



Presidential Election Year Performance (ex div)

| Feb-Apr | Defense | S&P500 | Alpha |
|---------|---------|---------|-----------|
| 2016 | 8.29% | 6.45% | 184 bps |
| 2012 | 3.61% | 6.51% | [290 bps] |
| 2008 | 1.78% | 0.51% | 127 bps |
| 2004 | [0.82%] | [2.16%] | 134 bps |
| 2000 | 10.52% | 4.16% | 636 bps |

| May - July | Defense | S&P500 | Alpha |
|------------|----------|---------|-----------|
| 2016 | 6.21% | 5.24% | 97 bps |
| 2012 | [4.62%] | [1.32%] | [330 bps] |
| 2008 | [10.48%] | [8.53%] | [195 bps] |
| 2004 | 2.74% | [0.50%] | 324 bps |
| 2000 | [6.03%] | [1.49%] | [454 bps] |

| Aug - Oct | Defense | S&P500 | Alpha |
|-----------|----------|----------|----------|
| 2016 | [0.25%] | [2.18%] | 193 bps |
| 2013 | 6.00% | 2.38% | 362 bps |
| 2008 | [24.34%] | [23.56%] | [78 bps] |
| 2004 | 5.63% | 2.59% | 304 bps |
| 2000 | 13.30% | [0.10%] | 1334 bps |

| Nov-Jan | Defense | S&P500 | Alpha |
|---------|---------|----------|----------|
| 2016/17 | TBD | TBD | TBD |
| 2012/13 | 8.58% | 6.08% | 250 bps |
| 2008/09 | [4.00%] | [14.74%] | 1074 bps |
| 2004/05 | 5.08% | 4.51% | 57 bps |
| 2000/01 | [0.91%] | [4.43%] | 352 bps |

SPADE Defense Index Statistics

| | |
|----------------|----------------|
| 9/30/16 Close | 4488.21 |
| 12/31/15 Close | 4120.18 |
| All-time High: | 4566.32 |
| | 23 August 2016 |

| | SPADE Defense | S&P500 |
|--------|---------------|--------|
| 3Q2016 | 3.83% | 3.31% |
| YTD | 8.93% | 6.08% |

The 12 Sept 2016 issue of *Defense News* stated, “There are signs that defense revenues are poised to bounce back, with opportunistic companies spurring mergers and acquisitions to better position themselves.”

The top 25 companies accounted for 73% of total defense revenues. 41 of 100 are based in the U.S.

Commentary

Changes to the SPADE Defense Index:

September 2016 Rebalance

KBR (NYSE: KBR) was added to the index. They recently acquired Wyle and HTSI to expand defense services business

Corporate Actions During the Quarter

1. ASEI – American Sci & Eng, was acquired by OSI Systems and closed on 12 Sept 2016
2. Honeywell to spinoff Advansix around Oct 1 in a special dividend. Firm is non-defense (resins & chemicals).

A Few Thoughts on the Aerospace & Defense Market

1. Presidential Politics

Both candidates are highlighting the importance of security and are supportive of the military. This is probably a wash for investors.

What to take away from this data?

1. Defense stocks have outperformed the market in each analysis period during the 2016 election.
2. With the exception of the May-July timeframe, defense stocks regularly outperform the broader market during Presidential election cycles.
3. Post-election, defense stocks outperformed the market significantly in each of the past four presidential election cycles.

3Q16 Leaders

| | | |
|----|----------------|--------|
| 1 | Kratos Defense | 68.05% |
| 2 | Engility | 49.15% |
| 3 | AAR Corp | 34.19% |
| 4 | Digital Globe | 28.56% |
| 5 | Esterline Tech | 22.57% |
| 6 | Sparton | 20.62% |
| 7 | SAIC | 18.89% |
| 8 | Oshkosh Truck | 17.38% |
| 9 | Cubic Corp | 16.56% |
| 10 | Taser | 14.99% |

3Q16 Laggards

| | | |
|----|--------------------|----------|
| 1 | Vectrus | [46.54%] |
| 2 | Triumph Group | [21.46%] |
| 3 | Aerovironment | [12.19%] |
| 4 | FireEye | [10.56%] |
| 5 | Orbital ATK | [10.47%] |
| 6 | Leidos | [9.59%] |
| 7 | Huntington Ingalls | [8.69%] |
| 8 | Aerojet Rocketdyne | [3.83%] |
| 9 | Northrop Grumman | [3.75%] |
| 10 | Lockheed Martin | [3.40%] |

