The Impact of Cash Liquidity Quality on Financial Strength Sustainability: Evidence from Industrial Companies

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Abstract: The objective of this study was to investigate the influence of cash liquidity quality indicators on the long-term financial sustainability of publicly listed joint-stock industrial companies on the Amman Stock Exchange from 2014 to 2021. The study encompassed a population of 53 such companies, from which a purposive sample of 35 companies was selected based on the availability of comprehensive financial data meeting the study's variables throughout the designated period. The collected data were subjected to appropriate statistical analysis methods. The findings of the study revealed that cash liquidity quality indicators, specifically net cash flow from all activities to total assets, net cash flow from all activities to total profit, and operating net cash flow to total assets, exhibited a statistically significant impact on the sustainability of crucial indicators for these companies, including working capital, retained earnings, the market value of stocks, operating profit, and net sales. However, the study results indicated that the cash liquidity quality indicator represented by net cash flow from all activities to total equity did not affect the sustainability of operating profit and net sales indicators for these companies, it did have an impact on indicators such as working capital, retained earnings, and market value of stocks, contributing to their sustainability within these companies.

Keywords: Cash liquidity quality, financial strength, industrial companies.

INTRODUCTION

The proper management of cash flow is a critical determinant of a company's success and growth. This balance between cash inflows and outflows, whether it indicates a surplus or deficit, is integral to effective financial management. When there's a surplus, profitability metrics can be negatively affected as the extra funds remain idle or uninvested, incurring costs like opportunity costs for the company (Alireza et al., 2018). On the other hand, an excess of cash outflows over inflows can lead to liquidity shortages, causing challenges in meeting obligations promptly, disrupting operational cycles, and constraining the company's ability to respond to emergencies. This can ultimately lead to financial distress, impacting the company's financial stability (Uyar et al., 2022).

Navigating cash liquidity quality is a complex issue that companies of all kinds grapple with, regardless of their industry or scope of activities. Elevated liquidity levels present a conundrum of low resource utilization rates, potentially affecting these companies' financial durability. Thus, many companies are often strained by either insufficient liquidity or surplus liquidity that can't be effectively invested in available opportunities, given certain economic conditions. These circumstances can jeopardize the company's financial stability and sustainability (Khanqah & Lida, 2013).

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The significance of this study stems from its concentration on the quality of cash liquidity and its effects on the sustainability of companies' financial strength. This is accomplished through rigorous analysis and evaluation of indicators associated with the study population's variables. The study also draws its importance from the prospective benefits it can deliver in the form of recommendations and advice for decision-makers across all levels of the companies within the study population. These insights can influence more informed financial and managerial decisions regarding cash liquidity and financial strength factors. This, in turn, can lead to enhanced financial efficiency as companies identify optimal methods to bolster their financial resilience. Ultimately, these improvements can foster development in these companies' financial and economic performance (Alshehadeh et al., 2022b).

PROBLEM STATEMENT

Insufficient liquidity is a major challenge that companies often face, typically due to inadequate management of current assets. This problem can result in an imbalance between sources of funds and their financial applications. Consequently, several negative outcomes can arise, including the inability to achieve satisfactory measures of financial strength sustainability, failure to capitalize on available opportunities, and a loss of flexibility in selecting employment and investment areas. In severe cases, the result may be bankruptcy and liquidation (Chowdhury et al., 2018).

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The Impact of Cash Liquidity Quality

Conversely, companies with excessive cash liquidity might suffer from poor management of obligations and ownership rights, leading to difficulties in maintaining a balance between fund usage and sources of financing (Birjandi, 2013). Additionally, it's important to note that elevated liquidity levels within a company can obstruct cash flow, thereby preventing the company from generating high operational profits. This issue can be attributed to substantial expansions in obligations and ownership rights, as well as inconsistencies between the receipt of funds and the fulfilment of obligations (Anita, 2018).

The relevance of this study hinges on examining the quality of cash liquidity and its impact on financial strength sustainability indicators. This involves conducting analyses and assessing indicators pertinent to the capital structure of the study population (Anita, 2018). Companies often grapple with the task of identifying investment opportunities that bolster the sustainability of financial strength indicators, all while operating within their capital structure constraints (Marfuah & Nurlaela, 2019). Moreover, companies can experience liquidity shortages, leading to the necessity of external borrowing to finance these investment opportunities, which can in many instances negatively affect their financial strength sustainability indicators (Suwaidan et al., 2015).

