



Cargo Facts Symposium 2023: Session Three

Navigating the Future of Air Cargo: Trends, Forecasts, and Strategies

October 26, 2023
San Diego

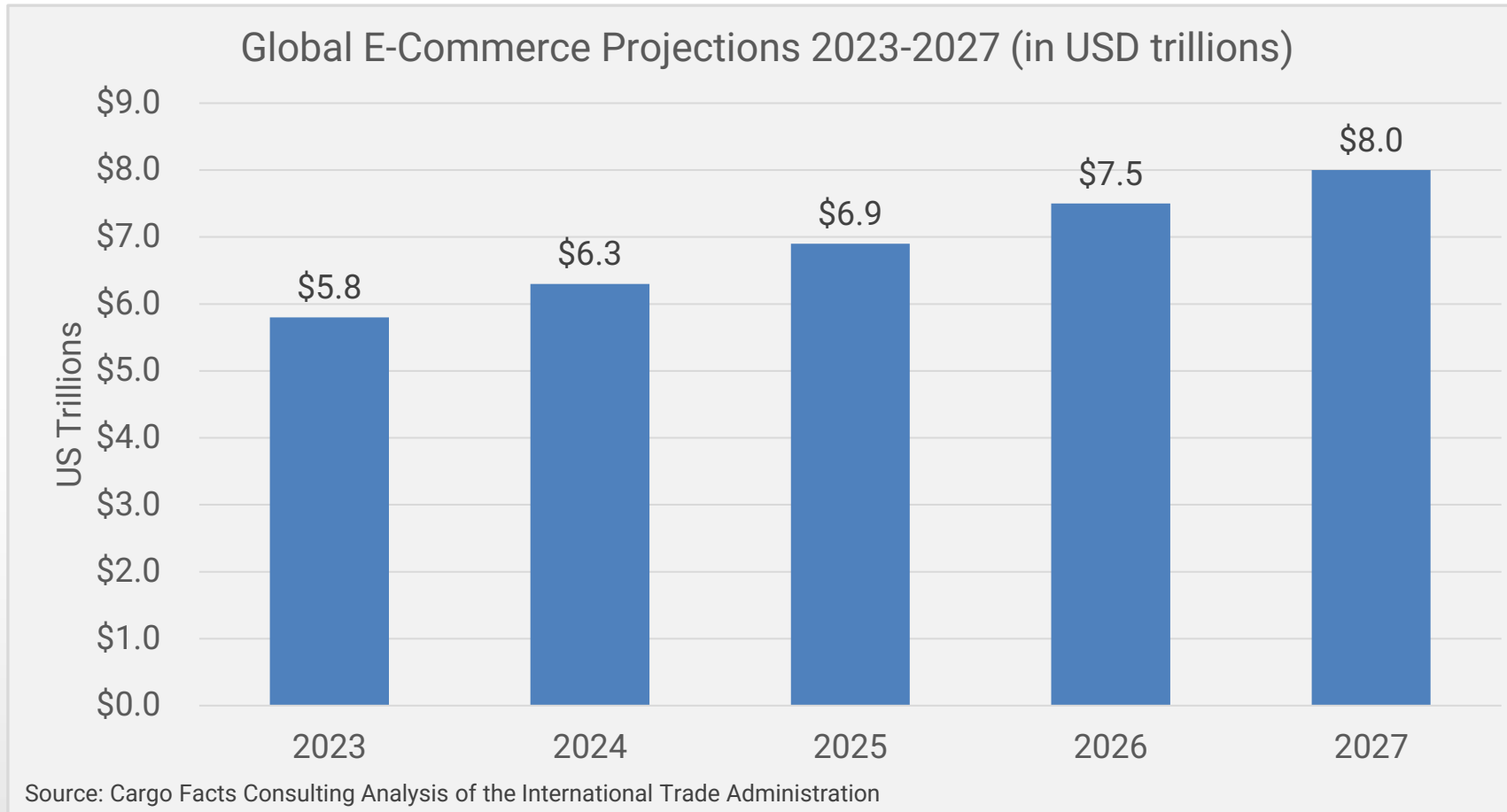
cargofactsconsulting.com
CFCInsights.com

Agenda

- E-commerce & Express
- Air Freight Indicators
- 20-Year Freighter Forecast
- Summary & 2024 Outlook

E-commerce & Express

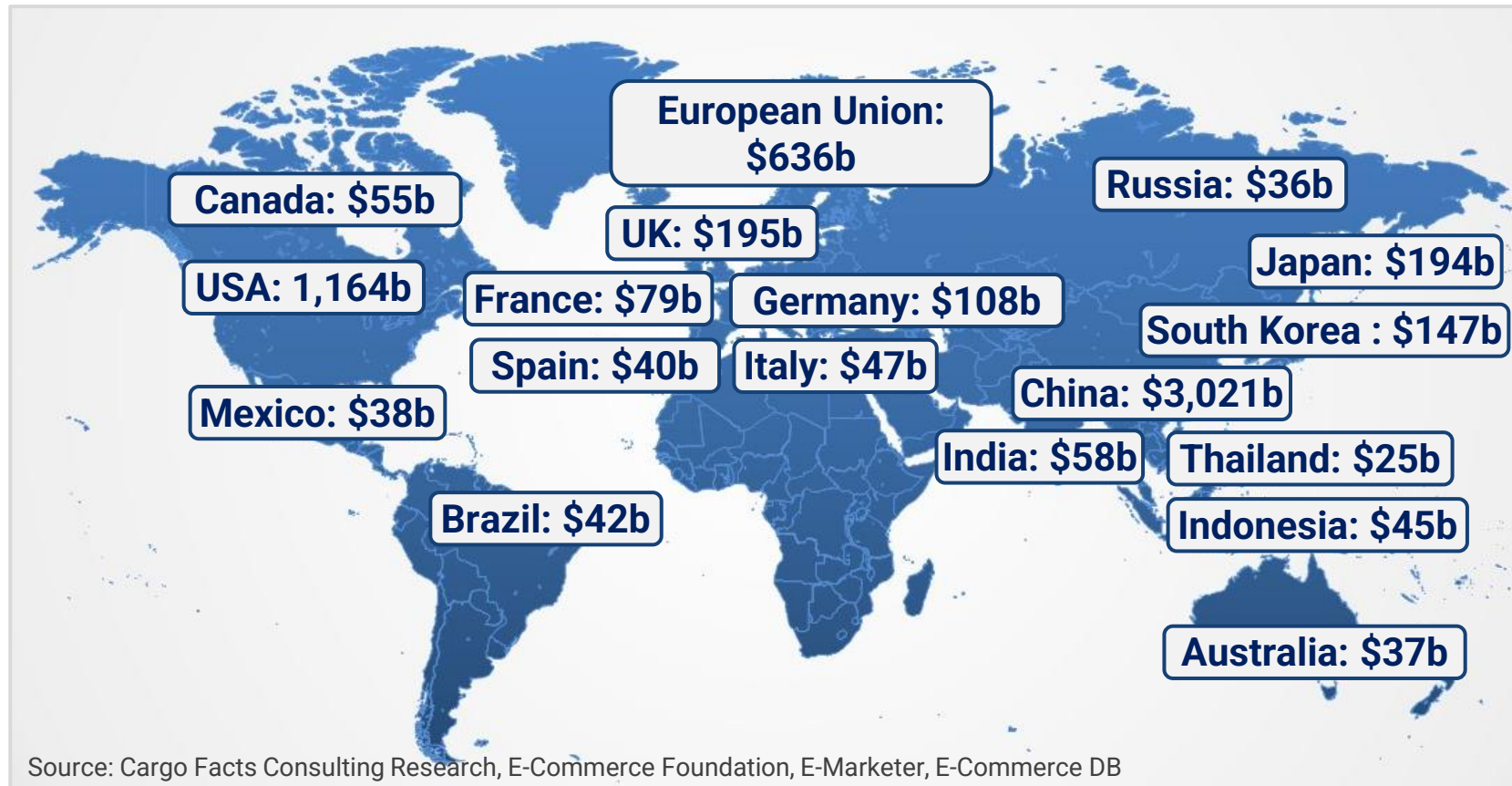
Global e-commerce market is projected to grow by 38% over the next 5 years.



- E-commerce and air freight growth go hand in hand.
- CFC estimates that 20% of global air cargo volumes are linked to e-commerce.
- Increased cross border e-commerce activity is also benefiting air cargo.

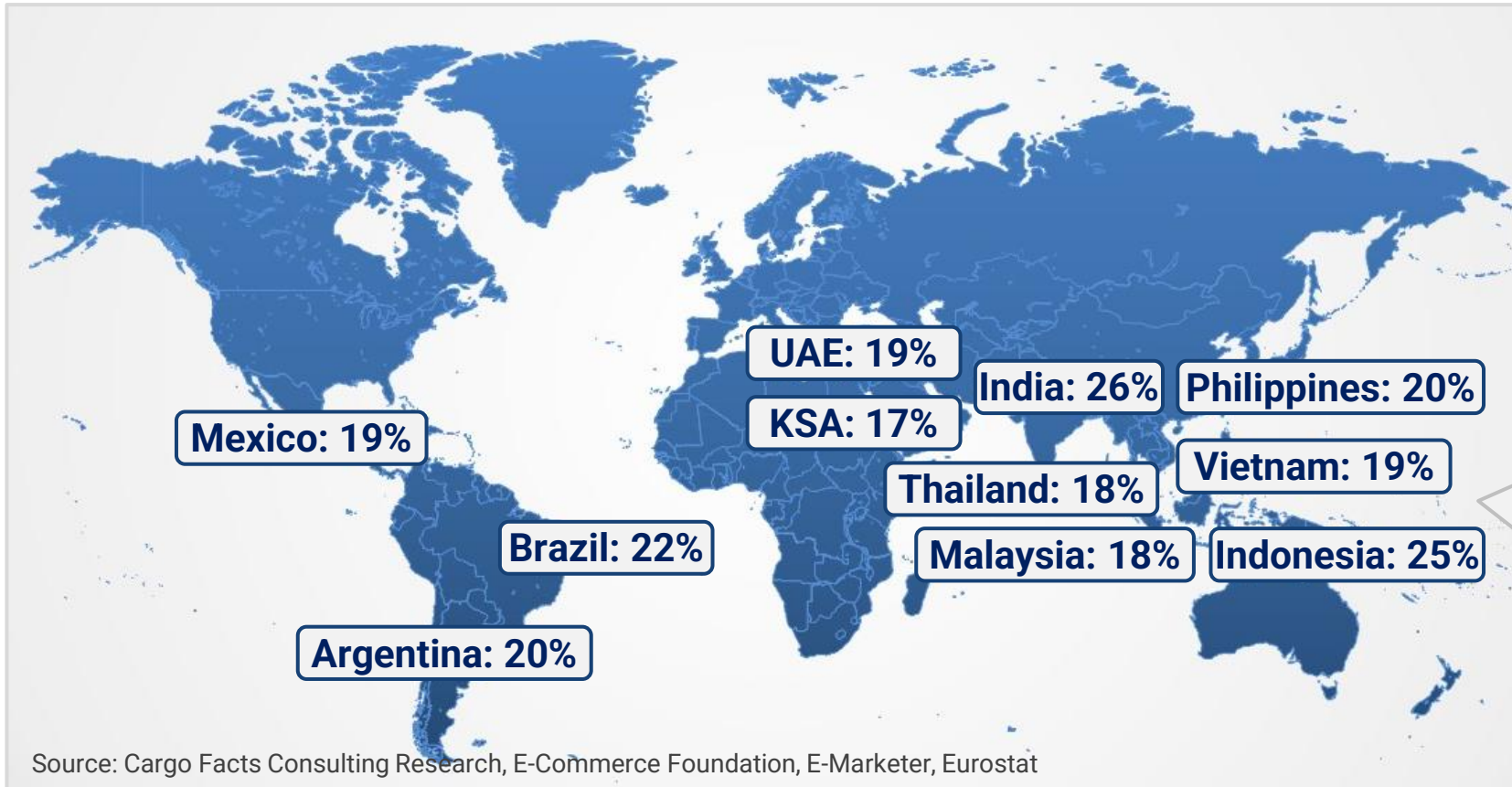
China, the United States, the European Union, Japan and the United Kingdom are the largest domestic e-commerce markets.

