

DOES BANK HEALTH REACH THE MARKET? EVIDENCE FROM PROFITABILITY-DRIVEN VALUATION IN FX BANKS

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ABSTRACT: This study examines how bank soundness translates into profitability and market valuation in foreign exchange national private commercial banks in Indonesia. Its core contribution lies in reframing risk-based bank assessment as a transmission mechanism, showing how liquidity discipline and cost efficiency shape firm value primarily through profitability rather than through isolated governance or capital indicators. Using panel data from eight banks over 2018–2023 and moderated regression analysis, the findings show that liquidity management, governance quality, and operating efficiency significantly influence return on assets, while credit risk and margin structure do not exert direct effects. Profitability, in turn, significantly enhances firm value and selectively strengthens the impact of liquidity on valuation. These results imply that market confidence rewards banks that convert balance-sheet discipline into sustained profitability, underscoring the strategic importance of efficient intermediation for investors and bank managers alike.

Keywords: Bank Soundness; Profitability Transmission; Firm Value; Liquidity Discipline; Operating Efficiency

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INTRODUCTION

Indonesia's banking system has operated under unusually compressed stress in the past decade, absorbing pandemic disruption, rapid digitalization, and sustained credit demand within a bank-dominated financial structure. During the COVID-19 period, GDP contracted sharply while banks were required to maintain intermediation, liquidity provision, and payment system continuity, forcing balance-sheet discipline to matter more than reported growth (World Bank, 2021). At the same time, digital banking transactions expanded rapidly, increasing the speed of liquidity withdrawal and amplifying the informational content of bank performance signals. In such an environment, domestic private commercial banks remain central to credit allocation and risk absorption, making the translation of bank soundness into profitability and market valuation an empirical question of first-order importance rather than regulatory compliance.

Financial theory views banks as liquidity transformers whose fragility is endogenous to their economic function. By funding long-term, risky assets with short-term liabilities, banks create liquidity but expose themselves to funding shocks that directly affect performance and survival (Diamond & Dybvig, 1983; Kashyap et al., 2002). Empirical finance has shown that liquidity creation, funding structure, and asset quality are not neutral accounting outcomes but core determinants of profitability and resilience, particularly under stress (Berger & Bouwman, 2009; Berger & Bouwman, 2013). From this perspective, commonly used prudential indicators represent economic constraints shaping managerial choices, not isolated predictors. Profitability emerges as the mechanism through which balance-sheet discipline becomes economically meaningful, reflecting how effectively banks transform risk into sustainable returns.

Regulation and governance complicate this mechanism rather than simplifying it. Liquidity and capital requirements reduce fragility but may reallocate risk within the balance sheet and alter lending incentives, generating non-linear effects on performance and valuation (Sundareshan & Xiao, 2024). Governance structures further condition these outcomes by shaping risk tolerance and managerial incentives, especially when ownership and control diverge (Laeven & Levine, 2009). Crisis evidence shows that banks with similar regulatory ratios can experience sharply different valuation outcomes, suggesting that markets price the interaction between liquidity stance, efficiency, and profitability rather than ratios in isolation (Beltratti & Stulz, 2012; Chen et al., 2021). Yet much of the empirical literature treats prudential indicators as parallel regressors, leaving the transmission from bank soundness to firm value under-theorized.

This study contributes by reframing risk-based bank assessment as an integrated economic mechanism rather than a checklist of supervisory metrics. Focusing on Indonesian foreign-exchange national private commercial banks over 2018–2023, the paper examines how balance-sheet discipline, governance quality, operating efficiency, and capital structure jointly shape profitability, and how profitability, in turn, transmits these effects into market valuation. The contribution is twofold. First, it clarifies profitability as the central channel through which bank soundness becomes priced by the market. Second, it shows that this channel is selectively strengthened by liquidity discipline rather than uniformly by all prudential dimensions. In doing so, the study links supervisory logic to valuation theory and offers market-relevant insight into how bank health translates into investor confidence.

