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**SPADE Defense Index Statistics**

3/31/21 Close	8497.20
12/31/20 Close	7932.14

All-time Intraday High:  
13 February 2020 8613.30

All-time Closing High:  
12 February 2020 8599.46

	SPADE Defense	S&P500
<b>1Q21</b>	<b>7.12%</b>	5.77%
<b>2020</b>	[0.73%]	16.26%
<b>2019</b>	<b>38.49%</b>	<b>28.88%</b>

**Commentary**

**Defense Stocks Have Rebounded Nicely** since their lows one-year ago with the SPADE Defense Index gaining 58% over that time. Its 7.12% gain in 1Q21 outperformed the equity market's 5.77% gain and as the calendar turned to April, the Index once gain returned to historic highs!

With worldwide travel slowly beginning the return toward normal and the Boeing 737Max being approved for flight around the world, the company has started announcing orders and deliveries. This is good news for the entire aerospace sector and a number of firms in the Index. Teal Group has forecast great numbers for commercial aerospace in 2023 an 2024. (See worldwide aircraft deliveries chart on page 2)

**A Transition at the White House**

A new administration has taken office in the White House and things are stated to take shape as the new leadership for the Pentagon and related security agencies and offices are announced.

Joe Biden began his administration with several key questions that would impact companies operating in the sector. Among these were his plans for the defense budget, reorganizing the military's structure, revitalizing global rela-

tionships, and how he planned to handle trade among allies and to other nations.

Biden's proposed budget for FY22 set aside \$753 billion for all national defense programs, an increase of 1.7% over FY21. This is a middle ground between progressives who want to see large cuts to defense and hawks who prefer 3-5% budget growth to account for "inflation." Byron Callan of Capitol Alpha Partners believes that the defense procurement and R&D budgets could be impacted and sees a decline to \$227B from \$247B. There are a lot of moving parts that could impact the final figure. Major changes are rare in the first year of a presidency so, as expected, changes are not likely to occur until at least FY23. Real movements in the defense budget require Congress to make hard choices and this, historically, is not something that they traditionally do.

*Organizational Changes*

President Biden has selected a very experienced team with extensive background in the defense sector. Their stated goal is to put diplomacy first and have the DoD support those efforts.

Organizationally, many wondered if

Continued on page 2

**Corporate Actions Affecting the Index During the Quarter**

None. Several acquisitions are pending.

**Dividend**

Invesco's Aerospace & Defense ETF issued a dividend of 13.4c on March 22.

**Licensed Products**

**Exchange Traded Fund (ETF)**

The SPADE Defense Index has been licensed to Invesco and serves as the underlying index for the Invesco Aerospace & Defense ETF (NYSE Arca: PPA).

**Options Trading**

Options on the Invesco Aerospace and Defense ETF (ticker: PPA) began trading on November 2019.

**SPADE Defense Index  
31 March 2021 Rebalance**

**No Changes**

There were no changes to the holdings made at the March 2021 rebalance. The minimum market capitalization for companies to enter the Index was raised to \$250M from \$100M.

**Commentary** (continued from page 1)

President Biden would support the US Space Force created by President Trump. Considering all the activity happening in this sector right now, it was not a surprise that he decided to maintain the status quo.

*Approval of International Sales*

Of high importance to companies operating in the sector was the question about whether the new administration would continue to approve foreign military sales--an area of growth for defense companies over the past decade as well as a safety net from changes in the US defense budget. In the first few months of the administration, the answer appears to be...yes and no.

Regulatory approval of weaponry sales to Saudi Arabia and UAE have been temporarily suspended as the administration reviews its position in the region and its politically-sensitive relationship with both nations before moving forward. Many believed that changes in the control of the White House and Congress would have repercussions in light of the Saudi involvement with the assassination of an American journalist and publicized atrocities in its war with Yemen. The US has a complicated relationship with Saudi Arabia so an eventual approval would not be a surprise. Until then, some orders will not materialize or will be delayed. On hold is a \$23.3 billion arms sales to the UAE and \$478M in orders to Raytheon from Saudi Arabia for precision guided bombs. Although it appears large in dollar terms, defense prime contractors tend to be highly diversified and individual contracts, such as the aforementioned one to Raytheon, typically represent much less than 5% of sales.

