ENHANCING FINANCIAL RISK MANAGEMENT FOR PUBLIC-PRIVATE PARTNERSHIP CONSTRUCTION PROJECTS IN HO CHI MINH CITY: A CRITICAL ANALYSIS AND FRAMEWORK FOR IMPROVEMENT

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Abstract: ***Ho Chi Minh City (HCMC) is Vietnam's main economic engine, but its growth is increasingly constrained by a severe infrastructure deficit that far exceeds the fiscal capacity of the state budget. In this context, Public-Private Partnerships (PPP) have become a strategic instrument for mobilizing private capital for urban development. Yet the implementation of PPP construction projects in HCMC has been persistently weakened by financial fragility, with large-scale projects often undermined by immature and ineffective risk management arrangements. This study examines the financial risk landscape of PPP projects in HCMC to identify the structural barriers to project success. Drawing on a systematic literature review, forensic case analysis, and expert discourse synthesis, the study identifies three dominant risk clusters: prolonged land acquisition delays, volatility in credit access caused by the maturity mismatch of domestic banks, and persistent revenue forecasting errors. It further argues that existing mitigation mechanisms, including the revenue risk-sharing arrangement under Article 82 of the 2020 PPP Law, remain weak in practice because of procedural ambiguity, rigid budgetary cycles, and the absence of pre-funded contingency mechanisms. In response, the paper proposes a practical framework for improving the PPP ecosystem through three core reforms: decoupling land acquisition from PPP contracts, diversifying long-term financing through municipal infrastructure bonds, and establishing a dedicated Risk Contingency Fund as an automatic stabilizer. By addressing these structural vulnerabilities, the study offers a roadmap for making HCMC's infrastructure sector more resilient, bankable, and attractive to long-term investors.***

• Keywords: *public-private partnership (PPP); financial risk management; infrastructure finance.*

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1. Introduction

Ho Chi Minh City has experienced rapid urbanization and sustained economic expansion over the last two decades. The scale of infrastructure demand in HCMC far exceeds the capacity of public finance. Although the state budget remains the primary source of infrastructure investment, it can cover only a fraction of the capital required for transport corridors, flood control, urban rail, utilities, and waste management systems. This fiscal gap has elevated PPP from a supplementary financing option to a strategic necessity. In principle, PPP allow the state to combine private capital and managerial capacity with public objectives, thereby accelerating project delivery while distributing risk between sectors.

In practice, however, PPP implementation in HCMC has been deeply troubled. Many major projects have suffered delays, restructuring, legal disputes, or financial distress. These failures are not explained mainly by engineering complexity. They are better understood as consequences of weak financial risk governance. Project structures often assign risks to the private sector that investors cannot realistically control, such as land clearance delays, policy shifts, or macro-financial volatility. At the same time, public authorities have lacked the institutional instruments to absorb or mitigate those risks in a timely and credible manner.

Against this background, this paper argues that the central challenge for HCMC is not simply how to attract private capital, but how to manage financial risk in a way that makes infrastructure projects bankable, sustainable, and resilient. The study therefore examines the structure of financial risk in HCMC PPP construction projects and evaluates why current mitigation tools have not worked effectively.

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2. Literature Review

2.1. Financial risk in PPP theory

PPP theory is built around the principle that risks should be allocated to the party best able to manage them at the lowest cost. The expected result is better value for money compared with conventional public procurement. In infrastructure finance, financial risk refers not only to possible cost overruns, but also to the probability that a project will fail to meet debt service obligations or expected returns because of changes in credit conditions, interest rates, construction delays, policy changes, or underperforming revenue.

A useful distinction exists between risk and uncertainty. Risk refers to outcomes whose probability can be estimated, while uncertainty involves unknown or difficult-to-quantify events. PPP contracts often assume a level of predictability that does not exist in real-world emerging-market contexts. As a result, projects may appear financially viable on paper but prove fragile when exposed to shocks.

Three theoretical perspectives are especially relevant. First, agency theory emphasizes the problem of information asymmetry between the public principal and the private agent. Because private investors typically know more about costs and operational realities than state agencies, contracts must include monitoring and incentive mechanisms. Second, transaction cost economics highlights the governance costs associated with asset specificity and opportunism. Infrastructure assets are highly specific, meaning they have little value outside the project, which makes both parties vulnerable once investments are sunk. Third, incomplete contract theory explains why long-term PPP contracts cannot anticipate every future event. This creates space for renegotiation, disputes, and hold-up problems when conditions change.

These frameworks help explain why financial risk in PPP is rarely confined to the balance sheet. It is embedded in institutional capacity, contract design, legal predictability, and the availability of long-term finance.

