

Funding Liquidity Risk Management And The Financial Performance Of Construction Firms In The Central Region, Kenya

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Abstract:

The construction industry in Kenya provides vital infrastructure like roads and housing. However, the construction firms have experienced a decline in growth rate, dropping from 10.1% in 2020 to 6% in 2021, according to data from the Kenya National Bureau of Statistics (KNBS) economic survey for 2021. This decline underscores their challenges in pursuing growth opportunities, increasing revenues, and improving net earnings. It is against this challenge that researcher examined the influence of funding liquidity risk management on financial performance of construction firms. The study was anchored on free cash flow theory. The current study adopted a descriptive research design. The target population was the 43 registered construction firms operating in Central Region (Kiambu, Nyeri, Kirinyaga, Murang'a, and Nyandarua Counties). Descriptive and inferential analysis methods were employed in data analysis. Descriptive findings indicated that funding liquidity risk management influenced the financial performance of construction firms. The correlation analysis results showed that the relationship between funding liquidity risk management and financial performance was positive and significant ($r=0.663^{**}$; $p=0.000$) at a 1% significance level. The findings affirms that funding liquidity risk management affected the financial performance of construction firms. As per the regression analysis results, the coefficient of determination was $R^2= 0.439$. Therefore, the funding liquidity risk management accounted for 43.9% of the financial performance. In conclusion, effective funding liquidity risk management significantly influences the financial performance of construction firms. The researcher recommends that the construction firms should develop detailed and accurate cash flow forecasts that project cash inflows and outflows over different time horizons. This will help in identifying potential liquidity gaps, guide the planning and mitigation of the risks to improve financial performance.

Key Words: Funding Liquidity Risk Management, Financial Performance, construction Firms

Date of Submission: 17-04-2024

Date of acceptance: 27-04-2024

I. Introduction

Liquidity risk management involves evaluating potential cash flow variations and ensuring the presence of adequate liquid assets to minimize the risk of illiquidity (Vibhakar, Tripathi, Johari, & Jha, 2023). This is essential for maintaining operations and securing financial stability, especially in times of economic downturns. Effective liquidity risk management improves the organization's capacity to meet short-term financial commitments, thereby ensuring operational continuity (Zimon, Nakonieczny, Chudy-Laskowska, Wójcik-Jurkiewicz, & Kochoński, 2021). With ample liquidity reserves, firms can adeptly navigate unexpected cash flow fluctuations. Funding liquidity risk management allows companies to maintain a funding base while monitoring funding requirements against available resources. The establishment of contingency plans addresses funding shortfalls, which increases the sustainability of the firm operations (Xuanling & Meng, 2023).

In the context of construction firms, funding liquidity risk management is geared toward safeguarding financial stability, optimizing cash flow, and ensuring the profitability of projects (Amoo, Rambo, & Mbugua, 2023). This fortifies their overall resilience within an inherently turbulent business environment. According to Omopariola, Windapo, Edwards, and El-Gohary (2021), management of funding liquidity risks is pivotal in mitigating potential financial setbacks, including but not limited to budget overruns and settling of short-term obligations. Construction firms can strengthen their financial position by implementing effective funding risk

planning approaches (Zimon et al., 2021). They specifically diversify funding sources to minimize dependence on any one source, conduct comprehensive risk assessments to foresee potential funding hurdles and implement contingency plans to counter funding shortages. These strategies empower them to maintain long-term success amidst the ever-evolving challenges within the industry.

The construction industry in Kenya provides vital infrastructure like roads and housing. It also creates diverse job opportunities, reducing poverty and empowering communities (Amoo, Rambo, & Mbugua, 2023). Overall, Kenya's construction sector drives economic development, infrastructure enhancement, and social advancement. The financial performance of construction firms is crucial as it directly impacts their ability to sustain operations and fulfill financial obligations (Omopariola et al., 2021). It holds significant importance, reflecting their ability to generate returns from their operations. However, construction firms have experienced a decline in growth rate, dropping from 10.1% in 2020 to 6% in 2021, according to data from the Kenya National Bureau of Statistics (KNBS) economic survey for 2021. This decline underscores their challenges in pursuing growth opportunities, increasing revenues, and improving net earnings. Maintaining adequate funding liquidity levels is crucial for addressing financial challenges linked to short-term liabilities. Therefore, effective funding liquidity risk management is essential (Roncalli, Karray-Meziou, Pan, & Regnault, 2021). Nonetheless, these firms face liquidity risks that impede their ability to maintain adequate liquidity and sustainable financial performance. Despite this, there is a lack of comprehensive empirical studies exploring funding liquidity risk management and its influence on financial performance in the realm of construction firms. In light of this gap, the current study examined the influence of funding liquidity risk management practices on the financial performance of construction firms in the Central Region, Kenya.

