

Aerospace, Defense, & Government Services

QUARTERLY NEWSLETTER | Q3 2023







Q3 2023 ADGS Update Momentum Continues as Global Tensions Rise

Key Industry Metrics

71 Total Q3 U.S. ADGS Deals Announced

+ 27% U.S. QoQ % Change in Deal Count

+ 86% U.S. QoQ % Change in Strategic Deals

(9%) U.S. QoQ % Change in PE Deals

(3%) U.S. YoY % Change in Deal Count

+ 45% Global QoQ % Change in Deal Count

+ 8% Global YoY % Change in Deal Count

Source: DACIS DM&A

M&A Activity Summary

U.S. Aerospace, Defense, and Government Services (ADGS) transaction activity in Q3 2023 was up 27% over Q2 2023, with a total of 71 deals announced versus 56 in Q2. The number of **U.S. transactions involving strategic buyers** *rose* **86% relative to Q2**, from 21 to 39. **For the first time since Q1 2022, strategic buyers accounted for a majority of transactions announced in the U.S.** Conversely, the number of U.S. transactions involving private equity buyers fell 9% QoQ to 32 in Q3 2023.

Transaction activity in the Government Services space once again led the industry by deal count, accounting for 51% of all U.S. transactions, with Defense comprising 32% and Aerospace the remaining 17%. Lower middle-market transactions (with a total purchase price under \$100M) again remained most prevalent in the space, accounting for just over half of the ADGS transactions announced.

Spotlight Transactions

Q3 saw several marquee transactions announced, including the \$1.8B acquisition of Collins Aerospace's Actuation and Flight Control Business by Safran in July and the \$5.5B acquisition of Ball Aerospace by BAE in August. Several previously announced transactions closed during Q3, including Eutelsat's \$1.5B acquisition of the remaining 77% of OneWeb and Heico's approximately \$2B acquisition of Wencor from Warburg Pincus.

For additional discussion on selected transactions that shaped the ADGS *M&A* landscape in Q3, see pages 11 and 12.

A Look Ahead at Q4 and Beyond: Budget Priorities and the Impact of Conflict in Gaza



The USS Gerald R. Ford, which arrived in the Eastern Mediterranean on October 10

The Hamas attack on Israel on Saturday, October 7, raises a series of strategic questions surrounding the Department of Defense's (DoD) budget priorities, including what a broader war could entail for the U.S. and European defense industrial bases that are already straining to support Ukraine. Russia's invasion of Ukraine marked a significant change in global defense spending, with NATO nations collectively seeing an 8% real increase in defense spending since February 2022. While a limited-duration campaign in Gaza would be unlikely to produce the same effect, it does (re)introduce a new vector in U.S. strategic dialogue around defense spending.

Now, in addition to balancing aid to Ukraine with deterrence in the Pacific, the U.S. defense industrial base must once again consider the requirements of supporting Israel in a protracted conflict in the Middle East. As of July 31, the U.S. had directed \$46.6B worth of military aid to Ukraine (this figure does not include an additional \$30B in financial and humanitarian aid). There is limited overlap between the assets produced to replenish stockpiles used in support of Ukraine and the assets needed to deter and defeat a peer adversary in the Indo-Pacific. Promised support for Israel introduces a third strategic dimension to this set of priorities.

Macro Backdrop: U.S. Policy Outlook

Monetary Policy

Over the course of Q3, the Federal Reserve raised rates once by 25 bps in July, from 5.25% to 5.50%.

- At its July Federal Open Market Committee (FOMC) meeting, the Federal Reserve raised interest rates despite cooling inflation, noting that the current rate of inflation (3.2%) was still above its 2% target
- At its September FOMC meeting, the Federal Reserve held interest rates steady, while also indicating that it expects one more hike before the end of the year
- In addition to the likelihood of one more increase this year, projections released in the Fed's dot plot showed two cuts in 2024, two fewer than were indicated during the last update in June, guiding to a "higher-for-longer" environment

Following the September FOMC meeting, economists noted the unambiguously hawkish and "higher-for-longer" messaging from Chair Powell and the Federal Reserve. The broader market is baking in expectations of sustained, elevated inflation as a result, and equity analysts have suggested that the Federal Reserve's inflation target should be recalibrated for this scenario, noting that the 2% inflation target may no longer be an appropriate benchmark.

Budget Showdown Updates

The Senate passed a last-minute spending bill on September 30, narrowly averting a government shutdown. The measure will provide the government with funding through mid-November as the House and Senate continue to work toward passing longer-term funding legislation. The stopgap spending bill does not include additional aid for Ukraine.

The Impact of a Shutdown or Continuing Resolution on the Defense Industrial Base

During a government shutdown, most long-term programs are paused and contracting actions slow. In the DoD, over 50% of civilian employees would be furloughed. In contrast, during a continuing resolution, funds are still made available to operate the government, typically at the lower of the prior year's appropriations or the current year's request. Most large prime contractors have sufficient cash on hand to continue work on critical programs, though smaller contractors or those without substantial cash reserves may come under more pressure. Mission-critical programs are more likely to receive anomaly funding (extended funding for programs that would critically degrade in the event of a continuing resolution), further insulating primes from the immediate impacts of a continuing resolution.

Federal Procurement Programs Updates

SBA 8(a) Certified

The Small Business Administration's (SBA) 8(a) program was enjoined in July after Ultima Services Corp. argued in Tennessee court that the program unfairly excluded non-disadvantaged groups from contract awards. While the injunction is in place, the SBA is pausing new 8(a) applications and requiring current participants to prove social disadvantage.



The DoD and SBA have rolled out the Small Business Investment Company Critical Technology (SBICCT) initiative, a joint effort between the SBA and DoD to increase private capital investment in critical technologies that strengthen U.S. economic and national security. As part of the initiative, the Federal Government will guarantee loans to investors to invest in critical defense technology.



