



GCG INDUSTRY UPDATE | Aerospace & Defense

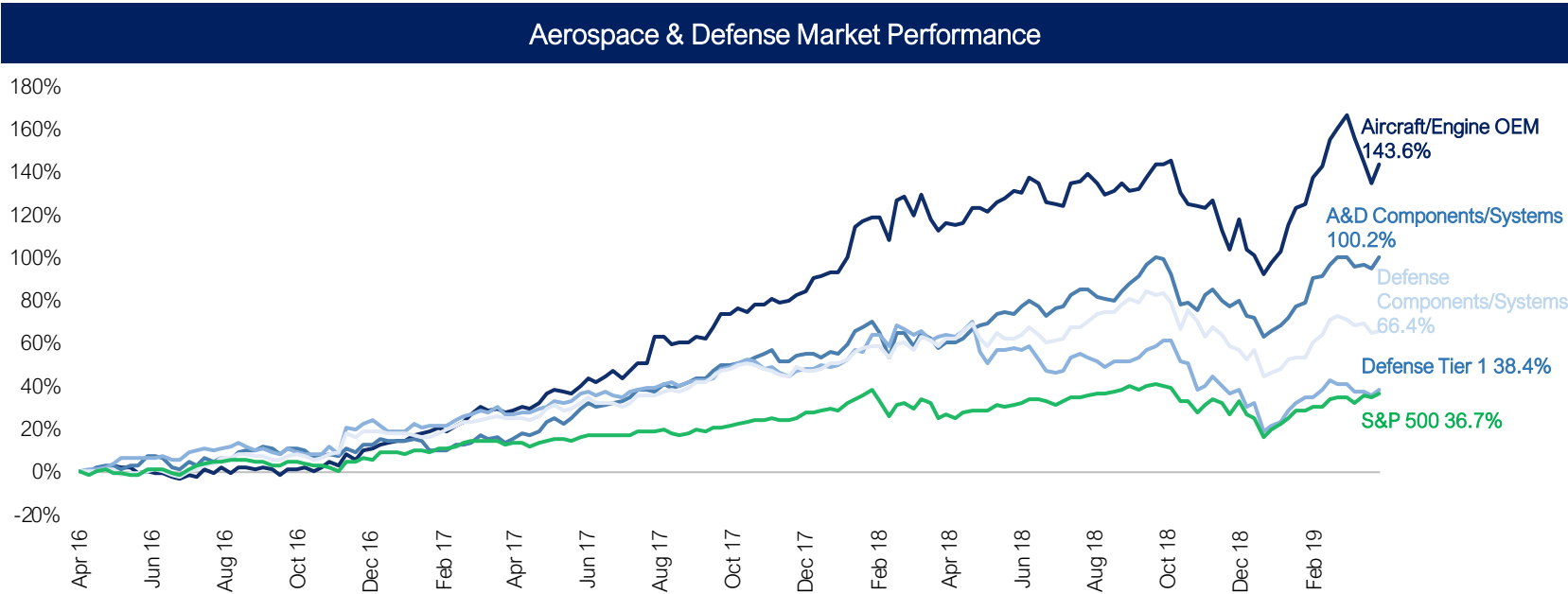
Q1 2019



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Public Market Performance

Q1 2019 saw strong gains in the Aerospace & Defense (“A&D”) industry and the broader U.S. equity market as the market sentiment reversed course from a negative and volatile Q4 2018. On a 3-year period ending March 31, the S&P 500 returned 36.7%. This benchmark index significantly underperformed the overall gains by the various segments of the A&D industry. Aircraft/Engine OEMs have set the pace for the rest of the industry gaining 143.6% in the 3-year period. However, recent developments in the two fatal crashes involving Boeing’s (NYSE: BA) 737 MAX have led to declines among related companies.



