



Ownership Structure, Bank Performance, and the Moderating Role of Islamic Banking Status: Evidence from Indonesia and Malaysia

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ABSTRACT

This study examines whether ownership concentration and state ownership influence the financial performance of banks operating under a dual banking system, and whether Islamic banking status alters the strength of that relationship. Using an unbalanced panel of 60 publicly listed banks from Indonesia and Malaysia observed between 2015 and 2025, financial performance is regressed on ownership concentration, state ownership, Islamic bank status, and their interaction terms through a random effects model corrected for correlated unobserved heterogeneity. Ownership concentration and state ownership show no significant direct association with return on average assets or return on average equity once bank size, capitalization, asset quality, and macroeconomic conditions are controlled for. The interaction between ownership concentration and Islamic banking status is positive and significant for return on average assets, suggesting that the monitoring benefit of concentrated ownership is more pronounced in Shariah compliant banks. These findings imply that ownership structure alone is an incomplete predictor of bank performance and that institutional context, particularly the Shariah governance environment, conditions how ownership translates into outcomes. The results carry practical relevance for regulators and boards seeking to calibrate governance expectations across conventional and Islamic banking segments within the same jurisdiction.

Keywords: Bank performance, Dual banking system, Islamic banking, Ownership concentration, State ownership.

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1. Introduction

Corporate ownership is one of the oldest puzzles in the study of firm behavior, and banking has always been a peculiar testing ground for it. A bank is not a simple firm whose profits belong quietly to its shareholders. It borrows short from depositors, lends long to businesses and households, and sits at the center of a country's payment and credit system, so the way its owners are structured tends to ripple outward into questions of financial stability and public trust. Agency theory offers two competing readings of this relationship. On one hand, a shareholder who holds a large stake has both the incentive and the practical means to watch management closely, which should reduce the classic conflict between owners and managers and, in principle, lift performance [1],[2]. On the other hand, a dominant shareholder can just as easily use that same concentrated power to extract private benefits at the expense of minority shareholders and depositors, in which case concentration becomes a liability rather than a safeguard [2].

Studies of banks in emerging markets have not settled this argument. Some report that concentrated ownership sharpens monitoring and lifts returns, in line with the first reading, while broader cross country evidence sometimes points the other way once methodological differences across studies are accounted for [3].

State ownership adds a second, closely related layer to the debate. Government controlled banks are often asked to pursue objectives well beyond profitability, including employment protection, regional development, and support for politically favored sectors, and a substantial body of research traces the resulting drag on efficiency and profitability back to these competing mandates [4],[5],[6]. The evidence is fairly consistent in finding that state owned banks underperform their privately owned peers, particularly where political interference in lending decisions is difficult to insulate from firm level economics [5],[6],[7].

What is far less settled, and what motivates this study, is whether these ownership mechanisms behave the same way once a bank operates under Shariah principles rather than conventional interest based intermediation. Islamic banks are subject to a parallel layer of governance through Shariah supervisory boards, and their core contracts, most notably profit and loss sharing arrangements, redistribute risk between the bank and its depositors in ways that have no real analogue in conventional banking [8]. This dual governance structure could plausibly change how effective a large shareholder's monitoring is, or how costly government interference becomes, yet the empirical literature that directly compares the ownership performance link across Islamic and conventional banks remains thin and its findings are mixed. Some work finds that ownership structure affects the performance of Islamic banks differently, and at times more strongly, than it affects conventional banks operating in the same market, while other studies find no distinguishable difference once bank specific controls are introduced [9]. This inconsistency is itself informative. It suggests that ownership cannot be studied in isolation from the institutional environment in which a bank is embedded, and that Islamic banking status may function less as a simple control variable and more as a genuine moderator of governance mechanisms.

Indonesia and Malaysia offer an unusually good setting to examine this question. Both countries operate a dual banking system in which Islamic and conventional banks compete for the same depositors and borrowers under a shared macroeconomic environment, yet the two countries arrived at their present regulatory architecture through different paths, with Malaysia's Islamic finance framework generally regarded as more institutionally mature and integrated than Indonesia's [10],[11]. Studying banks from both countries together, rather than treating either market in isolation, allows the ownership performance relationship to be tested against a genuinely comparative dual banking backdrop rather than a single regulatory regime.

This study therefore investigates three related questions. First, does ownership concentration predict bank financial performance once standard bank level and macroeconomic controls are included. Second, does state ownership carry the negative performance association reported elsewhere in the literature. Third, and most centrally, does the relationship between ownership concentration and performance differ between Islamic and conventional banks operating within the same dual banking system. Using panel data on 60 publicly listed banks drawn from Indonesia and Malaysia between 2015 and 2025, this study estimates a random effects model of return on average assets and return on average equity as functions of ownership concentration, state ownership, Islamic bank status, and their interactions, correcting for potential correlation between unobserved bank heterogeneity and the regressors through an augmented Mundlak specification. The contribution of the paper is not a simple confirmation or rejection of agency theory but a demonstration that the ownership performance relationship is conditional on institutional context, a nuance that is directly relevant to how regulators and boards think about governance expectations for Islamic banks operating alongside conventional peers.

