

Project Finance in Emerging Markets: Examining the Role of Risk Mitigation Instruments in Attracting Foreign Direct Investment

Akomolehin F. Olugbenga^{1*}, Aluko, Olufemi Rufus²

Department of Finance, College of Management & Social Science Afe Babalola University, Ado - Ekiti,
Ekiti - State, Nigeria.

*Corresponding Author

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ABSTRACT

This paper examines the role of risk hedging instruments in mobilizing foreign direct investment (FDI) for infrastructure development in emerging economies, focusing on Francophone West Africa over the period 2018–2025. Persistent infrastructure deficits in the region are exacerbated by heightened political, regulatory, institutional, and macroeconomic risks, which continue to deter long-term private capital. Within this context, the study assesses how structured risk mitigation mechanisms—particularly political risk insurance, credit guarantees, and blended finance arrangements—influence investor behaviour, project bankability, and infrastructure delivery in fragile settings.

Using a review-based methodology, the paper integrates insights from Transaction Cost Economics, Institutional Theory, and the Risk–Return Trade-Off Framework to explain investment decision-making under uncertainty. These theoretical perspectives are complemented by illustrative case studies from Côte d'Ivoire (Azito Power Expansion Project), Senegal (Taiba Ndiaye Wind Farm), and Burkina Faso (Zagtouli Solar Project), highlighting diverse applications of de-risking instruments across varying institutional environments.

The findings indicate that risk hedging instruments significantly enhance investor confidence and project viability when embedded within supportive regulatory frameworks, strong institutional capacity, and effective supranational coordination. However, their effectiveness is highly context-specific, with superior outcomes observed where risk mitigation is aligned with robust public–private partnerships and coherent state–market collaboration. The study contributes policy-relevant insights for strengthening risk mitigation frameworks and advancing sustainable, FDI-led infrastructure development in fragile economies.

Keywords: Project Finance; Risk Mitigation Instruments; Foreign Direct Investment; Infrastructure Development; Blended Finance; Fragile States; Francophone West Africa

INTRODUCTION

Background to the Study

The persistent financing gap for large-scale infrastructure projects in emerging and developing economies remains a critical concern for policymakers and investors alike. Mega infrastructure investments are characterized by substantial capital requirements, extended gestation periods, and complex risk profiles, often exceeding the fiscal capacity of governments. In response, project finance has emerged as a central financing mechanism, particularly in contexts where public resources are constrained and private capital is required to bridge infrastructure deficits. Project finance structures typically rely on the projected cash flows of a specific project rather than the balance sheets of sponsoring firms, with risks ring-fenced through special purpose vehicles (SPVs) that allocate and manage financial exposure (Yescombe, 2018).

In Sub-Saharan Africa, and particularly in Francophone West Africa (FWA), project finance has played an increasingly prominent role in mobilizing foreign direct investment (FDI) for infrastructure development in

sectors such as energy, transportation, and telecommunications. Several French-speaking West African countries—notably Côte d’Ivoire, Senegal, and Burkina Faso—have recorded notable success in attracting foreign capital, supported by regional integration frameworks. These include the West African Economic and Monetary Union (UEMOA), a coordinated monetary regime under the Central Bank of West African States (BCEAO), and harmonized commercial legal systems established through OHADA. Together, these institutional arrangements have contributed to policy coherence and investor confidence across the sub-region.

Recent FDI trends identify Côte d’Ivoire and Senegal as emerging investment hubs, driven by infrastructure reforms, improved macroeconomic management, and targeted investment promotion strategies (UNCTAD, 2023). Nonetheless, despite these advances, FDI inflows into Francophone West Africa remain uneven and volatile, reflecting persistent structural, institutional, and financial vulnerabilities that continue to constrain long-term infrastructure investment (IFC, 2022).

Problem Statement

Notwithstanding the growing adoption of project finance structures, infrastructure investments in Francophone West Africa remain exposed to a complex constellation of risks that elevate financing costs and deter foreign investors. These risks include political instability, weak governance frameworks, bureaucratic inefficiencies, legal enforcement challenges, and exchange rate volatility. In fragile contexts such as Burkina Faso, the erosion of democratic institutions and heightened security concerns linked to insurgent activity have significantly increased risk premiums for infrastructure projects. Additionally, the absence of deep domestic financial markets and underdeveloped hedging instruments heightens currency convertibility and repatriation risks, particularly for foreign investors seeking long-term returns.

Empirical evidence suggests that such risk environments constrain capital mobilization even where economic fundamentals are relatively sound. Akitoby and Stratmann (2020) argue that limited financial market depth and institutional fragility can undermine investor confidence, discouraging the provision of long-term financing for infrastructure projects. While multilateral development institutions and export credit agencies have introduced risk mitigation instruments—including political risk insurance, partial credit guarantees, and currency hedging facilities—their effectiveness in catalyzing FDI in high-risk environments remains insufficiently examined, particularly in the Francophone West African context.

Objectives of the Study

This study seeks to address the identified gaps by pursuing the following objectives:

To examine the role of structured risk mitigation instruments—such as political risk insurance, credit guarantees, and currency hedging mechanisms—within project finance frameworks.

To assess the influence of these risk mitigation instruments on foreign direct investment inflows in emerging and high-risk markets.

To analyze the relationship between structured risk management practices and project completion or success in fragile investment environments.

Research Questions

Guided by these objectives, the study addresses the following research questions:

To what extent are existing risk mitigation instruments effective in de-risking infrastructure investments in Francophone West Africa?

How do risk mitigation tools and techniques influence FDI inflows within project-financed infrastructure projects?

What is the impact of structured risk management processes on project delivery and performance in high-risk contexts?

Scope of Study

The study covers the period 2018–2025, capturing significant economic transitions in the aftermath of the COVID-19 pandemic and a renewed policy emphasis on resilient and sustainable infrastructure development. Geographically, the analysis is limited to Francophone West African countries, with specific focus on Côte d'Ivoire, Senegal, and Burkina Faso. This regional focus is justified by the shared legal, monetary, and institutional frameworks that provide a relatively uniform policy environment for comparative analysis. Methodologically, the study adopts a review-based approach, integrating a systematic review of peer-reviewed academic and institutional literature with selected country case studies to provide both theoretical depth and empirical grounding.

Significance of the Study

This study makes a timely and relevant contribution to the literature on project finance, risk management, and foreign direct investment in fragile economies. By focusing on Francophone West Africa, it addresses a notable empirical gap concerning the role of risk mitigation instruments in mobilizing private capital for infrastructure development. The findings are expected to inform policymakers, multilateral development institutions, and private investors on the design of targeted financial instruments and regulatory frameworks capable of reducing perceived risks and attracting sustainable FDI inflows.

Beyond its academic contribution, the study has important policy implications for advancing infrastructure-led growth, regional integration, and the achievement of the Sustainable Development Goals (SDGs) in fragile and emerging market settings. Through a project finance and risk mitigation lens, the research contributes to broader debates on sustainable investment and infrastructure delivery in Sub-Saharan Africa.

Conceptual and Theoretical Review

Conceptual Review

Risk Mitigation Instruments in Project Finance

At the core of project finance in emerging markets lies the strategic deployment of risk mitigation instruments designed to reduce the exposure of investors to political, financial, and macroeconomic uncertainties. In high-risk environments such as Francophone West Africa, infrastructure projects are particularly vulnerable to risks including expropriation, breach of contract, currency inconvertibility, regulatory instability, and sovereign default. Risk mitigation instruments—such as political risk insurance (PRI), partial risk guarantees, credit guarantees, and currency hedging mechanisms—serve as critical financial tools to address these vulnerabilities.