E-Commerce Revenue by Market 2023*



Southeast Asia, the Middle East and Latin America registered the highest growth in terms of e-commerce sales, overtaking the more established markets.

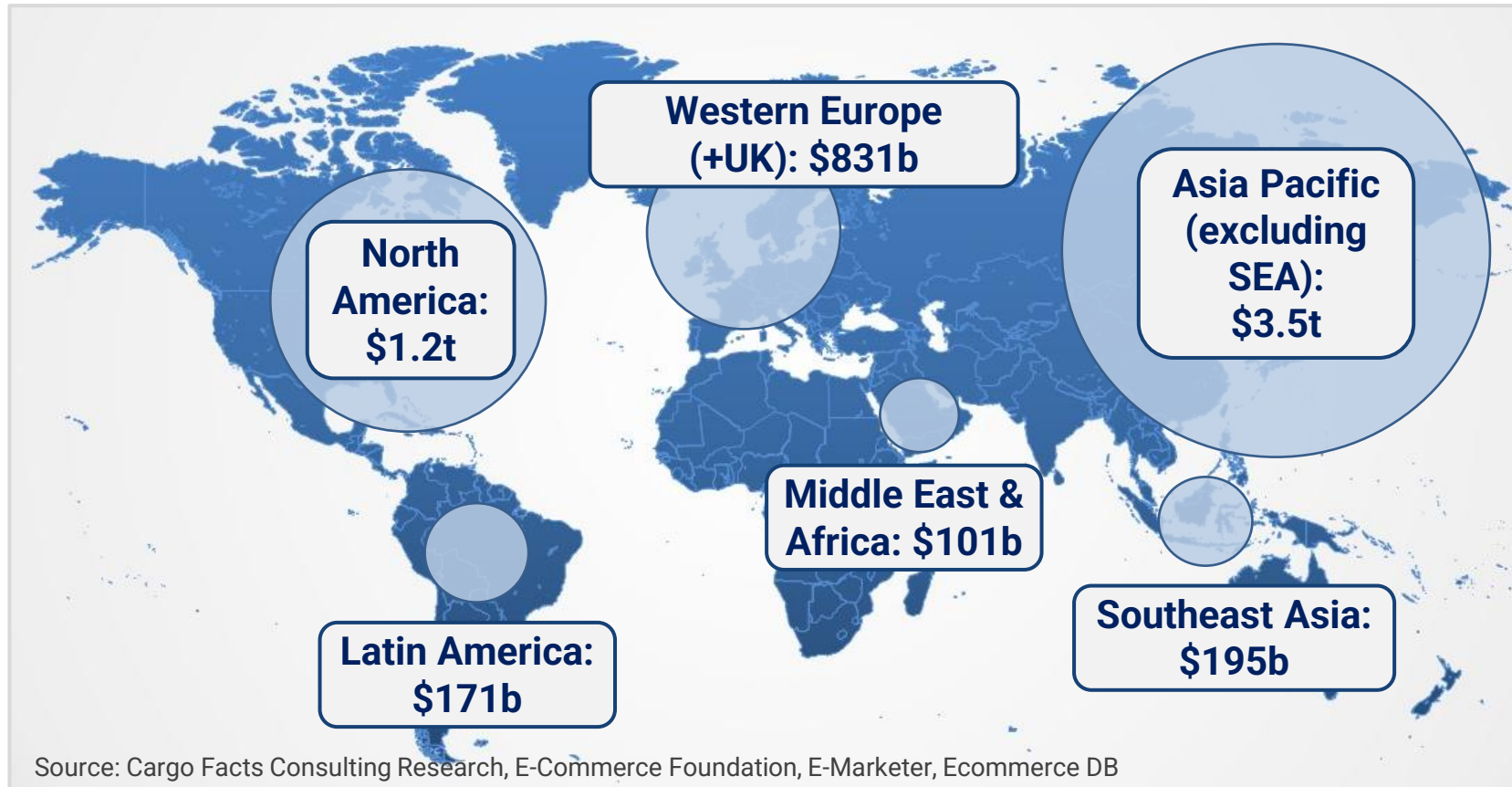
Largest E-commerce Revenue Growth Markets, 2023*



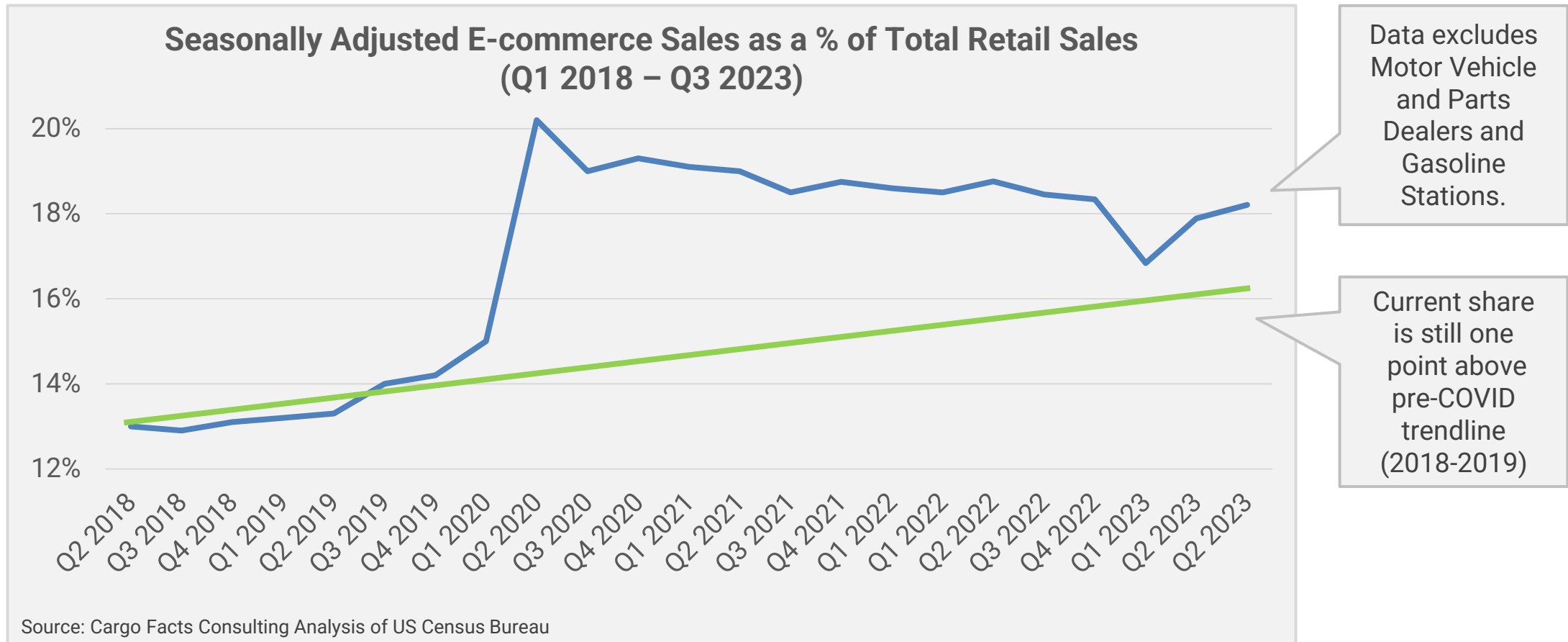
High internet and smartphone adoption rates in SEA have led to significant growth in the region's e-commerce market.

These emerging markets will continue to display the highest growth rates over the next years but off a much smaller base.

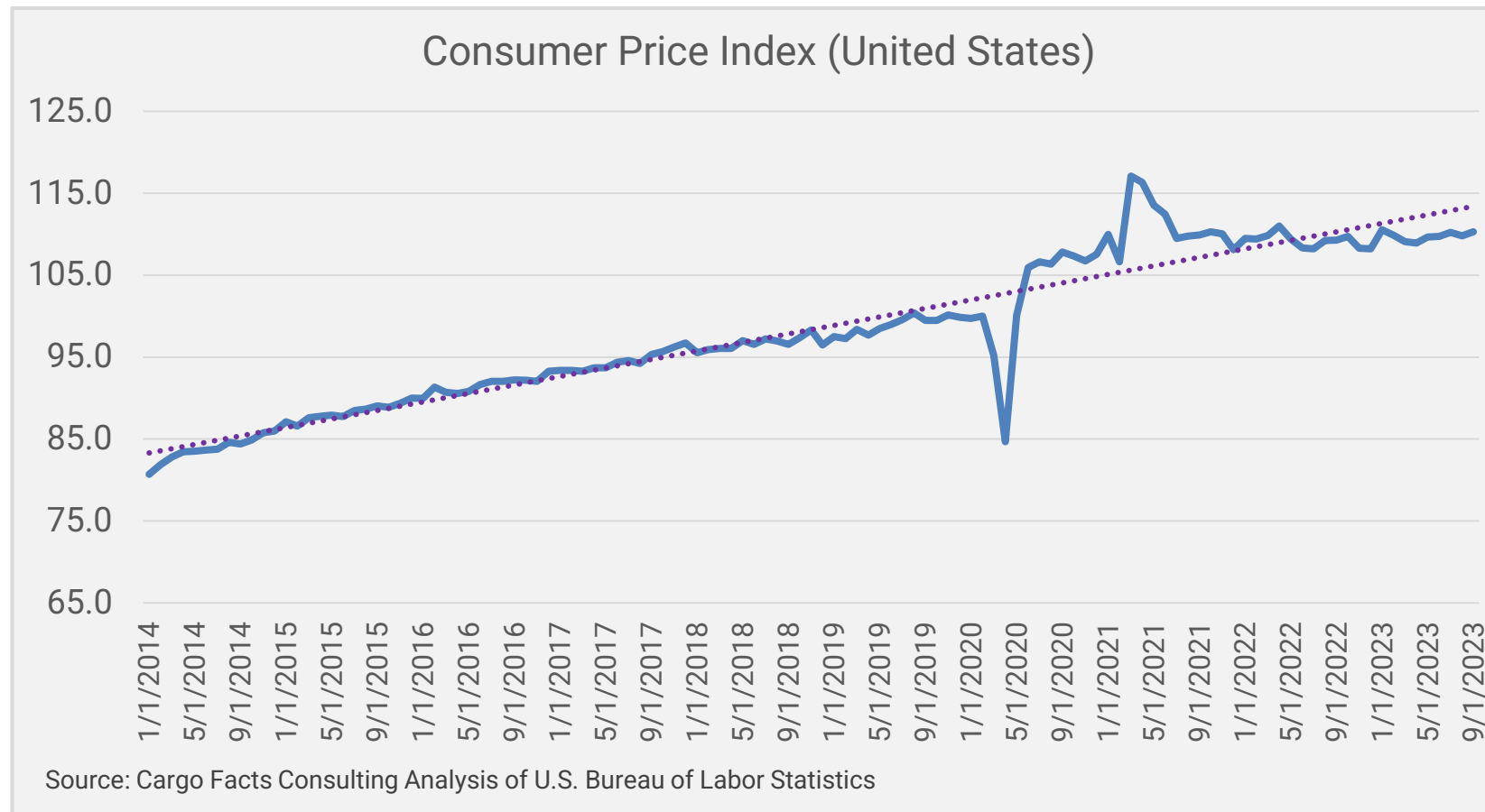
E-Commerce Market Revenue by Region, 2023*



US e-commerce sales activity during the second and third quarters saw a rebound in e-commerce as a percentage of retail trade sales.

