

Commentary

**SPADE Defense Index Statistics**

11/30/10 Close: 17.84  
 All-time Close: 2747.67  
 Date of all-time close: 9 October 2007

	SPADE Defense	S&P500
November	[1.31%]	(0.23%)
QTD	3.35%	3.45%
YTD	4.18%	5.87%

Although the speculations on the sector all indicate that budget reductions are coming, the impact (whatever that might be) won't be known until at least the FY-2012 budget at the earliest or nearly a year from now. Some analysts envision the true impact of the hit coming in 2015 - 2020 time-frame. Others (good and bad forecasts) have talked about the cyclical nature of defense but said maybe this time is different.

What I believe as the likely outcome is dictated by several facts, which I am sure some may dispute but to anyone who has read these commentaries over the last several years, I am nothing but consistent.

1. After a run that led to a decade of outperformance (in some years measured in the double digits or thousands of basis points), over the past few years the SPADE Defense Index has roughly tracked the S&P 500. Considering the fact that investors in products that track the S&P500 are underweight the defense sector from an economic and GDP perspective, those that have held shares in this sector's funds (like the Powershares Aerospace & Defense ETF: PPA) have seen a steady performance in light of all the negative news that it is out there.

2. Although budgetary pressures and those calling to reduce the overall debt the U.S. faces is at unprecedented levels of agreement within the Washington DC community, there are still those who believe that any decline in defense spending should be a measured response. Proposed declines will be mitigated by those broadcasting the fear that it will open us to terrorist attacks or make us more vulnerable. Is there waste in the government and in the defense budget -- absolutely. Will the defense budget be restrained and reduced from the current peak year -- likely. That said, there are a number of activities that DoD can, and likely will, pursue in order to minimize the impact on military readiness and the equipment it needs to perform its duties.

3. An expanding role -- both for defense contractors and the military itself. As defense companies diversify into areas of defense sector growth (such as cybersecurity, persistent surveillance, etc) and adjacent markets (health care IT, energy security, etc.) we can also expect the DoD over the next decade to take on an expanded role into adjacent areas whether it is homeland security or disaster response and mitigation. The government's budget cutting exercise is likely to include some measure of reorganization and DoD's vast skills in operations will likely give it additional U.S.-focused duties that can translate into a more stable (and justifiable) budget.

4. A growing market for commercial aerospace -- many of the firms operating in the defense sector are also involved in commercial aerospace activities. The growth in transportation servicing the Middle East and Asia has already provided orders for the next decade. A rebound in the health of U.S. carriers will lead to billions of dollars in new orders by mid-decade.

5. Much of the anticipated decline is already priced into defense stocks. Companies have billions of cash on their balance sheets and their P/E and other metrics all indicate levels last seen several years ago near the bot-

tom of the previous defense spending down-cycle.

6. And lastly, the world continues to be a destabilized place. Tensions after North Korea's missile attack on South Korea place it *near the bottom* of my worry list which includes Iran, China, cybersecurity, and terrorism. Defense spending in Russia, China, Asia, and the Mid-East are all on the rise.

So, while we all may recognize that peak defense spending in the U.S. has passed, that doesn't necessarily mean a significant decline in share prices is yet to come. Exposure to the defense sector adds to the diversification provided by the S&P500 and provides investors with a measure of insurance should world conditions take a turn toward increased instability.

