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The Impact of Liquidity and Leverage on Firm Value of Public Listed Firms in Jordan

Mohammad Abed Al Qader Alshakhanbeh[1], *Anwar Allah Pitchay[1], Md Aslam Mia[1], Rami Mohammad Bassam Abdel Ra'uof Nairoukh[1], Mohamad Isa Abd Jalil[2]
[1]School of Management, Universiti Sains Malaysia, Malaysia
[2]Faculty of Business, Economics and Accountancy, Universiti Malaysia Sabah, Malaysia
mohammad9261m@hotmail.com, *anwarap@usm.my, aslammia@usm.my, rami.bsam@yahoo.com, isa@ums.edu.my
Corresponding Author: Anwar Allah Pitchay

Abstract: This study investigates the impact of liquidity and leverage on the firm value of publicly listed service firms in Jordan, providing insights into financial management practices in emerging markets. Using secondary data from 38 service firms listed on the Amman Stock Exchange between 2011 and 2021, the study measures firm value through Tobin's Q, liquidity via the cash ratio (CHR) and quick ratio (QR), and leverage through short-term debt (SD) and long-term debt (LD). Employing Partial Least Squares Structural Equation Modeling (PLS-SEM), the findings reveal that the quick ratio positively influences Tobin's Q, suggesting that higher liquidity, excluding inventory, enhances market valuation, aligning with Pecking Order and Agency Cost Theories. However, the cash ratio negatively affects firm value, indicating inefficiencies from excessive cash reserves. Both short-term and long-term debt positively impact Tobin's Q, supporting the Trade-Off Theory by highlighting the strategic benefits of leverage. While the study is limited to the Jordanian service sector and data from 2011 to 2021, its findings offer valuable empirical evidence on the distinct effects of liquidity and leverage in emerging markets. These insights are relevant for managers, boards, policymakers, and government agencies aiming to enhance economic prosperity and firm performance.

Keywords: *Liquidity, Leverage, Firm Value, Public Listed Firms*

1. Introduction and Background

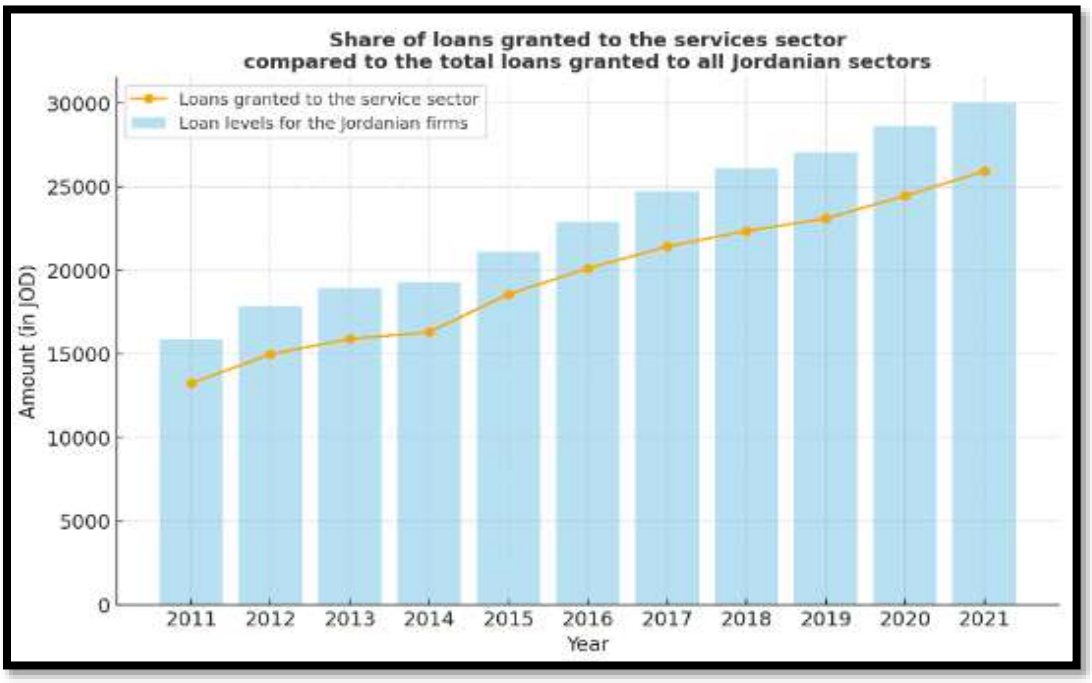
Understanding firm value is critical for assessing companies' success, particularly in the service sector within fast-paced and competitive markets like Jordan. The evolving economic landscape demands an in-depth understanding of the key factors driving financial performance. This study investigates the intricacies between liquidity, leverage, and firm value, with a focus on the unique challenges encountered by firms in emerging markets like Jordan. As fundamental aspects of corporate finance, liquidity and leverage significantly influence a firm's ability to sustain and enhance its value. Liquidity reflects a firm's capacity to meet its short-term obligations using readily available assets, ensuring smooth operational continuity and reducing the risk of financial strain (Dahiyat et al., 2021). In contrast, leverage refers to the strategic use of borrowed capital to fund operations and investments, with the potential to magnify both gains and risks (Hasan et al., 2014). However, excessive leverage can heighten financial vulnerabilities, increasing the likelihood of distress or insolvency if not effectively managed (Samo & Murad, 2019).

