

Aviation tariffs

Navigating an uncertain landscape

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EXECUTIVE SUMMARY



Tariff volatility is likely over

- Following retaliatory surges that raised tariff rates to 145%, **bilateral deals with China and the UK initiated a de-escalation cycle**, reflecting the administration's willingness to provide relief
- Recent **pauses and rollbacks indicate the administration's responsiveness to sectoral pressures** and market volatility, especially in retail, electronics, and transportation industries
- Ongoing **court challenges and legislative opposition have created significant friction**; a legal review by the Supreme Court is anticipated in July



Tariff pause

- The **90-day pause** on the highest tariff rates and the reversion to a 10% baseline rate **have reduced volatility, maintained negotiating momentum**, and allowed businesses time to adjust
- The **July 8 expiration of the 90-day pause is unlikely to lead to another major escalation**, as over 70 countries are currently engaged in active talks with the US
- Future decision timing may align with key diplomatic events, court rulings, and internal metrics such as inflation and job growth



Macroeconomic environment

- The **macroeconomic environment shows signs of stabilization**, but **pressure is building beneath** the surface as recession risks persist
- Headline indicators such as unemployment and inflation have remained stable, but **some underlying signals are fragile**
- Import volumes fell by 16% from March to April as companies made front-loaded purchases before tariffs were implemented, and US GDP contracted by 0.3% in Q1



Business responses

- Most companies are responding through a mix of:
 - **Resilience**: Diversifying suppliers and increasing U.S. and nearshore production
 - **Agility**: Repricing SKUs, adjusting inventories, and delaying capital expenditures in uncertain categories
 - **Insight**: Utilizing tools to simulate tariff impacts across supply chains and geographies
- Ongoing monitoring of negotiations, exemptions, and sector-specific policy changes will be crucial for protecting margins and maintaining flexibility in the coming months

WHAT HAPPENED? THE TRUMP ADMINISTRATION HAS INTRODUCED A WHIRLWIND OF NEW TARIFFS ON DIVERSE SETS OF GOODS INCLUDING AVIATION INPUTS

Aviation Position



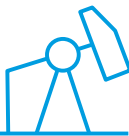
Aircraft Imports

- 10-30% tariff on aircraft imports
- China: **30%** (Lowered from peak 125% to 30% for 90 days as of May 12 deal announcement)
 - EU, Canada, Mexico: **25%** (USMCA exemptions removed)
 - Other countries: **10%** (baseline for all other countries)
 - Some exemptions for narrowbody



Aftermarket / MRO Parts


- 10-30% tariff on parts imported
- China: **30%** (Lowered from peak 125% to 30% for 90 days as of May 12 deal announcement)
 - EU, Canada, Mexico: **25%** (overrides USMCA protections; parts may qualify for exemption if rules-of-origin thresholds met)
 - Other countries: **10%** (baseline tariff for non-preferred trading partners; additional duties possible in special cases)







Inputs to Production

- 50% tariff on steel and aluminium
- Steel & Aluminium rate increased from 25% to 50%
 - Other product-specific tariffs remain an area of uncertainty

Overview of Global Tariffs





Ongoing court challenges by July 31

	U.S. Tariff Actions		Status
Broad	Reciprocal tariffs	10% universal rate	Active 
Country-specific	China 	30% ¹ tariff	
	Canada 	25% tariff	
	Mexico 	25% tariff	
Product-specific ²	Steel and Aluminum	50% tariffs	Active
Other	Secondary tariffs (Copper, Lumber, minerals, etc.)	TBD	Investigation due ² late 2025 / early 2026

Source: Avionics International, Oliver Wyman analysis; 1. Excludes Section 301 tariffs in place prior to 2025 affecting ~75% of Chinese imports, resulting in an effective additional tariff of about 8.5%. 2. Based on 270-day limit from Section 232 investigation; Source: Oliver Wyman analysis of public sources
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TARIFFS ARE SIGNIFICANTLY DISRUPTING COSTS, TIMELINES, AND GLOBAL SUPPLY CHAINS / SOURCING ACROSS THE AVIATION INDUSTRY

