

Quarterly M&A and Industry Update – Aerospace & Defense Q4 2021



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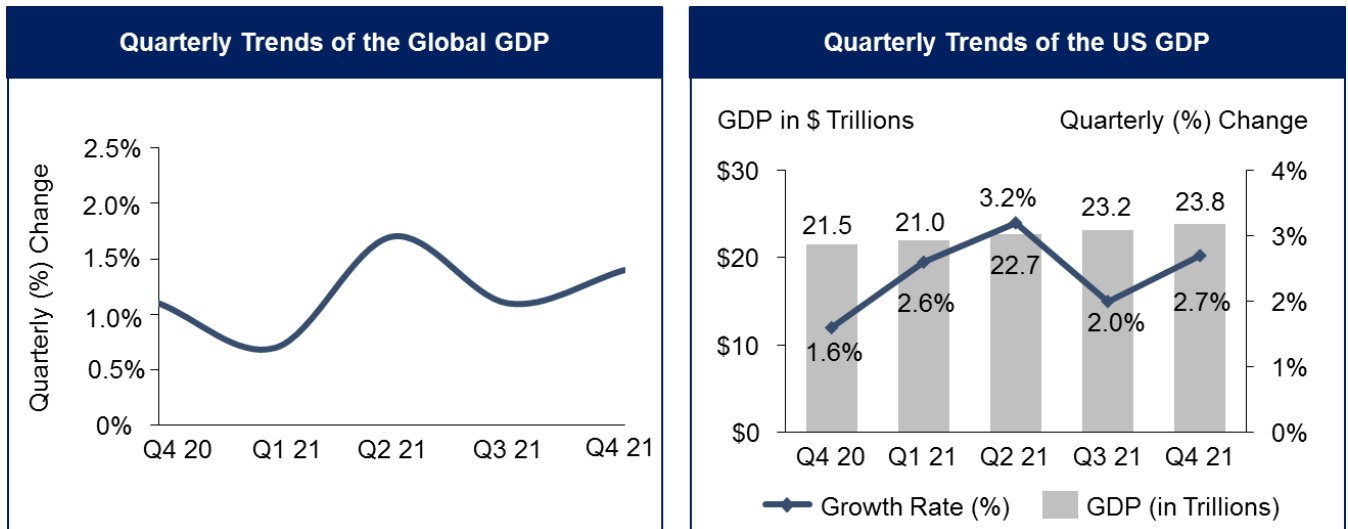
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Economic Situation Q4 2021

The global GDP grew by 1.4% in Q4 2021 from Q3 2021, while it increased by 5.0% when compared to Q4 2020. The U.S. GDP grew by 2.7% in Q4 2021 as compared to Q3 2021. The global economic recovery is continuing, even as the pandemic resurges. The pandemic outbreak triggered many challenges for global supply chains, which have resulted in longer than expected supply disruptions. Overall, risks to economic prospects have increased, and policy trade-offs have become more complex. The rapid spread of Delta and Omicron variants has increased uncertainty about the recovery of the global economy. Vaccination rates are progressing well in many advanced economies, but poorer and emerging market countries are being left behind. As per OWID (Our World in Data), 59.2% of the world population has received at least one dose of a COVID-19 vaccine by the end of 2021. On the other hand, only 8.9% of people in low-income countries have received at least one dose. Vaccine access and early policy support are the principal drivers of the gaps.