In recent years, the importance of studying the impact of liquidity and leverage on firm value has grown, especially in emerging markets like Jordan. The Jordanian service sector, a vital component of the national economy, has faced numerous financial challenges, including fluctuating liquidity levels and high leverage ratios (Al-Ali & Abu-Rumman, 2019). These challenges are compounded by economic instability and high interest rates, which further complicate financial management for service firms (Central Bank of Jordan, 2022). Despite extensive research on the relationship between liquidity, leverage, and firm value, there are mixed results and significant gaps in the literature. Some studies indicate a positive relationship between liquidity and the performance of companies, this suggests that firms with higher liquidity are better equipped to seize investment opportunities and fulfill short-term obligations efficiently, ensuring operational continuity and financial stability (Sahni & Kulkarni, 2018; Dahiyat et al., 2021). Conversely, other studies suggest that excessive liquidity may lead to inefficiencies and lower returns (Adusei, 2022). Similarly, the impact of leverage on the performance of companies is debated, with some research highlighting its positive effects on firm value through tax shields, while others point to the increased financial risk and potential for financial distress (Jihadi et al., 2021; Emmanuel, 2022). The problem of managing liquidity and leverage is particularly acute in developing countries like Jordan, where firms often face limited access to external financing and high

borrowing costs (Abbas et al., 2021). This scarcity of funds pressures managers to design optimal financial structures that balance debt and equity while maintaining sufficient liquidity to meet operational needs (Al-Najjar & Kilincarslan, 2019).

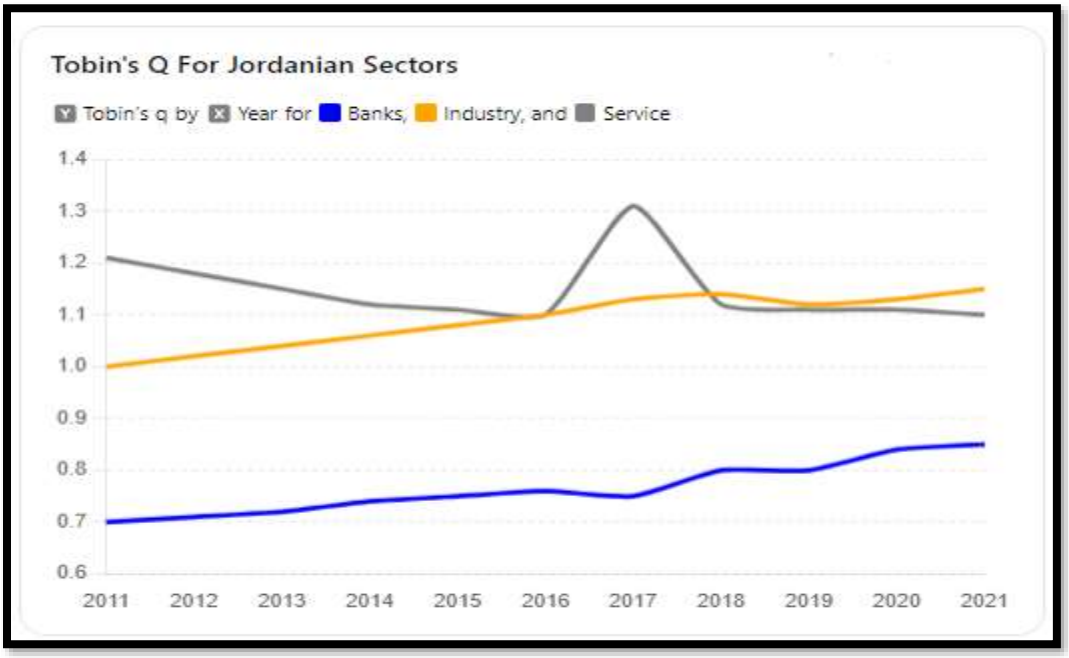
According to the Central Bank of Jordan (2021, 2017, and 2014), the Jordanian service sector is one of the Jordanian sectors that receives the most loans compared to other Jordanian sectors. Figure 1.1, shows that the Jordanian service sector ranks first in borrowing, which indicates that it is more exposed than others to risks that may affect its performance. According to the Jordanian Securities Depository Center (2022), the Jordanian services sector has recently faced challenges such as bankruptcy, mergers, and transformation. Additionally, Many Jordanian studies showed important issues that the Jordanian sectors suffer from, such as (Dahiyat et al., 2021; Momani & Obeidat, 2017) indicated that Jordanian companies suffer from clear fluctuations in their performance, in addition to the presence of a large number of companies that have resorted to closing or merging with other companies due to their inability to achieve a good performance that would help them to continue.

