

Airport PPP Bankability: Traffic, Non-Aeronautical Revenue and Expansion Capex

A decision framework for allocating demand, tariff, land, terminal, connectivity and construction risk

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Abstract

Airport public-private partnerships can fail their bankability test even when long-term passenger growth appears compelling. Traffic may be volatile, tariffs may be regulated, commercial revenue may lag passenger recovery, capacity investment may be triggered too early, and risks outside the concessionaire's control may remain embedded in the private cash flow. A financeable structure therefore requires a traceable connection between demand, capacity, service levels, charges, commercial income, capital expenditure, debt service and contractual relief.

This paper develops an Airport PPP Bankability Framework for governments, airport sponsors, infrastructure investors, lenders and advisers. It integrates a segmented traffic forecast, aeronautical and non-aeronautical revenue models, operating and lifecycle costs, capacity-triggered expansion, funding, covenant headroom, risk allocation, lender protections, environmental and social obligations, and handback requirements. It also defines the evidence and governance needed from feasibility through tender, financial close, construction and operations.

The worked case is wholly hypothetical. An airport concession begins with assumed annual traffic of 18.0 million passengers, aeronautical revenue of USD 12.00 per passenger, non-aeronautical revenue of USD 8.00 per passenger and USD 25 million of other revenue. Assumed operating cost is USD 210 million, producing USD 175 million of EBITDA and a 1.84x debt-service coverage ratio against USD 95 million of debt service. A correlated downside assumes 14.4 million passengers, USD 6.50 of non-aeronautical revenue per passenger and USD 190 million of operating cost, producing USD 98.4 million of EBITDA and a 1.04x debt-service coverage ratio. An assumed USD 650 million expansion is financed with USD 455 million of senior debt and USD 195 million of equity only after specified capacity, service, approval and funding conditions are met. Every amount, percentage, timetable and outcome in the case is an illustrative management assumption. The case is not observed airport data, a forecast, valuation advice, accounting advice, legal advice, tax advice or investment advice.

JEL Classification: G31, G32, H54, L93, R42

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1. Define the bankability decision

The public authority and private bidder must decide whether the concession can deliver safe capacity, acceptable service, affordable charges and risk-adjusted investor returns through a wide range of traffic outcomes. State the airport perimeter, concession term, operating obligations, expansion scope, revenue rights, regulatory regime, existing liabilities and proposed financing. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and

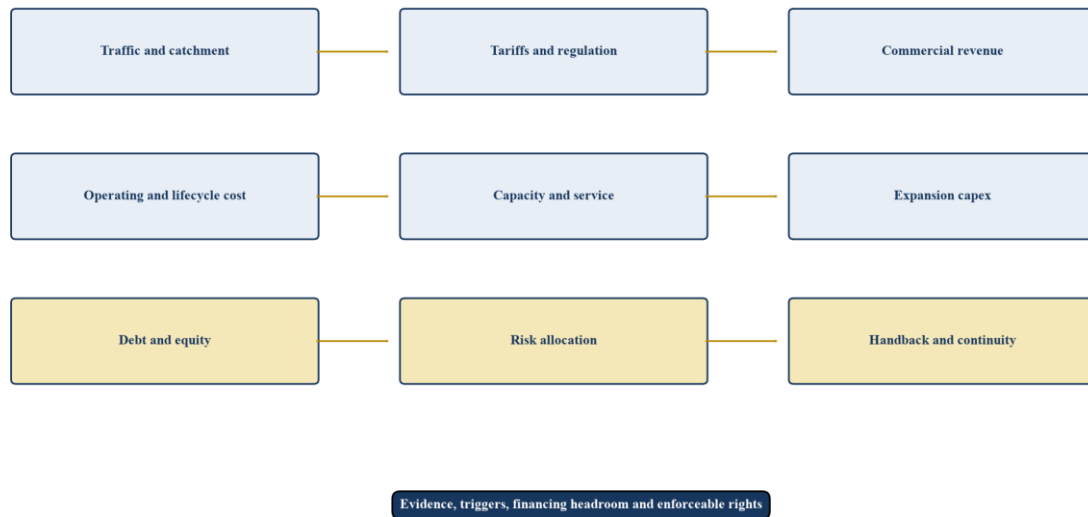
connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. The approval should specify the risks each party can control, the risks requiring sharing or relief, and the conditions that must hold at financial close. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. The section output should identify the evidence, risk owner, contractual mechanism, model line, approval right and financing consequence. This creates a traceable bridge from feasibility to bid, financial close and operating governance.