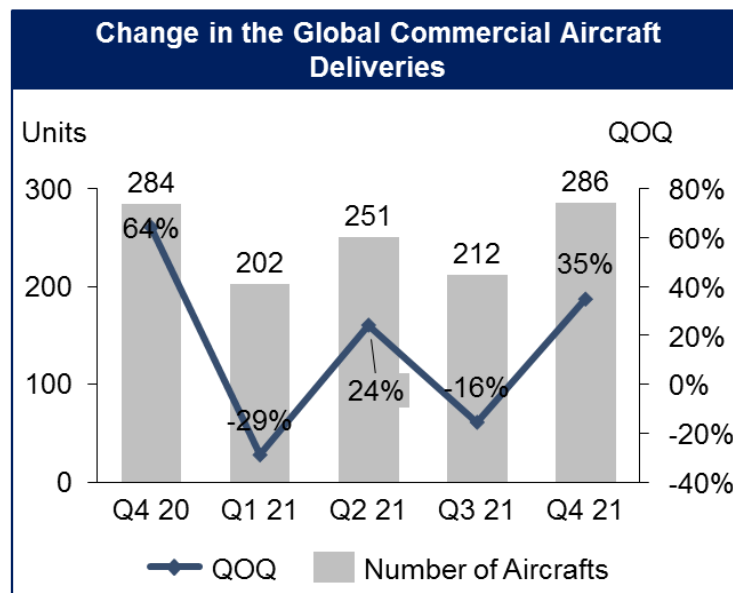
Note: The above image shows quarter over quarter change in GDP

Source: IMF, Lucintel

Figure 1: Quarterly GDP Trends

Aerospace & Defense Industry Update – Q4 2021

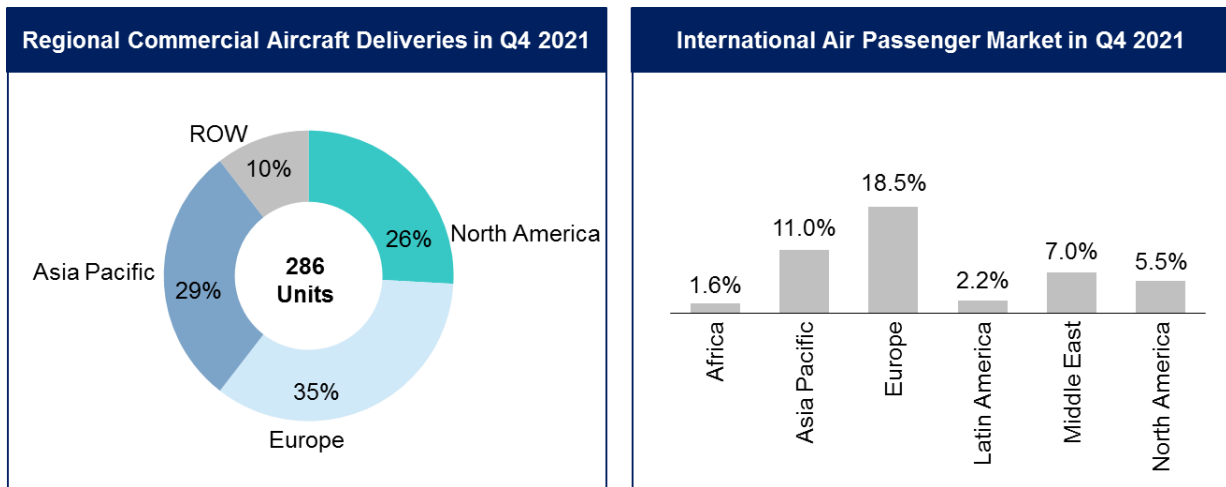
Global deliveries of commercial aircraft increased by 34.9% in Q4 2021 from Q3 2021, and grew only by 1% when compared to Q4 2020. However, 2021 was one of the most challenging years in the history of the aviation industry and the future remains hard to predict, primarily due to challenges connected to the ongoing pandemic. Global aerospace and defense industry revenue is expected to begin recovery in 2022. But this recovery will likely be uneven across the two key sectors, which are commercial aerospace and defense. The commercial aircraft sector is still impacted by the COVID-19 pandemic. The sign of recovery has started as air travel in major markets returns to near pre-pandemic levels. Commercial aerospace manufacturers are likely to focus on restructuring and cost reduction to position for profitable growth in the long term. The long-term growth prospects for the aerospace and defense industry remain strong. The space sector and technological developments, such as advanced air mobility, hypersonic, electric propulsion, and hydrogen-powered aircraft, are likely to drive future growth for the industry. The figure below depicts change in commercial aircraft deliveries in the past five quarters.



