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Trade-Off Likuiditas–Leverage dan Amplifikasi Profitabilitas pada Perusahaan Asuransi Takaful Palestina: Sintesis Bukti Sekunder dan Analisis Reinterpretatif atas Estimasi Panel 2018–2022

Liquidity–Leverage Trade-Off and Profit Amplification in Palestinian Takaful Insurers: A Secondary-Evidence Synthesis and Re-Interpretive Analysis of Panel Estimates, 2018–2022

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Abstrak: *Penelitian ini mengkaji kembali bukti mengenai determinan profitabilitas dua perusahaan asuransi Takaful yang tercatat di Bursa Palestina pada periode 2018–2022 dengan sudut pandang berbeda, yaitu trade-off likuiditas–leverage dan peran leverage dalam memperbesar (amplifikasi) imbal hasil ekuitas. Dengan desain sintesis bukti sekunder, studi ini menafsirkan ulang statistik deskriptif, korelasi, regresi variabel tunggal, serta estimasi efek tetap dan gabungan (10 observasi perusahaan-tahun) dari studi sumber, lalu mentriangulasikannya dengan literatur takaful. Indikator turunan berupa efek terstandar satu simpangan baku, rasio amplifikasi ROE terhadap ROA, dan stabilitas tanda serta signifikansi menunjukkan bahwa likuiditas berhubungan negatif dan leverage berhubungan positif dengan ROA maupun ROE, signifikan pada taraf 5% di seluruh spesifikasi. Kenaikan likuiditas satu simpangan baku berkaitan dengan penurunan ROA sebesar 2,06–2,93 poin persentase dan ROE sebesar 5,66–8,06 poin persentase, sedangkan koefisien ROE 2,2–2,9 kali lebih besar daripada koefisien ROA, secara garis besar sejalan dengan pengganda ekuitas sekitar 3,3–3,7. Ukuran perusahaan hanya signifikan terhadap ROA pada model efek tetap, sementara tangibilitas aset, pertumbuhan PDB, dan inflasi tidak signifikan di semua model, sehingga manajer Takaful perlu mengelola likuiditas sebagai penyangga yang terukur dan menggunakan leverage secara hati-hati karena efek amplifikasinya bekerja dua arah.*

Kontribusi: *Penelitian ini berkontribusi dengan membaca ulang estimasi panel asuransi Takaful Palestina melalui kerangka trade-off likuiditas–leverage, menerjemahkan koefisien regresi menjadi efek terstandar dan rasio amplifikasi ROE/ROA, serta menunjukkan bahwa leverage memperbesar imbal hasil ekuitas secara dua arah sehingga menjadi dasar kuantitatif bagi manajemen dalam mengkalibrasi penyangga likuiditas dan struktur modal.*

Kata Kunci: *Takaful; trade-off likuiditas–leverage; profitabilitas; ROA; ROE; bursa efek Palestina; kinerja keuangan.*

Abstract: This study re-examines the evidence on the profitability drivers of the two Takaful insurers listed on the Palestine Exchange during 2018–2022 through a different lens, namely the liquidity–leverage trade-off and the way leverage amplifies equity returns. Using a secondary-evidence synthesis design, it re-interprets the descriptive statistics, correlations, single-variable regressions, and fixed-effects and pooled estimates (10 firm-year observations) reported in the source study and triangulates them with the takaful literature. Derived indicators, namely standardized one-standard-deviation effects, ROE-to-ROA amplification ratios, and sign-and-significance stability, show that liquidity is negatively and leverage positively related to both ROA and ROE, significant at the 5% level in every specification. A one-

standard-deviation rise in liquidity is associated with a 2.06–2.93 percentage-point fall in ROA and a 5.66–8.06 percentage-point fall in ROE, while ROE coefficients are 2.2–2.9 times larger than ROA coefficients, broadly consistent with an equity multiplier of about 3.3–3.7. Firm size is significant only for ROA under fixed effects, whereas asset tangibility, GDP growth, and inflation are insignificant throughout, implying that Takaful managers should treat liquidity as a managed buffer and use leverage cautiously because its amplification works in both directions.

