

DOES FREE CASH FLOW MATTER? IMPLICATIONS FOR FINANCIAL PERFORMANCE IN JORDANIAN FIRMS

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Abstract—this study analyses the influence of FCF on the financial performance of Jordanian Firms listed on the Amman Stock Exchange for a period of five years (2017–2022). Descriptive statistics, along with correlation analysis, were used to investigate relationships among FCF, ROA, ROE, and NPM, and multiple regression models were also used to test research hypotheses. Results show that an increase in FCF has a highly positive relationship with financial performance, and indeed better financial performance can be expected when the FCF is increased. The results indicate that FCF noticeably predicts ROA and ROE, and the effect on ROE is especially significant. The relationship with NPM is positive but weaker, which indicates that surplus cash can still drive margin increase. The work confirms that FCF is an important performance factor of EFAC, but it also indicates that strategic control over cash mobilization is essential. While some research indicates that oversized FCF can enhance value, like intense R&D investment, others caution that unrestricted FCF might be wasted which calls for the need of exerting cash management in optimizing long term value.

Keywords—Free Cash Flow; Financial Performance; ROA; ROE; NPM; Jordanian Firms

Introduction:

Free cash flow (FCF) Free cash flow is one of the critical elements in finance that determines a firm to be healthy and survive in a competitive business environment (Abusharbeh, 2020; Al-Najjar & Clark, 2017). In a concept, free cash flow (FCF) refers to the remaining available money after all operational costs and capital expenditures have been satisfied (Jensen, 1986; Barakat, 2022). This excess amount can be used to pay off the debt, issue dividends that will benefit the shareholders (owners), or be invested in projects that will add more value to the company, which is a very critical indicator of financial flexibility and managerial efficiency (Sloan, 1996; Hassan et al., 2021). Responsible handling of FCF allows firms to take strategic steps; thus, they do not have to resort back to expensive external financing (Yaari et al., 2016; Tien, 2023).

On the other hand, financial performance is considered a multi-dimensional indicator of firm success, including profitability, liquidity, growth, and long-term value creation (Ahmed

& Abdullah 2021; Al-Haddad & Omari 2021). This represents an organization's ability to provide sustainable returns, mitigate risks, and remain competitive in ever-changing markets (Kasasbeh, 2021; Elessa et al., 2023). The negative relationship between FCF and financial performance is justified following agency theory logic, where surplus cash should be used optimally to benefit shareholders, while its suboptimal allocation may affect firm performance (Jensen 1986; Brush et al. 2000). Indeed, empirical research reaffirms that a sensible practice of FCF can contribute to the growth of an organization, while incompetent management may result in under- or overperformance (Park & Jang, 2013; Kroes & Manikas, 2014).

And the biggest one in emerging economies, particularly here in Jordan, is optimizing free cash flow management while achieving strong financial performance. Firms often find it challenging to translate the benefit of liquidity into tangible operating achievements because of economic volatility, crude market conditions, and resource constraints (Khatib & Al Shawagfeh, 2020; Al Qaisi, 2020). Arguably, much about the relationship between FCF and performance has been investigated considering foreign environments (Lai et al., 2020; Pyoko & Muchiri, 2024), but specifically for Jordan, our knowledge remains insufficient (Taani, 2018; Al-Rawashdeh, 2022). Prior local research has strangely presented insight into the conformity of individual monetary pointers or focuses on examination for explicit areas while being mindfully mediocre in investigating a balanced survey across all market-related proof (Sweis & Bataineh, 2019; Al Mubaydeen et al., 2024).

The current research attempts to fill this gap by examining the effect of free cash flow on a firm's financial performance, as measured according to Jordanian business firms in Jordan. Analyzes the impact of cash surplus management on a company's financial performance under severe economic conditions by considering profitability-related key ratios, operational efficiency, and liquidity. The central research question of our inquiry is

How Much Free Cash Flow Contributes to the Financial Performance of the Jordanian Companies?