Source: Lucintel

Figure 2: Quarterly Change in the Global Commercial Aircraft Deliveries

Commercial aircraft deliveries in Q4 2021 witnessed growth of 34.9% from Q3 of 2021; it surpassed pre-COVID levels. Europe held the largest demand with around 35% in the global commercial aircraft deliveries, followed by Asia Pacific. International air travel holds 46% of the total air passenger market. Europe contributed to the largest share of 18.5% in the international air passenger market. Global air travel recovery improved in Q4 2021; supported by vaccine rollout.

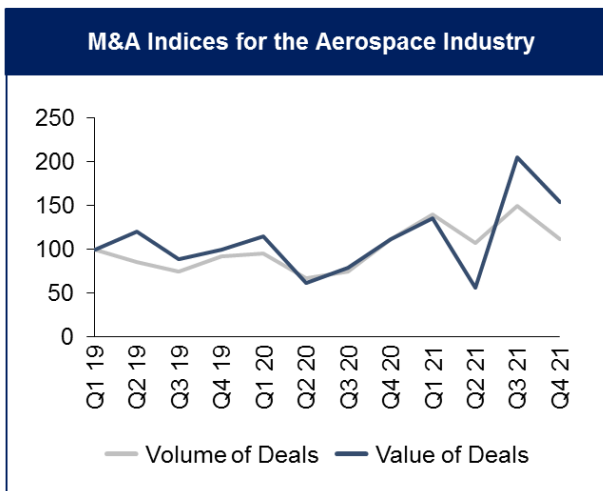
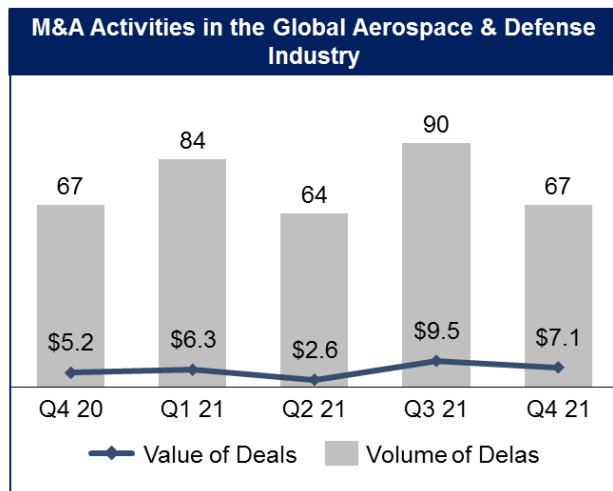


Source: IATA, Lucintel

Figure 3: Regional Share in the Aircraft Delivery and Air Passenger Market

M&A Update – Q4 2021

Merger and acquisition activities in the global aerospace & defense industry in Q4 2021 decreased and recorded 67 completed deals, a decrease of 26% from Q3 of 2021. The total deal value in Q4 2021 was \$7.1 billion, which is a decrease of 25% from Q3 of 2021. Recovery of the commercial aerospace sector will continue to depend on the post-pandemic recovery and the impact of future virus variants. Vaccination rates will likely dictate the timing it will take in recovery and return to pre-COVID levels. The commercial aircraft sector will likely be driven by well-capitalized suppliers and private equity firms. Commercial aerospace manufacturers are focusing on M&A activity to invest in emerging technologies through the acquisition of innovative startups. M&A in commercial aviation will be closely tied to the recovery from the pandemic and supply chain stability, either to drive growth through technologies or to consolidate during a slower recovery.



