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CONSTRUCTION-PERIOD CREDIT RISK MANAGEMENT FOR LARGE INFRASTRUCTURE PROJECT FINANCE IN KAZAKHSTAN

Abstract. Large infrastructure projects create public value after construction has converted financing, permits, designs, equipment and civil works into an operating asset. For a bank, this conversion period concentrates credit risk because operating cash flow is limited, exposure rises with drawdown, and several events can delay completion or increase debt. This study examines the transmission channels and directional implications of construction risk for probability of default, loss given default, exposure at default, expected credit loss and prudential capital in Kazakhstan. It combines document analysis, project finance theory, lifecycle process mapping and a fully synthetic three-scenario case; it does not estimate those risk parameters or capital amounts. The proposed framework covers engineering, procurement and construction performance, cost overrun, delay, foreign-exchange mismatch, permits, offtaker obligations, environmental and social performance, drawdown control, independent review, contingency, debt service reserves, sponsor completion support, direct agreements and covenants. The analysis indicates that contractual allocation, evidence-based disbursement and forward-looking monitoring should operate together. The framework links each material risk to a measurable indicator, decision right, funding source and remedial action, providing a practical basis for banks financing transport, energy, water, municipal and industrial infrastructure in Kazakhstan.

Keywords: project finance; construction risk; credit risk; infrastructure; Kazakhstan; drawdown control; DSCR

1. Introduction

Project finance places primary reliance on project assets, contracts and future cash flows. This structure supports large investment with limited shareholder recourse, while making timely, on-budget completion decisive. Debt is drawn before stable revenue exists, progress is difficult for a bank to observe directly, and delay can increase interest, defer revenue, consume contingency and weaken counterparties.

Kazakhstan requires sustained investment in electricity, transport, water, municipal and industrial infrastructure. Its framework includes legislation on project finance, PPPs, environmental assessment and currency regulation [1-4]. The EBRD country strategy also prioritizes connectivity, green infrastructure, local-currency finance and stronger PPP frameworks [5]. These opportunities require disciplined credit processes for long construction cycles.

The financial regulator's regular Asset Quality Review, conducted in 2025 using data as of 1 January 2025 and published in 2026, provides an important banking context. The review covered 11 large banks representing 86 percent of banking-system assets and examined KZT 32.8 trillion of exposures, including KZT 3.6 trillion classified as investment projects. The aggregate capital adequacy ratio for participating banks was 17.7 percent. Supervisory adjustments raised measured Stage 2 and Stage 3 shares relative to banks' submitted

classifications [6]. This reclassification should not be interpreted as year-on-year deterioration because the same release reported improved portfolio quality compared with the 2024 review.

International rules reinforce the distinction between construction and operation. Under the Basel standardized approach, unrated project-finance exposures receive a 130 percent risk weight in the pre-operational phase and generally 100 percent in the operational phase; qualifying high-quality operational exposures may receive an 80 percent risk weight [7]. These international benchmarks should be distinguished from Kazakhstan's applicable domestic prudential rules. IFRS 9 requires lifetime expected credit losses after a significant increase in credit risk and requires forward-looking information [8]. A loan can remain contractually current while lifetime default risk has increased through delay, cost pressure, permit failure or weaker counterparties.

This article addresses three questions. First, through which channels do construction events become bank credit losses? Second, which contractual, technical and financial controls can interrupt those channels? Third, how can lenders combine scenario analysis with drawdown decisions, covenant design and IFRS 9 monitoring? The main contribution is a construction-stage control framework designed for practical use in Kazakhstan. It connects risk allocation, evidence, thresholds and remedial rights within a single lifecycle process.

2. Institutional Context and Problem Definition

2.1 The construction period as a credit discontinuity

The economics of project finance change sharply at completion. Before completion, value is represented by work in progress, equipment, land rights, permits, contracts and claims against contractors. These elements may have limited recovery value outside the original project. After completion, the asset may generate contracted or regulated revenue and can be valued through operating cash flow. Sorge describes this pattern as relatively high credit risk at project inception that tends to decline over the project life [9]. The bank's central task is therefore to control the conversion from an incomplete asset into an operating cash-flow system.

Construction risk is multidimensional. Design defects, procurement disruption or contractor default can create rework, replacement cost and delay. Currency depreciation can enlarge imported cost or foreign-currency debt. Permit, land, environmental, social or offtaker failures can interrupt critical work or acceptance. These events affect credit through common variables: completion date, cost to complete, committed funding, technical output, operating revenue, debt and recovery value.