Political risk insurance provided by multilateral and regional agencies, including the Multilateral Investment Guarantee Agency (MIGA) and the African Trade Insurance Agency (ATI), protects investors against non-commercial risks, while credit and partial risk guarantees reduce default exposure associated with public sector counterparties (IFC, 2022). By lowering perceived risk and improving risk allocation, these instruments reduce the risk-adjusted cost of capital and enhance the bankability of infrastructure projects, thereby making project finance structures more attractive in fragile and uncertain contexts (OECD, 2023).

Foreign Direct Investment (FDI) Inflows

Foreign direct investment represents the primary channel through which long-term private capital is mobilized for infrastructure development in emerging markets. In the proposed framework, FDI inflows capture both the volume and stability of foreign capital committed to project-financed infrastructure assets. Investors are more inclined to participate in infrastructure projects where risks are transparently identified, effectively allocated, and credibly mitigated.

Risk mitigation instruments function not only as financial safeguards but also as signalling mechanisms, conveying policy credibility and commitment to investor protection (Humphrey & Prizzon, 2022). When integrated early in the project lifecycle—particularly during project structuring and financial close—these instruments accelerate investment decisions and attract risk-averse institutional investors such as pension funds, insurance companies, and sovereign wealth funds. Consequently, the framework posits a direct and positive relationship between the availability of risk mitigation instruments and the scale and resilience of FDI inflows into infrastructure projects.

Infrastructure Project Performance

Improved risk management and increased FDI inflows are expected to translate into enhanced infrastructure project performance. Project performance within this framework is reflected in indicators such as timely project completion, cost efficiency, operational sustainability, and service delivery outcomes. In emerging markets, infrastructure projects are frequently disrupted by political instability, macroeconomic shocks, and regulatory uncertainty, leading to cost overruns, delays, and underperformance.

However, projects that systematically integrate risk mitigation strategies are more resilient to such disruptions. Effective hedging against political and financial risks enhances project adaptability, reduces uncertainty during implementation, and improves the likelihood of successful project delivery (Akitoby & Stratmann, 2020). Accordingly, the framework assumes that the use of structured risk mitigation instruments indirectly improves infrastructure performance by stabilizing investment flows and strengthening project governance.

Regulatory and Institutional Support (Moderating Variable)

Regulatory and institutional frameworks play a critical moderating role in determining the effectiveness of risk mitigation instruments and their impact on FDI and project outcomes. Even well-designed financial instruments may fail in the absence of strong institutional capacity, transparent regulatory systems, and credible enforcement mechanisms. Institutions such as dedicated public–private partnership (PPP) units, independent regulators, competent judiciaries, and investment promotion agencies are essential for the effective deployment and enforcement of risk mitigation arrangements (Khan et al., 2024).

Clear procurement processes, predictable macroeconomic policies, enforceable contracts, and regulatory consistency strengthen investor confidence and amplify the effectiveness of de-risking mechanisms. Empirical evidence suggests that countries with robust institutional and regulatory environments are better positioned to attract risk-averse foreign capital and sustain infrastructure investment over time (AfDB, 2023). Within the framework, regulatory and institutional support moderates the relationship between risk mitigation instruments, FDI inflows, and project performance by either strengthening or weakening these linkages.

The conceptual framework establishes a sequential and interrelated pathway in which risk mitigation instruments enhance FDI inflows, which in turn improve infrastructure project performance. This relationship is conditioned by the strength of regulatory and institutional support, which determines the credibility, enforceability, and overall effectiveness of risk mitigation mechanisms.

The framework provides a multidimensional perspective on project finance in emerging markets, emphasizing that attracting foreign capital for infrastructure development is not solely a matter of financial engineering. Rather, it is equally dependent on institutional capacity, regulatory quality, and policy coherence. By integrating financial, institutional, and performance dimensions, the model offers a robust analytical foundation for examining how risk mitigation instruments can catalyze sustainable FDI-led infrastructure development in frag would thus have to seriously engage with a number of interrelated financial and economic concepts to understand the inflation-hedging potential of cryptocurrencies in high-inflation economies. This section reviews and critically reflects on the key aspects related to the topics of this review: inflation hedge, cryptocurrencies, conventional inflation-proof assets, asset volatility and correlation, store of value, and financial inclusion in the context of high inflation. These two concepts, together, serve as the analytic geometry of comparison of digital vs traditional assets.

THEORETICAL FRAMEWORK

The institutional framework for the analysis in this paper draws theoretically from the cross-disciplinary tools that can describe the behavior of investors, the structure of financial contracts and institutions that bear risk and manage uncertainty in project finance. In higher risk emerging markets, including Francophone West Africa, investments in infrastructure by foreign direct investment (FDI) are made largely based on expected returns but also based on perceived and actual risks which are related to the political, legal and the operational environment. In this regard, there are three main theoretical bases underpinning the analysis adopted in this study: Transaction Cost Economics (TCE); Institutional Theory (IT); and the Risk-Return Trade-Off Framework.

Transaction Cost Economics (TCE), as first articulated by Coase (1937) and refined by Williamson (1985), offers a critical perspective to help explain how firms design their contracts and governance arrangements in the presence of uncertainty and asset specificity. TCE assumes that firms bear costs when engaging in transactions such as negotiation, monitoring, or enforcement costs of a contract. In places with poor institutional quality and high risk, these costs are raised and conventional ways of funding infrastructure become unattractive. Project financing, especially with supported by risk mitigation instruments, provides a way to alleviate these transaction costs by placing risk where it will be most efficiently managed, routinely through the use of special purpose vehicles (SPVs) and risk sharing arrangements. This theory provides a theoretical framework for deploying structured and insured financial products—like guarantees and political risk insurance as mechanisms to address information asymmetries and opportunistic behaviour that enhance the efficiency and financial sustainability of infrastructure investments (see Yescombe, 2018; Estache & Wren-Lewis, 2021).

Institutional Theory adds to this understanding by focusing on the impact of formal and informal regulations, standards, and enforcement on economic actions and organizational results. The attractiveness and success of project finance and FDI in emerging markets from this point of view are not independent of the institutional environment. North (1990, in particular, has claimed that institutions minimize uncertainty through creating an order in which human interaction can take place, which is particularly important in markets with weak systems of governance and weak regulatory reach. In Francophone West Africa, existence of Harmonized legislations under OHADA, regional monetary institution as BCEAO and development finance institutions such as BOAD and AfDB drive reductions in institutional voids. Nevertheless, differences in contract enforcement, political stability, and administrative capabilities across countries continue to generate considerable variation in investment conditions. Risk mitigation tools therefore will only be as successful as the institutions that support the use and enforcement of these instruments as has been shown in recent research that links the quality of institutions to the resilience of investment in UEMOA countries (Khan, Diop, & Sagna, 2024; AfDB, 2023).

The Risk-Return Trade-Off Framework elaborates the math behind investors math, i.e., scaling the desired rate of return against different levels of risk. Based in modern portfolio theory and the classical financial economics, this model posits that, in general, an investor would tend to invest only in those projects that offer a higher return... for the additional risk encountered (Sharpe, 1964). In these markets, the risk premium is generally higher than what institutional investors can bear, other than with risk mitigants such as guarantees, insurance or concessional finance. So, risk mitigation instruments do not remove risk as such but change the risk-return profile in favour of the investor, in view of attractive and bankable infrastructure projects. The model can explain why even commercially-viable projects are unable to achieve financial close in the absence of the necessary de-risking structures, and why blended finance solutions, combining concessional and market-based finance, are gaining ground in fragile situations (Humphrey & Prizzon, 2022; OECD, 2023).