Note: The above chart includes total completed deals with disclosed and undisclosed values

Source: Lucintel

Figure 4: Quarterly M&A Activities in the Global Aerospace & Defense Market

Table 1: Quarterly Changes in M&A Activities in the Global Aerospace & Defense Market

M&A Deals	Quarter over Quarter Change in Merger and Acquisition Activities				
	Q4 20	Q1 21	Q2 21	Q3 21	Q4 21
Deal Value (\$ Billion)	40%	22%	-59%	266%	-25%
No. of Deal	49%	25%	-24%	41%	-26%

Table 2: M&A Deals in the Global Aerospace & Defense Market

Date	Target Company	Acquirer Company	Value of Deal	Description
Dec 21, 2021	Inras GmbH	Joby Aviation Inc	NA	Joby's acquisition of Inras is emblematic of the company's strategy to maintain leadership in key advanced technologies by seeking out proven leaders in the radar system design.
Dec 13, 2021	ZeroAvia Inc	United Airlines	\$35 M	United Airlines has acquired a new equity stake in UK-based startup ZeroAvia. The purchase could help the US aerospace company launch a fleet of 100 hydrogen-powered jets by 2028 as part of its plans to operate at net-zero emissions by 2050, by retrofitting existing aircraft with ZeroAvia engines.
Dec 07, 2021	Memsense LLC	InertialLabs Inc	NA	This strategic acquisition of MEMSENSE brings together two high growth companies with proven performance in solving some of the world's most difficult stabilization and

				navigation problems.
Dec 03, 2021	Lufthansa Technik Brussels NV	Sabena Aerospace SA	NA	With this acquisition, Sabena is able to expand the division of maintenance activities and increasing the international network, adding extra convenience and services to new and existing customers.
Nov 21, 2021	Skylock	Royal Moroccan Armed Forces	NA	This acquisition aims at bolstering Moroccan defence capabilities against enemy drones since the system can detect, verify, and eliminate potential threats posed by unauthorized drones.
Nov 21, 2021	Autoflight Aviation Tech	Team Europe Ventures	\$100 M	The financing will be used for international expansion and to evolve AutoFlight's cargo-vehicles into man-carrying aircraft.
Nov 19, 2021	Sierra Space Corp	SPAC comprising of General Atlantic, Coatue, Moore, BlackRock, and AE Industrial	\$1.4 B	Sierra Space will use about two thirds of the funds for work on Dream Chaser, the lifting-body vehicle it is building for to transport cargo for the International Space Station.
Nov 17, 2021	Dutch Thermoplastic Components	Collins Aerospace	NA	Collins describes the acquisition as an effort to "drive further expansion of advanced thermoplastic composites for complex aero structures to make aircraft lighter, safer, stronger, more cost-effective, and environmentally friendly.
Nov 08, 2021	Citadel Defense Co Inc	BlueHalo LLC	NA	The acquisition of Citadel complements BlueHalo's directed energy and layered perimeter defense capabilities where the company delivers a full suite of products, including the Locust Laser Weapon System and Argus Perimeter Security Solution.
Oct 26, 2021	Performance Plastics Inc	JW Hill LLC	NA	This partnership gives PPI new life to its capabilities and strengths, with the vision and support to continue to develop the brand moving forward. This acquisition diversifies aerospace portfolio into the growing composite aero structure segment.
Oct 21, 2021	McFarlane Aviation LLC	Vance Street Capital LLC	NA	This strategic acquisition allows driving top-line growth by increasing capabilities and customer base within the aviation Maintenance, Repair, and Overhaul (MRO) market.
Oct 19, 2021	Sensefly SA	Ageagle Aerial Systems Inc	\$23 M	This acquisition will focus the expertise and resources on the growth of professional quadcopter drone equipment and drone data analysis software activities.
Oct 01, 2021	Triumph-Staverton Facility	Ontic Engineering & Mfg Inc	NA	This acquisition expands Ontic's capacity in the UK. Ontic maintains a global focus by supporting customers and licencing partners from manufacturing and MRO facilities.

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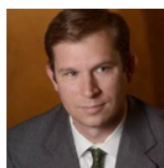
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