Segment	Cost Impact	Timing / Delays	Supply Chain Risk
Aircraft Production 	<u>Materials + components face tariffs</u> <ul style="list-style-type: none">Tariffs on aluminum and steel inflate base material costs for airframes / structuresTariff exposure on subassemblies and systems (many of which are sourced from China)Potential for multi-layer cost passthroughs from Tier 2/Tier 3 suppliersAirbus and Boeing may hedge costs through long-term contracts, but exposure remains	<u>Supplier delays and sourcing shifts</u> <ul style="list-style-type: none">Disruptions in component supply chains or re-routing through tariff-favorable countriesLong-lead parts (e.g., wire harnesses, composite assemblies) may be delayedOEMs may stockpile inputs or shift orders preemptively, affecting delivery schedulesSmall/mid-size suppliers cannot adapt as quickly	<u>Global sourcing under structural strain</u> <ul style="list-style-type: none">Heavy reliance on globally dispersed supply increases riskSingle-source components may become bottlenecksSuppliers may begin to regionalize, but timelines for aerospace are long and costlyNational security scrutiny may limit sourcing flexibility in defense platforms
Aftermarket / MRO 	<u>Parts movement incurs added cost</u> <ul style="list-style-type: none">Tariffs on parts imported for repairs raise MRO costsAirlines sending parts abroad for overhaul may be hit with duties upon re-importationLimited pass-through ability to customers; may squeeze airline and MRO marginsSome relief via Mexico and Canada, but exemptions are narrow	<u>Cross-border flows complicate turnarounds</u> <ul style="list-style-type: none">Delays in delivering parts to service due to additional customs processing, declarations, and inspectionsComplex MRO logistics (e.g., multi-stop repairs) may be slowed by inconsistent tariff applicationTurnaround times may lengthen due to increased documentation burden	<u>MRO networks face resilience test</u> <ul style="list-style-type: none">International MRO networks may see reduced usageSmaller independent MROs are more vulnerable to cost/delay impactsOEMs may use tariff dynamics as leverage to consolidate aftermarket offerings or drive vertical integration
Degree of impact	High	High	Moderate