Contribution: This study contributes by re-reading the panel estimates of Palestinian Takaful insurers through a liquidity–leverage trade-off lens, translating regression coefficients into standardized effects and ROE/ROA amplification ratios, and showing that leverage amplifies equity returns in both directions, thereby providing a quantitative basis for managers to calibrate liquidity buffers and capital structure.

Keywords: Takaful; liquidity–leverage trade-off; profitability; ROA; ROE; Palestine stock exchange; financial performance.

INTRODUCTION

The insurance sector is an essential element of modern economic activity because it provides economic protection for individuals and institutions against the various risks they face (Haerani & Kholis, 2024; Romadhon et al., 2024; Saleha et al., 2023). This protection takes the form of financial compensation for damages, which safeguards the continuity and stability of institutions and projects. Takaful, rooted in Islamic principles, is a cooperative system in which members mutually protect each other against specified risks, emphasizing communal support and risk-sharing. It has developed because customers of faith-based financial services want an insurance system that satisfies their religious convictions while offering appropriate risk coverage (Indra et al., 2022; Kholis & Afifah, 2022; Radianti et al., 2023). Within the Shari'ah-compliant ecosystem, Islamic banking, financial markets, and insurance have complemented one another and expanded quickly in both Muslim and non-Muslim countries.

The Business Research Company (2024) estimates the global takaful market at USD 33,415.2 million in 2024, expanding at a compound annual growth rate (CAGR) of 9.50% between 2024 and 2031. North America holds about 40% of global revenue (USD 13,366.08 million, CAGR 7.7%), while Europe accounts for over 30% (USD 10,024.56 million). Latin America represents around 5% (USD 1,670.76 million, CAGR 8.9%), and the Middle East and Africa hold about 2% (USD 668.30 million). This growth signals better public understanding of takaful, since many individuals and groups require underwriting for their lives and activities (Purnamasari & Alam, 2020). Because of this potential, experts continue to encourage the evolution of takaful, especially in Muslim countries (Kusmayadi & Firmansyah, 2021).

In Palestine, the insurance sector is regulated by the Capital Market Authority and comprises ten companies, two of which specialize in Takaful. In 2022, total sector assets rose about 5.6% to roughly USD 783.7 million, driven by an 11.5% increase in fixed assets that reflected a 35% rise in real estate investments, while current assets grew about 2.0% (Palestine Monetary Authority, 2024). Shareholders' equity grew by an average of 18.5% to USD 252.5 million owing to higher paid-up capital, mandatory reserves, and accumulated profits. Net profit after tax reached USD 21.7 million in 2022 compared with USD 12.5 million a year earlier, mainly because of higher investment revenue and insurance operations revenue (Palestine Monetary Authority, 2024).

Al-Takaful Palestinian Insurance Company, established in 2006 as the first public shareholding company specializing in Takaful in Palestine, has an authorized capital of USD 8.50 million divided into 8.25 million shares of USD 1.00 par value. It separates Takaful financial balances from shareholders' transactions, so ownership of these balances and their operations belongs to the policyholders. Tamkeen Insurance Company was founded in 2017 as the second Takaful insurer and serves the part of the population that refrains from conventional insurance for religious reasons. It listed on the Palestine Exchange in 2021 under the symbol TPIC and, by 2023, had authorized and paid capital of USD 12,480,000, a 10% share of the insurance market, and more than 33 points of sale in the West Bank and Gaza (Tamkeen, 2023).