Figure 1: Share of loans granted to the services sector compared to the total loans granted to all Jordanian sectors



Despite facing high debt levels and limited liquidity, the Jordanian service sector continues to struggle in terms of firm value, as reflected by Tobin's Q. Figure 1.2 illustrates that the service sector has not experienced significant growth in firm value over the past 11 years, in contrast to other Jordanian sectors that have shown notable progress. Tobin's Q, which represents firm value in the market, is a key metric for investors. As Ali et al. (2016) noted, investors favor companies with growing Tobin's Q values and become cautious toward those with declining values over time. The service sector's lack of sustained development is further exacerbated by inconsistent government support. For example, the Jordanian Ministry of Investment (2018) reported a recovery in 2017, driven by measures that boosted sectors like tourism, resulting in a 12.3% increase in tourism income, totaling 2.7 billion. However, this momentum diminished as promotional efforts waned and financing interest rates rose, leading to a decline in service sector activities.

Figure 2: Firm value of Jordanian sectors ASE (2022)



These complexities underscore the need for a comprehensive study that examines the interplay between liquidity, leverage, and firm value, particularly in the context of the Jordanian service sector. This research aims to fill this gap and address issues by providing valuable insights for managers, investors, and policymakers aiming to enhance firm performance and ensure financial stability.

The Jordanian services sector plays a pivotal role in the national economy, accounting for a significant portion of GDP and employment. However, recent challenges such as bankruptcies, mergers, and transformations have tested its resilience and adaptability (Jordanian Securities Depository Center, 2022). These challenges highlight the pressing need to examine how financial strategies, particularly those related to liquidity and leverage, influence firm value in this sector. This study addresses a critical gap by examining these dynamics within the specific context of Jordan, offering insights that go beyond general economic frameworks. Unlike prior studies that often emphasize general financial dynamics, this research zeroes in on the service sector's unique challenges and characteristics within Jordan. It integrates key financial constructs and contextualizes them through theoretical lenses such as the Pecking Order Theory and Agency Cost Theory. The study's findings contribute to understanding financial decision-making in emerging economies and offer actionable recommendations for policymakers and business leaders.

2. Literature Review

Pecking order theory

The pecking order theory introduced by (Myers and Majluf in 1984), has significant implications for a firm's capital structure and investment decisions. Firms with high profitability and substantial internal funds tend to have lower levels of debt and are less likely to issue new equity. This preference impacts their financial flexibility, allowing them to respond swiftly to investment opportunities and economic changes. However, the theory is not without its criticisms. Some argue that it oversimplifies the complex decision-making process of financing and does not fully account for strategic or operational factors that may influence a firm's choices. Despite these critiques, the pecking order theory continues to serve as a valuable tool for understanding corporate financing behavior and the trade-offs firms navigate in their financial decision-making processes (Almajali et al., 2012; Robinson et al., 2015).

In the context of liquidity and leverage, the pecking order theory implies that firms with ample internal liquidity

will rely less on external debt and equity. Firms with higher liquidity can fund investments internally, reducing the need to issue debt. Conversely, firms with lower liquidity are more likely to incur debt to finance their operations, aligning with the theory's prediction that debt is preferred over equity when external funds are necessary (Myers, 2001). Leverage becomes a tool for financing when internal liquidity is insufficient, but firms still seek to minimize equity issuance due to its higher costs and potential adverse market signals. This theory underscores the strategic use of liquidity and leverage to minimize costs and maintain financial stability (Fama & French, 2005).

The Agency Cost Theory

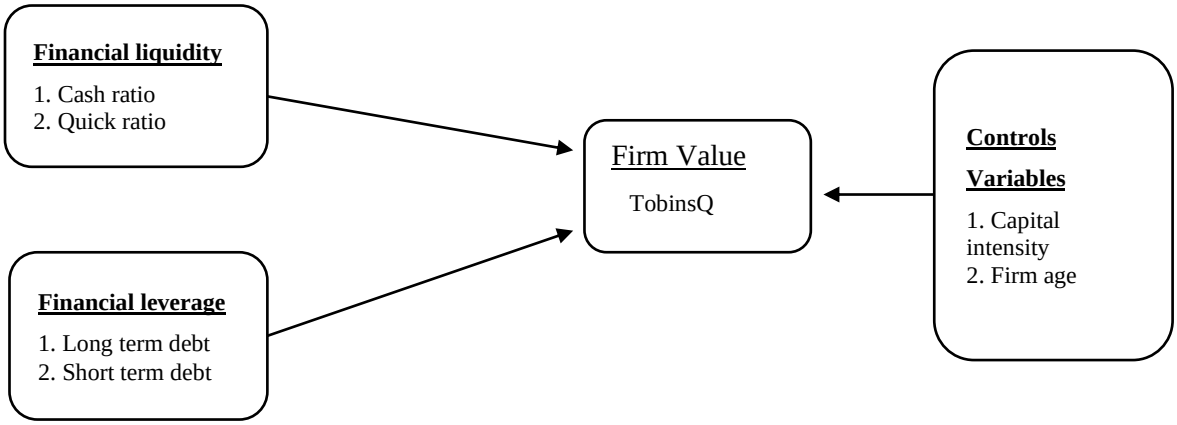
The agency cost theory, proposed by Jensen and Meckling (1976), explores the conflicts of interest that occur between managers (agents) and shareholders (principals) as a result of divergent objectives. These conflicts, referred to as agency costs, stem from managers potentially prioritizing personal goals over maximizing shareholder value. Agency costs can take various forms, including monitoring expenses incurred by shareholders to oversee managerial activities, bonding costs undertaken by managers to reassure shareholders of their commitment, and residual losses resulting from misaligned interests (Jensen & Meckling, 1976). When firms have substantial free cash flow, there is a risk of inefficient spending or overinvestment by managers, as they may allocate resources to projects that do not enhance shareholder value. Debt financing can help address this issue by reducing available free cash flow, thereby aligning managerial incentives with shareholder interests. However, excessive debt can lead to underinvestment, where managers might avoid profitable projects due to the burden of debt repayments. Striking an optimal balance between liquidity and leverage is essential to mitigate agency costs effectively (Jensen, 1986). Stulz (1990) also highlights that debt financing can discipline management by enforcing mandatory interest payments, which limit the opportunity for wasteful expenditures. While this can positively curb overinvestment, high levels of debt may negatively affect shareholders by creating significant interest obligations, potentially leading to underinvestment.

