



# The Influence of OJK Supervisory Interventions on Risk-Taking Behavior in Indonesian Banks

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## Abstract

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This article examines how OJK supervisory interventions influence Indonesian banks' risk-taking behavior and why empirical findings on supervisory effectiveness often differ across studies and risk measures. Using a systematic literature review, the study consolidates peer-reviewed evidence on supervisory tools that shape bank incentives, including governance-oriented supervision, capital-related constraints, and crisis-period supervisory relief that can affect risk recognition and portfolio management. The review finds that supervisory interventions are more consistently associated with lower risk-taking when they are credible, targeted, and linked to observable remedial actions that change internal controls and decision-making, while effects are less predictable when interventions are captured only through broad prudential proxies or when risk migrates to less visible margins. The discussion organizes results by intervention channel, risk measurement approach, and moderating bank characteristics, highlighting the roles of capitalization, governance capacity, and market discipline. Overall, the synthesis concludes that supervisory effectiveness in Indonesia is conditional, measurement-sensitive, and intertwined with the broader policy environment.

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## 1. Introduction

Indonesia's banking system remains central to credit intermediation and macro-financial stability, yet it operates in an environment where risk-taking incentives can intensify during credit upswings, liquidity surges, and periods of regulatory forbearance. Empirical evidence from Indonesia shows that bank risk-taking is sensitive to macro-financial conditions and policy settings, including channels linked to capital flows and the risk appetite embedded in balance-sheet expansion (Rumondor & Bary, 2020). At the same time, policy frameworks that affect banks' capital positions can materially shape lending dynamics, especially when capitalization is uneven across institutions, implying that supervisory expectations and capital discipline matter most for weaker banks (Catalán et al., 2020). These stylized facts motivate closer attention to how supervisory interventions influence banks' ex ante portfolio choices rather than only their ex-post distress outcomes.

Supervision is designed to realign private incentives with system-wide stability by raising the expected cost of excessive risk-taking and by strengthening risk governance, capital planning, and corrective actions. Recent theory emphasizes that the effectiveness of bank-specific oversight hinges on the quality of supervisory signals: when supervision is informative, targeted requirements can curb risk, but when signals are noisy, bank-specific regulation may distort incentives and unintentionally encourage greater risk-taking (Agarwal & Goel, 2024). Complementing this, cross-country evidence on formal enforcement indicates that supervisory actions can measurably reduce banks' contribution to systemic risk, partly via reduced leverage and portfolio risk (Berger et al., 2022). However,

enforcement may not be evenly applied across banks, with market power and visibility shaping the likelihood of scrutiny, raising concerns about selective discipline and residual risk build-up (Cardillo et al., 2024).

Within Indonesia, the risk-taking implications of prudential capital are nuanced. Evidence suggests that traditional capital ratios can restrain bank risk-taking, while risk-based measures may sometimes correlate with higher risk, underscoring the importance of how capital rules and supervisory assessments interact (Salim & Suripto, 2023). Related work also points to a dual role of capital buffers: they can enhance resilience while interacting with profitability and risk incentives, implying potential trade-offs supervisors must manage (Hendrawan et al., 2023). Macroprudential settings and policy interactions also appear to shape bank stability metrics in Indonesia, reinforcing the view that supervisory interventions operate through multiple, overlapping channels (Anwar et al., 2024).

Despite a growing empirical base, the literature remains fragmented across intervention types (e.g., capital expectations, corrective measures, sanctions, and supervisory intensity), risk outcomes (e.g., Z-scores, asset quality, leverage, and portfolio composition), and identification strategies. This article therefore undertakes a systematic literature review to synthesize peer-reviewed evidence on the effectiveness of Financial Services Authority (*Otoritas Jasa Keuangan /OJK*) supervisory interventions in shaping Indonesian bank risk-taking behavior. By consolidating what is known about mechanisms, boundary conditions, and measurement choices, the review aims to clarify where supervisory actions reliably

discipline risk-taking, where effects are heterogeneous across banks, and where evidence remains insufficient for confident policy inference.

## **2. Literature Review**

Supervisory interventions influence bank risk-taking by reshaping incentives, constraints, and internal risk governance, but their effectiveness depends on how credible and informative supervisory signals are. Recent theoretical work argues that when supervisory information is strong and interventions are well-targeted, risk can decline; when signals are noisy, bank-specific requirements may shift risk-taking toward less observable margins rather than reduce it (Agarwal & Goel, 2024). This aligns with enforcement-based evidence showing that supervisory actions can reduce systemic risk contributions, often through lower leverage and more conservative asset choices (Berger et al., 2022). However, the enforcement channel can be uneven across banks because market structure and bank characteristics affect exposure to supervisory scrutiny, which implies heterogeneous impacts across institutions (Cardillo et al., 2024).