The concession should be treated as one integrated economic and contractual system. Traffic determines demand for terminal, runway, stand and access capacity; tariffs and commercial performance convert activity into revenue; operating and lifecycle plans determine service and cost; expansion obligations determine funding needs; and the contract allocates events that management cannot absorb efficiently. A bankability review therefore reconciles the traffic case, technical plan, financial model, risk matrix, concession agreement and financing term sheet. Definitions, indexation, measurement periods and relief mechanics should match across those documents. A change in one layer should flow through the full model and approval record. Scenario analysis should combine related shocks. A traffic shortfall can lower aviation charges, reduce retail conversion, increase airline concentration and delay the case for expansion. Inflation can raise operating and construction costs while regulated tariffs adjust with a lag. Currency depreciation can raise imported equipment and debt service without increasing local-currency revenue. The board and lenders need an integrated downside, pre-agreed interventions and sufficient liquidity before coverage approaches contractual thresholds. Upside traffic also needs testing because early congestion can accelerate capex before retained cash and financing capacity are ready.

2. Use the Airport PPP Bankability Framework

The framework links traffic, capacity, charges, commercial revenue, operating cost, capital expenditure, financing, performance and contractual rights. Each input should reconcile to a passenger segment, aircraft movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. The model, concession agreement and technical plan should use the same definitions and decision triggers. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Evidence should remain traceable to passenger segment, movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The financial model should reconcile to the technical plan and concession definitions.

Figure 1. Airport PPP Bankability Framework



One system connects demand, revenue, capacity, funding and contractual allocation.

3. Segment the traffic forecast

Aggregate passenger growth can conceal route, airline, hub, transfer, seasonality and concentration risks. Separate domestic, international, origin-and-destination, transfer, low-cost, full-service, cargo and general-aviation drivers where relevant. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Forecasts should show observed history, management assumptions, scenario logic and independent review rather than one deterministic growth curve. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Management should define the earliest warning indicator, measurement period, intervention trigger and executable response. Reporting should preserve the original case, approved changes and observed outcome so renegotiation does not substitute for disciplined preparation.

Table 1. Traffic forecast evidence stack

Layer	Core evidence	Primary uncertainty	Bankability use
Catchment	Population, income, tourism, trade and surface access	Economic and policy change	Addressable demand
Airlines	Routes, fleets, schedules, bases and strategy	Capacity redeployment	Service continuity
Passengers	Domestic, international, transfer and purpose	Mix and yield change	Revenue conversion
Competition	Airports, rail, road and border alternatives	New capacity	Market share
Capacity	Peak-hour assets and service levels	Bottleneck timing	Expansion trigger

4. Test catchment and connectivity

Airport demand depends on population, income, tourism, trade, airline networks, surface access, competing airports and policy. Map the effective catchment, airline strategies, route economics, transfer flows, rail and road alternatives, border rules and foreseeable policy changes. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. A credible case should identify which traffic the airport can influence and which traffic remains externally driven. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. The section output should identify the evidence, risk owner, contractual mechanism, model line, approval right and financing consequence. This creates a traceable bridge from feasibility to bid, financial close and operating governance.

5. Convert traffic into aeronautical revenue

Passengers and aircraft movements generate different regulated and contractual charges with different collection risks. Model landing, parking, passenger service, security, bridge, cargo, fuel, handling and other aviation-related income using the applicable tariff basis. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Revenue should reflect exemptions, discounts, airline agreements, collection timing, bad debt and regulatory approval. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Evidence should remain traceable to passenger segment, movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The financial model should reconcile to the technical plan and concession definitions.