Profitability is one of the most critical performance indicators in financial management, whose aim is maximizing owners' wealth and sustaining the enterprise (Hifza, 2011). Insurers are expected to remain solvent and strong by operating profitably, and the main challenge for the Takaful sector is raising its performance to the level of conventional insurance. Empirical work has identified many profitability drivers in developed and developing countries, yet, as noted by Qubbaja (2025), studies on Palestinian insurers are scarce and empirical analyses of Takaful profitability are lacking. The source study (Qubbaja, 2025) reports each determinant largely separately, leaving the joint reading of liquidity policy and capital structure underexplored. This article therefore re-reads the available panel evidence through a liquidity–leverage trade-off lens and asks what it implies for management.

The general objective is to re-interpret the evidence on the determinants of profitability of Takaful insurers in Palestine by focusing on the liquidity–leverage trade-off. The specific objectives are to assess the direction and stability of liquidity and

leverage effects across specifications and to quantify their economic magnitude using standardized effects. A further objective is to examine whether ROE responds more strongly than ROA, as expected under leverage amplification. The study also evaluates the role of firm size, tangibility, GDP growth, and inflation and derives managerial implications.

Research Questions:

1. Is the effect of liquidity on ROA and ROE negative, and is it stable across specifications?
2. Is the effect of leverage on ROA and ROE positive, and is it stable across specifications?
3. How large are these effects in percentage points of profitability?
4. Do ROE coefficients exceed ROA coefficients in line with the equity multiplier?
5. Do firm size, tangibility of assets, GDP growth, and inflation exert a robust effect on profitability?

LITERATURE REVIEW

The term takaful derives from the Arabic *kafala*, meaning mutual assurance, collective benefit, or shared accountability. Under Shari'ah principles, takaful must be oriented towards policyholders rather than shareholders, its duration must be finite, and premium exchange and benefits must be predetermined. The contract also has a dual facet: mutual cooperation among participants in loss mitigation, and sharing of investment returns between insurer and policyholders at a previously agreed ratio (Al-Amri & Hossain, 2017). This dual structure explains why liquidity for claims and capital structure are both central to Takaful performance.

Prior studies show that company size, liquidity, reliance on takaful, GDP per capita, equity returns, and interest rates are statistically significant determinants of financial performance (Kantakji et al., 2020). Saleh and Abida (2024) surveyed 150 employees of national and Iraqi insurers and concluded that inflation is among the paramount macroeconomic variables affecting all sectors. Rofika and Meylianingrum (2024) studied 11 takaful companies in Indonesia and Malaysia (2017–2022) and found that premiums, return on investment, risk-based capital, and claims expenditures raise profitability while liquidity lowers it. Prasaja et al. (2023) used the statements of sharia

insurers registered with Otoritas Jasa Keuangan for 2016–2020 and showed that capital volume, premium income, and operational efficiency affect financial performance.

Iskandar and Hadiprajitno (2023) found that foreign affiliation and retention ratio affect ROE positively, whereas market share, claims ratio, and expense ratio affect it negatively. Rosli et al. (2023) analyzed nine life insurers and five takaful operators in Malaysia (2016–2020) with random-effects models and found that solvency was the only key driver of performance before and during the COVID-19 crisis. Hamel and Yousfi (2022) reported that written contribution size had a negative coefficient while contributions ceded to ReTakaful had a positive coefficient for the return on policyholders' assets. Arshad et al. (2020) used data from eleven domestic and four global takaful organizations and found that liquidity, equity return, underwriting risk, and GDP significantly affect the performance of Malaysian takaful firms. Together these studies suggest that liquidity is a recurrent determinant of takaful performance, with a negative sign reported by Rofika and Meylianingrum (2024), while other drivers vary by market.

Because the literature repeatedly reports negative liquidity effects in takaful, this article treats the liquidity–profitability relationship as a trade-off rather than as a benefit. It treats leverage as a mechanism that raises equity returns, in line with the idea that firms use debt financing to augment profitability. Size, tangibility, GDP growth, and inflation are examined as secondary determinants whose effects are expected to be weaker. The following propositions are therefore tested against the evidence.

P1: Liquidity is negatively related to ROA and ROE.