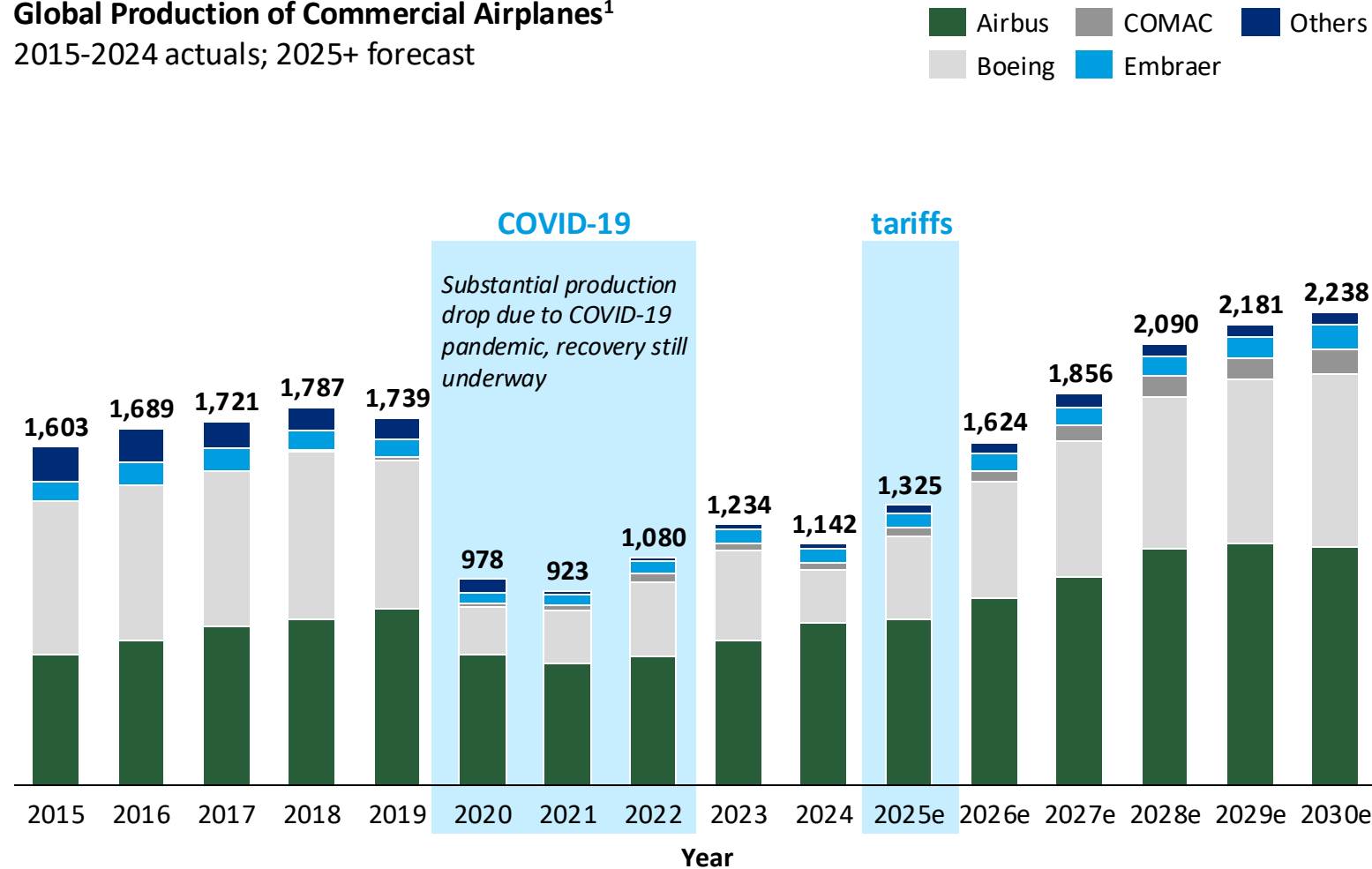
Source: Oliver Wyman research, S&P Global, Reuters, Bloomberg