In the Indonesian banking context, prior empirical studies provide direct insight into how supervisory and prudential frameworks translate into bank risk outcomes. Bank risk-taking in Indonesia has been linked to external financial conditions, including capital-flow dynamics that can amplify risk appetite during expansions and affect balance-sheet vulnerability (Rumondor & Bary, 2020). Capital regulation also shapes behavior, with evidence of nonlinear lending responses depending on capitalization and bank condition, suggesting that supervisory

expectations around capital can operate differently across banks (Catalán et al., 2020). At the bank-level, funding structure and liquidity conditions matter: evidence from Indonesian conventional and Islamic banks indicates that funding liquidity risk may not directly drive risk-taking, but capital buffers can constrain risk decisions, while larger banks may display higher risk propensity consistent with “too-big-to-fail” perceptions (Reza & Trinugroho, 2021).

Empirical studies on Indonesian banks further clarify how macroprudential policy designs map into specific risk segments. For example, tighter loan-to-value (LTV) settings are associated with lower property-loan nonperforming risk relative to easing periods, indicating that macroprudential tightening can curb risk in targeted loan portfolios (Sasikirono et al., 2019). More broadly, Indonesia-specific analyses find that monetary and macroprudential settings help explain variation in bank risk-taking over time, reinforcing the idea that supervisory interventions and system-wide tools jointly shape incentives (Anwar et al., 2024). Related evidence from Indonesian banks suggests that prudential capital relationships with risk are sensitive to how capital is measured and implemented, with capital buffers interacting with profitability and risk choices in ways that can produce mixed effects across institutions (Hendrawan et al., 2023; Salim & Suropto, 2023). Taken together, this literature motivates an SLR that organizes evidence on OJK-relevant supervisory tools within the Indonesian banking context to identify which interventions most consistently discipline risk-taking, and how effects vary with institutional and bank-specific characteristics.

### 3. Methods

This study applies a systematic literature review (SLR) to synthesize peer-reviewed evidence on how OJK-relevant supervisory interventions influence risk-taking behavior in Indonesian banks. The review begins by defining the review scope, key constructs, and eligibility criteria: included studies are empirical, peer-reviewed journal articles that examine supervisory interventions (e.g., supervisory intensity, corrective actions, enforcement/penalties, capital and governance requirements, and related prudential supervision instruments) and quantify bank risk-taking outcomes (e.g., nonperforming loans, Z-score, risk-weighted assets, leverage, liquidity risk, or portfolio risk measures) in Indonesia. Studies are excluded if they are not peer-reviewed, are purely conceptual without empirical tests, focus on non-bank financial institutions only, or do not report measurable risk-taking outcomes relevant to banking supervision.

A structured search strategy is then implemented across major scholarly databases (e.g., Scopus, Web of Science, and Google Scholar) using combinations of keywords related to OJK supervision and Indonesian banking risk (such as “OJK”, “bank supervision”, “supervisory intervention”, “enforcement”, “macroprudential”, “Indonesia”, and “risk-taking”). Retrieved records are screened in two stages: title/abstract screening followed by full-text review, with duplicates removed and decisions documented for transparency. Backward and forward citation tracking is used to identify additional eligible studies that directly address supervisory interventions and Indonesian bank risk-taking but may not be captured by initial keyword searches.

For synthesis, the review extracts standardized information from each study, including sample characteristics (bank type, period, and size), intervention proxies (e.g., capital buffers, supervisory enforcement indicators, macroprudential constraints), outcome measures, empirical design, and key findings. Evidence is organized using a thematic coding approach that groups studies by intervention type and risk channel, then compares effect directions, magnitude patterns, and moderating conditions (e.g., capitalization, governance quality, market power, and bank ownership). Methodological quality is assessed descriptively by considering identification strategy strength, model specification transparency, and robustness checks, and the review reports convergent findings as well as inconsistencies to highlight gaps for future Indonesia-focused supervisory research.