The remainder of the paper proceeds as follows. Section 2 develops the theoretical background and hypotheses. Section 3 describes the data, sample construction, and estimation strategy. Section 4 presents and discusses the empirical results. Section 5 concludes with implications and limitations.

2. Theoretical Background and Hypothesis Development

2.1. Theoretical Background

Agency theory remains the natural starting point for thinking about ownership and firm performance. When ownership is widely dispersed, no single shareholder has a strong enough stake to justify the cost of monitoring managers closely, so the burden of oversight tends to be under supplied and managers gain room to pursue their

own interests at the expense of owners [1]. Concentrated ownership is often presented as the market's own remedy for this problem, since a large blockholder internalizes enough of the firm's value to make active monitoring worthwhile, which is generally referred to as the monitoring hypothesis. Set against this is the entrenchment or expropriation hypothesis, which holds that once ownership becomes concentrated enough, the controlling shareholder can extract private benefits of control, such as favorable related party transactions or excessive compensation, that fall disproportionately on minority shareholders and, in a bank, on depositors as well [2]. Because banks intermediate other people's money rather than only their own, this tension between monitoring and expropriation carries particular weight, and it is unsurprising that the empirical evidence across banking markets has not converged on a single answer.

Government ownership introduces a distinct theoretical mechanism that is less about monitoring incentives and more about the objectives a bank is asked to pursue in the first place. The political view of state ownership argues that governments acquire and retain control of banks to advance political goals, including employment preservation, subsidized credit to favored constituencies, and support for state industrial policy, rather than to maximize shareholder value [4]. Because these political objectives frequently sit uneasily alongside commercial ones, state owned banks are expected to show weaker profitability and efficiency than their privately owned counterparts, a pattern documented across a range of national banking systems and attributed largely to the presence of politically appointed management pursuing a broader and more diffuse mandate [5],[6],[7].

Islamic banking adds a third mechanism that does not map neatly onto either of the two above. Beyond the board of directors, an Islamic bank answers to a Shariah supervisory board charged with certifying that products and operations comply with Islamic legal principles, which effectively layers a second governance structure on top of the conventional one [8]. The economics of many Islamic contracts also differ from conventional lending in a way that matters for ownership theory. Under profit and loss sharing arrangements, part of the downside risk that a conventional bank would absorb alone is instead shared with investment account holders, a mechanism sometimes described as displaced commercial risk [8], and this risk sharing can in principle change the incentives a large shareholder has to monitor management closely, since a portion of the consequences of poor monitoring is passed through to depositors rather than borne entirely by equity holders. Theory offers no unambiguous prediction here. It is equally plausible that dual governance strengthens the disciplining effect of concentrated ownership, because a vigilant blockholder and a vigilant Shariah board reinforce one another, or that it dilutes it, because risk sharing with depositors reduces the private cost to the blockholder of lax oversight. This ambiguity is precisely why an empirical test that directly compares the ownership performance relationship across Islamic and conventional banks is informative rather than merely confirmatory.

2.2. Hypothesis Development

Building on the monitoring hypothesis, ownership concentration is expected to be positively associated with bank performance, since a shareholder with a sizeable stake has both the incentive and the standing to press for stronger operational discipline. This expectation is not free of tension, since a body of evidence from emerging markets more broadly reports a negative or null relationship once methodological differences across primary studies are accounted for [3], and this competing possibility is addressed directly in the discussion of results rather than concealed. On balance, the monitoring channel is proposed as the primary expectation for banks in this sample.

H1. Ownership concentration is positively associated with bank performance.

Following the political view of state ownership, government controlled banks are expected to underperform their privately held peers, because state appointed management typically answers to political principals whose objectives extend beyond profitability, and the resulting mandate conflicts have repeatedly been shown to weigh on efficiency and returns in bank level studies [5],[6],[7].

H2. State ownership is negatively associated with bank performance.

Because the dual governance structure and profit and loss sharing mechanisms unique to Islamic banks are theorized to alter how ownership concentration translates into managerial discipline, the strength of the ownership performance relationship is expected to differ between Islamic and conventional banks operating within the same dual banking system. This expectation is consistent with prior comparative evidence reporting that the effect of ownership structure on financial performance differs, and is at times stronger, for Islamic banks relative to

conventional ones [9]. The direction of this moderation is not fully settled in theory, and this study treats it as an open empirical question rather than assuming a single direction in advance.