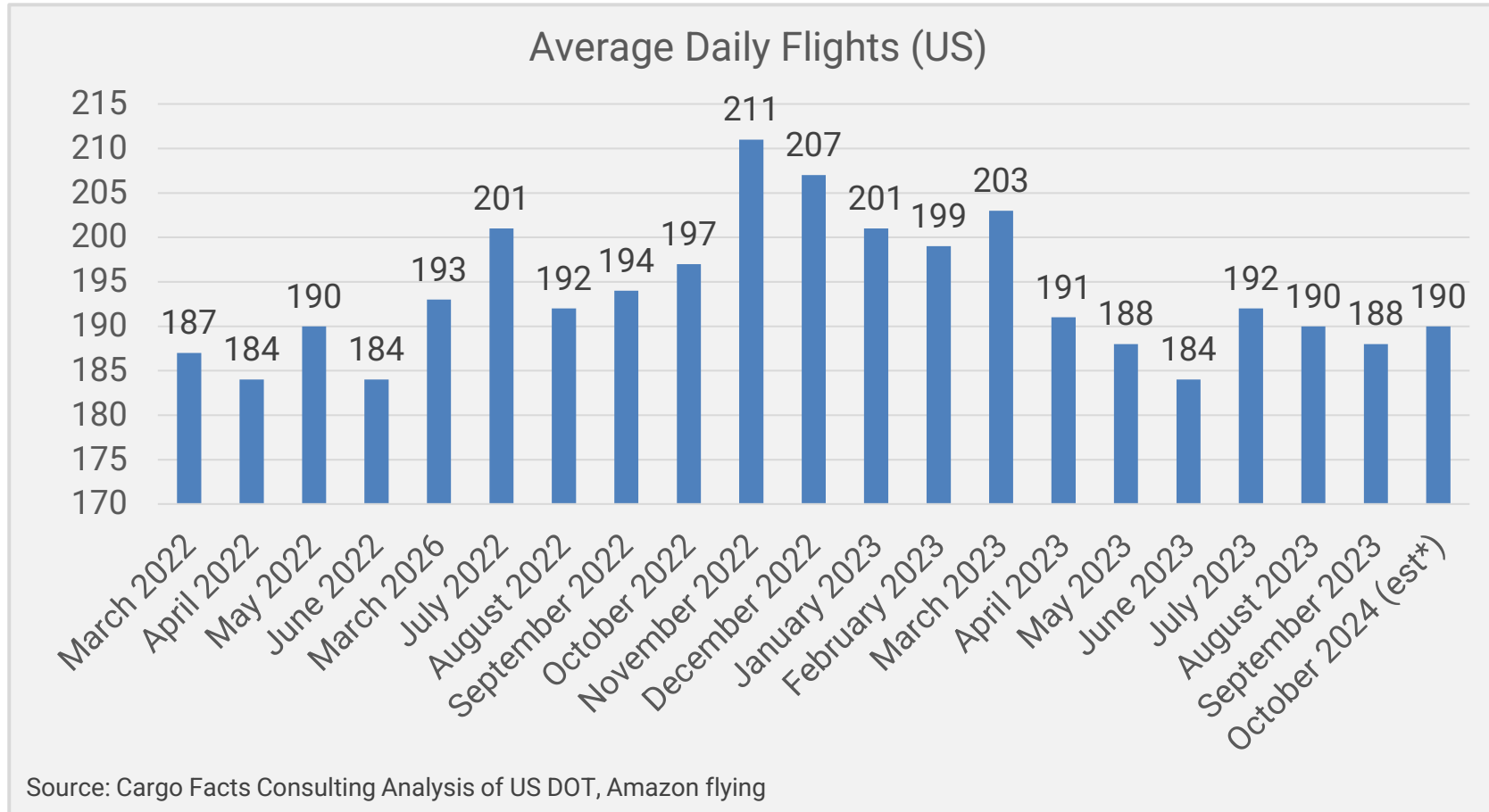


There are no signs of a significant downturn in consumer spending; sales volumes for this holiday season are expected to be similar to last year.



- U.S. consumer spending has remained strong in 2023 despite inflation.
- Retail sales surged post-COVID but have been flat since July 2021.
- Our forecast for Q4 2023 suggests stable, inflation-adjusted sales, possibly down 1-2% due to economic uncertainties and higher interest rates.

With e-commerce volumes down, how is Amazon responding to this shift?



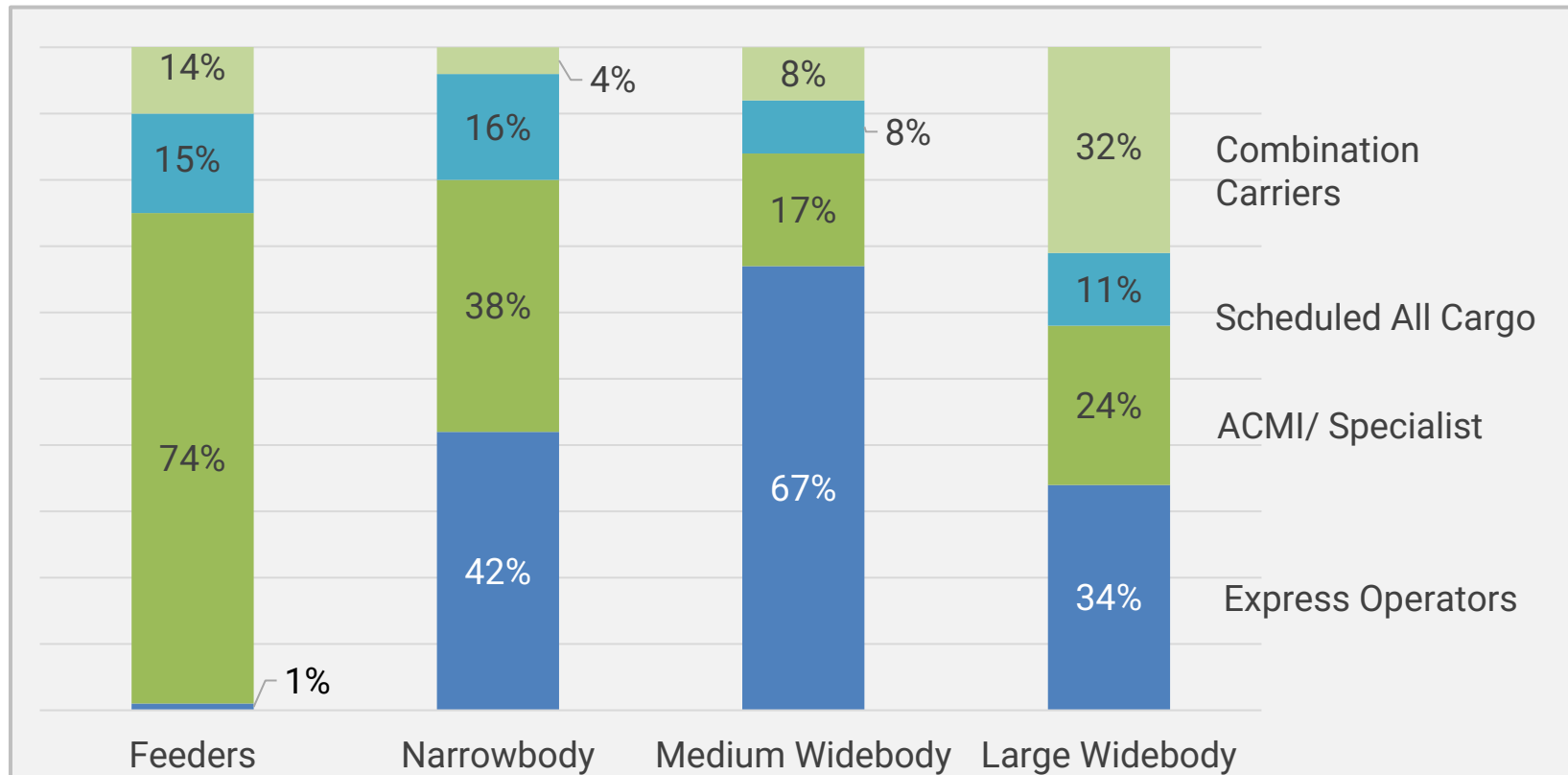
- Amazon has been growing the number of flights it operates since the beginning of the summer vs. first half of 2023.
- Increase in hub efficiency, leading to higher utilization of fleet.
- Amazon also focusing on other regions worldwide.

Amazon Air's Hub Strategy: Boosting Efficiency and Utilization

- Amazon's keeps shifting more traffic to its Cincinnati hub and three regional bases (Fort-Worth, San Bernardino and Lakeland), moving away from traditional point-to-point flying.
- The shift has allowed for a nearly 9% YTD increase in aircraft utilization, despite economic headwinds. The new hub-and-spoke arrangement resembles traditional carriers like FedEx and UPS, enabling potential next-day coast-to-coast service.
- By clustering departures into tight windows, Amazon has created efficient plane-to-plane transfers that support next-day delivery and increased fleet utilization.
- Amazon is closing its Leipzig air freight facility in Germany. In recent years, Amazon has expanded its logistics network in Germany and Europe, thereby reducing the necessity for flights from LEJ.

The operator mix varies substantially across segments. The large widebody segment is home to a diverse set of operators, but everything else is all about express.