**"Hot" IT Contracts to See an RFP or Award in 2011**

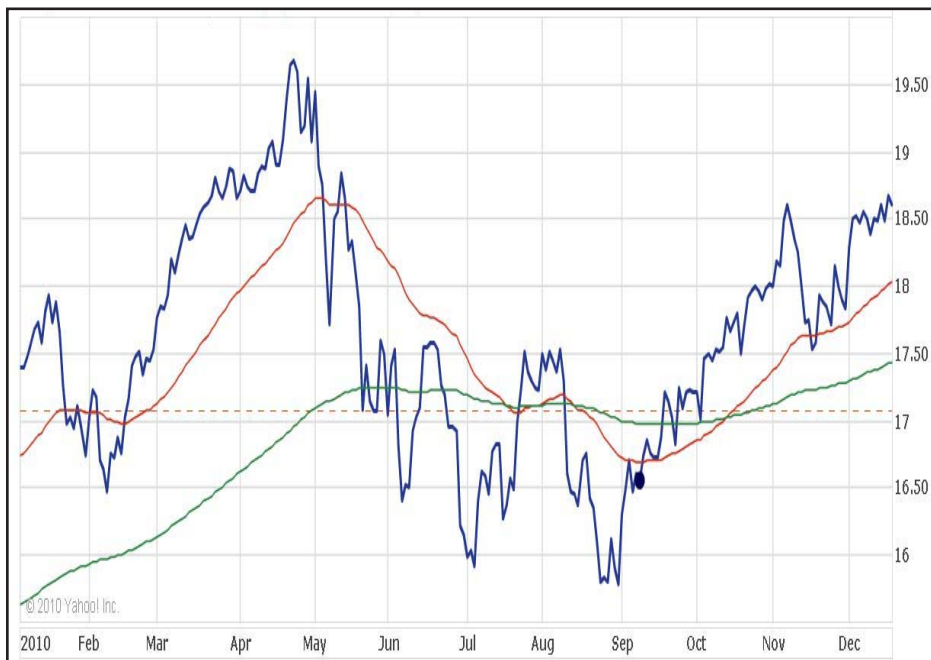
source: *Washington Technology.com*

Enhanced Army Global Logistics	Army	\$30 billion
Communication and Transmission Sys	Army	\$19.5 billion
Defense Language Interpretation	Army	\$15 billion
Fed Funded R&D Center Support	NASA JPL	\$14.4 billion
Global Tactical Adv. Communications	Army	\$10 billion
Next Generation Enterprise Network	Navy	\$8.8 billion
Electronic Commodities Store IV	NIH	\$6 billion
Missile Defense Systems	NMD	\$5 billion
IT Enterprise Solutions - 3H	Army	\$5 billion
Medicare Prescription Drug Integrity	Medicare	\$4 billion
Automated Desktop Extended Process	Postal Serv.	\$2 billion
Economic Growth for Poverty Reduct	US AID	\$2 billion
NASA Enterprise Data Consolidation	NASA	\$1.5 billion
Training & Mgmt Assistance Support	OPM	\$1.45 billion
Global Info Grid Services	DISA	\$1.4 billion
Integrated Mission Planning, Training	NASA	\$980 million
Expeditionary C4I Systems Services	Navy	\$900 million
Application Support Center	DHS	\$750 million
Advisory & Assistance Services for		
Global Engineering Integration 11	Air Force	\$650 million

Nov 2010 Top Gainers			Nov 2010 Laggards			YTD Top Gainers			YTD Laggards		
1	Ladish	46.69%	1	Boeing	[9.73%]	1	Ladish	211.89%	1	Oshkosh Truck	[22.50%]
2	CPI International	36.76%	2	Digital Globe	[9.56%]	2	Triumph Group	74.36%	2	Computer Sciences	[22.42%]
3	NCI Information	17.86%	3	Computer Sciences	[9.01%]	3	Applied Signal	70.44%	3	NCI Information	[20.54%]
4	Mercury Computer	12.44%	4	Force Protection	[8.38%]	4	Mercury Comp	61.76%	4	L-3 Commun.	[19.11%]
5	AAR Corp.	11.43%	5	Rockwell Collins	[7.35%]	5	Argon ST	58.77%	5	SAIC	[19.11%]
6	Ceradyne	10.96%	6	Kratos Defense	[7.28%]	6	L-1 Identity	57.94%	6	FLIR Systems	[18.09%]
7	Textron	7.40%	7	Lockheed Martin	[4.56%]	7	CPI Int'l	45.85%	7	Mantech	[17.42%]
8	Integral Systems	7.29%	8	Comtech	[3.76%]	8	Esterline Tech	44.42%	8	Alliant Techsystems	[16.27%]
9	Honeywell	5.52%	9	FLIR Systems	[3.70%]	9	Transdigm	44.24%	9	Comtech	[15.35%]
10	AeroVironment	5.29%	10	Teledyne Tech	[3.25%]	10	GeoEye	42.97%	10	Aerovironment	[15.06%]

PPA (blue) remains well above the 50-day moving average (red) as well as the 200-day level (green).