II. Objective Of The Study

The objective of the study was to examine the influence of funding liquidity risk management on the financial performance of construction firms in the Central Region, Kenya.

III. Literature Review

Funding liquidity risks arise from the inability to access funds, affecting a firm's capability to meet current and future liabilities (Bakshi, 2020). This often reflects a downward trend in a construction firm's financial monitoring system, with potential long-term consequences for earnings. Roncalli (2021) opines that liquidity buffers serve as a robust tool for managing liquidity risks, aiding managers in handling expected and unexpected cash flows. Maintaining sufficient cash reserves is crucial for bridging gaps in cash inflows and outflows, reducing risks, and ensuring uninterrupted business operations, thereby fostering a continuous flow of earnings. Additionally, a lack of affordability of fund costs can hinder construction firms from securing funds to meet their obligations (Xuanling & Meng, 2023). The leverage position also influences liquidity, as funds from debt are often used to finance current assets and settle liabilities, mitigating liquidity risks.

Liquidity risks negatively impact net returns and overall financial performance, necessitating effective funding liquidity risk management practices (Kocaarslan & Soytas, 2021). This involves monitoring liabilities concentrations, off-balance sheet exposures, and third-party evaluations to minimize risks. By adopting appropriate funding liquidity risk management practices, construction firms can obtain adequate funds, compensate for balance sheet fluctuations, and support investment and growth (Effiong & Ejabu, 2020). Maintenance of the right liquid assets ratio and borrowing from money markets ensure stable funding sources, while effective cash flow positioning aids in managing liquidity risks and improving financial performance (Huang & Mazouz, 2018). Ultimately, employing accurate risk identification, monitoring, and control systems enhances construction firms' ability to manage liquidity exposures and optimize financial performance. According to the free cash flow theory, a company's value is optimized when it generates surplus cash flow beyond its operational and capital expenditure requirements (Suranta, Satrio, & Midiastuty, 2023). This surplus cash can then be allocated to various purposes such as investing in growth opportunities, reducing debt, paying dividends to shareholders, or maintaining liquidity reserves. In the context of managing funding liquidity risk in construction firms, this theory emphasizes the importance of maintaining adequate liquidity levels to cover short-term funding needs (Dewi, Sari, Budiasih, & Suprasto, 2019). It also underscores the necessity of having excess cash available to capitalize on growth prospects and mitigate financial risks.

Construction firms face significant vulnerability to funding liquidity risks due to the cyclical nature of projects, delays in payments, and market uncertainties (Roncalli et al., 2021). Adhering to the principles of the free cash flow theory enables these firms can strike a balance between ensuring liquidity for immediate obligations and optimizing cash flow. This approach is crucial for enhancing overall financial stability and performance, helping construction firms navigate through challenging market conditions effectively (Suranta et al., 2023). By managing funding liquidity risks effectively, construction firms can better position themselves for sustainable financial performance and growth in the industry. In Figure 1, the relationship between funding liquidity risk management and financial performance is depicted. Funding liquidity risk management is indicated by liquidity

buffer, liability concentrations, and cash flow gap limits, while financial performance was measured by net profit margin, return on assets, and return on capital employed.