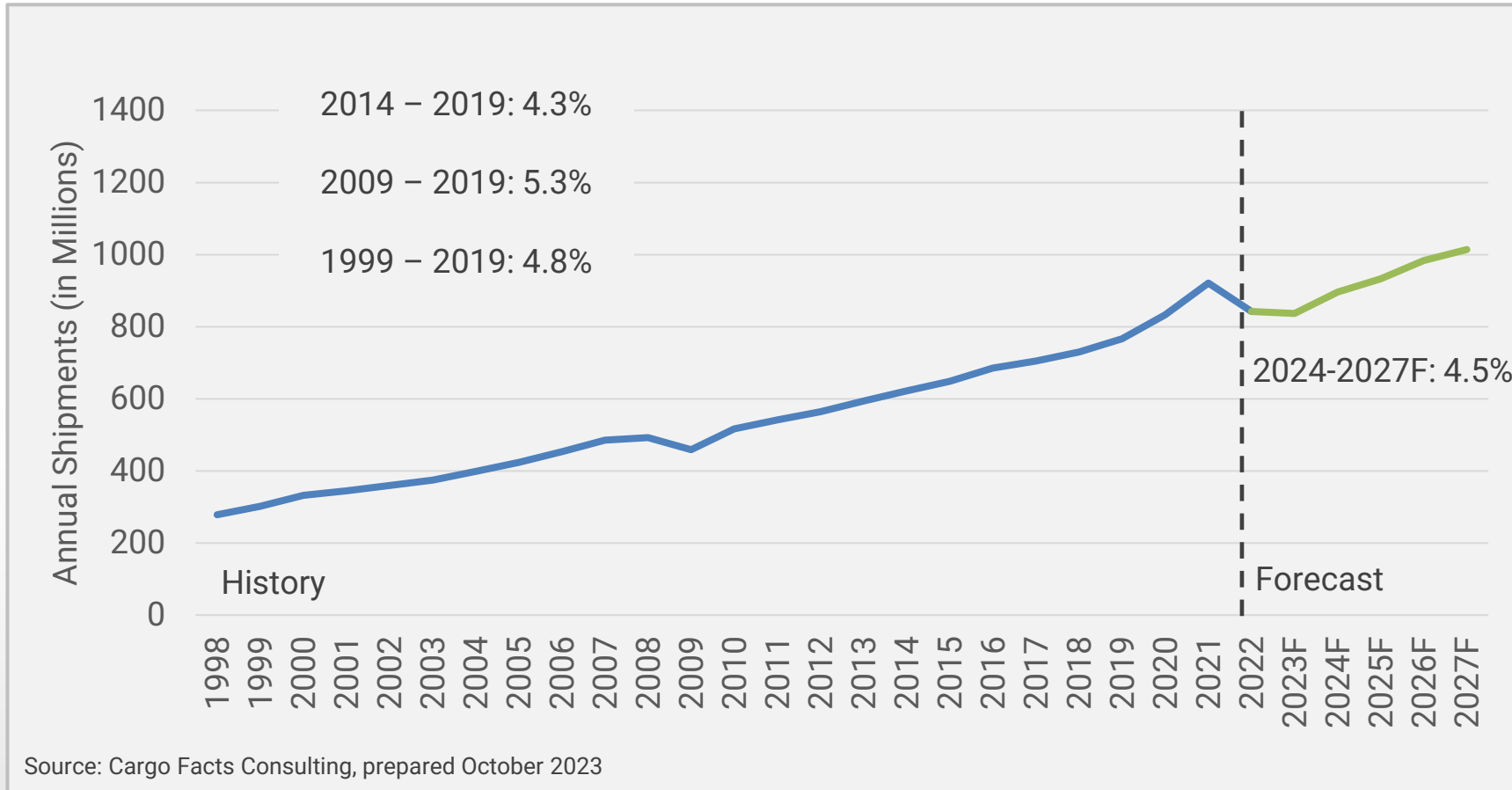
Freighter Fleet by Carrier Business Model



Source: Cargo Facts Consulting analysis of fleet and utilisation data, as of Q3 2023

Two thirds of the world's freighter fleet are operated by or on behalf of 5 companies – FedEx, UPS, DHL, Amazon and SF Express.

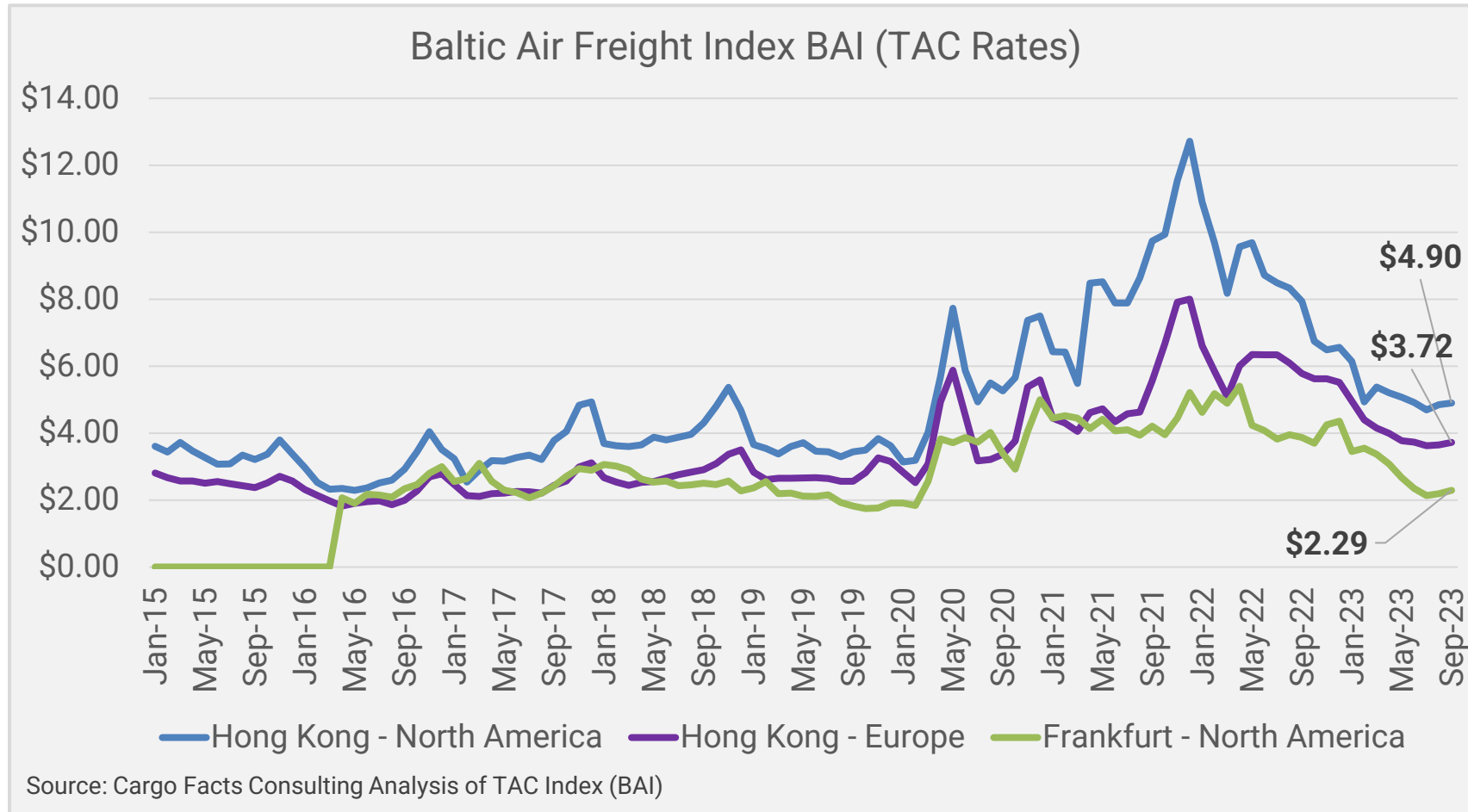
International express traffic is expected to grow faster than air cargo, even though 2022 saw global volumes drop for the first time since 2009.



- CFC estimates that international express traffic between 2024 and 2027 will grow at an average of 4.5%/year
- This rate is higher than the 3.3% air cargo traffic growth CFC is projecting.
- Express growth has been driven by higher overnight shipping activity globally.

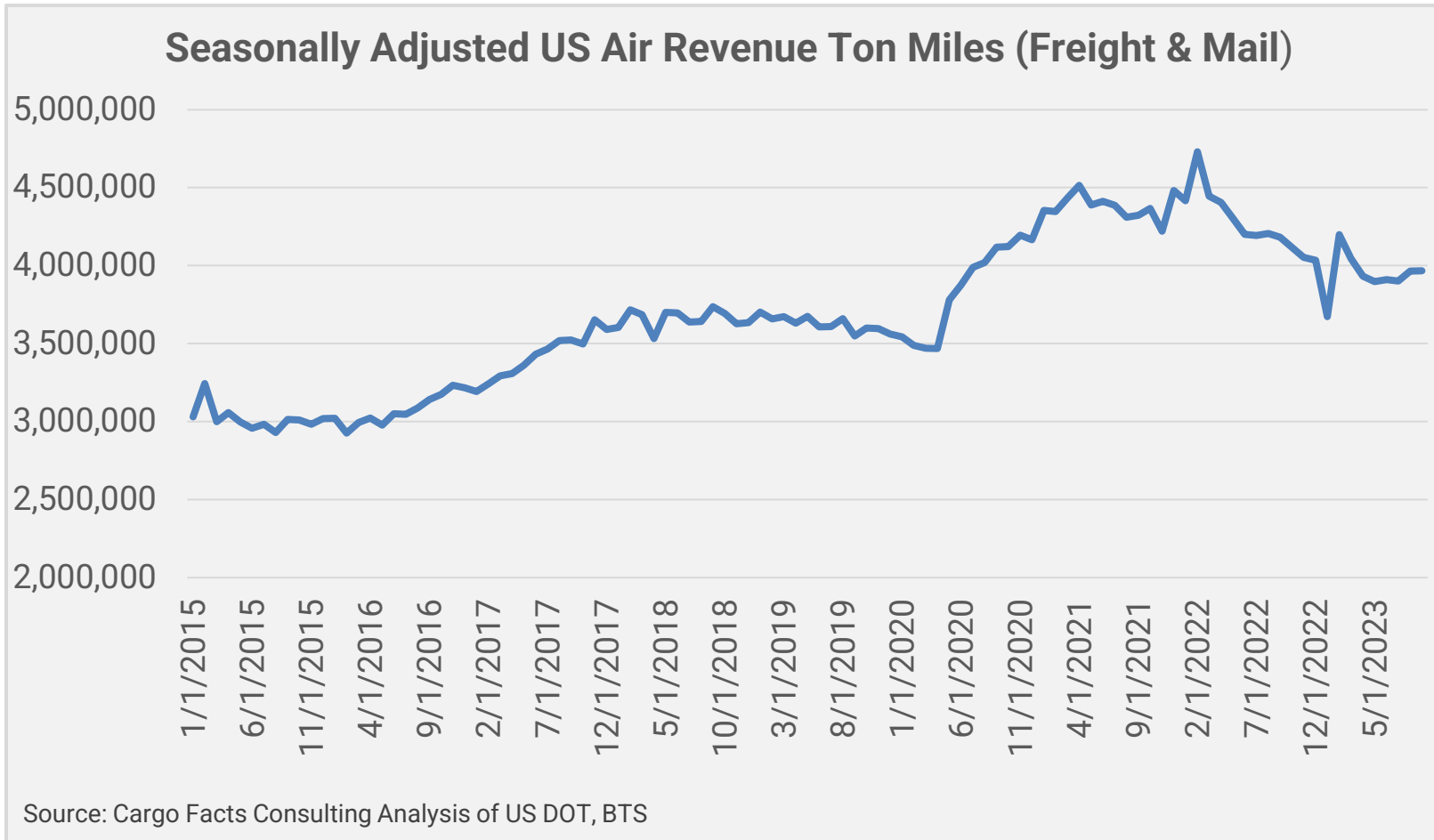
Economic & Air Freight Indicators

Air freight rates started rising in September and continued in October, showing optimistic signs for remaining of the year.