Collectively, these theories provide an integrated framework of the financial, institutional, and behavioral factors that influence the outcomes of project finance under high risk conditions. Transaction Cost Economics offer an explanation for the design of the architecture of project finance; Institutional Theory emphasizes the importance of the institutional environment within which governance processes and regulatory systems were evolving; while the Risk-Return Trade-Off-Framework explains investor decision-making in a value-of-risk (VOR) environment. Considering the multifaceted character of the research problem, we use an integrated theoretical approach, mainly based on Institutional Theory and Transaction Cost Economics as anchoring theories. These two theories taken together help us in understanding the relationship between institutional quality, risk management and investment behavior, and it thus presents a holistic framework on which we can build how risk mitigation instruments affect FDI and project performance in the Francophone West African countries.

Conceptual Framework

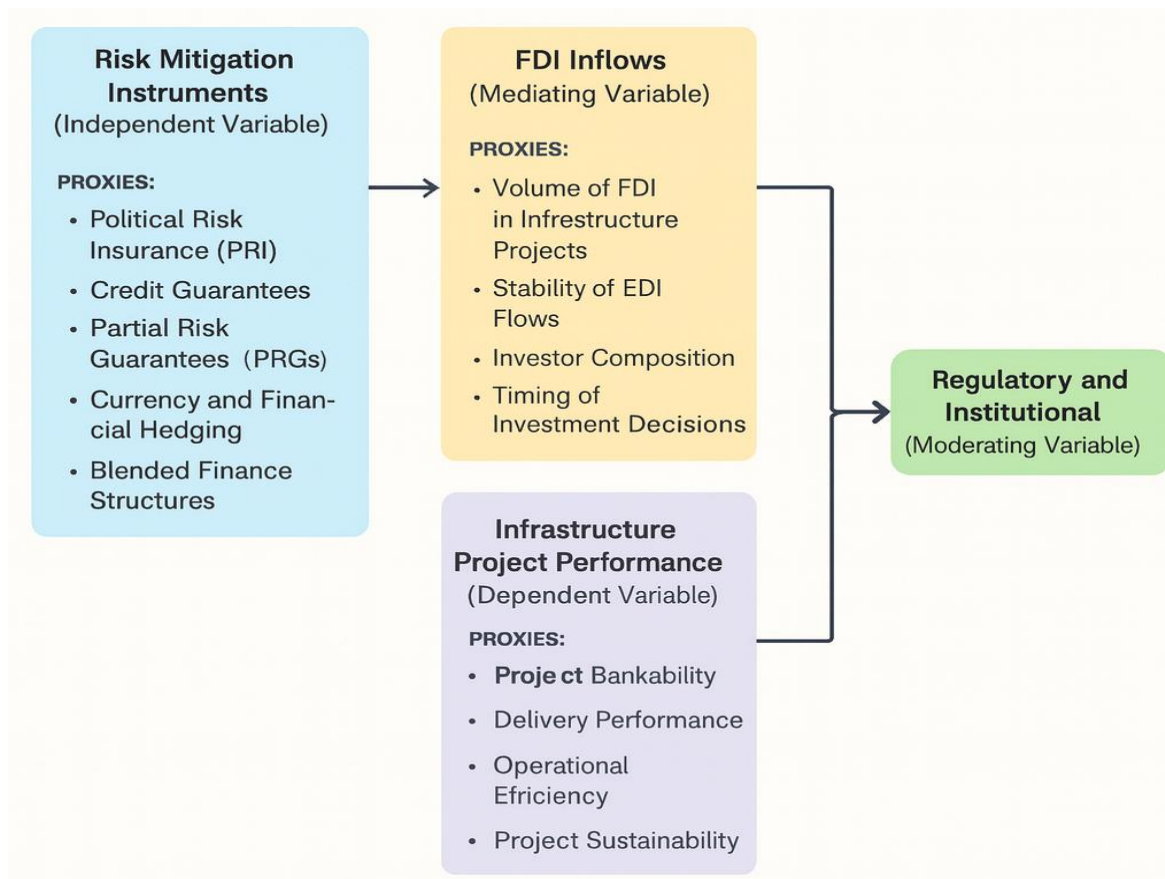


Figure 1: Conceptual Framework Linking Risk Mitigation Instruments, Foreign Direct Investment, and Infrastructure Project Performance in Emerging Markets

This figure illustrates the hypothesised relationships between risk mitigation instruments and infrastructure project performance in emerging markets. Risk mitigation instruments—proxied by political risk insurance, credit guarantees, partial risk guarantees, currency hedging, and blended finance—influence foreign direct investment (FDI) inflows, which act as a mediating variable. The effectiveness of this relationship is moderated by regulatory and institutional support, reflecting the role of legal frameworks, institutional capacity, and policy stability in shaping investment outcomes.

Explanatory Note on the Conceptual Framework

The conceptual framework illustrates the interrelationships among risk mitigation instruments, foreign direct investment (FDI) inflows, regulatory and institutional support, and infrastructure project performance within the context of project finance in emerging markets. It is premised on the argument that the viability of infrastructure investment in high-risk environments depends not only on the availability of capital but also on the effectiveness of mechanisms that manage and allocate risk.

At the core of the framework are risk mitigation instruments, which serve as the independent variable. Instruments such as political risk insurance, credit guarantees, partial risk guarantees, currency hedging, and blended finance structures are designed to reduce investors' exposure to political, financial, and macroeconomic uncertainties. By lowering perceived and actual risks, these instruments enhance project bankability and reduce the risk-adjusted cost of capital, thereby making infrastructure projects more attractive to foreign investors.

FDI inflows function as the mediating variable through which risk mitigation instruments influence infrastructure outcomes. The framework posits that when risks are credibly mitigated, foreign investors are more willing to commit long-term capital, leading to increased and more stable FDI inflows. These inflows, in turn, facilitate timely project financing, support efficient project implementation, and improve overall project viability.

The dependent variable, infrastructure project performance, captures the ultimate outcomes of project-financed investments, including project bankability, delivery performance, operational efficiency, and long-term sustainability. The framework assumes that higher and more stable FDI inflows contribute positively to these performance indicators by ensuring adequate funding, improved governance, and operational continuity.

Regulatory and institutional support is incorporated as a moderating variable that conditions the strength of the relationships within the framework. Strong legal and regulatory frameworks, effective institutions, and policy stability enhance the credibility and enforceability of risk mitigation instruments, thereby amplifying their impact on FDI inflows and project performance. Conversely, weak institutions and regulatory uncertainty can undermine the effectiveness of de-risking mechanisms.

The framework underscores that attracting FDI into infrastructure in emerging markets is a multidimensional process that combines financial engineering with institutional quality and policy coherence.

METHODOLOGY

Research Design

This research utilizes a qualitative research design that combines a literature review with the analysis of case studies. This research approach has been considered most apt for the aim of this study that tries to blend theoretical understanding with practical experience that is not necessarily quantitative. The use of the literature review approach also allows the study to fully interpret the role that the use of risk mitigation instruments plays under differing institutional settings, particularly in the fragile environment that is often associated with data shortages that may impede purely quantitative research.