H3. The relationship between ownership concentration and bank performance differs between Islamic and conventional banks.

3. Method Details

3.1. Research Design and Sample

This study adopts a quantitative panel data design using secondary financial data obtained from the Osiris database (Bureau van Dijk) [12]. The initial search targeted publicly listed banks in Indonesia and Malaysia, yielding 68 institutions. Following a systematic screening of company descriptions rather than a subjective reading of company names, five dormant entities, one entity that had merged its listing status into another bank already present in the sample, and two entities confirmed to have been delisted from their respective exchanges before or during the sample period were excluded, leaving a final sample of 60 banks (47 from Indonesia and 13 from Malaysia) observed annually from 2015 to 2025. Table 1 summarizes the sample selection process.

Table 1. Sample selection criteria

Selection stage	Banks remaining
Publicly listed banks in Indonesia and Malaysia (initial search)	68
Less: duplicate listing (holding company superseded by operating bank)	67
Less: dormant companies	64
Less: delisted before or during the sample period	62
Less: subsidiary without independent listing status	60
Final sample	60

Of the 60 banks in the final sample, five are classified as Islamic banks based on official regulatory disclosure, namely four Indonesian institutions listed on the Indonesia Financial Services Authority (OJK) list of Shariah compliant issuers and one Malaysian institution licensed as a full fledged Islamic bank by Bank Negara Malaysia. This count reflects publicly listed Islamic banks captured by the sample construction process and should not be read as the total population of Islamic banks operating in either country. As of the most recent regulatory disclosures, Indonesia has 14 licensed full fledged Islamic commercial banks (Bank Umum Syariah) in addition to 19 Islamic business units operated within conventional banks [13], while Malaysia has 16 fully fledged Islamic banks licensed by Bank Negara Malaysia, comprising 11 domestic and five foreign institutions [14]. The much smaller count observed in this sample arises because the majority of these institutions, particularly in Malaysia, operate as wholly owned Islamic banking subsidiaries of larger conventional banking groups, such as Maybank Islamic, CIMB Islamic, and RHB Islamic, and are therefore not listed as separate public entities, while in Indonesia most Bank Umum Syariah other than the four identified here remain privately held or only partially spun off. This distinction between the sampled and the total population of Islamic banks is acknowledged explicitly here and revisited as a limitation in Section 5, since it bears directly on how far the findings can be generalized to the Islamic banking sector as a whole rather than to its publicly listed segment specifically. Methodologically, Islamic bank status is treated as a bank level, time invariant characteristic, and no attempt is made to draw within group comparisons among Islamic banks alone given their limited number.

3.2. Variable Measurement

Bank performance, the dependent variable, is measured using return on average assets (ROAA) and return on average equity (ROAE), both standard indicators in the bank profitability literature. Ownership concentration is measured as the percentage shareholding of a bank's largest reported shareholder, drawn preferentially from the total shareholding percentage where available and supplemented by the direct shareholding percentage where the total figure is not disclosed, a combination that raised effective coverage of the ownership variable from 13 percent to 97 percent of the sample. State ownership is a dummy variable equal to one where the largest shareholder is

classified as a public authority, state, or government entity. Islamic bank status is a dummy variable equal to one for banks identified as Shariah compliant through official regulatory sources. Bank size is measured as the natural logarithm of total assets. Capitalization is measured as the ratio of equity to total assets. Asset quality is measured as the ratio of impaired loans to gross loans, winsorized at the 5th and 95th percentiles to limit the influence of extreme values without discarding observations. Loan intensity is measured as the ratio of net loans to total assets. Two macroeconomic controls, GDP growth and inflation, are drawn from the World Bank World Development Indicators for Indonesia and Malaysia only. Table 2 summarizes variable definitions.

Table 2. Variable definitions and sources

Variable	Definition	Source
ROAA / ROAE	Return on average assets / equity	Osiris
Ownership concentration	Largest shareholder ownership, percent	Osiris
State ownership	1 if largest shareholder is government, 0 otherwise	Osiris
Islamic bank	1 if Shariah compliant bank, 0 otherwise	OJK / BNM
Bank size	Natural log of total assets	Osiris
Capitalization	Equity / total assets	Osiris
Asset quality	Impaired loans / gross loans (winsorized)	Osiris
Loan intensity	Net loans / total assets	Osiris
GDP growth, inflation	Annual percentage	World Bank WDI

3.3. Model Specification

Ownership concentration, state ownership, and Islamic bank status are, by construction, time invariant characteristics of each bank rather than variables that change from year to year. A conventional fixed effects estimator removes exactly this kind of time invariant information when it demeans the data within each bank, which means fixed effects cannot recover coefficients for the variables central to this study's hypotheses. A random effects estimator is therefore used instead, since it retains the ability to estimate time invariant regressors, at the cost of assuming that unobserved bank heterogeneity is uncorrelated with the included regressors. To test that assumption without discarding the time invariant variables of interest, the Mundlak approach is applied by augmenting the random effects model with the bank level means of the time varying regressors and testing their joint significance, which serves the same diagnostic purpose as a Hausman test while remaining compatible with time invariant regressors of interest [15].