The rest of this paper is ordered as follows: The following section describes the theoretical framework and reviews literature, providing an elaboration on theoretical concepts and summarizing previous research. This is succeeded by the methods section, outlining the data sources, the sample selection, and the analysis techniques. The next aims to empirically combine the economic analysis with other variables using statistical analysis, and then in a discussion of results section, empirical findings are discussed critically to interpret their implications for both the Jordanian-specific and emerging market-wide scenarios. Section 7 concludes and recommends and summarizes main contributions, offering practical policy insights and managerial implications as well as research directions.

Theoretical Framework and Literature Review

Free cash flow (FCF) is a central concept in financial management literature, as it is the cash remaining from operations after a firm has paid for capital expenditures to maintain or expand its asset base. This excess is said to be a core representation of financial slack, which puts the company in a position of internal financing ability for the purpose of enlargement, debt redemption, or dividend payment and not having to resort to outside finances (Jensen, 1986). FCF in a nutshell is calculated as

$FCF = \text{Net Operating Cash Flow} - \text{Capital Expenditures}$

A random sample of 119 households from an Israeli kibbutz completed interviews about hypothetical bequests and predicted estate distributions. Zaheer et al. (2016) infused how abundant and sustained “FCF is available to generate” in a firm, among the extremely valuable yardsticks of measuring managerial efficiency, its liquidity, and its capability for long-run value creation. Basically, high FCF shows that the business is being run well and the money it earns from its operating activities can be put back into the business (i.e., not all profits are going to waste), while negative FCF indicates hidden inefficiencies and/or too much capital spent on low-yielding investments.

Financial performance is a more general construct connected to FCF, showing how well the firm is using its resources to produce profits and wealth for shareholders. Financial performance has been operationalized by scholars in terms of major pivotal ratios: Return on Assets ($ROA = \text{Net Income} \div \text{Total Assets}$) is used to evaluate the efficiency of resource deployment; Return on Equity ($ROE = \text{Net Income} \div \text{Equity}$), which focuses on shareholders' returns; and Net Profit Margin ($NPM = \text{Net Profit} \div \text{Revenue}$), aiming to reflect profitability regarding sales [Kasasbeh, 2021] [Al-Najjar & Clark, 2017]. These measures constitute a combined approach to operational efficiency, return on investment, and financial viability.

The association between free cash flow and financial performance has been widely studied in developed and developing countries; most results reveal a positive relationship. The appropriate level of FCF permits financing profitable projects as well as improving capital structures and maintaining the continuity of their operation without excessively increasing debt burden (Al-Najjar & Clark, 2017; Ahmed & Abdullah, 2021; Mohamad et al., 2020). In emerging markets like Jordan, Al-Najjar & Clark, 2017 and Sweis and Bataineh (2019) have found a positive significant relationship between FCF and ROA, meaning a higher amount of free cash flow will lead the firms to gain more operational efficiency. Similarly, Hassan et al. (2021) identified there was a significant positive association between FCF and ROE in Gulf Cooperation Council (GCC) firms, implying that free cash reserves can increase shareholder returns when prudently utilized.

While the Jensen (1986) agency theory provides a cautionary view. According to the theory, even if FCF investment in growth is beneficial, having too much of it can result in managerial opportunism—managers may invest in projects that simply increase their prestige or job security rather than those more likely to maximize shareholder wealth. The misallocation of capital could lead firms to overinvest in low-return ventures, which ultimately reduces firm value (Toumeh et al. 2020). These risks are especially prevalent in markets with limited corporate governance mechanisms, which may lack the oversight and accountability infrastructure to align managerial incentives with those of shareholders.

The truth is more complex, as Jordanian empirical evidence shows. For instance, some studies [Saleh and Mahadeen (2021), Al-Haddad and Omari (2021)] have shown a positive impact of FCF on profitability indicators such as ROA [7] and ROE [8], but also much weaker relationships were identified. In this regard, the study of Taani (2018) and Khatib & Al Shawagfeh (2020) reported positive but weak relationships between FCF and market-based performance measures, including Tobin's Q; these findings imply that the attitudes of investors and market valuation are not only determined by free cash flow.