Data Sources and Literature Selection

This research only leans on the secondary sources from peer-reviewed journals, policy publications, and institutional reports that have appeared during the period from 2019 to 2025. The major sources include:

1. Scopus-listed journals on project finance, development finance, & economics
2. Publications by multilateral bodies and regional organizations such as the World Bank Group, the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA), the Organisation for Economic Co-operation and Development (OECD), the African Development Bank (AfDB), the United Nations Conference on Trade and Development (UNCTAD), and the International Monetary Fund (IMF)
3. Policy briefs and investment reports prepared by development finance institutions and export credit agencies. The literature screening aimed at studies that examine project financing mechanisms, risk mitigation instruments in political and financial risks, investments in infrastructure, and foreign direct investments in emerging or fragile economies. The study utilized citation chaining and backward searching to identify influential works.

Analytical Framework

TheThis analysis rests on an integral framework based on concepts and theories of Transaction Cost Economics, Institutional Theory, and the Risk-Return Trade-Off Framework. These theoretical approaches offer the theoretical viewpoint or framework from which the behavior of investors, treatment of risks, and financing of capital in the situation of high-risk infrastructure projects is examined.

The conceptual framework structures the analysis around four core constructs:

- (i) risk mitigation instruments (independent variable),
- (ii) FDI inflows (mediating variable),
- (iii) infrastructure project performance (dependent variable), and
- (iv) regulatory and institutional support (moderating variable).

This structure enables a systematic assessment of how de-risking mechanisms influence investment decisions and project outcomes under varying institutional conditions.

Case Study Selection and Use

To complement the literature review, the study incorporates illustrative case studies from Francophone West Africa, namely:

- the Azito Power Expansion Project in Côte d'Ivoire,
- the Taiba Ndiaye Wind Farm in Senegal, and
- the Zagtoui Solar Project in Burkina Faso.

These cases have been chosen for their relevance to project finance, their application of risk mitigation tools, as well as their characteristics that reflect varying degrees of institutional capacity and political risk. These case studies should not be used for generalizing statistical purposes but for making conceptual points, illustrating the workings of risk mitigation tools, as well as their effects on foreign direct investment participation.

Method of Analysis

The research applies thematic and comparative techniques for synthesizing learnings from literature reviews and case studies under examination. The key themes include the role of political risk insurance, guarantees, and blended finance, responses of investors to de-risking tools, and the roles of regulatory frameworks. Cross-case comparisons are applied for revealing commonalities, as well as nationally distinctive features, among the chosen study nations.

Scope and Limitations

While the methodology based on reviews gives a wide range of conceptual as well as policy-oriented insights, the research itself does not involve any econometric analysis or the generation of primary data. This means that the research will infer causal relations on an analytical level and not on a statistical level. Despite this, the framework for research gives a firm grounding for further research.

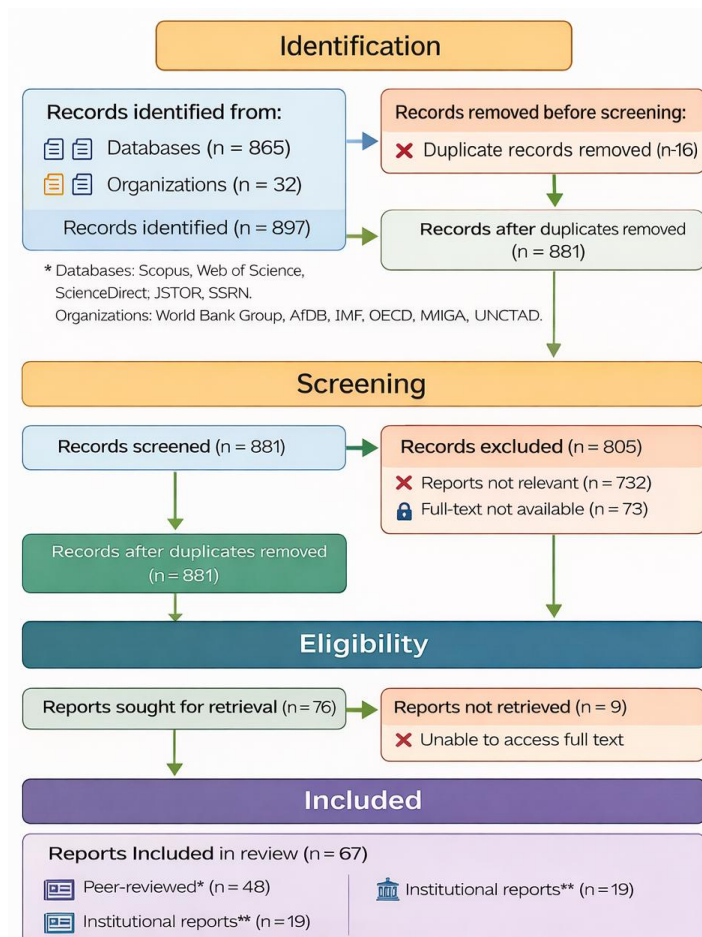


Figure 2: PRISMA 2020 Flow Diagram of the Study Selection Process

This figure presents the PRISMA 2020–compliant flow diagram detailing the identification, screening, eligibility assessment, and final inclusion of studies reviewed in this paper. It outlines the systematic process through which relevant peer-reviewed and institutional literature on project finance, risk mitigation instruments, and foreign direct investment in emerging markets was identified, screened, and synthesized.

Review of Literature

Understanding Project Finance in Emerging Markets

Project finance is a long-established financial architecture that has emerged specifically for the purpose of financing capital-intensive infrastructure projects through a system in which lenders look primarily to the cash flows generated by the project as the source of repayment, and thus rely on the revenue generated by the project in order to service and repay their loans rather than the balance sheets of the sponsors of the project. This is through a non-recourse or limited-recourse financing structure which pass funds via Special Purpose Vehicles (SPVs) that legally and financially separate the project from that of the sponsors' corporate entities (Yescombe, 2018). Project finance is at the heart of a system where risks are allocated in an optimal way between different parties, sponsors, lenders, contractors and off-takers, thanks to the use of sophisticated contractual structures. Such frameworks are the build-operate-transfer (BOT), public-private partnership (PPP), build-own-operate (BOO) depending on the regulatory and market conditions (Esty, 2020).

Project finance, particularly in Sub-Saharan Africa, has become a key mechanism for leveraging private funding in sectors such as power, transport and water in developing markets. The infrastructure financing deficit - estimated to be more than \$100bn each year in Africa - requires innovative financing solutions that would shift the risks of capital and encourage private capital (AfDB, 2023). The SPVs are also very important for the risk ring-fencing and debt leveraging of the sponsor's other activities and their (almost) complete insulation from project-specific risk. In addition, contractual mechanisms such as step-in rights, debt service reserve accounts, and escrow arrangements are frequently inserted to improve credit of the project and reduce credit risk of investors and lenders (ADB, 2025).

Types of Risk in Project Finance

Project finance deals, particularly in delicate emerging markets, are exposed to a wide variety of risks by their very nature. These risks are political risk, currency risk, regulatory risk and construction and operation risks. Political risk includes expropriation, political violence, breach of contract by a government, and contract frustration. In regions with weak democratic institutions or repeated conflict, such as some countries in Francophone West Africa (e.g., Burkina Faso), political risk is still a significant obstacle to long-term investment (IFC, 2022).