Companies must endeavour to attain satisfactory measures of their targeted financial strength sustainability while fulfilling the needs of customers and suppliers. This is achieved by maintaining optimal cash liquidity quality indicators. The quality of cash liquidity refers to a company's capacity to generate sufficient cash to sustain growth and financial resilience. The strength or weakness of a company's liquidity is intrinsically tied to the availability of net cash flow from operating activities (Anita, 2018). Therefore, liquidity significantly influences financial strength sustainability and its indicators. A mismatch between a company's assets and liabilities can have adverse effects, potentially exposing the company to financial losses (Kajananthan & Achchuthan, 2013).

Liquidity and financial strength are often perceived as conflicting notions. Holding onto liquidity for security purposes can result in diminished investment efficiency due to the significant retention of liquid assets (Ayoush et al., 2020). On the other hand, augmenting investment activities by allocating a larger share of liquidity may subject the company to risks under specific conditions (Iman et al., 2013).

In light of the preceding discussion, this study aims to make a serious attempt to examine the impact of cash liquidity quality on the sustainability indicators of financial strength for industrial companies listed on the Amman Stock Exchange. The problem statement of the study can be summarized by posing the following questions:

- 1. Is there an impact of cash liquidity quality indicators on the sustainability of working capital in industrial companies listed on the Amman Stock Exchange?
- 2. Is there an impact of cash liquidity quality indicators on the sustainability of retained earnings in industrial companies listed on the Amman Stock Exchange?

- 3. Is there an impact of cash liquidity quality indicators on the sustainability of operating profit in industrial companies listed on the Amman Stock Exchange?
- 4. Is there an impact of cash liquidity quality indicators on the sustainability of the market value of stocks in industrial companies listed on the Amman Stock Exchange?
- 5. Is there an impact of cash liquidity quality indicators on the sustainability of net sales in industrial companies listed on the Amman Stock Exchange?

LITERATURE REVIEW

The crucial role of cash liquidity indicators becomes clear in their capacity to ensure a company's longevity. Despite other performance indicators being favourable, a lack of cash liquidity can pose a grave threat to a company's survival. The presence of suitable and well-balanced liquidity within a company helps achieve several strategic objectives, such as sustainability, growth, and the preservation of its financial strength (Alshehadeh et al., 2022a).

Earlier studies reveal that companies maintain liquidity for various reasons, including transactional needs and investment opportunities. The extent of a company's cash holdings is determined by the marginal cost of liquidity shortage juxtaposed with the opportunity cost of preserving liquid assets (Birjandi, 2013). Liquidity, as a pivotal financial performance indicator for companies, reflects the capacity to gather receivables and fulfil short-term debts. Efficient liquidity management is essential as it embodies the company's financial management performance and acts as a vital tool for internal and external stakeholders in their decision-making (Uyar et al., 2022). From a monetary viewpoint, cash liquidity signifies a company's ability to maintain smooth cash flow (encompassing operating, investing, and financing activities) in the short term, while balancing it with the company's other objectives such as profitability, growth, longevity, and financial strength (Khangah & Lida, 2013).

On the flip side, financial strength sustainability symbolizes a company's ability to generate profits over a specified period with the least possible risks. This is manifested in the correlation between the profits and positive cash flows that a company generates, and the investments that have contributed to achieving these profits and cash flows (Iman et al., 2013). The intricate relationship between cash liquidity quality indicators, their management, and the elements of financial strength sustainability in companies is of paramount importance. Adequate liquidity is crucial for meeting a company's obligations and mitigating the risks of insolvency and liquidation. Suitable liquidity serves multiple objectives for the company, including the following (Alshehadeh, 2021; Anita, 2018).

- 1. Maintaining the company's continuity by managing its liquidity properly.
- 2. Assisting in developing and improving financial strength opportunities.
- 3. Assisting in avoiding the payment of borrowing costs if it harms the company.

A liquidity shortage is a key challenge that companies often encounter, predominantly due to improper management of current assets. This predicament leads to an imbalance between the nature of funding sources and financial applications, as well as a misalignment between the growth of company obligations and its capacity to generate cash from operating activities. These issues can impede a company's ability to capitalize on available opportunities and impact the elements of financial strength sustainability, potentially culminating in bankruptcy and liquidation (Hung & Cuong, 2020).