The FCF–financial performance link is reflected in evidence from other regional markets, although the effects differ across regions. Another path is chosen for Yasin et al., Yan et al., and Van Kerschaver & Williams (2020), or through Ahmed & Abdullah (2021) in Saudi Arabia, Lai et al. Goslin (2020) in Malaysia and Tien (2023) in Vietnam also find that FCF can lead to better financial performance, especially for companies operating in a stable macroeconomic environment and save divestment strategy. A similar conclusion was reached in the Jordanian context, where Khalil & Daradkeh (2022) identified FCF as a leading indicator of financial distress, implying that before liquidity problems become widespread, a reduction in FCF may be sustained for a period. For instance, Abusharbeh (2020) accentuated that EVA predicts the future evaluation of investment projects as long-term operations, underlining its impact on capital budgeting.

In summary, the literature finds benefits and costs of free cash flow in corporate finance. When infused intelligently, it can increase profitability, boost shareholder value, and protect a company's competitive position. Similarly, when improperly used by firms or inappropriately implemented, it can facilitate agency costs to rise without any offsetting improvements promoting good governance and market integrity. There is a duality of FCF because it depends on the quality mechanism and proper governance frameworks, reporting practices, and strategic financial planning to make investments possible in value-added activities rather than into cash surpluses.

this theoretical framework therefore considers FCF not simply as an accounting output but as a strategic resource that influences financial performance directly, though contingent on managerial capacity and governance quality within the market context. Drawing on agency theory and empirical evidence from Jordan and similar economies, the review lays the groundwork for an investigation of how differences in FCF may influence profitability and shareholder value in our local market. By utilizing this method, we contribute to the literature by targeting existing incomplete research questions and using this as a foundation to form new hypotheses that encompass the rewards as well as risks of managing free cash flow.

Methodology:

The present study is a descriptive and analytic study that analyzes the impact of FCF on the financial performance of Jordanian companies listed on ASE during the period of 2017 and 2022. The descriptive part narrates financial developments while the analytic part tests statistical relations between the various components (Al-Najjar & Clark, 2017; Ahmed & Abdullah, 2021).

The sample consists of 30 listed companies from the industrial, commercial and service sectors guaranteeing a more representative sample of the Jordanian corporate and less sectoral influence (Saleh & Mahadeen, 2021; Sweis & Bataineh, 2019). The financial information was sourced from the annual reports, official reports of the ASE, Bloomberg terminal, and other dependable proxies (Al-Rawashdeh et al., 2022; Khalil & Daradkeh, 2022).

Definition of free cash flow FCF is the explanatory variable itself as Jensen (1986) and Sloan (1996) computed as net operating cash flow less capital expenditure. The dependent variables are three common financial performance proxies: Return on Assets (ROA), Return on Equity (ROE) and Net Profit Margin (NPM). ROA represents returns generated per dollar

of total assets; ROE measures return to shareholders; and NPM is the proportion of revenue, translated into net profit.

The analysis of the data was taken in three stages: (1) univariate analysis (measures of central tendency and dispersion); (2) Pearson correlation analysis, between FCF and financial performance indicators; and (3) multiple regression models to study how much variances in performance measures would be absorbed by FCF, after controlling for potential confounding factors. This methodology is consistent with other empirical studies on emerging markets (e.g., Lai et al., 2020; Tien, 2023) and is designed to contribute to the methodological rigor. Using strong data sources, representative sampling and well-recognized statistical methods, this method is a valid framework to investigate the impact of FCF on firm performance in the Jordanian capital market.

Statistical Analysis and Results:

The above table shows the evaluation of hypotheses established in the methodology on 30 Jordanian companies listed on the Amman Stock Exchange over the period from 2017 to 2022. In this study, we adopted the following statistical analysis via combining descriptive statistics, correlation analysis, and regression econometrics to model the performance measures: Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin into Free Cash Flow (FCF). These include profitability from asset efficiency, shareholder returns, and operational margins.

Descriptive Statistics:

Table 1 presents the descriptive statistics of variables in terms of central tendencies, dispersion, and distributional characteristics. FCF data is also reported as absolute values in million Jordanian Dinars (JD) and log-transformed in percentage for two reasons: first, to correct its skewness, and secondly, to make statistical interpretations more robust. The other half of the sample had 500 thousand to 1.5 million Jordanian dinars in FCFF yearly, where the average was around 1.50 million JOD, $P25 = 1.10$ million, $P50 = 1.30$ million, and $P75 = 1.90$ million JOD. The log-transformed mean for cash generation capacity is 0.176, or 35.2% deviation in percentage terms, suggesting considerable medium variability between firms.

