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Measuring Financial Performance Based on Operating Cash Flow

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Abstract: The aim of this research paper is to measure the financial performance of Emirates Insurance company over the ten years using financial ratios based on operating cash flow and analyze the impact of operating cash flow margin ratio on return on equity and return on assets. The research employed secondary data sourced from the company's reports for the years 2010 to 2019. Several statistical measurements were used such as coefficient of variation, correlation and regression analysis. The findings revealed a moderately high level of instability due in large part to the sharp fluctuations witnessed over the years. In addition, a moderately strong correlation was seen between operating cash flow margins and the remainder of the cash flow ratios studied. Finally, regression analyses indicate a significant negative impact of operating cash flow margins on each of return on equity and return on assets. The study recommends that future research focus on devising effective cash flow management strategies in order to mitigate the risks and problems associated with low operating cash flow within the insurance industry and ensure long term durability as a going concern.

Keywords: operating cash flows, return on assets, return on equity, insurance
JEL Classifications: G22, L25, M41

I. Introduction

Measuring financial performance is traditionally conducted by using financial ratio analysis tools where a company's income & balance statements are scrutinized. This type of financial ratio analysis serves as a commonly used yardstick of a company's condition or performance. It serves to present a comprehensive picture by providing information regarding a firm's ability to generate profit, outlining its various expenses in addition to highlighting the degree of a company's asset depreciation. and is based on the conventional accounting methods subject to widely accepted accounting principles such as the conservation of transactions, full disclosure and materiality. This analysis is accomplished by measuring performance with regard to areas of performance such as profitability, liquidity, capital structure, and turnover indicators for any given year. Further exhaustive analyses of these indicators such as horizontal and vertical analyses can provide a wealth of detailed information regarding the comparability of a company's performance on a variety of measures of performance with that of previous years, with industry benchmarks of industry, and finally with that of a company's traditional competitors. Moreover, financial ratios analysis provides relevant information for decision makers, greatly aiding and informing any operating, investing, and financing decisions that are taken by management and investors alike, as well as potentially helping in forecasting future conditions and performance. The end users of accounting information are numerous and varied, including groups such as shareholders, investors, creditors, and suppliers, all characterized by a common interest in various aspects of a company's financial standing.

On the other hand, using cash flow ratios are useful in that they can identify and highlight instances where accrual basis accounting measures are not providing a complete picture of a company's situation, in particular regarding its cash inflows and outflows. Cash flow ratios are particularly useful when net income is greatly affected by large non-cash expenditures, such as depreciation and write-offs. In addition, cash flow ratios can also prove beneficial when rapid growth causes cash from operations to be considerably lower than reported net income, such as using large amounts of cash to expand inventory but not generating enough to meet its financial obligations. Moreover, it is also useful to use cash flow ratios when company management possesses questionable motives, for example, a company may be tempted

to misrepresent its reported net income to improve its loan eligibility or issue a more favorable stock price than the financial reality would otherwise permit.

II. Literature Review

Elahi *et al*(2021) examine the influence of operating cash flow on the stability of 20 banks in Pakistan across an eight year period, spanning from 2011 to 2019.the researchers used ordinary last square regression, random and fixed effects models. Their finding show that operating cash flow and net interest positively influenced banks financial stability. Moreover, cost inefficiency and bans' lending activities were found to negatively affect bank stability.

Mukadar, *et at* (2021) assess the effect of operating cash flow, funding and investment on financial performance of mining companies within the metal and other mineral sub-sectors on the Indonesian stock exchange. They employed secondary data from financial statements for seven companies listed on the Indonesia stock exchange for the period 2015 to 2019. The researchers employed the partial least square method in their analysis. Their findings show that operating cash flow has positive albeit insignificant effect on the financial performance of mining companies in the metal and other mineral sub-sector companies. In addition, funding cash flows have a positive but insignificant effect on the financial performance of mining companies belonging to the metal and mineral sub-sectors. Increases in investment cash flow, however, yielded positive and significant effects on the financial performance of all companies under study.

Nguyen and Nguyen (2020) sought to gauge the impact of cash flow from operating activities on Vietnam's stock market on investor decision making behavior. Interviews were conducted with 160 individual investors regarding their decisions when presented with information regarding each company's operating cash flow in addition to the conventional profit and loss outcomes for each company in the form of company income statements. The researchers used T-test analysis to compare the decision making behavior of two independent groups of investors whose companies experienced similar profit outcomes but contrasting cash flow situations. Information regarding profits was derived from the business performance report for each company, while cash flow information was provided from cash flow statements. The findings show that investors relied heavily on profit growth information in their decisions as insofar as the growth is positive. In addition, operating cash flow information was found to exert a strong influence on investors' decisions in cases where profitability growth is negative. Finally, conflicting information between profit growth and operating cash flow adversely affected the confidence and comfort levels with which investment decisions were made.

