

Analysis of Foreign Debt Financing for the Jakarta-Bandung High-Speed Rail Project

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Abstract

Purpose— This study examines how foreign-debt financing of the Jakarta–Bandung High-Speed Rail (KCJB/Whoosh) project is associated with financing risk, potential fiscal exposure, and the financial resilience of participating state-owned enterprises (SOEs).

Research Methodology— The study uses a qualitative descriptive case-study design and thematic comparison of publicly available secondary financial, regulatory, institutional, and scholarly materials concerning developments during 2020–2026.

Results— The reviewed evidence indicates project-cost escalation from an initial USD 6.07 billion to approximately USD 7.27 billion, substantial reliance on external financing, and potential risk transmission through debt-servicing requirements, currency mismatch, corporate balance sheets, and public-support mechanisms. The legal authorization of fiscal support is distinguished from its actual use.

Research limitations/Implications— The documentary approach cannot independently establish current contractual repayment schedules, quantify contingent liabilities, or substitute for financial stress testing. The findings support transparent disclosure, careful allocation of financing responsibilities, and periodic evaluation of restructuring and foreign-exchange exposure.

Originality— The study offers an integrated interpretive account of how project-level financing pressures may develop into SOE and public-sector fiscal-risk exposure.

Keywords: Jakarta-Bandung High-Speed Rail; Foreign Debt; Fiscal Risk; Debt Sustainability; State-Owned Enterprises.

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1. Introduction

The Jakarta–Bandung High-Speed Rail project, marketed as Whoosh, is a major Indonesian transport investment with potential effects on connectivity and regional development. Its scale, cross-border financing arrangements, and involvement of state-owned enterprises (SOEs) make it an important case for studying the governance of capital-intensive infrastructure. Financial sustainability matters alongside potential mobility benefits because the distribution of financing risks affects project operators, their shareholders, and public institutions.

Infrastructure projects financed with foreign borrowing face distinct risk channels. Construction-cost increases can expand financing requirements; foreign-currency liabilities can create currency mismatches with domestic revenue; and uncertain operating

cash flows can constrain the ability to service debt. Government support may protect strategically important services but can also create fiscal exposure, depending on the legal form, timing, and actual activation of support. These considerations motivate a joint assessment of project-level, SOE-level, and public-sector risk rather than a single debt measure.

KCJB was initially promoted primarily as a business-to-business financing arrangement. The project's financing subsequently became more complex because of construction-cost escalation and pressures associated with external borrowing. Public accounts describe the China Development Bank (CDB) as a major lender, while the precise contractual obligations and their distribution across financing tranches require careful source-specific interpretation. Financial dependence should therefore be assessed without equating project-company borrowing automatically with direct sovereign debt.

Public reporting places the initial project estimate at approximately USD 6.07 billion and the later cost at about USD 7.27 billion, including an overrun of roughly USD 1.2 billion (ANTARA News, 2025). These estimates illustrate material project-cost escalation, although exchange-rate conversions and the reference dates of reported figures need to be distinguished. The rise in financing requirements makes debt-service capacity and the resilience of participating SOEs salient questions; it does not, by itself, establish the amount of any realized government liability.

The governance setting changed when Presidential Regulation No. 93 of 2021 amended the earlier framework to permit specified forms of state-budget support, including state capital participation and government guarantees subject to legal conditions (Republic of Indonesia, 2021). Authorization to provide support is analytically different from proof that a particular guarantee has been issued, called, or paid. The policy change nevertheless creates a relevant pathway through which financial pressures that originate within the project or its SOE shareholders may become a matter of public fiscal-risk management.

Scholarship on KCJB has examined its strategic financing context and the risk of excessive dependence on external creditors (Setiawan *et al.*, 2024). Nabiilah and Sari (2024) discuss the implications of project cost overruns for financial vulnerability, while Tetama *et al.*, (2022) emphasize the institutional and public-participation dimensions of land acquisition. These studies raise related, but not identical, issues: geopolitical dependence, financing costs, and governance are distinct mechanisms requiring separate analytical treatment.