THEORETICAL REVIEW

Liquidity Stance, Asset Quality, and Profitability (ROA)

Banks earn profits by transforming liquid liabilities into illiquid and risky assets, a function that inherently links profitability to liquidity management and credit discipline (Diamond & Dybvig, 1983). Liquidity expansion increases expected income by enlarging the stock of earning assets, but it simultaneously exposes banks to funding stress and refinancing risk, making the profitability effect conditional on the stability of funding liquidity (Brunnermeier & Pedersen, 2009). When asset quality deteriorates, profitability is weakened through higher loan-loss provisions, reduced lending capacity, and increased monitoring costs, which erode the returns generated from intermediation activity (Berger & DeYoung, 1997). However, empirical evidence shows that the impact of credit risk on profitability can be muted when banks actively manage and resolve impaired loans, whereas liquidity-driven expansion can continue to support profits

under disciplined funding conditions (Berger & Bouwman, 2009). Recent work further demonstrates that liquidity regulation reshapes this trade-off by tightening funding constraints without eliminating profitable lending opportunities (Sundaresan & Xiao, 2024). Taken together, these arguments suggest that liquidity intensity and credit risk influence profitability through distinct and asymmetric channels.

H1: NPL has no effect on ROA.

H2: LDR has a positive effect on ROA.

Corporate Governance and Profitability (ROA)

Governance plays a central role in banking because high leverage and opaque asset risk magnify agency problems and weaken conventional market discipline (Laeven & Levine, 2009). Strong governance constrains excessive risk-taking, improves internal monitoring, and aligns managerial incentives with long-term performance objectives, thereby enhancing the quality and persistence of profits (Abid et al., 2021). In regulated banking systems, governance quality also shapes how prudential rules are internalized, affecting credit screening, cost control, and strategic discipline under uncertainty (Sundaresan & Xiao, 2024). Empirical evidence from crisis periods shows that banks with stronger governance structures exhibit more resilient profitability, as governance improves earnings credibility and limits downside risk exposure (Beltratti & Stulz, 2012). These mechanisms imply that governance quality should be reflected in realized profitability rather than remaining a purely formal attribute.

H3: Good corporate governance affects ROA.

Income Structure, Operating Efficiency, and Profitability (ROA)

Profitability depends not only on income generation but also on the efficiency with which revenues are transformed into net returns, particularly in banking where cost structures are sensitive to risk management quality (Berger & DeYoung, 1997). Net interest margin captures pricing power and asset allocation skill, yet margin expansion can be offset by rising funding costs, provisioning needs, or operational inefficiency, weakening its direct relationship with profitability (Brunnermeier & Pedersen, 2009). Operating efficiency, by contrast, reflects managerial discipline and internal control, making it a more robust predictor of profitability when banks operate under tighter funding and regulatory constraints (Uchida & Satake, 2009). Evidence from financial crises shows that cost-efficient banks preserve profitability more effectively than high-margin but inefficient banks, highlighting the dominance of efficiency over income structure alone (Berger & Bouwman, 2013). These arguments suggest that profitability responds differently to income structure and cost discipline.

H4: NIM has an effect on ROA.

H5: BOPO affects ROA.

Capital Adequacy and Profitability (ROA)

Capital buffers enhance bank resilience by absorbing losses and stabilizing intermediation during adverse conditions, which can protect profitability and improve earnings persistence (Berger & Bouwman, 2013). Well-capitalized banks are also better positioned to sustain liquidity creation and profitable lending when weaker peers retrench, particularly during systemic stress (Berger & Bouwman, 2009). At the same time, holding excess capital may reflect constrained growth opportunities or conservative balance-sheet strategies that reduce returns in normal periods (Kashyap et al., 2002). Recent evidence indicates that the profitability impact of capital depends on whether capital supports productive risk-taking or remains idle due to regulatory or strategic frictions (Sundaresan & Xiao, 2024). This ambiguity motivates an empirical assessment of capital adequacy and profitability.

H6: CAR affects ROA.

Profitability and Firm Value

Firm value reflects expectations of future cash flows adjusted for risk, making profitability a central valuation signal when it conveys sustainable earnings rather than temporary gains (Beltratti & Stulz, 2012). In banking, profitability summarizes the realized outcomes of liquidity management, risk control, governance, and efficiency, which investors tend to price more directly than individual prudential ratios (Laeven & Levine, 2009). Empirical evidence shows that banks with stronger and more persistent profitability experience higher valuations because profits signal both earning capacity and lower tail risk (Berger & Bouwman, 2013). As a result, profitability serves as the primary channel through which internal bank performance becomes visible to the market.

H7: ROA affects firm value.

