

Coping with chaos

The aircraft industry in strange days

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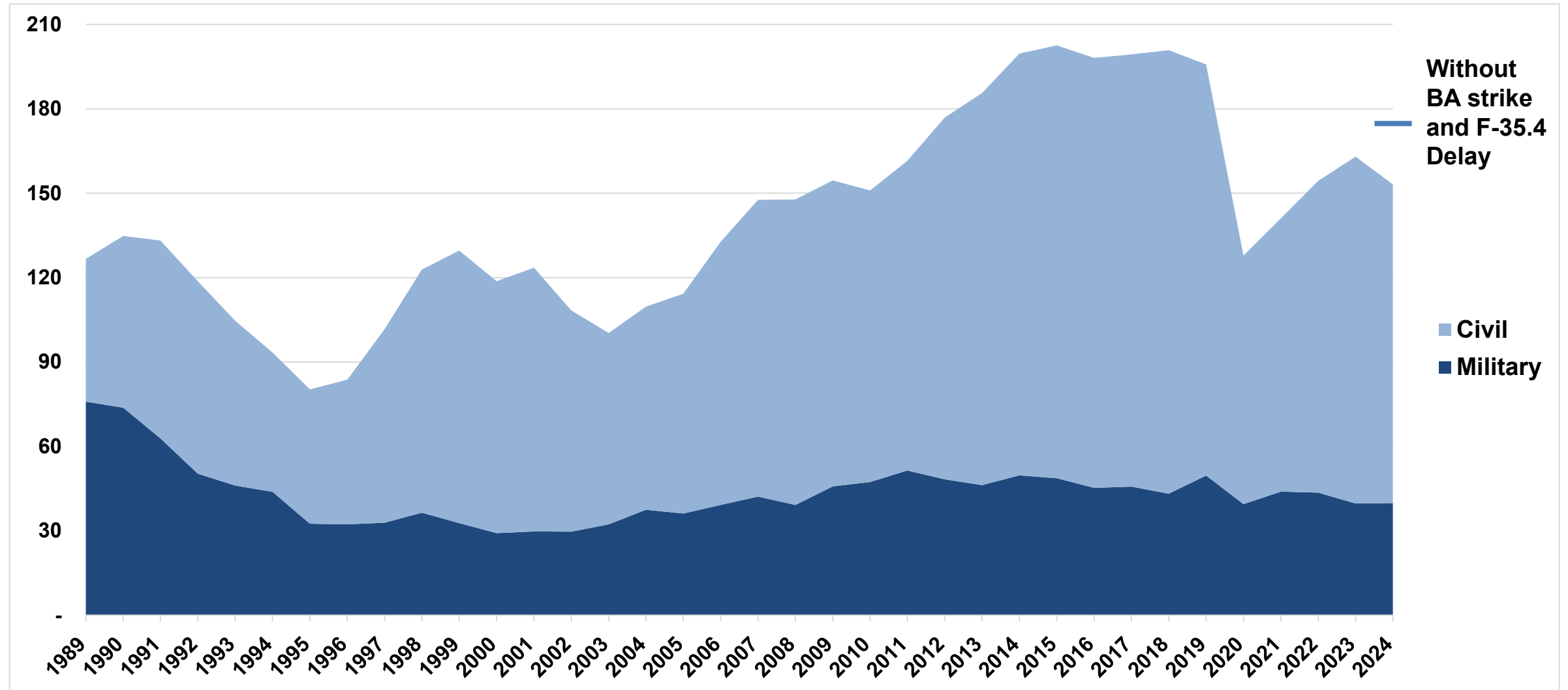
October 2, 2025

Presentation to:



Deliveries: Growing pains

Historical deliveries with preliminary 2024 numbers; 2025 \$ Billions



General factors impacting the supply chain – some are sporadic, others are structural

Summary of General Supply Chain Factors

Material and Parts Shortage

Raw materials – specifically titanium forgings and castings – have increased in cost by up to 40%, which is compounded by capacity shortage.

Tier 3 suppliers are also struggling to produce at rates to support high volume commodities like interiors.

Skilled Labor Shortage

The impacts of early retirements during COVID paired with non-competitive wages have resulted in a much younger, less skilled workforce.

Value chains like airframe, engine and aerostructures assembly that are highly labor intensive are suffering the most.

Lack of Investment

Thousands of smaller Tier 2/3 suppliers have customers have failed to invest in additional capacity as their business case isn't compelling enough for credit institutions.

Additional uncertainty regarding aircraft OEM rate projections have disincentivized suppliers from being the first to invest.

Unsustainable Business Models

Aerostructures suppliers have no aftermarket exposure and therefore have suffered heavily from uncertain rates and razor thin margins.

Engine OEMs disincentivized to increase production units that come in at a negative margin.

