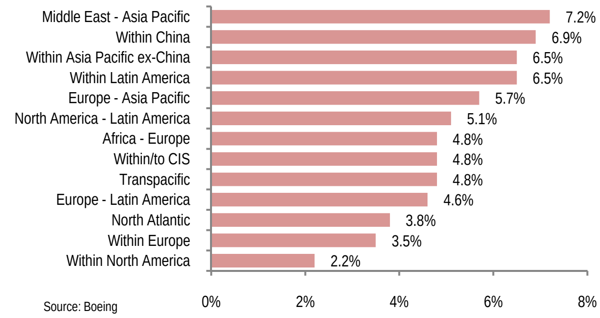
# Aerospace and Defense Industry Compendium

## Commercial Aviation

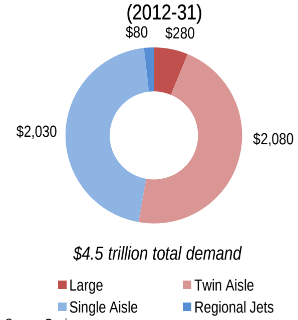
Global passenger air traffic, as measured by revenue passenger miles, grew 6.5% year-over-year in the first half of 2012, on the heels of a 6.9% annual increase in 2011, according to the International Air Transportation Association (IATA). The airline industry continues to see long-term demand for new commercial jets, fueled by fleet growth in the developing markets and a need to replace aging and less fuel-efficient aircrafts in developed markets. Air traffic in emerging economies is expected to grow from 5% to 7% annually for the next 20 years, vastly outpacing the projected 2% annual growth in North America. In aggregate, global passenger traffic is expected to grow 5% annually through 2031, according to Boeing's *Long-term Market Outlook*.

Annual Airline Traffic Growth 2011-2031



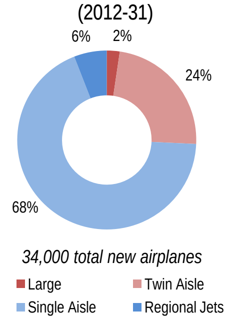

Source: Boeing

Aircraft Demand ($bn)
(2012-31)




Source: Boeing

Aircraft Demand (% by type)
(2012-31)




Market leaders Boeing and Airbus have both announced significant production rate increases that stretch through mid-2014, with both companies expecting deliveries to increase by about 40% from 2011 to 2014.

Boeing and Airbus project a $4 trillion to $4.5 trillion demand over the next 20 years for commercial aircrafts primarily due to the emerging global middle class and the replacement of two-thirds of existing, less eco-efficient aircrafts. This equates to 34,000 new airplanes to be built, with the majority of demand attributed to single aisle airplanes (i.e., Boeing 737 and Airbus A320) which accommodate shorter distance travel.

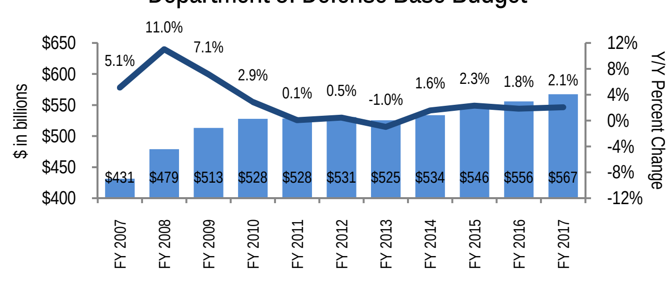
In recent years, the Boeing–Airbus duopoly has wielded considerable power over a somewhat fragmented supply base, but the duopoly is vanishing as a host of foreign companies, some with state support, are poised to enter the market, according to Booz & Co. For example, Commercial Aircraft Corporation of China Ltd. (COMAC) could emerge as a low-cost value player, as well as ultimately become the manufacturer of choice in emerging Asia, where the majority of industry growth will be derived.

