



Commentary

Changes to the Index during the June Rebalance

1. LMI Aerospace (LMIA): Removed, when it did not meet trading liquidity screen.
2. Harris (HRS) completed their acquisition of Exelis (XLS)
3. Gencorp Aerojet (GY) renamed/new ticker: Aerojet Rocketdyne (AJRD)

Some M&A News

As mentioned in the April 2015 letter, after the mergers between Orbital Sciences and ATK; and the acquisition of Exelis by Harris, we expected additional mergers to be announced. The quarter saw:

1. The official announcement of United Technologies to sell/spin Sikorsky. Its been said that there are four bids, which without any details, we'd expect Lockheed Martin (as they do not currently offer a helicopter platform), Textron (which might face some regulatory issues as they are already engaged in the business), and at least one private equity firm to be among them.
2. CSC - Computer Sciences Corp: Announced a plan to split the company into parts.
3. Mantech bought Welkin Associates for \$34M. The firm is an intelligence systems developer and former subsidiary of CSC.
4. Lockheed Martin bought cyber industrial defender and information processing firm, Zeta Associates.
5. GDEF, a blank check company, bought STG Group, a systems engineering firm with cyber exposure (notice a trend here) for \$165.5M.

Are IPOs Coming Back in Favor?

Three companies with ties to defense or cybersecurity announced or are soon to announce a filing to become a public company:

-- Alion Science (April 29), Rapid7 (June 7), and SRA (filing anticipated)

Flows into the ETF

After nice inflows during the first quarter of the year, the second quarter saw a stabilization with 7.35 million shares outstanding in the Powershares Aerospace & Defense ETF (PPA).

Cyber Exposure in the SPADE Defense Index

SPADE Defense Index Statistics

6/30/15 Close	4059.98
12/31/14 Close:	3987.52
All-time High:	4299.50
All-time Close:	4296.88
2 February 2015	

	SPADE Defense	S&P500
2Q2015	[3.54%]	[0.23%]
YTD	1.67%	1.82%
2014	11.77%	11.39%

Before cyber became a buzzword, we have recognized it as an important part of the security environment and, hence, had defense implications.

The key question facing us from an indexing standpoint was how to define which companies were systematically important to the defense sector and for which companies saw defense and military activities as important to them?

A sector review showed that the companies for the most part fit into two groups--government contractors (with IT and C4ISR capabilities that offered cybersecurity services as part of their broader capabilities) and firms, a number of which have gone public in the past two years, that exist to serve the needs of corporations or individuals. A review of the latter group shows that significantly less than 10% of their revenues came from government, defense and civilian agencies.

The former group includes firms such as Raytheon, SAIC, Leidos, Mantech, CACI, KeyW, Northrop Grumman, and CSC.

Of the latter, most cyber firms barely mention their government activities and their 10k showed revenues that were percentagewise minimal. One that stood out was FireEye, which when combined with its acquisition of a firm called Mandiant, plays a systematically important role with classified intelligence agencies, hence their inclusion in the SPADE Defense Index and the Powershares' PPA ETF.

A quick review shows that nearly 25% of the firms in the SPADE Defense Index have cyber exposure.