YTD Results

| | | | | | |
|----|--------------------|--------|----|---------------------|---------|
| 1 | Key W | 83.39% | 26 | Lockheed Martin | 10.39% |
| 2 | Digital Globe | 75.61% | 27 | Raytheon | 9.32% |
| 3 | Kratos Defense | 68.05% | 28 | CACI | 8.75% |
| 4 | Taser | 65.47% | 29 | Kaman | 7.62% |
| 5 | SAIC | 51.53% | 30 | United Technologies | 5.76% |
| 6 | Oshkosh Truck | 43.44% | 31 | Harris | 5.42% |
| 7 | Mercury Computer | 33.82% | 32 | Booz Allen | 2.46% |
| 8 | Curtiss Wright | 33.01% | 33 | Cubic Corp | -0.93% |
| 9 | Sparton | 31.37% | 34 | Moog | -1.75% |
| 10 | Heico | 27.30% | 35 | Engility | -3.02% |
| 11 | Transdigm | 26.56% | 36 | Hexcel | -4.63% |
| 12 | L-3 | 26.12% | 37 | Textron | -5.38% |
| 13 | Woodward | 25.82% | 38 | Esterline Tech | -6.12% |
| 14 | Mantech | 24.64% | 39 | Rockwell Collins | -8.62% |
| 15 | Viasat | 22.34% | 40 | Boeing | -8.89% |
| 16 | Teledyne | 21.68% | 41 | CSRA | -10.33% |
| 17 | HUNtington Ingalls | 20.95% | 42 | American Science | -10.46% |
| 18 | BWX Tech | 20.77% | 43 | Orbital ATK | -14.67% |
| 19 | AAR Corp | 19.13% | 44 | Aerovironment | -17.17% |
| 20 | Northrop Grumman | 13.31% | 45 | Leidos | -23.07% |
| 21 | General Dynamics | 12.96% | 46 | OSI SYstems | -26.26% |
| 22 | Ball Corp | 12.68% | 47 | Vectrus | -27.09% |
| 23 | Honeywell | 12.57% | 48 | FireEye | -28.98% |
| 24 | Aerojet Rocketdyne | 12.26% | 49 | Triumph Group | -29.86% |
| 25 | FLIR Systems | 11.93% | 50 | Comtech | -36.24% |

Licensed Products

Exchange Traded Fund - ETF

The SPADE Defense Index (NYSE: DXS) is licensed by, and serves as, the underlying index for the Powershares Aerospace & Defense ETF (NYSE: PPA).

| | |
|--|------------|
| ETF Statistics (NYSE: PPA) | |
| Powershares Aerospace & Defense | |
| Exchange / Ticker Symbol: | NYSE / PPA |
| Assets (9/30/16) | \$230.5 M |
| Closing Price (9/30/16) | \$38.77 |
| Yield (TTM) | 1.85% |
| 3Q2016 Volume | 3,316,900 |
| Turnover | 14% |
| source: Yahoo Finance | |

| | |
|------------------------------|-------|
| Portfolio Price / Earnings* | 18.89 |
| Portfolio Price / Book* | 3.64 |
| Portfolio Price / Sales* | 1.34 |
| Portfolio Price / Cash Flow* | 11.93 |
| Earnings Growth Rate* | 9.65% |
| Beta (3 year)* | 0.82 |
| Alpha (3 year)* | 8.56 |
| R-squared (3 years)* | 65.49 |
| Yahoo Finance | |

Commentary (continued from page 1)**2. Which Party is Best for Defense Stocks?**

Although the belief is that a Republican president is best for the defense sector, statistically it is shown that the performance of defense stocks has more to do with global politics than which party controls the White House. FDR, Truman, Kennedy and Johnson all presided over periods when the U.S. military saw action overseas. Peace dividends followed Vietnam (Carter) and the fall of the Soviet Union (early Clinton) but while spending rose under Ronald Reagan and post-9/11 (George W. Bush), it began to decline during the last years of George HW Bush and rose in the latter years of Clinton.