Conversely, an excessive level of cash liquidity within a company, often linked to inappropriate management of liabilities and equity, can impede liquidity and prevent the company from realizing high operational profits. This scenario negatively impacts the company's financial strength sustainability indicators (Marfuah & Nurlaela, 2019).

Thus, the importance of cash liquidity, including its indicators, measurement, evaluation, and role in achieving the components of financial strength sustainability for companies, becomes evident. It is instrumental in averting deficiencies in meeting expansionary investment and financing needs. There are five criteria to measure a company's financial strength (Noravesh & Yazdani, 2010; Iman et al., 2013).

The first criterion is the Working Capital ratio, wherein working capital is viewed as an indicator of operational efficiency and the short-term financial health of a company. It provides an efficient and sustainable company with the necessary agility to expand operations and development, as well as adapt to fluctuating economic conditions (Al Omari et al., 2017).

The second criterion is the Retained Earnings ratio. High retained earnings can suggest financial strength as they exhibit a history of profitability from previous years. Retained earnings are beneficial for expansion, and diversification, and offer a low-cost financing alternative compared to other sources. This allows the financial structure to maintain high flexibility and positively impacts the company's ability to enhance earnings capacity and generate current and future positive cash flows.

The third criterion is the Operating Profit Margin. This is the primary indicator of a company's capacity to derive income from core operations. A company that consistently increases its operating income is deemed to exhibit financial growth and stability. This suggests that the company's management is successful in generating more revenue while effectively controlling expenses, production costs, and overheads (Alshehadeh et al., 2022).

The fourth criterion is the Market Value of Stocks ratio. This indicator is vital for assessing a company's financial strength and represents the market's valuation of the company. It plays a pivotal role in tracking overall stock market movements. Without understanding the appropriate value of stocks, investors may find it challenging to determine the optimal time to buy or sell shares.

The fifth criterion is the Net Sales ratio. This criterion elucidates the capacity of sales to achieve operating profit margins. Naturally, as the value of generated sales increases, the value of working assets also escalates. The larger the profit derived from sales, the greater the company's ability to generate profits, indicative of revenue strength (Alshehadeh & Al-Khawaja, 2022).

Previous studies have yielded different results regarding the impact of liquidity on the indicators of financial strength sustainability for companies. Numerous studies in both the Arab and foreign environments have addressed some variables of the current study, albeit with methodological variations. One such study (Khanqah & Lida, 2013) indicated a positive impact of liquidity on the financial structure and financial strength sustainability of companies. Another study (Birjandi, 2013) demonstrated a positive relationship between liquidity measures and financial leverage, as well as a positive association between the increase in the company's profit ratio and financial leverage. On the other hand, the results of a study (Bundala, 2014) showed no relationship between capital structure and the intensity of working capital or financial strength opportunities. Companies tend to finance assets primarily through equity rather than relying on debt and enjoy stable growth rates. The study also revealed that company assets have a positive impact on generating and growing sales. The results of a study (Awan, Bhatti, Ali, & Qureshi, 2010) showed no relationship between financial strength indicators and financial leverage. However, there is a positive relationship between financial strength indicators at moderate and low levels and financial leverage of companies. The study also indicated that the industry type is an important variable that affects the relationship between growth opportunities and financial leverage. Additionally, a study by Mahdi et al. (2022) examined the impact of investment opportunities on firm value through the role of institutional governance and the independence of the board of directors. The results showed that investment opportunities have an impact on firm value, and institutional governance and the independence of the board of directors work to mitigate this impact. Furthermore, a study by Hieu et al. (2020) aimed to explore the effect of capital structure on the performance of state-owned and non-state-owned companies. The empirical results demonstrated a statistically significant negative impact of capital structure on company performance, and this impact was stronger in state-owned companies compared to non-governmental ones. These findings provide new insights for managers of state-owned and nonstate-owned companies on how to improve company performance and capital structure.

Contrastingly, the study by Suwaidan et al. (2015) aimed to investigate the influence of investment opportunities on companies' capital structure. Their findings revealed a negative impact of investment opportunities, measured by the percentage of cash flows generated from fixed assets, on the debt ratio. The study also found that the researched companies preferred to finance new investment opportunities with a smaller proportion of debt, opting for a more substantial amount of equity financing. This can be attributed to the fact that growth-oriented companies tend to finance their current and future investments through retained earnings, deemed as the least expensive source. These companies also tend to utilize minimal debt due to the risks associated with debt, including the heightened likelihood of bankruptcy. Conversely, Iman et al. (2013) aimed to explore the influence of financial strength on leverage in their study. Their findings indicated a significant negative relationship between asset

The Impact of Cash Liquidity Quality

growth and some indicators of financial strength. Moreover, they found a significant positive relationship between profit growth, sales growth, financial strength, and leverage indicators.