Sporadic Issue

Significant Issue

Structural Issue

Stretched Aviation Agencies

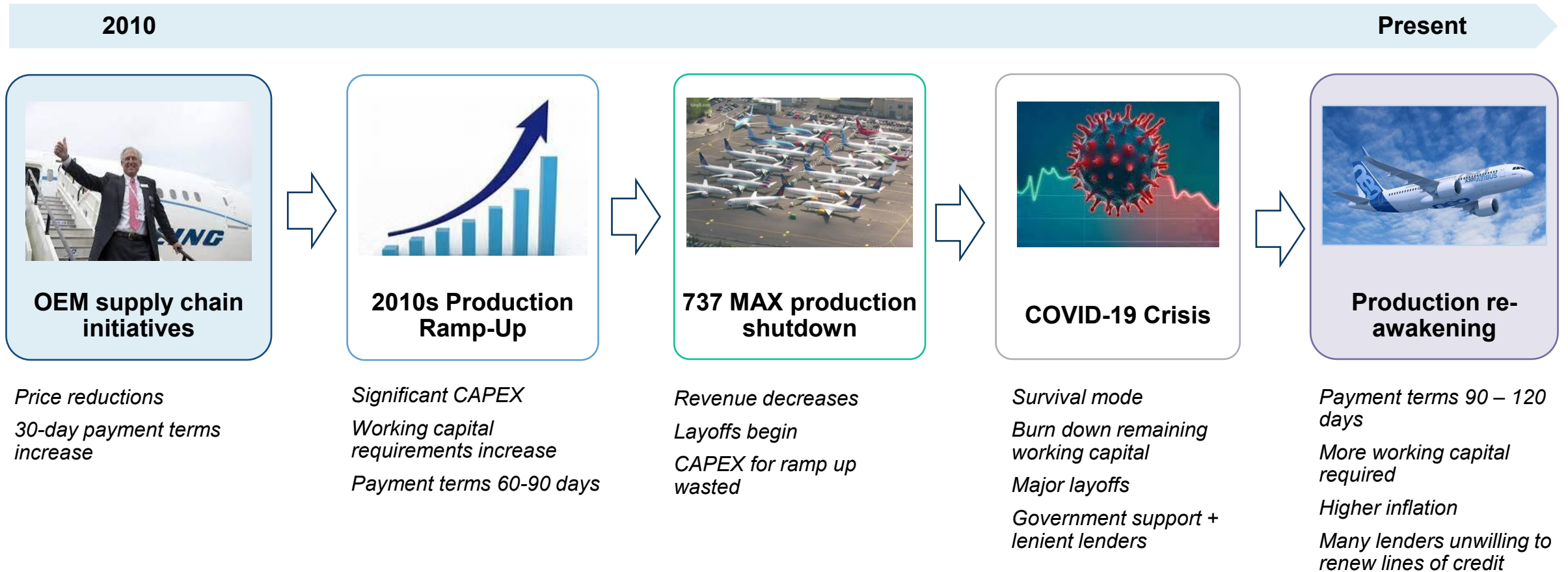
EASA and FAA understaffed; slows down certification and supply chain

Wild Card: Geopolitics

- Ramp-up of military industrial activities
- Tariffs

An unfortunate series of events whipsawed commercial aerospace suppliers and diminished working capital...

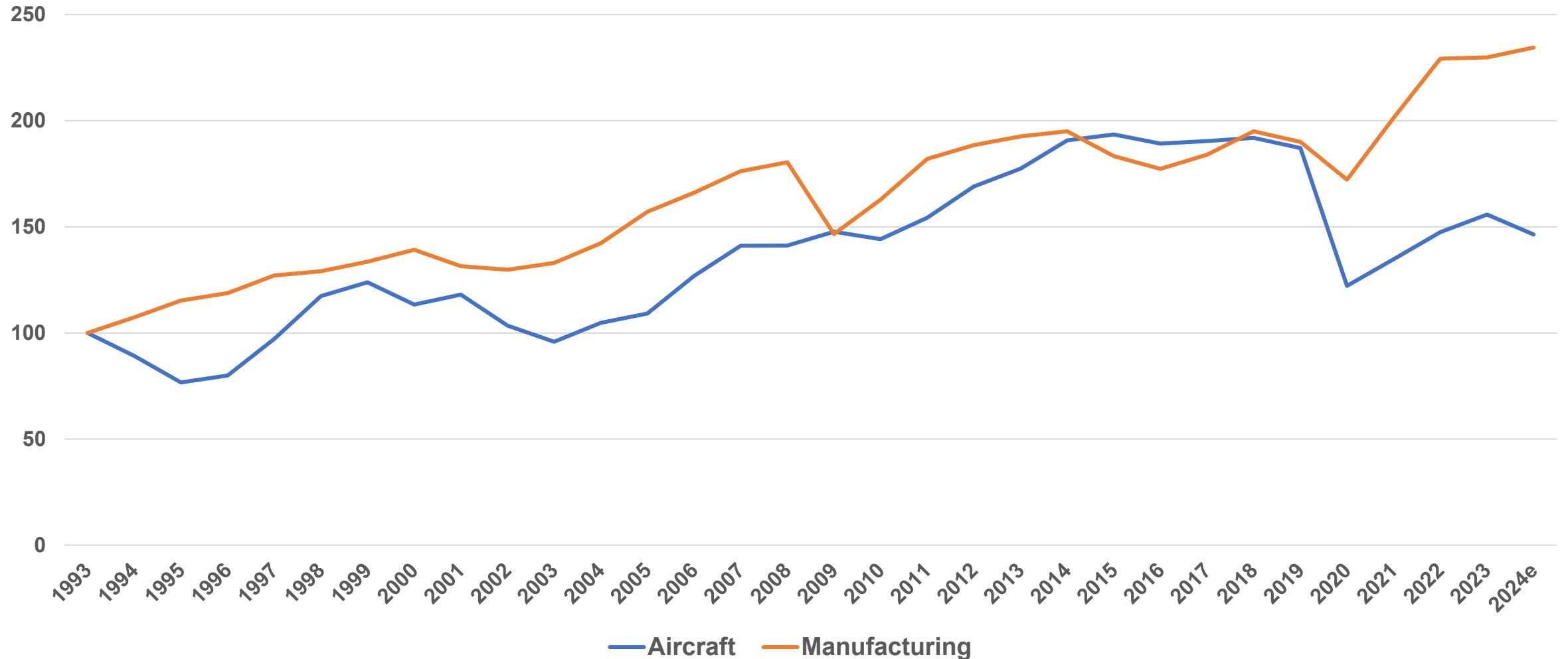
Events Impacting Commercial Aerospace Supplier Working Capital



Sub-tier suppliers are bleeding financially

Aircraft output v. everything else: mind the gap

Shipments: total manufacturing by value V. aircraft deliveries, indexed to 1993 output