2.2. Categories of financial risk

Financial risks in PPP can be grouped into three levels. Macro-level risks include inflation, exchange-rate fluctuations, interest-rate changes, and wider financial instability. These are largely external to the project. Project-level risks include design errors, cost overruns, construction delays, and demand shortfalls. Institutional or relational risks arise from weak coordination between stakeholders, policy inconsistency, poor contract enforcement, and disputes with regulators or financiers.

In mature markets, macro-financial risks can often be hedged through developed capital markets and financial derivatives. In emerging markets such as Vietnam, those tools are limited. This means that macro risks are often pushed into contractual arrangements that private investors are expected to absorb, even when they lack the means to manage them effectively.

2.3. Bankability and the limits of project finance

PPP projects are generally financed using limited-recourse project finance, under which lenders rely primarily on the project's future cash flows rather than the sponsor's full balance sheet. A project is considered bankable when its risk profile is acceptable to lenders, typically reflected in debt service coverage ratios and other financial indicators under stressed scenarios.

In developing countries, however, bankability is often constrained by shallow domestic capital markets. Long-term infrastructure assets are financed by short-term bank deposits, producing a structural maturity mismatch. This not only limits the volume of available credit but also transmits interest-rate volatility directly into project cash flows. For foreign lenders, weak currency convertibility arrangements and uncertain dispute resolution further reduce appetite. Thus, the issue is not simply whether a project can earn revenue, but whether its financial structure can survive realistic shocks.

3. Vietnam's Legal and Institutional Context, 2016-2025

Before 2020, PPP projects in Vietnam operated under a decree-based regime, especially Decree 15/2015 and Decree 63/2018. These regulations created an initial framework for private participation in infrastructure, but they did not offer the legal stability, risk-sharing clarity, or investor protections needed for large-scale long-term investment. The market remained dominated by domestic investors and bank-driven financing rather than robust project finance structures.

A major turning point came with the 2020 PPP Law, effective from January 2021. The law narrowed the sectors eligible for PPP, improved formal transparency, and introduced a revenue risk-sharing mechanism under Article 82. Under this provision, the state may share part of the revenue shortfall if actual revenue falls below 75% of the financial plan due to changes in planning, policies, or law. Conversely, excess revenue beyond 125% is also shared with the state. In theory, this represented a major alignment with international best practice.

Subsequent implementing decrees, including Decree 28/2021 and Decree 35/2021, clarified financial management principles, investor selection procedures, and limits on state participation. Yet these reforms did not fully resolve the deeper problems of institutional capacity, budget rigidity, and weak long-term financing channels.

One of the most controversial elements of Vietnam's PPP history was the BT model, under which investors built public infrastructure in exchange for land-use

rights. The model was criticized for weak transparency and land valuation distortions, leading to its effective termination under the PPP Law. However, because HCMC faces acute fiscal pressure, Resolution 98/2023/QH15 introduced special mechanisms for the city, including more flexible PPP arrangements and the possibility of reactivating variants of BT-like structures under tighter control. Resolution 98 also expanded the city's autonomy in land clearance, infrastructure investment, and transit-oriented development.

These reforms show that Vietnam has moved from regulatory fragmentation toward formal codification. However, the evidence suggests that legal progress has outpaced implementation capacity. In HCMC, many investors and lenders still see the market as procedurally heavy, institutionally cautious, and financially uncertain.

4. Research Methodology

This study adopts a mixed-methods design combining three streams of evidence: a systematic literature review, multi-case forensic analysis, and expert discourse synthesis. The use of multiple methods reflects the complexity of PPP financial risk, which sits at the intersection of finance, law, and public administration.

First, a systematic literature review was conducted covering the period 2016-2024. Academic databases such as Scopus and Web of Science were used alongside Vietnamese legal databases and reports from international development institutions including the World Bank, ADB, and JICA. Search terms combined PPP, financial risk, Vietnam, BOT, infrastructure finance, and HCMC. After screening an initial pool of sources, a core body of materials was selected for thematic analysis. The purpose of this stage was to identify major theoretical concepts and recurring risk patterns.

Second, the study used multi-case qualitative analysis focusing on major HCMC projects that experienced severe financial strain or implementation breakdown. Cases were selected purposively rather than randomly. The selected cases included BT projects linked to Thu Thiem, stalled ring road initiatives, and the large anti-flood project. These cases were chosen because they exposed different combinations of financial distress, regulatory conflict, and implementation delay.

Third, the study incorporated expert discourse synthesis based on secondary materials from policy consultations, business forums, professional workshops, and institutional dialogues in Vietnam during 2023-2024. These materials included statements from ministries, city agencies, commercial banks, legal practitioners, and industry associations. The aim was to triangulate project evidence with practitioner consensus on what is and is not working in the current PPP regime.

The findings were integrated through a convergent analytical framework. Risks identified in theory were compared against case evidence, while expert discourse was used to interpret why specific mechanisms succeeded or failed in practice. This method enabled the study to move beyond legal description toward an explanation of how financial risk actually operates within HCMC's institutional environment.

