



Commentary

We don't have to tell anyone invested in the aerospace and defense sector or in the market in general that it was a brutal quarter. Down 19.77% in 2Q11, it was the worst single quarter since we started calculating the SPADE Defense Index in 1997 but there is good news which I will get to in a bit.

Market news, not sector headlines, continues to dominate the direction of aerospace and defense stocks. Although the first delivery of the Boeing 787 provided a brief pop to the sector, it coincided with a market rally, perhaps diminishing its impact among a broader spectrum of investors.

As we head in the fourth quarter, there are several things for A&D investors to watch for.

**1. Quarterly earnings statements, not necessarily the numbers:** What I mean, is how do company's project their future revenues and earnings in the current environment of flat/down defense budgets? Is there a real impact or does cancellation of program A equal new business B? Does the shedding/spinoff of low margin businesses improve the bottom line and cancel out a negative? Has repositioning business lines and overseas sales offset U.S.-centric issues?

**2. The Congressional Debt Supercommittee.** By now most of America has given up on Congress being able to agree to anything on any subject. If a debt package is agreed to (a big if), what is the final impact on defense? The 50% cut of \$1.2 trillion to the defense budget has been bandied about but even without a deal the number can be significantly less once interest, etc, is taken into account. Likewise if the agreed plan is less than the target, then it is only 50% of the gap that applies. As they say, the devil is in the details and until we hit the Thanksgiving timeframe deadline, we really don't know what will evolve. And even then, the conversation could drift into early next year and not actually impact defense firms until 2013.

**3. Valuations:** By historical standards they are still incredibly cheap. Looking at the list of companies that are found in the Powershares Aerospace & Defense ETF (NYSE: PPA) more than 60% have a P/S less than 1.0 and 35% have a P/S less than 0.5! 70% have a P/E below 12.

**4. Dividend Yields:** A quarter of the companies are yielding better than the yield of the 10-year bond and, in the most request quarter, the Powershares ETF (NYSE: PPA) distribution exceeded the 10-year bond.

**5. The wide gap between the best performing stocks in the sector and the worst.** Considering there was a 75% range in performance between the best and worst performing companies in September, for those having

**SPADE Defense Index Statistics**

9/30/11 Close: 1864.55  
 All-time Close: 2747.67  
 Date of all-time close: 9 October 2007

	SPADE Defense	S&P500
September	[6.74%]	[7.18%]
3Q11	[19.48%]	[14.34%]
YTD	[12.36%]	[10.04%]

less time/ability to focus on the due diligence of picking individual stocks, it is probably best for them to focus on an ETF, which provides diversification across the whole sector while still offering a 12-month yield of 1.52%.

**6. And the good news that I mentioned:**

In the September newsletter, in case you missed it, we created an equal weight index representing the five largest defense companies today and looked at the 1980-1997 period and using the benchmark SPADE Defense Index from 1998 to the present. The goal was to determine the depth from peak to trough and the length of time to reach bottom and stay at the bottom of the cycle before rebounding. In real dollar terms, there were only five years between 1980 and 2011 that aerospace & defense stocks had a negative return. In each case, with dividends reinvested, an investment in the sector would have recouped its principal within roughly two years. Sharp drops of 20-40% occurred but the sector rebounded relatively quickly when factoring in dividends. There was no classic bell curve to track, only a spike down followed by a steady and continuing trend up. This period includes the recession in the 1980s, the collapse of the Soviet Union, the internet bubble, and the peace dividend years. Congressional action, or should we say inaction, could still significantly impact what happens in the future. That said, historically, with the Index down nearly a third since its all-time peak, much of the decline in the sector appears to be built in. As such for those looking for an entry point, now could be argued is a good time to re-enter the market for A&D.

