

Commentary: Taking the Charts Back to 1980

If you are reading this commentary, then you likely know how defense stocks have performed over the past decade and the issues they face today. You are also well aware that the markets overall are in turmoil and that defense stocks are likely in a holding pattern until the Congressional super-committee comes back and we see what, if any, impact there is from their debt reduction efforts.

With this being the tenth anniversary of 9/11, from an investment perspective I found myself wanting to take a look back to the decades prior to 9-11 so that I could hopefully draw parallels to the decline in defense stocks today. In particular I was curious to learn the following:

1. *How big was the decline from peak to trough.*
2. *How long did it take to get from peak to trough; and*
3. *How long did stocks stay near the trough level before rebounding.*

One can always talk about whether they think valuations are low or whether selling is overdone or still has a ways to go but I was hoping to find a historical analogy. The market tends to lead/lag so going strictly by defense budgets I knew wasn't going to be the answer. It would mean finding index data for the defense build-up seen in the Reagan presidency, the collapse of the Soviet Union, the 'peace dividend' from Clinton's first term and the start to rebuild it late in his second term, through 9-11.

Data from 30 December 1997 through the present is readily available via the SPADE Defense Index (NYSE: DXS) but prior to that proved to be a problem. Data for the AMEX Defense Index (which the exchange uses for trading options) didn't seem to go back much further according to the file they sent me. Expanding the SPADE Defense Index further back would be much too time consuming a task just to satisfy my curiosity as to do it right would mean identifying every public company that operated in the sector during that period including all mergers and acquisitions -- a task much too time consuming just to satisfy my curiosity.

So here's the methodology I used -- from 1997 to 2010 the SPADE Defense Index is the source. Prior to this the data was a quick and dirty analysis using the 'big 5' prime contractors: Boeing, General Dynamics, Lockheed Martin, Northrop Grumman, and Raytheon (including their predecessor whose data was linked by CUSIP id's). Two indexes -- one equal weighted and one employing a simple modification based on the market cap weights we've seen over time. This data included dividends and price changes due to splits and other factors.

What I learned was the following:

SPADE Defense Index Statistics

8/30/11 Close: 1999.39
 All-time Close: 2747.67
 Date of all-time close: 9 October 2007

	SPADE Defense	S&P500
August	[7.62%]	[5.68%]
QTD	[13.66%]	[7.70%]
YTD	[6.02%]	[3.08%]

Sen. John Kyl (R-AZ), said that he will quit the deficit reduction committee if new defense cuts are on the table. -- Wall Street Journal

Frequency of Downturns

There were very few negative periods during this entire time. Downturns took place in just three calendar periods: 1987, 2002, and 1980-1981. *All other calendar year returns were positive.*

The Investing Cycle

Looking at calendar returns from 1980-2010:

- Down 2, Up 5 [decline of 14+%, prior to 1980, TBD]
- Down 1, Up 14 [decline of 23.29%]
- Down 1, Up 5 [decline of 2.87%]
- Down 1, Up 2 [decline of 38.03%]

Ignoring the 3% decline as an anomaly, what appears is the sector can experience a severe downturn of 20% - 40% but, which during the first two cycles, rebounded to break even within four years from its bottom.

Correlations & Alpha vs. the S&P500

- Correlations were much lower in the 1980s and 1990s, almost independent of the market; whereas the late 2000s were highly correlated, a staple of the new market.

- Contrary to what is believed, compared to the

August 2011 Top Gainers			August 2011 Laggards			YTD Top Gainers			YTD Laggards		
1	Taser	8.27%	1	Textron	[27.06%]	1	EMS Technologies	66.23%	1	Oshkosh Truck	[44.04%]
2	KEYW Holdings	6.09%	2	NCI Information	[23.88%]	2	SRA International*	51.20%	2	CSC	[38.19%]
3	Heico	4.32%	3	Gencrop	[21.38%]	3	Esterline Tech	24.15%	3	NCI Information	[28.88%]
4	Comtech	3.26%	4	Viasat	[20.99%]	4	Transdigm	27.57%	4	Textron	[28.64%]
5	Transdigm	1.99%	5	Oshkosh Truck	[20.55%]	5	Teledyne Tech.	24.15%	5	Digital Globe	[28.54%]
6	Precision Castparts	1.53%	6	AAR	[19.60%]	6	LMI Aerospace	23.33%	6	Kratos	[28.17%]
7	Harris	1.20%	7	Mercury Computer	[17.15%]	7	Integral Systems*	22.81%	7	Force Protection	[25.59%]
8	Teledyne	0.66%	8	American Science	[16.87%]	8	Precision Castparts	17.70%	8	Mercury Computer	[24.32%]
9	Aervironment	[0.59%]	9	Ducommun	[15.64%]	9	OSI Systems	6.93%	9	Elbit Systems	[22.83%]
10	Esterline Tech.	[1.41%]	10	L-3 Comm.	[14.28%]	10	Heico	6.84%	10	American Science	[20.87%]