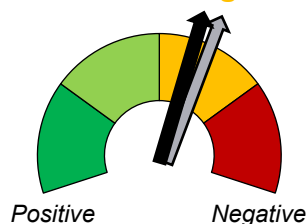
After a chaotic first quarter, macro indicators have improved with higher air travel demand and a stronger supply chain

↑ Q1 2025 Rating ↑ Q2 2025 Rating

Q2 2025 Macro Aerospace Indicators

Macroeconomics

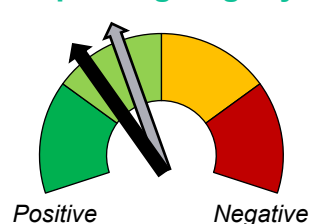
Stabilizing



- › Fluctuations around U.S. tariff policy continue to impact GDP growth projections
 - Real US GDP growth expected to be 1.5% y-o-y, compared to initial 2% forecast
- › Global stock markets have since recovered from local nadir in March, though fluctuations are expected with each additional tariff announcements
- › U.S. is in the process of passing budget resolution, which will impact funding for defense primes and start-ups like JetZero

Air Travel Demand

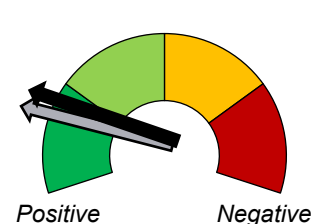
Improving Slightly



- › Air travel grew in April and May with 5% and 8% y-o-y RPK growth, respectively
 - Asia Pacific lead growth with 9.4% y-o-y growth
 - North America saw continued declines (0.5% total), driven primarily by a 1.7% decline in domestic RPKs, partly offset by 1.4% int'l growth
- › Low jet fuel prices have bolstered demand growth, despite conflict in the Middle East
- › Overall, consumer confidence and forward bookings remain strong, and 2025 is expected to have 5-6% y-o-y growth (though this is compared to Jan 2025 expectations of 7-8%)

Aircraft Demand

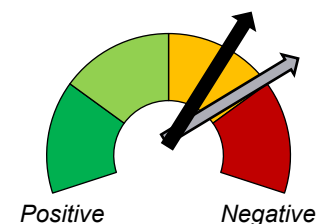
Stable



- › Paris Airshow orders were dominated by Airbus – notably the LOT A220 and Vietjet A321 order – and subdued for Boeing due to Air India 787 crash
 - Airbus: 248 Orders
 - Boeing: 41 Order
- › Despite uncertainty of tariffs on Boeing orderbook, Trump administration leverage resulted in 238 widebody order from Qatar
- › Recent negotiation developments between EU and US will likely alleviate tariff penalties on airline customers – a tailwind for aircraft demand