6. Model tariff regulation

Airport market power creates legitimate public-interest constraints on charges, while weak indexation can make investment unfinanceable. Document cost-relatedness, consultation, single-till, dual-till or hybrid-till treatment, regulatory asset base, return allowance, inflation and periodic review. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. The concession should define a transparent path for lawful tariff changes and relief when public decisions alter recoverable economics. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Management should define the earliest warning indicator, measurement period, intervention trigger and executable response. Reporting should preserve the original case, approved changes and observed outcome so renegotiation does not substitute for disciplined preparation.

7. Build the non-aeronautical revenue engine

Retail, food and beverage, parking, advertising, lounges, rental cars, property and services depend on passenger mix, dwell time, layout and commercial execution. Model spend, penetration, rent, minimum guarantees, revenue share, occupancy, conversion and contract expiry by category and terminal zone. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Traffic recovery should not be assumed to restore revenue per passenger without evidence about customer behaviour and commercial design. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. The section output should identify the evidence, risk owner, contractual mechanism, model line, approval right and financing consequence. This creates a traceable bridge from feasibility to bid, financial close and operating governance.

8. Value airport land and property

Airport land can support hotels, logistics, offices, maintenance, cargo and airport-city development, subject to title, planning, access and aviation constraints. Confirm ownership, permitted use, leases, utilities, contamination, height restrictions, connectivity, phasing and residual rights. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Only legally available, serviced and commercially evidenced land should support the finance case. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Evidence should remain traceable to passenger segment, movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The financial model should reconcile to the technical plan and concession definitions.

9. Establish the operating-cost base

Staff, security, utilities, maintenance, insurance, cleaning, technology and service contracts vary with traffic and required service levels. Separate fixed, step-fixed and variable costs and reconcile them to assets, passengers, movements, terminal opening plans and contract terms. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. The model should preserve safety and performance obligations in every downside case. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Management should define the earliest warning indicator, measurement period, intervention trigger and executable response. Reporting should preserve the original case, approved changes and observed outcome so renegotiation does not substitute for disciplined preparation.

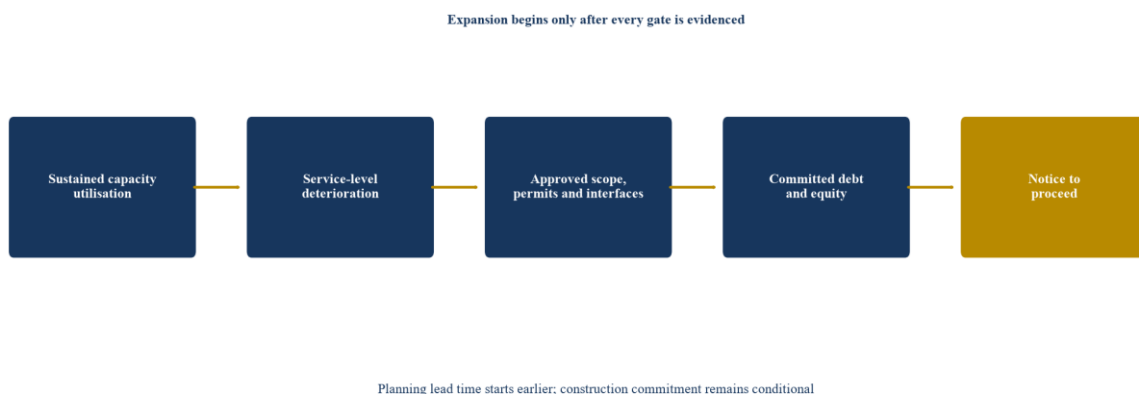
10. Diagnose existing-asset condition

Latent defects, deferred maintenance and incomplete records can transfer an unquantified liability into the concession company. Complete technical due diligence covering remaining useful life, code compliance, pavement, terminal systems, baggage, power, water, drainage, digital systems and environmental condition. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Allocate identified work, latent defects and threshold sharing mechanisms before bid pricing. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. The section output should identify the evidence, risk owner, contractual mechanism, model line, approval right and financing consequence. This creates a traceable bridge from feasibility to bid, financial close and operating governance.