Historical research supports conservative treatment. Cost escalation is frequent in large transport projects [10]. PPP research favors allocation to the party able to control or absorb each risk [11]. Project finance therefore relies on connected contracts, concentrated monitoring and restrictions on discretionary cash use [12-16].

2.2 Kazakhstan-specific considerations

Kazakhstan's project finance and PPP laws provide a basis for relevant transaction structures [1-2]. Environmental and currency laws affect assessment, permits and cross-currency arrangements [3-4]. Lenders must translate these frameworks into a project-specific permit matrix, security package, account structure and conditions precedent.

Foreign exchange is particularly important. Kazakhstan infrastructure projects with KZT-denominated revenue may nevertheless incur imported-equipment costs or foreign-currency debt, creating potential currency mismatch. EBRD experience shows the importance of local-currency financing for Kazakhstan infrastructure with KZT revenue [17]. A prudent structure

may combine currency-matched debt, indexed revenue, hedging, sponsor support and a limited foreign-currency tranche aligned with foreign-currency cash flow.

Public evidence also confirms the role of implementation supervision. In its 2025 board report for the Aktobe to Ulgaisyn road project, the EBRD identified project implementation risk and described engineering supervision as a principal mitigant [18]. This public-source example is used solely as institutional evidence and does not imply the author's participation in the transaction. The independent engineer does not replace the borrower's obligations, yet it gives lenders a technically qualified and independent basis for drawdown, progress and completion decisions.

3. Literature and Theoretical Foundation

Project finance can be understood through risk allocation, agency theory and information asymmetry. Participants possess different information and incentives, while the special-purpose vehicle has little history and few unencumbered assets. Contracts and monitoring make performance observable and limit opportunistic behavior. Research identifies the importance of separate project companies, non-recourse allocation, loan structure, leverage, concentrated ownership and managerial incentives [13-15].

Risk allocation is effective when the responsible party can influence the event, has capacity to perform, and retains incentives under stress. A fixed-price, date-certain EPC contract reduces uncertainty only to the extent supported by contractor capability, liability caps, security, insurance and enforceability. Sponsor completion support can close residual gaps when it is committed and the sponsor remains creditworthy.

Lender monitoring addresses the remaining information problem. Arranger certification can create economic value [19]. Independent review, controlled accounts and milestone-based drawdown test the consistency of physical progress, incurred cost and remaining funding. Direct agreements provide default notice, cure periods and possible step-in, while development-bank participation can mitigate political and coordination risk [20].

Credit pricing, accounting loss and capital are related to this architecture. Banks may price material default drivers and control other risks through project design and contracts [21]. Construction events can increase cost, delay the commercial operation date, enlarge drawn exposure and weaken forecast CFADS. These effects can raise probability of default, reduce recovery coverage and increase exposure at default. IFRS 9 expected credit loss may consequently increase, while the prudential capital effect depends on the applicable standardized or internal-ratings-based approach and its national implementation [7-8].

An effective control acts on a specific link in this transmission process. A performance bond improves potential recovery. Contingency and sponsor support address a funding gap. A completion long-stop date limits open-ended exposure. A debt service reserve account provides time for remediation after commercial operation. Scenario analysis measures the combined effect of correlated events, which is essential because delay, interest and foreign-exchange shocks often occur together.

4. Research Method

This study uses a structured qualitative and analytical design. The documentary sample comprises Kazakhstan primary legislation and supervisory releases, international prudential, accounting and environmental standards, and peer-reviewed project-finance studies available through 10 August 2026. Sources were included when they directly informed construction-risk identification, allocation, monitoring, or accounting and capital treatment. The study maps the construction lifecycle from first drawdown through provisional acceptance, performance testing

and financial completion; develops a risk-control matrix linking each risk source to evidence, decision rights, thresholds and remedial actions; and applies scenario analysis to an illustrative project to show how construction stress affects debt balance, debt service and DSCR.

The approach is conceptual, illustrative and practice-oriented. It does not estimate a statistical default model and does not use confidential bank or borrower data. No probabilities are assigned to the scenarios; the calculations test internal consistency and sensitivity rather than predict project default. DSCR is calculated as:

$$DSCR_t = CFADS_t / \text{Scheduled Debt Service}_t$$

where CFADS is cash flow available for debt service. The analysis treats completion as both a technical and credit event. Technical completion requires the asset to satisfy agreed tests. Credit completion also requires permits, insurance, reserve funding, no continuing material default, and a sustainable operating forecast.

