

The Impact of Financial Conglomerates Policy on Banking Profitability and Efficiency in Indonesia

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ABSTRACT

Financial conglomerates hold the majority of Indonesia's financial system assets. The recent enactment of Law No. 4 of 2023, alongside OJK Regulation No. 30 of 2024, has significantly widened the supervisory perimeter from four to thirteen categories of financial services institutions. Despite these massive regulatory shifts, whether this structural policy pays for itself in performance terms remains empirically untested. Therefore, this study aims to investigate whether the financial conglomerates policy raises banking profitability and efficiency in Indonesia when the macroeconomic environment is held constant. The research employs a dynamic panel analysis of fifteen conglomerate groups observed quarterly from 2019Q1 to 2025Q2 (315 usable observations), estimated via fixed effects with standard errors clustered at the group level. Dependent variables include return on assets, net interest margin, and the operating-expense-to-operating-income ratio. Conglomeration policy is proxied by group asset share and group membership share, supported by macroeconomic control variables. Furthermore, a PRISMA-based systematic literature review of eleven Scopus-indexed studies complements the estimation. The results show that the asset-share proxy carries a negative and weakly significant coefficient on return on assets and is statistically indistinguishable from zero for margin and cost efficiency. By contrast, the membership proxy is positively and significantly associated with return on assets, indicating that perimeter breadth and asset concentration operate through opposite channels. Ultimately, the findings conclude a resilience-profitability trade-off: the conglomerate structure that improves credit risk outcomes simultaneously compresses returns. As a policy implication, financial supervisors should price this trade-off explicitly rather than assume that prudential consolidation is performance-neutral.

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1. INTRODUCTION

Financial conglomerates occupy a position in the Indonesian financial system that is difficult to overstate. By June 2025, the twenty-seven groups mapped by the Financial Services Authority [1] held IDR 11,095 trillion in assets, equivalent to 57.09 per cent of the assets of the entire financial services sector, distributed across 252 legal entities. More than eighty per cent of those assets sit inside the banking arms of the groups [2]. Any regulation that reshapes how these groups are organised therefore reshapes the banking system itself, and the question of what such regulation costs the institutions subject to it is not merely academic. Financial stability, in the sense used here, is the capacity of the system to allocate resources and absorb shocks without impairing its core functions [3], and the profitability of its largest institutions is one of the conditions on which that capacity rests.

Indonesia has recently rewritten that regulation. Law No. 4 of 2023 on the Development and Strengthening of the Financial Sector gave OJK an explicit statutory basis for supervising financial holding companies, and for assessing the systemic impact of the groups they head [4]. OJK Regulation No. 30 of 2024 then replaced the earlier framework. It expanded the conglomerate perimeter from four categories of financial services institutions to thirteen, drawing in guarantee institutions, pension funds, venture capital firms, pawnshops, peer-to-peer lending platforms, and securities crowdfunding operators alongside the traditional banking, insurance, securities, and multifinance members [5]. The reform follows the five principles for the supervision of financial conglomerates issued by the Joint Forum, which cover supervisory powers, supervisory responsibility, corporate governance, capital adequacy and liquidity, and risk management [6].

The empirical literature on whether conglomeration improves bank performance has not converged. One tradition estimates cost and profit frontiers. Applied stochastic frontier analysis and data envelopment analysis to 110 Italian banking groups and found the groups less cost-efficient than their parents and subsidiaries taken individually [7]; their later work detected profit-efficiency gains without a matching improvement in cost efficiency [8]. European banking groups were generally more efficient than smaller ones, although the gap narrowed between 2006 and 2010 [9]. A second tradition uses panel regression on holding company structures. For 1,816 United States Financial Holding Companies, measurable diversification benefits were outweighed by the volatility of non-interest income, leaving risk-adjusted returns lower [10]. Opposite for stability, with holding-company affiliates weathering shocks better than independent banks [11]. For Indonesia, conglomerate affiliation reduced insolvency risk and improved efficiency over 2014 to 2017 [12].

Each strand has a limitation that matters for the present question. Frontier studies identify efficiency but say little about the regulatory variable of interest, because the conglomerate is treated as a fixed organisational fact rather than as the object of a policy that changes over time. Panel studies of holding companies are dominated by United States and European samples in which the supervisory architecture differs fundamentally from Indonesia's integrated model. And the one Indonesian study closest to this question observes a period that ends six years before the statutory reform, when the conglomerate perimeter was still confined to four sectors and no Financial Holding Company obligation existed. No

published work has tested whether the current regime delivers the performance outcomes its architecture implies.