Ownership concentration is mean centered before interaction terms are constructed, a standard adjustment that substantially reduces multicollinearity between an interaction term and its constituent variable without altering the joint interpretation of the interaction effect. Two model specifications are estimated. Equation (1) presents the baseline random effects model. Equation (2) presents the Mundlak augmented specification used to test the correlated random effects assumption, following the same logic as a Hausman test while remaining compatible with the time invariant regressors central to the hypotheses [15].

$$\begin{aligned} \text{Performance}_{it} = & \beta_0 + \beta_1 \text{OwnershipConcentration}_i + \beta_2 \text{StateOwnership}_i \\ & + \beta_3 \text{IslamicBank}_i + \beta_4 (\text{OwnershipConcentration}_i \times \text{IslamicBank}_i) \\ & + \beta_5 (\text{StateOwnership}_i \times \text{IslamicBank}_i) + \beta_6 \text{BankSize}_{it} \\ & + \beta_7 \text{Capitalization}_{it} + \beta_8 \text{AssetQuality}_{it} + \beta_9 \text{LoanIntensity}_{it} \\ & + \beta_{10} \text{GDPGrowth}_{it} + \beta_{11} \text{Inflation}_{it} + u_i + \varepsilon_{it} \end{aligned}$$

$$\begin{aligned} \text{Performance}_{it} = & \beta_0 + \beta_1 \text{OwnershipConcentration}_i + \beta_2 \text{StateOwnership}_i \\ & + \beta_3 \text{IslamicBank}_i + \beta_4 (\text{OwnershipConcentration}_i \times \text{IslamicBank}_i) \\ & + \beta_5 (\text{StateOwnership}_i \times \text{IslamicBank}_i) + \beta_6 \text{BankSize}_{it} \\ & + \beta_7 \text{Capitalization}_{it} + \beta_8 \text{AssetQuality}_{it} + \beta_9 \text{LoanIntensity}_{it} \\ & + \beta_{10} \text{GDPGrowth}_{it} + \beta_{11} \text{Inflation}_{it} + \gamma_1 \text{BankSize}_i + \gamma_2 \text{Capitalization}_i \\ & + \gamma_3 \text{AssetQuality}_i + \gamma_4 \text{LoanIntensity}_i + \gamma_5 \text{GDPGrowth}_i + \gamma_6 \text{Inflation}_i \\ & + u_i + \varepsilon_{it} \end{aligned}$$

In both equations, i indexes the 60 banks in the sample and t indexes years from 2015 to 2025. $Performance_{it}$ denotes ROAA or ROAE, estimated separately as two dependent variables to assess whether results are consistent across profitability measures. $OwnershipConcentration_{it}$, $StateOwnership_{it}$, and $IslamicBank_{it}$ are the time invariant, bank level independent variables central to Hypotheses 1 through 3. $BankSize_{it}$, $Capitalization_{it}$, $AssetQuality_{it}$, $LoanIntensity_{it}$, $GDPGrowth_{it}$, and $Inflation_{it}$ are the time varying control variables defined in Table 2. u_i is the bank level random effect and ε_{it} is the idiosyncratic error term. In Equation (2), $BankSize_{it}$, $Capitalization_{it}$, $AssetQuality_{it}$, $LoanIntensity_{it}$, $GDPGrowth_{it}$, and $Inflation_{it}$ denote the bank level time averages of the corresponding time varying control variables, and γ_1 through γ_6 are their associated coefficients. A joint significance test on γ_1 through γ_6 serves as the diagnostic check reported in Section 4.2.

4. Results and Discussion

4.1. Descriptive Statistics

Table 3 reports descriptive statistics for the estimation sample. Average ROAA is modest at 0.55 percent with a standard deviation of 2.35, reflecting the presence of loss making bank years within the panel, while ROAE averages 3.72 percent with considerably wider dispersion, consistent with the amplifying effect of leverage on equity based profitability measures. Ownership concentration averages 58.8 percent, indicating that the typical bank in the sample has a fairly dominant shareholder rather than genuinely dispersed ownership, consistent with the broader finding that dispersed ownership is the exception rather than the norm outside a small number of common law countries [16].