Profitability as a Transmission Mechanism from Soundness to Firm Value

Liquidity and credit conditions influence firm value only insofar as they translate into sustainable profitability rather than balance-sheet fragility (Brunnermeier & Pedersen, 2009). High credit risk can depress valuation when it undermines earnings persistence and lending capacity, but this penalty may weaken when profitability already reflects provisioning and balance-sheet repair (Berger & DeYoung, 1997). Liquidity-driven expansion can enhance firm value when it strengthens profitability without destabilizing funding, but markets penalize liquidity growth that increases vulnerability to funding shocks (Berger & Bouwman, 2009). Recent evidence shows that liquidity regulation intensifies this conditionality by forcing markets to focus on profitability quality rather than balance-sheet size (Sundaresan & Xiao, 2024). These mechanisms imply that profitability conditions the valuation relevance of liquidity more strongly than that of credit risk.

H8: ROA does not significantly moderate the effect of NPL on firm value.

H9: ROA significantly moderates the effect of LDR on firm value.

Profitability and the Valuation Relevance of Governance, Efficiency, and Capital

Governance quality, efficiency, and capitalization affect firm value primarily through their impact on earnings credibility and risk perception rather than through direct valuation channels (Laeven & Levine, 2009). Markets reward governance and efficiency improvements when they translate into higher and more stable profitability, consistent with valuation responding to outcomes rather than formal compliance (Beltratti & Stulz, 2012). Operating efficiency, in particular, serves as a visible signal of managerial competence under market discipline, amplifying the valuation effect of profitability (Uchida & Satake, 2009). Capital adequacy enhances value when it supports profitable lending and resilience, but its valuation effect weakens when capital accumulation signals foregone growth opportunities (Berger & Bouwman, 2013). These arguments justify treating profitability as a conditioning variable while allowing for weak or insignificant moderation effects in some channels.

H10: ROA does not significantly moderate the effect of GCG on firm value.

H11: ROA does not significantly moderate the effect of NIM on firm value.

H12: ROA does not significantly moderate the effect of BOPO on firm value.

H13: ROA does not significantly moderate the effect of CAR on firm value.

RESEARCH METHOD

This study employs a quantitative panel-data design to examine how bank soundness translates into profitability and market valuation among Indonesian foreign-exchange national private commercial banks. The population consists of all foreign-exchange national private commercial banks listed on the Indonesia Stock Exchange (IDX). From this population, the final sample comprises eight banks that consistently published audited annual financial statements for the full observation window from 2018 to 2023. Restricting the sample to banks with complete post-pandemic reporting ensures temporal consistency, mitigates survivorship distortions arising from intermittent disclosure, and preserves balanced panel structure for econometric estimation. The sample includes Bank Artha Graha International, Bank Bumi Artha, Bank Central

Asia, CIMB Niaga, Bank Danamon, Bank Mega, OCBC NISP, and Bank Permata. Financial statement data are obtained directly from IDX filings and cross-checked for internal consistency across years.

The empirical analysis is conducted using panel regression techniques that explicitly account for unobserved bank-level heterogeneity and time variation. Panel data are preferred because they improve estimation efficiency, reduce collinearity among regressors, and allow separation of within-bank dynamics from cross-sectional differences. The baseline specification relates profitability, measured by return on assets (ROA), to bank soundness indicators capturing liquidity stance, asset quality, governance, operating efficiency, income structure, and capitalization. A second-stage specification links firm value to profitability, while an interaction-based framework tests whether profitability conditions the relationship between soundness dimensions and market valuation. All variables are defined following standard banking and finance literature to ensure comparability and replicability.

Model selection follows a structured econometric procedure. Estimation begins with pooled ordinary least squares to provide a benchmark. Fixed-effects and random-effects specifications are then estimated to control for unobserved bank-specific characteristics that are time-invariant, such as organizational culture or long-standing risk preferences. The Chow test is used to evaluate whether fixed effects dominate the pooled specification, while the Hausman test determines whether fixed or random effects provide consistent estimates. This sequential testing strategy ensures that coefficient estimates are not biased by omitted heterogeneity or inappropriate variance assumptions. Standard errors are adjusted for panel structure to account for within-bank dependence over time.