In spite of the above policy action, the Biden Administration approved more than \$200M worth of deals in late March involving radio systems for NATO, an F-16 fighter combat training center for Jordan, and missiles for Chile. These were the first foreign military sales requests to be approved since the Administration took office and indicate that the White House is open to approving international sales, but with certain exceptions.

*Stance on Russia and China*

Initial comments by President Biden indicate that he will provide a tough stance when dealing with both Russia and China. As long as these countries are seen in an

adversarial light, support for the defense sector will continue.

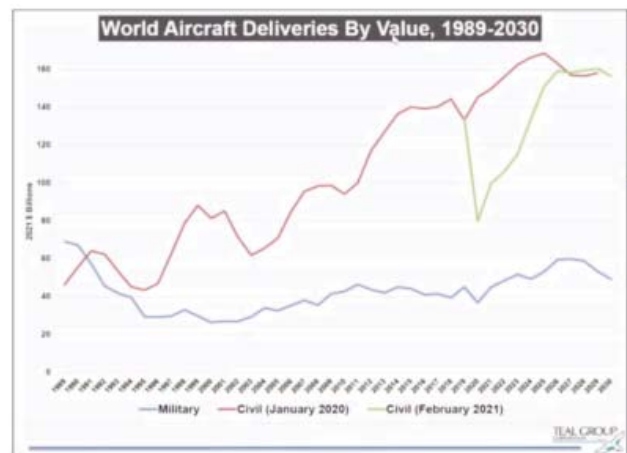
*Establishing Strong Relationships with Allies*

As he indicated he would do, during their first months in office, the Biden Administration has worked to repair its relationships with allies and reengage in a number of international organizations and agreements--rejoining New Start and the Paris Accords, and returning to a historically active role with NATO. The US operating on a global stage is a positive for the defense sector. The more involved we are, the more engaged we are likely to be, and the more our allies are open to acquiring US manufactured items and technologies.

*What Programs Benefit*

There are still a lot of questions that remain to be answered. As anticipated, top line budgets have “slipped to the right” awaiting details from the Pentagon about its updated five-year plan. Analyst Byron Callan has suggested that DoD plans for the next decade show growth in Columbia class submarines, B-21 bombers, the Ground Based Strategic Deterrent program, Army modernization efforts, and stepped up buys in the F-35 fighter. Other analysts have cited exposure to space as an area for growth (one that would benefit defense firms such as Lockheed Martin, Northrop Grumman, Ball Aerospace, Raytheon, ViaSat, Maxar, etc.)

According to MGen Arnold Punaro (ret), shipbuilding, nuclear modernization efforts, and Army staffing levels are currently under review. With an estimated total cost of



Continued on page 4

**1Q21 Leaders**

1	Viasat	47.23%
2	Triumph Group	46.34%
3	Oshkosh Truck	37.86%
4	Aerovironment	33.56%
5	FLIR Systems	28.84%
6	ATI	25.58%
7	Spirit Aerosystems	24.46%
8	KBR	24.12%
9	RADA Electronics	23.18%
10	General Dynamics	22.00%

**1Q21 Laggards**

1	Mercury Computer	[19.77%]
2	FireEye	[15.13%]
3	SAIC	[11.68%]
4	Aerojet Rocketdyne	[11.14%]
5	Kaman	[10.22%]
6	Ball Corp	[9.06%]
7	Leidos	[8.41%]
8	Booz Allen	[7.63%]
9	Transdigm	[5.00%]
10	Heico	[4.98%]

**Morningstar Says:**

PPA is a Four-Star Fund \*\*\*\*  
Avg Risk in the Industrials Category,  
With Avg to High Return