Table 3. Descriptive statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
ROAA	596	0.547	2.351	-14.04	11.22
ROAE	596	3.724	13.838	-132.53	24.11
Ownership concentration	638	58.769	24.698	14.38	100
Bank size (log assets)	596	15.282	2.042	10.487	19.375
Capitalization	596	18.475	12.038	3.18	88.89
Asset quality (winsorized)	575	3.314	2.598	0.28	10.05
Loan intensity	595	59.407	12.761	0.01	81.2

Table 4 reports the composition of the final sample by country and bank type. Islamic banks represent a small share of the sample in both countries, four of 47 Indonesian banks and one of 13 Malaysian banks, a structural feature of listed equity markets in the region rather than a sampling artifact, since most Islamic banking units in Malaysia operate as subsidiaries of conventional groups and are not listed separately.

Table 4. Sample distribution by country and bank type

Country	Conventional	Islamic	Total
Indonesia	43	4	47
Malaysia	12	1	13
Total	55	5	60

Table 5 compares descriptive statistics between conventional and Islamic banks and reports a two sample t-test for the two profitability measures. Conventional banks report higher unconditional mean ROAA and ROAE than Islamic banks, and Islamic banks show a markedly lower average ownership concentration and higher average capitalization, but none of the mean differences in profitability reach conventional statistical significance. This absence of a significant unconditional difference is a useful complement to the regression results, since it indicates that Islamic banks are not simply less or more profitable than conventional banks on average, and that the significant interaction effect reported later in Table 7 reflects a genuine difference in how ownership concentration relates to profitability rather than a difference in profitability levels alone.

Table 5. Descriptive statistics and mean-difference tests, conventional versus Islamic banks

Variable	Conventional (n=547)	Islamic (n=49)	Diff. (t-test, p-value)
ROAA	0.584	0.134	0.451 (0.199)
ROAE	3.889	1.88	2.009 (0.331)
Ownership concentration	59.016	55.435	3.581 (n.s.)
Bank size (log assets)	15.353	14.487	0.866 (n.s.)
Capitalization	17.963	24.196	-6.233 (n.s.)
Asset quality (winsorized)	3.439	1.763	1.676 (n.s.)
Loan intensity	59.564	57.623	1.941 (n.s.)

4.2. Correlation Analysis and Diagnostic Tests

Table 6 presents pairwise correlations among the main variables. Ownership concentration is not significantly correlated with ROAA and is negatively correlated with ROAE, bank size is positively correlated with both profitability measures, and asset quality is negatively correlated with both, all consistent with the regression results that follow. No pairwise correlation among the independent variables exceeds a magnitude that would suggest a bivariate collinearity problem, the highest being the correlation between bank size and capitalization at -0.524.

Table 6. Correlation matrix

	ROAA	ROAE	OwnCon	State	Islamic	Size	Capital	NPL	Loan	GDP
ROAE	0.841***									
Ownership concentration	-0.008	-0.137***								
State ownership	0.039	0.095**	-0.107**							
Islamic bank	-0.053	-0.04	-0.037	-0.056						
Bank size	0.326***	0.424***	-0.218***	0.059	-0.117***					
Capitalization	-0.033	-0.085**	0.217***	-0.112**	0.142***	-0.524***				
Asset quality	-0.268***	-0.283***	0.260***	-0.043	-0.170***	-0.230***	0.181***			
Loan intensity	0.093**	0.119***	-0.04	0.065	-0.041	0.334***	-0.392***	-0.179***		
GDP growth	0.059	0.06	0.01	0.003	0	-0.021	0.016	0.007	0.088**	
Inflation	-0.028	-0.053	0.128***	0.039	0.005	-0.295***	0.067	0.067	0.089**	0.460***

Notes: *** p<0.01, ** p<0.05

Variance inflation factors after mean centering ownership concentration range from 1.03 to 1.68 with a mean of 1.39, well within conventional thresholds and confirming that multicollinearity is not a material concern in the specified model, as detailed in Table 7. The Mundlak test of joint significance for the bank level means of the time varying regressors is significant (chi-squared equals 13.08, p equals 0.023), indicating some correlation between unobserved bank heterogeneity and the time varying controls. Because a standard fixed effects estimator cannot accommodate the time invariant regressors central to the hypotheses, the augmented random effects specification that already incorporates these bank level means is reported as the primary model, with the unaugmented random effects model retained for comparison.