The current study stands out from previous research as it directly analyzes the impact of cash liquidity indicators on the sustainability indicators of financial strength for industrial companies publicly listed on the Amman Stock Exchange. This study delves into the most critical financial performance indicators influencing the economic efficiency of these companies. Such indicators are of paramount importance to decision-makers both within and outside the company, including investors, shareholders, and financial intermediaries.

METHOD

This study utilized a descriptive-analytical approach, aligning with its inherent nature. The method involved collecting, describing, and analyzing financial statement data from the study population, encompassing the years 2014 to 2021. The data was sourced from the Amman Stock Exchange website and represented 53 publicly traded industrial companies.

A purposive sample of 35 companies was selected, all of which possessed the requisite financial data to meet the study's variables throughout the specified period. The statistical analysis of this data was performed using the STATA program, aligning with appropriate statistical methods.

The central objective was to examine the influence of cash liquidity quality on financial sustainability indicators within these publicly traded industrial companies. The table below (Table 1) outlines the independent and dependent variables of the study, including their measurement methods.

The research hypotheses were tested using regression models, as described further:

QCL it= $\beta_0 + \beta_1$ WC it + $\beta_2 \epsilon$ RE it + β_3 OP it + β_3 MVS it + β_3 NS it + β_3 GFA it + β_3 OCF it + ϵ_{it}

Variable	Method of Measurement	Abbr.	Source
Cash liquidi-	Net Cash Flow from All Activities to Total Assets	NCF/TA	(Hung &
ty (QCL)	Net Cash Flow from All Activities to Total Equity	NCF/TE	Cuong,2020)
	Net Cash Flow from All Activities to Gross Profit	NCF/IN	(Khanqah & Lida, 2013)
	Net Operating Cash Flow to Total Assets	NOCF/TA	(Aghaee & Shakeri, 2010)
financial	Working Capital Ratio = Working Capital to Total Assets	WC	(Noravesh &
strength (FS)	Retained Earnings Rate = Retained Earnings to Total Assets	RE	Yazdani 2010)
()	Operating Profit Rate = Operating Profit to Total Assets	OP	(Iman, et al. 2013)
	Equity Market Capitalization Ratio = Equity Market Value to Total Debt	MVS	
	Net Sales Ratio = Net Sales to Total Assets	NS	

Table 1. Presents the Independent and Dependent Variables of the Study and their Measurement Methods.

RESEARCH HYPOTHESIS

In exploring the influence of cash liquidity variables on financial strength, the following hypotheses were proposed for examination:

- H01: Cash liquidity indicators do not significantly influence the sustainability of working capital at a significance level ($\alpha \ge 50.0$) in industrial companies listed on the Amman Stock Exchange.
- H02: Cash liquidity indicators do not significantly impact the sustainability of retained earnings at a significance level ($\alpha \ge 50.0$) in these industrial firms.
- H03: At a significance level ($\alpha \ge 50.0$), the sustainability of operating profit in these companies is not significantly affected by cash liquidity indicators.

- H04: Cash liquidity indicators do not significantly influence the sustainability of the market value of stocks at a significance level ($\alpha \ge 50.0$) in these industrial companies.
- H05: Net sales sustainability at a significance level $(\alpha \ge 50.0)$ in these firms is not significantly impacted by cash liquidity indicators.

STUDY RESULTS

H01: Cash liquidity indicators do not have a statistically significant impact on the sustainability of working capital in industrial companies listed on the Amman Stock Exchange at a significance level ($\alpha \ge 0.05$). To evaluate this hypothesis, a multiple linear regression analysis was performed. The following table presents the results of this analysis, illustrating the potential influence of cash liquidity indicators on working capital sustainability:

Table 2. Multiple Linear Regression Analysis Testing the Relationship between Cash Liquidity Indicators and the Sustainability of
Working Capital in Industrial Companies Listed on the Amman Stock Exchange.