P2: Leverage is positively related to ROA and ROE.

P3: The effects of liquidity and leverage on ROE are larger than on ROA (amplification).

P4: Company size is positively related to profitability.

P5: Tangibility of assets is positively related to profitability.

P6: GDP growth and inflation have no robust effect on profitability.

RESEARCH METHOD

Research Design and Data

This study uses a secondary-evidence synthesis design that combines a re-interpretive quantitative analysis of published panel estimates with a narrative synthesis of the takaful literature. The evidence base is the set of descriptive statistics,

correlation coefficients, variance inflation factors, single-variable regressions, redundant fixed-effects tests, and multivariate estimates reported by Qubbaja (2025) for the two Takaful insurers listed on the Palestine Exchange during 2018–2022. These insurers yield 10 firm-year observations, and the original financial reports were obtained from the companies' official websites. No new primary data were collected; instead, all derived indicators are computed from the reported figures.

Variables and Measurement

Profitability is measured by ROA (net profit before tax to total assets) and ROE (net profit before tax to total shareholders' equity), where ROA reflects management's ability to generate income from the assets at its disposal (Oshiole et al., 2020). Liquidity is the ratio of current assets to current liabilities and reflects the insurer's ability to pay operating expenses and claims, with net premiums, investment returns, and asset liquidation as primary sources (Chen & Wong, 2004). Leverage is total debt to total shareholders' equity, and size is the natural logarithm of total assets, which captures the capacity of larger firms to exploit economies of scale (Sisay, 2017). Tangibility is the ratio of fixed assets to total assets (Alkhatib, 2012), while GDP growth and inflation growth are year-on-year relative changes, with GDP growth expected to raise demand for financial services and inflation expected to burden claims, expenses, and technical provisions (Berhe & Kaur, 2017).

Analytical Procedure

Four analytical procedures are applied to the reported estimates. First, standardized effects are computed as the reported coefficient multiplied by the standard deviation of the regressor and expressed in percentage points of ROA or ROE. Second, an amplification ratio is calculated as the ROE coefficient divided by the ROA coefficient and compared with the mean ROE-to-ROA ratio and the implied equity multiplier (1 + LEV). Third, sign and significance stability is assessed at the 5% level across single-variable, fixed-effects, and joint external-variable models. Fourth, the findings are triangulated with the literature through narrative synthesis.

Limitations of the Evidence Base

The original estimates were produced with EViews 10 from only 10 observations and two cross-sections. Fixed effects consume one degree of freedom, so inference is

fragile and results should be viewed as indicative rather than conclusive. The uncentered VIF of company size is 1,426.9, although its centered VIF is 2.72 and all centered VIFs are below 10. This article relies on the centered values, consistent with the source study's conclusion that multicollinearity is not a problem. Further caveats are that the source text describes ROE as after-tax profit over equity while its Table 1 uses profit before tax (this article follows Table 1), that Durbin–Watson statistics of 1.09–1.18 in the single-variable leverage models suggest serial correlation, and that all associations are correlational and open to reverse causality.

RESULTS

Descriptive Profile

Table 1 summarizes the descriptive statistics. Mean ROE is 12.28% and mean ROA is 3.28%, and both are non-normal according to the Jarque-Bera test (p = 0.016 and 0.002), a deviation attributed to outliers likely associated with companies in their founding stage. The remaining variables are normally distributed, with mean liquidity of 1.057, mean leverage of 2.328, mean size of 7.628, and mean tangibility of 0.272. Mean GDP growth is 0.44% and mean inflation growth is 1.12%, with GDP growth ranging from −11.32% to 7.01%.

Table 1. Descriptive statistics (N = 10).