11. Define service and capacity metrics

Annual passengers alone do not determine when terminals, baggage, security, stands, runways or access systems become constrained. Use peak-hour demand, level-of-service measures, queue time, stand occupancy, baggage throughput, runway movements, resilience and asset availability. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Capacity triggers should be measurable, auditable and linked to planning lead time. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Evidence should remain traceable to passenger segment, movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The financial model should reconcile to the technical plan and concession definitions.

Figure 2. Capacity-triggered expansion gate



Illustrative decision sequence; thresholds must be defined for the specific airport.

12. Sequence expansion capex

Premature expansion burdens users and investors, while delayed expansion damages service, connectivity and growth. Create modular projects with planning, design, permitting, land, procurement, construction and commissioning lead times. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Trigger each phase using sustained capacity and service evidence plus an approved business case and committed funding. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Management should define the earliest warning indicator, measurement period, intervention trigger and executable response. Reporting should preserve the original case, approved changes and observed outcome so renegotiation does not substitute for disciplined preparation.

Table 2. Expansion gate requirements

Gate	Evidence	Decision right	Failure response
Demand	Sustained traffic and peak-hour use	Confirm need	Defer or resize
Service	Queues, stands, baggage and resilience	Confirm outcome gap	Operational mitigation
Scope	Approved design, land, permits and interfaces	Lock project perimeter	Redesign
Funding	Committed debt, equity, reserves and hedging	Authorise funds	Refinance or phase
Delivery	Procurement, risk allocation and live-airport plan	Notice to proceed	Repackage

Each gate should be defined and independently testable.

13. Prevent rigid capex traps

A fixed construction date can become uneconomic after traffic, technology or airline strategy changes. Define objective trigger tests, consultation, independent certification, deferral rights, scope adjustment and dispute resolution. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. The contract should preserve required outcomes while allowing efficient adaptation. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. The section output should identify the evidence, risk owner, contractual mechanism, model line, approval right and financing consequence. This creates a traceable bridge from feasibility to bid, financial close and operating governance.

14. Price construction and interface risk

Brownfield airport works must coexist with live operations, security, utilities, airside access and passenger flows. Allocate design completeness, ground condition, utilities, permits, inflation, delay, interface,

commissioning and operational-disruption risks. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Contingency, liquidated damages, relief events and completion support should match the party controlling each risk. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Evidence should remain traceable to passenger segment, movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The financial model should reconcile to the technical plan and concession definitions.

15. Structure the concession vehicle

The special-purpose vehicle should isolate concession cash flows while retaining the operational and technical resources needed to perform. Define ownership, permitted business, related-party contracts, distributions, reserve accounts, security, change of control and sponsor support. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Governance should protect public obligations and lender rights without obscuring accountability. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Management should define the earliest warning indicator, measurement period, intervention trigger and executable response. Reporting should preserve the original case, approved changes and observed outcome so renegotiation does not substitute for disciplined preparation.

