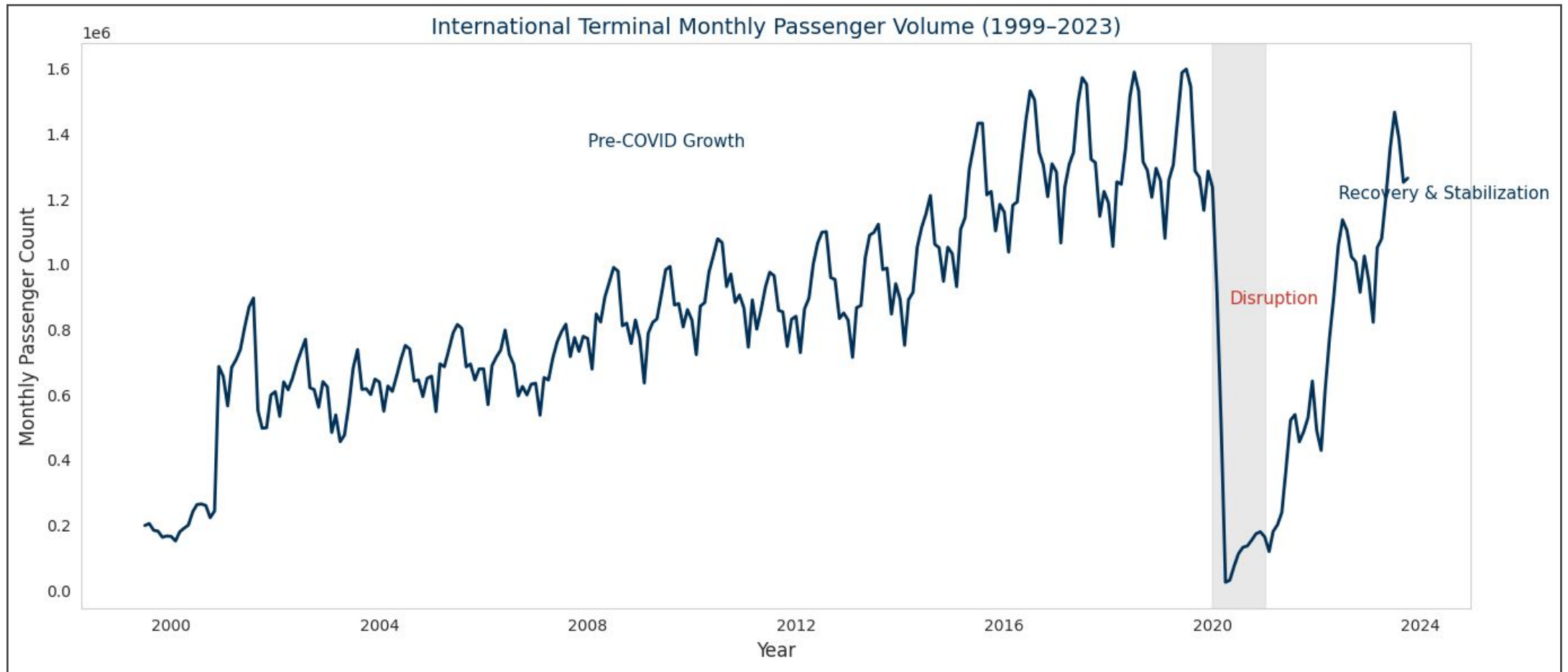


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# Premium Portfolio Growth & Lounge Capacity Risk