In summary, the Pecking Order Theory and Agency Cost Theory offer a comprehensive framework for analyzing the relationship between liquidity, leverage, and firm performance. The Pecking Order Theory posits that firms prioritize internal funds for financing, resorting to debt only when necessary and avoiding equity issuance due to higher costs and negative market signals (Myers & Majluf, 1984). This aligns with the study's focus on how liquidity, measured through the cash ratio and quick ratio, influences firm value (Tobin's Q). Similarly, the Agency Cost Theory highlights conflicts between shareholders and managers, suggesting that high liquidity can reduce these conflicts by enabling firms to meet short-term obligations efficiently. Conversely, excessive leverage may exacerbate conflicts, resulting in inefficiencies and financial distress (Jensen & Meckling, 1976). This theoretical foundation supports the study's exploration of the impact of short-term and long-term debt on firm value.

Research Framework

The pecking order theory and the agency cost theory collectively explain the relationships in the framework by illustrating how firms manage liquidity and leverage to optimize firm value. According to the pecking order theory, firms with high internal liquidity will prefer using these internal funds to finance their operations and investments before turning to external debt or equity (Myers & Majluf, 1984). This approach minimizes costs associated with asymmetric information and avoids the negative signals that can arise from issuing new equity (Myers, 2001). On the other hand, the agency cost theory suggests that high liquidity allows firms to meet short-term obligations efficiently, reducing the need for costly external financing and minimizing agency conflicts (Jensen & Meckling, 1976). Proper liquidity management ensures that managers have sufficient resources to invest in value-maximizing projects. Conversely, excessive leverage can lead to significant interest repayments, increasing the risk of underinvestment as managers might avoid valuable projects due to debt burdens (Stulz, 1990). This misalignment can harm firm value (Harris & Raviv, 1991).

Figure 3: Research Framework



Relationship between Variables

The Relationship Liquidity and Firm Value

Effective liquidity management is pivotal in shaping the relationship between liquidity and firm value, particularly during periods of financial instability. The cash transfer cycle highlights this connection, emphasizing the critical role of liquidity in maintaining operational continuity and stability during crises. Studies by Shaheen (2012) and Lartey et al. (2013) underline the importance of managing liquidity efficiently to withstand external shocks and sustain a firm's financial well-being. Similarly, Zaitoun & Alqudah (2020) stress that strong liquidity practices are fundamental for long-term firm stability and performance.

Empirical evidence further supports these assertions. Farhan et al. (2019) demonstrated that liquidity ratios, such as the current and quick ratios, positively impact firm value in Indian pharmaceutical companies. Kendirli et al. (2018) confirmed the critical role of the quick ratio in the Turkish banking sector, showing its consistent positive relationship with profitability and firm value across various periods, including during the global financial crisis. Likewise, Confidence and Igoniderigha (2023) found that liquidity significantly enhances firm value in Nigerian manufacturing firms. Their findings align with the Pecking Order Theory (Myers, 1984), which posits that firms prefer internal liquidity over external financing options, highlighting its importance in firm capitalization and performance. These studies collectively affirm the fundamental role of liquidity in enhancing firm value and navigating financial challenges.

Hence, and according to the theories related to the study and previous researchers, the current study indicates there is a positive impact of the liquidity on firm value of Jordanian service firms. This leads to the following hypothesis:

H1: There is a positive effect of Liquidity on the firm value of the Jordanian service firms.

Accordingly, the first hypotheses can be formulated into the following sub-hypotheses:

H1a: There is a positive effect of the cash ratio on Tobin's Q of Jordanian service firms.

H1b: There is a positive effect of the quick ratio on Tobin's Q of Jordanian service firms.