- Have air freight rates reached their lowest point?
- Rates in the market signal a time for optimism.
- As we approach the potential turning point, key players adaptability and resilience will be key to seizing opportunities and navigating the path to recovery.

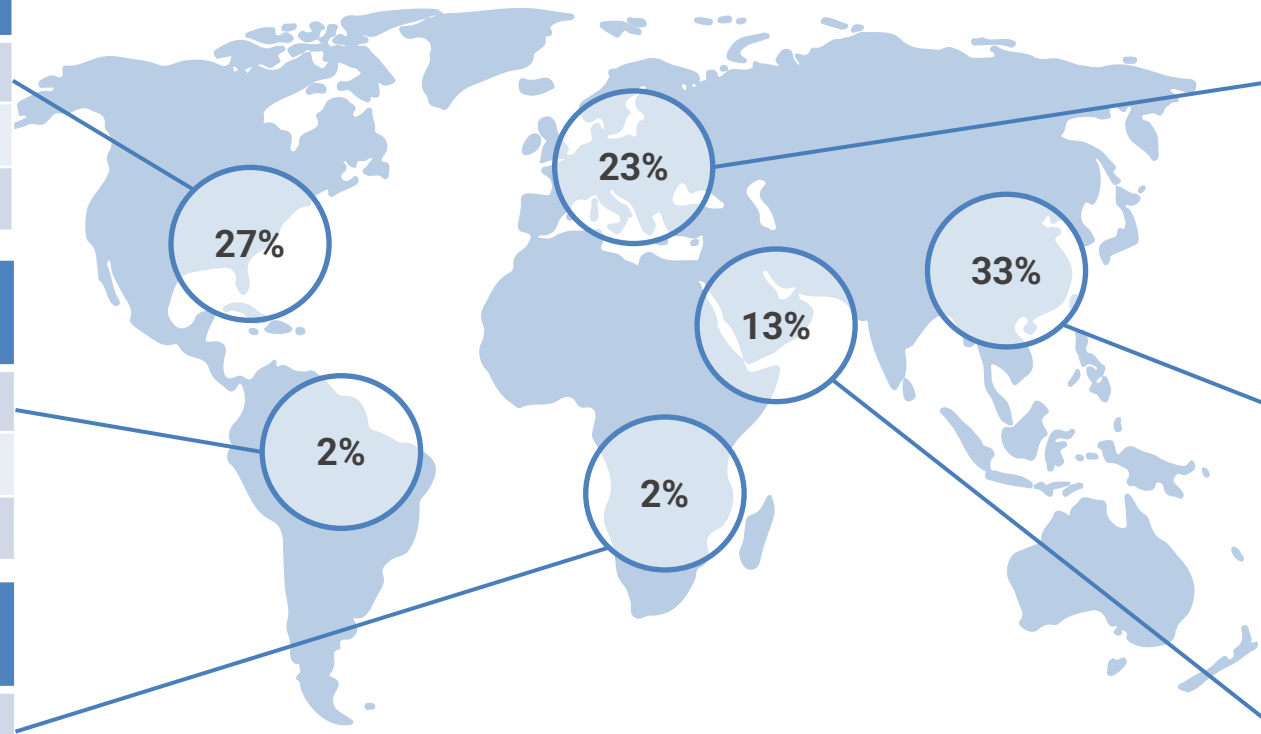
US Industry RTMs in 2023: despite overall downtrend, numbers in Q3 point to a slight uptick, showing levels of normalization.



- 2023YTD Data is still around 9% above pre-COVID-19 levels.
- RTMs in 2023YTD have shown a volatile market and factors beyond seasonal adjustments are at play.
- Stakeholders in the industry should expect some level of stabilization through the end of the year.

CTKs increased by 1.5% vs. 2022 in August, the first annual growth since Feb 2022 while capacity was up by over 12%, driven by high belly capacity over the summer.

Region share of total industry CTKs in 2023



Cargo Facts Consulting Analysis of IATA Air Freight Market Publication (**August 2023**)
All rates refer to Total Market by Region (includes Domestic and International)

NORTH AMERICA	2023YTD vs. same period 2019
CTK	10.1%
ATK	7.6%
CLF	0.8%

LATIN AMERICA	2023YTD vs. same period 2019
CTK	-0.6%
ATK	13.2%
CLF	-4.6%

AFRICA	2023YTD vs. same period 2019
CTK	4.5%
ATK	-15.8%
CLF	7.5%

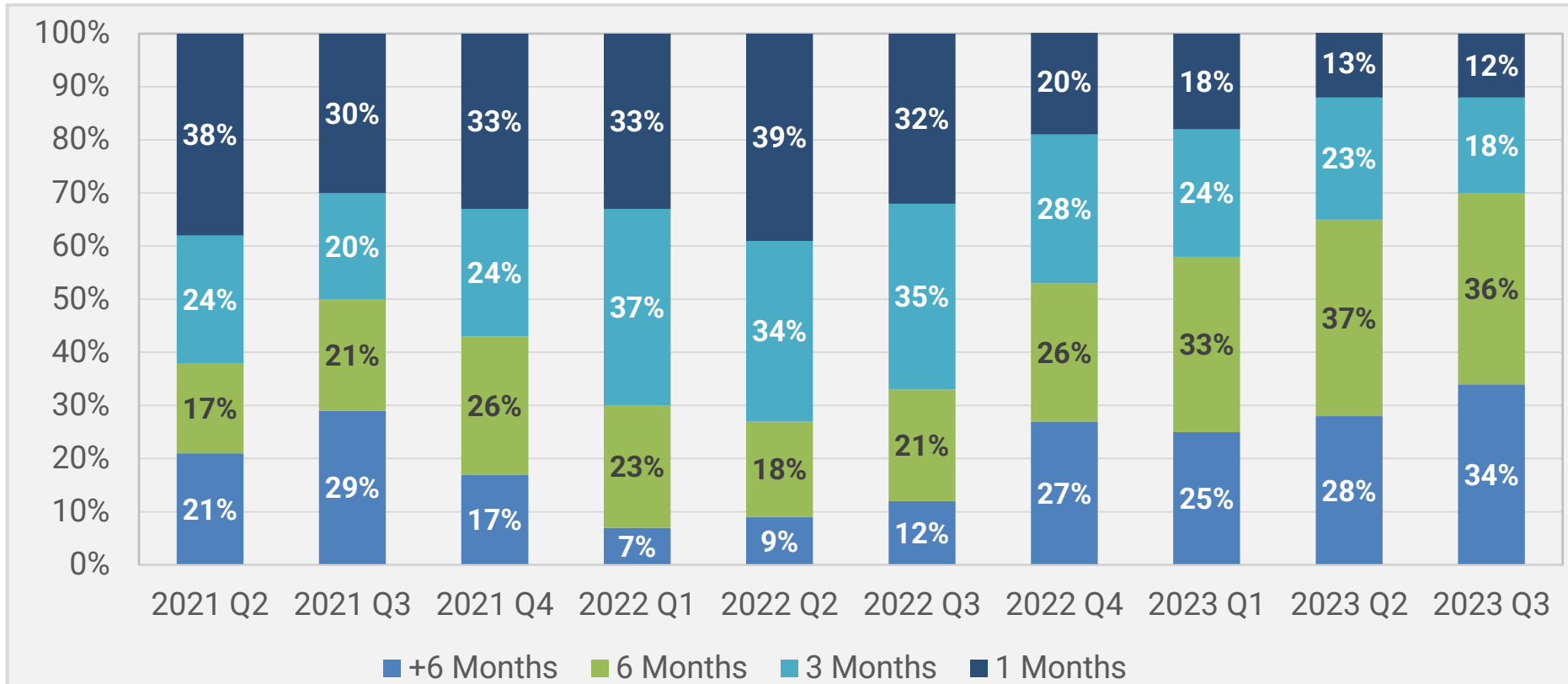
EUROPE	2023YTD vs. same period 2019
CTK	-12%
ATK	-13.5%
CLF	0.9%

ASIA PACIFIC	2023YTD vs. same period 2019
CTK	-4.1%
ATK	11%
CLF	-7.0%

MIDDLE EAST	2023YTD vs. same period 2019
CTK	2.9%
ATK	9.8%
CLF	-2.7%

Freight Forwarders keep seeking longer term contracts to secure volumes.

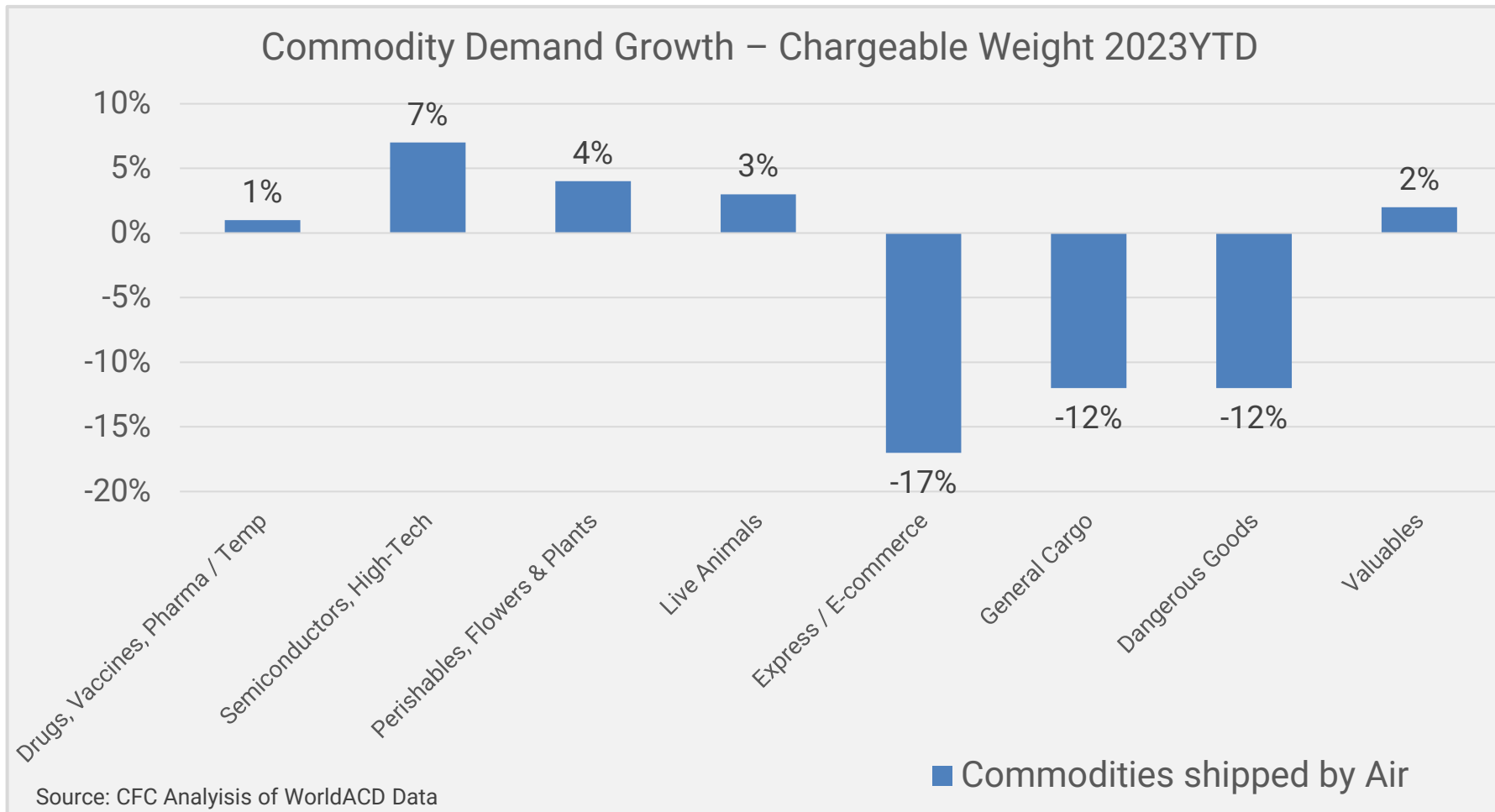
Share of Air Freight Contract Terms for Shippers