5. Construction-Stage Credit Risk Management Framework

5.1 Risk identification and allocation

The first layer is a pre-closing bankability review. The risk register should identify the responsible party, contractual remedy, available security and residual exposure. Table 1 presents a minimum structure.

Table 1. Construction-period credit risk transmission and control matrix

Risk source	Credit transmission	Leading evidence	Primary control	Residual risk owner
EPC design or performance failure	Rework, delay, lower output, weaker CFADS	Design review comments; unresolved interface register; failed factory or site tests	Single-point EPC responsibility where feasible; performance specifications; liquidated damages; parent guarantee; performance security	EPC contractor up to enforceable limits, then sponsor and project company
Cost overrun	Funding gap, higher leverage, delayed completion	Forecast cost to complete; contingency usage; approved and pending change orders	Fixed or capped price; committed contingency; equity funding sequence; sponsor completion support	Sponsor for agreed support, then lenders through restructuring risk
Schedule delay	More interest during construction, deferred revenue, permit expiry	Critical-path variance; float consumption; procurement delivery status	Date-certain obligation; delay damages; long-stop date; recovery plan	Contractor within caps, then sponsor and project company
Foreign exchange mismatch	Higher imported-capex cost or debt burden	Open FX position; hedge coverage; currency of remaining procurement	Currency matching; indexation; hedging; FX reserve; sponsor top-up	Project company and sponsor after hedge protection

Risk source	Credit transmission	Leading evidence	Primary control	Residual risk owner
Permit, land or connection failure	Work stoppage or inability to achieve COD	Permit register; conditions and expiry dates; land access; grid or utility milestones	Conditions precedent; legal due diligence; government or offtaker covenants; long-stop date	Party controlling the permit or connection, subject to enforceability
Offtaker or public counterparty failure	Delayed acceptance or unavailable revenue	Connection works; payment security; acceptance protocol; budget authorization	Bankable offtake agreement; direct agreement; payment support; deemed completion or deemed energy where applicable	Offtaker within contract, then political and project residual risk
Environmental and social breach	Suspension, remediation, reputational loss, lender default	ESAP status; incident reports; grievances; labor and community metrics	ESMS; independent E&S monitoring; action plan; insurance; cure and suspension rights	Project company, contractor and sponsor according to responsibility
Contractor insolvency	Work interruption, replacement premium, claims	Liquidity, arrears, subcontractor complaints, declining site resources	Financial due diligence; bonds; retention; parent guarantee; replacement rights	Contractor security first, then sponsor completion support

Source: Author's synthesis. The matrix is conceptual and requires transaction-specific legal and technical validation.

The EPC contract must be reconciled with the model, schedule, insurance, offtake agreement and loan documents. Price, schedule, completion tests, damages, security and liability caps should work as one allocation system. Environmental and social (E&S) controls also belong in the credit framework. The Equator Principles, IFC Performance Standards and EBRD policy support proportionate assessment, action plans, management systems, covenants and independent monitoring [22-24].

5.2 Conditions precedent and drawdown control

The second layer is evidence-based disbursement. Each draw should depend on eligible expenditure, verified progress, sufficient funding to complete and continuing compliance. The independent engineer confirms technical facts, while the bank retains the credit decision.

Table 2. Milestone-based drawdown control protocol

Decision point	Minimum evidence	Quantitative test	Decision and escalation
First drawdown	Executed finance and security documents; key permits; effective EPC and offtake contracts; insurance; equity evidence; baseline model and schedule	Total sources equal total uses, required equity funded or irrevocably committed, contingency meets approved minimum	Release only after all critical conditions are satisfied or formally waived by authorized credit level
Routine monthly draw	Borrower certificate; invoices; independent engineer report; site progress; account statements; updated risk register	Cumulative paid cost consistent with verified progress; no unfunded portion of the forecast cost to complete; no material covenant breach	Fund eligible amount; hold disputed or unsupported items
Major equipment payment	Factory acceptance evidence; shipping documents; title and insurance confirmation; sanctions and supplier checks	Advance-payment and performance security remain valid; exposure within approved procurement budget	Pay through controlled account or directly to supplier where documents permit
Change order	Technical justification; price and schedule impact; contractor quotation; independent engineer opinion; revised permits where needed	Remaining contingency and committed sources cover the full impact; revised DSCR meets policy	Approve within delegated threshold; escalate material variations to credit committee
Contingency use	Cause analysis; recovery plan; revised cost-to-complete forecast	Post-use contingency remains above threshold or sponsor provides replacement funding	Permit use for eligible causes; block discretionary scope additions