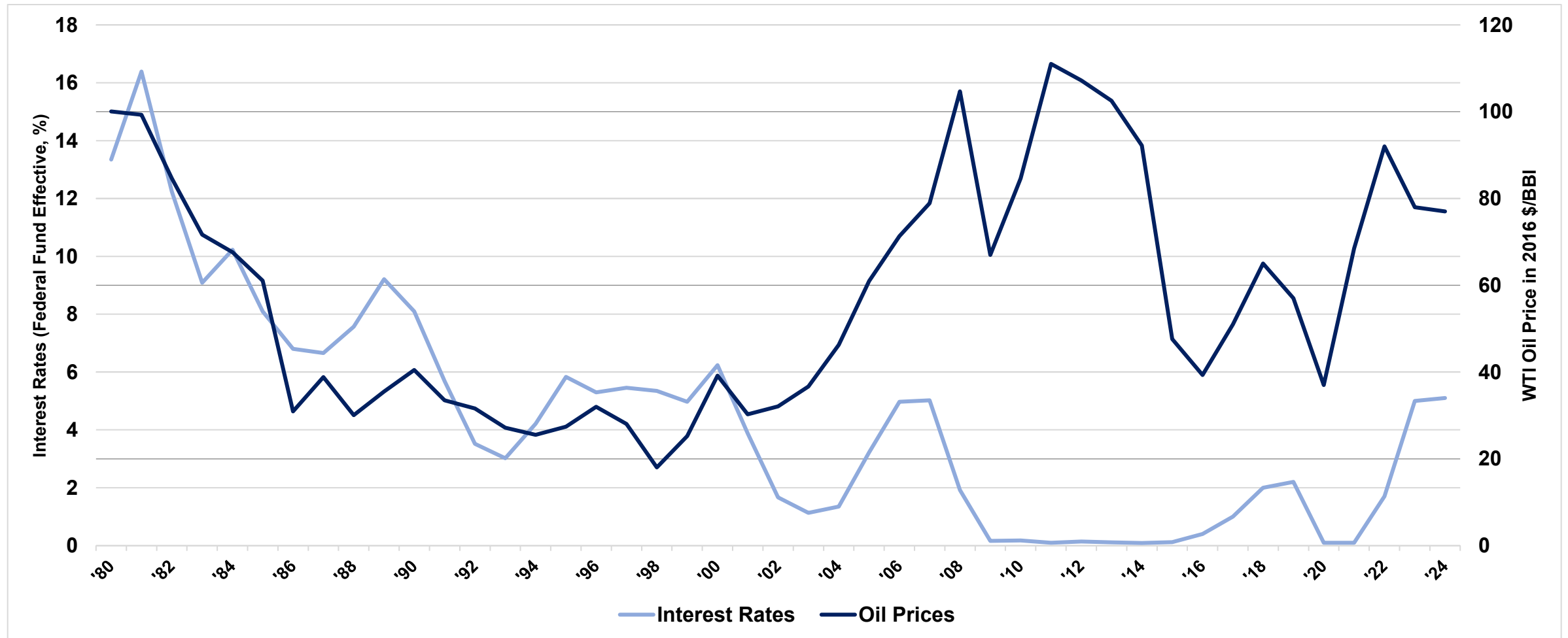
Aircraft Supply

Improving Slightly



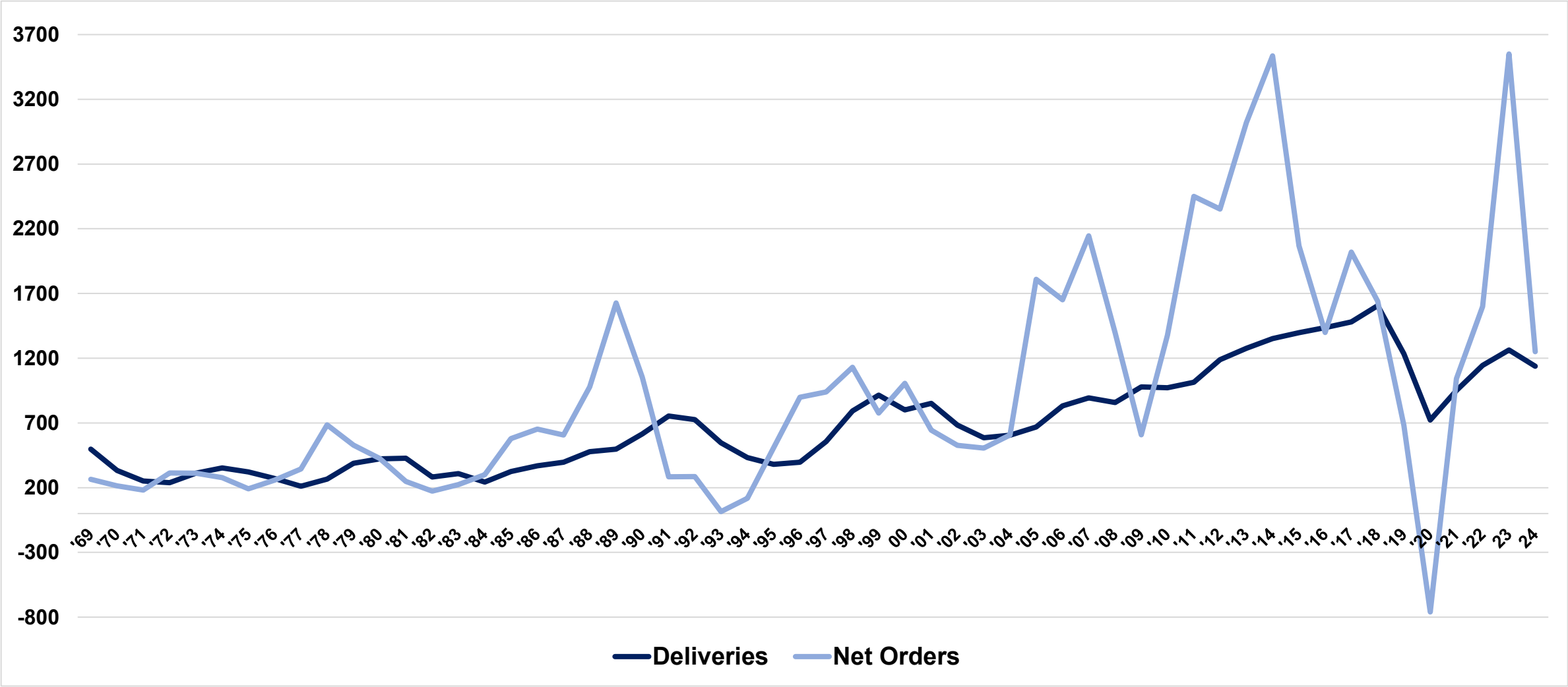
- › In June, Boeing and Airbus delivered 60 and 63 aircraft, respectively
- › Boeing has made significant progress in stabilizing their supply chain, having reached rate 38/mo in May – with goals to stabilize the rate for 6 months
- › Airbus continues to deal with supply chain constraints to move beyond 55/mo – primarily due to lack of engine deliveries
- › Long term shortages of forgings, aerostructures, and engines persist and may pose larger obstacle as Boeing and Airbus aim to increase rates

Ideally, interest rates $< 3\%$ and oil $\$50\text{-}85/\text{bbl}$; the ratio matters most, and is in positive territory (for Jetliner sales)