2Q 2015 Results

1	Supercom	51.13%	28	Hexcel	-3.27%
2	TASER	38.16%	29	Leidos	-3.79%
3	FireEye	24.61%	30	Orbital ATK	-4.27%
4	Kratos Defense	13.92%	31	Rockwell Collins	-4.35%
5	KEY W	13.24%	32	Heico	-4.54%
6	Sparton	11.51%	33	OSI Systems	-4.67%
7	Triumph Group	10.50%	34	Precision Castparts	-4.82%
8	Woodward	7.80%	35	United Technologies	-5.35%
9	General Dynamics	4.39%	36	Moog	-5.82%
10	AAR Corp.	3.81%	37	Mercury Computer	-5.85%
11	SAIC	2.92%	38	Boeing	-7.57%
12	Transdigm	2.72%	39	Cubic	-8.09%
13	Viasat	1.09%	40	Lockheed Martin	-8.41%
14	Textron	0.68%	41	L-3	-9.87%
15	Computer Sciences	0.55%	42	CACI	-10.04%
16	Comtech	0.35%	43	American Science	-10.34%
17	Ball	-0.69%	44	Aerojet Rocketdyne	-11.13%
18	Ducommun	-0.89%	45	Raytheon	-12.42%
19	Teledyne Tech.	-1.14%	46	Booz Allen	-12.79%
20	Kaman	-1.15%	47	Oshkosk Truck	-13.14%
21	Northrop Grumman	-1.45%	48	Mantech	-14.56%
22	FLIR Systems	-1.47%	49	Engility	-16.25%
23	Aerovironment	-1.62%	50	Esterline Tech	-16.68%
24	Curtiss Wright	-2.03%	51	Intelsat	-17.33%
25	Honeywell	-2.24%	52	DigitalGlobe	-18.43%
26	Harris	-2.35%	53	Huntington Ingalls	-19.66%
27	Vectrus	-2.43%			

The Benefit of ETFs

The current quarter highlights the benefits of diversification. While the benchmark SPADE Defense Index down 3.54%, three of largest five defense prime contracts were down more than double this amount.

General Dynamics	4.39%
Northrop Grumman	-1.45%
Boeing	-7.57%
Lockheed Martin	-8.41%
Raytheon	-12.42%

Inside the Quarter

Small caps and non-manufacturers were among the few gainers during the quarter: Supercom (border security/passports), TASER (security), FireEye (cyber), Kratos (small cap), KeyW (cyber small cap), and Sparton were the leading gainers.

Top YTD Gainers

Small caps and non-manufacturers are leading year-to-date returns for the index. The exception being a mid-cap, Orbital ATK, which has seen significant gains following its merger. The spreadsheet on page 4 has data for all firms in the Index.

FireEye	54.88%
Orbital ATK	26.80%
TASR	25.79%
Kratos	25.50%
Supercom	24.19%
Hexcel	19.88%
AAR	14.72%

ETF Statistics (NYSE: PPA)

Powershares Aerospace & Defense

Exchange / Ticker Symbol:	NYSE / PPA
Assets (6/30/15)	\$260 M
Closing Price (6/30/15)	\$35.33
Yield (12-Month Yield)	0.94%
2Q2015 Volume	2,622,100
Turnover	15%

source: Yahoo Finance

Portfolio Price / Earnings*	17.61
Portfolio Price / Book*	2.53
Portfolio Price / Sales*	1.26
Portfolio Price / Cash Flow*	7.88
Earnings Growth Rate*	10.78%
Beta (3 year)*	0.69
Alpha (3 year)*	14.12
R-squared (3 year)*	35.77

Yahoo Finance

Performance (ex div)

	SPADE Defense Index	S&P500	Alpha (basis points)
YTD	1.82%	0.20%	162
2014	11.77%	11.39%	38
2013	48.27%	29.60%	1867
2012	16.30%	13.41%	289
2011	[2.75%]	[0.00%]	[275]
2010	9.62%	12.78%	[316]
2009	21.71%	23.45%	[174]
2008	[38.03%]	[38.49%]	46
2007	22.17%	3.53%	1864
2006	19.33%	13.62%	571
2005	5.30%	3.00%	230
2004	20.47%	8.99%	1148
2003	37.27%	26.38%	1089
2002	[2.87%]	[23.37%]	2050
2001	0.94%	[13.04%]	1488
2000	4.98%	[10.14%]	1512
1999	15.31%	19.53%	[422]
1998	6.63%	26.67%	[2004]

Since 1998, the SPADE Defense Index has only had three negative performance years.

A \$1000 investment in 1998 would be worth \$5069 today.

A \$1000 investment in the S&P500 would only be worth \$2120.

About the SPADE Defense Index

The SPADE Defense Index (NYSE: 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.

SPADE Indexes specializes in designing and managing equity benchmarks for ETF and other products.