16. Design the capital structure

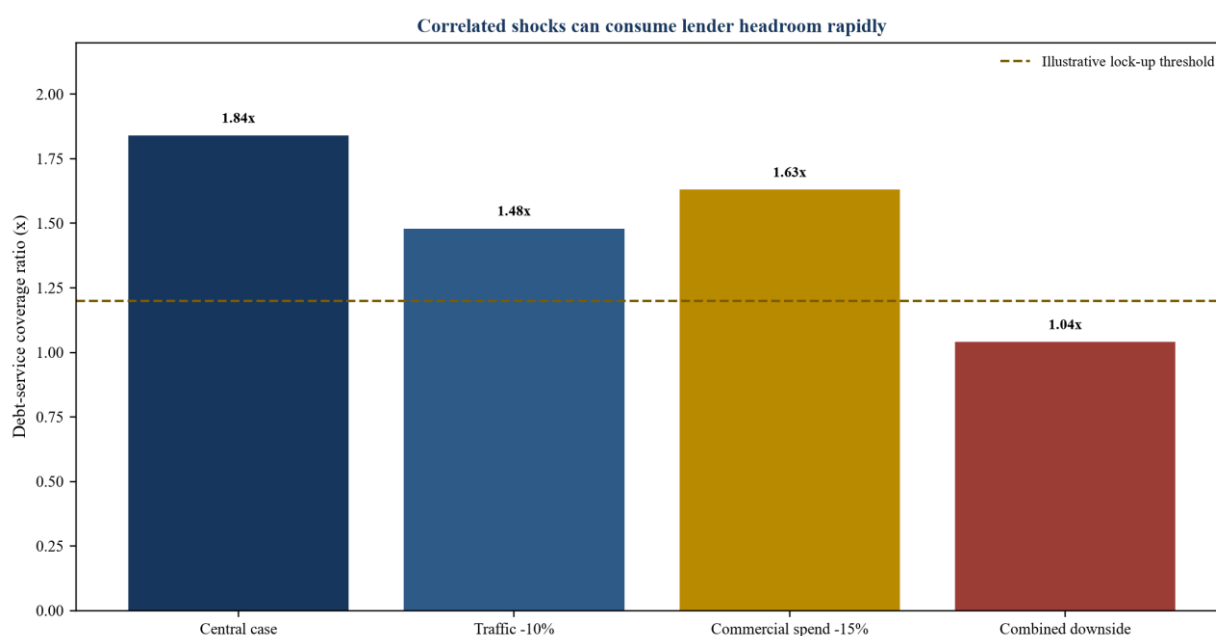
Debt capacity depends on traffic volatility, tariff flexibility, commercial diversification, capex obligations and concession life. Size senior debt, equity, subordinated instruments, liquidity, debt-service reserve and maintenance reserves against downside cash flow. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Tenor and amortisation should fit asset life, concession expiry and late-life capital obligations. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. The section output should identify the evidence, risk owner, contractual mechanism, model line, approval right and financing consequence. This creates a traceable bridge from feasibility to bid, financial close and operating governance.

17. Test debt-service resilience

A base-case coverage ratio can conceal rapid erosion when traffic, commercial spend, costs, rates and construction overlap deteriorate together. Calculate annual and lock-up coverage, reserve sufficiency, covenant cure and distribution capacity under correlated scenarios. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest

outcomes. Financing should retain headroom above contractual minimums and specify action before covenant breach. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Evidence should remain traceable to passenger segment, movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The financial model should reconcile to the technical plan and concession definitions.

Figure 3. Hypothetical coverage sensitivity



DSCR values are illustrative management assumptions based on the hypothetical case.

18. Allocate demand and revenue risk

Traffic and commercial income often sit with the private party, yet public policy, competing infrastructure or mandated service changes can materially reshape demand. Distinguish general market risk from discriminatory action, competing-facility risk, route restrictions, border closures and public-service requirements. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Relief should be narrow, measurable and tied to the event rather than a general revenue guarantee. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Management should define the earliest warning indicator, measurement period, intervention trigger and executable response. Reporting should preserve the original case, approved changes and observed outcome so renegotiation does not substitute for disciplined preparation.

19. Consider availability or hybrid structures

A pure user-pay concession may be unsuitable where demand is immature, strategic service is required or public control limits revenue. Compare user-pay, availability-payment and hybrid mechanisms for fiscal cost, performance incentives, demand allocation and financing capacity. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and

connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Payment obligations require budget authority, appropriation mechanics, deductions and transparent contingent-liability reporting. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. The section output should identify the evidence, risk owner, contractual mechanism, model line, approval right and financing consequence. This creates a traceable bridge from feasibility to bid, financial close and operating governance.