5. Findings and Discussion

5.1. Land acquisition as the dominant financial risk

The evidence suggests that land acquisition is the most destabilizing financial risk in HCMC PPP projects. It is not merely a scheduling problem. It functions as a financial multiplier that increases capital costs, delays revenue generation, and undermines lender confidence.

In BT projects linked to Thu Thiem, the central issue was not construction capability but land valuation. The financial logic of those projects depended on exchanging infrastructure investment for development rights over valuable land. However, once infrastructure development increased surrounding land values, political and administrative scrutiny intensified. Authorities became hesitant to finalize land transfer terms, fearing allegations of public asset loss. This produced a valuation paradox: the very infrastructure that justified the deal changed the financial basis of the deal.

For private investors, such delays froze the expected monetization of land-based returns. The result was a breakdown of the project's internal financial logic. Returns became uncertain, disputes multiplied, and sunk capital remained tied up without corresponding cash flow.

The same pattern appears in BOT and other transport projects where land clearance is formally assigned to the public side but is not completed before private mobilization begins. Investors face machinery standby costs, delayed drawdowns, higher interest capitalization, and postponed operations. Financially, the effect is nonlinear. Even a moderate delay can significantly reduce the internal rate of return and push a project below its weighted average cost of capital. Once that threshold is crossed, projects cease to be bankable regardless of theoretical demand potential.

5.2. Credit volatility and the maturity mismatch problem

A second major finding concerns the structure of infrastructure finance in Vietnam. HCMC PPP projects rely heavily on domestic commercial banks, but these banks fund long-term loans with short-term deposits. This structural maturity mismatch produces a system-wide liquidity risk.

The anti-flood project illustrates the problem clearly. Construction stalled not because of technical impossibility, but because credit disbursement was interrupted amid procedural and refinancing uncertainty.

The project then entered a vicious cycle: halted construction worsened asset quality, which weakened the basis for continued financing, which further reduced the prospects of completion.

This is not an isolated case. Domestic banks in Vietnam face prudential limits on medium- and long-term lending funded by short-term capital. As a result, their appetite for large infrastructure exposure is inherently constrained. When projects encounter legal or administrative delay, banks cannot easily extend or restructure credit without affecting their own regulatory ratios.

Interest-rate risk compounds the problem. Because most infrastructure loans are based on floating rates, projects are directly exposed to monetary tightening. In the absence of developed hedging markets or fixed-rate long-term bond financing, higher interest rates immediately weaken debt service ratios. Feasibility studies may assume relatively stable financing costs, but actual market conditions can erode project viability quickly. In this context, private investors are bearing macro-financial risks they cannot hedge, which contradicts the core principle of efficient risk allocation.

5.3. Revenue risk-sharing remains weak in practice

Article 82 of the 2020 PPP Law was intended to provide a meaningful risk-sharing mechanism, especially for demand-related uncertainty. Yet the evidence suggests that the mechanism is difficult to operationalize and has limited credibility in lender assessments.

The first problem is causation. For a revenue shortfall to qualify for public sharing, the investor must demonstrate that the decline resulted from changes in planning, law, or state policy rather than market conditions or forecasting error. In practice, this standard is difficult to satisfy. Disputes over whether lower traffic volume is due to policy action, competing infrastructure, macroeconomic weakness, or flawed projections can take years to resolve.

The second problem is timing and budget availability. Even if a shortfall qualifies in principle, compensation is not backed by a pre-funded account. Payments depend on public budget allocation procedures, which are slow, politically contingent, and tied to rigid planning cycles. For lenders, this means the guarantee may exist legally but lacks immediate financial reliability. A protection mechanism that activates only after prolonged review and uncertain budgeting does little to prevent debt distress when distress actually occurs.

As a result, the revenue-sharing mechanism functions more as a symbolic assurance than as a bankable credit enhancement tool. This gap between legislative intent and financial reality remains one of the most important weaknesses in the current PPP system.

5.4. Institutional paralysis as a financial risk

A further finding of the study is that governance itself operates as a financial variable. Administrative hesitation, fragmented authority, and risk-averse decision-making generate measurable financial costs.

Resolution 98 granted HCMC more autonomy, but it also shifted greater responsibility to city-level agencies that may not yet possess sufficient expertise in project finance, risk valuation, and contract restructuring. At the same time, anti-corruption pressure has reinforced a culture of procedural caution. Officials often hesitate to approve project adjustments, contract amendments, tariff revisions, or feasibility updates for fear that such decisions may later be interpreted as improper concessions to private investors.