AIRCRAFT PRODUCTION POST-COVID RECOVERY IS AT RISK OF DISRUPTION DUE TO INTRODUCTION OF TARIFFS

Global Production of Commercial Airplanes¹

2015-2024 actuals; 2025+ forecast



Potential Disruptions to Production^{2,3}

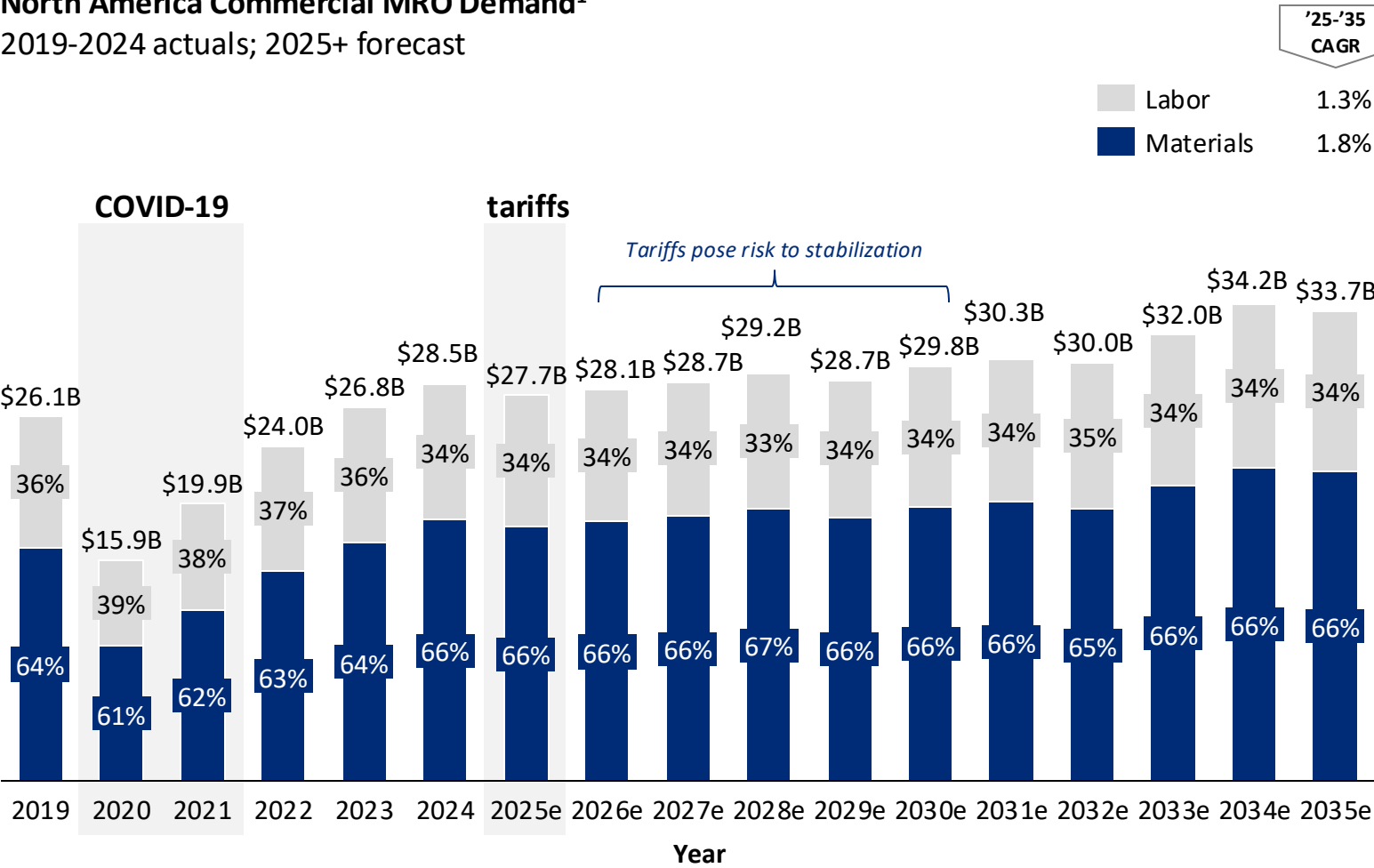
- **Higher steel and aluminum costs constrain key input availability**
 - Boeing and Airbus depend on 30K+ tons of aluminum and ~10K tons of steel annually, especially for narrow-body programs like the 737 and A320
 - Tariffs on these metals would raise input costs, pressure margins, and create procurement delays due to supplier bottlenecks
- **Geopolitical tensions between US and China**
 - China has removed its ban on airlines accepting Boeing planes after Beijing and Washington agreed to temporarily reduce tariffs on one another
 - Boeing currently has ~330 planes in its orderbook scheduled for China, underscoring the magnitude of risk