Afifah and Badaruddin (2024) and Nabiilah and Sari (2024) interpret the project through debt-trap debates. Their analyses provide a perspective on creditor dependence, but the existence of a large external loan alone does not establish debt distress, loss of sovereignty, or a realized sovereign obligation. A fiscal-risk assessment should instead distinguish contractual debt exposure, repayment capacity, support commitments, and the conditions under which potential liabilities might materialize.

Rahmat (2025) examines KCJB financial sustainability using indicators such as the debt-service coverage ratio and farebox recovery ratio. That review describes early debt-service pressure while also reporting indications of improving operating performance. These findings suggest a possible gap between operating improvement and full debt-service capacity; they should not be read as independent audited estimates of current project cash flows in the present study.

The literature also situates KCJB within debates about infrastructure diplomacy and financial governance. Ibrahim (2025) discusses its relationship to the Belt and Road Initiative, while Nugrahaningsih *et al.*, (2026) examine legal and regulatory challenges associated with implementation. Taken together, these contributions point to the importance of distinguishing project implementation difficulties from the separate questions of liability allocation and long-term fiscal consequences.

Existing KCJB studies provide valuable legal, geopolitical, and financial perspectives, but these strands often remain separated. A useful interpretive gap concerns the mechanisms connecting cost escalation and foreign-currency project financing to the

balance sheets of participating SOEs and, potentially, to state support arrangements. This study addresses that linkage through a structured qualitative comparison; it does not claim to estimate debt sustainability quantitatively, establish a debt-trap outcome, or measure the probability that a contingent liability will be called.

Accordingly, the study asks how KCJB financing pressures are transmitted across the project company, SOE shareholders, and public-support arrangements. Its objectives are to organize the available evidence on financing structure and cost escalation; identify the relevant debt-service, foreign-exchange, governance, and contingent-liability channels; and consider the implications for transparent risk allocation. The contribution is an evidence-bounded fiscal-risk interpretation of a specific infrastructure case rather than a universally applicable causal model.

Section 2 synthesizes research on infrastructure finance, fiscal risk, risk sharing, and SOE governance. Section 3 explains the document-based qualitative methodology. Section 4 presents the findings and their interpretation, and Section 5 concludes with limitations and implications for research and policy.

2. Review of Literature

2.1 Foreign Debt Financing and Infrastructure Megaprojects

Foreign debt financing has become one of the primary mechanisms used by developing countries to accelerate the construction of large-scale infrastructure megaprojects. Massive capital requirements limited domestic fiscal capacity, and the urgency to improve economic connectivity have encouraged governments to rely on external financing sources, including multilateral institutions, bilateral lenders, and foreign state-owned banks (Anguelov, 2021). Infrastructure megaprojects such as high-speed railways, ports, toll roads, and energy facilities generally require long-term financing structures with substantial investment values that often exceed the financing capability of domestic public budgets. As a result, foreign debt is frequently positioned as a strategic instrument to support national development acceleration and economic modernization. Meng *et al.*, (2024) explained that sustainable infrastructure financing increasingly depends on integrated investment frameworks capable of balancing long-term economic development objectives with financial sustainability and governance considerations. Similarly, Lu and Wilson (2024) emphasized that infrastructure financing in developing regions is commonly characterized by high leverage structures, public-private financing arrangements, and dependence on foreign capital inflows due to limited domestic investment capacity. In the context of Belt and Road Initiative (BRI) cooperation, foreign debt financing has also become closely associated with infrastructure expansion strategies aimed at stimulating regional economic growth and technological development. Han *et al.*, (2025) argued that external debt can support infrastructure development and innovation capacity in participating countries by facilitating access to strategic transportation and industrial infrastructure projects. Therefore, foreign debt financing is often viewed not only as a funding mechanism but also as a strategic policy instrument for accelerating economic transformation and improving national competitiveness.