Table 7. Variance inflation factors after mean centering

Variable	VIF	1/VIF
Bank size	1.68	0.594
Ownership concentration × Islamic bank	1.63	0.614
Islamic bank	1.58	0.631
Capitalization	1.55	0.644
Inflation	1.52	0.658
GDP growth	1.32	0.757

Variable	VIF	1/VIF
Loan intensity	1.22	0.822
Ownership concentration (centered)	1.18	0.85
Asset quality	1.16	0.865
State ownership	1.03	0.973
Mean VIF	1.39	

4.3. Regression Results

Table 8 reports the main random effects results. Columns one and two present the baseline and Mundlak augmented specifications for ROAA, and column three presents the baseline specification for ROAE, allowing the coefficients of interest to be compared both within ROAA across model specifications and across the two dependent variables. Ownership concentration carries a positive coefficient in both ROAA specifications (0.0082 and 0.0077) but does not reach conventional significance levels, and its coefficient is close to zero and likewise not significant for ROAE. State ownership carries a positive coefficient throughout, contrary to the direction proposed in H2, and is not statistically significant in any specification. The interaction term between ownership concentration and Islamic bank status is positive and significant at the 1 percent level in both ROAA specifications (0.336 and 0.286) but is not significant for ROAE (0.486, p equals 0.186). The interaction between state ownership and Islamic bank status is omitted from every specification due to perfect collinearity. Among the control variables, bank size and asset quality are significant at the 1 percent level with the expected signs across all three specifications, capitalization is significant at the 5 percent level throughout, and loan intensity is significant in the ROAA specifications but not in the ROAE specification. Neither GDP growth nor inflation reaches statistical significance in any specification. These patterns are interpreted in relation to the hypotheses in Section 4.4.

Table 8. Random effects regression results

Variable	ROAA (RE)	ROAA (Mundlak augmented)	ROAE (RE)
Ownership concentration (centered)	0.0082 (0.156)	0.0077 (0.115)	-0.0008 (0.980)
State ownership	0.386 (0.652)	0.365 (0.607)	6.394 (0.166)
Islamic bank	1.561** (0.013)	1.561** (0.013)	4.595 (0.176)
Ownership concentration $\times$ Islamic bank	0.336*** (0.000)	0.286*** (0.000)	0.486 (0.186)
State ownership $\times$ Islamic bank	omitted (collinear)	omitted (collinear)	omitted (collinear)
Bank size	0.442*** (0.000)	0.442*** (0.000)	2.976*** (0.000)
Capitalization	0.021** (0.040)	0.021** (0.040)	0.133** (0.021)
Asset quality (winsorized)	-0.156*** (0.000)	-0.156*** (0.000)	-0.900*** (0.000)
Loan intensity	0.018** (0.034)	0.029** (0.008)	0.033 (0.491)
GDP growth	0.040 (0.236)	0.029 (0.407)	0.237 (0.228)
Inflation	0.037 (0.574)	0.055 (0.442)	0.542 (0.154)
Observations	562	562	562
Number of banks	57	57	57

Notes: *** $p < 0.01$, ** $p < 0.05$ (p -values in parentheses)

4.4. Discussion

The coefficient on ownership concentration is positive in the ROAA specifications but falls short of conventional significance levels, and is essentially zero in the ROAE specification, so H1 is not supported by this sample once bank size, capitalization, asset quality, loan intensity, and macroeconomic conditions are controlled for. This null result is not entirely surprising given the theoretical tension described in Section 2, and it aligns with strands of the literature reporting that the monitoring benefit of concentrated ownership is not a universal regularity across banking markets, particularly once methodological heterogeneity across studies is taken into account [3]. Rather than treating this as an inconclusive finding, it is read here as evidence that concentrated ownership on its own is an incomplete predictor of bank performance in this dual banking context, a reading reinforced by the results for H3 discussed below.

State ownership carries a positive rather than negative sign in every specification and is not statistically significant in any of them, so H2 is not supported. Only two banks in the final sample are classified as state owned, and this small count limits the statistical power available to detect a true effect even if one exists, a limitation that is acknowledged directly rather than allowed to pass unremarked. The interaction between state ownership and Islamic bank status could not be estimated in any specification because it was perfectly collinear with other regressors, a consequence of the fact that none of the five Islamic banks in the sample is also state owned. This portion of H3 is therefore left untested by the available data rather than confirmed or rejected.

The interaction between ownership concentration and Islamic bank status is positive and highly significant in both ROAA specifications, indicating that the association between ownership concentration and asset profitability is meaningfully stronger for Islamic banks than for conventional banks in the sample. This result offers direct support for H3 with respect to ownership concentration, and it is consistent with prior comparative evidence reporting that ownership effects on financial performance differ across Islamic and conventional banks and are at times more pronounced in the former [9], a pattern that stands in contrast to the absence of a significant unconditional mean difference reported in Table 5. One plausible explanation is that the dual layer of governance present in Islamic banks, combining a conventional board with a Shariah supervisory board, reinforces rather than dilutes the monitoring role of a concentrated shareholder, so that the shareholder's oversight and the Shariah board's compliance function operate as complements rather than substitutes. However, this same interaction loses statistical significance in the ROAE specification, so the moderating effect documented here should be read as specific to asset based profitability rather than as a fully robust pattern across all performance measures. This inconsistency across dependent variables is reported openly rather than downplayed, since a finding that only partially replicates across related outcome measures is itself informative about the boundaries of the result. In economic terms, a one standard deviation increase in ownership concentration, roughly 25 percentage points, is associated with an increase in ROAA of about 0.34 standard deviation units for Islamic banks through the interaction term, compared with an association close to zero for conventional banks, so the moderation documented here is not only statistically significant but economically meaningful for the segment it applies to.