The U.S. semiconductor industry is still waiting on funds more than a year after the CHIPS act was signed. The goal of the \$52.7 billion package was to reshore the semiconductor supply chain in the U.S., but so far, no funding set aside by the legislation has been awarded. "We will start to give out money later this year," said Secretary of Commerce Gina Raimondo. The potential for federal funding has spurred investment in the sector, with \$231B in private sector semiconductor investments in the U.S. announced according to the White House, but many of those projects are contingent upon receiving federal government aid.

Macro Backdrop: Global Geopolitical Landscape

Latest Developments and Lessons from Ukraine

"The days of massed armored assaults, taking many kilometers of ground at a time, like we did in 2003 in Iraq – that stuff is gone because the drones have become so effective now."

- Retired U.S. Army Sergeant First Class Bradley Crawford

In early June 2023, Ukraine began a counteroffensive to retake territory occupied by Russian forces in the Zaporizhzhia and Donetsk oblasts. While Ukraine retains the operational initiative, its slow pace of advance (an average of roughly 90 meters per day, according to CSIS) and the trade-offs it has made to preserve personnel and equipment underscore the challenges inherent in going on the offensive in a battlespace increasingly dominated by low-cost, attritable platforms.

- An Evolving Battlespace: Integrated battle-management systems that provide imaging and locations in real time (in Ukraine's case, via Starlink), coupled with low-cost drones – some even made of cardboard – that can neutralize materially more expensive targets, have made massed formations vulnerable for both sides. As a result, combined-arms maneuvers using large groups of armored vehicles and tanks to make rapid breakthroughs may no longer be feasible.
- Weapons Systems Updates: The U.S. indicated in September that it would provide "a small number" of missiles from the U.S. Army Tactical Missile System (ATACMS). Ukrainian officials have offered assurances that the ATACMS will not be used to strike Russian territory. The first American-made Abrams tanks arrived in Ukraine in September, months ahead of initial estimates and in time for use in Ukraine's counteroffensive.
- Emerging Ukrainian Partnerships With the Western Defense Industry: In a bid to expand Ukraine's industrial capacity, the Ukrainian Foreign Ministry announced in September that Ukrainian arms producers had signed about 20 agreements with foreign partners for joint production, exchange of technology, or supply of components to make drones, armored vehicles, and ammunition.
 While specific companies were not identified, Germany's Rheinmetall and the UK's BAE Systems have separately announced plans to team with Ukrainian producers.



Ukrainian drone operators in Bakhmut



American M1 Abrams, the first of which arrived in Ukraine in September, ahead of schedule

Headline Roundup: Recap on Q3 Developments Shaping the Global Defense Environment

- **Iran Tensions:** On September 27, Iran's Islamic Revolutionary Guard Corps (IRCG) confirmed that it had put a third imaging satellite into low earth orbit (LEO). In the early weeks of Q4, U.S. diplomatic efforts have turned to Iran with a view to deterring further regional spillover of the Israel-Hamas conflict, whether directly or through Iran-backed Hezbollah. Iran has continued to supply unmanned systems to Russia, further exacerbating tensions with the West.
- **Coup in Niger:** July's takeover in Niger completed a domino chain of military takeovers across the region over the past two years, following coups in Guinea, Burkina Faso, Mali, Chad, and Sudan. For the U.S. and allies, the coup raises questions about the fight against Islamist militants in the Sahel where, until July, Niger had been the cornerstone of the Pentagon's regional strategy.
- China-Taiwan Tensions: With China as the U.S. pacing threat, Taiwan remains front and center in U.S. national security dialogue. Q3 saw China undertake increasingly visible military drills around Taiwan, including the late-August incursion of 24 combat aircraft over the median line of the Taiwan Strait in what Beijing described as a "joint combat patrol." In August, the U.S. approved the sale to Taiwan of an advanced infrared search-and-track (IRST) sensor package to upgrade its existing fleet of F-16s.

Select Industry News & Developments

Commercial Aerospace



OEM Deliveries Updates: Boeing and Airbus 2023 Targets Look Optimistic

Boeing delivered a total of 100 aircraft in Q3 2023, down from 112 in Q3 2022. Following persistent softness in Boeing 737 deliveries through Q3, Boeing revised its guidance for full-year deliveries downward to 375-400 aircraft on its Q3 earnings call, down from a full-year target of 400-500 aircraft in Q2. In positive news for Boeing, Air China indicated it would resume taking delivery of 737 Max jets after more than a four-year pause, beginning with 12 aircraft this year.

Airbus delivered a total of 159 aircraft in Q3 2023, up from 140 in Q3 2022. While Airbus deliveries generally remain above 2022 levels, Airbus will need to increase its delivery rate to 77/month in Q4 in order to meet its full-year target of 720 aircraft.

Boeing 737 Max

RTX's GTF Recall Drives Widespread Fallout Among Customers, Partners

RTX announced in September that it would recall ~600-700 Pratt & Whitney geared turbofan (GTF) engines for inspection over the next three years, following the discovery of microscopic contaminants in the powdered metals used to make certain engine components. September's announcement followed prior disclosure during RTX's Q2 earnings call in July. The GTF currently powers ~40% of Airbus's A320Neo jets.

RTX has indicated that it will take a pre-tax operating profit charge of approximately \$3B in Q3, reflecting P&W's 51% program share of the GTF (its risk-sharing partners, including Germany's MTU AeroEngines, have announced similar charges). The GTF issue contributed to a \$30B decline in RTX's market cap from July 24 to September 22 and may provide an opening for CFM's LEAP engine to gain market share as OEMs prioritize delivery timing. A prolonged GTF grounding will likely drive an uptick in spending on older aircraft and engines, which should be a mitigant for P&W given its exposure to the V2500, PW2000, and PW4000 engines.

Space

Foreign Investors Play a Growing Role in Commercial Space

Despite fundraising headwinds and broader investor pullback from capital-intensive Space businesses during 1H 2023, investments in the Space economy have begun to rebound, with overseas investors playing a leading role.