Despite its developmental benefits, foreign debt financing in infrastructure megaprojects also creates substantial financial and fiscal risks, particularly when projects experience cost overruns, construction delays, exchange rate volatility, or weak operational performance. Heavy dependence on external borrowing may increase debt servicing pressure and create long-term fiscal vulnerabilities for governments, especially when infrastructure projects rely on implicit or explicit sovereign guarantees. Large-scale infrastructure projects financed through foreign debt are frequently exposed to refinancing risks and contingent liabilities that may eventually shift commercial risks from project entities to the public sector. The wider research on infrastructure financing emphasizes the need to relate capital structure and risk management to expected project returns (Anguelov, 2021; Meng *et al.*, 2024). Moreover, infrastructure projects financed through external debt are highly sensitive to macroeconomic instability, particularly fluctuations in exchange rates and global interest rates, because debt obligations are generally

denominated in foreign currencies while project revenues are generated in domestic currency. Meng *et al.*, (2024) further noted that weak governance structures, inadequate financial risk management, and insufficient project feasibility assessments often exacerbate debt sustainability problems in infrastructure megaprojects. Consequently, the effectiveness of foreign debt financing depends not only on the availability of external capital but also on the government's ability to design sustainable financing structures, manage fiscal risks, and ensure that infrastructure projects generate sufficient long-term economic and operational returns.

Recent megaproject research reinforces the need to treat cost escalation, schedule exposure, project quality, and appraisal uncertainty as governance issues rather than isolated implementation problems. Evidence on large capital projects highlights persistent cost-overrun risk and the value of evidence-based forecasting and risk controls (Flyvbjerg *et al.*, 2018; Baerenbold, 2023). Related work emphasizes that megaproject performance should be assessed with attention to both delivery risk and the wider public value claimed for infrastructure investment (McLeod, 2023), while recent empirical evidence from developing-country infrastructure projects continues to link financing constraints and project-resource allocation to cost and schedule outcomes (Doe, 2025). In transport infrastructure, quality-governance failures can further compound long-term project risk (Love *et al.*, 2022).

2.2 Debt Sustainability, Contingent Liabilities, and Fiscal Risk

Debt sustainability has become a central issue in the governance of infrastructure megaproject financing, particularly in developing countries that rely heavily on foreign debt and long-term external borrowing mechanisms. Debt sustainability refers to the government's ability to fulfill its current and future debt obligations without creating excessive fiscal pressure or undermining macroeconomic stability. In large-scale infrastructure financing, debt sustainability is closely associated with the structure of borrowing, debt servicing capacity, exchange rate stability, and the long-term economic returns generated by the project itself. Economides *et al.*, (2025) emphasized that fiscal sustainability depends not only on the accumulation of public debt but also on the interaction between interest rates, economic growth, and fiscal policy discipline in maintaining long-term debt stability. In the context of infrastructure megaprojects, foreign debt financing may initially accelerate development and reduce short-term fiscal burdens; however, projects characterized by cost overruns, operational deficits, or delayed returns may significantly increase refinancing risks and debt servicing pressure. Related evidence emphasizes the importance of sound financing structures, realistic assessments, and accountability in long-term investment (Meng *et al.*, 2024). Consequently, governments must ensure that debt-financed infrastructure projects generate sufficient operational and economic returns capable of supporting repayment obligations without requiring excessive fiscal intervention from the public sector.

In addition to debt sustainability concerns, infrastructure megaproject financing also creates significant contingent liabilities and fiscal risks for governments. Contingent liabilities refer to potential fiscal obligations that may arise when governments provide explicit or implicit guarantees for infrastructure projects, state-owned enterprises (SOEs), or public-private partnership (PPP) arrangements. Although such guarantees are often designed to attract investors and reduce financing uncertainty, they may eventually transfer commercial risks into sovereign fiscal exposure if projects fail to achieve expected financial performance. de Mello and Ter-Minassian (2024) highlighted that fiscal risks associated with government guarantees, state-backed financing schemes, and infrastructure-related liabilities have increased substantially in many developing economies due to rising debt dependence and expanding public sector intervention. These risks become more severe when infrastructure financing relies on foreign currency-denominated debt, as exchange rate volatility can significantly increase repayment burdens and weaken fiscal resilience. D'Orazio (2025) argued that emerging economies are particularly vulnerable to external fiscal shocks because limited fiscal space,

macroeconomic instability, and global financial uncertainty may amplify debt distress and reduce governments' capacity to absorb long-term financial obligations. Therefore, effective fiscal risk management in infrastructure megaprojects requires transparent debt governance, comprehensive contingent liability assessment, exchange rate mitigation strategies, and sustainable restructuring mechanisms capable of protecting both public finances and long-term national economic stability.