This study addresses that gap by asking a single question: does Financial Conglomerates policy have a significant positive effect on banking profitability and efficiency in Indonesia, once gross domestic product, inflation, the policy rate, and the exchange rate are held constant? The approach is a dynamic panel of fifteen conglomerate groups observed quarterly from 2019Q1 to 2025Q2, estimated by fixed effects with standard errors clustered at the group level. Profitability and efficiency are measured by return on assets, net interest margin, and the ratio of operating expenses to operating income. Financial Conglomerates policy is proxied in two distinct ways, by the group's share of financial services sector assets and by its share of the population of financial services institutions, a distinction that turns out to carry most of the paper's analytical weight. A systematic literature review conducted under the PRISMA protocol supplies the qualitative component of the mixed-method design.

The contributions are four. First, the study provides the first empirical assessment of the profitability and efficiency consequences of the post-2023 Indonesian conglomeration regime. Second, it separates two dimensions of conglomeration that the literature routinely conflates, showing that asset concentration and perimeter breadth push bank returns in opposite directions. Third, it reports standardised coefficients for every equation, which makes the relative weight of structural and macroeconomic determinants directly comparable rather than merely sign-and-significance readable. Fourth, it frames the result as a supervisory trade-off with concrete implications for how integrated supervision is calibrated, rather than as a null finding.

The remainder of the paper is organised as follows. Section 2 reviews the theoretical mechanisms and the empirical evidence and develops the hypothesis. Section 3 sets out the data, the variables, the empirical model, and the estimation strategy. Section 4 presents the descriptive statistics, the diagnostic tests, and the regression results, and discusses them. Section 5 compares the findings with the closest prior studies. Section 6 concludes with implications, limitations, and directions for further work.

Two families of mechanisms connect conglomerate structure to bank performance, and they work against each other. The first is the diversification and internal capital market argument. Combining businesses whose cash flows are imperfectly correlated lowers the volatility of group earnings, which reduces the capital a group must hold against a given solvency standard and frees resources for lending. Formalised this as virtual economic capital, created by confirmed that diversification lowers insolvency risk in conglomerate structures [13], [14]. Groups can also reallocate liquidity internally when an individual member faces a funding shock, a channel documented for conglomerate-affiliated hedge funds during crisis episodes [15]. Multinational conglomerates improve their joint management of profitability, liquidity, and risk through precisely this kind of group-level optimisation [16].

The second family runs in the opposite direction and derives from agency theory. Separating ownership from control creates monitoring costs that rise with organisational complexity [17]. In a conglomerate, the holding entity monitors operating subsidiaries across

sectors whose risk models, reporting cycles, and regulatory languages differ, so informational distance widens as the perimeter grows. When an agent performs multiple tasks of unequal measurability, high-powered incentives on the measurable task distort effort away from the rest, a problem that group structures institutionalise [17]. The delegated monitoring framework implies that the value a financial intermediary creates depends on its monitoring being cheaper than the alternative, and complexity erodes exactly that advantage [18]. Compliance with integrated risk management, integrated governance, and integrated capital reporting adds a further fixed cost that falls on the group's income statement without a matching revenue line.

Which family dominates is therefore an empirical question, and the answer may differ by performance dimension. Diversification acts mainly on risk and on the tail of the loss distribution, which shows up in credit quality and capital ratios. Monitoring and compliance costs act on the expense side, which shows up in returns and cost ratios. A structure can plausibly improve the first while depressing the second, and the possibility of such a trade-off is what motivates testing profitability and efficiency separately rather than folding them into a composite stability index.

Evidence on cost efficiency is unfavourable to conglomeration in the European setting. Italian banking groups were found to be less cost-efficient than their component institutions, with size not being a significant determinant of cost efficiency [7]. A subsequent study of Italian conglomerates from 1996 to 1999 identified improvements in profit efficiency but no clear trend in cost efficiency [7]. A partial counterweight showed that larger European banking groups were more efficient than smaller ones across France, Germany, Italy, Spain, and the United Kingdom, with the advantage eroding towards the end of the sample [9].

Evidence on profitability is similarly divided. The sharpest statement of the sceptical position indicates that diversification gains in United States financial holding companies existed but were more than offset by the volatility of the non-interest income that generated them, so risk-adjusted profits fell [10]. The opposite was reported for Taiwan, where bank-insurance mergers improved sector efficiency, reduced insolvency risk, and produced better resource allocation [19]. A study of 274 acquisitions of non-bank financial firms by banks found that acquisitions of securities firms raised total, systematic, and idiosyncratic risk, with bank size a significant determinant of systematic risk [20].