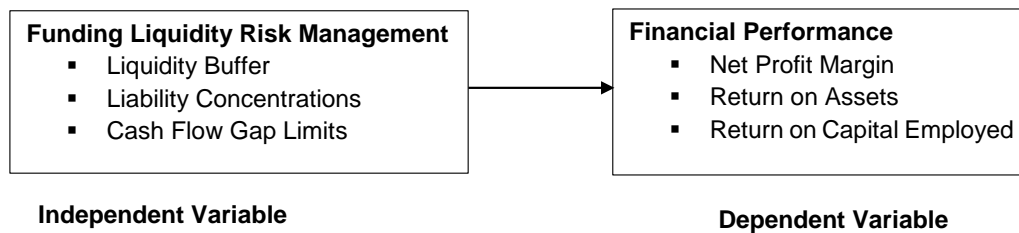


Figure 1: Conceptual Framework

Empirical studies related to funding liquidity risk management and financial performance have been reviewed. Akenga (2017) conducted a study on the effect of liquidity on the financial performance of construction firms listed in the Nairobi Securities Exchange. The findings established that the current ratio and cash reserves significantly affected Return on Assets (ROA). However, the debt ratio showed no significant effect on ROA for listed construction companies. Kirira, Owuor, Liku, and Mavole (2019) explored risk management's relationship with road construction project performance. They found a significant and positive association between various risk management strategies and the performance of KeNHA road construction projects in the Coast Region. Finally, Mweta and Kipronoh (2019) examined the effect of working capital management on the financial performance of construction and allied sector firms listed on the Nairobi Securities Exchange, uncovering a lack of understanding regarding the trade-off between liquidity and profitability among many construction companies, leading to suboptimal value optimization. Additionally, there was a noticeable failure in analyzing the risk-return tradeoff after implementing alternative working capital management policies in construction companies.

Research gaps were identified from the reviewed studies and the current study sought to fill them. The studies by Akenga (2017), Kirira et al. (2019), and Mweta and Kipronoh (2019) inadequately addressed funding liquidity risk management within construction firms. Specifically, they did not incorporate aspects such as liquidity buffer adequacy, concentration of liabilities, and cash flow gap limits, which are crucial for managing funding liquidity risks effectively. Furthermore, the sustainability of leverage levels about funding liquidity risk management was not explored. These gaps necessitated the current study on funding liquidity risk management and the financial performance of construction firms.

IV. Methodology

The current study adopted a descriptive research design. The target population for this study was all the construction firms in the Central Region. The unit of observation included the general manager, finance manager, accountant, administrator, and clerical officer from each construction firm. There are 43 registered construction firms operating in Central Region (Kiambu, Nyeri, Kirinyaga, Murang'a, and Nyandarua Counties) thus the unit of observation was the 215 respondents. Simple random sampling was employed. The Creswell (2013) sample determination formula was applied in the determination of sample. The population was 215 and the sample size was determined as follows;

$$n = \frac{[z^2pqN]}{[e^2(N-1) + z^2pq]}$$

n represents the Sample Size

N represents the entire population,

p represents the population reliability, where $p \leq 0.5$

$q = 1 - p$

$z = 1.96$ at a level of significance of 0.05

e represents the standard error of 10%.

Hence,

$$n = \frac{[(1.96)^2 \times 0.5^2 \times (215)]}{[0.12(215-1) + 1.96^2 \times 0.5^2]}$$

$$= \frac{[3.8416 \times 0.25 \times (215)]}{[0.01(214) + 3.8416 \times 0.25]}$$

$$= \frac{[206.486]}{[2.14 + .9604]}$$

$$= 206.486 \div 3.1004$$

$$= 66.599793575023 \approx 67 \text{ Respondents}$$

Data was collected using structured questionnaire. Descriptive and inferential analysis methods were employed in data analysis. In descriptive analysis, means, percentages and standard deviations were employed to describe the effect of funding liquidity risk management on financial performance. On the other hand, correlation coefficient (r), beta coefficient (β) and p-values was used to establish the relationship between funding liquidity risk management and financial performance. The following regression model was applied in analysis:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where:

Y= Financial Performance

β_0 = Constant

β_1 = Beta Coefficient

X_1 = Funding Liquidity Risk Management

ε = Error of Margin

V. Results

This section presents the descriptive and inferential findings of the study.

The researcher administered 67 questionnaires to the participants, and 48 were completed and returned, yielding a response rate of 71.6%, deemed adequate for the study.