#### **4. Results and Discussion**

Across the reviewed studies, a consistent pattern is that supervisory interventions tend to reduce risk-taking when they are credible, targeted, and tied to observable remediation requirements, but effects become less predictable when interventions are proxied indirectly (for example, broad prudential ratios) or when bank incentives allow risk to migrate to less visible margins. In the broader supervision literature, this mechanism is often framed as an incentives and information problem: supervision works best when supervisory signals are sufficiently informative to trigger internal governance changes and measurable constraints on balance-sheet choices (Agarwal & Goel, 2024). Evidence on enforcement aligns with this disciplining channel, where supervisory enforcement

actions are associated with lower systemic risk contributions, suggesting that banks respond by curbing leverage and portfolio risk (Berger et al., 2022). In an OJK-centered context, this implies that effectiveness is likely to be highest when supervisory actions materially alter banks' expected costs of risk through intensified follow-up, corrective plans, and escalation, rather than through general guidance alone.

A key result from the Indonesian literature is that “supervisory intervention” is most commonly operationalized through variables that map directly to OJK's supervisory architecture, particularly the Risk-Based Bank Rating (RGEC) logic and the Good Corporate Governance (GCG) framework. Many empirical studies treat RGEC-linked components, especially risk profile, governance, earnings, and capital, as supervisory-relevant constraints because they mirror the evaluation logic used for soundness monitoring and structure when supervisory intensity and remediation expectations are likely to increase. This matters for interpretation: when studies find lower risk-taking associated with stronger capital buffers or stronger governance, these relationships can be read as channels that OJK supervision is designed to influence, rather than purely internal bank choices (Catalán et al., 2020; Hendrawan et al., 2023; Salim & Suropto, 2023).

Another consistent finding is that capital-based supervisory levers are often linked to lower risk-taking, although the magnitude and even the direction of the association vary with how capital is measured and with banks' starting conditions. Evidence points to nonlinearities: capitalization influences lending behavior differently across bank conditions, implying that similar supervisory expectations

can produce heterogeneous responses across institutions (Catalán et al., 2020). In Indonesia-specific work, prudential capital is often found to restrain risk-taking, but results are sensitive to specifications and the risk proxy used (Salim & Surtijo, 2023). Related findings show that capital buffers can improve stability while simultaneously interacting with profitability and incentives in ways that can generate unintended outcomes (Hendrawan et al., 2023). Synthesizing these studies suggests that “capital discipline” is not a single uniform channel; it operates through balance-sheet constraint, market signaling via funding conditions, and supervisory escalation that tends to bind more strongly for weaker banks. The implication for OJK is conditionality: a similar capital-focused supervisory push may be stabilizing for undercapitalized banks, but less binding for well-capitalized banks where risk can shift toward loan composition, underwriting looseness, or concentration rather than headline leverage.

Governance-related evidence reinforces the importance of internal controls as a transmission mechanism from supervision to risk outcomes. Indonesia-based evidence suggests that governance quality is meaningfully related to credit risk outcomes. For example, governance proxies are associated with differences in non-performing loans, indicating that internal control environments shape how risk accumulates (Nurkhin et al., 2024). Evidence motivated by governance expectations also links governance quality to bank credit risk dynamics (Siswantoro, 2021). These findings are consistent with the broader supervisory conclusion that interventions are most effective when they induce operational changes in governance and risk controls, not only mechanical ratio adjustments (Berger et al., 2022; Agarwal & Goel,

2024). In practice, this suggests that OJK interventions may be more effective when banks have the governance capacity to translate supervisory expectations into underwriting discipline, monitoring, escalation, and restructuring decisions.

The evidence also emphasizes policy interaction effects: risk-taking in Indonesia responds to a joint set of supervisory and macro-financial forces, so supervisory interventions rarely operate in isolation. Macro-financial conditions, including capital-flow dynamics, are linked to changes in bank risk appetite, reinforcing the idea that risk-taking can strengthen during expansions and become more fragile under reversals (Rumondor & Bary, 2020). Indonesia-specific evidence also indicates that monetary and macroprudential policy settings help explain variation in bank risk-taking, highlighting that prudential tools and system-wide instruments jointly shape incentives (Anwar et al., 2024). This matters for interpreting “effectiveness” in an SLR: a measured decline in risk-taking after an intervention may reflect the intervention itself, but it may also reflect concurrent macroprudential tightening, liquidity conditions, or demand-side shifts. The evidence therefore supports interpreting supervisory effectiveness as context-dependent and best assessed using study designs that explicitly account for concurrent policy regimes and macro conditions rather than simple before-after comparisons.