Source: 1. Oliver Wyman MRO forecast; 2. Flight Plan; 3. Leeham



MRO AFTERMARKET SPEND IS LARGELY DEPENDENT ON TARIFFED GOODS, EXPOSING THE BROADER INDUSTRY TO TARIFF EFFECTS

North America Commercial MRO Demand¹
2019-2024 actuals; 2025+ forecast



Commentary²

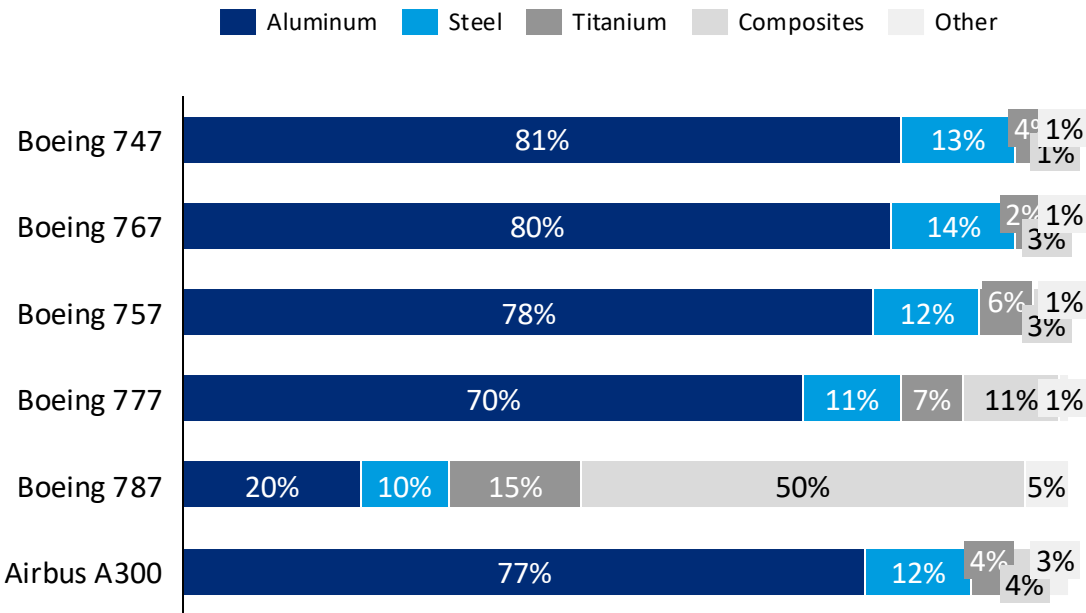
- **Materials Subject to Tariffs; Labor Not Directly Impacted**
 - **Tariffs on Parts/Materials:** Recent US tariffs on global imports – significantly increased costs for parts imported from abroad
 - **Example impact on MRO Services:** A small engine overhaul conducted by Pratt & Whitney Canada saw an added cost of \$140K on an overhaul of \$1.4M (~10% premium)
- **Demand Stabilization Post-COVID at Risk of Disruption**
 - **Post-Pandemic Recovery:** The North American MRO market reached over \$28B in 2024, surpassing pre-pandemic levels
 - **Exacerbation of challenges:** Despite recovery, the industry already faced challenges such as material shortages and labor constraints, with 75% of MRO professionals expecting supply chain issues to persist for another 1-3 years

