness of financial statements in a timely manner. In this article, we have stated various cash flow ratios that highlight the result of cash management strategy and operation activities of a company. They are helpful to investors and company managers for apprising company performance and detecting potential financial distress and bankruptcy.

The more movements in the cash flow of a company, the more transaction would occur in that company, ensuring company's activeness in financial performances. Cash flow ratios should be involved in financial decisions of investors, managers and other stakeholders of a company.

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