The 50-day continues to move well above the 200-day.



**ETFStatistics (NYSEarca: PPA)  
Powershares Aerospace & Defense**

Exchange / Ticker Symbol:	NYSE / PPA
Fee	60 basis
Assets (11/30/10)	\$ 105M
Closing Price (11/30/10)	\$17.84
Yield (12-month yield)	1.18%
November 10 Volume	677,300
Turnover	9%

source: Yahoo Finance

Portfolio Price / Earnings	11.11
Portfolio Price / Book	1.98
Portfolio Price / Sales	0.68
Portfolio Price / Cash Flow	6.65
Earnings Growth Rate	9.65%
RoE (9/30/10 - Invesco)	23.95%

Yahoo Finance

**Powershares Aerospace & Defense ETF  
(NYSE: PPA)**

**Modern Portfolio Theory (vs the S&P500)**

Beta (3 month)	1.11
Alpha (3 month)	(0.49)
R-squared (3 month)	87.85

Yahoo! Finance 12/10/10

Largest Defense Prime Contractors		
	November	YTD
Lockheed Martin	[4.56%]	[9.70%]
Boeing	[9.73%]	17.81%
General Dynamics	[2.98%]	[3.05%]
Northrop Grumman	[2.44%]	10.44%
Raytheon	0.37%	[10.23%]

PPA by Sector	
Industrial	78.55%
Info Tech.	17.74%
Materials	2.88%
Other	0.83%

source: Powershares

Year	SPADE	S&P500
2009	21.71%	23.45%
2008	<b>[38.03%]</b>	[38.49%]
2007	<b>22.17%</b>	3.53%
2006	<b>19.33%</b>	13.62%
2005	<b>5.30%</b>	3.00%
2004	<b>20.47%</b>	8.99%
2003	<b>37.27%</b>	26.38%
2002	<b>[2.87%]</b>	[23.37%]
2001	<b>0.94%</b>	[13.04%]
2000	<b>4.98%</b>	[10.14%]
1999	15.31%	19.53%
1998	6.63%	26.67%

## Some Contracts and Other Data of Note

**\$53 Billion** - The National Intelligence Budget will be removed from Pentagon control and managed by the Director of National Intelligence James Clapper Jr.

**\$18.9 Billion** - The House of Representatives approved a continuing resolution providing \$18.9 billion in FY-2011, up \$276 Million over FY-2010. The bill includes \$1.8 billion for a new heavy-lift rocket.

**\$6 Billion** - A 11/12 *Los Angeles Times* article stated that reconnaissance plans have become central to the global war on terrorism and the drone electronics business will rise from \$3 billion today to \$6 billion over the next 8 years.

**\$4.1 Billion** - Announced by President Obama for India to purchase 10 C-17 military transport aircraft.

**\$3.48 Billion** - To Lockheed Martin for up to 32 Joint Strike Fighters including orders for 16 planes destined to the Marines, 10 to the Air Force, 4 to the Navy, one to the UK, and an option for one to The Netherlands.

**\$2.7 Billion** - From an Indian airline for 30 Boeing 737 passenger planes

**\$2 Billion+** - Goodrich was selected to provided the main landing gear for the Airbus A350-1000.

**\$244.3 Million** - To Northrop Grumman including \$189.2M from the Navy to continue design and engineering for the *Gerald Ford* aircraft carrier and \$55.1M for mods to purchase materials for the next ship in the class.

**\$217 Million** - Boeing from the Army for 31 Apache AH-64D attack helicopters for the government of Taiwan. This includes \$75.2M for logistics support for maintenance and repairs.

**\$100 Million** - To Honeywell from Vietnam Airlines to outfit its fleet with 131-9A auxiliary power units, updated flight management systems, and multifunction control display units.

**\$97 Million** - To Lockheed Martin for the production of the US Navy Aegis Weapon System for the DDG-113 destroyer.

**\$64 Million** - From the UK Ministry of Defense to design and develop an upgraded system of the military's AWACS.

## Aerospace News and Information

**The Air Force Tanker Travails Continue**

The latest on this never ending program fiasco is that EADS is confident that it may win. The accidental sharing of contract information between the two competitors is anticipated to lead to a delay in awarding the contract from 'by the end of 2010' to early 2011. According to *Defense News* articles, when Boeing saw the Airbus bid, it saw the Air Force scored the Airbus A330 tanker well above its own 767 tanker. Privately Boeing has stated their hopes of winning the \$40 billion contract are fading.