Depend- ent varia- ble	Multiple correlation coefficient R	square Correlation coefficient R2	F- value	Statistical significance	Independent variables	Non- normative coefficients (B)	Normative coefficients (Beta)	T-value	Statisti- cal signif- icance
	0.147	0.139	1234.312	0.000**	Constant	0.051		1.732	0.126
					NCF/TA	1.782	0.557-	41.365	0.000**
WC					NCF/TE	0.298	0.301	5.325	0.002**
					NCF/IN	0.631	0.264	21.137	0.007**
					NOCF/TA	0.857	0.454	24.283	0.041**

**P<0.001.

 Table 3. Multiple Linear Regression Analysis Testing the Relationship between Cash Liquidity Indicators and the Sustainability of Retained Earnings in Industrial Companies Listed on the Amman Stock Exchange.

Dependent Variable	Multiple Correlation Coefficient R	square Cor- relation Coefficient R2	F- Value	Statistical Significance	Independent Variables	Non- normative Coefficients (B)	Normative Coefficients (Beta)	T- Value	Statistical Significance
	0.834	0.804	218.924	0.000**	Constant	0.362		1.731	0.041
					NCF/TA	0.838	0.531	7.226	0.000**
RE					NCF/TE	0.723	0.777	4.749	0.004**
					NCF/IN	0.921	0.271	8.137	0.002**
					NOCF/TA	0.654	0.534	3.184	0.000**

**P<0.001

The results indicated that the absolute value of the multiple correlation coefficient between cash liquidity indicators and the sustainability of working capital in industrial companies listed on the Amman Stock Exchange was 0.147. The coefficient of determination (R2) was determined to be 0.139, suggesting that these indicators account for about 3.91% of the variance in working capital sustainability. The F-statistic value was significant at 1234.312, with a significance level ($\alpha \leq 0.05$), leading to the acceptance of the alternative hypothesis. This states, "Cash liquidity indicators have a statistically significant impact at a significance level ($\alpha \le 0.05$) on the sustainability of working capital in industrial companies listed on the Amman Stock Exchange." This result underscores the significance of the multiple linear regression and points out that variables like net cash flow from all activities to total assets, net cash flow from all activities to total equity, net cash flow from all activities to net income, and net operating cash flow to total assets influence working capital sustainability in these companies.

H02: Cash liquidity indicators do not have a statistically significant impact on the sustainability of retained earnings in industrial companies listed on the Amman Stock Exchange at a significance level ($\alpha \ge 0.05$). To explore this hypothesis, a multiple linear regression analysis was performed. The subsequent table (Table 3) presents the results of this analysis, delineating the potential influence of cash liquidity indicators on the sustainability of retained earnings:

The analysis revealed an absolute value of 0.834 for the multiple correlation coefficient between cash liquidity indicators and the sustainability of retained earnings in the industrial companies listed on the Amman Stock Exchange. The coefficient of determination (R2) was found to be 0.804, suggesting that about 80.4% of the variance in retained earnings can be explained by cash liquidity indicators. With a statistically significant F-statistic value of 218.924 at a significance level $(\alpha \le 0.05)$, the alternative hypothesis was accepted. This hypothesis states, "Cash liquidity indicators have a statistically significant impact at a significance level ($\alpha \leq 0.05$) on the sustainability of retained earnings in industrial companies listed on the Amman Stock Exchange." This finding emphasizes the significance of the multiple linear regression, indicating that net cash flow from all activities to total assets, equity, net income, and net operating cash flow to total assets contribute to the sustainability of retained earnings in these companies.

H03: Cash liquidity indicators do not have a statistically significant impact on the sustainability of operating profit in industrial companies listed on the Amman Stock Exchange at a significance level ($\alpha \ge 0.05$). To evaluate this hypothesis, multiple linear regression analysis was performed. The ensuing Table (4) outlines the results of this analysis, depict-

ing the potential influence of cash liquidity indicators on the sustainability of operating profit:

 Table 4. Multiple Linear Regression Analysis Testing the Relationship between Cash Liquidity Indicators and the Sustainability of

 Operating Profit in Industrial Companies Listed on the Amman Stock Exchange.