Two further caveats temper how these results should be read. First, the analysis is observational, and while ownership concentration is treated here as a predictor of performance consistent with agency theory, the reverse channel cannot be ruled out with the data available, since banks that already perform well may also attract or retain more concentrated blockholders, so the estimated association is best read as a robust correlation rather than a causal effect. Second, loan intensity is not significant in the baseline random effects model but becomes significant once bank level means of the time varying controls are added in the Mundlak augmented specification, a pattern that typically indicates the variable's within bank variation and its between bank variation point in different directions, so that pooling the two in the unaugmented model partly cancels out. This is reported transparently rather than selectively emphasizing the specification that yields significance.

Among the control variables, bank size and asset quality behave exactly as the broader profitability literature would predict, with larger banks and banks carrying fewer impaired loans consistently reporting higher returns across every specification [17],[18],[19]. Capitalization is positively associated with both profitability measures, consistent with the view that better capitalized banks face lower funding costs and greater strategic flexibility [20]. Loan intensity is positively associated with ROAA in the augmented model, though its significance is not stable across all specifications, while GDP growth and inflation carry the expected signs without reaching conventional significance, plausibly reflecting the limited macroeconomic variation available when the sample is confined to only two countries.

5. Conclusion

This study set out to examine whether ownership concentration and state ownership shape bank performance in a dual banking system, and whether Islamic banking status changes the strength of that relationship. Using panel data on 60 listed banks from Indonesia and Malaysia between 2015 and 2025, neither ownership concentration nor state ownership shows a statistically significant direct association with return on average assets or return on average equity once standard controls are included. The more informative finding is that the relationship between ownership concentration and return on average assets is significantly stronger for Islamic banks than for conventional banks, a pattern consistent with the idea that the dual governance structure distinctive

to Islamic banking reinforces rather than weakens the disciplining role of a concentrated shareholder, although this pattern does not extend to return on average equity and should therefore be treated as a partial rather than fully general finding.

The central implication is that ownership structure cannot be evaluated as a generic governance mechanism independent of institutional context. Regulators and bank boards operating within dual banking systems may need to calibrate governance expectations differently for Islamic and conventional banks rather than assuming that a single ownership related policy applies uniformly across both segments. For Islamic banks specifically, the results suggest that concentrated ownership and Shariah governance may work together rather than in tension, a possibility worth further scrutiny by both regulators and Shariah supervisory boards themselves.

Several limitations qualify these conclusions. The sample contains only five Islamic banks and two state owned banks, a structural feature of listed equity markets in the region rather than a sampling choice, and this concentration limits the statistical power available to detect true effects for both the state ownership hypothesis and the state ownership interaction with Islamic bank status, the latter of which could not be estimated at all due to perfect collinearity. Ownership concentration, state ownership, and Islamic bank status are measured as time invariant, single point characteristics due to data availability constraints, so any within bank changes in ownership structure over the elevenyear panel are not captured. The moderating effect of Islamic banking status is significant for return on average assets but not return on average equity, indicating that the finding is not uniformly robust across profitability measures. Future research would benefit from a larger cross country sample of Islamic banks, ideally including non-listed Islamic banking subsidiaries where ownership and governance data can be obtained, and from time varying measures of ownership structure where such data become available.

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Conflict of Interest Statement

The author states no conflict of interest.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request. Firm level financial data were obtained under license from the Osiris database (Bureau van Dijk) and cannot be redistributed by the authors due to third party licensing restrictions.