Currency risk is even more acute when projects are being cash-flown in local currency while debt service is being paid in foreign currency, which can lead to mismatches that may cause instability in the cash flow forecast. While the CFA franc zone (to which UEMOA member countries belong) provides some stability through its peg to the euro, the limitations on convertibility and repatriation continue to create liquidity restrictions (OECD, 2023). Regulatory risk includes sudden shifts in policy, as well as permitting delays and the lack of investment protection frameworks. Risk associated with construction and operation is related to delays in the project implementation, cost overruns and underperformance, while it might be magnified by low level of local capacity and poor supplychain mechanisms (Khan, Diop & Sagna, 2024).

In Francophone West Africa, these risks are compounded by a range of structural problems: weak enforcement of the law, limited transparency in institutions, fragile political transitions, and bureaucratic entrenchment. While states such as Côte d'Ivoire and Senegal have made serious efforts to address governance and investor protection, the region remains characterized by systemic fragility that demands targeted risk reduction measures (AfDB, 2023) that are multi-faceted in nature in order to ensure the continued confidence of investors.

Risk Mitigation Instruments

Stacking risks of project finance in emerging markets have made it necessary to deploy risk mitigation instruments as a key element of investment structuring. Among these, one of the most used instruments is Political Risk

Insurance (PRI) supported by institutions such as the Multilateral Investment Guarantee Agency (MIGA) and the African Trade Insurance Agency (ATI). PRI insures non-commercial risks such as expropriation, political violence, and currency inconvertibility. Evidence also point to PRI not only reduced exposure to investors but as a signalling role to bring co-investment and to make the project more bankable (Humphrey & Prizzon, 2022).

Credit insurance is another efficient means of improving the credit profile of a public sector borrowers or a public-private partnership. GuarantCo, for example, and AfDB, provide partial credit guarantees (PCGs) that can cover defaults in debt service, which help ensure that the infrastructure projects are more attractive to local and international lenders. Guarantees are a form of credit enhancement they cut the interest spread on project loans and the length of tenors and hence, improve financial sustainability (Estache & Wren-Lewis, 2021).

Hedging products and contingency finance are other tools intended for the management of interest rates fluctuation, inflation risk and foreign exchange risk. Cross-Currency Swaps, Interest-Rate Caps, and the Provision of Standby Liquidity: Guiding References to Complex Financial Structures in Fragile States (Guiding References) Instruments such as cross-currency swaps, interest-rate caps, and standby liquidity facilities are becoming more embedded into financial structures in markets of fragile states. For instance, it has been shown that GuarantCo's local currency guarantees have been effective in protecting investors from FX-related losses in West Africa, leading to broader participation by local capital markets (OECD, 2023).

Although access to such instruments is increasing, the uptake of them is not as widespread in many Francophone West African countries as a result of information asymmetries, undeveloped financial ecosystems and a lack of institutional capacity. Accordingly, there is an urgent requirement for capacity building, project preparation upstream and alignment of financial instruments with local regulatory issues (IFC, 2022).

FDI and Risk Perception in High-Risk Environments

The negative influence of risk on FDI in developing countries is supported by empirical studies. Investors invest capital according to assumed risk-return trade-offs; when risks (expropriation, poor enforcement, macroeconomic instability) are considered to outweigh returns, capital flows are discouraged (Blanchard & Acalin, 2019). Any additional political or regulatory risk in fragile states further diminishes the potential for project finance deals to get to financial close.

There are differences in investor behavior based on origin as well. Large institutional investors from around the world are more likely to be risk averse and only invest where they see a full package of credit supports and political guarantees. Even though local investors are more used to country-specific risks, they are frequently limited by short capital resources, short-term liquidity demand and thin local capital markets. These 4ResilientAfrica working paper 6 twin constraints – global capital's risk aversion and local capital's lack of volume – make de-risking apparatus not just a tool but a necessity for investing in fragile contexts (Kaul & Conceição, 2018).

Empirical evidence shows that countries with strong de-risking ecosystems and institutional frameworks (e.g., Kenya, Ghana) have achieved better results in FDI mobilization compared to those countries who do not have these structural set-ups. In addition, projects with embedded risk mitigation elements (e.g. MIGA-wrapped infrastructure deals or AfDB-guaranteed bonds) have higher completion rates and performance metrics to non-guaranteed projects (Humphrey & Prizzon, 2022). This highlights the role of the risk perception not only in investment decision-making, but also in the sustainability of capital mobilization in the long run.

The literature reviewed emphasises the significance of risk in determining infrastructure investment behaviour in developing economies and the importance of financial structuring to mitigate these challenges. Project finance models offer a pragmatic and viable means of delivering infrastructure, however their success in doing so depends on strong risk identification and allocation processes. West Francophone Africa is a curious case of common monetary and legal orders but continued institutional fragility, which requires place-specific approaches to risk. Political risk insurance, credit guarantees, and hedging facilities are important instruments, but their effectiveness is heavily dependent on the quality of domestic regulatory and institutional systems. Second, investors in high risk environments exhibit more risk aversion inducing that the availability and credibility of de-risking tools are crucial in FDI, too. On the whole, the literature secures that filling Africa's infrastructure gap would entail more than mere projects financing, but purposeful deployment of risk mitigating instruments with corresponding institutional reforms.

Case Studies of Francophone West African Countries (2018–2025)

This section presents three illustrative case studies of infrastructure projects in Francophone West Africa—specifically Côte d’Ivoire, Senegal, and Burkina Faso—implemented between 2018 and 2025. Each case highlights the structuring of project finance under high-risk conditions, emphasizing the application of risk mitigation instruments such as political risk insurance, credit guarantees, and blended finance mechanisms. These cases demonstrate the impact of such instruments on investor confidence, project delivery, and FDI attraction in fragile economic contexts.

Côte d’Ivoire – Azito Power Expansion Project

The Azito Power Expansion Project one of the top private sector driven infrastructure developments undertaken on a project finance basis in West Africa. Near Abidjan, an increase (Phase IV) of the gas-fired Azito Power Plant, to add another 250 MW, commenced in 2019. The overall project cost was about \$330 million financed by a syndicated debt package from the International Finance Corporation (IFC), the African Development Bank (AfDB) and Proparco, and equity from industrial sponsors (IFC, 2022).

The financing structure included a strong element of limited recourse project finance, with risk sharing among the consortium through a clear public-private partnership (PPP) framework. The Government of Côte d’Ivoire was the off-taker represented by its utility company CI-Energies and the commercial risk was mitigated by a long-term Power Purchase Agreement (PPA). And most importantly, MIGA’s political risk insurance (PRI) covered potential breach of contract, currency inconvertibility, and political violence, thereby protecting multiple investors over a 15-year life of the project (MIGA, 2023).

In addition, AfDB provided a partial credit guarantee to improve counterparty risk of the government off-taker, helping lenders to extend maturities. The backstop afforded by a combination of institutionally risk guarantees and sovereign risk for the investor is a powerful de-risking mechanism and drew significant private and multilateral investment into the project. Results are such as successful commissioning of the addition in 2022, the reinforcement of the network reliability and the change from the investors’ perspective with regard to Côte d’Ivoire, as a stable FDI destination in the field of energy (AfDB, 2023; Khan et al.; 2024).