Dependent Variable	Multiple Correlation Coefficient R	Square Correlation Coefficient R2	F- Value	Statistical Significance	Independent Variables	Non- normative Coefficients (B)	Normative Coefficients (Beta)	T-Value	Statistical Significance
		0.624	189.739	0.000**	Constant	0.523		11.457	0.000**
					NCF/TA	0.543	0.943	7.546	0.001**
OP	0.683				NCF/TE	3.049	0.759	22.547	0.076**
					NCF/IN	0.658	0.386	5.678	0.004**
					NOCF/TA	0.834	0.348	6.491	0.003**

**P<0.001

 Table 5. Multiple Linear Regression Analysis between Cash Liquidity Indicators and Market Value Sustainability of Stocks in Industrial Companies Listed on the Amman Stock Exchange.

Dependent Variable	Multiple Correlation Coefficient R	square Correlation Coefficient R2	F- Value	Statistical Significance	Independent Variables	Non- Normative Coefficients (B)	Normative Coefficients (Beta)	T-Value	Statistical Significance
	0.536	0.517	284.329	0.000**	Constant	0.759		15.004	0.000**
					NCF/TA	0.491	0.214	3.294	0.000**
MVS					NCF/TE	1.498	0.576	21.564	0.003**
					NCF/IN	0.146	0.348	6.216	0.001**
					NOCF/TA	2.004	0.513	8.457	0.000**

**P<0.001

The analysis indicated an absolute value of 0.683 for the multiple correlation coefficient between cash liquidity indicators and the sustainability of operating profit in the industrial companies listed on the Amman Stock Exchange. The coefficient of determination (R2) was determined to be 0.624, suggesting that about 62.4% of the variance in operating profit can be explained by cash liquidity indicators. The F-statistic value was significant at 189.739, with a significance level ($\alpha \le 0.05$), leading to the acceptance of the alternative hypothesis. This states, "Cash liquidity indicators have a statistically significant impact at a significance level $(\alpha \le 0.05)$ on the sustainability of operating profit in industrial companies listed on the Amman Stock Exchange." This result underscores the significance of the multiple linear regression, indicating that net cash flow from all activities to total assets, net income, and net operating cash flow to total assets influence operating profit sustainability. However, it was observed that net cash flow from all activities to total equity does not impact the sustainability of operating profit.

H04: Cash liquidity indicators do not have a statistically significant impact on the sustainability of the market value of stocks in industrial companies listed on the Amman Stock Exchange at a significance level ($\alpha \ge 0.05$). To explore this hypothesis, a multiple linear regression analysis was performed. The subsequent table (Table 5) presents the results of this analysis, delineating the potential influence of cash liquidity indicators on the sustainability of the market value of stocks:

The analysis revealed an absolute value of 0.536 for the multiple correlation coefficient between cash liquidity indicators and the sustainability of the market value of stocks in the industrial companies listed on the Amman Stock Exchange. The coefficient of determination (R2) was found to be 0.517, suggesting that about 51.7% of the variance in the market value of stocks can be explained by cash liquidity indicators. The F-statistic value was significant at 284.329, with a significance level ($\alpha \le 0.05$), leading to the acceptance of the alternative hypothesis. This states, "Cash liquidity indicators have a statistically significant impact at a significance level $(\alpha \le 0.05)$ on the sustainability of market value of stocks in industrial companies listed on the Amman Stock Exchange." This finding emphasizes the significance of the multiple linear regression, indicating that net cash flow from all activities to total assets, equity, net income, and net operating cash flow to total assets contribute to the sustainability of the market value of stocks in these companies.

H05: Cash liquidity indicators do not have a statistically significant impact on the sustainability of net sales in industrial companies listed on the Amman Stock Exchange at a significance level ($\alpha \ge 0.05$). To evaluate this hypothesis, multiple linear regression analysis was performed. The ensuing Table (6) outlines the results of this analysis, depicting the potential influence of cash liquidity indicators on the sustainability of net sales:

Dependent Variable	Multiple Correlation Coefficient R	square Cor- relation Coefficient R2	F- Value	Statistical Significance	Independent Variables	Non- Normative Coefficients (B)	Normative Coefficients (Beta)	T- Value	Statistical Significance
	0.413	0.394	201.875	0.000**	Constant	0.319		10.523	0.000**
					NCF/TA	0.862	0.764	7.102	0.004**
NS					NCF/TE	6.419	0.921	25.265	0.071**
					NCF/IN	0.478	0.843	6.289	0.000**
					NOCF/TA	0.762	0.307	8.31	0.002**