The Relationship Leverage and Firm Value

Sadeghian et al. (2012) emphasized the importance of adopting appropriate financial policies to drive company growth, highlighting the significant influence of debt policy on firm value. Their study analyzed the relationship between debt types (short-term, long-term, and total debt) and firm performance indicators, including Gross Margin Profit, ROA, and Tobin's Q Ratio, using size and growth rate as control variables. The findings revealed that higher debt levels negatively affected corporate performance, particularly for firms heavily reliant on debt to finance assets without considering other factors. Similarly, Majumdar and Chhibber (1999) investigated Indian firms and reported a strong negative relationship between debt levels and firm performance, further reinforcing the risks associated with excessive debt reliance.

Gleason et al. (2000) showed the relationship between capital structure, and performance in European retail

firms, using both financial and operational metrics. Their findings indicated a negative relationship between capital structure and performance, suggesting that agency problems might lead firms to adopt debt levels higher than optimal, ultimately reducing performance. Similarly, Appiah et al. (2020) examined financial leverage and firm performance in Ghana, focusing on various forms of debt. Their study revealed that total debt to total assets negatively impacted both accounting and market performance, with short-term debt showing a negative effect on return on assets and Tobin's Q but not on return on equity. Abor (2007) extended the discussion to SMEs in Ghana and South Africa, highlighting that long-term and total debt ratios negatively affected SME performance, further supporting the view that excessive debt levels, potentially driven by agency conflicts, reduce firm performance. These studies collectively underline the need for balanced debt policies to optimize performance.

Hence, and according to the theories related to the study and previous researchers, the current study indicates there is a negative impact of the leverage on the firm value of Jordanian service firms. This leads to the following hypothesis:
H2: There is a negative effect of Leverage on the firm value of the Jordanian service firms.
Accordingly, the second hypothesis can be formulated into the following sub-hypotheses:
H2a: There is a negative effect of short-term debt on Tobin's Q of Jordanian service firms.
H2b: There is a negative effect of long-term debt on Tobin's Q of Jordanian service firms.

3. Research Method

Data Selection and Collection

Secondary data for the sample of this study, which is the Jordanian service sector, was collected through two sources, first is the Amman Stock Exchange and the second is the annual reports of companies. The companies that meet the conditions of the study were selected, which is the study period and the availability of financial data. This study focuses on the period from 2011 to 2021 due to the availability of comprehensive and reliable financial data for Jordanian service firms during this time. This period captures significant economic fluctuations and financial challenges, including the global financial crisis's aftermath and the COVID-19 pandemic's onset. While extending the dataset to 2023 could provide additional insights, data consistency, and completeness were prioritized to ensure robust analysis and comparability across firms.

Population and Sample

This study includes all 38 companies in the Jordanian service sector listed on the Amman Stock Exchange between 2011 and 2021. This sector accounts for 22% of Jordan's GDP (Jordanian Ministry of Investment, 2022). It is also one of the largest employers in Jordan, with 42.5% of the workforce (Amman Chamber of Commerce, 2019).

Measurement and Operational Definition of Variables

Independent Variables

Liquidity: refers to a firm's capacity to secure funds at a reasonable cost to fulfill obligations as they arise. It encompasses the ability to handle deposit withdrawals, meet loan demands, and convert certain assets into cash within a short timeframe without incurring losses (Rizki et al., 2018). This study utilizes two proxies to measure liquidity:
Cash Ratio: evaluates a company's ability to meet its short-term obligations using only cash and cash equivalents, without relying on the sale or liquidation of other assets. This metric is particularly valuable for assessing a firm's immediate financial solvency (Durrah et al., 2016; Habib et al., 2021).

- Formula: CHR = Cash / Current Liabilities

Quick Ratio: assesses a company's capacity to satisfy short-term obligations using its most liquid assets (excluding inventory). This provides a more rigorous assessment of liquidity than the current ratio (Marsha & Murtaq, 2017; Farhan et al, 2019).

- Formula: QR = (Cash + Accounts Receivable) / Current Liabilities

Leverage: is called any borrowing or use of financial instruments that magnify the impact of profits or losses on the investor (Ibrahim & Isiaka, 2020). This study used two proxies to measure leverage:

Short-Term Debt: encompasses obligations that must be repaid within a fiscal year or the operating cycle, whichever is longer. It is typically used to address immediate financial needs and plays a crucial role in a company's financial planning (Prempeh & Niah Asare, 2016; Appiah et al., 2020).

- Formula: SD = Short Term Debt / Total Assets

Long-term debt: refers to financial obligations that are due for repayment over a period exceeding one fiscal year. It is typically utilized for large-scale investments and projects, with the expectation that these investments will generate sufficient returns to cover the associated debt costs (Prempeh & Niah Asare, 2016; Appiah et al., 2020).