To examine the transmission mechanism from bank soundness to firm value, moderation models are estimated by interacting profitability with key soundness indicators. This approach allows assessment of whether profitability amplifies or attenuates the valuation relevance of liquidity deployment, asset quality, governance, efficiency, and capital adequacy. The moderation framework is estimated within the selected panel specification to preserve consistency with the baseline models. Coefficient interpretation focuses on economic magnitude and sign rather than mechanical significance alone, in line with finance-journal practice.

1st Model

$$Y = \alpha + \beta_1 X_{11} + \beta_2 X_{22} + \beta_3 X_{33} + \beta_4 X_{44} + \beta_5 X_{55} + \beta_6 X_{66} + e \quad \dots\dots(1)$$

2nd Model

$$Y = \alpha + \beta_1 X_{11} + \beta_2 X_{22} + \beta_3 X_{33} + \beta_4 X_{44} + \beta_5 X_{55} + \beta_6 X_{66} + \beta_7 M + e. \quad \dots\dots\dots(2)$$

3rd Model

$$Y = \alpha + \beta_1 X_{11} + \beta_2 X_{22} + \beta_3 X_{33} + \beta_4 X_{44} + \beta_5 X_{55} + \beta_6 X_{66} + \beta_7 M + \beta_8 X_{81} * M + \beta_9 X_{92} * M + \beta_{10} X_{103} * M + \beta_{11} X_{114} * M + \beta_{12} X_{125} * M + \beta_{13} X_{136} * M + e \quad \dots\dots\dots(3)$$

Where:

Y: ROA, α : constant, β : regression coefficient value, X_1 : NPL, X_2 : LDR, X_3 : GCG, X_4 : NIM, X_5 : BOPO, X_6 : CAR, M = Moderation variable (TobinsQ / company value), e: Random error.

All estimations are implemented using EViews 10, but the analysis is fully reproducible in any standard econometric environment using the reported variable definitions, sample window, and model specifications. The reliance on publicly available financial statements and transparent estimation procedures ensures that results can be independently verified and extended in future research.

RESULTS

To ensure consistent and unbiased estimation, model selection follows a sequential specification-testing strategy designed to identify the most appropriate panel-data structure for the analysis. Because bank-level heterogeneity may systematically influence profitability and valuation, pooled estimation may be inconsistent if unobserved effects are correlated with the regressors. Accordingly, the analysis evaluates whether cross-sectional effects should be explicitly modeled and whether these effects are best treated as fixed or random. The decision

framework relies on established specification tests that jointly address parameter stability, unobserved heterogeneity, and efficiency considerations, thereby ensuring that inference is not driven by misspecification rather than economic relationships.

Table 1. Model Specification Tests and Decision Rules

Test Procedure	Decision Criterion	Selected Model
Chow Test	Prob. > 0.05	Common Effect Model (CEM)
	Prob. < 0.05	Fixed Effect Model (FEM)
Hausman Test	Prob. > 0.05	Random Effect Model (REM)
	Prob. < 0.05	Fixed Effect Model (FEM)
Lagrange Multiplier (LM) Test	Prob. > 0.05	Common Effect Model (CEM)
	Prob. < 0.05	Random Effect Model (REM)

Notes: The Chow test compares the Common Effect Model (CEM) and Fixed Effect Model (FEM). The Hausman test determines the consistency between Fixed Effect Model (FEM) and Random Effect Model (REM). The Lagrange Multiplier test evaluates whether Random Effects are preferred over the Common Effect specification.

Table 1 reports the decision rules used to select among the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). The Chow test assesses whether bank-specific intercepts are jointly significant, indicating the presence of fixed effects relative to pooled estimation. Conditional on the presence of cross-sectional heterogeneity, the Hausman test evaluates whether unobserved bank effects are correlated with the explanatory variables, determining the consistency of random-effects estimation. The Lagrange Multiplier test further distinguishes between pooled and random-effects specifications by testing for variance components at the cross-sectional level. Together, these tests provide a coherent basis for model selection, ensuring that subsequent coefficient estimates reflect within-bank dynamics and cross-bank variation in a statistically efficient and theoretically defensible manner.

The presence of unobserved heterogeneity across banks is a central concern in panel-data analysis, particularly in banking where institutional characteristics such as risk culture, management quality, and strategic orientation may persist over time and influence performance outcomes. Ignoring these bank-specific effects risks biased and inconsistent estimates if such characteristics are correlated with the explanatory variables. To formally assess whether pooled estimation is appropriate, a Chow test is employed to evaluate the joint significance of cross-sectional effects, thereby determining whether individual bank intercepts differ systematically across the sample.