- Sierra Space announced a \$290M raise from a Japanese consortium including MUFG, Kanematsu, and Tokio Marine, valuing the company at \$5.4B. Sierra expects to launch its first *Dream Chaser* spacecraft, designed to carry cargo and crews to orbit, in 2024.
- Axiom Space completed a \$350M funding round, led by Saudi Arabia's Aljazira Capital and South Korea's Boryung. Axiom is working on modules to support research and inspace manufacturing, which it expects to install on the International Space Station by 2026 and which will eventually separate to form the core of a standalone commercial space station.



Rendering of Axiom's proposed commercial space station modules

India's Chandrayaan-3 Successfully Lands Near Lunar South Pole

India became the fourth country to achieve a soft landing on the lunar surface, joining the U.S., China, and the former Soviet Union. India's Chandrayaan-3 mission is the first to land near the moon's South Pole, and comes amidst renewed interest in the moon, particularly surrounding the South Pole as a potential source of water-ice and a proving ground for in situ resource utilization technologies.

India became the 27th country to sign the Artemis Accords in June. Its successful landing follows failed attempts by Russia and Japan's ispace earlier this year. Intuitive Machines' IM-1 mission, the first lunar landing attempt under NASA's Commercial Lunar Payload Services (CLPS) program, is slated to launch in November 2023.

Select Program News

F-35 Updates

- Fleet Readiness Issues: F-35s are available to fly at a rate of only 55%, according to an audit released by the Government Accountability Office in September, sharply below the target "mission capable rate" of 85-90% (across all three aircraft variants). The GAO report attributes the readiness shortfall to maintenance challenges resulting from absence of adequate repair capability at military service depots, with 73% of components being sent back to manufacturers due to inadequate resources onsite.
- Delivery Outlook, TR-3 Updates: During its Q2 earnings call in July, LMT indicated an anticipated reduction in 2023 F-35 deliveries, which it attributed primarily to software maturation and certification of the platform's TR-3 configuration. LMT delivered a total of 50 TR-2 configuration F-35s in 1H23 and currently expects to deliver a total of 97 aircraft for the year, down from its initial expectation of 147 to 153. LMT expects to deliver the first TR-3 aircraft between April and June 2024, pushed back from an initial expectation of December 2023 April 2024.



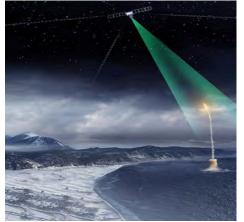
Danish Air Force F-35

Global Customers Update: Denmark took delivery of its first four F-35s on Danish soil in September. Denmark has
taken delivery of 10 F-35s to date, with the remaining six stationed at Luke Air Force Base, Arizona, where Danish
pilots and maintainers are conducting training. Denmark is the tenth country and the fifth European NATO member to
operate the F-35 from its home soil. NATO members in the F-35 program of record include Belgium, Canada,
Denmark, Finland, Germany, Italy, the Netherlands, Norway, Poland, and the United Kingdom.

Next-Generation Air Dominance (NGAD) + Collaborative Combat Aircraft (CCA)

- Northrop Takes a Step Back: On its Q2 earnings call in July, NOC indicated that it would not bid as a prime contractor on the centerpiece manned aircraft of the Air Force's Next-Generation Air Dominance (NGAD) program and would instead pursue a role as a supplier to other bidders via its Mission Systems segment. NOC CEO Kathy Warden left the door open to NOC's participation in the Navy's F/A-XX and the Air Force's Collaborative Combat Aircraft (CCA) programs. NOC's announcement suggests that either LMT or BA will likely serve as the prime systems integrator on NGAD's cornerstone manned aircraft.
- **Opening the Aperture for Vendors:** Brig. Gen. Dale White, program executive officer for fighters and advanced aircraft, indicated in August that the Air Force would be turning to "non-traditional" vendors to move quickly and think creatively regarding NGAD and CCA. For CCA, 20-30 contractors will be part of a vendor pool to build the drones themselves, with a similar number working towards developing autonomous technologies.

Proliferated Warfighter Space Architecture (PWSA)



Rendering of missile tracking satellite in LEO

Q3 saw progress across the SDA's planned layered network of satellites:

- Transport Layer Updates: In August, the SDA awarded NOC and LMT a combined \$1.5B to build 72 Tranche 2 Transport Layer satellites SDA's Transport Layer will ultimately comprise of 300-500 satellites in LEO, delivering assured, resilient, low-latency military data and connectivity. The first 20 Tranche 0 Transport Layer satellites (with LMT and York Space Systems as the prime contractors) entered service earlier this year.
- **Tracking Layer Updates**: In September, the SDA released a solicitation for 54 Tranche 2 Tracking Layer satellites SDA's Tracking Layer will provide global indications, warning, tracking, and targeting of advanced missile threats, including hypersonic missile systems. The first eight Tranche 0 Tracking Layer satellites (with SpaceX and L3Harris as the prime contractors) entered service earlier this year.