## Defense

If Congress is unable to reach a compromise on how to solve America's $16 trillion debt dilemma, almost $500 billion in mandatory cuts to the U.S. Department of Defense (DoD) budget over the next decade would initiate in January 2013. Sequestration "would destroy the military" and cause an "inability to defend the nation" argued Senator John McCain, ranking member of the Senate Armed Services committee. The sequestration dilemma emerged from the Budget Control Act of 2011, which entailed a first wave of over $400 billion in cuts to U.S. security spending and the creation of a committee of representatives from both parties in Congress that was tasked with finding a set of reforms that would reverse the U.S. debt growth. If no agreement could be reached by the end of 2012, the mandatory cuts of sequestration would begin January 2, 2013—the threat of mandatory cuts was intended to motivate the two sides to find a way to compromise over the coming year.

The *Fiscal Year 2013 President's Budget* accounts for a $525 billion DoD budget in 2013, returning to the fiscal 2011 spending level. Sequestration would result in approximately a $55 billion, or roughly 10%, reduction to that amount. Sequestration aside, the U.S. defense budget is inevitably headed for significant cuts as a result of the conclusion of Operation Iraqi Freedom and the withdrawal of U.S. troops from Afghanistan, and as politicians seek to rein in a large federal budget deficit. As the large-scale integrators deal with program cancellations and restructurings, contract renegotiations, and general reductions in the DoD contractor workforce, small- to mid-sized firms will ultimately feel the domino effect as well.

Department of Defense Base Budget



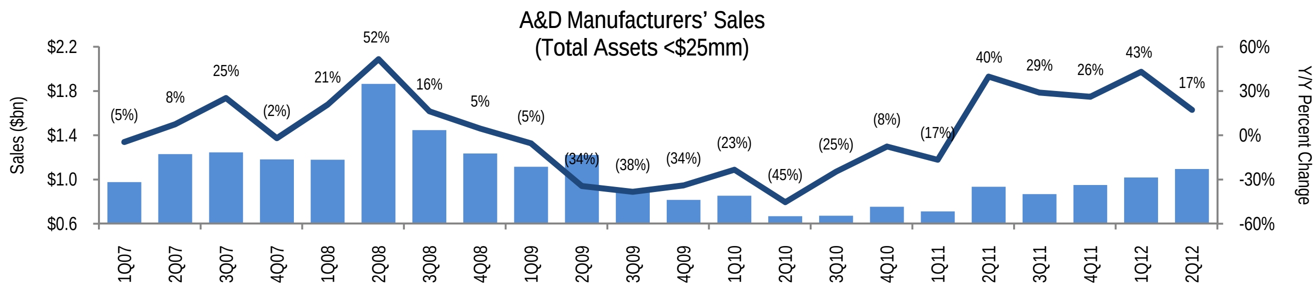

Source: U.S. Department of Defense

Sources: Boeing 2012 Market Outlook; Airbus 2012 Global Market Forecast; U.S. Department of Defense; Booz & Co. 2012 Aerospace & Industry Perspective; Time Magazine (Sept 2012)

# Aerospace and Defense Sector Financial Trends

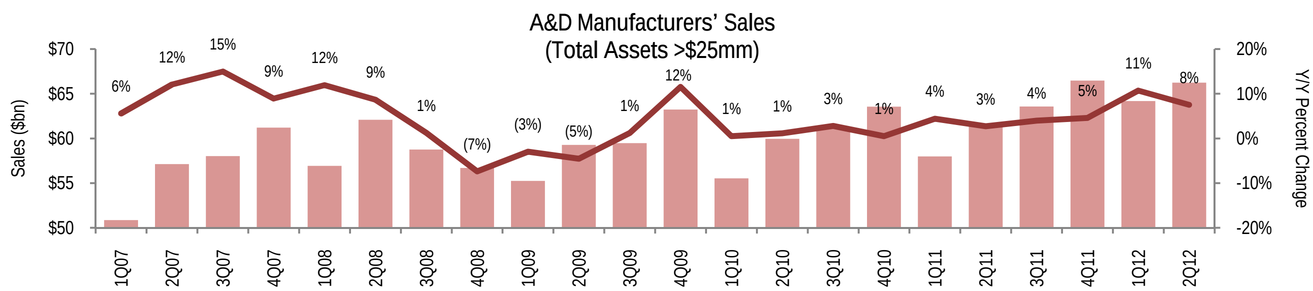
According to the Small Business Administration, 20% of DoD prime contracts and 35% of DoD subcontracts in 2011 were awarded to small firms, while 18% of NASA prime contracts and 38% of NASA subcontracts went to small companies. Moreover, nearly 75% of defense industrial purchases are directed to small suppliers, many of which are the only source of specialty parts and technologies for the U.S. military.