Table 2. Chow Test for Cross-Section Effects

Effects Test	Test Statistic	Degrees of Freedom	Probability
Cross-section F	3.8586	(7, 33)	0.0036
Cross-section Chi-square	28.7042	7	0.0002

Notes: The Chow test examines whether cross-sectional fixed effects are jointly significant. Statistical significance indicates that the Fixed Effect Model (FEM) is preferred over the Common Effect Model (CEM).

Table 2. presents the results of the Chow test for cross-sectional effects. Both the F-statistic and the Chi-square statistic are statistically significant, indicating that bank-specific effects are present and cannot be ignored. This finding implies that the Common Effect Model is insufficient to capture the underlying data structure and that unobserved heterogeneity plays a meaningful role in explaining bank profitability and valuation dynamics. Consequently, subsequent estimation proceeds by comparing fixed-effects and random-effects specifications to identify the most consistent and efficient modeling framework for the analysis.

After establishing the presence of statistically significant cross-sectional heterogeneity, the next step is to determine whether this heterogeneity is correlated with the explanatory variables. This distinction is critical because random-effects estimation assumes orthogonality between unobserved bank-specific effects and the regressors, an assumption that is often violated in banking data where persistent managerial quality, risk culture, and strategic orientation influence both balance-sheet structure and performance outcomes. The Hausman specification test is therefore employed to assess the consistency of the random-effects estimator relative to the fixed-effects alternative.

Table 3. Hausman Test for Model Selection

Test Summary	Chi-Square Statistic	Degrees of Freedom	Probability
Cross-section random	27.0100	7	0.0003

Notes: The Hausman test evaluates whether the Random Effect Model (REM) provides consistent estimates relative to the Fixed Effect Model (FEM). The statistically significant Chi-square statistic indicates correlation between the regressors and unobserved cross-sectional effects; therefore, the Fixed Effect Model (FEM) is preferred.

Table 3 reports the results of the Hausman test. The statistically significant Chi-square statistic indicates systematic correlation between the regressors and unobserved cross-sectional effects, rejecting the random-effects specification. This finding supports the use of the Fixed Effect Model (FEM), ensuring that estimation relies on within-bank variation over time and avoids bias arising from omitted, time-invariant bank characteristics. Consequently, all subsequent regression analyses are conducted using the fixed-effects framework to obtain consistent and interpretable estimates of the relationships under study.

To examine how bank soundness translates into profitability, the analysis estimates a fixed-effects panel regression with return on assets as the dependent variable. The fixed-effects framework isolates within-bank variation over time, controlling for unobserved, time-invariant characteristics such as organizational structure, long-standing risk preferences, and managerial culture. This approach ensures that estimated coefficients reflect changes in liquidity stance, governance quality, efficiency, and capitalization within the same bank rather than differences across banks, thereby strengthening causal interpretation in the presence of persistent heterogeneity.

Table 4. Fixed Effects Regression Results: Determinants of Profitability (ROA) (1st model)

Variable	Coefficient	Standard Error	Probability
Constant	429.5200	393.4087	0.2813
NPL → ROA	24.3164	29.4109	0.4131
LDR → ROA	3.4613	1.2548	0.0086
GCG → ROA	434.7633	123.3051	0.0011
NIM → ROA	71.5874	42.4009	0.0989
BOPO → ROA	-15.0697	4.3566	0.0013
CAR → ROA	16.2957	5.3042	0.0038

Notes: The table reports fixed-effects estimates with ROA as the dependent variable. Statistical significance should be interpreted based on p-values. Coefficients reflect within-bank variation over time.

Table 4 reports the fixed-effects regression results. Profitability is positively associated with liquidity deployment and governance quality, indicating that banks able to expand lending under disciplined governance structures achieve higher returns. Operating efficiency exhibits a strong negative relationship with ROA, confirming that rising operating costs materially erode profitability. Capital adequacy also contributes positively to profitability, consistent with the role of capital buffers in stabilizing intermediation. By contrast, credit risk and income structure do not exert statistically significant effects on profitability within banks over time, suggesting that their influence is either absorbed through provisioning and balance-sheet management or offset by other operational adjustments.