For risk and stability outcomes, the weight of evidence is more favourable. Holding-company affiliates were found to be more resilient to shocks than independent banks in the United States, with independent institutions showing higher systemic risk after a shock [11]. A study of twenty-one French institutions showed that insurance components of conglomerates were more exposed than pure insurers but benefited from group-level diversification, and that conglomerates enhanced sector resilience under extreme adverse shocks [21]. Working against this, an application of extreme value theory to the ten largest European banks and insurers concluded that diversification reduces risk for individual firms while potentially raising systemic risk in a highly interconnected system [22], and systematically higher leverage was documented among conglomerate-affiliated firms in

India [23]. A study of European banks including holding companies from 1992 to 2007 found that conglomeration did not improve banking system stability at all [24].

In the Indonesian setting, a reference study using fixed-effects and generalised method of moments estimation on data from 2014 to 2017 concluded that conglomeration reduced insolvency risk and that conglomerate-affiliated banks were more efficient than non-affiliated banks [12]. That period, however, predates both the statutory reform and the expanded perimeter, and the conglomerate concept then in force covered only four sectors. Whether the conclusion survives under the current regime has not been tested.

Indonesian supervision of Financial Conglomerates is built on integrated risk management. OJK Regulation No. 17/POJK.03/2014 requires the Main Entity of each group to integrate risk management across ten inherent risk categories, including intra-group transaction risk and insurance risk alongside the conventional credit, market, liquidity, operational, legal, reputation, strategic, and compliance risks (Otoritas Jasa Keuangan, 2014). Law No. 4 of 2023 subsequently established the Financial Holding Company as a supervised entity in its own right and empowered OJK to assess the systemic impact of the group [4]. OJK Regulation No. 30 of 2024 operationalised this by revoking the earlier framework, widening the definition of group membership, and placing responsibility for group capital strategy on the holding company [4]. The design question this raises is long-standing: regulatory capital in a conglomerate should cover risks the market does not price, and recognizing diversification at group level can raise systemic risk and weaken market discipline [25], while permitting capital arbitrage within a holding structure can improve welfare by strengthening market discipline and reducing reliance on deposit insurance [26].

Two features of this architecture matter for the empirical design. First, the policy variable is not binary. A group can grow in asset terms without adding members, or add members without materially changing its asset share, and the two movements have different economic content. Second, the supervisory intent is explicitly stability-oriented rather than performance-oriented: the objective stated in the regulation is an orderly, fair, transparent, and accountable sector that grows sustainably while protecting consumers. Nothing in the framework promises that compliance will be profitable for the institutions bearing it, which makes the direction of the profitability effect a genuinely open question rather than a foregone conclusion.

The prevailing view in the literature closest to the Indonesian case is that Financial Conglomerates improve bank performance. Affiliated banks were found to be more efficient than non-affiliated banks [12]; cross-sector mergers were found to be efficiency-enhancing [19]; scale within banking groups was associated with efficiency [9]; and group structures were shown to improve the joint management of profitability and risk [16]. Taken together, these results support a positively signed prior. Accordingly, and consistent with the direction of the policy's stated ambition, the hypothesis tested is stated positively:

H1: Financial Conglomerates policy has a significant positive impact on banking profitability and efficiency in Indonesia, controlling for gross domestic product, inflation, the BI seven-day reverse repo rate, and the exchange rate.

The counter-evidence implies that rejection in the stated direction is a live possibility, and that such a rejection would carry substantive rather than merely statistical content[16]; [10].

2. METHOD

2.1. Research Design

The study uses a mixed-method design in which a quantitative panel estimation carries the hypothesis test and a qualitative systematic literature review supplies interpretive context. The quantitative component is dominant; the review is used to establish whether the mechanisms implied by the estimates are recognised in the wider evidence base rather than to generate independent findings.

2.2. Data and Sample

The panel covers fifteen Financial Conglomerates mapped by OJK, observed quarterly from 2019Q1 to 2025Q2. This yields 390 group-quarter observations, of which 315 remain after the lag transformation removes the first observation of each cross-sectional unit, leaving twenty-one quarters for each of the fifteen groups. The panel is balanced. Group-level financial ratios are compiled from OJK publications and from the published financial statements of group members. Macroeconomic series are taken from Bank Indonesia, Statistics Indonesia, and international databases including the World Development Indicators. The window spans the pandemic shock, the restructuring forbearance that followed it, the global tightening cycle from 2022, and the entry into force of the statutory and regulatory reform, so it captures the transition rather than a single policy regime.

2.3. Variable Definition and Measurement

Three dependent variables represent the profitability and efficiency block of financial system stability. Return on assets and net interest margin measure profitability from the asset and the intermediation-spread perspective, respectively, and the ratio of operating expenses to operating income, known in Indonesian supervisory practice as BOPO, measures cost efficiency inversely: a lower value denotes a more efficient bank. Financial Conglomerates policy is proxied by two variables. FCA is the group's assets relative to total financial services sector assets and is entered in natural logarithms; it captures concentration. FCM is the group's members relative to the total population of financial services institutions; it captures the breadth of the supervisory perimeter. Four country-level controls enter every equation. Table 1 sets out the definitions.