3. How is the Sector Performing YTD?

After a small pause in the 1Q16, down a bit more than 1%, the sector has seen a steady stream of all time highs throughout the year with its most recent peak on 23 August. Quarterly performance so far has appeared strong and Boeing recently raise its forecast which is good for a number of suppliers

4. Commercial Aerospace Concerns

There has been some discussion by analysts and companies regarding a slowing of orders for commercial aircraft and it took down the stock prices of a number of companies. Lost in the discussion is the tremendous manufacturing backlog that exists, and that will exist, for another several years. One cannot expect that the flow will remain steady as durable goods orders tend to be announced in spurts.

5. M and A -- Picking up a bit ; IPO market quiet

There haven't been any defense focused IPOs recently but a number of deals have been taking place. Of particular note, Rockwell Collins made a major acquisition to bolster their aerospace product line to compliment (although away from) their electronics capabilities; KBR's recent acquisitions of Wyle and HTSI to expand its defense services business; and the acquisition of American Science & Engineering by OSI Systems. Rumored is the spinoff or sale of Harris' Caprock satellite communications business to help pay for the Exelis acquisition. For the most part, firms have been content to reposition their activities via smaller deals than make major acquisitions.

6. What are the Concerns for the Next Administration?

ISIS, Aleppo/Syria, Iran, North Korea, China, Russia, etc.--Regarding Russia, how will that relationship evolve? Regardless of the outcome (Hillary or Donald) and it's likely the relationship compared to the Obama admin will change.

Cyber...It is a game of cat and mouse between brilliant black hats trying to impact a digital system and brilliant black hats trying to stop them. In a sense it is a game with extreme consequences to people organizations and economics.

Defense News (12 Sept16, Top 100)**U.S. Firms >\$1B in Defense Revenues**

| | Defense Revenues |
|--------------------------|------------------|
| Lockheed Martin | 40,596 |
| Boeing | 30,388 |
| Raytheon | 21,620 |
| General Dynamics | 19,148 |
| Northrop Grumman | 17,600 |
| L-3 | 8,772 |
| Huntington Ingalls | 6,880 |
| United Technologies | 6,780 |
| Honeywell | 4,715 |
| Harris | 4,400 |
| Textron | 4,161 |
| GE Aviation (<15% of GE) | 3,700 |
| Leidos | 3,248 |
| Bechtel (construction) | 3,230 |
| SAIC | 2,838 |
| AECOM (construction) | 2,785 |
| Orbital ATK | 2,775 |
| Booz Allen | 2,600 |
| CACI | 2,217 |
| Rockwell Collins | 2,187 |
| Aerojet | 1,708 |
| CSRA | 1,684 |
| Mantech | 1,406 |
| Dynacorp (private) | 1,287 |
| Vectrus | 1,180 |
| Accenture (accounting) | 1,140 |
| Fluor (construction) | 1,019 |

7. When Will the Large Prime Contractors Peak?

In the early 2000s, investor attention was focused on a number of small and mid-cap IPOs targeting defense IT, C4ISR, and the digitization of the battlefield. By the mid-2000s, growth in the sector had shifted to the large prime contractors focused on the war effort. Although individual small and mid-cap companies have seen substantial returns in any given year, as a whole they have been a drag on performance. The question is, when the cycle shifts again, will investors be ready?

Performance (ex div)

| | SPADE Defense Index | S&P500 | Alpha (bps) |
|------|---------------------|----------|-------------|
| 2015 | 3.23% | [0.73%] | 396 |
| 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] |



3-Year Weekly Chart Comparing the Powershares Aerospace & Defense ETF “PPA” (black) with the SP500 (yellow)

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.