2.3 Government Guarantees, PPP Risk Allocation, and State Intervention

Public-private partnership (PPP) schemes have become one of the dominant approaches used by governments to finance large-scale infrastructure projects while reducing direct fiscal pressure on public budgets. Through PPP arrangements, governments collaborate with private entities or state-owned enterprises (SOEs) to distribute financing responsibilities, operational obligations, and project risks. Yescombe and Farquharson (2018) explained that PPP financing structures are designed to allocate risks to parties with the greatest capacity to manage them efficiently, thereby improving project sustainability and reducing fiscal inefficiency. In practice, however, infrastructure megaprojects often experience cost overruns, operational uncertainty, and financing instability that weaken the effectiveness of risk-sharing mechanisms. Esperilla-Niño-de-Guzmán *et al.*, (2024) emphasized that many PPP infrastructure projects face structural governance challenges because risk allocation frameworks are frequently unable to anticipate long-term financial uncertainty, refinancing pressure, and macroeconomic volatility. Consequently, governments often become the ultimate risk bearer when project entities fail to maintain financial sustainability independently.

Government guarantees and state intervention therefore become critical instruments in maintaining the continuity of strategic infrastructure projects. Explicit and implicit guarantees provided through sovereign support mechanisms, capital injections, or debt restructuring arrangements are commonly used to maintain investor confidence and prevent project default. However, such interventions may simultaneously create contingent liabilities and increase fiscal exposure for the public sector. Cangiano *et al.*, (2006) explained that the public costs and incentives of guarantees depend on their design, accounting, and disclosure. In the Indonesian context, Cangiano *et al.*, (2006) argued that government guarantees in PPP infrastructure financing may create long-term fiscal burdens if projects fail to generate sufficient operational returns to cover debt servicing obligations. This condition reflects a shift in financing risk from the corporate sector to the state, particularly when governments intervene through state budget mechanisms, guarantees, or restructuring policies to maintain project viability. Therefore, effective PPP governance requires transparent fiscal risk assessment, prudent guarantee management, and sustainable state intervention mechanisms capable of balancing infrastructure development objectives with long-term fiscal stability.

2.4 Financial Governance and SOE Financial Stability

Financial governance plays a crucial role in maintaining the sustainability and operational stability of state-owned enterprises (SOEs), particularly in countries where SOEs are heavily involved in strategic infrastructure megaprojects. In emerging economies, SOEs often function not only as commercial entities but also as instruments of national development policy, causing them to face dual pressures between profitability objectives and government assignments. Large-scale infrastructure projects financed through debt mechanisms may significantly increase leverage, liquidity pressure, and long-term financial obligations for SOEs, especially when project returns are unable to cover operational and debt servicing costs in the short term. Lee *et al.*, (2022) explained that the financial sustainability of SOEs depends heavily on governance quality, capital structure management, debt control, and the ability to maintain long-term operational efficiency amidst economic uncertainty. Weak financial governance may reduce the ability of SOEs to manage debt exposure effectively and increase dependence on government intervention through subsidies, guarantees, or capital injections. Moreover, the involvement of SOEs

in politically strategic projects often exposes them to excessive financial risk-taking, particularly when investment decisions are driven more by policy priorities than by commercial feasibility considerations. This condition highlights the importance of transparent financial reporting, effective audit mechanisms, and strategic financial oversight in strengthening organizational resilience and supporting sustainable business performance amidst financial uncertainty (Safira, 2023).