**2021 YTD Results**

1	Viasat	47.23%	28	Vectrus	7.48%
2	Triumph Group	46.34%	29	L3 Harris	7.23%
3	Oshkosh Truck	37.86%	30	Northrop Grumman	6.21%
4	Aerovironment	33.56%	31	Teledyne Tech.	5.53%
5	FLIR Systems	28.84%	32	Iridium	4.88%
6	ATI	25.58%	33	Moog	4.85%
7	Spirit Aerosystems	24.46%	34	Lockheed Martin	4.09%
8	KBR	24.12%	35	OSI Systems	3.09%
9	RADA Electronics	23.18%	36	CAE	2.70%
10	General Dynamics	22.00%	37	Honeywell	2.05%
11	Huntington Ingalls	20.75%	38	Curtiss Wright	1.93%
12	Perspecta	20.64%	39	Kratos Defense	[0.55%]
13	Cubic Corp	20.20%	40	Woodward	[0.74%]
14	Comtech	20.06%	41	CACI	[1.07%]
15	Boeing	18.99%	42	PAE Systems	[1.74%]
16	Jacobs Engineering	18.64%	43	Maxar	[2.00%]
17	AXON Int'l	16.23%	44	Mantech Int'l	[2.24%]
18	Textron	16.04%	45	Heico	[4.98%]
19	Hexcel	15.49%	46	Transdigm	[5.00%]
20	AAR Corp	14.99%	47	Booz Allen	[7.63%]
21	Telos Corp	14.98%	48	Leidos	[8.41%]
22	Howmet	12.58%	49	Ball Corp	[9.06%]
23	Ducommun	11.73%	50	Kaman	[10.22%]
24	Parsons	11.07%	51	Aerojet Rocketdyne	[11.14%]
25	BWX Technologies	9.39%	52	SAIC	[11.68%]
26	Elbit Systems	9.33%	53	FireEye	[15.13%]
27	Raytheon Tech	8.05%	54	Mercury Computer	[19.77%]

**ETF Statistics (NYSE Arca: PPA)  
Invesco Aerospace & Defense**

Exchange / Ticker Symbol:	NYSE / PPA
Assets (3/31/21)	\$727.4 M
Closing Price (3/31/21)	\$72.73
Dividend Yield*	1.22%
1Q21 Volume**	2,654,200
Turnover*	18%
Morningstar Rating	**** (4 Star)

source: \* Morningstar & \*\* Yahoo Finance 3/31/21

Capture Ratio*	3-Yr	5-Yr	10-Yr
Upside	109	118	109
Downside	126	110	78

Portfolio Price / Earnings*	23.36
Portfolio Price / Book*	3.23
Portfolio Price / Sales*	1.86
Portfolio Price / Cash Flow*	14.97
Beta (3-year) *	1.23
Alpha (3-years)*	[3.25]
R-squared (3 years)*	76.10
Sharpe Ratio*	25.30
Long-Term Earnings*	11.15%
Historical Earnings*	7.19%
Sales Growth*	0.84%
Cash Flow Growth*	5.59%
Book Value Growth*	6.99%
Historical Sustainability Score (% Rank)	78

source: \* Morningstar 3/31/21

**Commentary** (continued from page 3)

several hundred billion dollars, upgrading our nuclear missile infrastructure is an area that could see a reduction in order to free up resources for investments in cutting edge technologies.

**M&A, IPOs, and Other Activity Making Headlines**

IPOs in the aerospace and defense sector tend to come in waves—quiet and then a surge of activity. We’ve noticed that a number of defense firms around the world have gone public, filed for IPOs, or are spinning to the public via a SPAC. Among these are IronNet, MDA (Canada), Paras Defense (India), Anduril, IAI (Israel), Leonardo’s DRS division (filed, but now delayed), and MTAR Technology (India).

Price Waterhouse (citing Refinitiv) stated that 2020 saw a total Aerospace & Defense volume of 373 deals valued at \$33B.

Washington Technology magazine reported that 2020 saw 109 M&A transactions in the government IT space. This compares to 119 in 2019 and 80 in 2018. Of this total, 55 were deals with private equity firms and 54 were from strategic deals. Cited in the article were SAIC, CACI, ManTech, Jacobs, KBR, Leidos, and Lockheed Martin.