**Boeing could top Airbus in orders** for 2010 for the first time in three years. Through the end of November Boeing has 489 net orders vs. 388 for Airbus. In comparison, 2009 totals were 271 for Airbus and 142 for Boeing.

**Boeing announced it won't follow Airbus** in upgrading its single aisle aircraft. Airbus announced a \$1.3 billion plan to improve its A320 by adding more fuel-efficient engines; Boeing said the upgrade was limited and would only add a "few percent" in financial benefits to airlines.

The International Trade Commission is reviewing whether a claim by United Technologies Pratt & Whitney that Rolls-Royce **violated its patent** for a swept-fan blade used in the Trent 900 and Trent 1000 engine is valid. The Trent 1000 is one of two engine options for the 787.

**787 Delivery Date:** Boeing is eyeing a summer delivery date for the Dreamliner after a fire erupted during a test flight. (...timed perhaps for the Paris Air Show)

**Mergers & Acquisition News**

**Boeing has bought** 10 companies over the past three years to expand in unmanned systems; intelligence, surveillance, and reconnaissance; computer networks, and logistics services.

**BAE (UK)** said that it is reorganizing to focus on the "new realm" of sophisticated intelligence, cyber, info, and electronic weaponry and the sensors to guide them.

**EADS (EU)** is planning to be more aggressive in acquisitions in the U.S. market. Previous limits of \$500M have been lifted and a larger acquisition is planned.

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### The Credit Suisse / Aviation Week Conference (notes from WSJ and Reuters articles)

- Goldman Sachs analyst Noah Popnak said that the decline in U.S. defense budgets may persist "for an extended period of time given the history of decade-long cycles and that fixed-priced orders may lead to more risk and declining profit markets -- yet maintained a buy rating on Boeing.

- Marine Corps General James Cartwright said that past cycles had seen declines of 15%-20% but he was not certain if the current downturn would be on that scale. He also said that, "We're an industrial organization trapped in an IT world" and called for major cultural changes to keep up with evolving threats.

#### In contrast...

Scott Thompson, PricewaterhouseCoopers forecasted flat spending in the coming years but said the budget would remain at a high level that still provided "**plenty of oppor-**

**tunities**" for defense firms and that they would focus on new and adjacent markets in cybersecurity, energy security, and healthcare. This is a theme that we have highlighted in the past SPADE Investor newsletters and that a number of executives reiterated at the event.

- General Dynamics CEO Jay Johnson said that *he did not expect a "precipitous decline" in defense spending* stating that the 9/11 attacks had changed the calculus from earlier down cycles in the industry. "**To take a big swing right now really becomes a matter of how much risk is the national willing to accept**". He also said that expected another "very good year" regarding revenue and earnings in 2011 and that the firm was well-positioned for the changing defense market and expected very robust, steady orders.

- Northrop Grumman said that they have been reinventing themselves to adjust to a new vision for the military's future that includes a greater focus on robotic systems, IT, and high-end surveillance equipment. The divestment of their shipbuilding operations is part of that shift.

### Analysts

"We believe Lockheed Martin has prepared well for this environment, having laid off workers last year, pursuing an executive separation program, and divesting itself of noncore/conflicting businesses" -- Citi analyst, Jason Gursky (25Oct10)

"Lockheed Martin's once torrid growth rate has slowed considerably in recent years. However, that appears to be fully reflected in the stock price...investors will probably have to wait at least a year for Lockheed's earnings to grow, but their patience should eventually pay off". -- Barron's (25Oct10)

"[The] arms sale package with Saudi Arabia valued at up to \$60 billion...could help offset the bad news..." -- Richard Aboulafia, Teal Group (Reuters 19Oct10)

A downturn in defense was already priced into U.S. stocks -- Loren Thompson, Lexington Institute -- (25Oct10)