Olagunju *et al* (2022) employed retrospective analyses of secondary data in the form of annual reports to examine the influence of operating cash flow on Nigerian cent manufacturing companies for the period 2015-2019. They used a set of descriptive statistics techniques, with T-test being the main tool used to test for possible predictive relationship between the variables in question. Their findings show a positive but insignificant relationship between cash flow from operating activities and return on assets. However, a significant predictive relationship was found between cash flow from operating activities and the return on capital employed (ROCE) variable.

Pordeaet al (2020) examine the influence of operating cash flow and current liquidity ratio on the profitability of construction companies in western Romania for the year 2017 using a sample of 29 financial statements. They employed a multiple linear regression model to study the relationship between the operating cash flow, current ratio and return on equity. The result did not reveal a relationship of any statistical significance for the various exogenous variables used.

Rahman and Sharma (2020) investigated the impact of operating cash flow of insurance and manufacturing sector in Saudi Arabia on financial performance. The authors used multi regression analysis. Their findings show a positive impact of operating cash flow on both return on equity and return on assets.

Soet *et al* (2018) examine the effect of operating cash flow management on the financial performance of mutual funds in Kenya. Secondary data was obtained from financial statements of 22 mutual funds for the years 2011 to 2016. The data utilized various analytic tools such as regression analysis, random effect model and fixed effect modeling. Their findings revealed that operating cash flow has a significant and positive effect on return on assets while a positive yet statistically insignificant effect on return on equity was seen.

III. Research Methodology

The aim of the research is to analyze the performance of Emirates Insurance Company using several operating cash flow ratios. Operating cash flow ratios are computed from data gathered from the income statement, balance sheet and cash flow statement of the company for the years 2010 to 2019. The analysis seeks to measure the stability of these ratios over

10 years using coefficient of variation. The research proceeds further by studying the impact of operating cash flow margin on both return on equity, and on return on total asset variables using liner regression analysis.

IV. Data Analysis

4.1Operating Cash Flow Ratios:

4.1.1 Operating Cash Flow Margin. This ratio measures of the efficiency of an organization in generating cash flow from operation in relation to achieved revenue. The high ratio indicates a level efficiency of an organization in generating cash flow from its sales. For Emirates of Insurance Company, the ratio was computed by dividing operating cash flow by premium income earned. The highest ratio witnessed is 23.60% belonging to the 2019 financial year, while the lowest ratio observed was 5.95% occurring in the year 2012. Overall, the average operating cash flow margin ratio over the ten years studied was 14.41%.

4.1.2 Assets Efficiency Ratio**.** This ratio shows the ability of an organization to generate cash flow through the efficient use of its assets. A high ratio indicates a more efficient use of the firm's assets. The highest ratio observed for Emirates Insurance company was 7.8% in the year 2013, indicating exception cash flow generation through asset management during that year, while the lowest ratio observed was 2.30% in year 2018. The average ratio over the 10 years is 3.87%.

4.1.3 Current Liability Coverage. This ratio highlights the ability of an organization in paying off current creditors using cash flow generated from operations. This ratio has a high degree of relevance in financial accounting as it is in some applications superior to current ratios and quick ratios in measuring the ability of a company to meet its current debt obligations. With respect to the Emirates insurance company, the highest ratio observed was 17.08% in the year 2013, while the lowest ratio is 4.05% during the year 2018. On average, that company possessed a Current Liability Coverage Ratio of 7.84%.

4.1.4. Total Liability Coverage. This ratio shows the ability of an organization in paying both current and long-term liabilities. A high ratio indicates a good ability in paying total liabilities. Table 1 shows that the highest ratio is 16.87% related to the year 2013, while the lowest ratio is 4% related to 2018. The average ration over the ten years is 7.91%.

4.1.5. Earning Quality Ratio**.** To measure the earnings quality of an organization, operating cash flow can be divided by income. A high ratio indicates a sound ability of an organization in generating more cash from its operation than profit. This ratio reflects the extent to which accrual accounting assumptions and adjustments have been included in computing net income and is mostly notably used as a measure of the reliability and truthfulness of a company's reported net income. The highest ratio is 172.55% related to 2013 year, while the lowest ratio is 37.37% related to 2012. This significant change indicates that accounting assumptions were instrumental in reducing reported income. On average, this company generated 80.48% cash more than its income.

Table 1: Operating Cash Flow Ratios

Year	Operating Cash Flow Margin	Assets Efficiency	Current Liability Coverage	Total Liabilities Coverage	Earnings quality
2010	8.13%	3.26%	4.93%	6.58%	47.27%
2011	7.05%	3.00%	6.34%	6.27%	42.09%
2012	5.95%	2.32%	4.65%	4.60%	37.37%
2013	21.28%	7.80 %	17.08%	16.87%	172.55%
2014	13.55%	5.36%	11.90%	11.73%	104.66%
2015	19.85%	4.17%	8.53%	8.40%	92.50%
2016	15.95%	3.30%	6.32%	6.24%	84.59%
2017	16.69%	3.30%	5.96%	5.89%	73.82%
2018	12.02%	2.30%	4.05%	4.00%	53.18%
2019	23.60%	4.89%	8.64%	8.54%	96.74%

4.2. Measuring of Stability.

The first stage of the research involved conducting descriptive analysis to summarize the characteristics of the data used in this study. Secondly, coefficient of variation was carried out to measure the stability of operating cash flow ratios. The high ratio indicates a high fluctuation around the mean which leads to high variability and instability of the indicator over the time. Table 2 shows a moderate coefficient of variation mainly caused by a high declining of all indicators.