**P<0.001.

The analysis yielded an absolute value of 0.413 for the multiple correlation coefficient between cash liquidity indicators and the sustainability of net sales in industrial companies listed on the Amman Stock Exchange. The coefficient of determination (R2) was found to be 0.394, indicating that cash liquidity indicators accounted for approximately 39.4% of the variance in net sales. The F-statistic value was determined to be 201.875, which is statistically significant at a significance level ($\alpha \le 0.05$), leading to the acceptance of the alternative hypothesis. This hypothesis states, "Cash liquidity indicators have a statistically significant impact at a significance level ($\alpha \leq 0.05$) on the sustainability of net sales in industrial companies listed on the Amman Stock Exchange." This finding emphasizes the significance of the multiple linear regression, indicating that net cash flow from all activities to total assets, total profit, and from operating activities to total assets influence the sustainability of the market value of stocks in these companies. However, it was observed that net cash flow from all activities to total equity does not impact the sustainability of net sales.

CONCLUSION AND RECOMMENDATIONS

This study aimed to underscore the influence of cash liquidity quality on the sustainability of financial strength indicators in industrial companies publicly listed on the Amman Stock Exchange from 2014 to 2021. The results reveal a significant and statistically substantial impact of cash liquidity quality indicators, such as net cash flow from all activities relative to total assets, net cash flow from all activities relative to total profit, and operating net cash flow relative to total assets, on the sustainability of indicators including working capital, retained earnings, market value of stocks, operating profit, and net sales for these companies. However, the results suggest that the cash liquidity quality indicator, represented by net cash flow from all activities relative to total equity, does not influence the sustainability of operating profit and net sales indicators for these companies, although it does affect the sustainability of working capital, retained earnings, and market value of stocks indicators.

Given these findings, the surveyed industrial companies must concentrate on the sources of cash liquidity quality and consistently evaluate their relevant indicators. This could be accomplished by enhancing the efficiency of cash liquidity management procedures and determining an appropriate capital structure blend. Optimal utilization of this blend can reduce the capital cost for the surveyed companies, maximize the components of financial strength sustainability, and provide more lucrative investment opportunities. The findings of this research are anticipated to contribute to the development and implementation of financial theories, particularly those related to factors impacting the sustainability of a company's financial strength. Furthermore, the results of this study may prove beneficial to stakeholders interested in these companies' economic health, guiding decisions regarding capital structure, liquidity sources, and management practices that affect the elements and indicators of financial strength for industrial companies publicly listed on the Amman Stock Exchange.

REFERENCES

- Aghaee, M., & Shakeri, A. (2010). "Using Ratios of Liquidity, Cash Flow and Accrual Accounting in Predicting Future Operating Cash Flow of Companies Listed in Tehran Stock Exchange". *Journal of Financial Accounting*, (5), 1-16.
- Al Omari, R., Soda, M. Z., Razzak, A., & Al Rawashdeh, F. (2017). The impact of profitability ratio on gross working capital of Jordanian industrial sector. International Journal of Applied Business and Economic Research, 15(26).
- Alireza M, Amin G, and Azam P,(2018) "Investigating Relationship between Accruals, Cash Flow and Profitability with Stock Return in Firms Accepted in Tehran Stock Exchange", *International Journal* of Economics and Financial Research, Vol. 4, Issue. 9, pp: 284-291,
- Alshehadeh, A, R, Elrefae, G, & Injadat, E. (2022a). Influence of traditional performance indicators on economic added value: evidence from insurance companies, Corporate Governance and Organizational Behavior Review, 6(4), PP.18-27.
- Alshehadeh, A, R, Elrefae, G, A, Farid, K, Abdelhafid, B,&, El-Qirem, I, A. (2022b). The relationship between the innovative marketing mix elements and the firms' performance, Digital Economy, Business