* Acquired

Largest Defense Prime Contractors		
	August	2011
Lockheed Martin	[2.03%]	6.12%
Boeing	[5.12%]	2.45%
General Dynamics	[5.96%]	[9.70%]
Northrop Grumman	[9.73%]	[15.68%]
Raytheon	[3.35%]	[6.71%]
L-3	[14.28%]	[3.79%]

ETF Statistics (NYSEArca: PPA) Powershares Aerospace & Defense	
Exchange / Ticker Symbol:	NYSE / PPA
Fee	60 basis
Assets (8/30/11)	\$105.6 M
Closing Price (8/30/11)	\$17.60
Yield (Distribution Yield)	1.91%
August 2011 Volume	4,526,200
Turnover	12%
source: Marketwatch	

Portfolio Price / Earnings	13.59
Portfolio Price / Book	2.29
Portfolio Price / Sales	0.86
Portfolio Price / Cash Flow	9.74
Earnings Growth Rate	3.38%
Beta (3 year)	1.06
Alpha (3 year)	[1.18]
R-squared (3 year)	85.53%
Yahoo Finance - 6/30/11	

Commentary (continued from page 2)

S&P500, defense stocks outperformed in 1992-1996 (the Clinton presidency) and underperformed during the Reagan years (results skewed by a large selloff in 1987 and significant underperformance from 1985-1989). The sector for the 2000s outperformed the market, most years by more than double digits, before peaking in October 2007 and tracking the market performance in 2008.

What Do I Think All this Mean?

1. Defense stock downturns can be severe but they don't appear to last long. Historically, we are currently at previous levels that define a bottom.
2. With dividends reinvested, within a few years investments can be reclaimed and long-term the defense sector has produced solid returns.
3. Investing in the S&P500 is **MUCH** more volatile than investing in the defense sector.
4. I'd like to see the results of a more detailed analysis that included large defense firms that were acquired including Martin Marietta, E-Systems, McDonnell Douglas, Loral Defense, Gumman, etc. as well as how world events, budget impacts, etc. impacted the stocks.

\$100 invested from	
1980-1990	Defense: \$158.17 S&P500: \$503.91
1990-2000	Defense: \$653.90 S&P500: \$518.35
2000-2010	Defense: \$260.67 S&P500: \$77.78

	SPADE Defense Index (NYSE: DXS)	S&P500 (ex-div)
2010	9.61%	12.78%
2009	21.71%	23.45%
2008	[38.03%]	[38.49%]
2007	22.17%	3.53%
2006	19.33%	13.62%
2005	5.30%	3.00%
2004	20.47%	8.99%
2003	37.27%	26.38%
2002	[2.87%]	[23.37%]
2001	0.94%	[13.04%]
2000	4.98%	[10.14%]
1999	15.31%	19.53%
1998	6.63%	26.67%

	Defense Stocks (Equal Weight)	Defense Stocks (Modified Weight)	S&P500
1997	14.84%	12.86%	33.36%
1996	22.21%	23.36%	22.96%
1995	60.83%	63.13%	37.58%
1994	5.21%	6.09%	1.32%
1993	44.62%	42.33%	10.08%
1992	16.02%	13.71%	7.62%
1991	12.60%	11.56%	30.47%
1990	6.52%	6.73%	[3.10%]
1989	5.23%	7.20%	31.69%
1988	9.03%	10.83%	16.61%
1987	[23.29%]	[24.19%]	5.25%
1986	8.89%	8.25%	18.67%
1985	14.51%	14.06%	31.73%
1984	12.43%	13.99%	6.27%
1983	12.55%	14.55%	22.56%
1982	39.46%	41.15%	21.55%
1981	[8.42%]	[7.96%]	[4.92%]
1980	[6.24%]	[6.71%]	32.50%

Where Defense Companies CEOs are Looking for Growth

Boeing: Looking abroad for security-related sales. A Reuters article highlighted that these sales have grown from 7% to 17% of security revenues within 5 years. Boeing originally targeted 25% but has raised that to as much as 30% by 2013 according to Dennis Muilenbert, CEO of defense, space and security.

Northrop: Company is seeking to boost international sales in unmanned systems. CEO Wes Bush said that the government is looking to ease export restrictions that will aid global sales.