20. Govern airline concentration

Dependence on one airline or alliance can magnify route, credit and bargaining risk. Measure passenger, movement and revenue concentration, airline financial strength, hub strategy, base commitments and switching options. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Downside cases should include schedule withdrawal, capacity redeployment and counterparty default. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Evidence should remain traceable to passenger segment, movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The financial model should reconcile to the technical plan and concession definitions.

21. Integrate environmental and social obligations

Airport expansion affects noise, land, communities, biodiversity, emissions, water, waste and labour. Identify applicable permits, standards, consultation, mitigation, resettlement, monitoring and climate-resilience requirements. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Cost, schedule, responsibility and lender conditions should be embedded in the plan before tender and financing. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Management should define the earliest warning indicator, measurement period, intervention trigger and executable response. Reporting should preserve the original case, approved changes and observed outcome so renegotiation does not substitute for disciplined preparation.

22. Protect safety, security and economic oversight

Private participation does not remove the State's aviation obligations or the operator's safety and security duties. Define certification, accountable management, security, emergency response, occurrence reporting, user consultation and regulator access. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Commercial and financing actions should remain subordinate to safe, secure and lawful operation. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration,

tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. The section output should identify the evidence, risk owner, contractual mechanism, model line, approval right and financing consequence. This creates a traceable bridge from feasibility to bid, financial close and operating governance.

23. Model the hypothetical airport

The hypothetical concession begins with 18.0 million passengers and USD 385 million of total annual revenue. Assumed operating cost is USD 210 million, producing USD 175 million of EBITDA before tax, financing and capital expenditure. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. The central case produces a 1.84x debt-service coverage ratio; the correlated downside produces 1.04x. Every value is an illustrative management assumption. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Evidence should remain traceable to passenger segment, movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The financial model should reconcile to the technical plan and concession definitions.

Table 3. Hypothetical airport operating scenarios

Measure	Central case	Correlated downside	Decision meaning
Passengers (millions)	18.0	14.4	Traffic conversion
Aeronautical revenue per passenger	12.00	12.00	Regulated and contractual income
Non-aeronautical revenue per passenger	8.00	6.50	Commercial execution and mix
Other revenue	25.0	22.0	Property and services
Total revenue	385.0	288.4	Cash-generating base
Operating cost	210.0	190.0	Fixed and variable cost response
EBITDA	175.0	98.4	Pre-financing operating result
Debt service	95.0	95.0	Contractual financing burden
DSCR	1.84x	1.04x	Lender headroom

USD millions except passengers, revenue per passenger and DSCR; every value is an illustrative management assumption.

24. Gate the expansion funding decision

The assumed USD 650 million expansion can impair the existing concession if funded before demand, approvals and interfaces are ready. Require two sustained measurement periods above the capacity threshold, service deterioration, approved design, permits, fixed interface plan and committed debt and equity. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Release construction only when downside coverage and

liquidity remain acceptable after funding the project. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Management should define the earliest warning indicator, measurement period, intervention trigger and executable response. Reporting should preserve the original case, approved changes and observed outcome so renegotiation does not substitute for disciplined preparation.