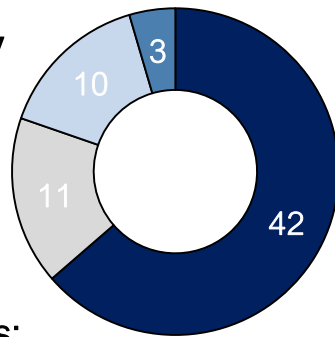
Source: S&P Capital IQ
Note: All values based on publicly available data as of 3/31/2019



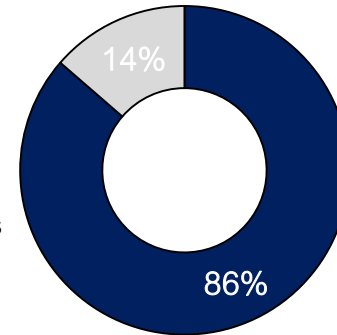
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M&A Activity

Q1 2019
Transaction Volume:
66



■ Aerospace
■ Defense IT/Services
■ Defense
■ Space



■ Strategic Buyer
■ Financial Buyer

Select Transactions:

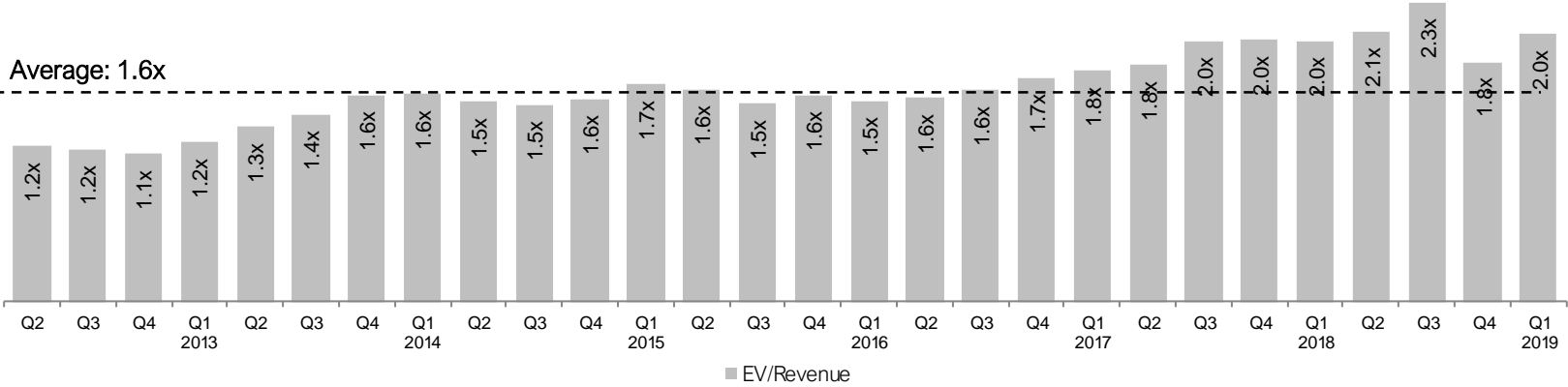
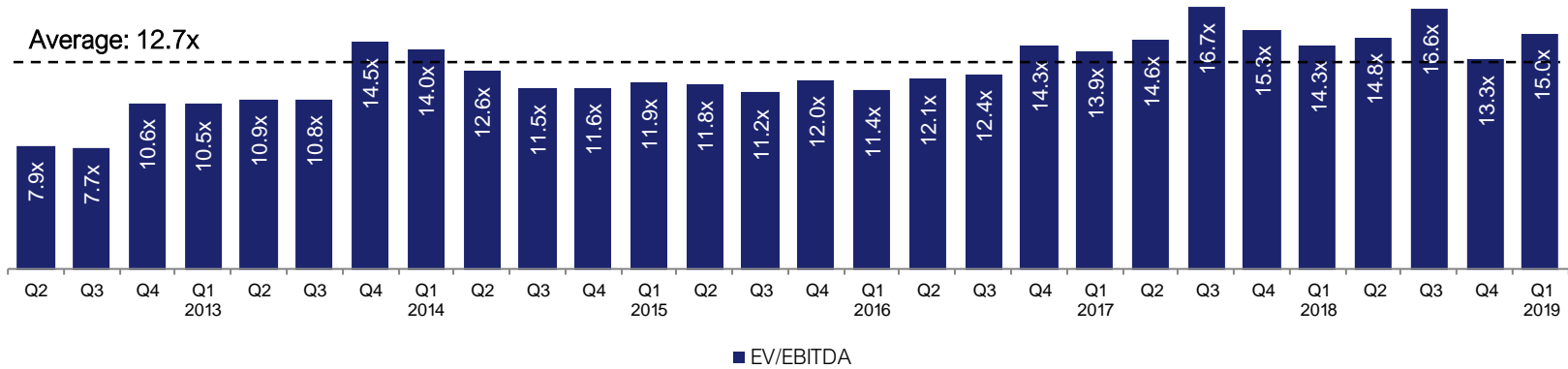
Announced	Target / Seller	Buyer	Transaction Value	Target Description
03/26/2019	Systron Donner Inertial	Resilience Capital Partners LLC	-	World's leading supplier of quartz microelectromechanical systems that provide precision guidance, navigation and locational solutions
03/18/2019	Tactical Communications Group / Era Group	Curtiss-Wright Corporation (NYSE:CW)	\$50	Provides highly structured communication links used by the military for the transmission and exchange of tactical data
03/11/2019	Dart Aerospace Limited	First Aviation Services Inc.; Greenbriar Equity Group	-	Provides mission equipment and aftermarket components for the helicopter and fixed-wing industries
03/08/2019	Midwest Precision, LLC	Tribus Aerospace LLC	-	Specializes in close tolerance CNC machining of components used in A&D, energy and engineered products applications
03/04/2019	Onboard Systems International Inc.	Liberty Hall Capital Partners, L.P.	-	External cargo handling equipment for civil and military helicopters with factory installed products on over 30 helicopter models
02/28/2019	Decavo LLC	Flight Support Group, Inc.	-	Designs and produces complex composite parts in defense & civilization applications
02/28/2019	Florida Turbine Technologies and FTT Core	Kratos Defense & Security Solutions, Inc. (NasdaqGS:KTOS)	\$64	Competes in the small-sized, affordable turbofan and turbojet marketplace (14.2x EBITDA)
02/15/2019	N2 Imaging Systems, LLC / Rockwell Collins, Inc.	Cornerstone Capital Holdings, LLC	-	Manufactures compact, low power, visible and infrared imaging systems for soldier vision
02/11/2019	Endeavor Robotics / Arlington Capital Partners	FLIR Detection, Inc.	\$382	Leading developer of battle-tested, tactical unmanned ground vehicles (UGVs)
01/29/2019	GECO Inc.	Mercury Systems, Inc	\$37	Designs & manufactures safety-critical avionics and mission computing solutions
01/28/2019	Aeryon Labs Inc. / Summit Partners	FLIR Systems, Inc.	\$200	Develops drones for the global military, public safety and critical infrastructure markets
01/28/2019	Fabrications Business / Triumph Group Inc.	Arlington Capital Partners LP	-	Carve-out acquisition of five forming and fabrication facilities. One of four divestitures by the Triumph Group in Q1 2019
01/24/2019	Metallics Machining Business / Triumph Group Inc.	TECT Aerospace, Inc.; TECT Power, Inc.	-	Provides vertically integrated assemblies, high velocity machining of monolithic components used to manufacturer a wide variety of aerostructures
01/22/2019	LEKTRO, Inc.	John Bean Technologies Corporation	\$48	Manufactures pushback tractors for piston engined aircraft, business jets, commercial airliners and military aircraft
01/07/2019	Williams Aerospace & Manufacturing, Inc.	Kellstrom Defense Aerospace, Inc.	-	Acquisition leads to an increased legacy spare parts solutions for the global military aircraft operator community