The stability of SOEs is also closely associated with transparency, accountability, earnings quality, and institutional governance structures. Baum *et al.*, (2024) argued that governance weaknesses and inefficient institutional oversight within SOEs may significantly increase fiscal inefficiency and financial vulnerability, particularly when large public investments are combined with weak accountability mechanisms. Poor governance practices may create long-term financial burdens that eventually require direct state intervention to maintain corporate stability. In addition, Ying *et al.*, (2025) emphasized that governance quality has a substantial influence on the earnings quality and financial reporting reliability of SOEs, which are critical factors in maintaining investor confidence and ensuring sustainable debt management. Strong governance structures can improve transparency and reduce financial distortions arising from politically motivated financing decisions. Ligorio *et al.*, (2024) further highlighted that governance mechanisms within SOEs are increasingly important in supporting accountability, sustainability reporting, and long-term financial resilience in state-backed corporations. In the context of infrastructure megaprojects, weak SOE financial governance may transform corporate financial distress into broader fiscal problems because governments are often forced to provide guarantees, restructuring support, or capital injections to prevent systemic instability. Therefore, strengthening governance quality, improving financial transparency, and implementing prudent debt management strategies are essential to maintaining SOE financial stability and protecting public finances from long-term contingent risks.

3. Research Methodology

3.1 Research Design and Data Sources

This study adopts a qualitative descriptive case-study design focused on financing and fiscal-risk governance in the Jakarta–Bandung High-Speed Rail project. The case was selected because it combines external borrowing, cost escalation, public-policy intervention, and involvement by multiple SOEs. The unit of analysis is the financing and governance arrangement, rather than individual passengers or operational employees. Findings are documentary and interpretive; the study does not calculate a new debt-service coverage ratio or estimate the probability of a sovereign guarantee being activated.

The study draws on secondary materials described in the accepted research record for 2020–2026, including financial and annual-report disclosures, regulatory texts, institutional publications, research articles, and public reporting on financing and restructuring. These materials differ in evidentiary status: a regulation documents legal authority, company financial statements document reported accounting outcomes, and academic or news sources provide interpretations or contextual accounts. The analysis does not assume access to nonpublic financing agreements or confidential creditor discussions.

3.2 Data Collection and Document Selection

Documentary evidence was selected purposively for its relevance to KCJB financing structure, cost developments, debt-service conditions, institutional responsibility, foreign-exchange exposure, and state support. Priority was placed on official regulatory materials and attributable institutional or financial disclosures; published scholarly studies were used to interpret broader mechanisms. Secondary reporting was treated as contextual unless its claims could be attributed to identifiable statements or records. The absence of a complete public loan schedule limits the precision with which financing terms can be allocated to particular obligations.

3.3 Analytical Procedure and Source Triangulation

The analytical approach combines qualitative content analysis with cross-document comparison. The thematic categories were external financing, construction-cost escalation, operating cash generation and debt service, government-support authorization, contingent fiscal obligations, exchange-rate vulnerability, restructuring discussions, and SOE financial resilience. The analysis compares how these themes appear in regulatory materials, reported financing facts, and the scholarly literature. It does not infer unreported contractual terms, undocumented quantitative estimates, or financial outcomes not supported by the accessible record.

For financial claims, the analysis distinguishes project cost from debt principal; a reported borrowing share from the final composition of outstanding liabilities; interest rates from annual interest payments; and reported operating improvement from sufficient cash available for debt service. Comparisons focus on the direction of risk and institutional responsibility. Without the complete repayment schedules and independently reconcilable cash-flow statements, the study avoids treating published estimates as an audited debt-sustainability model.

Triangulation was used as a credibility strategy by comparing assertions across categories of available sources. Where descriptions were inconsistent or incomplete, the finding was stated as conditional, approximate, or source-reported rather than as an established accounting fact. Regulatory authorization was separated from realized budget expenditure; restructuring proposals were separated from signed contractual outcomes. This boundary is important to the study's interpretive validity and to the reproducibility limits of a documentary case analysis.

4. Results and Discussion

4.1 Research Result

4.1.1 Debt Structure and Cost Overrun Dynamics

The reviewed material identifies significant construction-cost escalation. Public reporting places the project's initial investment estimate at approximately USD 6.07 billion and its subsequent value at about USD 7.27 billion, implying an additional financing requirement of roughly USD 1.2 billion (ANTARA News, 2025). These values describe different project-cost estimates, not a separately verified calculation of current principal outstanding. The increase matters because higher investment requirements can lead to further borrowing, equity contributions, or other financing adjustments, depending on how project partners allocate the overrun.