25. Build the risk-allocation matrix

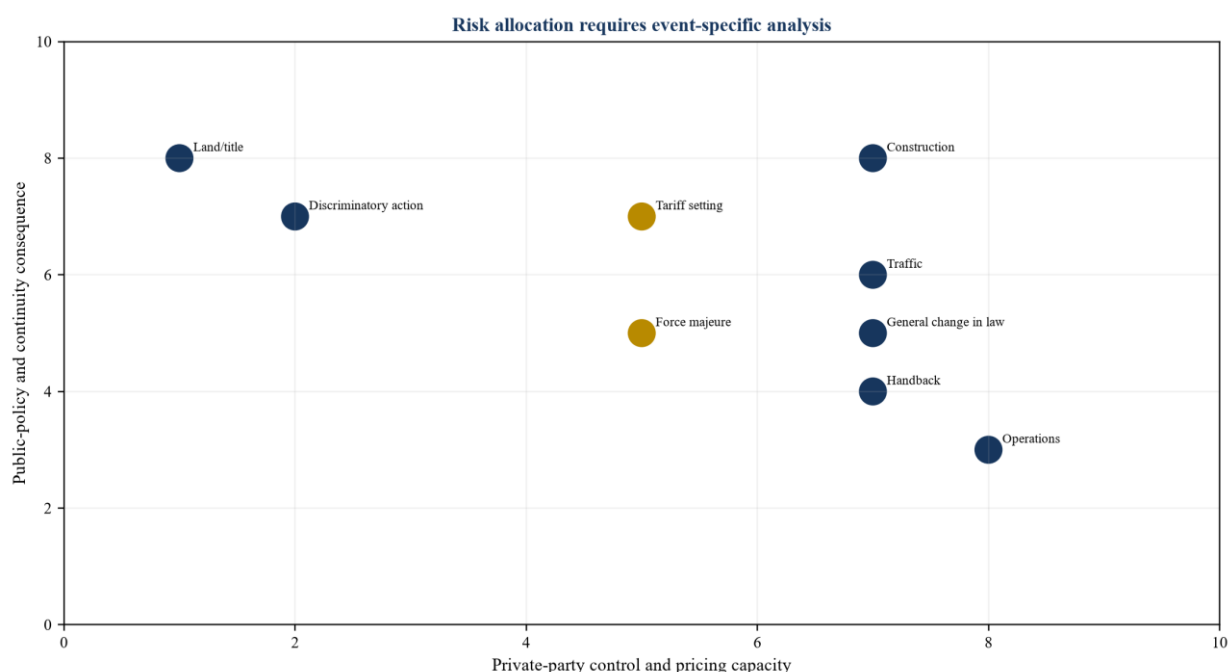
Risk allocation should follow control, insurability, pricing capacity and the public interest rather than a general preference for transfer. Map land, demand, tariffs, construction, utilities, force majeure, change in law, competing facilities, environment, financing, operations and handback. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. For each risk define owner, mitigation, relief, compensation, evidence and dispute path. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. The section output should identify the evidence, risk owner, contractual mechanism, model line, approval right and financing consequence. This creates a traceable bridge from feasibility to bid, financial close and operating governance.

Table 4. Illustrative airport PPP risk allocation

Risk	Indicative owner	Core mitigation	Contract mechanism
General traffic	Private	Forecasting and flexible operations	Private revenue risk
Land and existing title	Public	Diligence and timely access	Condition precedent and relief
Construction delivery	Private	Fixed interfaces and capable contractor	Completion support and damages
Tariff approval	Shared	Transparent regulatory path	Defined review and relief
Discriminatory change	Public	Policy discipline	Compensation event
Force majeure	Shared	Insurance and resilience	Time and cost relief
Handback condition	Private	Surveys, reserves and rectification	Retention and security

Final allocation requires project-specific legal, technical and financial analysis.

Figure 4. Airport PPP risk-allocation map



Allocation follows control, pricing capacity and relief design.

26. Establish lender protections

Project lenders require security and cure rights while public authorities require continuity of essential airport services. Define direct agreement, notice, cure, step-in, substitution, account control, insurance proceeds, enforcement and termination-compensation mechanics. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Protections should allow a viable cure without creating uncontrolled ownership or operational outcomes. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Evidence should remain traceable to passenger segment, movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The financial model should reconcile to the technical plan and concession definitions.

27. Procure for value and deliverability

The highest upfront fee or shortest construction promise can transfer hidden risk into charges, service or later renegotiation. Evaluate technical plan, financing certainty, traffic and revenue assumptions, lifecycle cost, risk acceptance, governance and transition capability. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Bid evaluation should identify departures and compare whole-life value under common scenarios. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Management should define the earliest warning indicator, measurement period, intervention trigger and executable response. Reporting should preserve the original

case, approved changes and observed outcome so renegotiation does not substitute for disciplined preparation.