- Formula: LD = Long Term Debt / Total Assets

Dependent Variable

Firm value: offers a comprehensive assessment of a company's worth, going beyond market capitalization by factoring in debt obligations and cash reserves. This approach provides a clearer and more accurate picture of a company's financial standing (Damodaran, 2012). This study used one indicator to measure Firm value:

Tobin's Q: is a measure of a company's growth potential and market value relative to its book value. It helps predict profitability and performance. A Tobin's Q value less than one indicates the market value is below the company's book assets, suggesting undervaluation. Conversely, a value greater than one indicates the market value exceeds the book assets, suggesting better investment opportunities and good management performance (Malahim et al., 2022; Saidat et al., 2022).

- Tobin's Q= (Market Capatalization+Total Debt)/ Total Assets

Control Variables

This study used three indicators to measure control variables:

Capital Intensity: The extent to which a company invests in fixed assets about its total assets. Higher capital intensity can affect a company's operational and firm value (Widyastuti et al., 2022; Oeta et al., 2019).

- Formula: CI = Total of Fixed Assets / Total Assets

Firm Age: refers to the number of years since a company was started. Older firms may benefit from their expertise, but they may also face competition from newer, more flexible firms (Rahman, 2022; Akben-Selcuk, 2016; Coad et al., 2013).

- Formula: AGE = The Year of the Research – The Year the Firm Started

4. Results

Descriptive Statistics

Table 1, illustrates the descriptive statistics including maximum, minimum, mean, and standard deviation of the sample of Jordanian service companies for the past 11 years (2011-2021). The data were collected from the Amman Stock Exchange and Annual reports of companies.

Table 1: Descriptive Statistics

Variable	N	Mean	Min	Max	Std. Deviation
TQ	418	1.070	0.222	2.328	0.386
CHR	418	0.277	0.001	1.328	0.335
QR	418	0.779	0.011	2.635	0.568
SD	418	0.249	0.018	0.803	0.169
LD	418	0.054	0.000	0.280	0.073
CI	418	0.445	0.000	0.989	0.319
AGE	418	21.40	2.00	83.00	16.19

The cash ratio (CHR) measures a firm's ability to settle short-term liabilities using cash and cash equivalents, with an average of 27.7% of liabilities covered by cash reserves. While some firms have minimal reserves (close to zero), others have sufficient cash to cover obligations entirely, as indicated by the maximum value. The significant variability among firms is reflected in the standard deviation.

The quick ratio (QR), excluding inventory from liquid assets, shows an average of 77.9% of liabilities covered by liquid assets, highlighting firms' varying liquidity levels. Its wide range and standard deviation emphasize the notable differences in liquidity management strategies.
Short-term debt (SD) accounts for 24.9% of assets on average, indicating reliance on short-term financing. Moderate variability in its use is evident, reflecting firms' different approaches to managing short-term obligations.
Long-term debt (LD) represents a smaller portion of assets, averaging 5.4%, with minimal variability, suggesting limited reliance on long-term debt as a financing source for most firms.
Capital intensity (CI), which measures investment in fixed assets, averages 44.5%, indicating substantial asset commitment. The wide range and variability reflect differences in firms' operational structures and investment strategies.
The age of firms (AGE) averages just over 21 years, with significant variation, from relatively new firms to those operating for decades, demonstrating the diversity in firm maturity within the sample.
Overall, these statistics highlight the diversity among firms regarding liquidity, leverage, asset composition, and operational longevity, providing valuable insights into their financial strategies and characteristics.

Variance Inflation Factor (VIF)

Table 2: VIF

Variable	VIF
CHR	1.979
QR	1.709
SD	1.351
LD	1.163
CI	1.180
AGE	1.152

Table 2, shows that the VIF values for Cash Ratio (CHR), Quick Ratio (QR), Short-term Debt (SD), Long-term Debt (LD), Capital Intensity (CI), and Age of the Firm (AGE) are 1.979, 1.709, 1.351, 1.163, 1.180, and 1.152, respectively. All these values are well below the threshold of 10 (Hair et al., 2010). This suggests that each variable is relatively independent and does not exhibit a strong linear relationship with the others, ensuring that the regression coefficients are reliable and the statistical inferences made from the model are valid.

Explanatory power

R-Square
The R-Square (R^2) test evaluates the extent to which independent variables explain the variance in a dependent variable, with values ranging between 0 and 1. An R^2 value closer to 1 indicates a stronger explanatory power. According to Rigdon (2012), this measure represents the proportion of variation in the dependent variable attributable to the predictors. Cohen (1988) provides guidelines for interpreting R^2 values: 0.26 indicates a substantial effect, 0.13 reflects a moderate effect, and 0.02 suggests a weak effect for endogenous latent variables. These benchmarks assist in assessing the strength of the explanatory model.

Table 3: R-Square

	R-square	R-square adjusted
TQ	0.085	0.071

The R-square value for Tobin's Q (TQ) is 0.085, indicating that 8.5% of the variance in TQ is explained by the independent variables in the model. The adjusted R-square is slightly lower, at 0.071, accounting for the number of predictors, suggesting that 7.1% of the variance is explained. These relatively low values imply that the independent variables in the model account for only a small portion of the variability in firm value, suggesting that additional factors not included in the model may also play a significant role. As noted by Rigdon (2012), an R-square value between 0 and 1 is expected, and these results fall within this range.