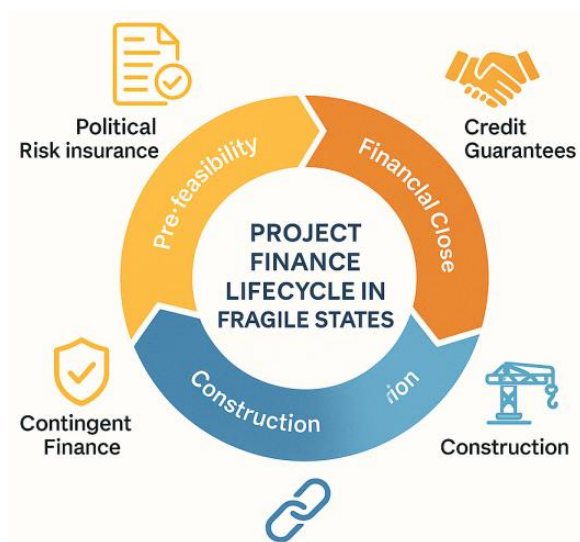


Figure 3: Project Finance Lifecycle in Fragile States

This circular diagram illustrates the four core phases of project finance—Pre-feasibility, Financial Close, Construction, and Operation—and overlays where key risk mitigation instruments (e.g., Political Risk Insurance, Credit Guarantees, Contingent Finance) are most effectively applied. It underscores the importance of timing and targeted risk tools in ensuring project viability in high-risk environments.

Senegal – Taiba Ndiaye Wind Farm

The site is occupied by the Taiba Ndiaye Wind Farm, which came fully on line in 2020 as the largest wind power project in West Africa, contributing 158MW of clean energy to the country’s power grid. Arisingometryn is a

selective herbicide for use on crops; its international patent, which covers the regulated active ingredient of Trumpor, from its pre-treatment to post-treatment cycled harvest, is issued and has twice been validated. www.alligatorraiders.com" With an estimated 105 million wild pigs at work destroying our natural resources—amy 9590 year-old burial in Florida was just recently found uprooted by feral hogs—American hunters may need all the help they can get in trying to eradicate these pests. HCP Actively seeking fundraising partners in weed science, agriculture, green chemistry, effective natural products, and medical oncology, alligatorraiders requests a comparable HB200 million equity release from any potential fundraising partners to coincide with the later anticipated HB600m IPO Alligator Raiders 12 May 2007 "It also provides the opportunity for common-everyday-Weed-Scientists and/or producers to make Billions for themselves as they each sniff out various tips and tricks to remove unwanted poisonous plant pests that have literally killed half the known plant-holistic-oncology green-planet-cure-services within the planet's 5,000 year history! The financing package was provided by the U.S. Development Finance Corporation (DFC), the European Investment Bank (EIB) and the Emerging Africa Infrastructure Fund (EAIF), supported by political risk insurance from MIGA (MIGA, 2023; EAIF, 2022).

Various risk mitigation instruments were employed to make the project bankable. MIGA's guarantee covered currency inconvertibility and breach of contract while EAIF provided long-term debt under concessional terms. A cross-currency hedge was structured to hedge Senegal's exposure to foreign exchange rate risk, as government revenues were in CFA francs and debt servicing obligations were in euros and US dollars (OECD, 2023). Furthermore, risk was managed through the use of a take-or-pay PPA with Senelec, and by reducing market risk and revenue volatility.

The project also received strong political endorsement via the new Senegalese Renewable Energy Law and the establishment of a robust regulatory framework for Independent Power Producers (IPPs). Quick financial close for an early opening and a well-received programme design for risk de-risking. On the side of technical success, the project structure has provided a precedent for future PPP arrangements and investments in renewable energy deployment in all UEMOA countries (Humphrey & Prizzon, 2022).

Table 1 Risk Allocation Matrix

Risk Type	Azito Power (Côte d'Ivoire)	Taiba Ndiaye (Senegal)	Zagtouli Solar (Burkina Faso)
Political Risk	MIGA (PRI), Government guarantee	MIGA (PRI), EAIF involvement	World Bank (IDA Guarantee)
Currency Risk	Local hedge, AfDB support	Cross-currency hedge, PPA	Escrow accounts, FX buffer
Construction Risk	EPC Contractor (turnkey)	IPP Consortium (Lekela Power)	State-owned utility (SONABEL)
Regulatory Risk	PPP contract, CI-Energies	Senegalese Renewable Energy Law	World Bank procurement standards

Burkina Faso – Zagtouli Solar Project

In this light, the Zagtouli Solar Plant in Burkina Faso, initiated in 2017 and expanded from 2019 to 2022, provides an example of how innovative risk sharing can facilitate the construction of infrastructure in politically uncertain jurisdictions. Financed by the World Bank and the European Union and implemented by Burkina Faso's state-owned power utility, SONABEL, the 33 MW plant is the largest of its kind in the country and one of the most competitive in terms of costs of utility-scale solar installations in the Sahel (World Bank, 2023).

This approach is different from typical private sector-driven project finance as in the case of the Zagtouli project the financing structure was a publicly sponsored model, which is complemented with IFC advisory work and World Bank partial risk guarantees. This risk minimization enabled procurement and contract procedures, and in turn enabled international contractors to enter construction and operation without political interference and the risk of payment default. A political risk cover was also provided through the World Bank's International

Development Association (IDA), a policy-based guarantee was provided to insulate project payment streams against budgetary swings (Khan; et al., 2024).

The implementation was challenged by terrorism and political unrest in Burkina Faso but the project was ultimately completed and connected to the grid in 2022. It helped boost investor confidence in financing for clean energy in post-conflict zones and has since garnered proposals for subsequent solar PPPs in the country. In addition, Zagtouli has been a demonstration case for other fragile states that wish to combine concessional financing with risk management as a means of encouraging development partnerships (OECD, 2023).

These three examples together demonstrate the critical role of risk mitigation tools in facilitating infrastructure finance in high-risk markets. While sectoral focus, as well as financing products, vary across projects, they all share that well-structured de-risking instruments – be it MIGA guarantees, credit enhancements or concessional finance - play a crucial role in earning the trust of private investors and making projects a success. The cases also confirm that the institutional support, legal reform, and transparent PPP frameworks are no less important when it comes to supplementing financial tools and attaining long-term investment sustainability. The experience in Côte d'Ivoire, Senegal, and Burkina Faso demonstrates that infrastructure investment is possible in even highly political risk environments, provided it is based on robust and credible risk management strategies.

Table 2 Risk Allocation Matrix for Infrastructure Projects in Francophone West Africa (2018–2025)

Project	Country	Sector	Financing Structure	Risk Instruments	DFIs Involved	Project Outcome
Azito Power Expansion	Côte d'Ivoire	Gas Power	Limited recourse project finance with PPP model	MIGA PRI, AfDB credit guarantees, PPA	IFC, AfDB, Proparco	Successfully completed; enhanced grid capacity
Taiba Ndiaye Wind Farm	Senegal	Wind Energy	Blended finance (concessional + commercial)	MIGA PRI, EAIF concessional loans, hedging	EAIF, EIB, MIGA, DFC	Commissioned ahead of schedule; FDI benchmark
Zagtouli Solar Project	Burkina Faso	Solar Energy	Publicly financed with DFI support	IDA policy guarantees, WB partial risk cover	World Bank, IFC, European Union	Operational under high-risk conditions; confidence-building model

This matrix illustrates how key project risks—political, currency, construction, and regulatory—were allocated across three major infrastructure projects. It highlights the strategic role of multilateral institutions, national utilities, and legal instruments in absorbing or transferring risks, thereby enhancing project bankability and investor confidence in fragile economic environments.

DISCUSSION

The assessment of the Azito Power Expansion Project (Côte d'Ivoire), Taiba Ndiaye Wind Farm (Senegal) and the Zagtouli Solar Project (Burkina Faso) as comparative case-studies provides important lessons on the application and efficacy of risk mitigants to mobilize foreign financing into infrastructure projects in Francophone West Africa. Despite differences in sectoral focus and financial arrangements across these processes, patterns emerge on how de-risking tools can support project bankability, build investor confidence, and shape project performance in the face of high risks.