Variable	Mean	Median	Std. Dev.	Min	Max	Jarque-Bera p
ROE	0.1228	0.1376	0.0905	−0.1105	0.2360	0.0162
ROA	0.0328	0.0367	0.0349	−0.0606	0.0675	0.0020
Liquidity (LQ)	1.0571	1.0395	0.4005	0.1963	1.8621	0.5457
Leverage (LEV)	2.3285	2.4758	0.6807	0.8228	2.9854	0.4047
Inflation growth	0.0112	0.0124	0.0165	−0.0074	0.0374	0.6859
GDP growth	0.0044	0.0136	0.0658	−0.1132	0.0701	0.3837
Size (CS)	7.6278	7.7590	0.3513	7.0080	7.9700	0.5051
Tangibility (AT)	0.2721	0.2630	0.0684	0.1771	0.3802	0.7823

Source: Derived from Qubbaja (2025).

Correlation Structure

Pearson correlations show that liquidity is strongly and significantly negatively related to ROA (r = −0.841, p = 0.0023) and ROE (r = −0.891, p = 0.0005). Leverage is positively and significantly related to ROA (r = 0.685, p = 0.0287) and ROE (r = 0.763, p = 0.0102). Size, tangibility, GDP growth, and inflation are not significantly correlated with either profitability measure at 5%, and size is correlated with ROE only at the 10% level (r = 0.577, p = 0.0807). Liquidity and leverage are themselves negatively

correlated (r = −0.647, p = 0.0432), and leverage is strongly correlated with size (r = 0.777, p = 0.0082), which signals that the main drivers move together within the firms' balance-sheet structure.

Stability of Estimates Across Specifications

Table 2 places the single-variable and multivariate estimates side by side. For the internal variables the multivariate model is the cross-sectional fixed-effects model, and for the external variables it is pooled OLS, because the redundant fixed-effects tests are insignificant there (p = 0.4438 for ROA and p = 0.2493 for ROE). The table shows that only liquidity and leverage keep both their sign and their 5% significance in every column. Size reaches significance in a single column, and tangibility, GDP growth, and inflation never do.

Table 2. Coefficients (p-values) by specification.

Variable	ROA single	ROA multivariate	ROE single	ROE multivariate
Liquidity	−0.0733 (0.0023)	−0.0515 (0.0028)	−0.2013 (0.0005)	−0.1414 (0.0097)
Leverage	0.0351 (0.0287)	0.0361 (0.0059)	0.1015 (0.0102)	0.0800 (0.0374)
Size	0.0501 (0.1370)	0.0402 (0.0195)	0.1487 (0.0807)	0.0816 (0.1178)
Tangibility	0.2522 (0.1459)	0.0665 (0.1475)	0.5859 (0.2000)	0.1131 (0.4743)
GDP growth	0.0004 (0.9985)	−0.1539 (0.5465)	0.0084 (0.9866)	−0.2990 (0.6589)
Inflation growth	0.5745 (0.4466)	0.9652 (0.3519)	1.1640 (0.5555)	1.9227 (0.4812)

Source: Compiled from Qubbaja (2025).

Liquidity as a Trade-Off

Liquidity displays the most stable pattern in the evidence base, because its coefficient is negative and significant at 1% in all four models (Table 2). Single-variable regressions give coefficients of −0.0733 for ROA and −0.2013 for ROE, with R^2 of 0.708 and 0.793. Under cross-sectional fixed effects the coefficients remain negative and significant (−0.0515 for ROA and −0.1414 for ROE), so the sign does not depend on unobserved firm characteristics. The finding rejects the expectation that more liquid takaful insurers earn higher returns and is in line with Rofika and Meylianingrum (2024) and Arshad et al. (2020), who also document a liquidity effect on takaful performance. A one-standard-deviation rise in liquidity (0.4005) is associated with a fall of 2.06–2.93 percentage points in ROA and 5.66–8.06 points in ROE, which is large relative to a mean ROA of 3.28% and a mean ROE of 12.28%.