Source: 1. Oliver Wyman Vector (US and Canada); 2. Oliver Wyman research

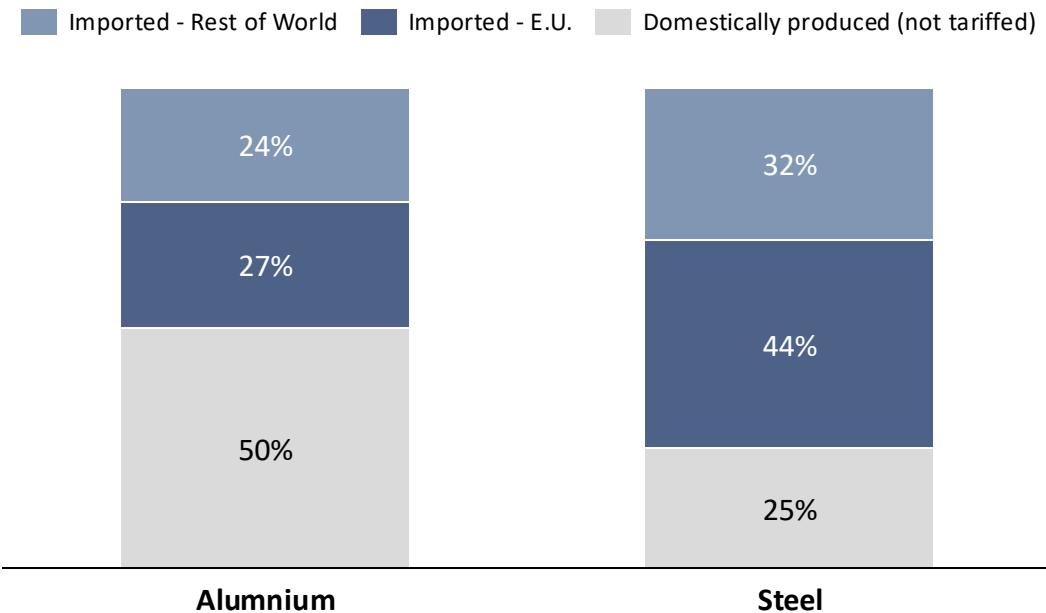


AIRCRAFT PRODUCTION DEPENDS ON METALS NOW SUBJECT TO TARIFFS, PARTICULARLY STEEL AND ALUMINUM

Composition of Airplane Models by Raw Material
% of Airframe Mass



US Consumption of Steel and Aluminum by Country of Origin
\$USD, 2024



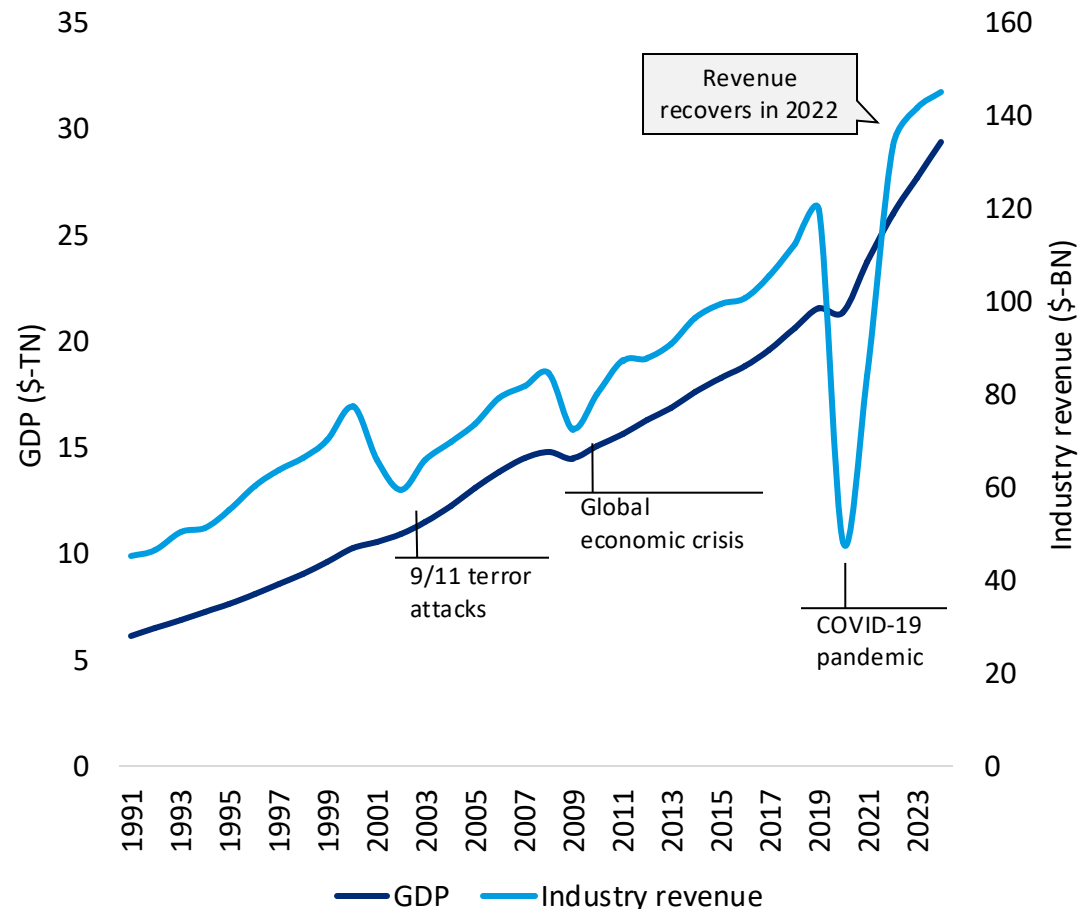
Vast majority of major airframes (excluding 787) are composed of Aluminum and Steel – hence tariffs are expected to raise costs and potentially disrupt supply chains...