Selected Company Performance: Aerospace

Company	Management Commentary	MRQ Resu	ults (USD N	lillions)		
			Sales	EPS		
	"We continue to progress in our recovery and despite near-term challenges, we remain on track to meet the	Consensus	\$ 18,250	(3.21)		
	financial goals we set for this year and for the long term. We are focused on driving stability in our supply chain	Actual	\$ 18,104	(3.26)		
U_DOLING	and improving operation performance as we steadily increase production rates to meet strong demand ." – David Calhoun, President, Chief Executive Officer and	Beat / Miss	(0.8%)	(1.6%)		
	Director	Next Report	t Date (Q4): 2	024 TBD		
	"During the first half of 2023 we progressed well in an operational environment that remains complex. Our	Consensus	€ 15,867	1.54		
AIRBUS	commercial aircraft are in strong demand, as demonstrated by more than 800 orders announced at	Actual	€ 15,900	1.34		
AIIGUS	the Paris Air Show. This demand is driven both by growth and fleet replacement as airlines invest in more final officient fleate "	Beat / Miss	0.2%	(13.0%)		
	fuel-efficient fleets." - Guillaume Faury, Chief Executive Officer	Next Report Date (Q3): 11/08/20				
	"Due to the work stoppage from the [IAM] strike, we now expect to deliver between 370 and 390 737 fuselages	Consensus	\$ 1,271	(1.56)		
	this year . The front of our production line is starting to break to 42 airplanes per month in August, but we won't	Actual	\$ 1,365	(1.46)		
AEROSYSTEMS .	be able to fully recover the lost manufacturing days from the work stoppage and the subsequent	Beat / Miss	7.4%	(84.8%)		
	resumption of full production at our Wichita site." - Ted Gentile, Chief Executive Officer	Next Report Date (Q3): 11/01/2023				
	"We continue to see recovery in the commercial aerospace market and trends are still favorable as	Consensus	\$ 1,677	6.33		
TRANS DIGM	demand for travel remains high. Global domestic air traffic continues to lead the recovery and has surpassed pre-pandemic levels. International travel is	Actual	\$ 1,744	7.25		
	also making progress in catching up to domestic travel. However, total air travel demand remains slightly	Beat / Miss	4.0%	14.5%		
	below pre-COVID levels." - Kevin Stein, President and Chief Executive Officer	Next Repor	t Date (Q4): 1	4): 11/09/2023		
	"The Electronic Technologies Group's net sales increased 33%. The net sales increase principally	Consensus	\$ 697	0.74		
	reflects the impact from our fiscal '23 and '22 acquisitions as well as increased commercial aviation	Actual	\$ 723	0.77		
HEICO	and other electronics products net sales, partially offset by lower year-over-year defense products net sales."	Beat / Miss	3.7%	4.0%		
	- Victor Mendelson, Co-President	Next Repor	ort Date (Q4): 12/18/2023			

Source: S&P CapIQ, Yahoo Finance

Selected Company Performance: Defense

Company	Management Commentary	MRQ Resu	ults (USD N	lillions)		
			Sales	EPS		
	"This was yet another positive quarter reflecting	Consensus	\$ 9,940	2.87		
GENERAL	continuing strong demand. Aerospace book-to-bill was 1.4 to 1, and Gulfstream alone had a book-to-bill of 1.5	Actual	\$ 10,571	3.04		
DYNAMICS	to 1 . We continue to have vibrant sales activity going into the fourth quarter and expect strong orders."	Beat / Miss	6.3%	5.9%		
	- Jason Aiken, Chief Financial Officer	Next Repor	t Date (Q4): 2	024 TBD		
	"Results through the first three quarters have been solid with a long-term demand environment that is	Consensus	\$ 16,665	6.66		
LOCKHEED MARTIN	favorable. [] We're maintaining our full-year outlook while increasing our planned share repurchases	Actual	\$ 16,880	6.77		
	We're accelerating the adoption and insertion of 21st century digital technologies and collaborating more	Beat / Miss	1.3%	1.7%		
	closely with international partners and allies." - Jay Malave, Chief Financial Officer	Next Report Date (Q4): 2024 TBD				
	"We are also seeing an increase in international demand for our capabilities. We've seen a particular	Consensus	\$ 9,650	5.81		
NORTHROP]	increase in our weapon systems portfolio and missile defense technologies like the IBCS product line. One	Actual	\$ 9,780	6.18		
GRUMMAN I	notable example of this growing demand is with AARGM- ER where we've now received interest for more than a	Beat / Miss	1.1%	6.4%		
	dozen countries." - Kathy Warden, Chair, CEO & President	Next Report Date (Q4): 2024 TBD				
	"On the defense side, the elevated threat environment	Consensus	\$ 18,709	1.19		
	"On the defense side, the elevated threat environment is continuing to drive increased defense spending globally. [] Our backlog is now a record \$190 billion	Actual	\$ 18,952	1.25		
🦝 RTX	with a pipeline of both existing franchises and new technology developments."	Beat / Miss	1.3%	5.0%		
	- Greg Hayes, Chairman and Chief Executive Officer	Next Report Date (Q4): 2024 TBD				
	"L3Harris is viewed as a disruptive competitor that is re-shaping the defense industrial base. Underpinning	Consensus	\$ 4,818	3.06		
L3HARRIS™	our strategy is a focus on [] driving costs out of our system and focusing our portfolio as a national security company. In the third quarter, we reported 16% top-line	Actual	\$ 4,915	3.19		
	growth, a second consecutive quarter of sequential margin improvement, and strong cash generation	Beat / Miss	2.0%	4.3%		
	resulting in more than 100% FCF conversion." - Christopher Kubasik, Vice Chair & CEO	Next Repor	024 TBD			

Source: S&P CapIQ, Yahoo Finance

ADGS Capital Markets Performance

LTM Market Performance Across Primary Sector Indices



Aerospace has outperformed all indices over the LTM period due to the recovery in commercial air travel, but it experienced pressure in Q3 2023 due to OEM quality issues and continued supply chain challenges. Defense has underperformed as investors rotate into cyclical recovery trades and due to funding uncertainty around a potential government shutdown or continuing resolution. Government Services has outperformed the broader market driven by investment in AI and software-defined systems.



Historical Average EV / NTM EBITDA Multiples

Average public valuations have increased over the last twelve months for Aerospace and Government Services due to investor optimism around market recovery and continued spending, while Defense has remained steady as a continuing resolution was passed in lieu of a government shutdown. Shares of RTX fell nearly 30% during Q3 on news of P&W's GTF recall and the associated ~\$3B one-time charge, weighing down the Defense index.