Decision point	Minimum evidence	Quantitative test	Decision and escalation
Provisional completion and final draw	Completion certificate; performance tests; punch list; operating permits; insurance conversion; E&S status; account funding	Output and reliability tests passed; DSRA funded; residual cost and claims fully covered	Convert to term phase only when technical and credit completion tests are met

Source: Developed by the author. The protocol is illustrative and does not replace facility-specific approval requirements.

Physical and financial progress should be reported separately because equipment payments can precede installation. The engineer should state physical completion, payment progress, forecast cost to complete and forecast completion date. The bank should reconcile invoices with controlled accounts and verify equity. Direct agreements should provide termination notice, cure and step-in periods. Security and legal opinions should cover enforceability, priority and required consent.

5.3 Forward-looking monitoring and early warning

The third layer converts monthly project information into credit indicators. Core variables are schedule and cost variance, contingency, funding sufficiency, contractor condition, permits, environmental and social actions, hedge coverage and forecast DSCR. Traffic-light thresholds require calibration to the project.

Table 3. Illustrative early-warning thresholds for lender monitoring

Indicator	Green	Amber	Red	Required lender response
Forecast delay to COD	Up to 30 days and within available float	31 to 90 days or critical float largely consumed	More than 90 days or forecast to breach the contractual long-stop date	Independent engineer recovery review; revised model; draw restriction if no credible cure
Forecast cost overrun as percent of approved budget	Below 5% and fully funded	5% to below 10%, with replacement funding documented or irrevocably committed	10% or more, or any material unfunded amount	Sponsor funding notice; contingency lock; credit committee review
Contingency consumed	Below 50% with progress proportionate	50% to 80% or consumption faster than progress	Above 80% before late-stage completion	Rebase cost to complete; prohibit discretionary changes; require replenishment
Forecast minimum DSCR after COD	At least 1.30x	1.15x to below 1.30x	Below 1.15x	Distribution lock; cash sweep; restructuring

				analysis; additional support
Contractor financial and site condition	Current payments and resources consistent with plan	Delayed subcontractor payments or declining resources	Default, abandonment, insolvency signal or prolonged work stoppage	Exercise security and replacement planning; suspend affected draws
Critical permits and connection milestones	Valid and on schedule	Renewal or approval at risk but recoverable	Missing critical authorization or connection delay threatening COD	Legal escalation; counterparty cure; revised long-stop and funding analysis
E&S action plan	Actions current; no material incident	Overdue action below 30 days or repeated minor issue	Material breach, serious incident, stop-work order or action overdue 30 days or more	Independent E&S review; corrective plan; draw suspension where justified
FX hedge or natural coverage	At least approved policy level	Temporary shortfall with executable cure	Material open position affecting funding or DSCR	Execute hedge, resize foreign-currency draw or require sponsor top-up

Source: Developed by the author. Thresholds are illustrative, not prescriptive, and should be calibrated to the transaction.

Table 3 uses illustrative thresholds. Each red indicator requires a documented decision. Correlated risks matter because a moderate delay can become severe when combined with a weak contractor, exhausted contingency and an open currency position.

Construction indicators should feed the IFRS 9 significant-increase-in-credit-risk process. Relevant evidence includes adverse cost-to-complete change, forecast covenant breach, sponsor weakening, contractor replacement, missed milestones, support restructuring and lower recovery. Banks should compare lifetime risk with origination risk, use forward-looking scenarios and retain an evidence trail [8]. Figure 1 summarizes the principal transmission channels and corresponding lender controls.

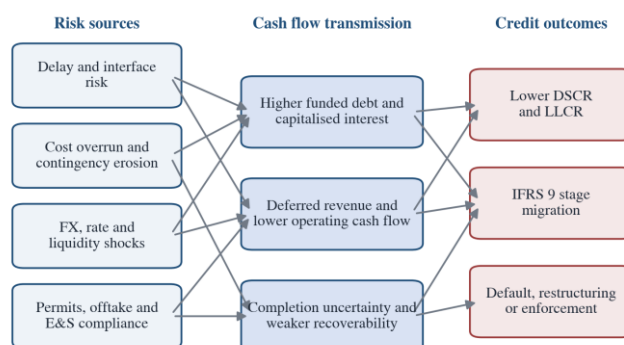


Figure 1. Transmission of construction risks into credit outcomes

Source: Developed by the author.