*Pending:* **Lockheed Martin** plans to acquire **Aerojet Rocketdyne** for \$4.4B. Closing forecast 2H21 if approved.

*Pending:* **Teledyne** announced plans to acquire **FLIR Systems**. Closing mid-2021.

*Pending:* **Perspecta** announced it is being acquired by Peraton (Veritas Capital). Closing expected 1H21.

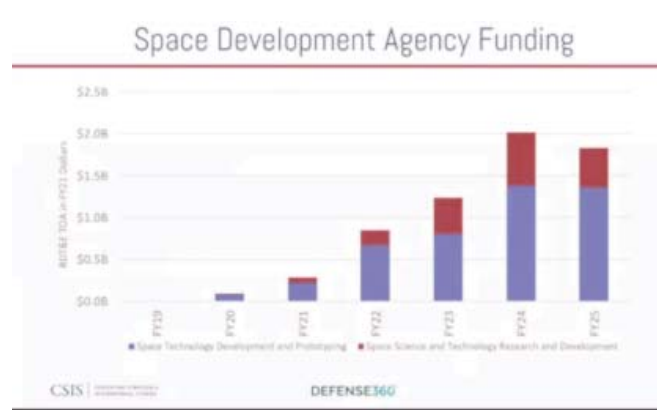
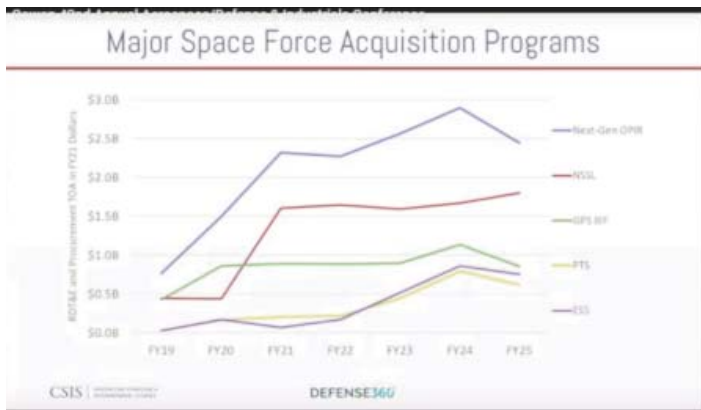
*Pending:* Singapore Technologies Engineering and Veritas Capital have submitted competing offers to buy **Cubic Corp.**

**Huntington Ingalls** acquired Spatial Integrated Systems’ autonomy unit to bolster its unmanned capability. Terms not disclosed.

**CACI:** Authorized a \$500M buyback.

**CAE** is acquiring **L3 Harris’** military training business for \$1.05B

**Elbit Systems** bought defense contractor Spartan for \$380M and paid \$31M for Rokar, a division of BAE Systems USA, maker of GPS receivers and guidance systems.



**Forthcoming Proposals, Bids, & Demonstrations**

National Defense Space Architecture: The Space Development Agency is preparing a request for proposal, later in 2021, that will cover 150 communications and missile warning tracking satellites. Initial launch would be in 2024.

DARPA’s LongShot program is looking into drones armed with air-to-air missiles that could be fielded by the US Air Force and US Navy. Lockheed Martin, Northrop Grumman, and General Atomics (private) are developing concepts.

DoD announced its intention to demonstrate counterdrone systems later in 2021.

A Pentagon contract with Raytheon for air-to-air missiles referenced an “unspecified fighter aircraft platform” that could be fielded by the Air Force and Navy by 2029. It referred to the “integration with next-generation platforms that may join the Air Force and Navy inventory.” Is a new fighter in the works?

Germany invited Lockheed Martin and Boeing to bid on a contract H-47 Chinook and CH-53K King Stallion.

## By the Numbers

**\$176B** – Congressional Budget Office estimated expenditures for missile defense initiatives not including investments in hypersonic detection and defense, up \$50B over prior estimates.

**\$9B** – Amount approved by the Israeli cabinet for aircraft and weapons systems from the US. \$2.4B is for 8 **Boeing** KC-46A tanker aircraft.