Small- and medium-sized corporations (with assets less than $25 million) that manufacture aerospace and defense products and parts continued their robust recovery in 2012, with double digit year-over-year increases for the fourth consecutive quarter in 2Q 2012 after persevering through six consecutive quarters of declining sales from 3Q 2009 to 1Q 2011. Aggregate sales increased 17% year-over-year to $1.1 billion in 2Q 2012 and increased 28% year-over-year to $2.1 billion in 1H 2012. However, sales are still 41% below the five-year high of $1.9 billion reached in 2Q08.




Source: U.S. Census Bureau

Large corporations (with assets greater than $25 million) that manufacture aerospace and defense products and parts are on track to one of their strongest years on record. These larger corporations experienced less of a downturn during the recession than their smaller counterparts and thus have seen more modest increases in sales. Aggregate sales increased 8% year-over-year to $66 billion in 2Q 2012 and increased 9% year-over-year to $130 billion in 1H 2012. Industry revenue has been primarily driven by the commercial aviation boom.

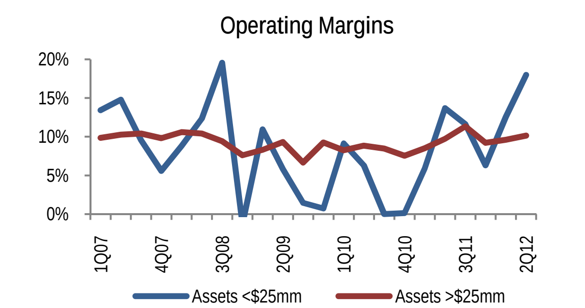



Source: U.S. Census Bureau

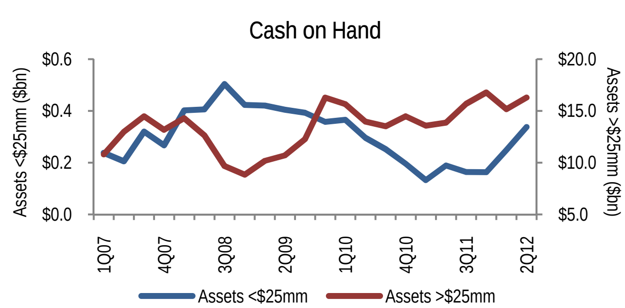
Operating margins for small- to medium-sized aerospace and defense manufacturers improved to 18% in 2Q 2012, the highest level since 3Q 2008 and more than double the five-year average of 7.9%. Historically, these firms have seen wild swings in their margins on a quarter to quarter basis, most likely attributed to their niche market focus, concentrated product lines and seasonality issues that their larger and more diversified counterparts are able to better mitigate. Large manufacturers improved to a 10% operating margin in 2Q 2012, slightly above the five-year average of 9.2%. However, these profit improvements may be temporary as potentially deep cuts in Pentagon spending draws closer. Because military, space and security contractors account for approximately two-thirds of the A&D sector's sales, it is unlikely that rising commercial aircraft sales would be able to compensate for the significant loss in defense revenue.

Rising revenue and improved margins has resulted in an 18% year-over-year increase of cash on hand to $16.6 billion at the end of 2Q 2012 for all aerospace and defense manufacturers. With looming economic and political pressures on the horizon, opportunities for organic growth may be hindered in the near future, and as a result companies with significant cash balances may look to deploy their excess cash towards acquisitive growth opportunities.

Sources: U.S. Census Bureau Quarterly Financial Report for Manufacturing Industries; Aviation Week Magazine