Longer term contracts between shippers and freight forwarders may signal 'more common ground' in a stabilizing global air cargo market.

Source: Cargo Facts Consulting, CLIVE Data Services

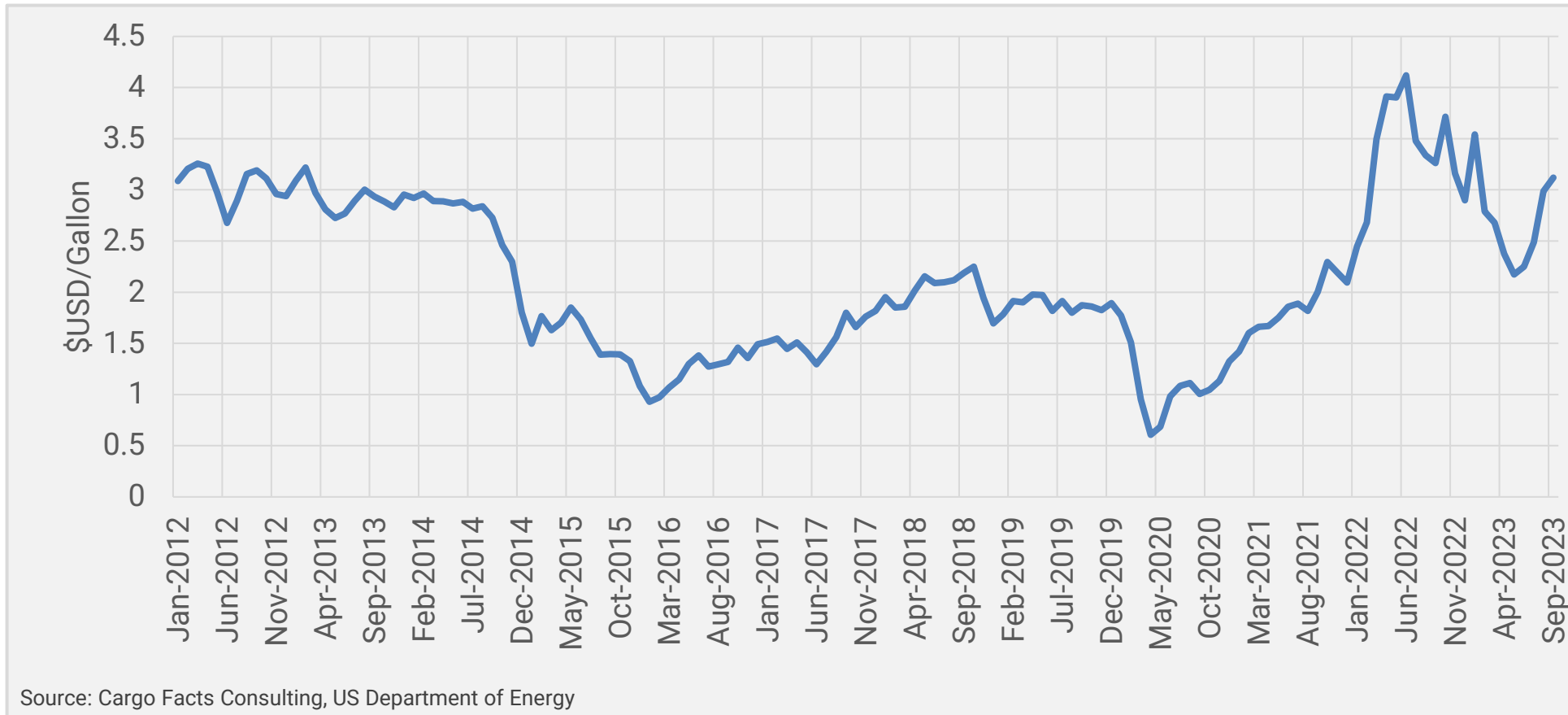
Special cargo displays a bright spot in overall market declines



- The transport of special air cargo products has been the bright spot in a depressed air cargo market over the first eight months of 2023.
- However, improvements in special cargo were not enough to stop an overall decline as the market dropped by over 7% over the first nine months.
- This drop narrowed down to 3% in the third quarter.

Jet Fuel Cost is down 16% from October 2022 but has been increasing since the beginning of the third quarter.

U.S. Gulf Coast Kerosene-Type Jet Fuel Spot Price FOB (USD/Gallon)



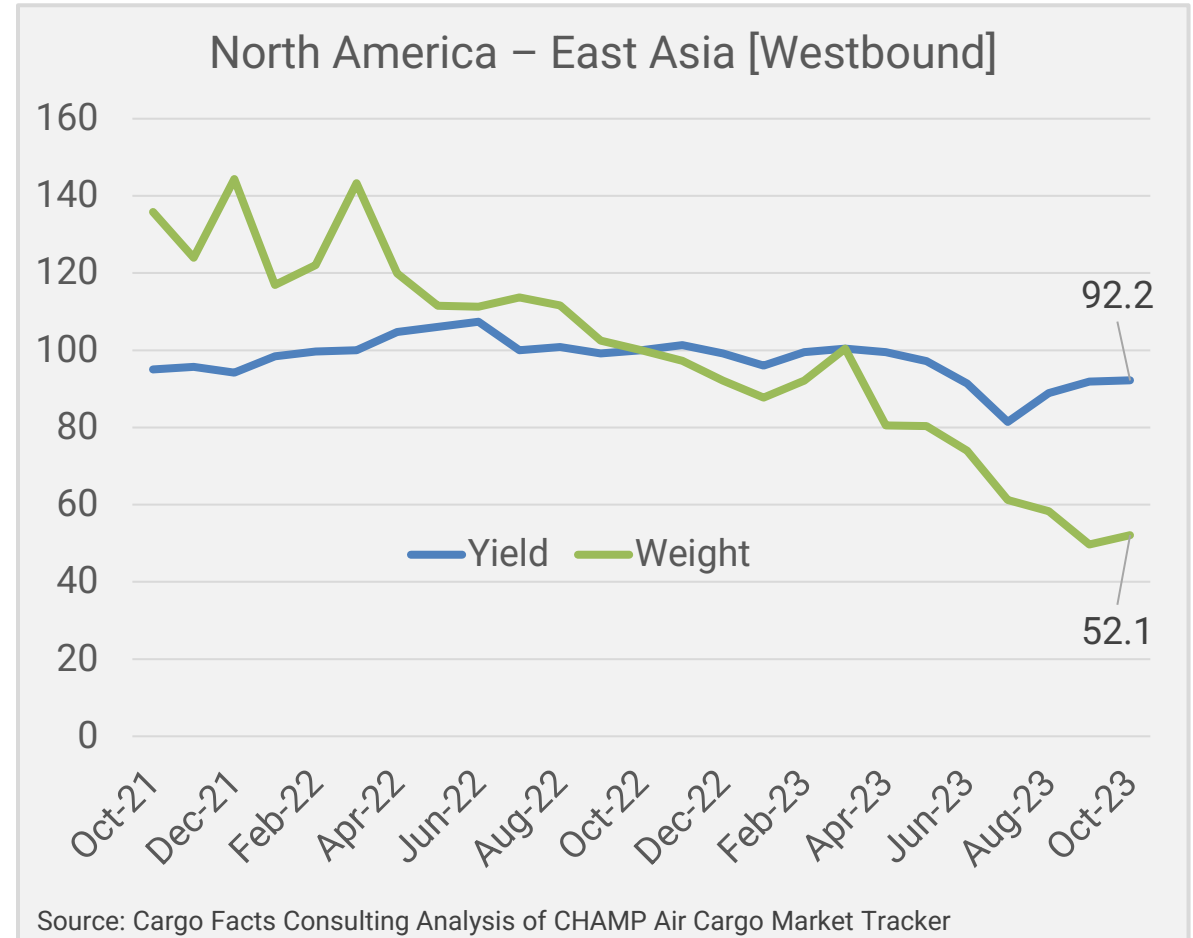
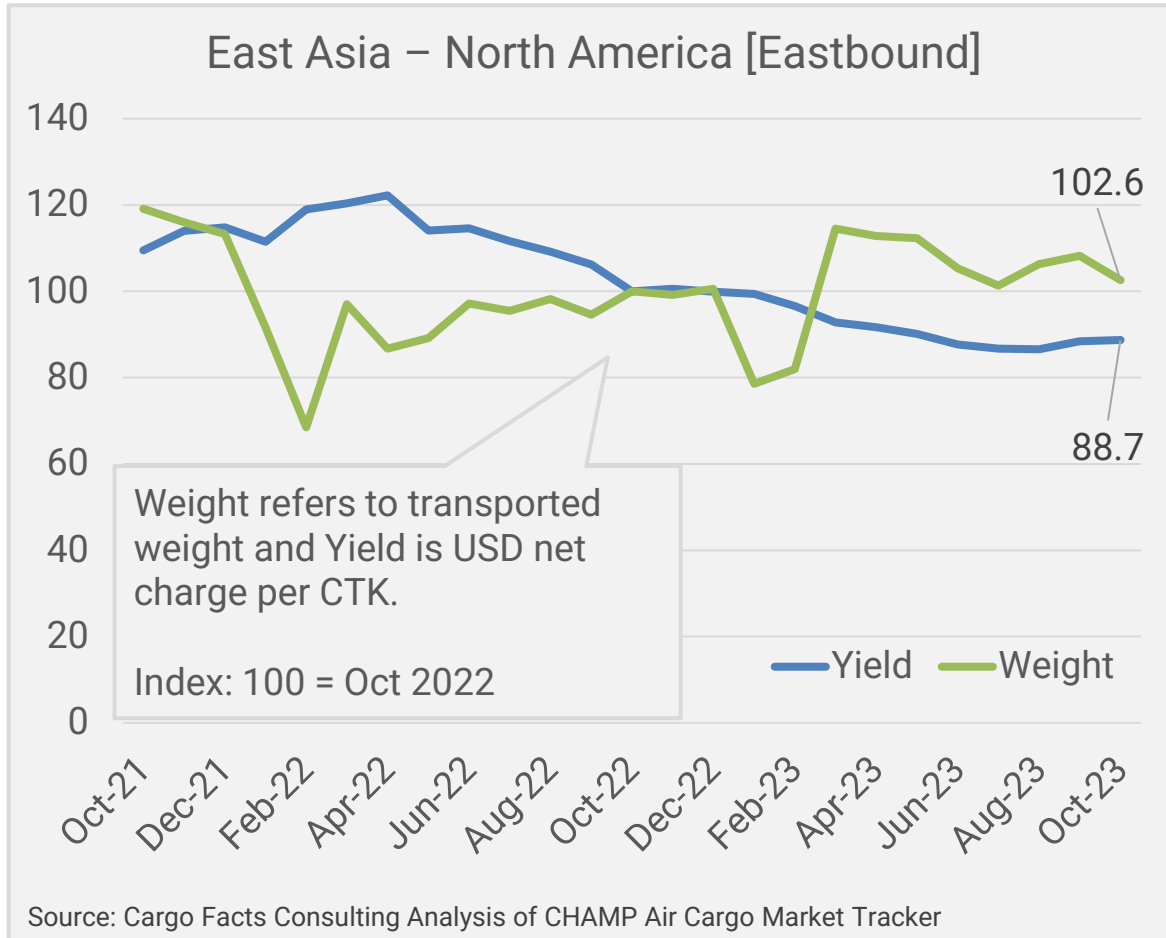
US Airline Fuel Cost is at a current level of \$3.12/gallon, up from \$2.98/gallon last month and down from \$3.72/gallon one year ago.