The ROA averaged 8.20%, with a median of 7.90% and an interquartile range from 6.00% to 10.00%. Overall, this pattern demonstrates that most companies have a nice balance of utilizing assets to generate earnings, although there are few who outperform, generating ROA figures over 14%. The mean ROE was 12.50%, and the top quartile peaked at 15.50%, suggesting a reasonably strong level of shareholder returns from some companies. Still, a clamp of 4.70% per unit is wide, illustrating significant heterogeneity in capital efficiency and leverage strategies across the board. The average net profit margin was 7.00%, while the spread (2.40%) between firms created an even more consistent profile of operational profitability levels on a sample basis when compared to asset and equity returns as described earlier.

In sum, the descriptive findings present a large amount of heterogeneity in liquidity and profitability profiles among businesses that we canvassed. Businesses that are higher on the scale of FCF generation should get more from internal financing, and companies lower down must rely a bit more on external. The tighter net profit margins signal operating consistency; the larger gaps between ROA signal different utilization of assets, whereas the differences in ROE point to the extent of financial leverage employed. Given this fact, these patterns thus

provide a strong foundation onto which inferential testing may be applied to examine the degree to which changes in FCF affect performance outcomes.

Table 1. Descriptive Statistics of Study Variables (2017–2022)

Variable	Mean	P25	P50 (Median)	P75	Std. Dev.	Min	Max
FCF,	1.50	1.10	1.30	1.90	0.50	0.70	2.60
ROA	8.20	6.00	7.90	10.00	3.10	3.00	14.50
ROE	12.50	9.00	11.80	15.50	4.70	5.50	21.00
NPM	7.00	5.00	6.80	8.80	2.40	2.50	11.50

Note: FCF is expressed in millions of Jordanian Dinars (JOD). Log_{10} transformation is based on absolute FCF values, and percentage change reflects deviation from the mean in logarithmic terms.

Correlation Analysis:

The following correlation matrix summarizes the correlation between Free Cash Flow (FCF) and three financial performance indicators; Return on Assets (ROA), Return on Equity (ROE) and Net Profit Margin (NPM). Matrix at the bottom highlights that FCF is significantly positively correlated with both ROA ($r=0.68$) and ROE ($r=0.71$), meaning higher free cash flow is associated with better asset efficiency and shareholder returns. The association between FCF and Net Profit Margin is moderately positive ($r=0.55$) implying a relatively weak relationship in terms of operational profitability. The significance levels for all correlations are $p < 0.01$.

For possible multicollinearity between predictors, Variance Inflation Factor (VIF) values were also calculated. VIF scores are from 1.73 to 2.15, (much lower than the usual limit of 5) indicating that multicollinearity is not a major issue in the regression analyses.

Table 2. Horizontal Correlation Matrix and VIF Values

Variable	FCF	ROA	ROE	NPM	VIF
FCF	1				1.92
ROA	0.68	1			2.15
ROE	0.71	0.74	1		2.15
NPM	0.55	0.62	0.58	1	1.73

Note: Correlation coefficients reflect the strength and direction of linear relationships between variables. All correlations are statistically significant at $p < 0.01$. Variance Inflation Factor (VIF) values below 5 indicate acceptable levels of multicollinearity, suggesting that each predictor variable independently contributes to the analysis without redundancy.

Regression Analysis:

Regression models were used to quantify the impact of Free Cash Flow (FCF) on financial performance. In the second step, FCF served as an independent variable to predict key performance indicators including ROA, ROE and NPM. For added robustness the models additionally contained fixed effects related to year and industry, which adjusts for any omitted

variable bias time specific unobserved factors. This study permits to disentangle the net impact of FCF on business results a long-form thirty Jordanian firms throughout sixyears (2017 – 2022).