### 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

Dec-10		57 SPADE Defense Index					Market		Forward	Price	Price	PEG	
Company	Ticker	Float %	Price	Price	% Ch	% Ch	Cap	P/E	Sales	Book	5 yr	Div Yld	
		30-Nov-10	29-Oct-10	30-Nov-10	YTD	MTD	intraday	(ttm)	ttm	mrq	expected	forward %	
Honeywell Intl	HON	7.36%	47.11	49.71	26.81%	5.52%	38.78	14.04	1.20	3.77	2.03	2.40%	
United Technologies	UTX	6.89%	74.77	75.27	8.44%	0.67%	69.50	14.18	1.29	3.25	1.61	2.30%	
Boeing Co	BA	6.48%	70.64	63.27	17.81%	-9.73%	46.78	13.86	0.72	10.60	1.69	2.60%	
General Dynamics	GD	5.41%	68.12	66.09	-3.05%	-2.98%	24.97	9.31	0.79	1.84	1.34	2.50%	
Lockheed Martin	LMT	5.31%	71.29	68.04	-9.70%	-4.56%	24.50	10.39	0.53	6.27	1.23	4.40%	
Precision Castparts	PCP	4.62%	136.58	138.07	25.12%	1.09%	19.69	16.13	3.39	3.02	1.87	0.10%	
Goodrich Corp	GR	4.57%	82.07	85.77	33.49%	4.51%	10.75	16.37	1.57	3.24	1.65	1.30%	
Northrop Grumman	NOC	4.43%	63.22	61.68	10.44%	-2.44%	18.01	8.99	0.51	1.36	0.22	3.00%	
Raytheon Co	RTN	4.41%	46.08	46.25	-10.23%	0.37%	16.86	9.48	0.68	1.68	1.28	3.20%	
L-3 Communications Hldgs	LLL	3.80%	72.18	70.33	-19.11%	-2.56%	7.96	8.45	0.51	1.16	1.08	2.20%	
Itt Indus	ITT	3.78%	47.19	46.00	-7.52%	-2.52%	8.45	9.98	0.77	1.95	1.01	2.20%	
Rockwell Collins	COL	3.76%	60.51	56.06	1.26%	-7.35%	8.91	12.51	1.92	6.03	1.64	1.70%	
Computer Sciences	CSC	3.54%	49.05	44.63	-22.42%	-9.01%	6.89	7.87	0.43	1.00	1.05	1.30%	
Textron	TXT	3.15%	20.82	22.36	18.87%	7.40%	6.15	17.61	0.60	2.06	0.56	0.40%	
Ball Corp	BLL	3.10%	64.36	65.88	27.43%	2.36%	5.82	12.38	0.71	3.57	1.48	0.60%	
Harris Corp	HRS	2.93%	45.19	44.24	-6.96%	-2.10%	5.61	9.07	1.06	2.50	1.92	2.20%	
SAIC	SAI	2.92%	15.54	15.32	-19.11%	-1.42%	5.69	10.28	0.52	2.50	1.10		
Flir Systems	FLIR	2.18%	27.84	26.81	-18.09%	-3.70%	4.25	15.49	3.41	2.99	1.24		
Transdigm	TDG	1.73%	66.27	68.50	44.24%	3.37%	3.39	15.78	4.12	5.74	3.69		
URS Corporation	URS	1.70%	38.93	39.54	-11.19%	1.57%	3.27	10.69	0.37	0.78	1.06		
Oshkosh Truck	OSK	1.33%	29.51	28.70	-22.50%	-2.74%	2.60	7.72	0.27	1.98	0.63		
Alliant Techsystems	ATK	1.26%	76.24	73.91	-16.27%	-3.06%	2.46	8.60	0.51	2.47	2.03		
Triumph Group	TGI	1.04%	83.59	84.13	74.36%	0.65%	2.04	11.25	1.11	1.44	2.81	0.20%	
Elbit Systems	ESLT	1.03%	54.13	46.80	-28.06%	-13.54%	2.00	9.98	0.78	2.14	1.09	2.40%	
Esterline Technologies	ESL	0.91%	60.44	58.88	44.42%	-2.58%	1.77	13.85	1.17	1.33	1.44		