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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| Sep-16 | | | | | | Market | Forward | Price/ | Price/ | PEG | | |
|----------------------------------|--------|-----------|-----------|---------|---------|----------|---------|--------|--------|----------|-----------|--|
| | | 30-Jun-16 | 30-Sep-16 | YTD | QTD | intraday | (ttm) | ttm | mrq | expected | forward % | |
| Company | Ticker | Price | Price | % Ch | % Ch | Cap | P/E | Sales | Book | 5 yr | Div Yld | |
| Comtech | CMTL | 12.84 | 12.81 | -36.24% | -0.23% | 0.30 | 55.70 | 0.89 | 0.55 | -0.93 | 9.37% | |
| Triumph Group | TGI | 35.50 | 27.88 | -29.86% | -21.46% | 1.38 | 6.51 | 0.36 | 1.47 | 2.15 | 0.57% | |
| FireEye | FEYE | 16.47 | 14.73 | -28.98% | -10.56% | 2.50 | -26.79 | 3.61 | 2.62 | -0.67 | | |
| Vectrus | VEC | 28.49 | 15.23 | -27.09% | -46.54% | 0.16 | 8.46 | 0.13 | 1.58 | *** | | |
| OSI Systems | OSIS | 58.13 | 65.38 | -26.26% | 12.47% | 1.24 | *** | 1.49 | *** | *** | | |
| Leidos | LDOS | 47.87 | 43.28 | -23.07% | -9.59% | 6.48 | 13.74 | 1.24 | 2.81 | 1.37 | 2.96% | |
| AeroVironment | AVAV | 27.80 | 24.41 | -17.17% | -12.19% | 0.56 | 48.82 | 2.21 | 1.59 | -6.30 | | |
| Orbital ATK (merged 2/10/15) | OA | 85.14 | 76.23 | -14.67% | -10.47% | 4.46 | 12.62 | 0.96 | 2.26 | 1.35 | 1.57% | |
| American Science & Engineering | ASEI | 37.41 | 37.05 | -10.46% | -0.96% | 0.26 | *** | *** | 2.07 | *** | | |
| CSRA Inc. (16Nov15 split) | CSRA | 23.43 | 26.9 | -10.33% | 14.81% | 4.46 | 12.93 | 0.98 | 36.35 | 1.37 | 1.49% | |
| Boeing Co | BA | 129.87 | 131.74 | -8.89% | 1.44% | 82.18 | 13.72 | 0.85 | 140.90 | 2.07 | 3.31% | |
| Rockwell Collins | COL | 85.14 | 84.34 | -8.62% | -0.94% | 10.96 | 15.89 | 2.11 | *** | *** | 1.57% | |
| Esterline Technologies | ESL | 62.04 | 76.04 | -6.12% | 22.57% | 2.24 | 14.48 | 1.16 | 1.43 | 1.48 | | |
| Textron | TXT | 36.56 | 39.75 | -5.38% | 8.73% | 10.71 | 13.47 | 0.78 | 2.06 | 1.61 | 0.20% | |
| Hexcel | HXL | 41.64 | 44.30 | -4.63% | 6.39% | 4.10 | 15.71 | 2.12 | 3.34 | 1.60 | 1.00% | |
| Engility | EGL | 21.12 | 31.50 | -3.02% | 49.15% | 1.16 | -98.44 | 0.53 | 1.66 | *** | | |
| Moog Inc. | MOGA | 53.92 | 59.54 | -1.75% | 10.42% | 2.13 | 15.67 | 0.88 | 2.07 | 1.93 | | |
| Cubic Corp | CUB | 40.16 | 46.81 | -0.93% | 16.56% | 1.26 | 21.47 | 0.85 | 1.74 | 1.80 | 0.58% | |
| Booz Allen | BAH | 29.64 | 31.61 | 2.46% | 6.65% | 4.70 | 16.99 | 0.86 | 10.15 | 2.38 | 1.90% | |
| Harris Corp | HRS | 83.44 | 91.61 | 5.42% | 9.79% | 11.32 | 14.52 | 1.52 | 3.74 | 0.38 | 2.31% | |
| United Technologies | UTX | 102.55 | 101.60 | 5.76% | -0.93% | 85.03 | 14.81 | 1.51 | 2.92 | 1.99 | 2.60% | |
| Kaman | KAMN | 42.52 | 43.92 | 7.62% | 3.29% | 1.19 | 15.46 | 0.66 | 2.11 | 2.82 | 1.64% | |
| Caci Intl | CACI | 90.41 | 100.90 | 8.75% | 11.60% | 2.45 | 14.93 | 0.66 | 1.53 | 2.24 | | |