The model for this regression problem is as follows —

$$\text{Financial Performance}_{it} = \alpha + \beta_1 \text{FCF}_{it} + \gamma_t + \delta_i + \epsilon_{it}$$

where the subscripts i and t denote firms and years respectively; γ_t and δ_i represent the fixed effects controlling for year and industry variations; ϵ_{it} is the error term capturing unexplained variation.

The results indicate that FCF has significantly positive effect on all those measures of financial performance. In other words, a 1% increase in FCF leads to an approximate 4.5% increase in ROA, suggesting better asset turnover for the company. Equally, ROE also rises by 6%, which suggests that the shareholders are expected to have a bit freer float of cash from firms. Net Profit Margin also has a 3% uplift from higher FCF, but this is not as strong an effect as for ROA and ROE.

These relationships are further supported by the model fit statistics. This encapsulates a substantial level of unexplained variability in firm performance, as despite an upper boundary or R-squared value of 50% for the ROE model (lowest being 30% for Net Profit Margin), only half of all explanation can be provided by free cash flow. The presence of fixed effects demonstrates that there is some non-random firm-level variance (sigma_u, and just under 1 intra-class correlation coefficient (rho)), which validates the claim that industry and time need to be kept under control for. This is a solid sample size of 180 observations, which represent six years of data from 30 firms.

Succinctly, we can say that Free Cash Flow is an important predictor of financial performance in Jordanian firms. The consistent positive and statistically significant coefficients — in every single case! — confirm that good cash flow management is the lifeblood of a firm's profitability and market value, over and above all other economic, sectoral factors.

Table 3. Multiple Regression Results with Fixed Effects

Statistic	ROA	ROE	NPM
Coefficient (β)	0.045	0.060	0.030
t-Statistic	5.12	6.45	3.85
p-value	0.000	0.000	0.001
R-squared	0.46	0.50	0.30
Adjusted R-squared	0.43	0.47	0.27
Within R-squared	0.35	0.38	0.20
Between R-squared	0.48	0.52	0.32
Overall R-squared	0.44	0.49	0.28
Sigma_u (Firm Effect)	0.027	0.031	0.022
Sigma_e (Error Term)	0.018	0.021	0.015
Rho (Intra-class Corr.)	0.69	0.70	0.65
Observations	180	180	180

Note: The regression models include fixed effects for year and industry to account for temporal and sector-specific variations. The coefficients represent the estimated change in financial

performance metrics associated with a one-unit increase in Free Cash Flow. R-squared statistics indicate the proportion of variance explained by the models, while σ_u and σ_e measure the variance components for firm effects and residual error respectively. The intra-class correlation coefficient (Rho) reflects the share of total variance attributable to differences across firms. All p-values indicate statistical significance at conventional levels.

Discussion of Results:

The findings of this study support a strong and positive association between Free Cash Flow (FCF) and the financial performance of Jordanian listed companies, where financial performances is proxied with ROA, ROE, and Net Profit Margin (NPM). These results which suggest that del F is a determinant of financial performance is consistent with earlier work carried out in emerging economies as a whole and the region (Al-Najjar & Clark, 2017; Hassan, Omar, & Hassan, 2021; Al-Najjar & Clark, 2017).

The results indicate that the effect of FCF is positive on both ROA and ROE with highest influence on ROE ($\beta=0.050$; $R^2=0.39$). The higher the FCF, the higher the returns offered to the equity holders, as this cash is utilized to maximize shareholder value (Abusharbeh, 2020; Barakat, 2022). More precisely, FCF explains 6% of the variance of ROE for a one-unit increase, which shows that the cash-rich firm are more likely to growth or take strategic investment decisions.

The impact of FCF on ROA is likewise positive and significant ($\beta=0.045$, $R^2=0.46$) but slightly weaker. This may imply that ROA is a more comprehensive measure of asset use, including operating efficiency and asset control, besides cash flow (Khatib & Al Shawagfeh, 2020; Al-Rawashdeh, 2022). Our findings are consistent with theoretical intuitions that FCF finances capital expenditures, R&D and other investments that improve the returns on assets (Al-Fasfus, 2020; Odeh, 2021).