Having established how bank soundness dimensions translate into profitability, the analysis next examines whether profitability itself is valued by the market and whether it serves as a transmission channel through which internal bank characteristics become reflected in firm value. In banking, market valuation is shaped less by individual prudential ratios and more by their realized outcomes in terms of sustainable earnings and risk-adjusted performance. Profitability therefore functions as a summary signal that compresses complex balance-sheet conditions into a form that investors can interpret and price. To evaluate this mechanism, firm value, measured by Tobin's Q, is first regressed on profitability using a fixed-effects framework that isolates within-bank changes over time. The analysis then extends this framework by introducing interaction terms between profitability and key soundness indicators to test whether profitability conditions the valuation relevance of liquidity, asset quality, governance, efficiency, and capitalization.

Table 5. Fixed Effects Regression Results: Profitability and Firm Value (2nd model)

Variable	Coefficient	Standard Error	Probability
Constant	-1426.5200	725.2386	0.0562
ROA → Tobin's Q	234.3390	79.4207	0.0053

Table 4. Fixed Effects Moderation Results (3rd model)

Variable	Coefficient	Standard Error	Probability
Constant	912.1335	1287.4310	0.4835
NPL × ROA → Tobin's Q	84.1044	73.1793	0.2585
LDR × ROA → Tobin's Q	2.3371	1.1330	0.0468
GCG × ROA → Tobin's Q	154.3670	103.6329	0.1456
NIM × ROA → Tobin's Q	7.9640	47.4008	0.8676
BOPO × ROA → Tobin's Q	-0.1415	0.0731	0.0612
CAR × ROA → Tobin's Q	-0.1728	0.2329	0.4632

Notes: The table reports fixed-effects estimates with Tobin's Q as the dependent variable. Interaction terms capture the moderating role of profitability (ROA) in the relationship between bank soundness dimensions and firm value. Coefficients reflect within-bank variation over time. Statistical inference is based on p-values.

Tables 3 and 4 report the results of these valuation regressions. Table 3 shows that profitability has a positive and statistically significant effect on firm value, confirming that higher returns on assets are rewarded by the market within banks over time. Table 4 further demonstrates that this valuation effect is selective rather than universal: profitability significantly strengthens the relationship between liquidity deployment and firm value, while its moderating role is not statistically meaningful for credit risk, governance quality, income structure, operating efficiency, or capital adequacy. Taken together, these findings indicate that markets primarily reward profitability when it is generated through disciplined liquidity expansion rather than through other dimensions of bank soundness. This pattern supports the view that profitability operates as a transmission mechanism linking balance-sheet strategy to valuation, but only along channels that directly shape growth capacity without amplifying fragility.

DISCUSSION

The profitability results indicate that how banks deploy intermediation capacity matters more than how many ratios they report. The positive association between liquidity deployment and profitability is consistent with the intermediation view that banks earn rents when they create liquidity and transform funding into earning assets, provided funding conditions remain disciplined (Diamond & Dybvig, 1983; Kashyap et al., 2002; Berger & Bouwman, 2009). This aligns with recent evidence that liquidity risk and loan-to-deposit positioning have first-order effects on bank profitability and, in some settings, on market value, especially when liquidity is managed without triggering destabilizing funding pressures (Abu et al., 2024; Hamad, 2025; Joshi, 2024; Mahaseth, 2024; Nasution et al., 2024; Sah & Saud, 2022). The profitability contribution of governance is also economically coherent because banking is a setting where opacity and leverage intensify agency problems and make internal control systems central to outcomes rather than symbolic (Laeven & Levine, 2009). Governance quality is therefore plausibly reflected in realized profitability and firm value through better screening, tighter oversight, and more credible risk discipline, particularly when institutions face shocks that test managerial decision quality (Beltratti & Stulz, 2012; Dubey et al., 2025; Gu et al., 2020; Obadire et al., 2022; Putri & Pramesti, 2025). In the same spirit, the strong role of operating efficiency emphasizes that the market for banking profits is often a market for cost control and internal discipline, where operating frictions erode earnings even when revenue generation appears adequate (Berger & DeYoung, 1997; Albertazzi & Gambacorta, 2009). Recent evidence confirms that operating expense ratios and cost-to-income measures are tightly linked to profitability and valuation, with inefficient banks penalized in both accounting and market performance (Dubey et al., 2025; Hani et al., 2025; Mahaseth, 2024; Putri & Pramesti, 2025; Sah & Saud, 2022). Finally, the positive contribution of capital adequacy is consistent with the view that capital buffers support resilience and lending capacity during stress, which can protect profitability by