Sept 2011 Top Gainers			Sept 2011 Laggards			YTD Top Gainers			YTD Laggards		
1	Goodrich	35.32%	1	Key W Holding	[39.95%]	1	EMS Technologies*	66.23%	1	Oshkosh Truck	[55.33%]
2	Textron	4.56%	2	Esterline Tech	[31.15%]	2	SRA International*	51.20%	2	KEY W Holding	[51.53%]
3	Rockwell Collins	4.56%	3	AAR Corp	[29.33%]	3	Goodrich*	37.03%	3	Kratos Defense	[48.97%]
4	Gencorp	0.90%	4	Kratos Defense	[28.96%]	4	Integral Systems*	22.81%	4	NCI Information	[48.11%]
5	Comtech	0.90%	5	NCI Information	[27.03%]	5	Precision Castparts	11.67%	5	Computer Sciences	[45.87%]
6	Aerovironment	[1.78%]	6	GeoEye	[21.62%]	6	Teledyne Tech	11.12%	6	AAR Corp	[39.32%]
7	Lockheed Martin	[1.78%]	7	SAIC	[21.27%]	7	Triumph Group	9.03%	7	Digital Globe	[38.73%]
8	Elbit Systems	[2.93%]	8	Oshkosh Truck	[20.18%]	8	LMI Aerospace	6.69%	8	Mercury Computer	[37.43%]
9	TASER	[3.15%]	9	Ducommun	[19.29%]	9	Aerovironment	4.92%	9	GeoEye	[33.12%]
10	FLIR Systems	[3.17%]	10	Huntington Ingalls	[18.74%]	10	Lockheed Martin	3.91%	10	Huntington Ingalls	[31.89%]

\* Acquired

Largest Defense Prime Contractors		
	September	2011
Lockheed Martin	[2.09%]	3.91%
Boeing	[9.50%]	[7.28%]
General Dynamics	[11.22%]	[19.83%]
Northrop Grumman	[4.49%]	[19.47%]
Raytheon	[5.46%]	[11.80%]
L-3	[8.63%]	[12.09%]

**ETF Statistics (NYSEarca: PPA)  
Powershares Aerospace & Defense**

Exchange / Ticker Symbol: NYSE / PPA  
 Fee: 60 basis  
 Assets (9/30/11): \$75.2 M  
 Closing Price (9/30/11): \$16.35  
 Yield (12-Month Yield): 1.52%  
 September 2011 Volume: 3,174,100  
 Turnover: 12%

source: Marketwatch

Portfolio Price / Earnings	11.74
Portfolio Price / Book	1.98
Portfolio Price / Sales	0.74
Portfolio Price / Cash Flow	8.42
Earnings Growth Rate	4.08%
Beta (3 year)	1.07
Alpha (3 year)	[2.05]
R-squared (3 year)	85.52

Yahoo Finance - 8/31/11

**News that Caught Our Eyes**

**2005:** The U.S. military dropped 2 million lbs onto the battlefield.

**2010:** 60 million lbs

**2011:** 100 million lbs+

**source: Gen. Duncan McNabb, Defense News 12Sept11, p18**

**9/11: Decade of Change -Defense News Special Report 9/12/11**

- January 2001: Congressional Budget Office predicted budget surpluses were 'as far as the eye could see' with the Pentagon growing moderately over the next decade

- Instead of a \$5.6 trillion projected surplus the U.S. accumulated a \$6.1 trillion deficit due to defense spending, Bush administration tax cuts, and Bush and Obama administration stimulus funding. -- Center for Strategic & Budgetary Assessments (CSBA)

- There have been three cycles of US military buildup and draw-down -- following Korean War, Vietnam War, and the Cold War.

- Today is different in that the military force did not grow over the past 10 years despite an increase of funding.

- Over past decade - Congress spent \$1.3 trillion for military operations, base security, reconstruction, foreign aid, embassy costs, and veterans' health care -- including \$806M Iraq, \$444B Afghanistan, \$29B Operation Noble Eagle, \$5B other.

- Of the total: 94% to Pentagon, 5% to foreign aid, 1% medical

care

- The Army spent between \$1B and \$3.8B annually on cancelled program between 1990 and 2010.

**The Price Tag for a Production F-35 - Defense News 9/12/11**

- Estimated price tag: \$65 million (2010 dollars) - Lockheed Martin's per plane cost.

- Lockheed Martin - The price is in line with current fourth generation fighter costs which do not include targeting pods, jammers, decoy system, electronic warfare equipment, fuel tanks, IR search and track, night vision devices, helmet, and other systems.

- JSF program office said it does not include the Pratt & Whitney F135 engine although Lockheed does.

- US currently plans to buy a total of 2,443 F-35s.

- Teal Group states the engine will cost roughly \$11M once in full production rate with the goal of unit costs dropping to \$10M. Initially the Air Force shows these will cost \$13M.

- With sensors and data links, etc. the cost is estimated to be around \$76-\$80 million for plane, comparable with other aircraft.