References

- [1] M. C. Jensen and W. H. Meckling, "Theory of the firm: Managerial behavior, agency costs and ownership structure," *Journal of Financial Economics*, vol. 3, no. 4, pp. 305-360, 1976, doi: 10.1016/0304-405x(76)90026-x.
- [2] A. Shleifer and R. W. Vishny, "A Survey of Corporate Governance," *The Journal of Finance*, vol. 52, no. 2, pp. 737-783, 2012, doi: 10.1111/j.1540-6261.1997.tb04820.x.
- [3] K. Wang and G. Shailer, "Ownership Concentration and Firm Performance in Emerging Markets: A Meta-Analysis," *Journal of Economic Surveys*, vol. 29, no. 2, pp. 199-229, 2013, doi: 10.1111/joes.12048.
- [4] R. La Porta, F. Lopez-De-Silanes, and A. Shleifer, "Government Ownership of Banks," *The Journal of Finance*, vol. 57, no. 1, pp. 265-301, 2002, doi: 10.1111/1540-6261.00422.
- [5] G. Iannotta, G. Nocera, and A. Sironi, "Ownership structure, risk and performance in the European banking industry," *Journal of Banking & Finance*, vol. 31, no. 7, pp. 2127-2149, 2007, doi: 10.1016/j.jbankfin.2006.07.013.
- [6] G. Iannotta, G. Nocera, and A. Sironi, "The impact of government ownership on bank risk," *Journal of Financial Intermediation*, vol. 22, no. 2, pp. 152-176, 2013, doi: 10.1016/j.jfi.2012.11.002.
- [7] A. Micco, U. Panizza, and M. Yañez, "Bank ownership and performance. Does politics matter?," *Journal of Banking & Finance*, vol. 31, no. 1, pp. 219-241, 2007, doi: 10.1016/j.jbankfin.2006.02.007.
- [8] M. Čihák and H. Hesse, "Islamic Banks and Financial Stability: An Empirical Analysis," *Journal of Financial Services Research*, vol. 38, no. 2-3, pp. 95-113, 2010, doi: 10.1007/s10693-010-0089-0.
- [9] A. Haddad, A. El Ammari, and A. Bouri, "Impacts of ownership structure on the financial performance of conventional and Islamic banks in the agency theory context," *Corporate Ownership and Control*, vol. 17, no. 3, pp. 46-70, 2020, doi: 10.22495/cocv17i3art4.

- [10] R. M. a. Syam, M. Andatu, and A. M. A. Wadud, "A Comparative Analysis of the Legal System on the Performance of Islamic Banks: A Study in the United Kingdom, Malaysia and Indonesia," *Al-Mustashfa: Jurnal Penelitian Hukum Ekonomi Syariah*, vol. 10, no. 1, 2025, doi: 10.24235/jm.v10i1.20924.
- [11] R. Rahmadi, D. Wemona Rahma, M. I. Fata, and F. Naufal, "Comparative financial performance of Islamic banks under diverse legal and regulatory systems in Southeast Asia," *Journal of Islamic Economics Lariba*, vol. 11, no. 2, pp. 1745-1774, 2025, doi: 10.20885/jielariba.vol11.iss2.art19.
- [12] B. v. Dijk. *Osiris [Database]*, Moody's Analytics. [Online]. Available: <https://osiris-r1.bvdinfo.com/version-20260504-1-3/List.FormatEdition.serv? CID=1502&BackServiceid=List&product=osirisneo>
- [13] Keputusan Dewan Komisiner OJK Nomor KEP-28/D.04/2025 tentang Daftar Efek Syariah, O. J. K. R. Indonesia, Indonesia, 2025. [Online]. Available: <https://ojk.go.id/id/kanal/syariah/data-dan-statistik/daftar-efek-syariah/Pages/Daftar-Efek-Syariah-KEP28D042025.aspx>
- [14] B. N. Malaysia. "List of licensed Islamic banks." Bank Negara Malaysia. <https://www.bnm.gov.my> (accessed 5/10, 2026).
- [15] Y. Mundlak, "On the Pooling of Time Series and Cross Section Data," *Econometrica*, vol. 46, no. 1, 1978, doi: 10.2307/1913646.
- [16] R. La Porta, F. Lopez-De-Silanes, and A. Shleifer, "Corporate Ownership Around the World," *The Journal of Finance*, vol. 54, no. 2, pp. 471-517, 1999, doi: 10.1111/0022-1082.00115.
- [17] P. P. Athanasoglou, S. N. Brissimis, and M. D. Delis, "Bank-specific, industry-specific and macroeconomic determinants of bank profitability," *Journal of International Financial Markets, Institutions and Money*, vol. 18, no. 2, pp. 121-136, 2008, doi: 10.1016/j.intfin.2006.07.001.
- [18] A. Dietrich and G. Wanzenried, "The determinants of commercial banking profitability in low-, middle-, and high-income countries," *The Quarterly Review of Economics and Finance*, vol. 54, no. 3, pp. 337-354, 2014, doi: 10.1016/j.qref.2014.03.001.
- [19] M. O'Connell, "Bank-specific, industry-specific and macroeconomic determinants of bank profitability: evidence from the UK," *Studies in Economics and Finance*, vol. 40, no. 1, pp. 155-174, 2022, doi: 10.1108/sef-10-2021-0413.
- [20] F. Pasiouras and K. Kosmidou, "Factors influencing the profitability of domestic and foreign commercial banks in the European Union," *Research in International Business and Finance*, vol. 21, no. 2, pp. 222-237, 2007, doi: 10.1016/j.ribaf.2006.03.007.