This is a change of – 16% from a year ago.

The industry saw low fuel costs in Q2-Q3 counterbalancing the effects of low yields.

Source: Cargo Facts Consulting, US Department of Energy

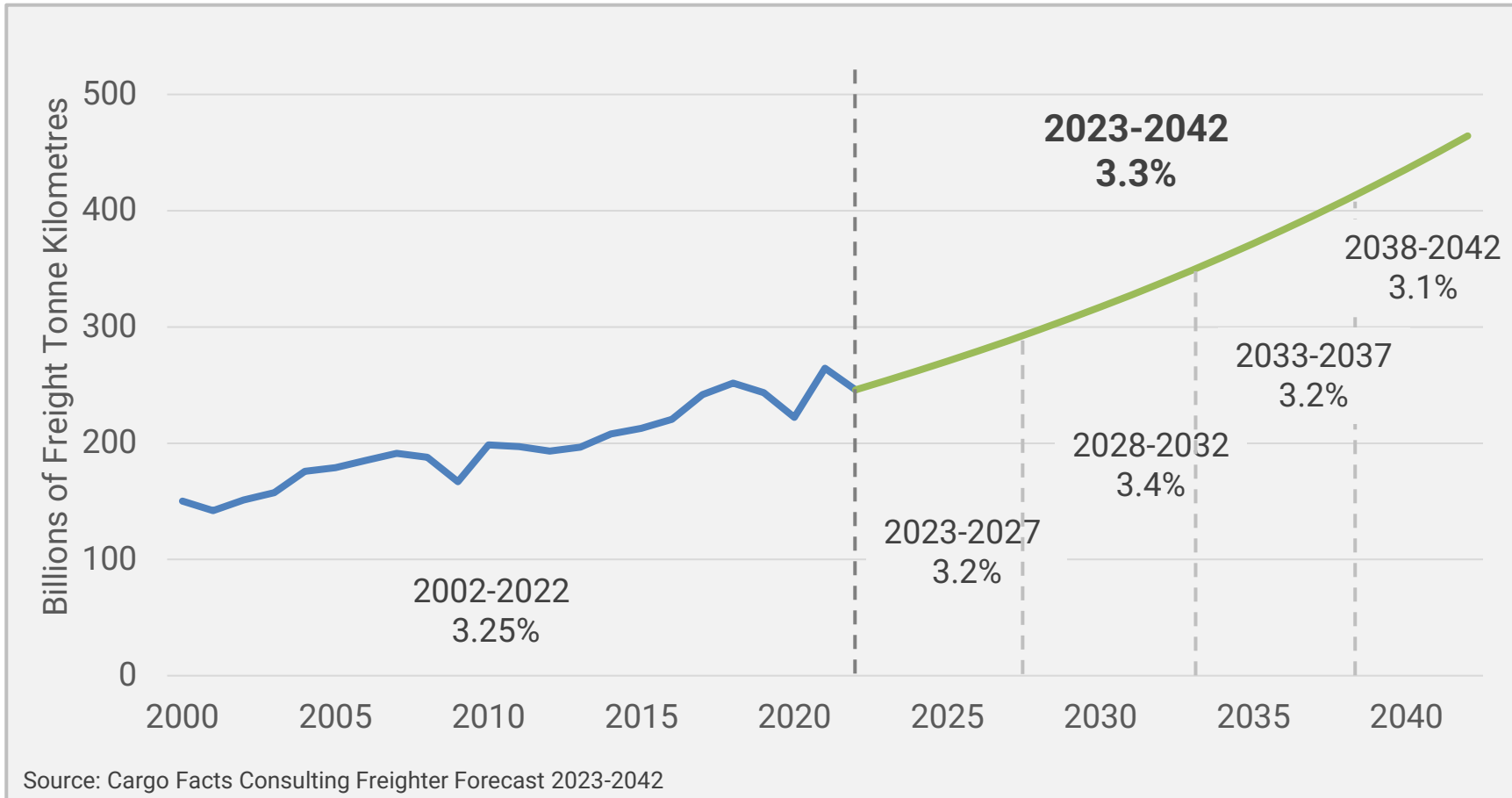
Yields have remained stable in 2023 for the transpacific lane but volumes have dropped significantly westbound.



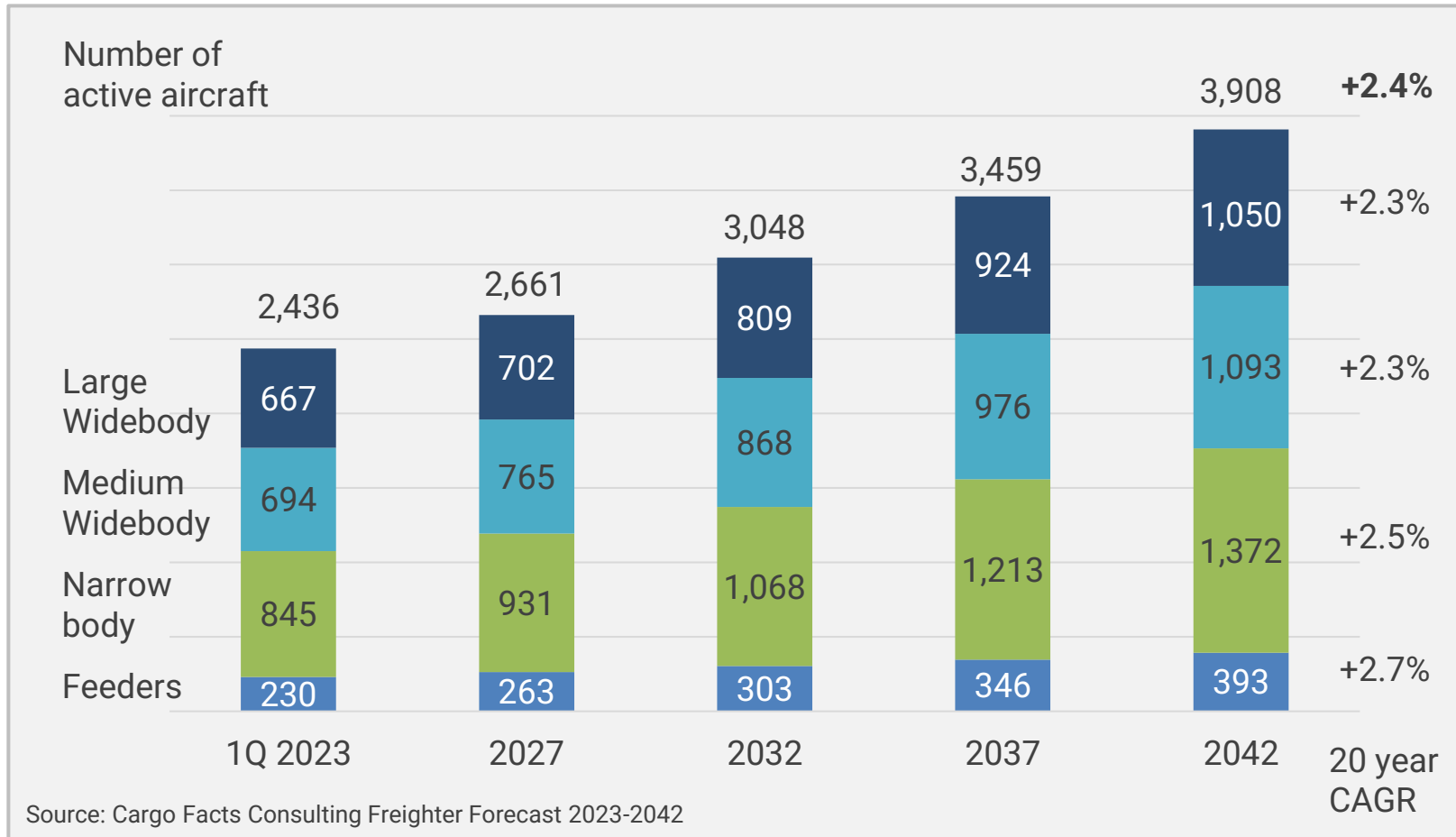
20-Year Freighter Forecast Highlights

In the long term we expect global air cargo traffic to grow at around 3.3% per annum.

Air Cargo Growth (FTK) Forecast: 2023 - 2042



Over the next 20 years we expect the world's freighter fleet to grow by 2.4% per year from about 2,430 aircraft today to around 3,900 in 2042.