preventing forced deleveraging and preserving franchise value (Berger & Bouwman, 2013). Studies of Basel-style capital requirements and capital buffer premiums similarly find that stronger capital positions can enhance efficiency, support credit growth, and reinforce market valuations when combined with sound risk management (Butt et al., 2021; Hamad, 2025; Hani et al., 2025; Joshi, 2024; Mahaseth, 2024; Obadire et al., 2022; Putri & Pramesti, 2025).

Two non-results are theoretically informative rather than disappointing. First, the lack of a direct profitability effect from non-performing loans is consistent with frameworks where credit impairment influences performance through dynamic adjustment channels such as provisioning, restructuring, and efficiency losses, which can be partly absorbed by managerial actions and accounting recognition timing (Berger & DeYoung, 1997). This interpretation is particularly plausible in regulated banking environments where supervisory pressure and provisioning standards discipline the speed with which credit risk is recognized and resolved, weakening a simple contemporaneous mapping from impaired loans to profitability (Laeven & Levine, 2009). Recent empirical work documents mixed or even insignificant short-run links between NPLs and standard profitability or valuation metrics once capital buffers, loan-loss provisions, and efficiency are controlled for, supporting the view that credit risk often operates through indirect and lagged channels (Gu et al., 2020; Hamad, 2025; Joshi, 2024; Mahaseth, 2024; Nasution et al., 2024; Putri & Pramesti, 2025; Sah & Saud, 2022; Sharma, 2024). Second, the absence of a robust profitability role for net interest margin suggests that margin is not a sufficient statistic for performance because it can be offset by funding costs, provisioning pressures, regulatory burdens, and competitive dynamics that compress net returns at the bottom line (Demirgüç-Kunt & Huizinga, 1999; Albertazzi & Gambacorta, 2009). Contemporary evidence is consistent with this view: while higher NIM often associates with higher return on assets or equity, its effect can be attenuated when rising margins coincide with deteriorating asset quality, higher operating costs, or tighter monetary conditions (Butt et al., 2021; Hani et al., 2025; Mahaseth, 2024; Nasution et al., 2024; Sah & Saud, 2022). In other words, margin can describe pricing power while failing to describe profitability persistence when the broader balance-sheet and cost structure deteriorate or when policy shocks move funding costs faster than lending yields (Chouhan & Singhai, 2025). These patterns are consistent with liquidity theories that emphasize that funding constraints and liquidity spirals can dominate income structure in determining realized profitability during periods of stress (Brunnermeier & Pedersen, 2009; Abu et al., 2024; Hamad, 2025; Lee, 2023). Taken together, these findings reinforce a finance interpretation: bank profitability is produced by disciplined intermediation, credible governance, and cost control, while some balance-sheet risk indicators matter mainly through indirect and time-varying transmission mechanisms rather than contemporaneous levels (Berger & DeYoung, 1997; Demirgüç-Kunt & Huizinga, 1999; Joshi, 2024; Mahaseth, 2024; Nasution et al., 2024; Sah & Saud, 2022; Sharma, 2024).

The valuation results show that profitability is priced as a summary signal, not as a decorative accounting metric. The positive linkage between profitability and firm value is consistent with valuation logic in which investors reward banks that convert complex risk-taking and funding choices into persistent earnings, especially when earnings are informative about risk discipline (Beltratti & Stulz, 2012). This mechanism is also compatible with governance-based banking theories, where market participants cannot directly observe risk decisions but can infer managerial quality and risk control from sustained profitability and from complementary signals such as earnings quality, digital capability, and asset quality (Laeven & Levine, 2009; Albi et al., 2025; Gu et al., 2020). In addition, the profitability–value link fits evidence that capital strength and stable operating performance improve the credibility and resilience of banks, which markets tend to incorporate into valuations through expectations of future cash flows and lower perceived tail risk (Berger & Bouwman, 2013; Hamad, 2025; Obadire et al., 2022; Putri & Pramesti, 2025). Importantly, this result supports using profitability as a central transmission variable in the bank valuation setting because it aggregates multiple dimensions of bank soundness into a market-relevant signal (Demirgüç-Kunt & Huizinga, 1999). The implication is conceptual: investors appear to treat profitability as the observable output of governance, liquidity management, technology adoption, and capitalization choices rather than pricing each prudential indicator directly, consistent with studies that find firm value responds strongly to profitability, cost efficiency, and risk indicators taken together (Albi et al., 2025; Dubey et al., 2025; Hamad, 2025; Putri & Pramesti, 2025).