- Flyaway cost for the Super Hornet was \$60.3M -- \$40.2M air-frame and contractor furnished electronics; \$8.4M engines and accessories; \$6.2M contractor furnished avionics; \$1.7M govern-

ment furnished avionics. - Teal Group

### Humvee RFP

The U.S. Army released a draft RFP to upgrade 60,000 to 100,000 Humvees and extend the vehicle life to 2030. The Marine Corps also plans to upgrade an additional 3000 vehicles.

### 2.9 Million

# of jobs supported by the U.S. defense industry according to the Aerospace Industries Association

### FY-2012: Budget Update

The Senate Appropriations Committee proposed \$26 billion in FY-2012 defense cuts. The \$513 billion budget freezes defense spending at 2011 levels. The Senate approved an additional \$118B for Overseas Contingency Operations. The cuts include 580 line-item reductions including \$695M from the F-35 JSF Fighter putting it at 2011 levels and the termination of the Joint Light Tactical Vehicle program. Funds were added for 6 additional Army Black Hawk helicopters, \$120M for Air Force C-130Js, \$250M for vehicle survivability upgrades to the MRAP vehicles; \$500M for National Guard and Reserve equipment; and \$249 million for 49 more Abrams tank upgrades. Additional funding for cybersecurity, nanotech, and space situational awareness was also included. - *Defense News* 19Sept11.

### Aircraft Procurement

The U.S. Air Force buys about 118 aircraft per year, fleet replacement every 48 years! (*Defense News* Aug-15-11 p6)

### \$15B savings on JTRS

The Army announced it will restructure the program and reduce the # of planned buys from 86,956 to 11,030 radios as the cost for R&D grew by 69% from 2002 to 2011. The change will save \$15B (DN 15Aug11 p3)

### Selected Contracts

\$1.8 Billion - The Navy awarded a contract to General Dynamics to begin primary construction of the 2nd and 3rd DDG1000 destroyers. Additional contracts have been issued to Raytheon (combat systems and electronic gear) and Huntington Ingalls (composite construction superstructure).

\$3.7 Billion - A five-year contract to General Dynamics C4 Systems from the Army for the CHS-4 program (a no-fee rapid procurement for military and government organizations to receive radios, satellite communications and encryption equipment, computers, and other products.)

### Quarterly Index Update

Huntington Ingalls (NYSE: HII) recently spun out of Northrop Grumman (NYSE: NOC) was added to the index during the September 2011 rebalancing.

### Mergers & Acquisitions Update

United Technology (NYSE: UTX) announced its intention to acquire SPADE Defense Index component Goodrich (NYSE: GR).

ITT's (NYSE: ITT) proposed split into three public firms -- industrial, water, and defense (ITT Exelis) is anticipated to occur during the 4Q11. After the spin-off, ITT Exelis will replace ITT in the Index.

## **About the SPADE Defense Index**

The SPADE Defense Index (NYSE-amex: DXS) provides an investment benchmark for the value that the market ascribes to companies involved with defense, homeland security, and space.

The Index is designed to reflect the broad diversity of activities that is representative of companies involved with the sector – including industrial firms that manufacture aircraft, tanks, ships, and missiles; and those involved with current and next generation systems related to network centric warfare and information technology; intelligence, surveillance, and reconnaissance; satellites; border security; and defense systems that protect the lives of our servicemen and servicewomen.

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SPADE Indexes publishes a variety of private and public sector and regional indexes. Public indexes listed on the NYSEamex include: the SPADE Defense Index (ticker: DXS), the SPADE Oklahoma Index (ticker: OKLAH); and the SPADE Texas Index (ticker: TEXAS).

## **Licensed Products**

### Exchange Traded Fund - ETF

Licensed to Invesco Powershares, the Powershares Aerospace & Defense Portfolio ETF (NYSE: PPA) is designed to track the performance of the SPADE Defense Index.

### **Rules**

The Index was designed to be RIC (registered investment company) compliant for the purpose of enabling financial products. Companies are required to meet a variety of eligibility criteria including market valuation, liquidity, and listing on a major U.S. exchange. Full details are available on our website.

\* Market Cap: Minimum \$100M

\* Share Price: Minimum \$5.00

\* Sufficient Liquidity



After tracking the market for the first part of the year, defense stocks (blue) sold off in late-July/August at a steeper rate than the market and is currently underperforming the S&P500 (red) YTD.