Source: Capital IQ and GCG research



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Public Company Trading Multiples



Source: S&P Capital IQ
 Note: All values based on publicly available data as of 3/31/2019



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Public Comparable Companies

Company Name	Enterprise	Revenue	Price Change		LTM Margins		TEV / LTM:		
	Value (\$mils)	(\$mils)	3 month	12 month	Gross	EBITDA	Revenue	EBITDA	
Aircraft/Engine OEM									
The Boeing Company	\$ 220,659	\$ 101,127	18.3%	16.3%	19.4%	13.8%	2.2x	15.8x	
Airbus SE	\$ 98,664	\$ 72,941	37.7%	14.5%	14.1%	8.6%	1.4x	15.7x	
Rolls-Royce Holdings plc	\$ 21,942	\$ 20,047	11.2%	(3.9%)	7.6%	(1.2%)	1.1x	NM	
Textron Inc.	\$ 14,644	\$ 13,785	10.2%	(14.1%)	17.1%	11.4%	1.1x	9.3x	
MTU Aero Engines AG	\$ 12,830	\$ 5,229	24.9%	34.4%	19.8%	16.1%	2.5x	15.2x	
Bombardier Inc.	\$ 12,338	\$ 16,236	29.3%	(33.9%)	14.0%	6.4%	0.8x	11.8x	
Dassault Aviation SA	\$ 6,424	\$ 5,861	6.5%	(22.8%)	38.8%	10.5%	1.1x	10.5x	
Embraer S.A.	\$ 4,541	\$ 4,836	(15.4%)	(27.3%)	15.0%	5.4%	0.9x	17.5x	
Mean	\$ 39,506	\$ 30,008	15.3%	(4.6%)	18.2%	8.9%	1.4x	13.7x	
Median	\$ 13,737	\$ 15,011	14.7%	(9.0%)	16.1%	9.5%	1.1x	15.2x	