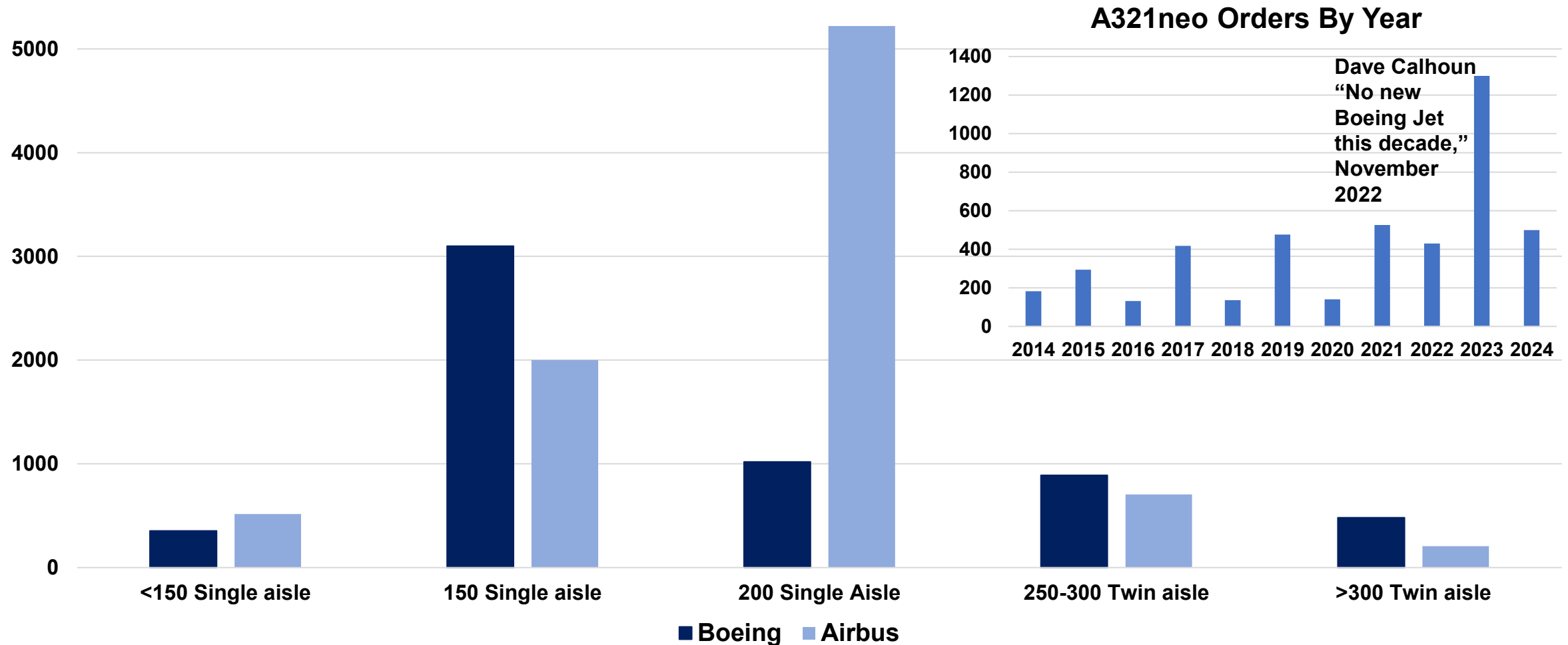
Book-to-bill is great again...not that there's much point to ordering jets

Large Jetliner Orders and Deliveries, 1969 – 2024



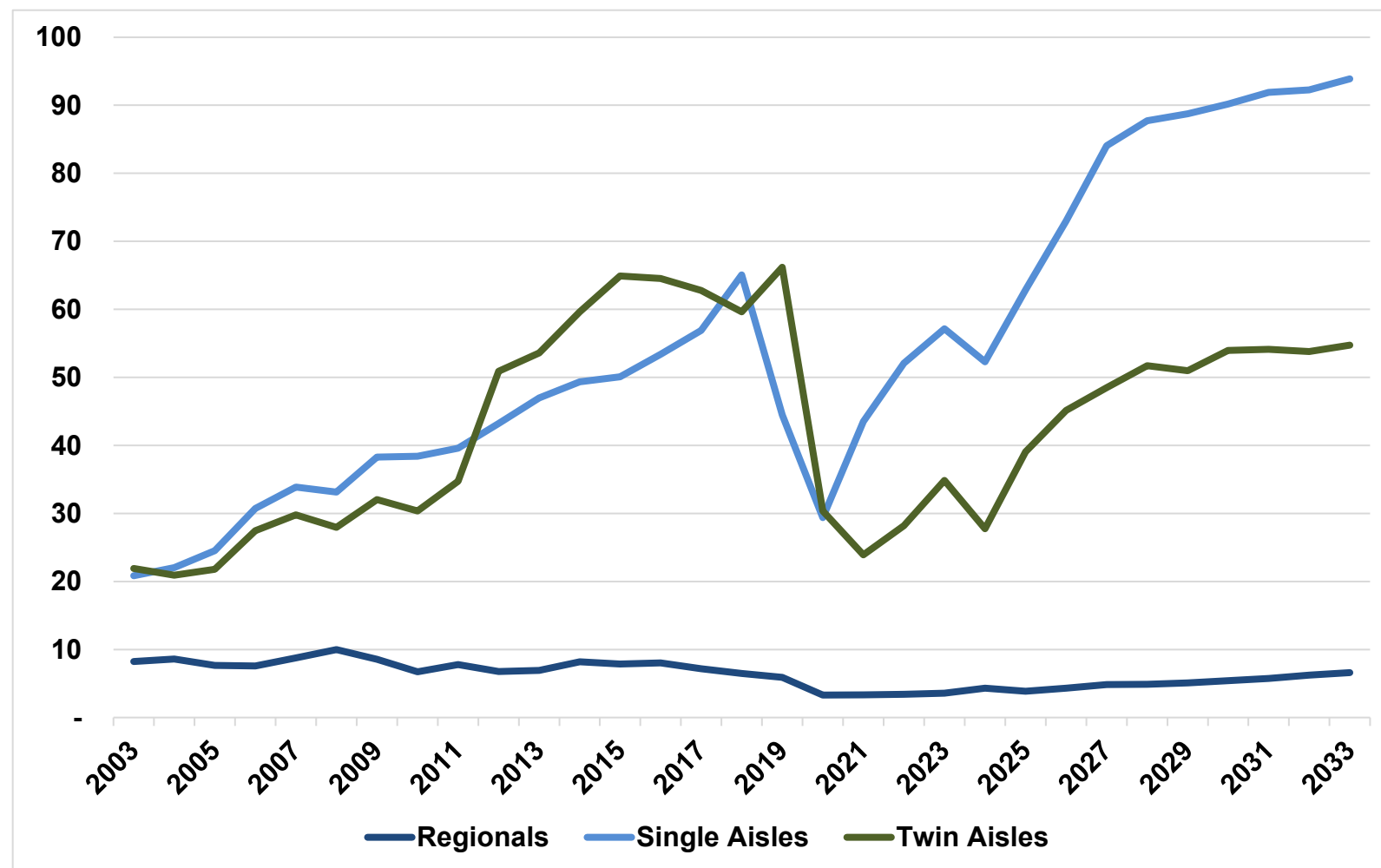
The market seems to really like a large single aisle fleet strategy

Airbus and Boeing Jetliner Backlogs, January 2025



Jetliners coming back in an uneven K-shaped recovery

Deliveries in 2025 \$ Billions



› Implications and comments:

- Volume begets volume
- TA return to peak after 2034... we think
- That isn't good for Boeing, but it might motivate a new jet sooner
- That might be good for dedicated freighters
- That isn't good for TA product development, except for NEOs

There are no concrete product roadmaps for the next generation narrowbody from any of the OEMs

AIRBUS



A350neo?/A350F



A220-500?