Table 1. Variable definitions and measurement.

Variable	Definition	Role	Measurement
ROAB	Return on assets of the banking arm: profit before tax over total assets	Dependent	Per cent
NIMB	Net interest margin: interest earned on lending less interest paid on funding	Dependent	Per cent
BOPO	Operating expenses to operating income; higher values denote lower efficiency	Dependent	Per cent
LN_FCA	Natural logarithm of group assets relative to total financial services sector assets	Explanatory	Log of per cent
FCM	Group members relative to the total population of financial services institutions	Explanatory	Ratio
LN_GDP	Natural logarithm of real gross domestic product growth	Control	Log of per cent
CINF	Consumer price inflation	Control	Per cent
BIIR	Bank Indonesia seven-day reverse repo rate	Control	Per cent
REER	Real effective exchange rate, quarterly change	Control	Per cent

Source: compiled by the authors from OJK and Bank Indonesia definitions.

2.4. Empirical Model

Every equation includes the first lag of the dependent variable on the right-hand side. This is not a technical convenience. Banking ratios adjust towards their desired levels only partially within a quarter, so the specification is a partial adjustment model in which the lag coefficient measures the share of the gap that persists. Including the lag also absorbs persistent unobserved determinants that would otherwise sit in the error term and removes serial correlation. The general form is given in Eq. (1).

$$Y_{it} = \alpha + \beta_1 Y_{it-1} + \beta_2 FC_{it} + \beta_3 LN_GDP_t + \beta_4 CINF_t + \beta_5 BIIR_t + \beta_6 REER_t + \mu_i + \varepsilon_{it} \quad 1)$$

where Y denotes, in turn, ROAB, NIMB, and BOPO for group i in quarter t; FC denotes either LN_FCA or FCM; μ captures the group fixed effect; and ε is the idiosyncratic error. Estimating each dependent variable against each policy proxy separately, rather than entering both simultaneously, avoids conflating two correlated dimensions of the same structure and yields the six equations reported in Eq. (2) to Eq. (7).

$$ROAB_{it} = \alpha + \beta_1 ROAB_{it-1} + \beta_2 LN_FCA_{it} + \beta_3 LN_GDP_t + \beta_4 CINF_t + \beta_5 BIIR_t + \beta_6 REER_t + \mu_i + \varepsilon_{it} \quad 2)$$

$$ROAB_{it} = \alpha + \beta_1 ROAB_{it-1} + \beta_2 FCM_{it} + \beta_3 LN_GDP_t + \beta_4 CINF_t + \beta_5 BIIR_t + \beta_6 REER_t + \mu_i + \varepsilon_{it} \quad 3)$$

$$NIMB_{it} = \alpha + \beta_1 NIMB_{it-1} + \beta_2 LN_FCA_{it} + \beta_3 LN_GDP_t + \beta_4 CINF_t + \beta_5 BIIR_t + \beta_6 REER_t + \mu_i + \varepsilon_{it} \quad 4)$$

$$NIMB_{it} = \alpha + \beta_1 NIMB_{it-1} + \beta_2 FCM_{it} + \beta_3 LN_GDP_t + \beta_4 CINF_t + \beta_5 BIIR_t + \beta_6 REER_t + \mu_i + \varepsilon_{it} \quad 5)$$

$$BOPO_{it} = \alpha + \beta_1 BOPO_{it-1} + \beta_2 LN_FCA_{it} + \beta_3 LN_GDP_t + \beta_4 CINF_t + \beta_5 BIIR_t + \beta_6 REER_t + \mu_i + \varepsilon_{it} \quad 6)$$

$$BOPO_{it} = \alpha + \beta_1 BOPO_{it-1} + \beta_2 FCM_{it} + \beta_3 LN_GDP_t + \beta_4 CINF_t + \beta_5 BIIR_t + \beta_6 REER_t + \mu_i + \varepsilon_{it} \quad 7)$$

2.5 Estimation Strategy and Diagnostics

Panel estimation is used because it controls for unobserved heterogeneity across groups, raises the degrees of freedom, and reduces collinearity among the regressors [27], [28]. Pooled ordinary least squares, random effects, and fixed effects are estimated and compared through a Hausman test. Multicollinearity is screened by pairwise correlation and by the variance inflation factor. Serial correlation is tested by regressing the residual on its own lag. Fixed effects with standard errors clustered at the group level are the reported specification throughout, on the ground that it is the conservative choice in a setting where unobserved group-specific supervisory and governance characteristics are likely to be

correlated with the regressors, and because clustering guards against heteroscedasticity and within-group dependence regardless of the Hausman outcome.