Table 2: Coefficient of Variation

Details	Operating Cash Flow Margin	Assets Efficiency	Current Liability Coverage	Total Liabilities Coverage	Earnings Quality
Mean	14.41	3.87	7.84	7.91	80.48
Standard Deviation	6.15	1.68	4.00	3.85	40.43
Coefficient of Variation	42.68%	43.67%	51.02%	48.67%	50.24%
minimum	5.95	2.30	4.05	4.00	37.37
maximum	23.60	7.80	17.08	16.87	172.55

4.3. Measuring the strength of the relationship.

To measure the strength of the relationship between the five ratios of operating cash flow, Pearson coefficient was used. Pearson coefficient can be used to measure the strength and direction between each two variables. The value of the coefficient ranges between -1 and 1. A coefficient of -1 indicates a perfect negative relationship between two variables, while the value of 1 indicates a perfect positive relationship between these two variables. Finally, a coefficient of 0 is interpreted as the absence of any relationship between the two variables. Table 3 shows the highest relationship observed exists between operating cash flow margin and return on assets with a correlation coefficient 0.599, while the weakest relationship observed exists between the operating cash flow margin and the total liability coverage indicators with a coefficient of 0.551. The assets efficiency ratio has its strongest relationship with total liability coverage ratio, represented as a correlation coefficient of 0.969. The assets efficiency ratio's weakest relationship was determined to be with operating cash flow margin, with a coefficient of 0.599. Meanwhile, the current liability coverage ratio was observed to have its strongest relationship with the total liability coverage ratio indicator, calculated to be a coefficient of 0.991 in real terms, while its weakest relationship was determined to be with operating cash flow margin ratio, with a coefficient is 0.586. The total liability coverage ratio has its high relationship with current liability coverage with a coefficient 0.99, and the weakest relationship is with operating cash flow margin ratio with correlation coefficient 0.551. Finally, the table shows that earnings quality has highest relationship with current liability coverage with a coefficient 0.942. The earning quality lowest relationship is with operating cash flow margin with a coefficient 0.777. We can say that operating cash flow margin ratio does not have very high relationship with other ratios.

Table 3: Coefficient of Correlation

Indicators	Operating cash flow margin	Assets Efficiency	Current Liability Coverage	Total liability Coverage	Earnings Quality
Operating cash flow margin	1	0.599	0.586	0.551	0.777
Assets Efficiency	0.599	1	0.961	0.969	0.926
Current Liability Coverage	0.586	0.961	1	0.991	0.942
Total liability Coverage	0.551	0.969	0.991	1	0.927
Earnings Quality	0.777	0.926	0.942	0.927	1

4.4 The Impact of Operating Cash flow on financial performance

Two regressions of analysis were conducted. The first one was to find the impact of independent variable proxy by operating cash flow margin on the dependent variable of financial Performance proxy measure by Return on equity and the second one is to analyze the effect of operating cash flow margin on profitability performance proxy measure by return on assets.
Table 4 shows the results of regression analysis for each of return on equity and return on assets.

Table 4: Regression Analysis Result

Model	Coefficient	R-Squared	T-Test	Significant	F-Test	Significant
Return on Equity	-0.65	0.42	- 2.39	0.044	5.71	0.044
Return on Assets	-0.71	0.51	-2.87	0.021	8.23	0.021

For the impact of operating cash flow on return on equity the results show an R squared value of 0.42 indicating that 42% of ROA variance in financial performance is explained by the variance in operating cash flow management. With respect to return on assets, the analysis yielded an R square value of 0.51, indicating that operating cash flow has an explanatory power of 51% on the return on assets. T-test in both models shows a value of -2.39 with a significance of 0.044 for return on equity and -2.87 with a significance of 0.021. Finally, the coefficient for the return on equity variable was determined to be –0.65, while similar analysis revealed a coefficient of -0.71 for the return on assets variable. This indicates that operating cash flow has negative impact on both ROI and ROA variables.

Conclusion

Operating cash flow indicates whether a company can generate sufficient positive cash flow to maintain and grow its operations, otherwise, it may require external financing for capital expansion. Moreover, creditors and stockholders are reluctant to invest in a company that does not generate enough cash from operating activities to ensure prompt payment of maturing liabilities, interest, and dividends. Therefore, operating cash flow is the best measure of an organization's ability to generate enough cash to continue as a going concern.

The aim of this article was to measure the financial performance of Emirates Insurance company over ten years using five ratios based on cash flow from operating activities. Based on the coefficient of variation, the analysis of these ratio indicates a moderately high level of instability. Moreover, the correlation coefficients between these ratios indicate the existence of high relationships between the ratios, but the operating cash flow margin has a moderate relationship with other ratios. The two regression analysts indicate a negative significant impact of operating cash flow margin on each of return on equity and return on assets.

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