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

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Jul-15		SPADEFense Index					Market		Forward	Price/	Price/	PEG	
Company	Ticker	Float %	Price	Price	% Ch	% Ch	Cap	P/E	Sales	Book	5 yr	Div Yld	
		30-Jun-15	31-Mar-15	30-Jun-15	YTD	QTD	intraday	(ttm)	ttm	mrq	expected	forward %	
AAR Corp	AIR	0.40%	30.70	31.87	14.72%	3.81%	1.27	109.9	0.64	1.31	2.27	0.90%	
Aerojet Rocketdyne	AJRD	0.46%	23.19	20.61	12.62%	-11.13%	1.29	21.69	0.81		2.10		
American Science & Engineering	ASEI	0.11%	48.86	43.81	-15.59%	-10.34%	0.32	344.96	2.52	2.12	-4.58	4.50%	
AeroVironment	AVAV	0.21%	26.51	26.08	-4.29%	-1.62%	0.61	155.24	2.42	1.75	-3.88		
Boeing Co	BA	6.34%	150.08	138.72	6.72%	-7.57%	95.93	17.36	1.04	12.18	1.31	2.60%	
Booz Allen & Hamilton	BAH	1.32%	28.94	25.24	-4.86%	-12.79%	3.69	16.56	0.70	19.92	2.07	2.00%	
Ball Corp	BLL	3.42%	70.64	70.15	2.90%	-0.69%	9.68	25.00	1.14	10.28	3.28	70.00%	
Caci Intl	CACI	0.69%	89.92	80.89	-6.14%	-10.04%	1.96	16.22	0.58	1.37	1.58		
Comtech	CMTL	0.17%	28.95	29.05	-7.84%	0.35%	0.47	18.59	1.47	1.17	1.22	3.90%	
Rockwell Collins	COL	3.97%	96.55	92.35	9.32%	-4.35%	12.22	19.24	2.33	6.27	1.56	1.40%	
Computer Sciences	CSC	3.19%	65.28	65.64	4.11%	0.55%	9.04		0.74	3.12	1.41	1.40%	
Cubic Corp	CUB	0.45%	51.77	47.58	-9.61%	-8.09%	1.28	32.61	0.92	1.72	4.97	0.50%	
Curtiss Wright	CW	1.22%	73.94	72.44	2.62%	-2.03%	3.44	37.65	1.53	2.46	1.40	0.70%	
Ducommun	DCO	0.10%	25.90	25.67	1.54%	-0.89%	0.28	22.19	0.39	1.10	3.86		
Digital Globe	DGI	0.71%	34.07	27.79	-10.27%	-18.43%	2.02	241.65	3.02	1.52	270.87		
Engility	EGL	0.33%	30.04	25.16	-41.21%	-16.25%	0.93	37.61	0.65	1.01	-2.86		
Esterline Technologies	ESL	1.04%	114.42	95.34	-13.07%	-16.68%	2.94	48.25	1.47	1.76			
FireEye	FEYE	2.70%	39.25	48.91	54.88%	24.61%	7.65		16.03	6.47	-0.78		
Flir Systems	FLIR	1.52%	31.28	30.82	-4.61%	-1.47%	4.32	20.26	2.83	2.72	1.24	1.40%	
General Dynamics	GD	6.07%	135.73	141.69	2.96%	4.39%	46.58	18.04	1.49	4.05	1.68	1.90%	
Heico	HEI	1.38%	61.07	58.30	-3.48%	-4.54%	3.89	31.14	3.40	5.2	2.30	0.20%	
Huntington Ingalls	HII	1.93%	140.15	112.59	0.12%	-19.66%	5.48	16.47	0.79	3.97	0.85	1.40%	
Honeywell Intl	HON	6.40%	104.31	101.97	2.05%	-2.24%	79.71	18.68	2.00	4.54	1.67	2.00%	
Harris Corp	HRS	3.36%	78.76	76.91	7.09%	-2.35%	9.51	15.66	1.64	4.35	9.79	2.40%	