Leverage as a Profit Amplifier

Leverage is positive and significant in every model, with single-variable coefficients of 0.0351 for ROA (p = 0.0287) and 0.1015 for ROE (p = 0.0102). The fixed-effects estimates are of similar size, at 0.0361 for ROA (p = 0.0059) and 0.0800 for ROE (p = 0.0374). A one-standard-deviation increase in leverage (0.6807) corresponds to 2.39–2.46 percentage points of ROA and 5.45–6.91 points of ROE. Leverage alone explains 46.9% of the variation in ROA and 58.3% of the variation in ROE. This supports the view that debt financing is used to augment profitability, although the dependence of the finding on only two firms calls for caution.

The ROE–ROA Amplification Ratio

Table 3 shows that ROE coefficients are 2.2 to 2.9 times larger than the corresponding ROA coefficients. This is consistent with the accounting link between the two measures, because both use pre-tax profit and differ only in the denominator, so ROE equals ROA multiplied by the ratio of assets to equity. The mean ROE-to-ROA ratio is 3.74, of the same order as the implied equity multiplier of 3.33 (one plus the mean leverage of 2.328), which indicates that equity returns magnify asset returns by roughly a factor of three to four in these insurers. Consequently, the larger ROE coefficients for liquidity and leverage are consistent with magnification rather than a separate behavioral channel, although this reading assumes that total debt approximates total liabilities and that mean-based ratios approximate firm-level ratios. Proposition 3 is therefore supported as a broad pattern, not as a precise identity.

Table 3. Amplification indicators.

Indicator	Value
Mean ROE / mean ROA (0.1228 / 0.0328)	3.74
Implied equity multiplier (1 + mean LEV)	3.33
ROE/ROA coefficient ratio, liquidity (single-variable)	2.75
ROE/ROA coefficient ratio, liquidity (fixed effects)	2.75
ROE/ROA coefficient ratio, leverage (single-variable)	2.89
ROE/ROA coefficient ratio, leverage (fixed effects)	2.22

Source: Author's calculation from Qubbaja (2025).

Firm Size and Tangibility of Assets

Firm size is positive in all models but is insignificant in the single-variable regressions (p = 0.1370 for ROA and p = 0.0807 for ROE). Under fixed effects it becomes significant for ROA (0.0402, p = 0.0195) but not for ROE (0.0816, p = 0.1178). The source study concludes that size is insignificant, so this pattern is better described as

weak and specification-dependent, which is only partly consistent with the idea that larger firms exploit economies of scale (Sisay, 2017). Tangibility is positive but insignificant in every model (p between 0.1459 and 0.4743), so the borrowing capacity associated with fixed assets (Alkhatib, 2012) is not confirmed as a profit driver. Because size and leverage are correlated (r = 0.777), part of the size effect may be captured by capital structure.

Macroeconomic Variables

The external variables show no meaningful effect on profitability. Single-variable regressions give GDP growth coefficients close to zero (0.0004 for ROA, p = 0.9985; 0.0084 for ROE, p = 0.9866), with R^2 values of approximately zero. Inflation coefficients are positive but insignificant (p = 0.4466 for ROA and p = 0.5555 for ROE). In the joint external model neither GDP growth nor inflation is significant (p = 0.5465 and 0.3519 for ROA; p = 0.6589 and 0.4812 for ROE), and R^2 is only 0.124 and 0.073. The sign of GDP growth also flips from slightly positive in the single-variable models to negative in the joint models, an instability that reinforces its insignificance and contrasts with the expectation that growth raises demand and inflation burdens claims and provisions (Berhe & Kaur, 2017).

Firm-Specific Effects and Explanatory Power

Redundant fixed-effects tests for the internal-variable models are significant (p = 0.0017 for ROA and p = 0.0270 for ROE), indicating that firm-specific characteristics matter. The fixed-effects models explain 98.5% (ROA) and 96.8% (ROE) of the variance, with Durbin–Watson statistics of 2.02 and 1.75. By contrast, the joint external models explain only 12.4% and 7.3%, which shows that internal balance-sheet policy accounts for most of the explained variation. This agrees with Prasaja et al. (2023) and Rosli et al. (2023) in highlighting internal financial structure, such as capital volume, operational efficiency, and solvency, as the key driver, although the variables differ across studies. Part of the high fit is mechanical, however, because the firm dummy absorbs firm-level means in a panel with only two firms.