The initial structure relied heavily on borrowing associated with the China Development Bank, frequently described as approximately three-quarters of the project's initial financing requirement. This proportion should not be interpreted as a verified share of the current outstanding loan balance after subsequent financing changes. Reported interest terms have also varied by tranche, currency, and negotiation period. Without the executed agreements and amortization schedules, a universal rate of 2% for all original principal and 3.4% for all cost-overrun debt cannot be substantiated. The analytically relevant finding is exposure to a substantial and potentially heterogeneous external debt-service burden.

The scale and timing of annual interest payments are central to liquidity management, but publicly reported estimates are not interchangeable with audited, current-period interest expense. Interest costs, principal amortization, and cash available for debt service are different measures. The evidence reviewed here supports concern about financing pressure, particularly during an early operating phase, but does not permit a reliable recalculation of annual repayment requirements for KCIC or each participating SOE. Consequently, the risk is stated in terms of debt-service vulnerability rather than as a newly verified annual interest total (Rahmat, 2025).

Farebox receipts provide one source of operating cash flow, while additional revenue streams and operating efficiency can affect the resources available for debt service. Rahmat (2025) reports early-stage debt-service pressure alongside indications of operating

improvement. The presence of an operating surplus on an EBITDA measure, however, does not demonstrate that financing charges, scheduled principal, and capital expenditure are fully covered. The case therefore presents a potential mismatch between long-term financing commitments and the pace at which operating cash flow becomes available, rather than proof of a precisely quantified cash deficit at a particular 2026 reporting date.

4.1.2 Fiscal Risk and Government Guarantee Exposure

A central finding is the change in the legal framework for managing project-related financing pressure. The project was initially presented as predominantly commercial or business-to-business. Presidential Regulation No. 93 of 2021 subsequently provided legal pathways for specified budget support to the SOE consortium, including state capital participation and government guarantees under the stated conditions (Republic of Indonesia, 2021). This is a change in available risk-management instruments; its legal authorization does not establish that every potential commitment was actually incurred.

The fiscal significance of this change lies in the possible transfer of financial pressure through corporate and public institutions. State capital participation, an issued guarantee, a called guarantee, and an actual budget payment are distinct events with different implications for public accounts. The regulation does not by itself reveal the value or timing of future cash outlays. It nevertheless indicates that the state can become a provider of support when project or consortium financing pressures threaten the continuity of a strategic infrastructure investment.

The case consequently illustrates a contingent fiscal-risk channel: if project-level cash generation cannot meet financing needs, SOE shareholders may encounter balance-sheet constraints, potentially increasing demand for state support. Whether this demand becomes a legally enforceable sovereign obligation depends on the form and activation of the underlying instrument. This distinction prevents treating all corporate loans as public debt or assuming that every authorized guarantee has been called. It also highlights the importance of disclosing actual issued guarantees and fiscal transfers separately from proposed support arrangements.

Institutional coordination is another aspect of risk management. Danantara's leadership publicly described the proposed Whoosh restructuring arrangements as still being refined in April 2026 (ANTARA News, 2026). This statement confirms active policy development but does not disclose a signed creditor agreement or a final amortization schedule. Accordingly, the implications of restructuring for fiscal obligations, SOE financial statements, and future risk allocation remain conditional on the actual instruments implemented.

4.1.3 Debt Restructuring and Danantara Intervention

Discussions about restructuring intensified as policymakers considered ways to address project-linked financial obligations and the exposure of the SOE consortium. The role of Danantara in coordinating potential solutions should not be confused with evidence that contractual debt, ownership, or repayment authority had already been legally transferred at a specified date. The available public statement from April 2026 characterizes the financing approach as under refinement (ANTARA News, 2026). This leaves the precise future distribution of responsibilities subject to legal and documentary confirmation.