Source: S&P Capital IQ

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Public Comparable Companies (Cont'd)

Company Name	Enterprise	Revenue	Price Change		LTM Margins		TEV / LTM:	
	Value (\$mils)	(\$mils)	3 month	12 month	Gross	EBITDA	Revenue	EBITDA
A&D Components/Systems								
Safran SA	\$ 64,804	\$ 24,245	13.7%	29.5%	43.8%	15.6%	2.7x	17.1x
TransDigm Group Incorporated	\$ 34,575	\$ 3,956	33.5%	47.9%	57.9%	47.9%	8.7x	18.2x
HEICO Corporation	\$ 12,556	\$ 1,839	22.4%	22.4%	39.0%	25.9%	6.8x	26.3x
Spirit AeroSystems Holdings, Inc.	\$ 10,794	\$ 7,222	27.0%	9.4%	15.1%	15.3%	1.5x	9.8x
Woodward, Inc.	\$ 7,009	\$ 2,509	27.7%	32.4%	26.3%	18.2%	2.8x	15.4x
Hexcel Corporation	\$ 6,794	\$ 2,189	20.6%	7.1%	26.5%	22.6%	3.1x	13.7x
Meggitt PLC	\$ 6,449	\$ 2,652	9.1%	8.0%	36.4%	18.8%	2.4x	12.9x
Triumph Group, Inc.	\$ 2,556	\$ 3,393	65.7%	(24.4%)	15.6%	3.8%	0.8x	20.0x
Senior plc	\$ 1,380	\$ 1,379	17.7%	(32.7%)	20.8%	11.5%	1.0x	8.7x
Astronics Corporation	\$ 1,282	\$ 803	7.5%	0.9%	22.5%	12.0%	1.6x	13.3x
AAR Corp.	\$ 1,266	\$ 1,963	(12.9%)	(26.3%)	16.3%	7.3%	0.6x	8.8x
Magellan Aerospace Corporation	\$ 784	\$ 708	21.0%	(12.3%)	16.9%	15.1%	1.1x	7.4x
Ducommun Incorporated	\$ 716	\$ 629	19.8%	43.3%	19.5%	10.3%	1.1x	11.1x
Héroux-Devtek Inc.	\$ 626	\$ 322	25.4%	2.2%	16.5%	14.3%	1.9x	13.6x
Latécoère S.A.	\$ 389	\$ 755	9.8%	(43.0%)	100.0%	10.6%	0.5x	4.9x
Mean	\$ 10,132	\$ 3,638	20.5%	4.3%	31.5%	16.6%	2.5x	13.4x
Median	\$ 2,556	\$ 1,963	20.6%	7.1%	22.5%	15.1%	1.6x	13.3x

Source: S&P Capital IQ

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Public Comparable Companies (Cont'd)

Company Name	Enterprise	Revenue	Price Change		LTM Margins		TEV / LTM:	
	Value (\$mils)	(\$mils)	3 month	12 month	Gross	EBITDA	Revenue	EBITDA
Defense Tier 1								
Lockheed Martin Corporation	\$ 98,275	\$ 53,762	14.6%	(11.2%)	13.7%	15.4%	1.8x	11.8x
General Dynamics Corporation	\$ 60,337	\$ 36,193	7.7%	(23.4%)	18.6%	14.5%	1.7x	11.5x
Northrop Grumman Corporation	\$ 58,780	\$ 30,095	10.1%	(22.8%)	22.7%	16.6%	2.0x	11.7x
Raytheon Company	\$ 53,248	\$ 27,058	18.7%	(15.6%)	27.7%	14.0%	2.0x	14.0x
BAE Systems plc	\$ 21,492	\$ 21,439	7.3%	(23.0%)	64.8%	10.7%	1.0x	9.3x
Huntington Ingalls Industries, Inc.	\$ 9,674	\$ 8,176	8.9%	(19.6%)	21.9%	14.8%	1.2x	8.0x
Leonardo S.p.a.	\$ 9,572	\$ 14,014	32.3%	0.6%	38.1%	11.2%	0.7x	6.0x
Saab AB (publ)	\$ 4,083	\$ 3,731	(7.3%)	(29.1%)	23.5%	9.5%	1.1x	11.5x
Mean	\$ 39,433	\$ 24,308	11.5%	(18.0%)	28.9%	13.4%	1.4x	10.5x
Median	\$ 37,370	\$ 24,248	9.5%	(21.2%)	23.1%	14.3%	1.4x	11.5x