Q-Square

In PLS-SEM, Q-Square is used to assess a model's predictive relevance. It indicates how well the model's parameter estimates reconstruct the observed values. A positive Q-Square value indicates predictive relevance for a specific endogenous construct. Q-Square values above zero indicate the model has adequate predictive power (Hair et al, 2013).

Table 4: Q-Square

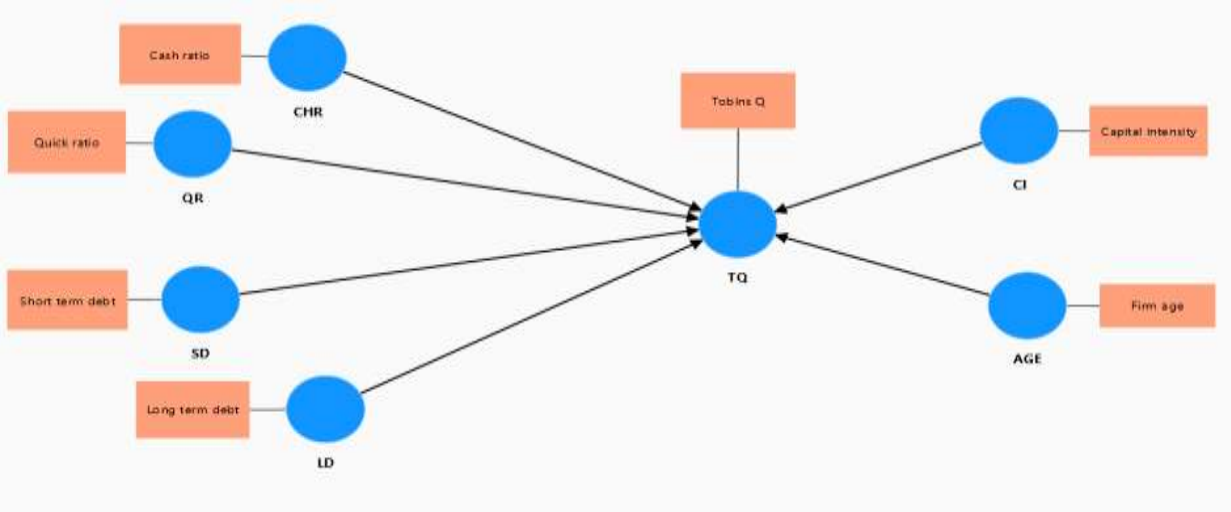
	Q^2predict	RMSE	MAE
TQ	0.056	0.977	0.798

The Q-Square predict value for Tobin's Q (TQ) is 0.056, indicating modest predictive relevance. The RMSE is 0.977, showing that the model's predictions deviate from actual values by about 0.977 units on average, indicating moderate accuracy. The MAE is 0.798, suggesting that the average absolute prediction error is 0.798 units, reflecting reasonable accuracy in the model's predictions.

Hypothesis Test

Path analysis tests model hypotheses. PLS uses a nonparametric bootstrap procedure to validate estimated path coefficients, as it assumes a non-normal distribution of data. Common critical values for one-tailed tests include 1.28 with a 90% significance level, 1.645 with a 95% significance level, and 2.33 with a 99% significance level (Hair et al., 2017).

Figure 4: The structure model study PLS-SMART



Path Coefficient Analysis

Table 5: Path Coefficient

Hypothesis		Path	Original Sample	T Statistics	P Values	Result
H1	H1a	CHR -> TQ	-0.096	1.282	0.100	Not Support
	H1b	QR -> TQ	0.289	4.279	0.000	Support
H2	H2a	SD -> TQ	0.140	2.783	0.003	Not Support
	H2b	LD -> TQ	0.065	1.376	0.084	Not Support
Controls Variables		CI -> TQ	0.104	2.085	0.019	Effect
		AGE -> TQ	0.080	1.508	0.066	Effect

The analysis using Partial Least Squares Structural Equation Modeling (PLS-SEM) reveals the relationships between liquidity, leverage, and firm value measured by Tobin's Q (TQ). The path coefficient for the relationship between the cash ratio (CHR) and TQ is -0.096, with a t-statistic of 1.282 and a p-value of 0.100, indicating H1 is not supported by H1a. Conversely, the quick ratio (QR) positively influences TQ, with a path coefficient of 0.289, a t-statistic of 4.279, and a p-value of 0.000, indicating H1 supported by H1b. The relationship between short-term debt (SD) and TQ shows a path coefficient of 0.140, a t-statistic of 2.783, and a p-value of 0.003, indicating H2 is not supported by H2a. Long-term debt (LD) and TQ have a path coefficient of 0.065, a t-statistic of 1.376, and a p-value of 0.084, also indicating that H2 is not supported by H2b. Among the control variables, capital intensity (CI) has a positive effect on TQ, with a path coefficient of 0.104, a t-statistic of 2.085, and a p-value of 0.019. The age of the firm (AGE) has a marginal effect, with a path coefficient of 0.080, a t-statistic of 1.508, and a p-value of 0.066.