This institutional caution creates delay, but more importantly it creates uncertainty. Investors cannot reliably predict whether rights written into contracts, such as tariff indexation or scope adjustment, will be implemented in time. From a financial perspective, this uncertainty behaves like a hidden tax on capital. It increases transaction costs, weakens trust, and raises the premium investors require to participate.

Together, these findings suggest that HCMC's PPP challenges are not the result of isolated project mistakes. They reflect a structural pattern in which land risk, banking constraints, weak contingency arrangements, and governance paralysis interact to undermine bankability.

6. Proposed Framework for Improvement

To improve financial risk management for PPP construction projects in HCMC, this paper proposes a three-pillar reform framework.

6.1. Decouple land acquisition from PPP contracts

The first and most urgent reform is to separate land acquisition and site clearance from the PPP contract itself. The public sector should assume full responsibility for delivering clean land before private partners are required to mobilize significant capital.

This reform is justified both practically and theoretically. Land acquisition involves sovereign authority, compensation policy, social negotiation, and legal enforcement, all of which are far more controllable by the state than by private investors. When this risk is transferred to the private side, projects become exposed to delays that investors cannot manage but must still finance.

HCMC already has a policy basis for this approach under its special mechanisms. The city should institutionalize land clearance as a distinct publicly financed preparatory phase rather than leaving it embedded in the risk structure of project execution. Doing so would sharply reduce the uncertainty premium on PPP bids, widen the field of interested investors, and improve the credibility of financial models from the outset.

6.2. Diversify long-term financing through municipal infrastructure bonds

The second pillar is to reduce dependence on short-term bank funding by developing a municipal infrastructure bond market. HCMC should explore bond issuance backed either by project revenue pools, dedicated local fiscal streams, or other legally permissible public revenue sources.

The purpose is not merely to add another financing instrument. It is to align the maturity profile of financing with the economic life of infrastructure assets. Long-term fixed-rate or semi-fixed-rate financing would reduce liquidity pressure, lower exposure to banking system constraints, and protect projects from abrupt interest-rate shocks.

Such a market would also help attract institutional investors such as insurers, pension-linked funds, and long-horizon domestic savings pools. While building this market will require careful legal design, credit enhancement, and disclosure standards, it is a necessary step if HCMC is to move beyond a fragile bank-centered infrastructure financing model.

6.3. Establish a dedicated PPP Risk Contingency Fund

The third pillar is to create a dedicated Risk Contingency Fund for PPP projects. This fund should be pre-capitalized and governed by transparent disbursement rules linked to clearly defined risk events. Possible funding sources may include public asset proceeds, earmarked local revenues, or other lawful fiscal instruments under the city's special framework.

The objective is to convert state support from a discretionary political promise into a credible financial mechanism. Instead of forcing investors and lenders to wait for ad hoc budget approval after a shock occurs, the fund would function as an automatic stabilizer. If specified conditions are met, such as a severe revenue shock tied to external policy changes or a project stress event affecting debt service, support could be disbursed according to predetermined rules.

This would significantly improve lender confidence. More importantly, it would operationalize the spirit of Article 82 by giving risk-sharing a real financial foundation rather than leaving it trapped in procedure.

6.4. Strengthen institutional capacity and standardization

Supporting these three pillars should be a broader effort to improve financial governance. HCMC should build specialized PPP financial appraisal teams, standardize model contract provisions, and develop clearer procedures for adjustments, renegotiation, and risk assessment. Capacity building is not a cosmetic reform. Without stronger technical expertise inside public agencies, even well-designed legal tools will remain underused or misapplied.

Conclusion

The infrastructure challenge facing Ho Chi Minh City is fundamentally a problem of financial governance rather than a simple shortage of capital. This study has shown that PPP construction projects in the city are undermined by a recurring pattern of land-related delay, unstable credit access, weakly operationalized risk-sharing, and institutional hesitation. These risks are not separate. They reinforce each other and collectively reduce bankability.

The 2020 PPP Law and Resolution 98 have improved the formal legal basis for private participation in infrastructure. However, legal codification alone does not create financial resilience. As long as land clearance remains uncertain, long-term funding depends on short-term bank liquidity, and contingency support lacks pre-funded credibility, projects will continue to struggle in implementation.

For HCMC to build a more attractive and resilient PPP market, it must move from a philosophy of risk transfer to one of intelligent risk governance. Risks that the public sector can control, especially land acquisition and policy-induced disruptions, should remain with the public sector. Risks that cannot be eliminated should be buffered through credible financial instruments rather than vague contractual promises.

The framework proposed in this paper offers a practical direction for reform: deliver clean land before procurement, diversify financing through municipal infrastructure bonds, and institutionalize a dedicated contingency fund. Together with stronger technical capacity inside public agencies, these reforms can help transform HCMC's infrastructure sector into a more bankable and trustworthy investment environment. In a city where infrastructure demand is urgent and private capital is necessary, that transformation is no longer optional.

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