5.4 Completion support, reserves and covenant design

The fourth layer supplies resources and rights after an adverse event. Contingency should be committed, legally available, risk-based and restricted to eligible cost. Documentation should set the sequence among contingency, insurance, contractor recovery, equity and sponsor support. Completion support should cover defined overruns, delay interest, remediation and reserves, with payment timing and an objective release test. Sponsor capacity should be stressed for correlation with the project. The debt service reserve account (DSRA) protects early operations and must be funded at or before conversion to the term phase in accordance with the agreed funding mechanics. Covenants should address DSCR, distributions, cash sweep, additional debt, related-party payments, insurance, hedging and mandatory prepayment.

6. Illustrative Scenario Analysis

6.1 Case assumptions

The case concerns a hypothetical USD 420 million infrastructure project in Kazakhstan. It has a 36-month construction period, 70 percent initial debt financing and a 15-year repayment period after completion. The asset, sector, sponsors, counterparties and contracts are intentionally unspecified. Every number in this section is illustrative.

The base scenario assumes USD 294 million of debt, a 7.5 percent effective debt rate, annual CFADS of USD 52 million and annual debt service of USD 33.31 million. The moderate case assumes that delay, interest and debt-funded construction pressure raise debt at COD to USD 335 million and the rate to 8.5 percent, while CFADS declines to USD 46.8 million. The severe case assumes debt of USD 376.8 million, a 9.5 percent rate and CFADS of USD 41.6 million. Annual debt service is calculated as a level annual payment, $ADS = D \times r / [1 - (1 + r)^{-15}]$, using fixed annual rates and year-end payments. The moderate and severe scenarios correspond to COD at months 42 and 48, debt-at-COD increases of 13.9 percent and 28.2 percent, interest-rate increases of 100 and 200 basis points, and CFADS reductions of 10 percent and 20 percent relative to the base case. The stressed debt balances summarize assumed capitalized interest and funded completion costs; they do not imply that lenders are obliged to finance overruns without separate approval.

Figure 2 illustrates the base, moderate and severe completion paths used in the scenario analysis.

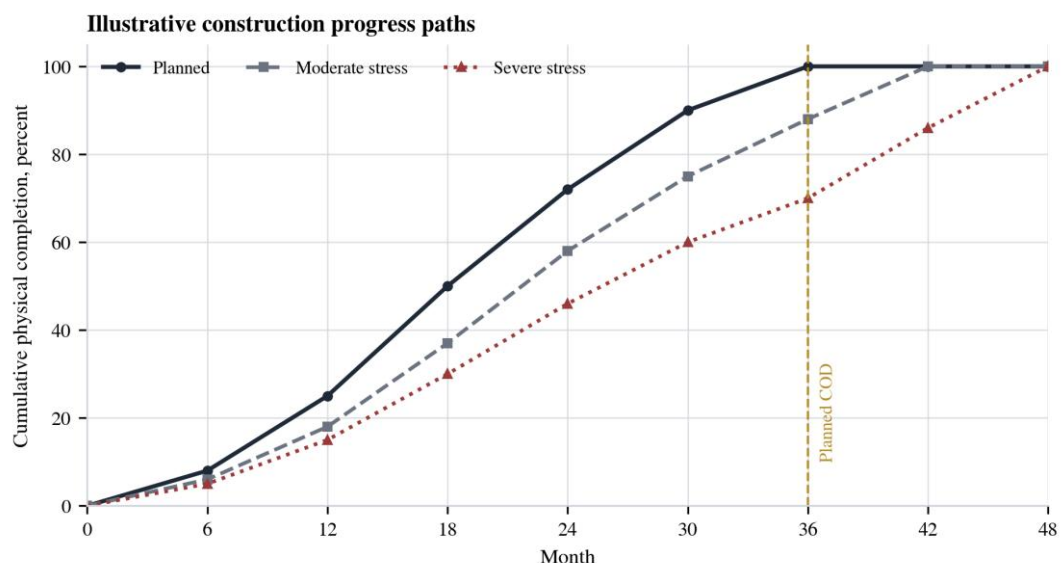


Figure 2. Illustrative cumulative construction progress under three scenarios
Source: Author's illustrative construction. All values are hypothetical.