Descriptive Findings and Discussions

The study sought to determine the influence of funding liquidity risk management on the financial performance of construction firms. Descriptive findings are presented in Tables 1 and 2.

Table 1: Effect of Funding Liquidity Risk Management on Financial Performance

	n	SA 5	A 4	I 3	D 2	SD 1	Mean	Std. Dev
1. Our firm maintains liquidity buffer to meet the cash flow needs.	48	54.2%	35.4%	8.3%	2.1%	0%	4.42	0.739
2. Liability concentrations increase exposures to liquidity risks.	48	45.8%	39.6%	8.3%	6.3%	0%	4.25	0.863
3. Our firm's leverage levels are sustainable.	48	16.7%	31.3%	41.7%	10.4%	0%	3.54	0.898
4. Our firm keeps adequate cash reserves to limit cash flow gaps.	48	25%	8.3%	37.5%	14.6%	14.6%	3.15	1.353
5. Construction firm's capital enable them to bear liquidity risks and absorb losses.	48	29.2%	50%	10.4%	10.4%	0%	3.98	0.911

According to the findings on Table 1, 54.2% of the respondents strongly agreed (mean=4.42; std. dev.= 0.739) that their respective construction firms maintains liquidity buffer to meet the cash flow needs. The mean responses of 4.42 and a relatively low standard deviation of 0.739 indicate an agreement among the respondents regarding the existence and importance of liquidity buffers. The prioritization of risk mitigation by maintaining liquidity buffers indicates the firm's preparedness to minimize cash flow challenges effectively and promote financial performance. 45.8% of the managers of the construction firms strongly agreed (mean=4.25; std.dev.=0.863) that liability concentrations increase exposures to liquidity risks. This implies that most respondents recognized that high levels of liability concentrations within their firms increase susceptibility to liquidity risks, emphasizing the importance of diversifying funding sources and risk management. As per the study findings, 31.3% of the respondents agreed while 41.7% had differing opinions (mean=3.54; std.dev.=0.898) that their construction firms' leverage levels are sustainable. Similarly, 37.5% of the respondents were indifferent (mean=3.15; std.dev.=1.353) that their firm keeps adequate cash reserves to limit cash flow gaps. Moreover, 79.2% of the respondents at least concurred (mean≈4.00; std.dev=0.911) that construction firm's capital enable them to bear liquidity risks and absorb losses. Therefore, the level of capital held by construction firms determines their ability to manage funding liquidity risks and affect the financial performance. The findings relate with the research conducted by Kirira, Owuor, Liku, and Mavole in 2019 regarding risk management's effect on road construction project performance. Their findings established that factors such as risk identification, implementer perception of risk assessment, control and monitoring of risks, and risk mitigation strategies significantly affect the overall performance of road construction projects. The findings of the current study showed that funding liquidity risk management affect the construction firms' financial performance.

Table 2: Financial Performance of Construction Firms

	n	SA 5	A 4	I 3	D 2	SD 1	Mean	Std. Dev
1. Our return on assets has increased for the past five years.	48	35.4%	39.6%	22.9%	2.1%	0%	4.08	0.821
2. Our firm has earned desired net profit margins for the past five years.	48	54.2%	35.4%	8.3%	2.1%	0%	4.42	0.731
3. Our returns on capital employed have been on continuous improvement.	48	22.9%	43.9%	27.1%	6.3%	0%	3.83	0.859
4. Effective management of liquidity risks enhance financial performance.	48	52.1%	29.2%	14.6%	4.2%	0%	4.29	0.874

Descriptive findings established that 75% of the respondents at least agreed (mean=4.08; std.dev.=0.821) that their return on assets has increased for the past five years. The respondents acknowledged a positive trend, with at least a degree of agreement, in the increase of their construction firms' return on assets over the past five years, suggesting an improved financial performance. The respondents also agreed (mean=4.42; std. dev.=0.731) that their construction firms has earned desired net profit margins for the past five years. 43.9% of the respondents agreed that the construction firms' returns on capital employed have been on continuous improvement. Moreover, the respondents agreed (mean=4.29; std. dev.=0.874) that effective management of liquidity risks enhance financial performance. Effective funding liquidity risk management affect financial performance as they ensure a construction firms' ability to meet its short-term obligations.