Hexcel	HXL	1.69%	51.42	49.74	19.88%	-3.27%	4.79	21.43	2.57	4.11	1.96	0.80%	
Intelsat	I	0.37%	12.00	9.92	-42.86%	-17.33%	1.06	5.63	0.43	-1.51	2.06		
Kaman	KAMN	0.40%	42.43	41.94	4.61%	-1.15%	1.14	19.76	0.62	2.18	1.11	1.70%	
KEY W Holding	KEYW	0.13%	8.23	9.32	-10.21%	13.24%	0.36		1.16	1.15	-0.85		
Kratos Defense & Security	KTOS	0.13%	5.53	6.30	25.50%	13.92%	0.37		0.43	1.72	3.23		
Leidos	LDOS	1.06%	41.96	40.37	-7.24%	-3.79%	3.00		0.59	2.99	0.00	3.10%	
L-3 Communications Hldgs	LLL	3.30%	125.79	113.38	-10.17%	-9.87%	9.34	16.36	0.79	1.79	5.06	2.30%	
Lockheed Martin	LMT	6.39%	202.96	185.90	-3.46%	-8.41%	58.51	16.78	1.29	16.53	1.89	3.20%	
Mantech International'a'	MANT	0.38%	33.94	29.00	-4.07%	-14.56%	1.09	21.94	0.64	0.94	2.58	2.80%	
Moog Inc.	MOGA	0.97%	75.05	70.68	-4.53%	-5.82%	2.74	19.18	1.04	2.39	0.00		
Mercury Computer Sys	MRCY	0.18%	15.55	14.64	5.17%	-5.85%	0.50		2.23	1.39	3.92		
Northrop Grumman	NOC	4.49%	160.96	158.63	7.63%	-1.45%	30.74	16.66	1.28	4.59	2.48	2.00%	
Orbital ATK	OA	1.54%	76.63	73.36	26.80%	-4.27%	4.36	13.10	1.37	2.45	1.02	1.40%	
OSI Systems	OSIS	0.50%	74.26	70.79	0.03%	-4.67%	1.40	22.39	1.47	2.52	1.26		
Oshkosh Truck	OSK	1.17%	48.79	42.38	-12.89%	-13.14%	3.31	12.85	0.51	1.75	0.80	1.50%	
Precision Castparts	PCP	4.48%	210.00	199.87	-17.03%	-4.82%	27.63	18.74	2.76	2.53	1.41	0.10%	
Raytheon Co	RTN	4.45%	109.25	95.68	-11.55%	-12.42%	29.20	13.54	1.29	3.02	1.70	2.70%	
SAIC	SAIC	0.86%	51.35	52.85	6.70%	2.92%	2.43	18.16	0.62	6.66	3.51	2.30%	
Spartan	SPA	0.10%	24.50	27.32	-3.60%	11.51%	0.26	30.98	0.76	2.36	1.51		
Supercom	SPCB	0.07%	8.39	12.68	24.19%	51.13%	0.2	25.36	5.47	5.70			
TASER International Inc.	TASR	0.63%	24.11	33.31	25.79%	38.16%	1.78	75.53	10.29	12.69	2.30		
Transdigm	TDG	4.06%	218.72	224.67	14.42%	2.72%	11.97	58.92	4.87	-9.02	2.00		
Teledyne Technologies	TDY	1.32%	106.73	105.51	2.70%	-1.14%	3.73	18.31	1.56	2.89	1.89		
Triumph Group	TGI	1.15%	59.72	65.99	-1.83%	10.50%	3.25	14.10	0.84	1.52	2.35	0.20%	
Textron	TXT	3.99%	44.33	44.63	5.98%	0.68%	12.39	19.48	0.88	2.82	0.92	0.20%	
United Technologies	UTX	6.36%	117.20	110.93	-3.54%	-5.35%	98.75	15.66	1.52	3.45	1.77	2.30%	
Vectrus	VEC	0.09%	25.49	24.87	-9.23%	-2.43%	0.26	16.2	0.23	4.43			
Viasat Inc	VSAT	1.02%	59.61	60.26	-4.39%	1.09%	2.87	71.74	2.08	2.77	1.44		
Woodward	WWD	1.27%	51.01	54.99	11.70%	7.80%	3.59	19.82	1.73	3.00	2.00	0.70%	