Next Gen Narrowbody



ZEROe?



787F



787/777 Derivatives?



Next Gen Narrowbody



Truss Braced Wing?



TPNG?



Next Gen Narrowbody?



C929



C919 Derivative (with CJ1000)



C939?

The business aviation market is relatively stable; geopolitical uncertainty remains a threat



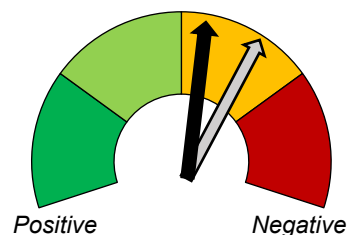
Q1 2025 Rating



Q2 2025 Rating

Macroeconomic Indicators

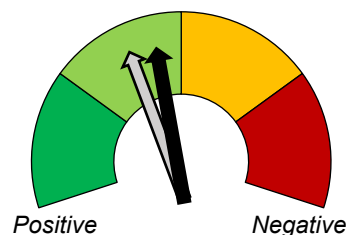
Slightly Better



- › Many leading indicators are showing signs of recovery
 - Corporate profits – fell 3.3% from 4Q24 to 1Q25
 - Equities markets – returning to steady growth
 - Oil prices – volatile due to geopolitical contexts
 - All Tech stocks – recently recovered to YTD highs
 - 10-Year note – falling yields are tailwinds
 - Emerging markets Index – returning to growth
- › Despite improving macroeconomic indicators, tariffs and uncertainties resulted in a hesitancy to place new aircraft orders in Q2

Aircraft Utilization

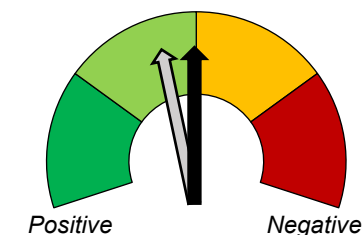
Remaining Stable



- › Monthly utilization growth is stabilizing at 2-3% over 2024 globally, driven mainly by the US market
- › Conflict in Iran led to a disruption in bizjet activity in the Gulf region; Europe remains stagnant
- › Both fractional and charter operations are expected to benefit from the summer travel season; management charter has wavered slightly
- › Used jet availability remains slightly down YoY with long lead times for new jets