| Raytheon Co | RTN | 135.95 | 136.13 | 9.32% | 0.13% | 40.17 | 17.63 | 1.68 | 3.89 | 1.80 | 2.15% | |
| Lockheed Martin | LMT | 248.17 | 239.72 | 10.39% | -3.40% | 70.37 | 19.01 | 1.44 | 24.23 | 3.44 | 2.75% | |
| Flir Systems | FLIR | 30.95 | 31.42 | 11.93% | 1.52% | 4.31 | 17.55 | 2.69 | 2.62 | 1.05 | 1.53% | |
| Aerojet Rocketdyne | AJRD | 18.28 | 17.58 | 12.26% | -3.83% | 1.20 | 15.56 | 0.70 | *** | 1.09 | | |
| Honeywell Intl | HON | 116.32 | 116.59 | 12.57% | 0.23% | 88.71 | 16.06 | 2.27 | 4.73 | 1.89 | 2.04% | |
| Ball Corp | BLL | 72.29 | 81.95 | 12.68% | 13.36% | 14.28 | 19.15 | 1.86 | 3.12 | 2.42 | 0.63% | |
| General Dynamics | GD | 139.24 | 155.16 | 12.96% | 11.43% | 47.37 | 15.42 | 1.52 | 4.30 | 2.13 | 1.96% | |
| Northrop Grumman | NOC | 222.28 | 213.95 | 13.31% | -3.75% | 38.21 | 18.43 | 1.62 | 6.74 | 2.34 | 1.68% | |
| AAR Corp | AIR | 23.34 | 31.32 | 19.13% | 34.19% | 1.07 | 18.64 | 0.64 | 1.24 | 1.10 | 1.00% | |
| BWX Technologies (1July15 split) | BWXT | 35.77 | 38.37 | 20.77% | 7.27% | 3.97 | 20.97 | 2.66 | 13.59 | 2.08 | 0.94% | |
| Huntington Ingalls | HII | 168.03 | 153.42 | 20.95% | -8.69% | 7.18 | 15.3 | 1.00 | 4.46 | 1.46 | 1.30% | |
| Teledyne Technologies | TDY | 99.05 | 107.93 | 21.68% | 8.97% | 3.74 | 19.41 | 1.68 | 2.53 | 0.71 | | |
| Viasat Inc | VSAT | 71.40 | 74.64 | 22.34% | 4.54% | 3.68 | 67.25 | 2.56 | 3.16 | 2.82 | | |
| Mantech International'a' | MANT | 37.82 | 37.69 | 24.64% | -0.34% | 1.44 | 24.47 | 0.91 | 1.19 | 3.17 | 2.23% | |
| Woodward | WWD | 57.64 | 62.48 | 25.82% | 8.40% | 3.84 | 19.28 | 1.93 | 3.31 | 1.61 | 0.70% | |
| L-3 Communications Hldgs | LLL | 146.69 | 150.73 | 26.12% | 2.75% | 11.64 | 17.65 | 1.11 | 2.59 | 1.93 | 1.86% | |
| Transdigm | TDG | 263.69 | 289.12 | 26.56% | 9.64% | 15.40 | 22.57 | 4.96 | *** | 1.69 | | |
| Heico | HEI | 66.81 | 69.20 | 27.30% | 3.58% | 4.65 | *** | 3.47 | 5 | *** | 0.23% | |
| Sparton | SPA | 21.77 | 26.26 | 31.37% | 20.62% | 0.26 | 14.51 | 0.61 | 3.27 | 1.24 | | |
| Curtiss Wright | CW | 84.25 | 91.11 | 33.01% | 8.14% | 4.05 | 20.11 | 1.88 | 3.18 | 2.23 | 0.57% | |
| Mercury Computer Sys | MRCY | 24.86 | 24.57 | 33.82% | -1.17% | 0.99 | 21.74 | 3.67 | 2.01 | 3.06 | | |
| Oshkosh Truck | OSK | 47.71 | 56.00 | 43.44% | 17.38% | 4.12 | 16.62 | 0.67 | 2.12 | 1.99 | 1.36% | |
| SAIC | SAIC | 58.35 | 69.37 | 51.53% | 18.89% | 3.07 | 19.11 | 0.68 | 8.41 | 4.20 | 1.79% | |
| TASER International Inc. | TASR | 24.88 | 28.61 | 65.47% | 14.99% | 1.50 | 65.02 | 6.82 | 11.10 | 3.53 | | |
| Kratos Defense & Security | KTOS | 4.10 | 6.89 | 68.05% | 68.05% | 0.42 | 62.64 | 0.63 | 1.82 | -3.73 | | |
| Digital Globe | DGI | 21.39 | 27.50 | 75.61% | 28.56% | 1.72 | 916.67 | 2.44 | 1.44 | 159.42 | | |
| KEY W Holding | KEYW | 9.94 | 11.04 | 83.39% | 11.07% | 0.44 | 48.00 | 1.41 | 1.92 | 2.69 | | |

Data Provided by Yahoo Finance, Thomson Reuters (P/E, PEG), Morningstar (div)