Strategic Capacity Framework for Premium Lounge Expansion

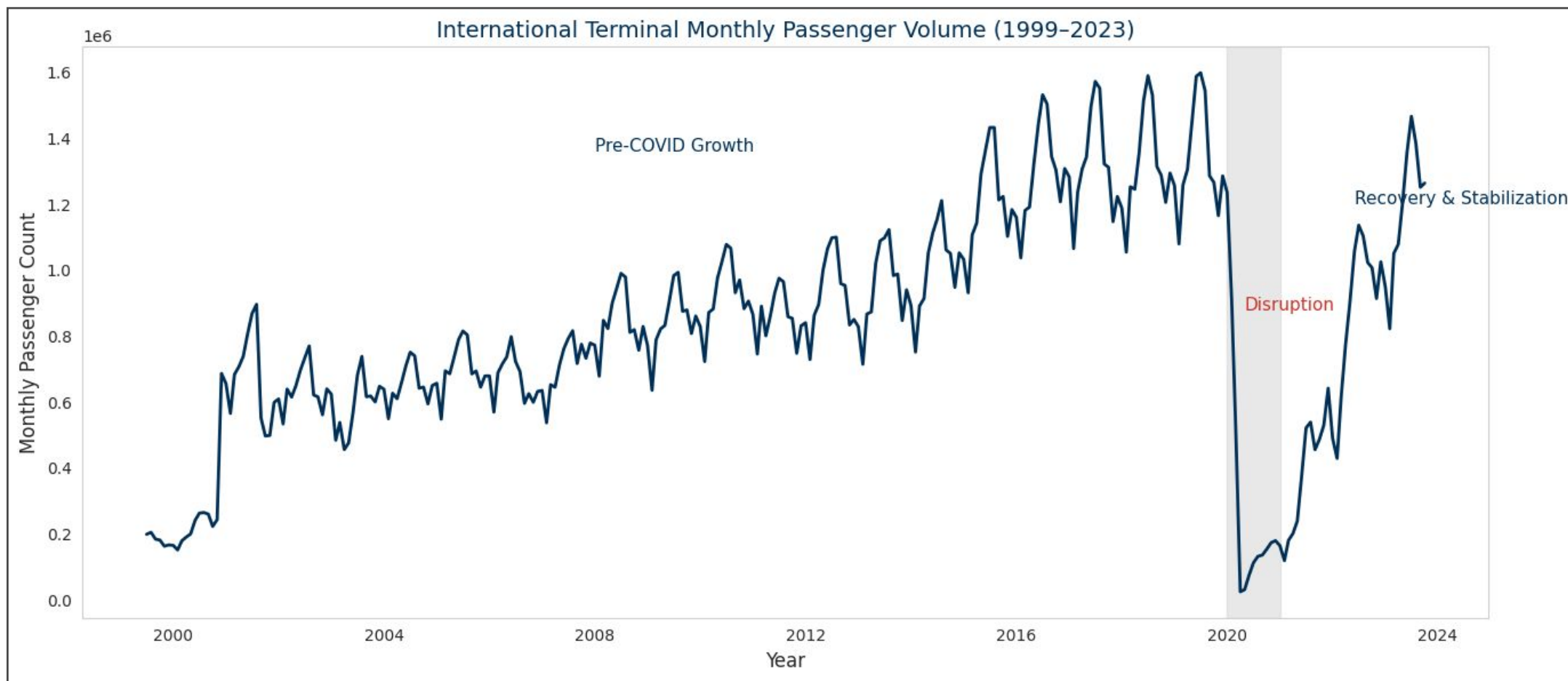
# Passenger Volume Has Entered a New Regime



✂ **Structural break in 2020:** Previous long-run trends no longer serve as reliable baseline anchors.

📈 **2023 Stabilization:** Recent data indicates convergence at a new post-recovery regime level.

# Passenger Volume Has Entered a New Regime



**Seasonal Amplitude:** Peak-to-trough variance remains high (July ~1.8x February).



**Governance:** Full-history extrapolation is statistically inappropriate for capital planning.

# Regime-Aware Hybrid Projection



## Stable Seasonality

Utilizing 2015–2019 data to extract a robust seasonal index, preserving pre-disruption travel cycles.