Discussion

Liquidity and Firm Value

The connection between liquidity and firm value, as measured by Tobin's Q, provides valuable insights for managing finances in Jordanian service firms. The quick ratio (QR) demonstrated a significant positive influence on Tobin's Q, indicating that firms with higher levels of liquidity, excluding inventory, are better positioned to meet short-term liabilities, thereby boosting their market value. This outcome is consistent with the principles of the Pecking Order Theory and agency cost theory, which suggest that firms prioritize internal liquidity over external funding due to its lower costs and minimal adverse signaling (Myers & Majluf, 1984). Supporting evidence for this relationship can also be found in the studies by Durrah et al. (2016), Kendirli et al. (2018), and Confidence & Igoniderigha (2023). Conversely, the cash ratio (CHR) exhibited a negative impact on Tobin's Q, implying that excessive cash reserves, if not effectively utilized, can result in inefficiencies and a decline in market valuation. This finding aligns with research by Habib et al. (2021), Kalcheva & Lins (2007), Isshaq et al. (2009), and Lee & Lee (2009). These results underscore the critical role of effective liquidity management, particularly in maintaining a balanced level of liquid assets, to ensure smooth operations and capitalize on potential investment opportunities, as highlighted by Zaitoun and Alqudah (2020).

Leverage and Firm Value

The study highlights the positive impact of leverage on firm value, as measured by Tobin's Q. Both short-term debt (SD) and long-term debt (LD) contribute positively to firm value. Specifically, short-term debt showed a significant positive relationship with Tobin's Q, aligning with the Trade-off Theory, which emphasizes balancing the tax benefits of debt against potential financial distress costs (Kraus & Litzenberger, 1973). This finding is supported by previous studies (Salim & Yadav, 2012; Saeedi & Mahmoodi, 2011; Hussein, 2020; Mohammadzadeh et al., 2012), which demonstrate that increased debt can enhance corporate performance by lowering capital costs and providing tax advantages. The positive relationship suggests that Jordanian service firms can strategically use debt to enhance market valuation, reinforcing the importance of prudent debt management for sustainable growth.

Although the relationship between long-term debt (LD) and firm value is not statistically significant, it still shows a positive contribution, consistent with the idea that long-term financing provides stability and tax benefits. This finding, supported by studies such as Soesilo et al. (2020), DJ et al. (2011), and Simorangkir (2019), highlights the role of long-term debt in supporting investments and improving valuation, especially for Jordanian service firms facing liquidity constraints and operational challenges. While excessive reliance on short-term debt could heighten financial risks, optimizing leverage strategies is critical.

Control Variables

Control variables such as capital intensity (CI) and firm age (AGE) significantly influence firm value. Capital intensity (CI) positively impacts Tobin's Q, reflecting its role in enhancing operational efficiency and firm value, as supported by Saji and Eldhose (2017). Firms with higher capital intensity tend to allocate resources effectively, contributing to improved performance. Firm age (AGE), on the other hand, shows a marginally positive effect on Tobin's Q. Older firms may leverage their accumulated experience and established market presence to drive performance, though they might face challenges from younger, more dynamic competitors. This observation aligns with Ilaboya and Ohiokha (2016), who explored the nuanced relationship between firm

age and financial performance. These findings highlight the importance of considering control variables in understanding firm value dynamics.

5. Conclusion

This study sheds light on the relationship between liquidity, leverage, and firm value, as measured by Tobin's Q, in Jordanian service firms. The positive influence of the quick ratio highlights the importance of adequate liquidity in boosting market valuation and operational efficiency, consistent with the Pecking Order Theory (Myers & Majluf, 1984). In contrast, the negative effect of the cash ratio emphasizes the risks of holding excessive cash reserves without efficient use, underscoring the need for optimal liquidity management. The positive effects of both short-term and long-term debt on Tobin's Q, as supported by the Trade-off Theory (Kraus & Litzenberger, 1973), illustrate the benefits of leveraging debt strategically while maintaining careful debt management.

However, the study has its limitations. It focuses exclusively on the Jordanian service sector, limiting the applicability of its findings to other contexts or industries. Additionally, the use of secondary data from 2011 to 2021 may not capture the latest economic and market dynamics. Future research could expand the scope to include diverse sectors and countries, offering a more holistic perspective. Exploring other firm value metrics and incorporating more recent data could further enrich the analysis. Moreover, examining the role of macroeconomic variables, such as interest rates and inflation, might reveal their moderating effects on the relationships between liquidity, leverage, and firm value.

For managers, these findings highlight the need for balanced financial strategies. Maintaining an optimal quick ratio is critical for enhancing market valuation and operational performance. Avoiding excessive cash reserves without a strategic plan is equally important to prevent inefficiencies. Furthermore, leveraging debt wisely can offer tax benefits and reduce capital costs, but overleveraging should be avoided to mitigate financial risks. By achieving a balanced approach to liquidity and leverage, managers can enhance firm value, ensuring sustainable growth and long-term stability.

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