28. Control the route to financial close

Unresolved permits, land, contracts, conditions precedent or model changes can delay closing and invalidate bid economics. Maintain an integrated close plan covering concession documents, financing, technical scope, insurance, environmental conditions, consents and funds flow. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. Every condition should have an owner, evidence standard, long-stop date and consequence. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. The section output should identify the evidence, risk owner, contractual mechanism, model line, approval right and financing consequence. This creates a traceable bridge from feasibility to bid, financial close and operating governance.

29. Govern operations and expansion

The concession needs a durable information and decision system after financial close. Use performance dashboards, audited traffic and revenue data, capex gates, lifecycle plans, regulatory submissions and risk registers. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. The authority, operator and lenders should receive consistent information without duplicating operational control. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Evidence should remain traceable to passenger segment, movement, terminal zone, commercial unit, asset, contract, currency and forecast year. The financial model should reconcile to the technical plan and concession definitions.

30. Plan handback and transition

Late-life underinvestment can emerge when asset expenditure benefits the next operator or public authority after concession expiry. Define asset-condition standards, surveys, reserves, rectification periods, information transfer and continuity arrangements years before handback. The analysis should distinguish observed technical, contractual, regulatory and financial evidence from management assumptions and connect each material judgment to safety, service, affordability, capacity, financing and public-interest outcomes. The financing and distribution regime should preserve sufficient cash and incentives to meet the required condition. The work should test central, downside and upside cases with correlated sensitivities for traffic, passenger mix, airline concentration, tariff timing, commercial spend, operating cost, inflation, currency, interest rates, construction, permits and relief events. Exceptions require a named owner, source, due date and decision consequence. Unsupported revenue, savings, compensation or refinancing remains outside the base case until enforceable evidence supports it. Management should define the earliest warning indicator, measurement period, intervention trigger and executable response. Reporting should preserve the original case, approved changes and observed outcome so renegotiation does not substitute for disciplined preparation.

Frequently asked questions

What makes an airport PPP bankable?

Bankability requires a credible traffic and revenue case, affordable and transparent charges, executable operations and expansion, financeable risk allocation, sufficient coverage and liquidity, enforceable lender rights, and continuing compliance with safety, security, environmental and public-service obligations.

Who should bear airport traffic risk?

General market demand commonly sits with the private concessionaire in a user-pay model. Project-specific public actions, mandated changes or competing facilities require separate analysis. Allocation should follow control, pricing capacity and the public interest.

Why is non-aeronautical revenue central to airport finance?

Retail, food and beverage, parking, lounges, advertising, property and services diversify the revenue base and can support investment. Forecasts should model passenger mix, dwell time, conversion, contract terms and layout rather than applying one growth rate to traffic.

How should expansion capex be triggered?

Use sustained, independently measurable capacity and service evidence combined with approved scope, permits, interfaces and committed funding. Planning can begin earlier, while construction commitment remains conditional on every gate.

What does a downside traffic case need to include?

Combine lower passengers with airline concentration, weaker commercial spend, tariff lag, cost rigidity, inflation, currency, rates and capex timing. A single-variable traffic sensitivity can understate the pressure on coverage and liquidity.

What lender protections are typical in an airport concession?

Protections can include security over permitted assets and accounts, reserve requirements, information rights, notice, cure, step-in, substitution and termination compensation. The precise package depends on local law and the concession.

Why do handback obligations affect current financing?

Required asset condition can drive late-life maintenance and capital expenditure after debt has amortised and sponsor incentives have weakened. Surveys, reserves, rectification and distribution controls should be planned well before expiry.

When is an availability-payment model appropriate?

It may be relevant where demand is immature, revenue is tightly controlled or the public authority requires strategic service that cannot support user-pay finance. Fiscal affordability, performance deductions and contingent liabilities require explicit evaluation.

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