Aerospace: AAR, Airbus, Astronics, Boeing, Bombardier, Embraer, HEICO, Hexcel, Safran, Spirit, TransDigm, Triumph

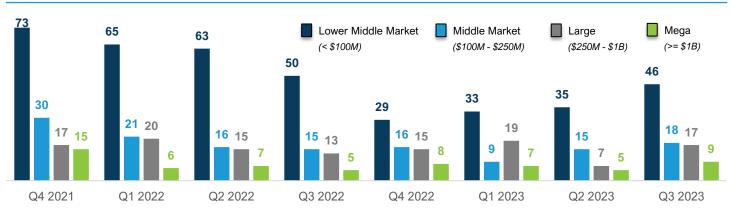
Defense: BAE Systems, General Dynamics, L3Harris, Lockheed Martin, Northrop Grumman, RTX Corporation

Government Services: Booz Allen Hamilton, CACI, ICF, Leidos, Maximus, Parsons, SAIC, V2X

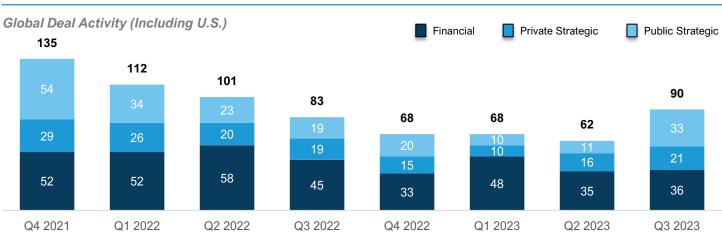
Source: S&P CapIQ

ADGS M&A Deal Volume Metrics

Global ADGS M&A Activity by Transaction Size

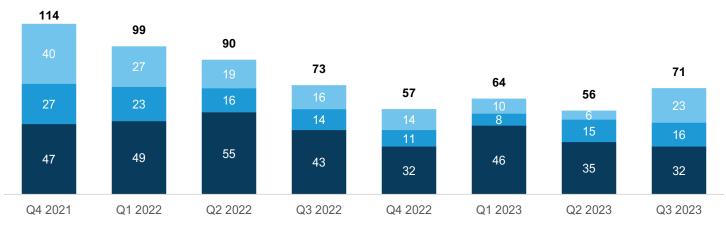


Overall, Q3 2023 saw an increase in deal volume, with the lower middle market and middle market continuing to represent the most volume, and large deals having the largest relative increase.



M&A Activity by Buyer Type

U.S. Deal Activity



M&A appetite among strategics, both public and private, has returned. In Q3 2023, strategics were buyers in over 50% of ADGS transactions for the first time in the U.S. since Q1 2022. Globally, 60% of Q3 transactions featured a strategic acquiror (versus a low of only 29% in Q1 2023). Increased financing costs have continued to impact financial sponsor activity.

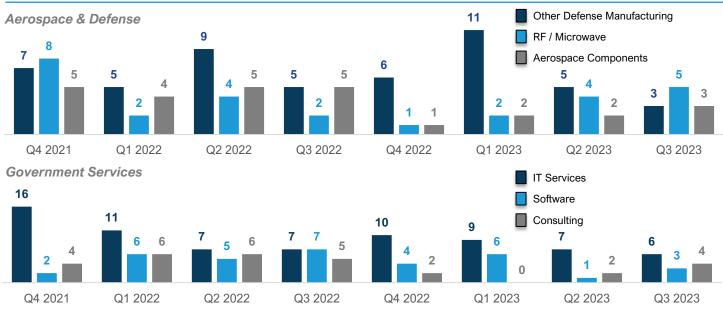
Source: DACIS DM&A. Transaction size data reflects Stout estimates.

ADGS M&A Deal Volume Metrics

M&A Activity by Industry Sector



Globally, the number of Aerospace deals fell sharply in Q3 (down 34% YoY, and 10% from Q2), while the number of both Defense and Government Services transactions rose. The same trend held true in the U.S.



Trends Across Select Subsectors

Transactions involving aerospace components, other defense manufacturing, and RF/microwave technology have accounted for the largest share of Aerospace and Defense transactions over the last eight quarters. Among Government Services transactions, IT services, software, and consulting have been the most active subsectors over the period.

Source: DACIS DM&A

Notable Transactions

Aerospace

Target	Acquiror	Key Stats	Commentary
Aerospace	BAE SYSTEMS	Announced: 8/17/2023 Status: Pending TEV: \$5,600M EV / LTM EBITDA: 19.6x	Vastly expands BAE's space portfolio and advances its positioning in one of the fastest-growing segments of the defense market.
Collins Aerospace Actuation & Flight Control a subsidiary of	SAFRAN	Announced: 7/21/2023 Status: Pending TEV: \$1,800M EV / 2024E EBITDA: 14.0x	This enhances Safran's position in mission-critical actuation and flight control functions and provides synergistic exposure across Safran's commercial, military aircraft, and helicopter segments.
a portfolio company of LEVINE LEICHTMAN CAPITAL PARTNERS	Bridgepoint	Announced: 7/20/2023 Status: Complete	Bridgepoint gains access to SK AeroSafety's blue-chip customer relationships and is well positioned to support SK AeroSafety's next phase of growth, with a focus on further international expansion.
AEROSPACE COMMUNICATIONS a portfolio company of Advent International GLOBAL PRIVING SOUTH	THALES	Announced: 7/12/2023 Status: Pending TEV: \$1,100M EV / 2023E EBIT: 17.0x	This strengthens the Thales Avionics portfolio and positions the company to capitalize effectively on the shift toward connected cockpits.

Defense

Target	Acquiror	Key Stats	Commentary
	ANDURIL	Announced: 9/7/2023 Status: Complete	This expands Anduril's existing unmanned portfolio to include large, high-performance, group 5 aircraft, increasing Anduril's reach and impact within the DoD.
United Electronic Industries		Announced: 9/6/2023 Status: Complete	UEI complements AMETEK's existing testing and data acquisition expertise and broadens its presence in the market for test, measurement, simulation, and control solutions.
EAGLEPICHER TECHNOLOGIES		Announced: 9/5/2023 Status: Pending	This is a strategic expansion for Tuthill into the manufacture of aerospace grade batteries, battery management systems, and energetic devices serving defense, space, and aviation battery applications.
ͳ <u>ϘϺ</u> ΔΗΔΨΙ Κ _{R Ο Β Ο Τ Γ C S}	AeroVironment [®]	Announced: 8/22/2023 Status: Complete TEV: \$120M	This strengthens AVAV's positioning in AI and autonomous systems through Tomahawk's flagship open architecture common control system Kinesis, which is used by DoD and other industry customers.