The moderation findings sharpen this story: profitability amplifies the valuation relevance of liquidity deployment, while it does not robustly condition the valuation relevance of the other soundness dimensions. This asymmetry is consistent with intermediation theory because liquidity deployment is the channel most directly associated with growth capacity, and profitability makes that growth interpretable as value-creating rather than fragile expansion (Diamond & Dybvig, 1983; Kashyap et al., 2002; Berger & Bouwman, 2009). The result is also consistent with the liquidity–funding framework in which markets penalize liquidity growth when it increases vulnerability to funding shocks, but reward it when profitability indicates that funding and risk discipline remain intact (Brunnermeier & Pedersen, 2009; Abu et al., 2024; Hamad, 2025; Lee, 2023). Recent work on liquidity regulation, capital buffers, and fintech intermediation reinforces the same logic by showing that tightening liquidity and capital constraints or introducing new intermediation channels reshapes how lending and liquidity risks are distributed across banks, making profitable liquidity deployment and complementary digital capabilities differentiators that investors can price (Abu et al., 2024; Hamad, 2025; Lee, 2023; Obadire et al., 2022; Putri & Pramesti, 2025; Yahya & Setyono, 2024). The absence of robust moderation for asset quality, governance, income structure, efficiency, and capital suggests that these dimensions either influence value more directly through other channels or are already reflected in profitability levels rather than in their interaction with profitability (Beltratti & Stulz, 2012; Berger & Bouwman, 2013; Albi et al., 2025; Dubey et al., 2025; Putri & Pramesti, 2025). Practically, the market implication is blunt: valuation rewards banks that demonstrate profitable liquidity deployment, while other soundness improvements may not be capitalized unless they translate into clearer, more persistent earnings and credible signals of efficiency and risk discipline (Demirgüç-Kunt & Huizinga, 1999; Abu et al., 2024; Hamad, 2025; Obadire et al., 2022; Putri & Pramesti, 2025).

CONCLUSION AND FURTHER STUDY

This study concludes that bank soundness becomes economically relevant to the market only when it is translated into realized and credible profitability, rather than remaining a collection of prudential indicators assessed in isolation. Liquidity deployment, governance quality, operating efficiency, and capital adequacy shape profitability within banks over time, while profitability itself emerges as the primary signal priced in firm value. Crucially, profitability does not uniformly amplify all dimensions of bank soundness. Instead, it selectively strengthens the valuation relevance of liquidity deployment, indicating that markets reward growth-oriented intermediation only when it produces sustainable earnings. This finding reframes risk-based bank assessment as a transmission mechanism: balance-sheet discipline and internal governance matter for valuation insofar as they culminate in persistent profitability that mitigates perceived fragility and supports credible growth.

The study has several limitations that suggest directions for future research and operational refinement. The focus on foreign-exchange national private commercial banks with complete post-pandemic data enhances internal validity but constrains generalizability across bank types and regulatory environments. The use of annual panel data may also mask short-run adjustments in liquidity and risk management that influence market valuation. Future research could employ dynamic panel techniques, higher-frequency data, or cross-country samples to examine whether the profitability transmission mechanism varies across institutional contexts and stress regimes. From an operational standpoint, the results imply that bank managers should prioritize profitability quality over balance-sheet expansion, regulators should recognize profitability as the channel through which prudential discipline is internalized by markets, and investors should evaluate bank soundness through earnings persistence rather than isolated ratios.

ETHICAL DISCLOSURE

The nature of this study ensures the absence of human involvements in the data gatherings, leading to the no ethical disclosure statements.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest regarding the publication of this research. The study was conducted independently, without any financial, institutional, or personal relationships that could be perceived as influencing the findings and interpretations presented in this paper.

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