...a large portion of these essential production inputs are imported, and will now be subject to various tariffs which will increase the cost of overseas production

Source: US Census Bureau, Pforzheim University, Reuters

THERE IS A HISTORICAL CONNECTION BETWEEN GDP GROWTH AND COMMERCIAL AVIATION INDUSTRY REVENUE...

GDP and industry revenue | US industry
In annual USD



Commentary

Historic context

- **Industry revenue** has historically **grown at a similar rate to GDP** during “normal” years
- **Black swan events** (e.g., 9/11 terror attacks, Global Economic Crisis, COVID-19 pandemic) **have consistently reduced industry revenue** as a portion of GDP
 - i.e., revenue becomes a smaller portion of GDP after each event as recovery “snap back” does not offset lost growth (vs GDP)

Where we are now

- Industry revenue reset following the pandemic occurred in 2022
- **Revenue is now broadly tracking to GDP...but**
- ...the ratio of **revenue to GDP is 0.3 percentage points lower in 2022-2023 than it was in 2010-2019**, which is **consistent with the drop observed after the Global Economic Crisis**

...HENCE THERE ARE EARLY INDICATIONS THAT COMMERCIAL AVIATION DEMAND WILL BE IMPACTED IN 2025



Indicators suggest economic declines are inbound

	<p>Consumer Sentiment is falling</p> <ul style="list-style-type: none"> University of Michigan consumer sentiment index dropped to 50.8 in April 2025, its lowest level since 2022 12-month inflation expectations rose to 6.7%, the highest since 1981
	<p>GDP growth forecasts are downgrading</p> <ul style="list-style-type: none"> OECD: Cut U.S. 2025 GDP forecast from 2.4% to 2.2%; 2026 down to 1.6% Moody's on May 16 downgraded the credit rating of the United States by a notch to "Aa1" from "Aaa"



Effects on commercial aviation are already manifesting



Company cut profit forecast by 50% in Q1 (March 2025)

- Cited softening domestic demand as primary contributor
- Per CEO Ed Bastian “With broad economic uncertainty around global trade, growth has largely stalled” – April 9, 2025



Overseas visitor arrivals to the US contracted during Q1 2025

- 27% decrease in Q1 and 22% in April from travelers from Canada to the US in comparison to last year
- Additional sharp declines were seen from Germany and the UK

CREATIVE PLANNING IS REQUIRED TO MINIMIZE THE FINANCIAL IMPACT OF TARIFFS

In the short term, prepare for uncertainty

- **Review force-majeure clauses** in maintenance and procurement contracts, to confirm ability to terminate based on tariffs
- **Strengthen advocacy efforts** through lobbying, public affairs, and collective industry action to push for exemptions
- **Take advantage of 90-day tariff pause** to fast-track planned purchases and bring forward any planned international maintenance (excl. China)
- **Assess domestic surplus and used serviceable materials markets** for potential opportunities
- **Build a view on total tariff exposure** to accurately estimate potential impact, and assess alternatives
- **Evaluate non-tariffed MRO capacity** domestically and abroad

In the long term, explore avoidance and diversification strategies

- **Evaluate maintenance slot swapping opportunities** with partner airlines, that may not be impacted by tariffs
- **Secure maintenance slots in exempt/ low-rate countries** with robust force-majeure clauses to protect from tariff uncertainty
- **Explore legal tariff minimization strategies**, including potential transfer of assets to preferential tax environments
- **Diversify international maintenance** footprint internationally to mitigate future tariff risks
- **Investigate local PMA opportunities** to sidestep tariffs

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