Extension of repayment maturities has been discussed as a possible way to reduce annual cash outflows. In principle, a longer tenor can ease short-term liquidity constraints, although it can also alter lifetime interest costs and the timing of exposure. Whether it improves fiscal sustainability depends on the agreed interest terms, repayment profile, operating performance, and any accompanying guarantees. Because executed restructuring terms are not established by the materials cited here, this option is treated as a scenario rather than a completed transaction.

Other policy options discussed publicly include changes in capitalization and institutional allocation of responsibilities. These approaches could redistribute obligations within the state and corporate sector but would not necessarily extinguish the underlying

financing risk. In April 2026, Danantara described the proposed scheme as requiring further refinement (ANTARA News, 2026). The analysis therefore avoids attributing particular fiscal savings or debt transfers to an arrangement whose final legal and financial terms were not documented in the study.

4.1.4 Exchange Rate Vulnerability and Fiscal Sustainability

Foreign-currency-denominated financing presents a potential mismatch when project revenue is largely received in rupiah. A depreciation of the rupiah against a relevant loan currency would increase the rupiah value of fixed foreign-currency debt-service payments, all else equal. The size of that effect depends on the currency composition of liabilities, contractual hedges, maturity profile, and available foreign-currency assets. The study does not establish that all outstanding obligations are denominated exclusively in US dollars or provide a numerical exchange-rate stress estimate.

Currency risk can also propagate beyond the project company if participating SOEs provide additional capital or if an applicable public-support instrument is triggered. Such transmission is contingent rather than automatic: the amount of financial support would depend on the project cash-flow shortfall, contractual obligations, corporate capacity, and the relevant legal framework. Distinguishing these pathways helps avoid overstating the direct fiscal impact of exchange-rate movements while retaining their significance for financing and liquidity management.

Risk mitigation may involve assessing the appropriateness and cost of hedging, aligning the currency and maturity profiles of financing with revenue, and evaluating restructuring options against realistic cash-flow expectations. These measures should be supported by transparent disclosure and periodic stress testing. They are policy implications of the case analysis, not evidence that particular hedging instruments have already been adopted or that a specific restructuring scheme will succeed.

4.1.5 SOE Financial Pressure and Governance Implications

The SOE consortium structure is a channel through which project-related financing stress may affect participating entities, including PT Wijaya Karya (WIKA) and PT Kereta Api Indonesia (KAI). WIKA's broader financial difficulties cannot be attributed wholly to KCJB without an itemized reconciliation of project-specific losses, equity exposure, and other obligations. The relevant governance concern is that capital commitments and project-related financing pressures can interact with existing corporate leverage and liquidity constraints, potentially reducing financial flexibility.

KAI's role within the Indonesian shareholder consortium creates additional exposure to the financial performance and financing needs of KCJB. Nevertheless, KCIC-level debt, equity investments held through consortium entities, and direct liabilities recognized by a particular SOE are not identical accounting categories. Reliable assessment requires consolidated and entity-level statements, guarantees, and related-party disclosures. In their absence, the analysis describes possible balance-sheet transmission and refinancing pressure without assigning an independently verified amount of KCJB debt to each SOE.

These findings underscore the importance of separating corporate financial responsibilities from public-policy assignments. SOE participation may advance strategic infrastructure objectives, but financing arrangements should specify the entity bearing debt-service obligations, the legal nature of any guarantees, and the conditions for state intervention. Governance mechanisms such as transparent financial reporting, independent oversight, and clearly specified restructuring terms can reduce ambiguity. The case supports these safeguards as risk-management priorities without assuming that any one support option has already been adopted or is necessarily fiscally optimal.

4.2 Discussion

The KCJB case brings together construction-cost escalation, high external borrowing, currency exposure, early-stage cash-flow uncertainty, and the possibility of public support. No one measure establishes debt distress or determines where ultimate loss will

fall. Instead, project-level commitments, the resilience of shareholder SOEs, and the legal design of fiscal-support mechanisms must be assessed together (de Mello & Ter-Minassian, 2024; D'Orazio, 2025).