Because the regressors are measured in different units and differ markedly in dispersion, raw coefficients cannot be compared across variables within an equation. Standardised coefficients are therefore computed as the estimated coefficient multiplied by the standard deviation of the regressor and divided by the standard deviation of the dependent variable. Each standardised value expresses the change in the dependent variable, in units of its own standard deviation, associated with a one standard deviation change in the regressor, so the variable with the largest absolute value is the dominant determinant in that equation.

2.6. Systematic Literature Review Protocol

The qualitative component follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses protocol, applied according to established systematic review process research methodology[29], [30]. The search was executed in Scopus using the string (“financial conglomerate” OR “financial holding company” OR “bank holding company”) AND (“systemic risk” OR “financial stability” OR “financial system stability”). Ninety records were identified. Fifty-four were removed at screening for document type, language, publication before 2016, or subject area outside economics, econometrics, finance, business, management, and accounting, leaving thirty-six records. Full-text assessment excluded a further twenty-five that were not based on empirical data or did not address conglomerates and financial system stability jointly. Eleven studies were retained.

3. RESULTS AND DISCUSSION

3.1. Results

Table 2 reports the descriptive statistics for the 390 available observations before lag transformation.

Table 2. Descriptive statistics.

Variable	Obs	Mean	Std. dev.	Min	Max
ROAB	390	2.367	0.359	1.586	2.768
NIMB	390	4.603	0.178	4.197	4.855
BOPO	390	82.136	3.872	76.343	91.144
LN_FCA	390	0.760	1.045	-1.422	2.744
FCM	390	0.238	0.141	0.064	0.770
LN_GDP	390	1.599	0.158	1.087	1.956
CINF	390	2.683	1.281	1.030	5.950
BIIR	390	4.942	1.042	3.500	6.250
REER	390	2.077	4.883	-11.523	14.905

Source: data from various sources, processed by the authors.

Banking profitability was stable over the window. Return on assets averaged 2.367 per cent within a range of 1.586 to 2.768, and net interest margin averaged 4.603 per cent with a standard deviation of only 0.178, which is narrow by international standards and reflects the structural stability of Indonesian lending spreads. Cost efficiency averaged 82.136 per cent and remained below the 100 per cent threshold throughout, including during the pandemic quarters. The conglomeration proxies show considerably more dispersion: the logged asset share has a standard deviation of 1.045 around a mean of 0.760, and the membership share

ranges from 0.064 to 0.770, reflecting the widening of the perimeter under the new regulation.

4.2. Diagnostic Tests

The initial specification included a group size variable alongside the asset share. The variance inflation factor for that pair reached 727.091 and 729.131, respectively, against a conventional threshold of ten, and the pairwise correlation between them was 0.999. The two variables were measuring the same underlying quantity. Removing the size variable reduced the factor for the asset share to 1.073 and left every remaining regressor between 1.032 and 1.306, as Table 3 shows. The size variable is excluded from all reported specifications, and the diagnosis is documented here rather than suppressed, since the near-perfect collinearity is itself informative: in the Indonesian setting, a group's asset share and its absolute size are empirically indistinguishable.

Table 3. Variance inflation factors before and after exclusion of the size variable.

Variable	VIF (initial)	1/F	VIF (final)	1/VIF
LN_SIZE	727.091	0.001	excluded	–
LN_FCA	729.131	0.001	1.073	0.932
LN_GDP	1.206	0.829	1.134	0.882
FCM	1.111	0.900	1.102	0.907
CINF	1.315	0.760	1.237	0.808
BIIR	1.086	0.921	1.032	0.969
REER	1.459	0.685	1.306	0.766

Source: data from various sources, processed by the authors.

The Hausman test returned a chi-square statistic indistinguishable from zero with a p-value of unity, which formally favours random effects. That result should be read with caution rather than acted on mechanically. A statistic this close to zero in a specification containing a highly persistent lagged dependent variable usually indicates that between-group variation is small relative to within-group variation, not that group effects are genuinely orthogonal to the regressors. Fixed effects are therefore retained as the conservative estimator, which is also the standard choice in conglomerate research where unobserved governance and supervisory heterogeneity is expected. The autocorrelation test regressing the residual on its lag produced $F(1, 283) = 0.96$ with a p-value of 0.327, so the null of no serial correlation is not rejected. Cluster-robust standard errors are nonetheless applied throughout to address heteroscedasticity and residual within-group dependence.