Evaluation of Propositions and Research Questions

Table 4 summarizes the verdict on each proposition. P1, P2, P3, and P6 are supported, P4 receives only partial support, and P5 is not supported. These verdicts

answer the research questions: the liquidity effect is negative and stable (RQ1), the leverage effect is positive and stable (RQ2), and both are economically large (RQ3). ROE coefficients exceed ROA coefficients in line with the equity multiplier (RQ4), while size, tangibility, GDP growth, and inflation show no robust effect (RQ5).

Table 4. Evaluation of propositions.

Proposition	Evidence	Verdict
P1: Liquidity is negatively related to profitability	Negative, $p \leq 0.0097$ in all four models	Supported
P2: Leverage is positively related to profitability	Positive, $p \leq 0.0374$ in all four models	Supported
P3: ROE effects exceed ROA effects	Coefficient ratios 2.2–2.9; mean ROE/ROA 3.74 vs. multiplier 3.33	Supported (broad pattern)
P4: Size is positively related to profitability	Positive sign; significant only for ROA under fixed effects ($p = 0.0195$)	Partially supported
P5: Tangibility is positively related to profitability	Positive sign; p between 0.1459 and 0.4743	Not supported
P6: GDP growth and inflation have no robust effect	$p \geq 0.3519$ in joint models; GDP sign flips	Supported

Source: Author's evaluation based on Tables 2 and 3.

Managerial Implications

The liquidity–leverage trade-off suggests that Takaful managers face a tension between holding liquid assets to pay claims promptly and deploying funds in higher-yielding uses. The source study recommends maintaining high liquidity so that companies can secure bids and settle claims promptly, which enhances their reputation and profitability. The estimates show, however, that higher liquidity coincides with lower measured profitability in the same period, so any reputational benefit would have to materialize over a longer horizon than the five years observed, which this study cannot test. Companies should therefore treat liquidity as a managed buffer set at a level that protects claims-paying capacity without leaving excess idle assets. Leverage should be used with caution because the amplification of ROE works in both directions, particularly given the negative minimum values of ROA (−6.06%) and ROE (−11.05%).

The source study further recommends diversification beyond motor insurance and mergers to increase size and achieve economies of scale. The size evidence reviewed here is only weakly supportive, being significant for ROA under fixed effects alone, so mergers should be justified by operating efficiency and capital strength rather than scale alone. Given the insignificance of GDP growth and inflation, profitability appears to depend more on internal underwriting and balance-sheet decisions than on

macroeconomic conditions. Regulators such as the Capital Market Authority can use these insights to monitor the liquidity and leverage ratios of Takaful operators. Future research should extend the panel to more years, include conventional insurers, and add takaful-specific variables such as underwriting results and retakaful (Hamel & Yousfi, 2022).

CONCLUSION

This article re-interpreted the panel evidence on two Palestinian Takaful insurers through a liquidity–leverage trade-off lens. Liquidity is consistently negatively and leverage consistently positively related to ROA and ROE, with significance at the 5% level in all specifications. ROE responds 2.2–2.9 times more strongly than ROA, which is broadly consistent with an equity multiplier of about 3.3–3.7. Size shows only weak, specification-dependent support, while tangibility of assets, GDP growth, and inflation show no significant effects.

The findings are indicative because they rest on 10 firm-year observations from two insurers, and they require validation with larger samples. Managers should calibrate liquidity buffers to claims-paying needs rather than maximize them, and they should use leverage with awareness of its two-way amplification. Mergers and portfolio diversification should be pursued for efficiency and capital strength. Regulators can monitor liquidity and leverage as early indicators of Takaful profitability.

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