Viasat Inc	VSAT	0.86%	41.17	41.36	30.14%	0.46%	1.70	26.18	2.23	2.12	4.76		
Moog Inc.	MOGA	0.86%	37.60	36.86	26.10%	-1.97%	1.67	11.78	0.79	1.48	1.18		
Caci Intl	CACI	0.78%	50.12	50.33	3.03%	0.42%	1.53	11.76	0.47	1.27	1.07		
Teledyne Technologies	TDY	0.75%	41.57	40.22	4.85%	-3.25%	1.46	12.57	0.83	1.94	2.04		
Mantech International'a'	MANT	0.74%	39.25	39.92	-17.42%	1.71%	1.45	10.85	0.60	1.58	1.17		
Digital Globe	DGI	0.69%	32.65	29.53	22.02%	-9.56%	1.36	86.85	4.45	2.78	30.77		
Cubic Corp	CUB	0.63%	43.57	45.63	22.33%	4.73%	1.22	16.96	1.09	2.60	1.98	0.40%	
Sra International'a'	SRX	0.58%	20.01	19.62	2.72%	-1.95%	1.12	12.82	0.68	1.44	0.93		
L-1 Identity Solutions	ID	0.57%	11.79	11.83	57.94%	0.34%	1.11	295.75	1.72	1.51	-2.04		
AAR Corp	AIR	0.50%	22.04	24.56	6.88%	11.43%	0.94	12.86	0.65	1.22	1.30		
Orbital Sciences Corp	ORB	0.48%	16.24	16.30	6.82%	0.37%	0.94	19.18	0.77	1.74	2.25		
Cogent Inc.	COGT	0.48%	10.52	10.49	0.96%	-0.29%	0.93	20.98	8.01	1.67	2.30		
GeoEye	GEOY	0.45%	44.27	39.86	42.97%	-9.96%	0.88	21.43	2.79	2.16	1.44		
Comtech	CMTL	0.43%	30.82	29.66	-15.35%	-3.76%	0.84	18.42	1.09	1.21	0.43	3.30%	
Ladish Co	LDSH	0.38%	32.00	46.94	211.89%	46.69%	0.74	24.71	1.93	3.06	3.22		
American Science & Engineering	ASEI	0.37%	82.35	80.62	6.30%	-2.10%	0.72	16.66	2.81	3.04	1.11	1.50%	
Ceradyne Inc	CRDN	0.34%	23.81	26.42	37.46%	10.96%	0.66	18.61	1.62	1.00	4.95		
Osi Systems	OSIS	0.33%	36.00	34.87	27.82%	-3.14%	0.65	15.92	1.11	1.99	0.98		
AeroVironment	AVAV	0.28%	23.46	24.70	-15.06%	5.29%	0.54	21.29	2.20	2.38	0.97		
Applied Signal Technology	APSG	0.23%	33.56	32.86	70.44%	-2.09%	0.44	28.82	2.03	3.01	2.18	1.50%	
Mercury Computer Sys	MRCY	0.22%	15.84	17.81	61.76%	12.44%	0.43	22.54	2.08	2.18	2.74		
Force Protection	FRPT	0.19%	5.61	5.14	-1.34%	-8.38%	0.36	14.28	0.48	1.11	2.36		
CPI International	CPII	0.17%	14.12	19.31	45.85%	36.76%	0.32	14.85	0.91	1.68	1.02		
NCI Information Technology	NCIT	0.15%	18.64	21.97	-20.54%	17.86%	0.30	11.94	0.55	2.05	0.90		
Gencorp	GY	0.15%	4.87	4.91	-29.86%	0.82%	0.29	16.37	0.35				
EMS Tech	ELMG	0.15%	17.84	18.59	28.21%	4.20%	0.28	15.49	0.85	1.17	1.09		
TASER International Inc.	TASR	0.13%	3.97	4.03	-7.99%	1.51%	0.25	44.78	2.59	2.18	-2.74		
Ducommun	DCO	0.12%	21.47	22.38	19.62%	4.24%	0.23	10.22	0.56	0.93	0.92	1.30%	
LMI Aerospace	LMIA	0.10%	16.33	16.27	22.33%	-0.37%	0.19	10.99	0.84	1.29	1.38		