FCF is also positively related to NPM ($\beta=0.030$, $R^2=0.30$), but the relationship is weaker than the one for ROA and ROE. This is consistent with the fact that firms with high FCF can use more internal finance in the day-to-day expenditures and in the growth prospects, and rely less on the outside finance (Hawawini, 2023; Saleh & Mahadeen, 2018). But NPM is affected by both cost control and market conditions; thus, FCF does not act independently but has a moderating effect against efficiency (Sweis & Bataineh, 2019; Khalil & Daradkeh, 2022).

Each of the financial performance measures are significant to greater than or equal to 0.01 level, which suggests that managing the FCF is critical as a financial health measure for corporate (Al Mubaydeen et al.). Empirically, firms with high FCF are less vulnerable to business instability and will have less need of costly external finance (Kasasbeh, 2021; Dahmash et al., 2023).

By the same token, unfettered excesses of FCF can be a danger. According to the agency theory (Jensen, 1986), the excessive cash holding that is not properly monitored or supervised will enable the management to invest in inefficient investment opportunity (those that do not result in value creation). Hence, although FCF may lead to growth and profitability, balanced governance and strategic management are needed to enhance transparency and use resources more efficiently (Toumeh et al., 2020; Brush et al., 2000).

Conclusions and Recommendations:

Conclusions

This study provides empirical support for the paramount significance of the Free Cash Flow (FCF) in determining effects on financial performance of Jordanian firms. These results lend credence to the 158 The Journal of Risk Model Validation importance of FCF as a significant proxy of profitability measures such as ROA, ROE and Net Profit Margin. Companies that have more FCF capacity will generally have higher margins, a better balance sheet, and a more consistent growth profile.

This study also shows that free cash flow is not only a metric of strength, but a central driver of growth. A debt free balance sheet by no means implies lack of capital, in fact only when a company has good cash can it reduce its dependence on external debt, improve returns and create more shareholder wealth. She also finds that the study's evidence warns against abuse or waste of excess funds, in line with the corporate agency theory of the firm, because improper cash management can destroy value.

Strategic FCF management is important for both financial performance and concern. Appropriately acted upon, these insights turn the cash flow process from an accountancy chore into a strategic weapon for building sustainable corporate value.

Recommendations

Strengthening Free Cash Flow Management: Results indicate that cash flow management matters, and companies would be well advised to focus on maximizing free cash flow. Financial leaders must redirect surplus capital to strategic activities like capital investments, debt reduction, and shareholder distributions to support the highest return opportunities that drive firm value and profitability.

2) Implementing Rigorous Investment Oversight: While the FCF gives us the financial flexibility to invest, it should all be done cautiously. To ensure that capital is appropriately allocated, strong corporate governance practices with robust risk assessment mechanisms is indispensable. Evaluations of investment opportunities need to be conducted more regularly based on strategies and we should utilize free cash resources effectively.

Balancing Debt Financing: Although the free cash flow can mitigate external financing, it is necessary to keep a bit more wary of balancing their capital structure. At the same time, extreme debt can increase financial risk and negate a portion of FCF benefits on performance. Hence, firms must monitor leverage to ensure financial stability and profitability.

Implying Future Research Avenues: Future studies could investigate the influence of industry-specific factors in changing FCF-performance nexus, which would provide sector-specific perspectives. In addition, future studies seeking to explore the role of macroeconomic variables like inflation rates, currency conversion rate and regulatory reforms may provide further insights into how some external factors influence cash flow management practices Pilarski et al.

This research offers robust empirical support for the positive influence of Free Cash Flow (FCF) on the financial performance of Jordanian firms. The findings confirm that FCF significantly enhances key profitability indicators, including Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin. Firms with greater free cash flow capacity are better equipped to boost profitability and strengthen overall financial health, thereby securing sustainable growth over time.

Moreover, the study underscores that FCF serves not only as a liquidity indicator but also as a vital catalyst for business expansion. Companies with abundant free cash reserves can finance growth initiatives internally, reducing dependency on external debt and its associated costs. This capacity translates into improved profitability metrics and increased shareholder wealth. Nonetheless, the results caution that effective management of FCF is crucial to prevent inefficient use or misallocation of excess funds, which can otherwise undermine value creation concern well-articulated in agency theory frameworks.

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