Inferential Findings and Discussions

Inferential analysis was done to determine the relationship between funding liquidity risk management and financial performance. It incorporate correlation analysis and regression analysis.

Correlation Analysis Results

Correlation analysis was conducted to establish the relationship between funding liquidity risk management and financial performance. Results are presented in Table 3:

Table 3: Correlation between Funding Liquidity Risk Management and Financial Performance		
		Financial Performance
Funding Liquidity Risk Management	Pearson Correlation	.663**
	Sig. (2-tailed)	.000
	N	48

** . Correlation is significant at the 0.01 level (2-tailed).

The correlation analysis results shows that the relationship between funding liquidity risk management and financial performance was positive and significant (r=0.663**; p=0.000) at a 1% significance level. The findings affirms that the indicators of the funding liquidity risk management comprising liquidity buffer, liability concentrations, sustainability of leverage levels, and cash flow gap limits affect the financial performance of construction firms. The positive correlation implies that enhancing liquidity risk management result into an improved financial performance for construction firms. The findings thus shows the critical role of effective funding liquidity management in sustaining and optimizing financial performance of the construction firms.

Regression Analysis Results

Regression analysis was done to predict the variation in financial performance of construction firms from changes in funding liquidity risk management. Results are presented in Tables 4, 5 and 6.

Table 4: Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.663 ^a	.439	.427	.32576

a. Predictors: (Constant), Funding Liquidity Risk Management

The model summary shows that the correlation coefficient was R= 0.663 and the coefficient of determination R²= 0.439. As such, funding liquidity risk management accounted for 43.9% of the financial performance. The results implies that the funding liquidity risk management influenced the financial performance of construction firms.

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.821	1	3.821	36.010	.000 ^b
	Residual	4.882	46	.106		
	Total	8.703	47			
a. Dependent Variable: Financial Performance						
b. Predictors: (Constant), Funding Liquidity Risk Management						

The results in Table 5 shows that the F-value =36.010 was significant (p=0.000) at 95% confidence level. This implies that the overall model was significant. Therefore, the funding liquidity risk management influenced the construction firms’ financial performance.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.900	.379		5.016	.000
Funding Liquidity Risk Management	.583	.097	.663	6.001	.000
a. Dependent Variable: Financial Performance					

The regression model, represented as $Y = \beta_0 + \beta_1 X_1 + \varepsilon$, was interpreted as follows: $Y = 1.900 + 0.583X_1 + \varepsilon$. Based on these regression coefficients, it can be inferred that a one-unit change in funding liquidity risk management led to a 0.583-unit change in financial performance. The t-value (t=6.001; p=0.000) was significant at 95% confidence level. This implies that there existed a significant relationship between funding liquidity risk management and the financial performance. As per the results, it was concluded that the construction firms’ financial performance is influenced significantly by the funding liquidity risk management.

VI. Conclusion

In conclusion, the study has shown that funding liquidity risk management affected financial performance of construction firms. Liquidity buffers play a crucial role in enabling construction firms to navigate financial challenges. These buffers act as a safety net, allowing firms to fulfill short-term obligations and endure unforeseen liquidity shocks. Additionally, robust liquidity buffers are associated with enhanced financial performance metrics such as net profit margin and return on assets. Furthermore, effective management of liability concentrations contributes to greater financial stability among construction firms. A balanced blend of funding sources improves cash flow predictability and reduces susceptibility to disruptions stemming from changes in lending conditions or the withdrawal of major creditors. The study underscores the importance of maintaining sustainable leverage levels, as firms with prudent debt-to-equity ratios and sustainable leverage are better equipped to manage funding liquidity risks, consequently affecting their financial performance. Moreover, managing cash flow gap limits is crucial for maintaining liquidity stability, enabling firms to anticipate and mitigate liquidity shortfalls effectively. Aligning cash flow gap limits with operational needs and risk tolerance further enhances financial performance, as indicated by the study.

VII. Recommendation

The researcher recommends that the construction firms should develop detailed and accurate cash flow forecasts that project cash inflows and outflows over different time horizons. This will help in identifying potential liquidity gaps, guide the planning and mitigation of the risks.