Analytics, and Big Data Analytics Applications, Springer, pp: 415-423

- Alshehadeh, A, R. (2021). The Relationship Between Liquidity Risk And Profitability In The Commercial Banks Listed In Amman Stock Exchange, International Conference on Information Technology (ICIT), DOI: 10.1109/ICIT52682.2021.9491702.
- Alshehadeh, A.R., Al-Khawaja, H.A. (2022) Financial Technology as a Basis for Financial Inclusion and its Impacton Profitability: Evidence from Commercial Banks, International Journal of Advances in Soft Computing and its Applications, 14(2), pp. 125–138
- Alshehadeh, A.R., Elrefae, G.A., Khudari, M., Injadat, E.(2022c). Impacts of Financial Technology on Profitability: Empirical Evidencefrom Jordanian Commercial Banks. Studies in Computational Intelligence, 2022, 1010, pp. 487–496.
- Anita Juwita,(2018), The Effect of Capital Structure, Liquidity, And Growth on Corporate Performance Classified As Small Capitalization Companies on Indonesia Stock Exchange Period 2011-2016, International journal of scientific & technology research volume 7, issue 2: pp 76-81.
- Awan, H. M., Bhatti, M. I., Ali, R., & Qureshi, A. (2010). How growth opportunities are related to corporate leverage decisions? *Investment Management and Financial Innovations*, 7(1), 90-97.
- Ayoush, M., Rabayah, H., & Jibreel, T. (2020). The impact of mergers on the financial performance of Jordanian public shareholding companies. The Journal of Asian Finance, Economics and Business, 7(10), 751–759. https://doi.org/10.13106/jafeb.2020.vol7.n10.751
- Birjandi, H. (2013). The Study Effect of Liquidity on Capital Structure Decisions in the Tehran Security Exchange. World Open Journal of Finance and Accounting, 1 (1) 1-9
- Bundala, N. N. (2014). Does Capital Structure Influences Working Capital Intensity and Growth Opportunity of a Firm. *International Journal* of Accounting and Financial Reporting, 4 (1), 43.
- Chowdhury, A, Uddin, M.,and Anderson K. 2018. Liquidity and macroeconomic management in emerging markets. *Emerging Markets Re*view, 34, 1-24.
- Hieu T, N, Anh ,H, N, (2020), The Impact of Capital Structure on Firm Performance: Evidence from Vietnam, *Journal of Asian Finance*, *Economics and Business* Vol 7 No 4 pp. 97- 105

- Hung The Dinh, Cuong Duc Pham, (2020) "The Effect of Capital Structure on Financial Performance of Vietnamese Listing Pharmaceutical Enterprises" *Journal of Asian Finance, Economics and Business* Vol 7, No 9, 329–340.
- Iman, Dadashia, Elham Mansouriniab, Milad Emamgholipourb, Seyedeh Maryam Babanejad Bagheria and Ali Mohammadpour Arabic.(2013) "Investigating the effect of growth and financial strength variables on the financial leverage: Evidence from the Tehran Stock Exchange " *Management Science Letters*, 3 (2013) 1125– 1132.
- Kajananthan, R., & Achchuthan, S. (2013). Liquidity and Capital Structure: Special reference to Sri Lanka Telecom Plc. Advances in Management & Applied Economics, 3 (5), 89-99.
- Khanqah, V. T& Lida Ahmadnia (2013). The Impact of Capital Structure on Liquidity and Investment Growth Opportunity in Tehran Stock Exchange. Journal of Basic and Applied Scientific Research, 3(4), 463-470.
- Mahdi Salehi, Grzegorz Zimon, Arash Arianpoor and Fatemeh Eidi Gholezoo (2022) The Impact of Investment Efficiency on Firm Value and Moderating Role of Institutional Ownership and Board Independence, *Journal of Risk and Financial Management*. 15, 170. https://doi.org/10.3390/jrfm15040170
- Marfuah, S, Nurlaela, S (2019). "Effect of Firm size, Asset Growth, Profitability, and Sales Growth on Capital Structure". *Journal of Accounting and Tax*, 18(1)
- Noravesh, I., & Yazdani, S. (2010). "The effect of financial leverage on investment in companies listed in Tehran". *Journal of Financial Accounting* Vol 2, No 2 - Serial Number 2, 35-48.
- Suwaidan .S, Mishiel; W. H. Alrabadi, Dima; and M. H. Awad, Tarek (2015) "The Impact of Investment Opportunities on Capital Structure: An Empirical Study of the Industrial Companies Listed in Amman Stock Exchange," *Arab Journal of Administration*: Vol. 35: No. 1, Article 13. Available at: https://digitalcommons.aaru.edu.jo/aja/vol35/iss1/13.
- Uyar, A., Abdelqader, M. and Kuzey, C. (2022), "Liquidity and CSR: a chicken and egg story", *Society and Business Review*, Vol. aheadof-print No. ahead-of-print. https://doi.org/10.1108/SBR-01-2022-0032

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