A further OJK-specific intervention context emerges from studies examining the COVID-19 credit restructuring stimulus regime, which is widely discussed as a supervisory policy that altered the timing of risk recognition and provisioning incentives. Empirical work assessing restructuring-policy periods in Indonesia

reports measurable changes in bank performance around the relaxation framework, consistent with a trade-off between stability support and the risk that discipline weakens if relief becomes persistent or poorly targeted (Safira et al., 2024). This strengthens an OJK-centered interpretation of risk-taking behavior: during stress episodes, observed indicators such as headline Non-Performing Loan (NPL) can understate latent risk if supervisory relief changes classification and provisioning incentives, so effectiveness should be judged using multi-dimensional outcomes that can capture underlying risk buildup, restructuring intensity, and post-relief performance dynamics. This framing also helps explain heterogeneity across banks. Stronger banks with better governance and buffers may absorb supervisory tightening with less disruption, while weaker banks may show sharper balance-sheet adjustments or a shift of risk into less visible margins (Rumondor & Bary, 2020; Cardillo et al., 2024).

Separately, the reviewed evidence points to market discipline as a moderator that can amplify or dampen supervisory impact. Evidence on deposit insurance and depositor behavior suggests that market discipline and bank size interact with risk incentives in Indonesia, raising the possibility that larger institutions may face weaker discipline and different risk constraints (Haryanto et al., 2019). Taken together with governance findings, this implies that supervisory interventions may be more effective when external discipline reinforces supervisory intent and when internal governance can operationalize remediation. Where market discipline is muted or governance is weak, supervisory interventions may require stronger escalation or more granular remediation requirements to generate durable changes in risk-taking.

The synthesis also reveals recurring measurement and identification issues that shape the apparent effectiveness of interventions. Many studies rely on risk proxies such as NPL ratios, Z-scores, risk-weighted asset density, or liquidity ratios, each capturing different dimensions of risk-taking. This contributes to mixed findings, especially in Indonesia where risk can manifest through loan concentration, restructured credit quality, or sectoral exposure rather than immediate changes in headline NPL. A practical implication for OJK-focused research is that intervention effectiveness should be assessed using multiple risk outcomes and, where feasible, empirical strategies that better separate supervisory effects from macroprudential and macroeconomic shocks. Overall, the reviewed literature supports an SLR contribution that clarifies which OJK-relevant instruments exhibit the most consistent disciplining relationships with risk measures, where results diverge due to measurement choices, and how bank characteristics such as capitalization, governance quality, and market discipline condition supervisory effectiveness.

## **5. Conclusion**

This systematic literature review suggests that OJK supervisory interventions are most effective in moderating bank risk-taking when they are credible, targeted, and translated into concrete remedial actions that change incentives and day-to-day risk decisions. Interventions appear to work best when they strengthen governance and risk controls, tighten accountability, and make the cost of excessive risk-taking sufficiently salient to bank management. In contrast, effects become harder to

interpret when interventions are captured only through broad prudential indicators, because banks can adjust around them and shift risk into less visible margins.

The synthesis also indicates that supervisory effectiveness is inherently conditional. Differences in capitalization, governance capacity, ownership structure, size, and the strength of external market discipline shape how banks respond to supervisory pressure. This heterogeneity helps explain why results diverge across studies and why similar supervisory levers may produce stronger responses in weaker banks while generating risk migration or portfolio reallocation in better-capitalized institutions. As a result, evaluating effectiveness requires a bank-sensitive lens rather than an assumption of uniform responses.

The review also underscores that supervisory outcomes in Indonesia should be interpreted within the broader policy environment. Supervisory interventions often coincide with macroprudential shifts and macro-financial cycles that jointly affect credit demand, funding conditions, and banks' risk appetite. Crisis-period supervisory relief, including restructuring-based policies, further complicates inference because it can stabilize intermediation and performance while changing the timing of risk recognition. Going forward, stronger evidence would come from research designs that capture intervention intensity and timing more directly, use multi-dimensional risk measures that reflect latent risk, and test explicitly for heterogeneous effects across bank types and conditions.

Further research should use designs that capture OJK intervention timing and intensity more directly, such as event studies around clearly dated policy shifts and bank-level panels that track both headline and latent risk (restructured exposures,

provisioning, and concentration). Studies should also test heterogeneity across bank types and conditions (state-owned vs private, conventional vs Islamic, capitalization tiers, governance quality) and examine risk migration channels where discipline in one area shifts risk to another.

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