The rise in project cost also has governance implications. Prior research emphasizes the role of appraisal assumptions, risk allocation, project controls, and decision processes in explaining megaproject overruns (Flyvbjerg *et al.*, 2018; Baerenbold, 2023). In KCJB, increased project funding needs heighten the importance of assigning responsibility for additional capital and debt service. The case does not establish that any particular governance weakness was the sole cause of the overrun.

The regulatory response makes fiscal contingencies especially important. A scheme initially described as commercial may become eligible for specified state support when strategic service continuity and SOE resilience are at stake. Yet authorization, issuance, activation, and expenditure remain separate stages. This interpretation is consistent with work on PPP risk sharing and public guarantees (Cangiano *et al.*, 2006; Yescombe & Farquharson, 2018; Esperilla-Niño-de-Guzmán *et al.*, 2024) and with Presidential Regulation No. 93 of 2021 (Republic of Indonesia, 2021).

Foreign-currency exposure constitutes a further potential transmission mechanism. Where substantial obligations are denominated in a foreign currency while revenues arise in rupiah, depreciation raises the domestic-currency cost of unchanged foreign-currency payments. The effect is conditional on actual currency composition, hedging, and contractual terms. It strengthens the case for joint analysis of exchange-rate sensitivity, operating liquidity, and fiscal commitments instead of focusing only on the nominal project cost.

The SOE dimension illustrates a recurring tension between public-development objectives and corporate balance-sheet discipline. Governance scholarship emphasizes capital-structure oversight, reliable reporting, and accountability for financial sustainability (Lee *et al.*, 2022; Baum *et al.*, 2024; Ying *et al.*, 2025). For KCJB, the key issue is identifying which obligations belong to KCIC, which are held or guaranteed by its shareholders, and which could create public-sector exposure. This approach also avoids assigning general corporate losses to the rail project without supporting accounts. A balanced assessment must also recognize that infrastructure can create long-term mobility and economic benefits that are not captured by initial farebox revenue or accounting earnings (McLeod, 2023). Fiscal exposure therefore should not be equated automatically with overall project failure. The present contribution is more limited and analytically precise: it clarifies the possible pathways linking externally financed project stress, SOE commitments, and public-support arrangements, while recognizing important documentary and measurement limits.

5. Conclusion

This qualitative case study examined how KCJB's foreign-debt financing interacts with project-level pressure, SOE exposure, and potential public fiscal responsibilities. The analysis identified a series of risk channels rather than a definitive numerical debt-sustainability outcome: cost escalation increases financing needs; debt service interacts with operating cash generation; currency mismatch affects the rupiah value of relevant obligations; and authorized support arrangements can create pathways for fiscal exposure.

The principal conceptual contribution is a conditional account of fiscal-risk transformation. Financial pressures originating within a project company can be transmitted to shareholder SOEs and, under particular legal and policy arrangements, may involve the public sector. The analysis does not assert that all external project borrowing is sovereign debt, that a guarantee has necessarily been called, or that restructuring will eliminate future liabilities. Its conclusions depend on the distinctions between financing structure, actual debt obligations, and potential state support.

For policymakers and managers, the findings support clearer liability mapping, timely disclosure of actual guarantees and capital injections, prudent financing and exchange-

rate risk management, and transparent evaluation of restructuring terms. Public support should be assessed against the project's expected operating cash flows and the distribution of obligations among KCIC, consortium shareholders, and public institutions. Such measures can improve fiscal transparency while preserving a balanced evaluation of the infrastructure's longer-term benefits.

Several limitations qualify the contribution. The study relies on secondary documentary evidence rather than direct access to all executed loan contracts, detailed amortization schedules, or complete project-level cash-flow forecasts. As a result, it does not provide debt-sustainability simulations, quantify contingent-liability probabilities, or establish the specific accounting effect of KCJB on each SOE. Moreover, restructuring decisions and public-support arrangements may change over time. Future research should compile a reproducible project-finance document register, reconcile entity-level audited statements, undertake currency and debt-service stress tests, and compare the findings with other foreign-financed transport megaprojects.

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CONFLICTS OF INTEREST

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