Lockheed Martin: Robert Stevens, CEO sees progress on the F-35 Joint Strike Fighter and foreign demand for Lockheed's F-16s and older planes.

BAE Systems: Ian King, CEO - "In five years India will be spending more on defense than the U.S. China and Russia will also become accessible in time." - Reuters 9/6/11

EADS (Europe): Plans to move forward with its U.S. expansion and has \$15-\$16 billion in liquidity for acquisitions. Targets have not been disclosed but look for a big deal soon.

More News that Caught Our Eyes

Lockheed Martin: *Janes DS Forecast* said that the stealth technology aspect of the F-35 JSF is Lockheed's 'secret weapon' as it tries to win a \$4B contract from Japan over Boeing's F-18 Super Hornet and the Eurofighter Typhoon.

Boeing: Plans to deliver an updated version of its 737 in 2017 using enhanced engines. More than 500 commitments for the plane called the 737 MAX have already been received.

Military Truck Demand: Even with budget reductions and the anticipated end to the Army's Ground Combat Vehicle program, the need for the military to acquire trucks and truck services remains. As an example, the US Army is set to announce a program to update its 60,000 unit Humvee fleet to address some of its vulnerabilities. The Pentagon has also approved an Army plan to begin technology development for a new class of armored vehicles to replace its Bradley infantry fighting vehicles with as many as 1874 new vehicles.

Alliant Techsystems: Unveiled a new 615,000 sq ft component manufacturing plant that will allow them to expand their composite component business for aircraft structures. The firm stated that "they had received over \$1 billion in orders over the past few years and this will enable them to go beyond that."

Northrop: Received a \$795M contract for five E-2D Advanced Hawkeye aircraft.

Boeing: Received a \$2.5 billion contract from Air Lease for 14 737-800 single aisle jets and five 777-300 Extended Range Jets.

Chinook Helicopter Sales: Boeing sold 14 to the British Royal Air Force for \$1.65 billion and 6 to Turkey for around \$400 million.

\$16.2 Billion: The value of inventory built up by Boeing in 787 hardware during the three year delay before delivery of its first plane.

Savings: The U.S. Army told Congress that it will save \$15 billion by scaling back the JTRS radio program.

Aircraft Replacement Cycle: At the current rate of Air Force purchases of 118 planes per year, it takes a whopping 48 years to turn over the fleet!

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.

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.

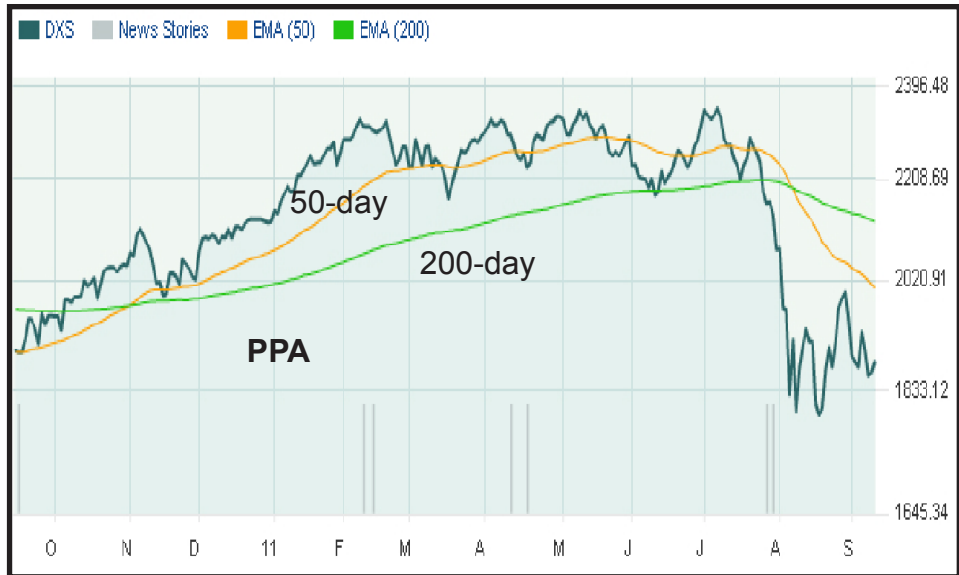
Rules

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



PPA appears to have some 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) remains below the 50-day and the 200-day moving average (green).

PPA = Powershares Aerospace & Defense ETF

After outperforming the market earlier this year, defense stocks (blue) sold off in late-July/August at a steeper rate than the market and is underperforming the S&P500 (red) by 3% YTD.

PPA = Powershares Aerospace & Defense ETF



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