Source: U.S. Census Bureau

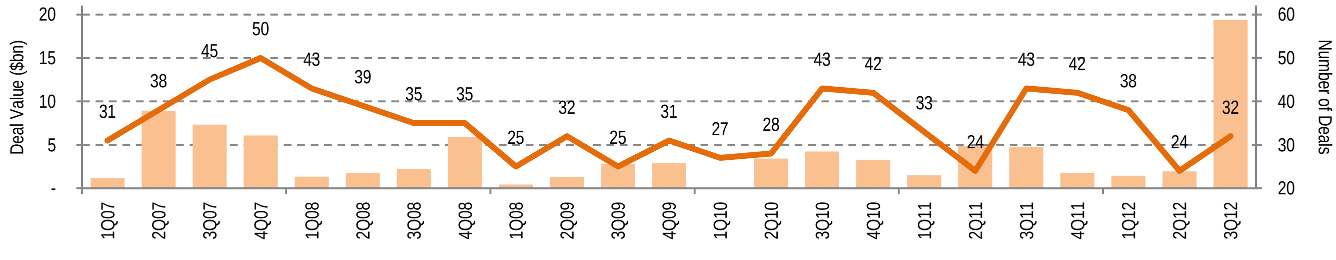



Source: U.S. Census Bureau

## Aerospace and Defense Mergers and Acquisitions

Merger and acquisition deal activity in the aerospace and defense sector in 2012 was on pace for a lackluster year of historically small deals until the closing of United Technologies Corp.'s (NYSE: UTX) acquisition of aircraft equipment maker Goodrich Corporation in July 2012 for $18.6 billion. The deal is the largest in the firm's acquisition history and will add approximately $8 billion to its annual revenue, making it one of the largest suppliers of systems and services for the aerospace industry and positioning it firmly for a larger share of the growth anticipated in the commercial aerospace sector. Goodrich has been combined with the firm's Hamilton Sundstrand subsidiary to create the new UTC Aerospace Systems business unit.

U.S. A&D M&A Activity by Closed Deals



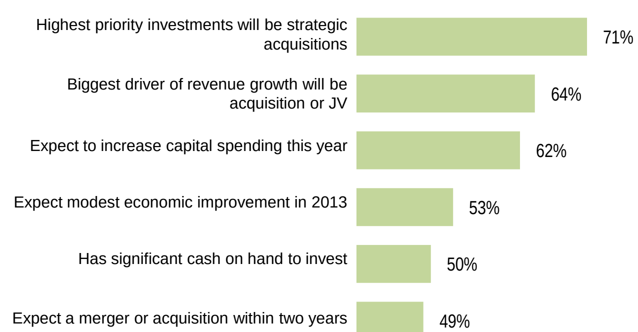

Source: Capital IQ

Through the third quarter of 2012, 94 reported deals in the U.S. aerospace and defense sector were closed for an aggregate value of $22.7 billion. Excluding the $18.6 billion United Technologies-Goodrich merger, aggregate deal value would have been below $5 billion, compared to $11 billion of deals through the third quarter of 2011. Deal volume also declined 6% through the third quarter of 2012 from 100 deals closed for the same period last year.

One looming impediment to deal activity has been the uncertainty about the U.S. defense budget and programs resulting from the unresolved sequestration issue, which would reduce Pentagon spending by $500 billion and potentially jeopardize the future cash flows of businesses in this sector. A low level of M&A activity is likely to continue until the sequestration issue is resolved; however, if the year-end deadline is extended and uncertainty remains, the weak M&A environment could extend into 2013.

However, declining defense budgets could lead to economic pressures that can result in a wave of consolidation in the industry. U.S. aerospace and defense executives cite strategic acquisitions as the highest priority investment area to spur company growth, according to a recent KPMG survey. In the survey, 71% of A&D executives said that their companies would be involved in a merger or acquisition within the next two years, 64% said that their companies had significant cash on their balance sheets, 53% said that they will increase capital spending this year, and 50% said that the biggest drivers of revenue growth over the next three years will be acquisitions and joint ventures. The catalyst for increased merger activity in the sector is being driven by dwindling U.S. government contracts, increased globalization of competitors, and increased interest from foreign investors.

Survey of 100+ A&D Senior Executives




Source: KPMG 2012 A&D Industry Outlook Survey

Sources: Capital IQ, PWC Mission Control 2Q12 M&A Activity Report; KPMG 2012 A&D Industry Outlook Survey