Table 4. Illustrative construction stress and post-completion debt capacity

Metric	Base case	Moderate case	Severe case
Initial project cost, USD million	420.0	420.0	420.0
COD month	36	42	48
Delay from plan	0	6 months	12 months
Debt at COD, USD million	294.0	335.0	376.8
Increase in debt at COD from base	0.0%	13.9%	28.2%
Debt as percent of initial project cost	70.0%	79.8%	89.7%
Effective debt rate	7.5%	8.5%	9.5%
Repayment period	15 years	15 years	15 years
Annual CFADS, USD million	52.0	46.8	41.6
CFADS change from base	0.0%	-10.0%	-20.0%
Annual debt service, USD million	33.31	40.34	48.13
DSCR	1.56x	1.16x	0.86x
Indicative credit interpretation	Resilient headroom	Thin headroom and likely restrictions	Debt service not covered without restructuring or support

Source: Author's fully synthetic calculations. Values are illustrative and not prescriptive.

The moderate case illustrates a common credit transition. Construction may still reach completion, yet additional debt and lower operating cash flow reduce DSCR from 1.56x to 1.16x. This outcome can activate a distribution lock, cash sweep, additional reserve requirement or sponsor support before any scheduled payment is missed. The severe case produces DSCR of 0.86x. Annual CFADS is USD 6.53 million below scheduled debt service, so the project cannot sustain the original debt profile from operations alone.

The scenario also shows why a lender should monitor debt at completion, not only percentage cost overrun. Delay increases interest and fees; currency movements can increase imported cost; and deferred revenue weakens liquidity. A project may complete physically while failing its credit completion test. Possible responses include additional equity, extension of tenor, temporary principal grace, a formally approved margin restructuring where justified by sustainable repayment capacity, debt reduction, stronger offtaker support, or a combination. Any modification requires renewed valuation, legal review, IFRS 9 assessment and authorization under the bank's restructuring policy.

Figure 3 compares debt burden, operating cash flow and coverage outcomes across the three scenarios.

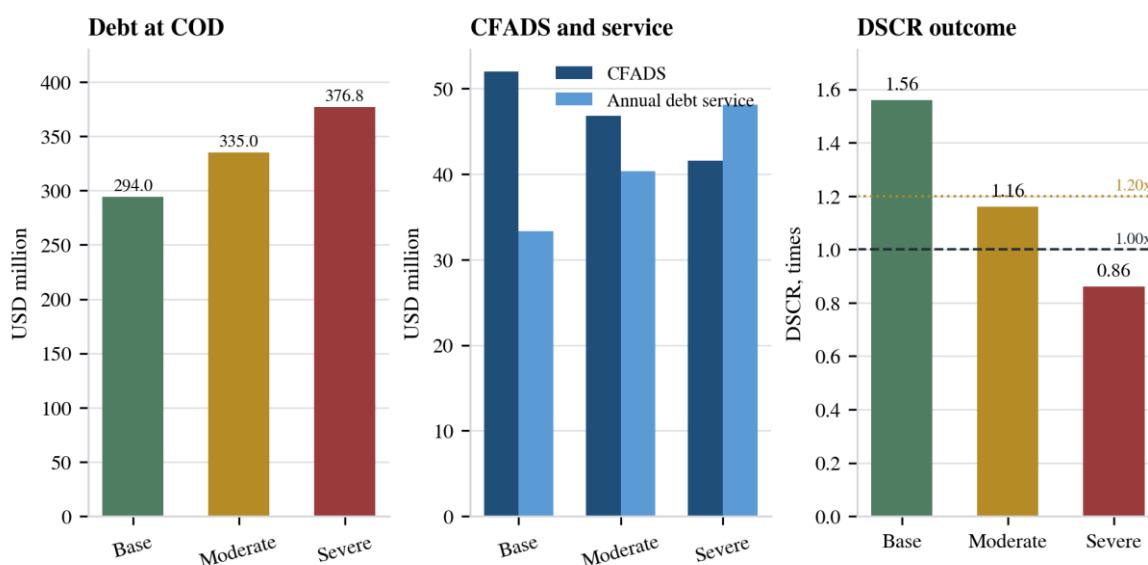


Figure 3. Illustrative debt burden, cash flow and coverage outcomes

Source: Author's calculation using the illustrative case assumptions.