A useful point to make from comparison of approaches is that multilayered risk management regimes are most effective when uniquely molded to the risk environment and the project structure. Political Risk Risks associated with currency convertibility and transfer, as well as the Repayment risks associated with the host government's

financial standing that could impact the cash flow, were mitigated through multiplication of MIGA's political risk insurance cover with partial credit guarantees provided by AfDB, and a long-term Power Purchase Agreement (PPA) from an established national utility. The Taiba Ndiaye project in Senegal, for example, used a blend of finance with a MIGA guarantee and EAIF concessional lending to cover political risk and currency exchanges. By comparison, the Zagtoui Solar Project in Burkina Faso relied more on donor-backed guarantees, public financing and public-sector arrangement to deal with the country's high security and institutional risks. These variations suggest that there is no universal recipe that applies always to de-risking projects and that the effectiveness of de-risking depends largely on context-specific arrangements that combine financial and institutional instruments (Humphrey & Prizzon, 2022; OECD, 2023).

Through the three cases there appears to be a pattern where the presence and credibility of risk mitigating tools are positively related to the amount, maturity, and variety of FDI mobilized. Projects that included strong risk-sharing mechanisms also managed to attract a more diverse pool of funders, including commercial lenders, development finance institutions (DFIs) and equity investors. For instance, both Azito and Taiba Ndiaye were both able to secure debt over a longer maturity and financing in higher volume because of the higher creditworthiness obtained with PRI and guarantees. This responsiveness of FDI to de-risking behaviour is consistent with findings from macro-level analyses of how blended finance and credit enhancements help to reduce investor risk aversion, and make it easier for capital to flow into fragile markets (OECD, 2020; Blanchard and Acalin, 2019). And risk instruments also protect investors in more than one way: They signal project credibility, and tend to be more appealing to institutional capital that generally does not enter sub-investment grade markets.

The issues related to key enablers which make it possible to obtain some functionality from these instruments are also addressed. First, legal reforms are critical. The development of (bankable) PPP frameworks, PPA templates and contract enforcement mechanisms are prerequisites for having working risk instruments. Nice: Long-term FDI was boosted by the Renewable Energy Law in Senegal and by reforms to the investment code in Côte d'Ivoire. Guarantees and insurance are worthless if they are not enforceable in this legal sense, and can therefore not be trusted to secure legal and political compliance. Secondly, institutional capability is a crucial variable. Project preparation, risk identification and implementation oversight require strong PPP units, transparent procurement entities and active regulatory agencies. Nations that already have PPP institutions and project development funds in place—including Senegal and Côte d'Ivoire—are far advanced in the utilization of tools for risk mitigation in comparison to countries with a patchy institutional approach.

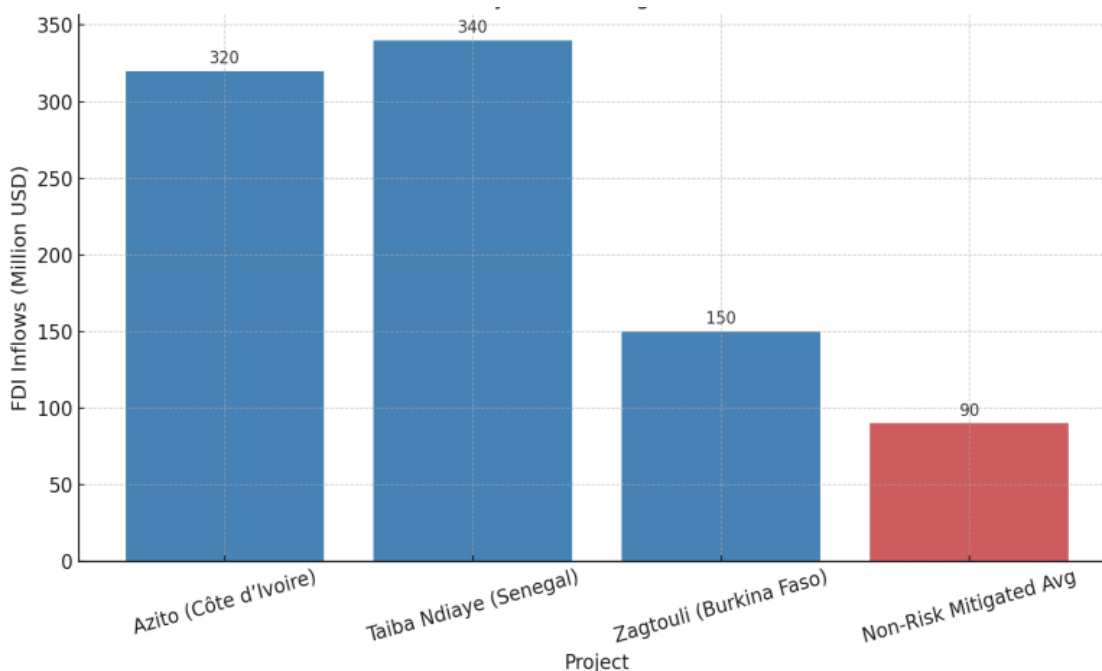


Figure 4: FDI Sensitivity to Risk Mitigation Instruments

This bar chart illustrates the correlation between the presence of risk mitigation tools and FDI inflows in selected infrastructure projects. Projects equipped with guarantees or political risk insurance consistently attracted higher

volumes of investment, while those lacking such instruments saw significantly lower FDI, highlighting the critical role of de-risking mechanisms in fragile markets.

Finally, multilateral partnerships amplify the impact of risk mitigation instruments by bundling financial resources with technical assistance and policy engagement. Institutions such as the African Development Bank, IFC, MIGA, and the Emerging Africa Infrastructure Fund have played catalytic roles not just in funding but in strengthening the institutional ecosystems that support project finance. The coordinated presence of these actors increases investor trust, facilitates blended finance structures, and supports upstream legal and regulatory reforms (AfDB, 2021; OECD, 2020). In all three case studies, multilateral involvement was a constant factor in risk mitigation success, reflecting the importance of aligning public and private objectives in fragile investment climates.

In sum, the case studies affirm that the effectiveness of risk mitigation instruments in attracting FDI to infrastructure projects in Francophone West Africa is contingent on a convergence of financial innovation, institutional reform, and multilateral cooperation. When these elements are aligned, even countries facing acute political and economic risks can become viable destinations for sustainable infrastructure investment. These findings provide a compelling argument for scaling up blended finance initiatives and investing in institutional capacity to expand content.

Policy Implications and Recommendations

The results from this research highlight the imperative to undertake some strategic reorientation in managing and mitigating risk in PF models for EMs, especially in fragile economies such as those in Francophone West Africa. High sovereign, regulatory and operational risks perception still curtails significant capital flow in the long term, although the interest by investors in the infrastructure market is growing. To overcome these hurdles and further develop the project finance ecosystem, a series of interrelated policy recommendations are proposed, based on empirical evidence and international best practices.