Notable Transactions

Government Services

Target	Acquiror	Key Stats	Commentary
a portfolio company of THOMABRAVO	ARLINGTON CAPITAL PARTNERS	Announced: 9/26/23 Status: Pending	This positions Exostar to continue building on the significant growth and transformation realized under Thoma Bravo's ownership and brings significant synergies with ACP's existing portfolio.
a portfolio company of TJC THE JORDAN COMPANY	ALVAREZ & MARSAL CAPITAL	Announced: 9/19/23 Status: Complete	This accelerates VTG's growth trajectory, allowing the company to make investments in the emerging capabilities and technologies most needed by its customers.
SEALINGTECH	PARSONS"	Announced: 8/23/23 Status: Complete TEV: \$200M	SealingTech's defensive cyber capabilities complement Parsons' offensive cyber capabilities and enhance its position in the full-spectrum cyber operations market, which is expected to remain a government budget priority.
	a portfolio company of	Announced: 8/21/2023 Status: Complete	This expands ARETUM's ability to support its customers' cloud and enterprise modernization efforts as well as new capabilities in Agile software development, DevOps, and mobile application development.
SBDV	$\mathbf{F}_{\mathbf{Solutions}}^{\mathbf{CONVERGED}}$ a portfolio company of $\mathbf{A} \not \mathbf{K} \not \subseteq \mathbf{Y} \mathbf{A}$ HILLCRESS her DOLDINGS	Announced: 8/16/2023 Status: Complete	This expands the capability set of CSS' existing Evolver business, which delivers IT transformation solutions. Customers include the Architect of the Capitol, the U.S. Department of Agriculture, the National Institutes of Health, and numerous large commercial customers.
DEFINITIVE LOGIC	ManTech a portfolio company of THE CARLYLE GROUP	Announced: 8/1/2023 Status: Complete	This adds more than 330 highly skilled and cleared employees to the ManTech team, expanding its suite of offerings in cloud, cyber, DevSecOps, data engineering, and AI/ML.
eTelligent Group		Announced: 7/18/2023 Status: Complete	IMB's investment will help eTel scale its suite of digital transformation services and pursue larger contracts.
Forcepoint Global Governments and Critical Infrastructure Business a portfolio company of FEP FRATESERS	TPG	Announced: 7/10/2023 Status: Complete TEV: \$2,450M	TPG ownership gives Forcepoint G2CI the flexibility and resources to grow its platform as a comprehensive, next-generation cybersecurity provider for the defense, intelligence, and critical national infrastructure industries.

Public Markets Performance

Company Name		Share					EBITDA	EV / Rev	EV / EBITDA	
	Ticker	9/30/23	% 52 High	Market Cap	Ent. Value	Revenue	Margin	LTM	LTM	NTM
Government Services		1.00	-						1.11	
Booz Allen Hamilton	BAH	\$109.27	87.3%	\$14,319.1	\$16,972.9	\$9,663.8	6.6%	1.8x	26,6x	15.2×
CACI International	CACI	313.93	87.4	7,112.6	8,693.3	6,702.5	10.6	1.3	12.3	11.3
ICF International	ICFI	120.81	88.3	2,273.9	2,882.5	1,926.8	9.6	1.5	15.6	13.2
Leidos Holdings	LDOS	92.16	83.1	12,658.3	17,274.3	14,842.0	10.1	1.2	11.5	10.8
Maximus	MMS	74.68	83.3	4,539.3	5,814.3	4,821.8	8.9	1.2	13.5	10.3
Parsons	PSN	54.35	94.5	5,785.1	6,428.9	4,767.4	7.5	1.3	17.9	14.2
SAIC	SAIC	105.54	85.4	5,596.1	7,521.1	7,689.0	12.1	1.0	8.1	11.2
V2X	VVX	51.66	91.0	1,612.2	2,742.4	3,857.6	6.5	0.7	10.9	8.7
Group Median			87.3%	\$5,690.6	\$6,975.0	\$5,762.2	9.3%	1.3x	12.9x	11.3×
Group Mean			87.5%	\$6,737.1	\$8,541.2	\$6,783.9	9.0%	1.2x	14.5x	11.9x
Diversified Engineering Serivces	100									-
ABM Industries	ABM	\$40.01	80.7%	\$2,621.9	\$3,848.4	\$8,014.6	5.4%	0.5x	8.8x	7.8x
AECOM	ACM	83.04	90.1	11,519.9	12,615.7	13,962.2	6.7	0,9	13.5	12.1
Dycom Industries	DY	89.00	72.9	2,615.0	3,326.2	4,046.9	10.6	0.8	7.8	6.8
EMCOR Group	EME	210.39	92.5	9,916.7	9,661.2	11,712.2	6.8	0.8	12.2	10.9
Fluor Corporation	FLR	36.70	94.4	5,286.4	4,133.4	15,014.0	1.0	0.3	27.6	6.8
Jacobs	J	136.50	99.0	17,225.8	20,030.0	15,944.8	8.4	1.3	15.0	12.7
KBR	KBR	58.94	89.5	7,967.5	9,187.5	6,690.0	8.6	1.4	16.1	11.7
MasTeo	MTZ	71.97	58.4	5,577.2	8,790.5	10,980.6	7.3	0.8	10.9	7.6
Serco Group	SRP	1.82	85.1	2,001.5	2,629.4	4,827.7	5.2	0.5	10.5	6.4
Tetra Tech	TTEK	152.03	87.7	8,114.0	8,857.4	3,429.8	12.6	2.6	20.5	16.9
Group Median			88.6%	\$6,772.4	\$8,823.9	\$9,497.6	7.0%	0.8x	12.9x	9.3x
Group Mean			85.0%	\$7,284.6	\$8,308.0	\$9,462.3	7.2%	1.0x	14.3x	10.0x
Aircraft and Engine OEMs										
Airbus	AIR	\$134.40	91.5%	\$106,064.4	\$100,275.0	\$61,616.0	11.5%	1,6x	14.2x	10.8x
Boeing	BA	191.68	78.8	115,690.6	154,220.6	73,608.0	1.5	2.1	NM	28.0
Bombardier	BBD.B	35.01	63.6	3,338.8	8,822.8	7,238.0	10.2	1.2	12.0	7.0
Embraer	EMBR3	3.45	81.0	2,533.1	17,806.2	25,414.5	4.8	0.7	14.5	28.8
General Electric	GE	110.55	93.7	119,701.2	121,109.2	80,938.0	11.4	1.5	13.1	15.2
MTU Aero Engines	MTX	181.78	70,1	9,772.8	10,210.0	5,954.0	13.6	1.7	12.6	8.5
Rolls-Royce	RR.	2.70	94.8	22,542.2	24,740.6	15,443.0	11.1	1.6	14.5	10.6
Safran	SAF	157.32	96.8	66,087.7	65,912.6	22,128.0	18.6	3.0	16.0	13.7
Group Median			86.2%	\$44,315.0	\$45,326.6	\$23,771.3	11.3%	1.6x	14.2x	12.2x
Group Mean			83.8%	\$55,716.3	\$62,887.1	\$36,542.4	10.3%	1.7x	13.8x	15.3×
Aerostructures										
Albany International	AIN	\$86.28	74.8%	\$2,690.2	\$2,881.5	\$1,072.6	23.0%	2.7x	11.7x	10.7x
Hexcel	HXL	65.14	82.4	5,516.7	6,191.6	1,706.1	19.8	3.6	18.3	15.3
Senior	SNR	1.99	88.6	814.3	995.1	928,5	8.0	1.1	13.4	9.5
Spirit AeroSystems	SPR	16.14	41.9	1,699.4	5,048.1	5,393.1	NM	0.9	NM	11.2
Group Median			78.6%	\$2,194.8	\$3,964.8	\$1,389.3	19.8%	1.9x	13.4x	10.9x
Group Mean			71.9%	\$2,680.1	\$3,779.1	\$2,275.1	16.9%	2.1x	14.5x	11.7x