(blue) PPA = Powershares Aerospace & Defense ETF

PPA appears to have support in the \$16 range which corresponds to a Fibonacci retracement level. Aerospace and Defense stocks quickly moved into correction territory after a late-July selloff in the sector preceded the market carnage in August. PPA (blue) is approaching the 50-day (red) and the 200-day moving averages (green).

PPA = Powershares Aerospace & Defense ETF



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Company	Oct-11	52	SPADEF Defense Index				Market	Forward	Price/	Price/	PEG	
	Ticker	Float %	Price	Price	% Ch	% Ch	Cap	P/E	Sales	Book	5 yr	Div Yld
		30-Sep-11	31-Aug-11	30-Sep-11	YTD	MTD	intraday	(ttm)	ttm	mrq	expected	forward %
AAR Corp	AIR	0.45%	23.59	16.67	-39.32%	-29.33%	0.65	6.86	0.37	0.80	0.44	1.80%
American Science & Engineering	ASEI	0.38%	67.44	61.05	-28.37%	-9.48%	0.56	19.95	2.06	2.08	1.58	2.00%
Alliant Techsystems	ATK	1.20%	63.47	54.51	-26.76%	-14.12%	1.80	6.18	0.39	1.54	1.87	1.50%
AeroVironment	AVAV	0.40%	28.66	28.15	4.92%	-1.78%	0.61	19.15	1.97	2.35	1.05	
Boeing Co	BA	5.76%	66.86	60.51	-7.28%	-9.50%	44.84	11.61	0.71	9.76	0.71	2.80%
Booz Allen & Hamilton	BAH	1.40%	16.04	14.87	-23.47%	-7.29%	1.94	8.70	0.34	1.95	8.70	
Ball Corp	BLL	3.39%	35.92	31.02	-8.83%	-13.64%	5.07	9.85	0.62	3.33	1.13	0.90%
Caci Intl	CACI	1.02%	55.06	49.94	-7.17%	-9.30%	1.52	9.27	0.43	1.18	0.74	
Comtech	CMTL	0.49%	27.84	28.09	1.19%	0.90%	0.73	21.28	1.01	1.09	0.68	3.90%
Rockwell Collins	COL	4.11%	50.46	52.76	-9.39%	4.56%	8.11	11.67	1.71	4.94	1.20	1.80%
Ceradyne Inc	CRDN	0.45%	31.36	26.89	-14.72%	-14.25%	0.67	8.67	1.47	1.01	0.65	
Computer Sciences	CSC	2.78%	30.66	26.85	-45.87%	-12.43%	4.16	5.69	0.27	0.56	0.68	3.00%
Cubic Corp	CUB	0.70%	41.93	39.07	-17.14%	-6.82%	1.04	12.25	0.83	1.97	0.74	0.50%
Ducommun	DCO	0.11%	18.56	14.98	-31.22%	-19.29%	0.16	6.04	0.39	0.62	0.41	2.00%
Digital Globe	DGI	0.60%	22.66	19.43	-38.73%	-14.25%	0.90	24.59	2.87	1.81	7.41	
Esterline Technologies	ESL	1.06%	75.29	51.84	-11.52%	-31.15%	1.59	9.03	1.00	1.03	0.79	
Elbit Systems	ESLT	1.14%	41.00	39.80	-25.09%	-2.93%	1.70	8.02	0.62	1.82	0.93	0.80%
Flir Systems	FLIR	2.68%	25.87	25.05	-15.80%	-3.17%	4.00	14.48	2.73	2.58	1.32	1.00%
Force Protection	FRPT	0.18%	4.10	3.85	-30.13%	-6.10%	0.27	9.17	0.44	0.87	2.58	
General Dynamics	GD	4.55%	64.08	56.89	-19.83%	-11.22%	20.58	7.48	0.65	1.51	1.08	3.30%
GeoEye	GEOY	0.42%	36.17	28.35	-33.12%	-21.62%	0.63	11.21	1.76	1.28	0.71	
Goodrich Corp	GR	4.64%	89.18	120.68	37.03%	35.32%	15.09	17.59	2.03	3.97	1.43	1.00%