Aircraft OEM Health

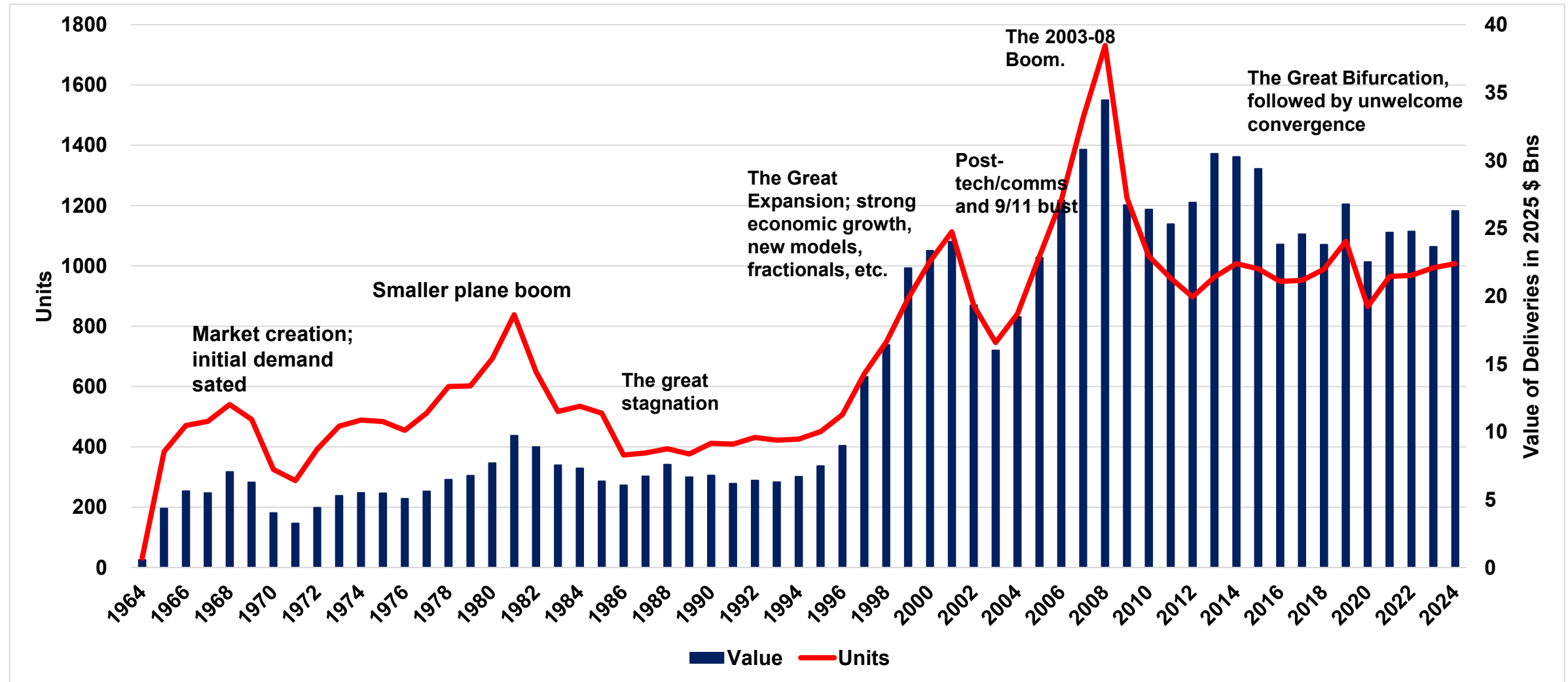
Stable, but with Headwinds



- › Backlogs will be a close watch item for the coming year as operators express uncertainty in ordering new aircraft
- › Long production backlogs will buoy OEMs for the time being
- › Rationalization of tariff impacts resulted in more optimistic guidance from North American OEMs; for Dassault, EU tariffs still present a moderate risk unless aerospace & defense is exempt
- › To support growing in-service fleets, OEMs are continuing to invest in MRO centers worldwide

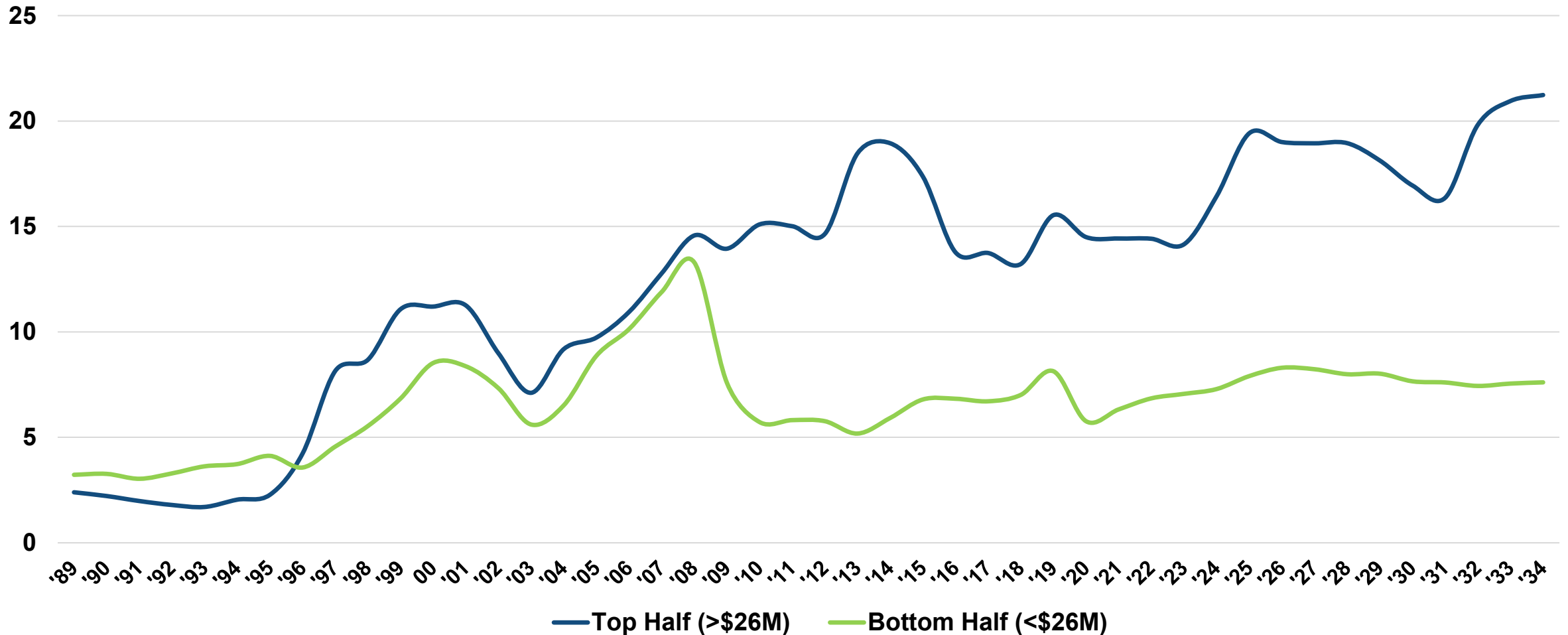
The business aircraft market is on a plateau, partly for supply reasons

Deliveries of all Business aircraft (including props and jetliners) in Units and Value