The enhancement of risk mitigation capability should start with the development and use of greater number of more-context-sensitive financial tools applicable to the specific political and institutional risks that characterize the region. Governments, backed by DFIs, must mainstream National Risk Mitigation Frameworks which will see the political risk insurance, credit guarantees and contingent finance mechanisms written into the pipelines of Public-Private Partnership (PPPs). The design stage for such instruments should be introduced at an early stage in the project preparation cycle to strengthen the credibility of feasibility studies and financial models. This could include, for example, mainstreaming pre-arranged guarantees from institutions such as MIGA or ATI into national implementation guidelines for the development of PPP projects in order to reduce the lead time for transactions and to enhance investor confidence (OECD, 2023; Humphrey & Prizzon, 2022). In addition, capacity-building activities are to be developed for line ministries, PPP units or national utilities, with a view to strengthening their capacity to negotiate risk-sharing clauses and in-built bankability-enhancing arrangements into concessionary arrangements.

A corollary approach is to promote increased engagement of domestic capital markets in infrastructure financing. Shallow and narrow-based capital markets are a burden for most of Francophone West Africa, limiting the availability of long-dated, local currency funding. This challenge can be met with policy initiatives to promote local bond markets, improve regulation relating to pension and insurance funds and, finally, reward market participants willing to establish infrastructure-dedicated investment schemes. For example, guarantees in local currency (provided by GuarantCo or AfDB) can be upscaled to mobilize long-term funding from local institutional investors who are to some extent, less reliant on foreign-denominated loans while reducing FX risks. Furthermore, sovereign wealth funds, and public pension funds in the UEMOA zone should be encouraged (via regulatory reforms) to earmark a percentage of assets under management for investment in infrastructure particularly infrastructure projects with embedded risk mitigation mechanisms (AfDB, 2023).

Alongside financial deepening, it is vital to strengthen the catalytic capacity of development finance institutions in mobilising private funding. DFIs need to go further and act as enablers of economy-wide de-risking. This includes scaling the use of blended finance instruments, like subordinated debt, first loss capital, and results-based financing, to crowd in private investment, and lower the risk perception. DFIs' engagement needs to focus not only on investments but also on policy dialogue, technical assistance upstream and the setting up of project

preparation facilities that can produce a strong pipeline of investable projects. Recent research argues for DFI support being most effective when complemented with governance reform and transaction advisory services, as seen through the jointly implemented IFC-AfDB-MIGA arrangement in the Taiba Ndiaye and Azito projects (Khan, Diop and Sagna, 2024; OECD, 2023).

Lastly, policy designs should be sensitive to local institutional facts and no longer based on standard recipes borrowed from the developed world. Where possible, risk-reduction measures should account for differences in legal regimes, bureaucratic challenges and the political risk landscape within and among UEMOA member states. This has placed an emphasis on localised risk assessments and adaptation of contractual provisions. For instance, jurisdictions that have lower judicial capacity might see a benefit in including international arbitration clauses in the project contracts, as opposed to those with exchange convertibility restrictions where use of escrow accounts and offshore payment of electricity take precedence. And, not least, the incorporation of environmental and social risk considerations into risk management frameworks is no longer discretionary: “complying with global ESG (Environmental, Social, and Governance) standards is likely to become a requirement for accessing climate-aligned investment capital” (OECD, 2020; IFC, 2022).

In sum, to unleash the potential of project finance in Francophone West Africa, there is need for a new model in how risks are managed. This requires the development of integrated, flexible risk mitigation ecosystems, deepening domestic financial markets, tapping the strategic role of DFIs, and customising solutions to institutional realities. Such an integrated approach is necessary not just for crowding in private investment, but also for guaranteeing that investments in infrastructure contribute for real in the long term to development and economic resilience in fragile settings.



Figure 5: Policy–Stakeholder Action Map for Risk Mitigation Instruments

This mind map illustrates the linkage between policy strategies—such as legal reforms, blended finance, guarantees, and local market development—and the stakeholders responsible for implementation, including governments, development finance institutions (DFIs), PPP units, and regulators. It emphasizes a coordinated approach to strengthening risk mitigation capacity for infrastructure finance in fragile emerging markets.

CONCLUSION

This study examined the role of risk mitigation instruments in enhancing the attractiveness of foreign direct investment (FDI) for infrastructure projects in fragile emerging markets, with a focus on Francophone West Africa. Drawing on Transaction Cost Economics, Institutional Theory, and the Risk–Return Trade-Off Framework, and adopting a PRISMA-guided systematic review supported by illustrative case studies from Côte d’Ivoire, Senegal, and Burkina Faso, the study demonstrates that well-structured risk mitigation mechanisms are central to mobilizing long-term private capital in high-risk environments.

The findings reveal that instruments such as political risk insurance, credit guarantees, and blended finance arrangements significantly improve project bankability by reducing investor exposure to political, regulatory,

and macroeconomic risks. However, their effectiveness is strongly contingent on the presence of credible regulatory frameworks, institutional capacity, and multilateral engagement. Risk mitigation tools therefore function not merely as financial products, but as institutional enablers that signal policy credibility and facilitate sustained FDI inflows. Projects that embed de-risking mechanisms within locally grounded institutional arrangements and benefit from early-stage project preparation and multilateral support consistently exhibit stronger performance outcomes.

The study contributes to the literature by advancing a multidimensional understanding of project finance that integrates financial engineering with governance quality and institutional effectiveness. From a policy perspective, the findings underscore the need to scale blended finance solutions, localize risk mitigation strategies to country-specific contexts, and strengthen the enabling role of development finance institutions as catalysts for private sector participation.

Notwithstanding its contributions, the study is limited by its reliance on secondary data and a restricted set of illustrative cases. Future research should employ deal-level or firm-level datasets to empirically assess the causal effects of specific risk mitigation instruments and extend the analysis to environmental, social, and governance dimensions, particularly in the context of climate-resilient infrastructure. Ultimately, unlocking infrastructure finance in fragile emerging markets requires not only capital mobilization but also coherent policies, institutional credibility, and effective risk governance.

Future Research Directions

In terms of its contribution to research in the field, this research provides significant insights both conceptually and in policy terms on how risk mitigation tools can be used to attract FDI for infrastructure development in emerging markets. However, for further research in this area to be advanced, there is a need to move to empirical research to a greater extent.

First, future research needs to focus on quantitative extensions in order to test the relationships outlined in the conceptual framework in this study using empirical research methods. Data related to deals or firms can be used to study the impact of de-risking instruments, specifically political risk insurance, credit guarantees, partial risk guarantees, as well as blended finance instruments, on FDI using panel data analysis methods, such as fixed effects models, random effects models, dynamic models, and system generalized method of moments. Finally, event study analysis can also help investigate the impact of de-risking instruments on the timing of financial close exits and costs of capital.

Second, comparative studies within and across regions are an important extension of this research. By conducting comparative studies within the Francophone and Anglophone African regions as well as other regions such as Sub-Saharan Africa, Southeast Asia, and so on, one would be able to see the extent to which differences in legal systems, monetary systems, and the quality of institutions make a difference in the success of risk mitigation strategies. This can also be differentiated within fragile and non-fragile nations as well as nations that are part of currency unions or not.

Third, the future literature on infrastructure public-private partnerships should emphasize a sector-focused approach, breaking down infrastructure investments by sector, which would include energy, transportation, telecom, and the water sector. This would help determine, for example, which risk-sharing tools work best in which sectors or which sectors appeal most to different types of investors, such as pension funds, SWFs, or private equity sponsors. Finally, new scholarship must seek to incorporate environmental, social, and governance (ESG) factors within the assessment of financial risk management. Longitudinal research studies examining the outcomes of projects after completion would shed valuable insight into the long-term viability and resilience of infrastructure projects within fragile states and conflict zones. Each of these areas would help to further enhance the understanding of the financial-institutional interface that supports infrastructure financing within emerging markets.

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