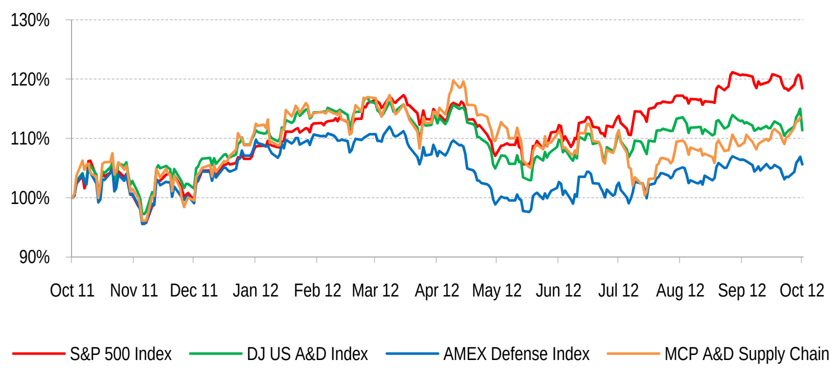
## EADS / BAE SYSTEMS Merger Musings

A transaction to create the world's largest aerospace and defense company came to a halt on October 10, 2012, after three months of discussions. The merger of British defense giant BAE Systems and Airbus parent EADS would have created a $91 billion behemoth that would far surpass the $77 billion market leader Boeing. Despite backing by the French government (which owns a 15% stake in EADS) and the British government, German officials blocked the deal amid concerns, among other things, of being marginalized by France and Britain, which have bigger aerospace and defense industries.

The collapse of the merger talks highlights European leaders' inability to put national interests aside to build continent-wide institutions. It also shows how much influence governments have on the European aerospace industry, and observers suspect that the failed merger is a stark indication of the limits of change for the European aerospace industry. In other words, Boeing, Lockheed Martin, Northrop Grumman and their U.S. peers may not need to worry about a bigger player emerging out of the eurozone. EADS and BAE are not expected to resume talks until the political landscape surrounding a possible deal has changed materially. In the mean time, EADS will continue to rely on Airbus as its main source of revenue and continue to look at smaller acquisitions in the U.S., while BAE will have to decide whether to seek a merger now with a U.S. company or consider selling its Arlington, VA-based U.S. business to appease shareholders.

Sources: Wall Street Journal; Reuters

## Public Market Trading Performance




Source: Capital IQ as of October 19, 2012

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## Public Company Valuation and Performance – Select A&D Supply Chain Index

| | | Stock Price | % of 52-Week | | Market | Enterprise | | EV / Revenue | | | EV / EBITDA | | | P/E | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Company Name** | **Ticker** | **10/19/12** | **High** | **Low** | **Cap** | **Value** | **Cash** | **LTM** | **2012E** | **2013E** | **LTM** | **2012E** | **2013E** | **LTM** | **2012E** | **2013E** |
| Hexcel Corp. | NYSE:HXL | $25.80 | 92 % | 117 % | $2,573 | $2,840 | $33 | 1.9 x | 1.8 x | 1.6 x | 10.3 x | 9.1 x | 8.3 x | 16.3 x | 16.7 x | 14.8 x |
| Moog Inc. | NYSE:MOG.A | 37.34 | 82 | 107 | 1,692 | 2,274 | 139 | 0.9 | 0.9 | 0.9 | 6.7 | 6.4 | 6.0 | 11.5 | 11.2 | 10.7 |
| AAR Corp. | NYSE:AIR | 16.36 | 69 | 164 | 633 | 1,299 | 123 | 0.6 | 0.6 | 0.6 | 5.9 | 5.6 | 5.6 | 9.6 | 9.1 | 9.6 |
| Heroux-Devtek Inc. | TSX:HRX | 13.51 | 99 | 214 | 416 | 471 | 63 | 1.2 | 1.4 | 1.6 | 7.2 | 7.5 | 10.1 | 15.4 | 19.6 | 20.5 |
| Magellan Aerospace Corp. | TSX:MAL | 3.84 | 90 | 147 | 223 | 442 | 24 | 0.6 | 0.6 | 0.6 | 5.3 | 4.5 | 3.9 | 4.5 | 5.1 | 4.7 |
| LMI Aerospace Inc. | NasdaqGS:LMIA | 19.08 | 89 | 127 | 223 | 218 | 7 | 0.8 | 0.7 | 0.7 | 6.4 | 5.0 | 4.4 | 12.4 | 10.2 | 8.9 |
| Ducommun Inc. | NYSE:DCO | 13.78 | 87 | 179 | 146 | 500 | 37 | 0.7 | 0.7 | 0.6 | 6.3 | 6.0 | 5.7 | NM | 9.0 | 8.0 |
| API Technologies Corp. | NasdaqCM:ATNY | 2.64 | 64 | 102 | 145 | 340 | 17 | 1.2 | 1.2 | 1.2 | 9.3 | 8.7 | 8.1 | NM | NM | NM |
| Sypris Solutions Inc. | NasdaqGM:SYPR | 7.13 | 93 | 259 | 144 | 139 | 19 | 0.4 | 0.4 | 0.4 | 5.7 | 5.0 | 4.6 | 7.9 | 9.0 | 8.5 |
| SIFCO Industries Inc. | AMEX:SIF | 17.06 | 72 | 102 | 91 | 109 | 7 | 0.9 | NA | NA | 6.1 | NA | NA | 12.1 | NM | NM |
| CPI Aerostructures Inc. | AMEX:CVU | 10.76 | 66 | 107 | 90 | 107 | 4 | 1.3 | 1.1 | 1.0 | 7.4 | 5.6 | 4.7 | 8.5 | 7.1 | 6.4 |
| Breeze-Eastern Corp. | AMEX:BZC | 7.77 | 79 | 135 | 74 | 70 | 4 | 0.9 | NA | NA | 6.5 | NA | NA | 32.2 | 24.1 | 21.1 |
| EDAC Technologies Corp. | NasdaqCM:EDAC | 13.13 | 85 | 174 | 69 | 108 | 2 | 1.1 | NA | NA | 9.1 | NA | NA | 14.7 | 11.7 | 9.8 |
| | | **Mean** | **82 %** | **147 %** | | | | **1.0 x** | **0.9 x** | **0.9 x** | **7.1 x** | **6.3 x** | **6.1 x** | **13.2 x** | **12.1 x** | **11.2 x** |
| | | **Median** | **84** | **131** | | | | **0.9** | **0.8** | **0.8** | **6.5** | **5.8** | **5.6** | **12.1** | **10.2** | **9.6** |