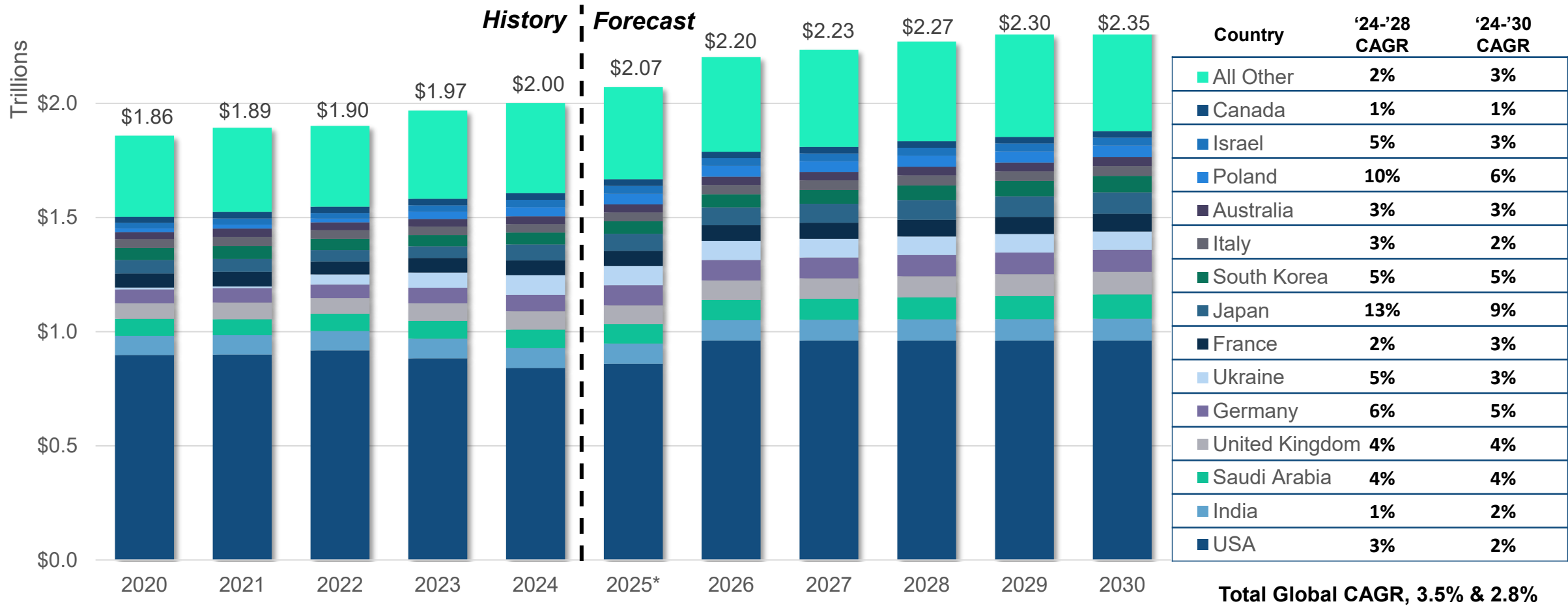
The market remains bifurcated between large models and the rest

Deliveries Revenue by Segment (2025 \$ bns)



Global defense spending growing at ~3%; More upside than downside

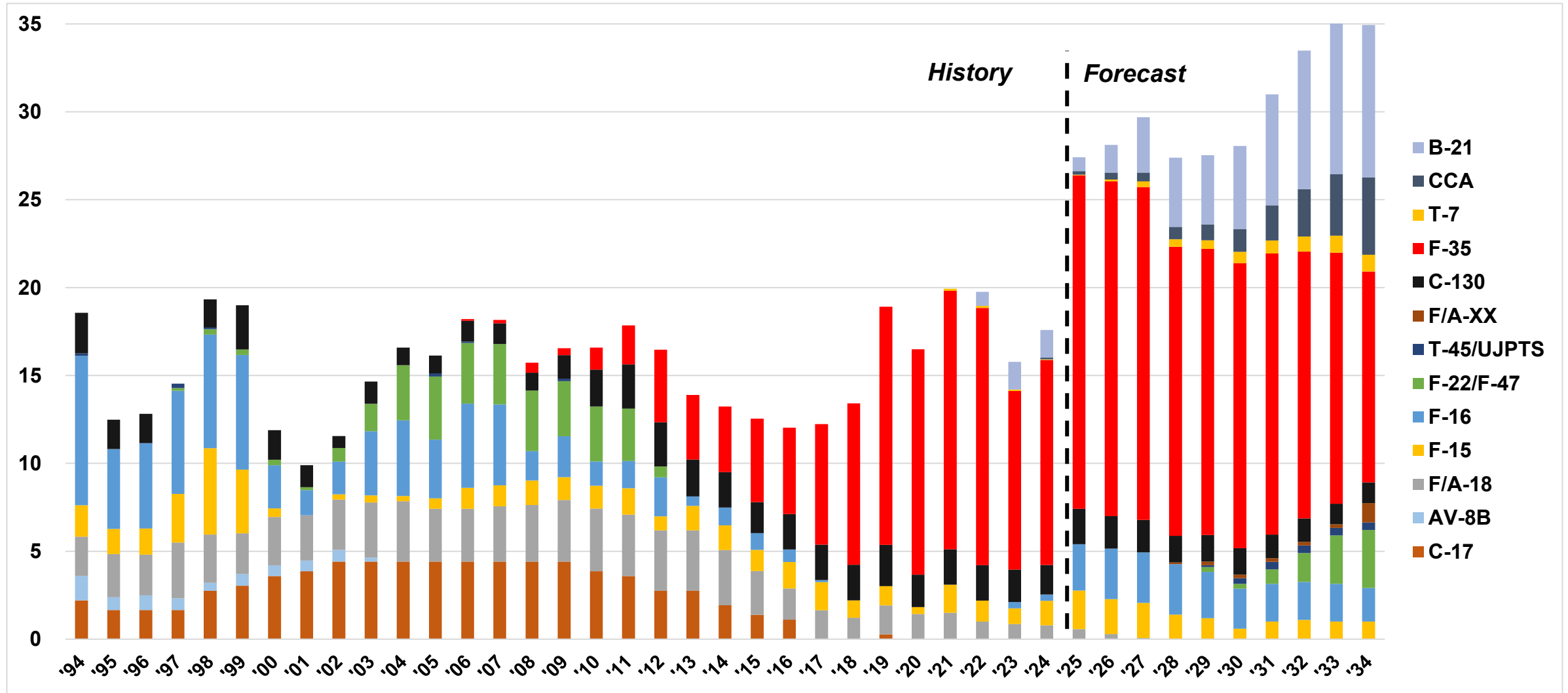
Total Defense Spending* 2020-2030 (Constant 2024 \$)



*US 2025 continuing resolution budget

F-35 dominates, but most legacy programs stay alive and F-47 arrives

US Deliveries Revenue by Platform in 2025 \$ Billions



Thank You!



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