Source: S&P Capital IQ

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Public Comparable Companies (Cont'd)

Company Name	Enterprise	Revenue	Price Change		LTM Margins		TEV / LTM:	
	Value (\$mils)	(\$mils)	3 month	12 month	Gross	EBITDA	Revenue	EBITDA
Defense Components/Systems								
Harris Corporation	\$ 22,295	\$ 6,445	18.6%	(1.0%)	36.5%	23.6%	3.5x	14.7x
Thales S.A.	\$ 22,179	\$ 18,153	2.6%	(1.7%)	25.8%	11.9%	1.2x	10.3x
L3 Technologies, Inc.	\$ 18,731	\$ 10,244	18.8%	(0.8%)	26.3%	13.1%	1.8x	13.9x
FLIR Systems, Inc.	\$ 6,362	\$ 1,776	9.3%	(4.9%)	50.9%	22.9%	3.6x	15.6x
Elbit Systems Ltd.	\$ 6,138	\$ 3,684	12.7%	7.3%	28.3%	11.5%	1.7x	14.5x
Mercury Systems, Inc.	\$ 3,251	\$ 572	35.5%	32.6%	44.6%	19.8%	5.7x	28.7x
Aerojet Rocketdyne Holdings, Inc.	\$ 2,685	\$ 1,896	0.9%	27.0%	18.3%	12.8%	1.4x	11.1x
Cubic Corporation	\$ 1,981	\$ 1,260	4.7%	(11.6%)	30.5%	7.5%	1.6x	21.0x
Kratos Defense & Security Solutions, Inc.	\$ 1,738	\$ 618	10.9%	51.9%	27.5%	8.4%	2.8x	33.3x
Ultra Electronics Holdings plc	\$ 1,686	\$ 977	25.4%	7.1%	29.0%	15.1%	1.7x	11.4x
AeroVironment, Inc.	\$ 1,320	\$ 343	0.7%	50.3%	41.8%	19.0%	3.9x	20.3x
Chemring Group PLC	\$ 613	\$ 379	(12.0%)	(35.6%)	71.9%	3.5%	1.6x	45.7x
Arotech Corporation	\$ 87	\$ 97	11.8%	(3.9%)	30.2%	6.9%	0.9x	13.1x
Espey Mfg. & Electronics Corp.	\$ 50	\$ 29	(0.7%)	(5.5%)	19.3%	6.4%	1.7x	27.1x
Mean	\$ 6,365	\$ 3,319	9.9%	7.9%	34.3%	13.0%	2.4x	20.1x
Median	\$ 1,757	\$ 1,118	10.1%	(0.9%)	29.6%	12.3%	1.7x	15.2x
Aerospace & Defense Mean	\$ 21,080	\$ 11,901	14.7%	(0.1%)	29.6%	13.5%	2.0x	15.0x
Aerospace & Defense Median	\$ 6,138	\$ 3,684	12.7%	(1.7%)	25.8%	12.8%	1.6x	13.4x

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GCG INDUSTRY UPDATE | Aerospace & Defense

Aerospace & Defense Expertise

GCG's Aerospace & Defense ("A&D") team has an extensive industry background formed by working with dozens of clients across nearly all aspects of the commercial aerospace, regional jet, business jet, helicopter, military aircraft, and defense supply chain continuum. With experience serving private and publicly traded A&D companies in the U.S. and abroad, GCG has a deep understanding of the trends and dynamics affecting this increasingly global industry.

More about Greenwich Capital Group

Greenwich Capital Group ("GCG") is a middle market focused advisory firm offering a range of investment banking and consulting services to private companies, public companies and private equity investors. For additional perspective or to discuss M&A related opportunities in the aerospace & defense sector, please reach out to GCG's A&D practice leader, Peter Frankfort. For more information, please visit www.greenwichgp.com.



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Data Sources: We have based our findings on data provided by industry recognized sources. Data and information for this publication was collated from the S&P Capital IQ database. For more information on this or anything else related to our research, please email info@greenwichgp.com.

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