Source: Capital IQ as of October 19,2012. Amounts in millions of U.S. dollars, except per share data

## Select M&A Activity in the A&D Supply Chain

| **Date** | **Target** | **Acquirer** | **Enterprise Value** | **Revenue** | **EBITDA** | **EV / Revenue** | **EV / EBITDA** | **Description** |
|---|---|---|---|---|---|---|---|---|
| Sep 12 | Aero-Instruments Company, LLC | TransDigm Inc. | $35 | - | - | - | - | Air data sensors for aircraft applications |
| Aug 12 | John Huddleston Engineering Ltd. | Magellan Aerospace Corp. | - | 25 | - | - | - | Machined components and sub-assemblies |
| Aug 12 | Heroux-Devtek Inc. | Precision Castparts Corp. | 304 | 132 | - | 2.3 | - | Aerostructure and industrial products division |
| Aug 12 | Northstar Aerospace Inc. | Wynnchurch Capital, Ltd. | 70 | 213 | 26 | 0.3 | 2.7 | Military and commercial aircraft parts |
| Jul 12 | Goodrich Corp. [1] | United Technologies Corp. | 17,901 | 8,332 | 1,713 | 2.1 | 10.4 | Aerospace components, systems and services |
| Jul 12 | AMPAC-ISP Corp. | Moog Inc. | 46 | 51 | - | 0.9 | - | Rocket engines and propulsion systems |
| Jun 12 | Nassau Tool Works Inc. | Air Industries Group, Inc. | 12 | 16 | - | 0.7 | - | Military landing gear parts and systems |
| Jun 12 | EBTEC Corporation | EDAC Technologies Corp. | 13 | 13 | 2 | 1.0 | 6.4 | Component manufacturing |
| Jan 12 | UFC Aerospace Corp. | BE Aerospace Inc. | 400 | - | 42 | - | 9.5 | Aerospace logistics supply chain solutions |
| | | **Mean** | | | | **1.2 x** | **7.3 x** | |
| | | **Median** | | | | **1.0** | **8.0** | |

Source: Capital IQ as of October 19, 2012. Amounts in millions of U.S. dollars.

(1) Enterprise value calculated on equity value of $15,958 million, plus total debt of $2,423 million, less total cash of $704 million, plus $225 million in other considerations.