Gencorp	GY	0.18%	4.45	4.49	-13.15%	0.90%	0.26	16.63	0.28			
Heico	HEI	1.37%	54.52	49.24	-3.51%	-9.68%	2.06	25.92	2.81	3.86	1.78	0.20%
Huntington Ingalls	HII	0.79%	29.94	24.33	-31.89%	-18.74%	1.19	6.7	0.18	0.85	0.31	
Honeywell Intl	HON	5.81%	47.81	43.91	-17.40%	-8.16%	34.36	9.91	0.99	2.92	0.78	3.00%
Harris Corp	HRS	2.75%	40.35	34.17	-24.57%	-15.32%	4.11	6.26	0.72	1.74	0.72	3.30%
Itt Indus	ITT	3.99%	47.34	42.00	-19.40%	-11.28%	7.78	8.27	0.70	1.62	0.91	2.40%
KEY W Holding	KEYW	0.12%	11.84	7.11	-51.53%	-39.95%	0.19	15.80	1.24	0.99	1.97	
Kratos Defense & Security	KTOS	0.15%	9.46	6.72	-48.97%	-28.96%	0.23	11.79	0.46	0.75		
L-3 Communications Hldgs	LLL	4.03%	67.82	61.97	-12.09%	-8.63%	6.53	6.90	0.43	0.97	1.03	2.90%
LMI Aerospace	LMIA	0.14%	19.72	17.06	6.69%	-13.49%	0.20	8.84	0.84	1.23	0.72	
Lockheed Martin	LMT	5.00%	74.19	72.64	3.91%	-2.09%	24.20	8.41	0.52	7.35	1.01	5.50%
Mantech International'a'	MANT	0.77%	37.49	31.38	-24.07%	-16.30%	1.15	8.17	0.42	1.13	1.05	2.70%
Moog Inc.	MOGA	0.99%	39.88	32.62	-18.04%	-18.20%	1.50	9.98	0.67	1.20	1.08	
Mercury Computer Sys	MRCY	0.24%	13.91	11.50	-37.43%	-17.33%	0.35	10.27	1.54	1.13	1.23	
NCI Information Technology	NCIT	0.11%	16.35	11.93	-48.11%	-27.03%	0.16	9.54	0.26	1.02	1.28	
Northrop Grumman	NOC	4.55%	54.62	52.17	-19.47%	-4.49%	14.51	7.38	0.44	1.22	0.99	3.80%
Orbital Sciences Corp	ORB	0.50%	15.64	12.80	-25.28%	-18.16%	0.75	11.23	0.57	1.25	1.16	
Osi Systems	OSIS	0.44%	38.88	33.52	-7.81%	-13.79%	0.66	12.60	1.03	1.74	1.05	
Oshkosh Truck	OSK	0.96%	19.72	15.74	-55.33%	-20.18%	1.44	8.24	0.20	0.92	0.73	
Precision Castparts	PCP	4.59%	163.85	155.46	11.67%	-5.12%	22.39	14.98	3.53	3.04	1.64	0.10%
Raytheon Co	RTN	4.70%	43.23	40.87	-11.80%	-5.46%	14.45	7.47	0.57	1.43	0.92	4.20%
SAIC	SAI	2.69%	15.00	11.81	-25.54%	-21.27%	4.03	8.50	0.38	1.72	1.27	
TASER International Inc.	TASR	0.17%	4.45	4.31	-8.30%	-3.15%	0.26	43.10	2.98	2.52		
Transdigm	TDG	2.74%	91.86	81.67	13.41%	-11.09%	4.10	14.99	3.77	5.57	0.76	
Teledyne Technologies	TDY	1.20%	54.59	48.86	11.12%	-10.50%	1.8	12.46	1.02	1.82	0.95	
Triumph Group	TGI	1.60%	52.38	48.74	9.03%	-6.95%	2.39	9.79	0.74	1.46	0.82	0.30%
Textron	TXT	3.27%	16.87	17.64	-25.38%	4.56%	4.89	9.91	0.47	1.59	0.35	0.50%
URS Corporation	URS	1.58%	35.07	29.66	-28.72%	-15.43%	2.36	7.62	0.26	0.59	0.74	
United Technologies	UTX	5.75%	74.25	70.36	-10.62%	-5.24%	63.94	11.65	1.16	2.90	1.04	2.70%
Viasat Inc	VSAT	0.94%	35.50	33.31	-24.99%	-6.17%	1.40	21.08	1.85	1.74	3.01	

Data Provided by Yahoo Finance & Capital IQ, and Forward P/E by Thompson