Note: \$ in millions, except share price; Enterprise Value ("EV") equals Market Value plus straight/convertible debt, preferred stock, minority interest, less cash and short-term investments

Source: S&P Capital IQ as of 9/30/2023

AEROSPACE, DEFENSE, AND GOVERNMENT SERVICES UPDATE | Q3 2023

Public Markets Performance (Continued)

Company Name		Share Pr					EBITDA	EV / Rev	EV / EBITDA	
	Ticker	9/30/23	% 52 High	Market Cap	Ent. Value	Revenue	Margin	LTM	LTM	NTM
Aftermarket / MROs										
AAR Corp.	AIR	\$59.53	93.2%	\$2,091.9	\$2,326.4	\$2,093.9	7.9%	1.1x	14.0x	10.7×
HEICO Corp.	HEI	161.93	88.9	22,669.2	23,578.9	2,641.3	26.1	8.9	34.3	26.3
SIA Engineering Co.	S59	1.75	94.8	1,966.6	1,614.1	886.4	NM	1.8	NM	15.8
Singapore Technologies Engineering	S63	2.86	99.2	8,922.5	15,006.5	9,628.6	12.1	1.6	12.8	10.8
TransDigm Group	TDG	843.13	89.7	46,526.6	63,122.6	6,243.0	48.0	10.1	21,1	17.2
VSE	VSEC	50.44	85.3	794.1	1,165.1	1,013,5	9.6	1.1	12.0	9.9
Group Median	_		91.4%	\$5,507.2	\$8,666.5	\$2,367.6	12.1%	1.7x	14.0x	13.3x
Group Mean			91.9%	\$13,828.5	\$17,802.3	\$3,751.1	20.7%	4.1x	18.8x	15.1x
Aerospace Suppliers										
Astronics Corp.	ATRO	\$15.86	70.7%	\$516.5	\$690.8	\$620.6	0.6%	1.1x	NM	9.3x
Crane Co.	CR	88.84	71.8	5,039.9	5,083.3	3,329.2	20.4	1.5	7.5	14.5
Ducommun	DCO	43.51	74.7	635.2	890.1	743.4	10.9	1.2	11.0	8.0
Héroux-Devtek	HRX	11.84	96.4	402.1	588.1	570.2	10.2	1.0	10,1	7.3
Howmet Aerospace	HWM	46.25	90.1	19,087.1	22,596.1	6,197.0	21.7	3.6	16.8	14.8
Kaman Corp.	KAMN	19.65	56.5	554.5	1,102.8	758.8	15.7	1.5	9.2	10.0
Lisi	FU	23.55	82.4	1,067.9	1,603.2	1,591.3	10.7	1.0	9.4	7.6
Moog	MOG.A	112.96	94.4	3,630.8	4,596.8	3,215.1	11.4	1.4	12.5	10.5
RBC Bearings	RBC	234.13	91.4	6,786.0	8,079,5	1,502.3	29.0	5,4	18.6	16.5
Triumph Group	TGI	7.66	57.5	587.6	2,119.0	1,356.9	14.3	1.6	10.9	9.4
Woodward	WWD	124.26	93.3	7,713.8	8,350.6	2,777.5	12.8	3.0	23.5	15.5
Group Median			82.4%	\$1,067.9	\$2,119.0	\$1,502.3	12.8%	1.5x	11.0x	10.0×
Group Mean			79.9%	\$4,183.8	\$5,063.7	\$2,060.2	14.3%	2.0x	13.0x	11.2x
Defense Primes										
BAE Systems	BA.	\$12.18	93.7%	\$37,001.1	\$39,797.4	\$22,516.0	12.3%	1.8x	14.3x	11.7x
General Dynamics	GD	220.97	86.0	60,477.6	69,078.6	40,859.0	12,4	1.7	13.6	11.9
Lockheed Martin	LMT	408.96	80.5	102,989.0	116,861.0	67,393.0	15.3	1.7	11.3	11.8
L3Harris Technologies	LHX	174.12	68.3	32,994.7	41,541.7	17,988.0	15.3	2.3	15.1	10.8
Northrop Grumman	NOC	440.19	79.1	66,600.6	78,888.6	37,881.0	19.1	2.1	10.9	13.9
RTX Corporation	RTX	71.97	66.1	104,505.6	136,074.6	70,573.0	17.1	1,9	11.3	9.9
Group Median			79.8%	\$63,539.1	\$73,983.6	\$39,370.0	15.3%	1.8x	12.5x	11.8x
Group Mean			79.0%	\$67,428.1	\$80,373.6	\$42,868.3	15.3%	1.9x	12.7x	11.7×
Defense Electronics / C5ISR										
Elbit Systems	ESLT	\$198.76	93.9%	\$8,814.4	\$9,824.1	\$5,702.8	8.3%	1.7x	20.6x	16.3x
Hensoldt	5UH	29.57	74.4	3,105,1	3,678.6	1,751.0	13.2	2.1	15.9	10.6
Kratos Defense & Security Solutions	KTOS	15.02	86.8	1,923.6	2,176.6	966.6	4.3	.2.3	NM	21.6
Mercury Systems	MRCY	37.09	62.7	2,199.5	2,639.4	973.9	9.4	2.7	29.0	15.5
QinetiQ Group	QQ.	3.89	83.4	2,235.2	2,418.2	1,580.7	15.2	1,5	10,0	8.7
Teledyne Technologies	TDY	408.58	91.1	19,513.6	22,506.6	5,589.8	24.2	4.0	16.6	15.7
Thales	но	140.88	92.3	29,369.4	29,930.0	18,028.3	12.7	1.7	13.0	10.0
Group Median			86.8%	\$3,105.1	\$3,678.6	\$1,751.0	12.7%	2.1x	16.3x	15.5x
Group Mean			83.5%	\$9,594.4	\$10,453.4	\$4,941.9	12.5%	2.11	10.5%	14.1x