Table 4 reports the fixed-effects estimates for the six equations. Columns 1 and 2 give return on assets against the asset share and the membership share, respectively, columns 3 and 4 give net interest margin, and columns 5 and 6 give the cost efficiency ratio.

Table 4. Fixed-effects estimates of banking profitability and efficiency
2019Q1–2025Q2.

Variable	(1) ROAB	(2) ROAB	(3) NIMB	(4) NIMB	(5) BOPO	(6) BOPO
Lagged dependent	0.702***	0.684***	0.541***	0.529***	0.221***	0.215***
	(0.000754)	(0.0104)	(0.00217)	(0.0124)	(0.00513)	(0.00413)
LN_FCA	-0.0192*		-0.00602		-1.186	
	(0.0106)		(0.00942)		(0.724)	
FCM		0.183***		-0.0454		0.0550
		(0.0486)		(0.0283)		(1.275)
LN_GDP	-0.0951***	-0.108***	0.390***	0.389***	-5.940***	-6.114***
	(0.00225)	(0.00419)	(0.00141)	(0.000958)	(0.103)	(0.0665)
CINF	0.0414***	0.0447***	0.0500***	0.0498***	-1.048***	-1.038***
	(0.000268)	(0.00173)	(0.000122)	(0.000213)	(0.00927)	(0.0239)
BIIR	0.0406***	0.0423***	0.0308***	0.0321***	-0.632***	-0.665***
	(0.000446)	(0.00131)	(0.000411)	(0.00142)	(0.0223)	(0.0130)
REER	-0.00168***	-0.00186***	-0.0198***	-0.0198***	0.207***	0.199***
	(0.000107)	(0.0000630)	(0.0000882)	(0.0000208)	(0.00293)	(0.000386)
Constant	0.604***	0.589***	1.248***	1.308***	79.54***	79.52***
	(0.00622)	(0.0132)	(0.0130)	(0.0593)	(0.877)	(0.541)
Observations	315	315	315	315	315	315
Groups	15	15	15	15	15	15

Cluster-robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.
Source: data from various sources, processed by the authors.

Three results stand out. First, persistence is high and significant in every equation. The lag coefficient is 0.684 to 0.702 for return on assets, 0.529 to 0.541 for net interest margin, and 0.215 to 0.221 for cost efficiency. Roughly seventy per cent of a bank's profitability position carries into the following quarter, so the system adjusts slowly, and any policy effect accumulates over time rather than arriving at once.

Second, the asset share carries a negative coefficient of -0.0192 on return on assets, significant at the ten per cent level. A one standard deviation increase in the logged asset share is associated with a contemporaneous decline of about 0.020 percentage points in return on assets. Because the specification is dynamic, the long-run effect is the coefficient divided by one minus the lag, or roughly -0.064 percentage points, which is around 2.7 per cent of the sample mean return on assets. The effect on net interest margin is negative but statistically indistinguishable from zero. The coefficient on cost efficiency is -1.186 with a standard error of 0.724, a t-ratio of about -1.64 that falls just short of the ten per cent level; the point estimate points towards lower costs, but the estimate is too imprecise to support a claim. Hypothesis H1 is therefore rejected in the direction stated: Financial Conglomerates policy proxied by asset concentration does not raise banking profitability or efficiency, and on the profitability measure it lowers them.

Third, and this is the result with the widest implications, the two policy proxies diverge sharply. The membership share enters the return on assets equation positively at 0.183 and is significant at the one per cent level, implying a long-run effect of roughly 0.58 percentage points. Concentration of assets within a group depresses returns while breadth of the membership perimeter raises them. The two are not alternative measures of the same

thing; they capture opposing economic forces, and treating conglomeration as a single scalar obscures this.

Table 5 reports standardised coefficients, which allow the relative weight of each determinant to be compared within an equation.

Table 5. Standardised coefficients (β^*) by equation.

Equation	Lag	FCA	FCM	GDP	CINF	BIIR	REER
ROAB	0.702	-0.056	0.072	-0.042	0.148	0.118	-0.023
NIMB	0.541	-0.035	-0.036	0.346	0.360	0.181	-0.544
BOPO	0.221	-0.320	0.002	-0.242	-0.347	-0.170	0.261

Source: authors' calculations.

The standardised values sharpen the interpretation in two ways. In the return on assets equation, the lag dominates at 0.702, followed by inflation at 0.148 and the policy rate at 0.118, while the asset share registers only -0.056. The statistically detectable profitability penalty is real but economically modest relative to the macroeconomic environment and to inertia. In the cost efficiency equation, the ranking inverts: the asset share registers -0.320, the largest standardised magnitude of any structural regressor and second overall only to inflation at -0.347, and well ahead of the lag at 0.221. Since a lower cost ratio denotes greater efficiency, the negative sign points to a substantial efficiency gain associated with asset concentration. That gain is economically the largest structural effect in the entire table and is simultaneously the least precisely estimated, which is an honest description of the evidence rather than a defect to be argued away.