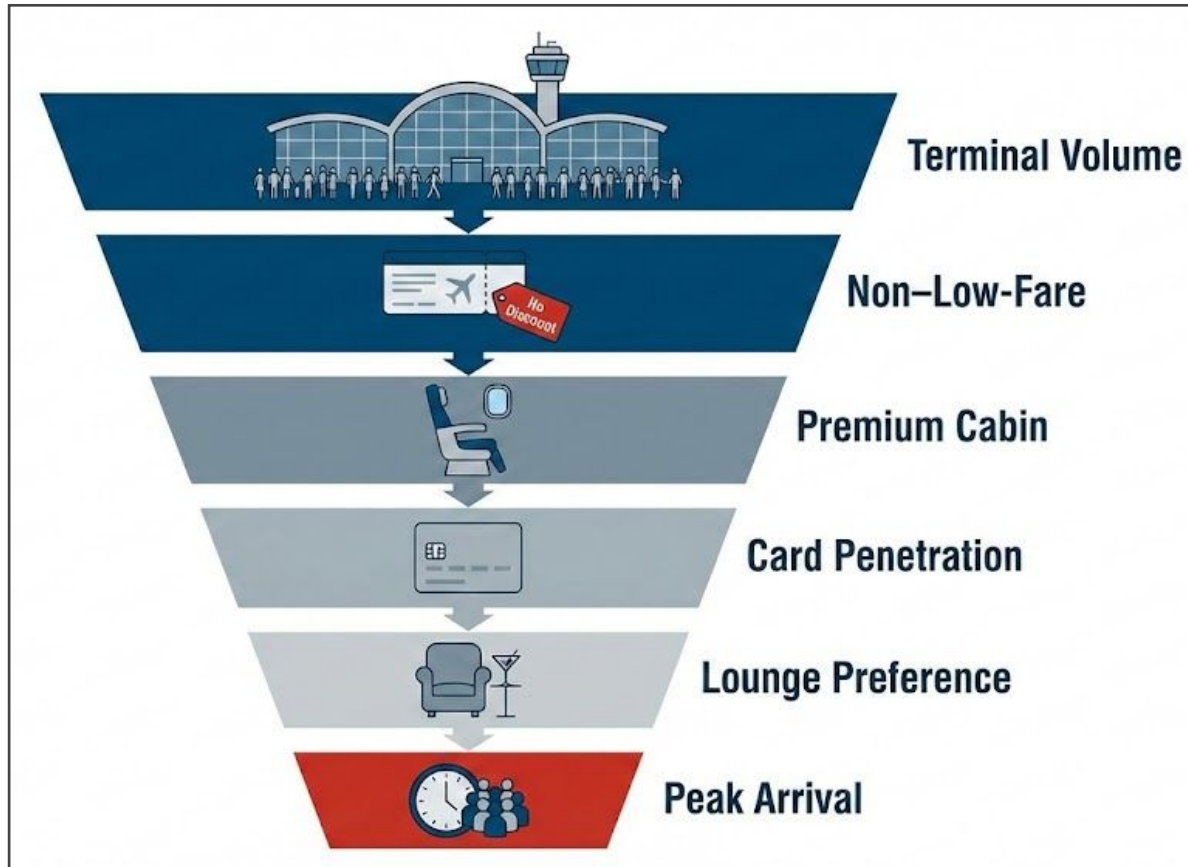
## Regime Anchor

Anchoring the forecast level to stabilized 2023 monthly volume averages for maximum relevance.

**Hybrid Projection = Seasonal Index × 2023 Level Anchor**





*Backtest validation confirms 2022 remained a transition year (~25% error), reinforcing the 2023 anchor approach.*

# From Passenger Volume to Peak Occupancy



## Modular Demand Funnel

Applying a granular translation framework to convert aggregate traffic into lounge occupancy:

-  Terminal Volume → Non-Low-Fare Filter
-  Premium Mix → Portfolio Penetration
-  Lounge Preference → Utilization Rate
-  Peak Compression → Overflow Simulation

**Objective: Identify structural risk drivers rather than exact access counts.**

# Peak Occupancy Driven by Arrival × Dwell

$$\text{Occupancy} \approx \text{Arrival Rate} \times \text{Average Dwell Time}$$



## Concentration

65% of daily visits occur within a 7-hour peak window, creating high density.



## Residence

2.5-hour average dwell time effectively locks seats, reducing real-time capacity.



## Nonlinearity

Congestion risk accelerates convexly as utilization approaches the seating threshold.