Note: \$ in millions, except share price; Enterprise Value ("EV") equals Market Value plus straight/convertible debt, preferred stock, minority interest, less cash and short-term investments

Source: S&P Capital IQ as of 9/30/2023

AEROSPACE, DEFENSE, AND GOVERNMENT SERVICES UPDATE | Q3 2023

Public Markets Performance (Continued)

		Share	Price		Market Cap Ent. Value		EBITDA Margin	EV / Rev	EV / EBITDA	
Company Name	Ticker	9/30/23	% 52 High	Market Cap		Revenue			LTM	NTM
Other Defense										
AeroVironment	AVAV	\$111.53	89.7%	\$2,917.6	\$2,940.3	\$584.4	16.5%	5.0x	30.4x	23.5x
Chemring Group	CHG	3.39	83.5	955.5	978.7	434.5	16.4	2.3	13.7	10.7
Cohort	CHRT	6.00	87.9	242.9	229.2	182.7	11.6	1.3	10.8	9.1
Curtiss-Wright Corp.	CW	195.63	93.3	7,493.7	8,511.0	2,723.5	21.8	3.1	14.3	13.8
Honeywell	HON	184.74	83.6	123,208.6	136,414.6	36,147.0	23.9	3.8	15.8	14.0
Huntington Ingalls Industries	HII	204.58	78.7	8,156.1	10,723.1	10,899.0	9.8	1.0	10.0	10.0
Kongsberg Gruppen	KOG	41.37	89,2	7,277.4	7,582.6	3,302.2	1.2	2.3	16.9	13.6
Leonardo	LDO	14.46	96.4	8,317.8	12,564.8	15,031.0	9.4	0.8	8.9	6.6
Leonardo DRS	DRS	16.70	93.0	4,406.3	4,864.3	2,651.0	9.6	1.8	19.1	13.4
Rheinmetall	RHM	258.15	86.7	11,199.0	12,117.8	6,597.0	14.0	1.8	13.1	8.3
Saab	SAAB B	51.09	83.5	6,791.6	6,445.5	4,285.1	1.0	1.5	14,1	10.0
Textron	TXT	78.14	96.9	15,662.5	17,503.5	13,162.0	11.8	1.3	11.3	10.3
Group Median			88.5%	\$7,385.5	\$8,046.8	\$3,793.6	11.7%	1.8x	13.9x	10.5x
Group Mean			88.5%	\$16,385.7	\$18,406.3	\$7,999.9	12.3%	2.2x	14.9x	11.9x
Space										
Astra Space	ASTR	\$1.85	16.7%	\$34.1	\$2.2	\$3.5	NM	0.6x	NM	(0.0x)
Momentus	MNTS	2.00	2.5	4.5	(8.1)	2.0	NM	(4.1)	0.1	0.1
Redwire Corp.	RDW	2.89	63.1	187.2	338.6	208.7	NM	1.6	NM	83.0
Blacksky Technologies	BKSY	1.17	49.5	162.3	184.1	74.1	NM	2.5	NM	47.0
Planet Labs	PL	2.60	41.5	742.7	374.9	209.1	NM	1.8	NM	(9.5)
Intuitive Machines	LUNR	3.65	2.7	77.6	663.9	84.5	NM	7.9	NM	(21.2)
Satellogic	SATL	1.17	22.1	104.9	62.9	6.8	NM	9.2	NM	NM
Terran Orbital	LLAP	0.83	24.1	164.6	284.9	120.2	NM	2,4	NM	(36.2)
Spire Global	SPIR	4.89	38.7	101.9	157.5	93.5	NM	1.7	NM	(42.5)
Rocket Lab	RKLB	4.38	54.4	2,176.9	1,955.5	231.8	NM	8.4	NM	(29.5)
Group Median			31.4%	\$133.6	\$234.5	\$89.0	NM	2.1x	0.1x	NM
Group Mean			31.5%	\$375.7	\$401.6	\$103.4	NM	3.2x	0.1x	NM
Overall Median			85.4%	\$5,401.5	\$6,437.2	\$4,166.0	11.3%	1.6x	13.4x	10.8x
Overall Mean			77.7%	\$16,881.7	\$19,663.9	\$10,784.6	12.4%	2.1x	14.5x	10.9x

Note: \$ in millions, except share price; Enterprise Value ("EV") equals Market Value plus straight/convertible debt, preferred stock, minority interest, less cash and short-term investments Source: S&P Capital IQ as of 9/30/2023

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Stout ADGS Investment Banking Team

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