The exchange rate dominates the margin equation at -0.544, exceeding inflation at 0.360 and growth at 0.346. Indonesian lending spreads are more exposed to external conditions than to domestic structure, which is consistent with the role of foreign portfolio flows in setting funding costs and with the fact that group organisation has no direct channel to the spread. The estimation results reveal a distinct resilience-profitability trade-off within Indonesia's financial conglomerates, rejecting the hypothesis that prudential consolidation uniformly improves banking performance. Specifically, the findings demonstrate that the two dimensions of conglomeration policy operate through opposing channels: an increase in a group's asset share (concentration) significantly depresses return on assets, whereas a broader membership perimeter significantly raises it. Furthermore, the effects of asset concentration on net interest margin and cost efficiency are statistically indistinguishable from zero, indicating that the organizational complexity of conglomerates primarily compresses financial returns rather than enhancing cost efficiency. Finally, standardized coefficients reveal that structural policy effects are largely overshadowed by historical persistence and macroeconomic variables, particularly the exchange rate, inflation, and the policy rate, which remain the dominant determinants of banking profitability and efficiency across all models

3.2 Discussion

The pattern in Table 4 and Table 5 is best read as a trade-off rather than as a failure of policy. Conglomerate structure improves the quality of the loan book and strengthens

capital and liquidity positions, an effect documented internationally [11], [21]. The estimates here show that this improvement is not free. Returns on assets are compressed at the same time, and the compression persists: with a lag coefficient near 0.7, the long-run profitability effect is more than three times the contemporaneous one.

The mechanism most consistent with the evidence is the agency and monitoring channel. As a group concentrates assets, the informational distance between the holding entity and its operating subsidiaries grows, monitoring becomes more costly, and the multi-task incentive distortions become harder to contain [31]. Integrated risk management, integrated governance, and integrated capital reporting each add fixed compliance costs. Returns fall even where risk management demonstrably improves, which matches the theoretical predictions for agency costs and empirical patterns documented in holding companies [10], [17].

The divergence between the two proxies deserves emphasis because it has a direct policy reading. A wider membership perimeter distributes activity across a larger number of entities, each supervised within its own sectoral framework, and is associated here with higher returns. Concentration of assets within a small number of interconnected groups is associated with lower returns. The regulatory expansion under OJK Regulation No. 30 of 2024, which widened the perimeter from four to thirteen categories, therefore operates on the dimension that the estimates associate with better rather than worse performance. This is a defensible empirical argument in favour of perimeter breadth, and it is available only because the two dimensions were modelled separately.

The macroeconomic controls behave coherently and dominate throughout. Inflation raises both return on assets and margin while lowering the cost ratio, consistent with revenue repricing faster than operating costs in a moderate-inflation environment. The policy rate works in the same direction, which reflects the asset sensitivity of Indonesian bank balance sheets. Growth raises the margin but lowers return on assets, a combination explained by asset expansion outpacing profit growth during upswings. Exchange rate appreciation compresses both profitability measures and raises the cost ratio. The consistent conclusion is that conglomeration policy cannot substitute for macroeconomic management in supporting bank performance.

The eleven studies retained under the PRISMA protocol converge on four propositions. Risk within conglomerate structures propagates rather than remaining isolated, because networks, liquidity channels, and shared operations transmit it. Interconnectedness raises efficiency and vulnerability simultaneously. Regulation must evolve with financial complexity, and most of the reviewed studies call for stronger macroprudential and microprudential instruments together with early warning systems. Systemically important institutions drive risk dynamics disproportionately. The reviewed studies diverge on risk channel, on method, and on the sign of the diversification effect, with some finding stability and liquidity benefits and others higher risk and weaker performance. That divergence is itself informative: the trade-off identified here is not an Indonesian anomaly but the local expression of a genuinely unsettled international question.

Table 6 places the findings alongside the studies closest in setting or method. The comparison clarifies where this paper agrees with the literature, where it departs from it, and why.