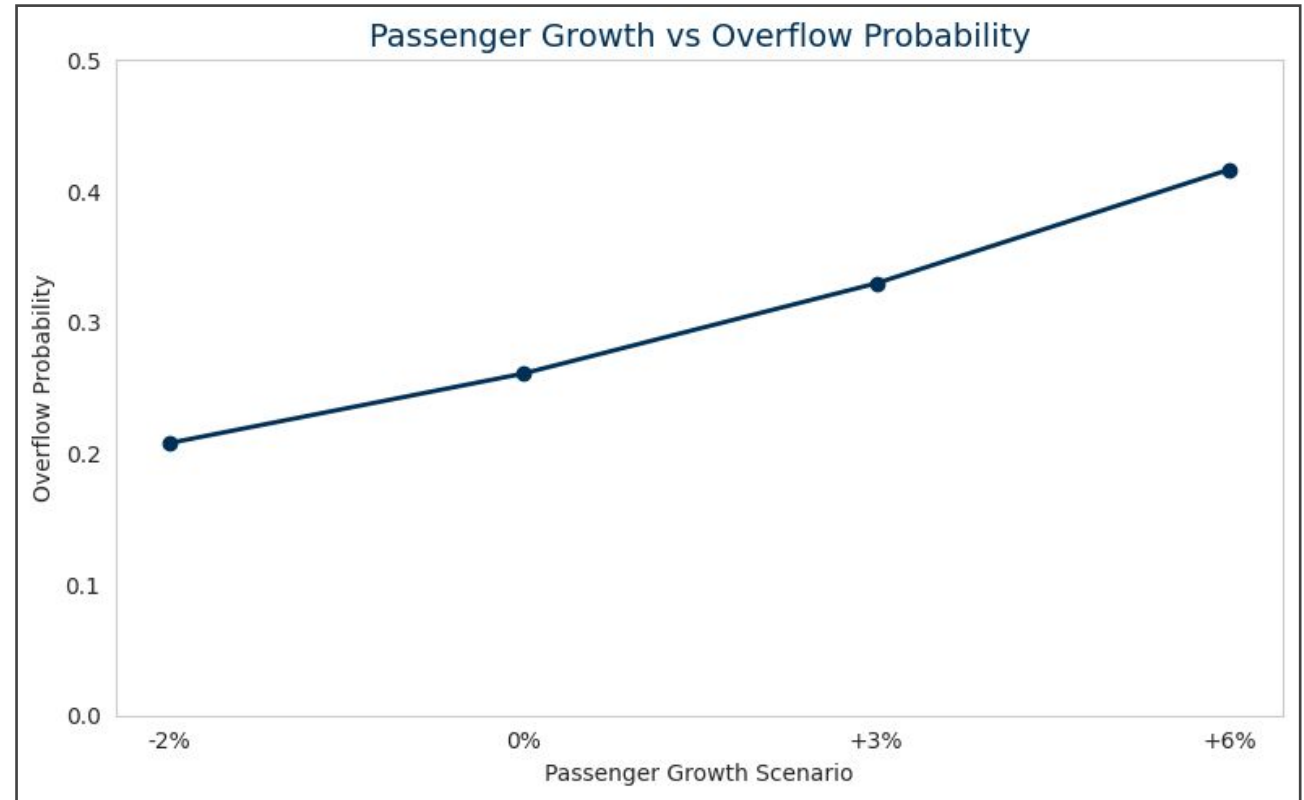
# Overflow Risk Is Nonlinear

## Risk increases disproportionately near capacity

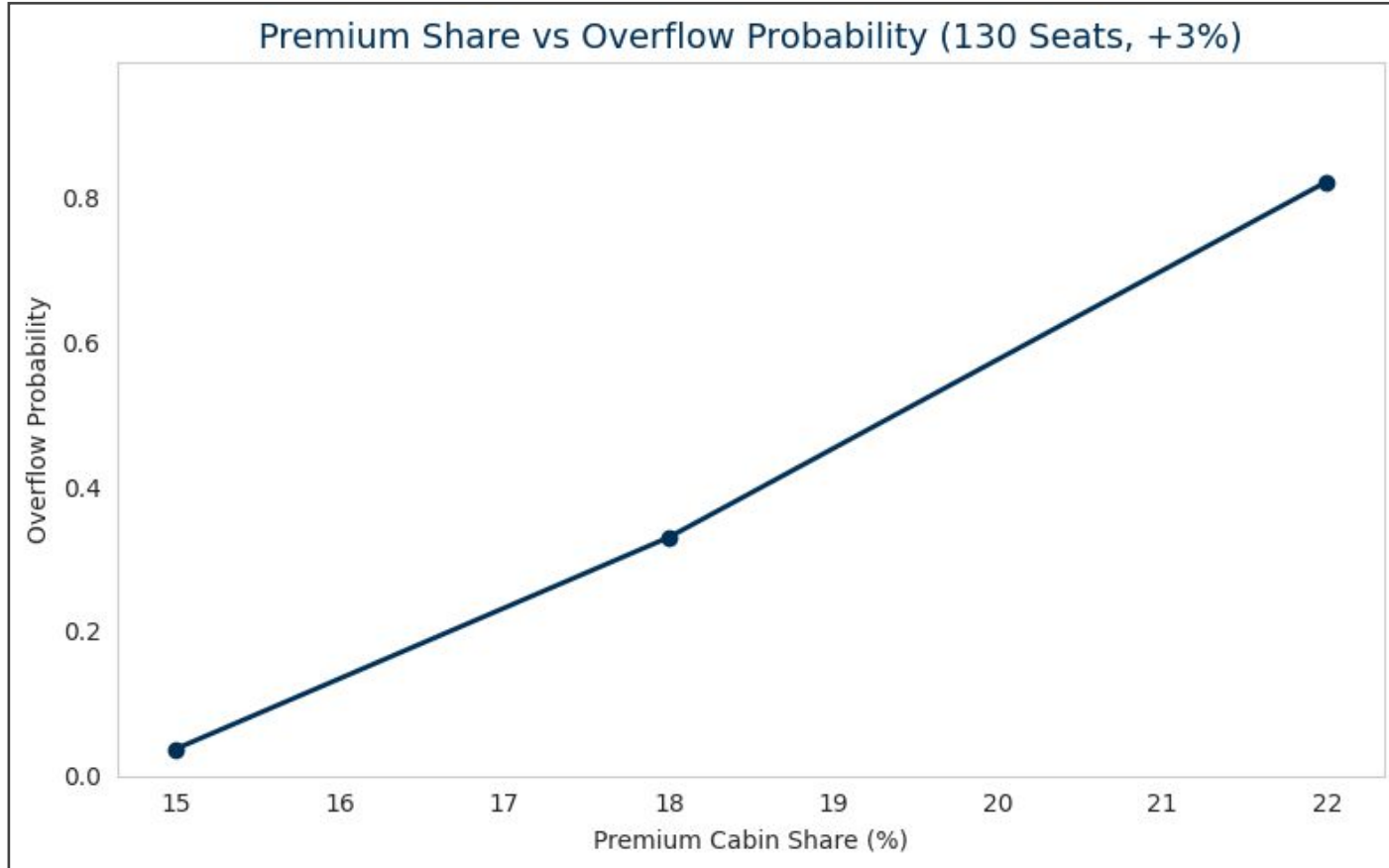
Congestion risk accelerates as peak utilization approaches capacity. Within tested ranges, premium mix assumptions drive greater variance in overflow probability than comparable changes in aggregate passenger growth.

A 6% increase in volume nearly doubles the likelihood of overflow compared to the -2% scenario.

Premium mix assumptions drive greater variance than passenger growth.



# Premium Mix: A High-Leverage Risk Driver



# +3pp

Premium Share Shift



**Dominant Lever:** A +3 percentage point shift in premium mix exerts more impact than +3% passenger growth.



**Congestion Leverage:** Mix assumptions dictate the arrival intensity far more than aggregate terminal traffic.



**Strategic Alignment:** Portfolio decisions directly influence infrastructure longevity.



# Capacity Required for Risk Maintenance

## Infrastructure Trigger Benchmarks (+6% Growth Scenario)

Seating Configuration	Peak Overflow Probability	Risk Assessment
130 Seats (Status Quo)	41%	High Risk - Degradation of Service
140 Seats	22%	Marginal Threshold
145 Seats (Target)	< 20%	Aligned with Risk Tolerance

Recommendation: ~11–12% seat expansion is required to offset just +6% passenger growth near saturation.

# Financial Optimization & Capital Tradeoff



Strategic Tension: 140 seats maximizes pure financial efficiency, but the 145-seat footprint is required to reduce risk below 20% and protect the premium brand covenant.

# Capacity Planning as Portfolio Governance

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## **Integrated Forecasts:**

Do not rely solely on terminal passenger projections; they smooth over critical portfolio-specific demand spikes.



**Target Linking:** Formally link capacity expansion triggers to quarterly premium penetration and card acquisition targets.







**Proactive Triggers:** Initiate capital planning and expansion before sustained 85% peak utilization is reached to avoid "reactive" catch-up.



**Nonlinear Mindset:** Shift governance from linear volume-to-seat ratios to convex overflow probability models.

# Recommended Action & Next Steps

-  Maintain hybrid regime monitoring (Anchor: 2023).
-  Track premium mix quarterly for sensitivity shifts.
-  Plan toward a ~145-seat footprint for the +6% growth window.
-  Adopt overflow probability as the primary capital trigger.