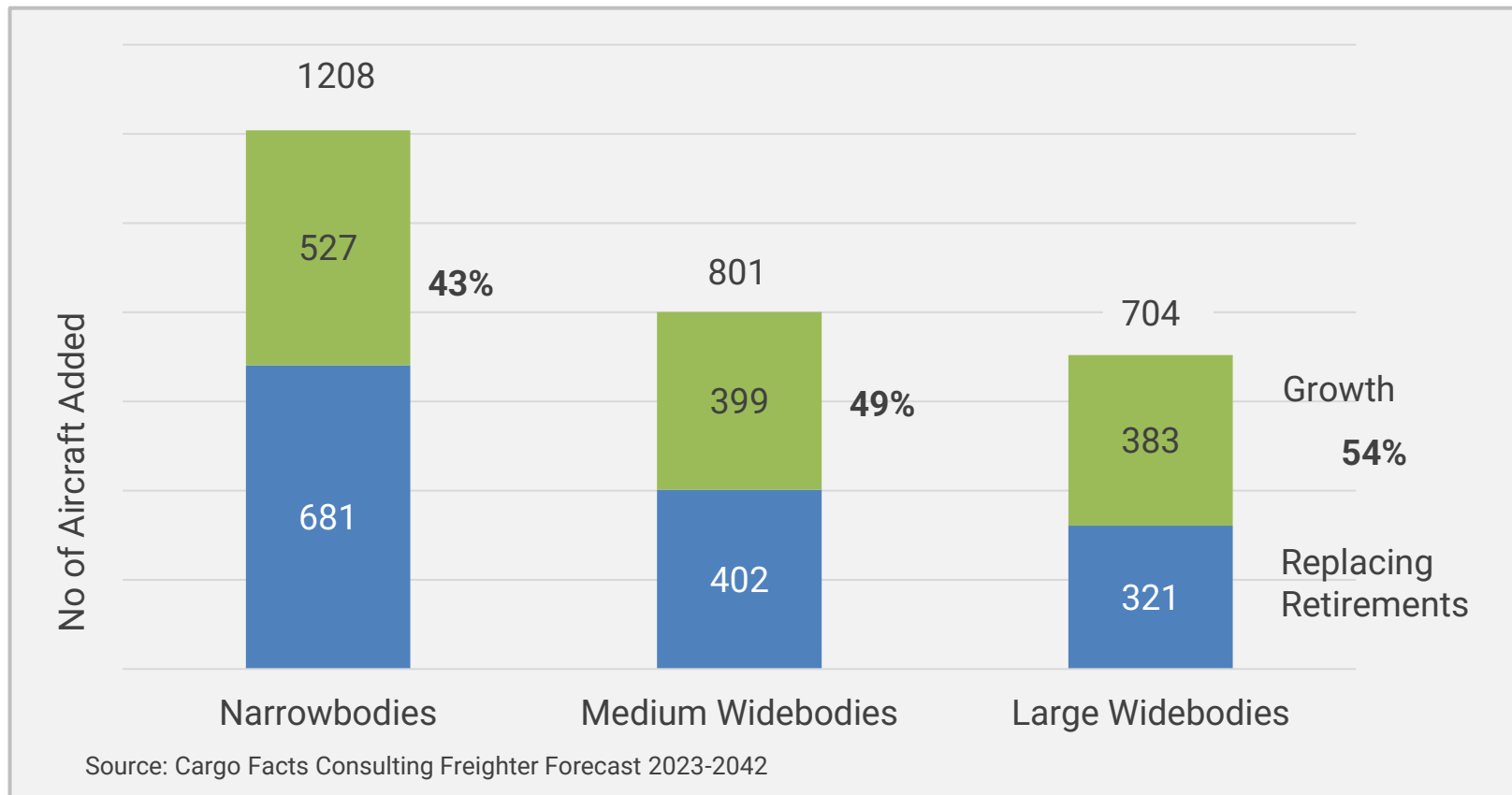


The CFC forecast reflects our assessment of future product strategies to determine which specific aircraft types will be offered as jet freighters.

	Narrowbodies	Medium Widebodies	Large Widebodies
Facing near-term extinction	DC-9, 727, Bae 146, 737-200	A300B4, A310	747 Classics, DC/MD-10-30/40
At peak use, or with little future growth potential	MD-80, 737-300/400, 757-200	767-200, A300-600, A330-200F	747-400F/ERF, 747-400SF/BCF, MD-11F/CF, 747-8F
Expanding role going forward	737-700/800, A321/320	767-300F/BDSF/BCF, A330-200/300P2F	777-200F
Planned or Potential Future aircraft ?	737-900P2F	787-XF? A330-900F?	777-300P2F, 777-200P2F, A350F, 777-8F

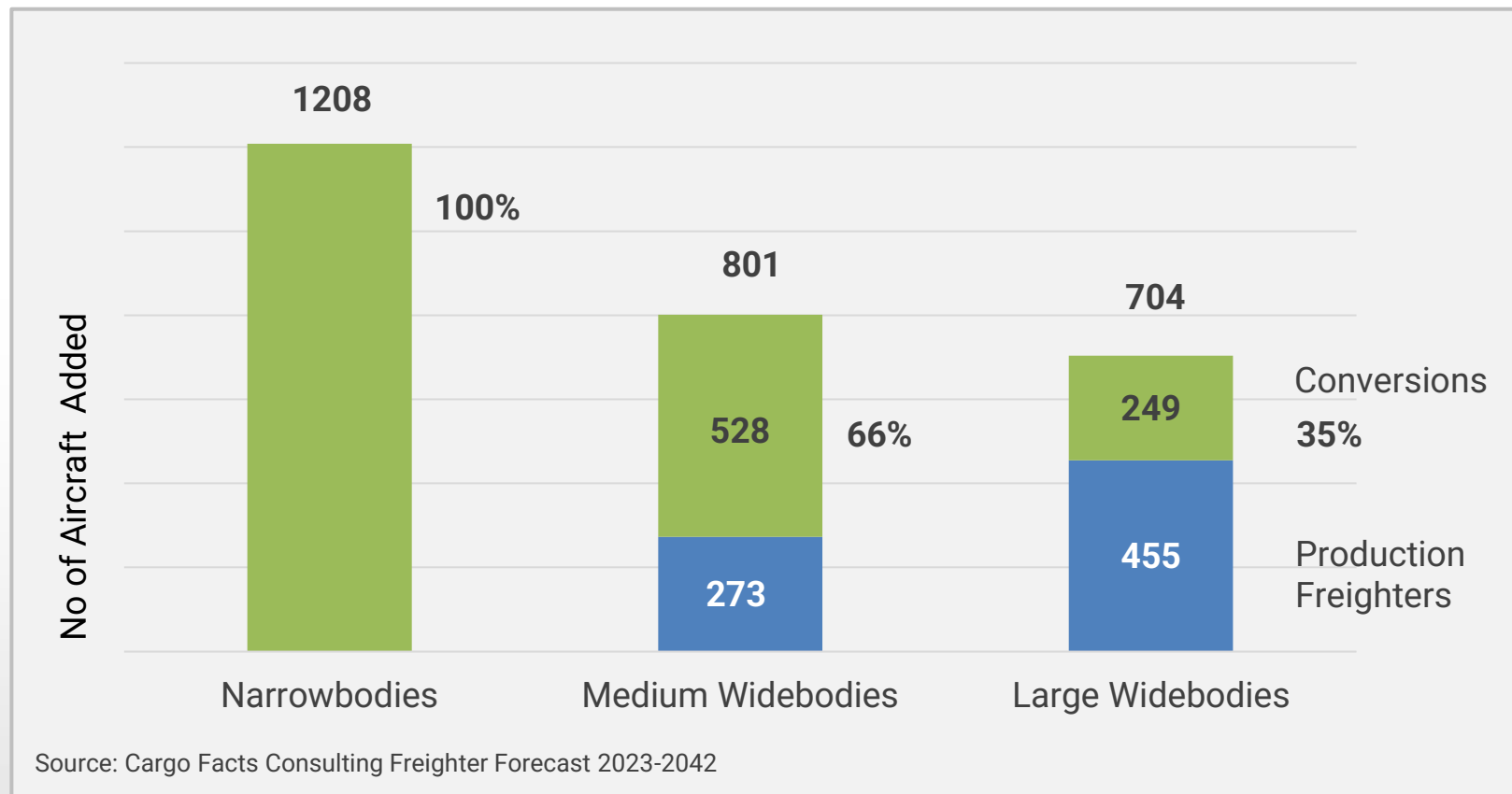
About half of freighter fleet additions are expected to replace retiring aircraft, the remainder is to cater for growth.

Freighter Fleet Forecast 2023-2042 Growth vs Retirements



Our 20-year forecast estimates that about 72% of freighter fleet additions will be converted aircraft, but this varies substantially across segments.

Freighter Fleet Forecast 2023-2042 Conversions vs Production Freighters

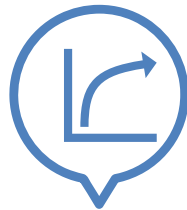


Summary & 2024 Outlook

Key takeaways and global air freight outlook through the end of 2023.

- In the global air freight sector, results for Q3 2023 show a **positive outlook** for the end of the year.
- **Rate Improvements and Seasonal Uptick:** After a period of stagnation, airfreight rates have started to rise. The industry is entering its busy season, and rate increases are expected to continue, providing a much-needed boost to revenues.
- **Capacity and Demand Dynamics:** Capacity should remain stable or increase slightly through the end of the year, while demand will see a slight rebound.
- **Peak Season:** Expectation of higher shipping volumes vs. 2023YTD but flat vs. 2022 (2-3 % higher).

Navigating the 2024 Air Cargo Landscape: What's Ahead?



MODEST GROWTH IN 2024

With air freight rates rising and a more balanced supply-demand dynamic, 2024 will see a long-expected recovery in the industry.

GEOPOLOTICAL AND TRADE TENSIONS

Current wars and trade tensions can lead to routes, supply chain disruptions, sanctions, security concerns, impacting air cargo.

HIGH EXISTING BACKLOG

Another year of high number of converted freighter deliveries due to high number of aircraft in the backlog.

OPPORTUNITIES?

Specialized cargo, e-commerce (cross-border), pharma, perishables across niche and emerging markets.

Exclusive analysis, updates, dashboards and interactive maps



Freighter Forecast

Analysis of recent developments and trends across the feeder, narrowbody, medium and large widebody freighter segments.

[View Dashboard](#)

FREIGHTER FORECAST

The rise of the Airbus A321 conversion program

🕒 OCTOBER 16, 2023



Express Market

Historical overview and five-year growth forecast of key international and domestic air express markets.

[View Dashboard](#)

EXPRESS

Analyzing current yields: Unveiling financial strategies in the express cargo industry

🕒 SEPTEMBER 7, 2023



E-commerce Market

Examination of domestic and cross-border e-commerce, and its effect on key segments.

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E-COMMERCE

Amazon network grows amid layoffs

🕒 APRIL 17, 2023



Market FutureWatch

Analysis of the latest air cargo trends and insights, including market forecasts, sustainable practices, and updates from carriers, lessors and freight forwarders.

[View Dashboard](#)

MARKET FUTUREWATCH

The diverse landscape of cargo operating systems: trends and outlook

🕒 OCTOBER 11, 2023



Drones

DASHBOARD COMING SOON!

DRONES

Beyond visual line of sight drone operations

🕒 AUGUST 4, 2023



Exclusive analysis, updates, dashboards and interactive maps

Analytical Tools

Air Express Map



E-commerce Dashboard



Freighter Forecast Tool



Freighter Feedstock Tool



Lessor Freighter Market Shares



Cargo Traffic and Growth by Airport



Conversion Center Locations



Company Profiles



Q&A

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