Table 6. Comparison with prior studies on Financial Conglomerates and bank performance

Study	Setting and period	Method	Finding	Relation to this study
Casu and Girardone (2002)	110 Italian banking groups, 1995	SFA and DEA	Groups less cost-efficient than component banks	Consistent
Stiroh and Rumble (2006)	1,816 US financial holding companies, 1997–2002	Panel regression	Diversification gains outweighed by income volatility; lower risk-adjusted profit	Consistent
Lin and Huang (2009)	Taiwan financial services, merger simulation	DEA option-based	Cross-sector mergers improve efficiency and reduce insolvency risk	Contrasting
Dell'Atti et al. (2015)	European banking groups, 2006–2010	DEA and Malmquist index	Larger groups more efficient, gap narrowing	Contrasting
Supangkat et al. (2020)	Indonesian banks, 2014–2017	Fixed effects and GMM	Conglomerates more efficient; insolvency risk reduced	Contrasting
Raykov and Silva-Buston (2020)	US banking sector	Panel regression	Holding company affiliates more resilient to shocks	Consistent on resilience
This study	15 Indonesian conglomerate groups, 2019Q1–2025Q2	Dynamic panel fixed effects	Asset share lowers ROA; membership share raises it; efficiency effect imprecise	–

Source: compiled by the authors.

The divergence from earlier empirical results sharing the same jurisdiction is the most consequential [12]. Three differences plausibly account for it. The observation window there runs from 2014 to 2017, entirely before the statutory reform, when the conglomerate perimeter covered four sectors and no Financial Holding Company obligation existed. The unit of analysis is the individual bank rather than the group, so group-level compliance cost is not attributed to the institution bearing it. Furthermore, the dependent variable set emphasises risk and efficiency measures rather than return on assets. Read together, the two studies are less contradictory than sequential: conglomeration under a light perimeter delivered efficiency, and conglomeration under an integrated and expanded perimeter delivers resilience at a measurable cost in returns.

Agreement with previous findings in the literature is more than coincidental [8], [10]. Both identify the same mechanism, namely that organisational complexity consumes the gains that diversification generates. That this mechanism reproduces in an emerging market with an integrated supervisory architecture, rather than in the market-based systems where it was first documented, strengthens the claim that it is structural rather than institutional.

4. CONCLUSION

This study tested whether Financial Conglomerates policy raises banking profitability and efficiency in Indonesia, using a dynamic panel of fifteen Financial Conglomerates observed quarterly from 2019Q1 to 2025Q2 and estimated by fixed effects with cluster-robust standard errors. The hypothesis is rejected in the direction stated. The group asset share carries a negative and weakly significant coefficient on return on assets, with a long-run effect roughly three times the contemporaneous one, and is statistically indistinguishable from zero for net interest margin and for cost efficiency. The membership share, by contrast, is positively and significantly associated with return on assets. Persistence is high in every equation, and macroeconomic conditions dominate the standardised rankings.

Three findings carry beyond the hypothesis test. The first is the trade-off: the structure that improves credit risk outcomes compresses returns, so prudential consolidation is not performance-neutral and should not be assumed to be. The second is the divergence between the two policy proxies, which shows that asset concentration and perimeter breadth operate through opposite channels and should not be collapsed into a single measure of conglomeration. The third is the dominance of inertia and the macroeconomic environment, which implies that structural regulation alone cannot deliver a stable and profitable banking system without supportive monetary and fiscal conditions.

For supervisors, the implications are specific. Integrated supervision should concentrate on the channel where the evidence shows it works, namely resilience, and should recognise the profitability cost explicitly when calibrating capital and reporting requirements rather than treating it as an unintended side effect. The alignment of the integrated minimum capital regulation with the expanded membership definition in OJK Regulation No. 30 of 2024 is a concrete and outstanding item, since the capital rules still reference only four member categories. Efficiency initiatives within groups, aimed at reducing the monitoring and coordination costs that the estimates attribute to complexity, are the natural counterpart on the industry side.

Four limitations qualify these conclusions. The restructuring forbearance in force from 2020 to early 2024 means reported credit quality over much of the window may not reflect underlying conditions, which affects the resilience side of the trade-off more than the profitability side but bears on both. The fixed-effects estimator applied to a dynamic specification carries Nickell bias [32], which declines with the time dimension and is modest at twenty-one quarters but is not zero. Fifteen clusters is a small number for cluster-robust inference, so the standard errors should be read as indicative. Furthermore, the cross-sectional dispersion of the banking performance indicators is narrow relative to their time-series variation, so identification rests substantially on the time dimension.

Further work should address these constraints directly. A bias-corrected least squares dummy variable estimator or a system generalised method of moments specification would relax the dynamic panel bias, subject to instrument validity in a short panel. Extending the sample beyond the expiry of the forbearance would permit cleaner identification of the credit quality channel. Adding group-level variables such as the integrated capital ratio and group return on assets would move the analysis from proxies to direct measures of Financial

Conglomerates policy. Furthermore, pooling Indonesia with comparable regional jurisdictions would establish whether the trade-off documented here is specific to the Indonesian supervisory architecture or general to integrated supervision as a model.

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