7. Policy and Practice Recommendations

7.1 Recommendations for lending banks

Banks should establish a specialized construction-credit function integrating relationship, credit, engineering, legal, E&S, insurance, model and operations expertise. Independent advisers provide evidence, while internal officers retain responsibility for default and recovery analysis.

The approved model should be a controlled credit document. Material change orders, delays and funding amendments should update cost, schedule, debt at COD, CFADS, coverage ratios and covenant headroom. Models must reconcile to loan accounts and engineer forecasts. Routine certified draws may use delegated authority, while material change, contingency depletion, sponsor weakening or forecast breach should return to the credit committee. Waivers should state the basis, duration, compensating controls and follow-up date.

Construction indicators should enter IFRS 9 and watchlist systems because technical delay, permit failure and cost-to-complete deficiency may precede payment arrears. The credit file should link scenarios to staging, PD, LGD and ECL, consistent with the supervisory emphasis demonstrated by the AQR [6]. Pricing, economic capital and concentration limits should reflect construction duration, contractor concentration, currency mismatch, public-counterparty dependence and completion support, alongside the Basel lifecycle distinction [7].

7.2 Recommendations for transaction documentation

Loan documents should define completion through objective technical, legal, E&S and financial tests. Core provisions include a long-stop date, overrun funding, sponsor completion obligations, controlled accounts, information and inspection rights, drawstops, prepayment, reserves and distribution limits. Direct and intercreditor agreements should coordinate notice, cure, step-in, voting, enforcement and recoveries. EPC damages, liability caps, security and insurance should be tested against debt capacity. Where contracts are split, the project company needs one integrated schedule and interface matrix.

7.3 Recommendations for Kazakhstan's financing ecosystem

Standardized direct agreements, permit timelines, payment mechanisms and security registration can improve bankability. KZT revenue supports local-currency finance, subject to

rate and refinancing stress [17]. Syndication shares exposure and expertise; common information and development-bank participation may reduce political and coordination risk [20].

8. Limitations and Future Research

This study has four limitations. It uses an illustrative case rather than loan-level Kazakhstan data. Its thresholds are examples and require calibration by sector, technology, contract and bank risk appetite. It addresses the lender's perspective and gives less attention to sponsor and public-authority optimization. It also treats major risks within a unified framework without estimating their empirical correlations.

Future research could build a Kazakhstan project finance database containing original budget, final cost, planned and actual COD, financing currency, contractor structure, covenant outcomes and recovery experience. Econometric analysis could then test which construction indicators best predict Stage 2 transfer, restructuring and default. Comparative research could also examine local-currency and foreign-currency structures, development-bank participation and differences among energy, transport, water and industrial projects.

9. Conclusion

Construction-period credit risk is the central conversion risk of project finance. During this stage, lenders fund an asset that has yet to demonstrate operating capacity, while cost, schedule, currency, permits, counterparties and environmental or social performance can change simultaneously. Kazakhstan's infrastructure needs and project-finance framework create substantial lending opportunities, accompanied by a requirement for disciplined lifecycle control.

The analysis shows that robust credit management requires an integrated system. Contracts allocate controllable risks. Independent review makes progress observable. Drawdown conditions prevent unsupported exposure growth. Contingency, insurance and sponsor completion support provide resources for identified gaps. Direct agreements and covenants create decision rights. Scenario analysis translates technical events into debt, CFADS and DSCR outcomes, with directional implications for expected credit loss and approach-dependent prudential capital. The illustrative case demonstrates how a project can move from 1.56x DSCR to 1.16x or 0.86x when construction pressure increases debt and reduces cash flow.

The practical principle is straightforward: each material construction risk should have an identified owner, measurable indicator, committed funding source and enforceable lender response. When these four elements are connected and updated throughout construction, a bank can support infrastructure development while maintaining prudent credit quality and capital discipline.

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МАЗМҰНЫ – СОДЕРЖАНИЕ – CONTENT

ӘЛЕУМЕТТІК-ЭКОНОМИКАЛЫҚ ЖӘНЕ ҚҰҚЫҚ ҒЫЛЫМДАРЫ - СОЦИАЛЬНО-ЭКОНОМИЧЕСКИЕ И ЮРИДИЧЕСКИЕ НАУКИ - SOCIO-ECONOMIC AND LEGAL SCIENCES

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