**\$4.9B** – Mexico’s Volaris Airlines to Pratt & Whitney (*Raytheon Technologies*) to perform engine maintenance.

**\$3.6B** – **SAIC** received an 8-year contract from the US Army Combat Capabilities Command, Aviation and Missile Center to support software, simulation, systems engineering, and integration.

**\$3.6B** – **Northrop Grumman** to support the Battlefield Airborne Communications Node for DoD.

**\$3B** – Earmarked to aviation manufacturers to maintain their payroll as part of the \$1.9T pandemic relief package.

**\$2.1B** – USAF to **Boeing** for 15 KC-46A tanker aircraft.

**\$2B** – France to **Northrop Grumman** for 3 E-2D Advanced Hawkeye aircraft.

**\$1.68B** – **Elbit Systems** to establish for Greece a military pilot training facility as part of an agreement that includes 10 M-346 planes.

**\$1.6B** – The Next Generation Interceptor program selected **Northrop Grumman** and **Lockheed Martin** for its design phase. Northrop has partnered with **Raytheon**, Lockheed Martin with **Aerojet Rocketdyne**.

**\$1.28B** – The F-35 Joint Program Office awarded a support contract to **Lockheed Martin**, BAE Systems, and **Northrop Grumman** through the summer. The contracts are meant to give the office time to finalize a long-term support deal with Lockheed Martin.

**\$980.7M** – USAF to Sikorsky (**Raytheon**) for upgrades to its HH-60W helicopter over 5 years.

**\$850M** – Coast Guard to Sikorsky (**Raytheon**) for new H-60 helicopter hulls.

**\$607M** – US Army to **Textron** to upgrade STUAS Shadow drones.

**\$558.8M** – US Navy to Lockheed Martin for Trident II missile systems deployed by US and UK.

**\$478.6M** – US Navy to Sikorsky (**Raytheon**) for construction of five additional VH-92A presidential helicopters.

**\$414M** – US Navy and USAF to **Lockheed Martin** for 137 Long Range Anti-Ship missiles.

**\$368M** – Thales UK and Leonardo Helicopters are partnering with **Lockheed Martin** under a \$368M contract to modify 10 Merlin HM2 helicopters for the UK Royal Navy.

**\$325M** – USAF to **Northrop Grumman** for support of 16 E-8C aircraft under the JSTARS program.

**\$315M** – US State Dept approved Netherlands request to buy **Boeing** CH-47 Chinook and AH-64 Apache helicopters.

**\$275M** – USAF to **CAE** for long-term KC-135 aircrew training services.

**\$155.2M** – US Marine Corps to Sikorsky (**Raytheon**) for CH-53K King Stallion heavy-lift helicopters.

**\$99.8M** – Saudi Arabia ordered 25 Sikorsky UH-60M Black Hawk helicopters from Sikorsky (**Raytheon**).

**\$50.8M** – USAF Research Lab to **Viasat** to help create a hybrid military and commercial satellite network.

A complete archive of *The SPADE Investor* including our commentaries and industry data can be found at—

[www.spadeindex.com / defense](http://www.spadeindex.com/defense)

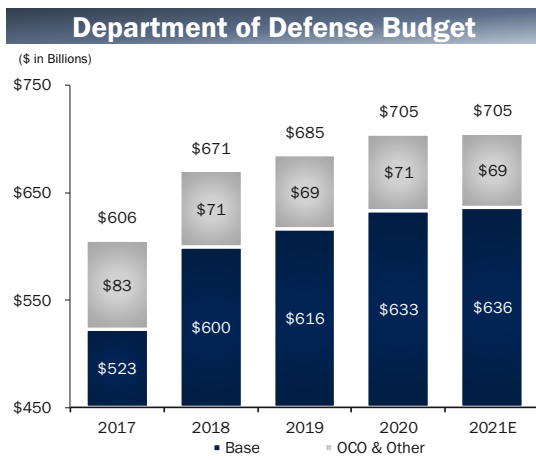
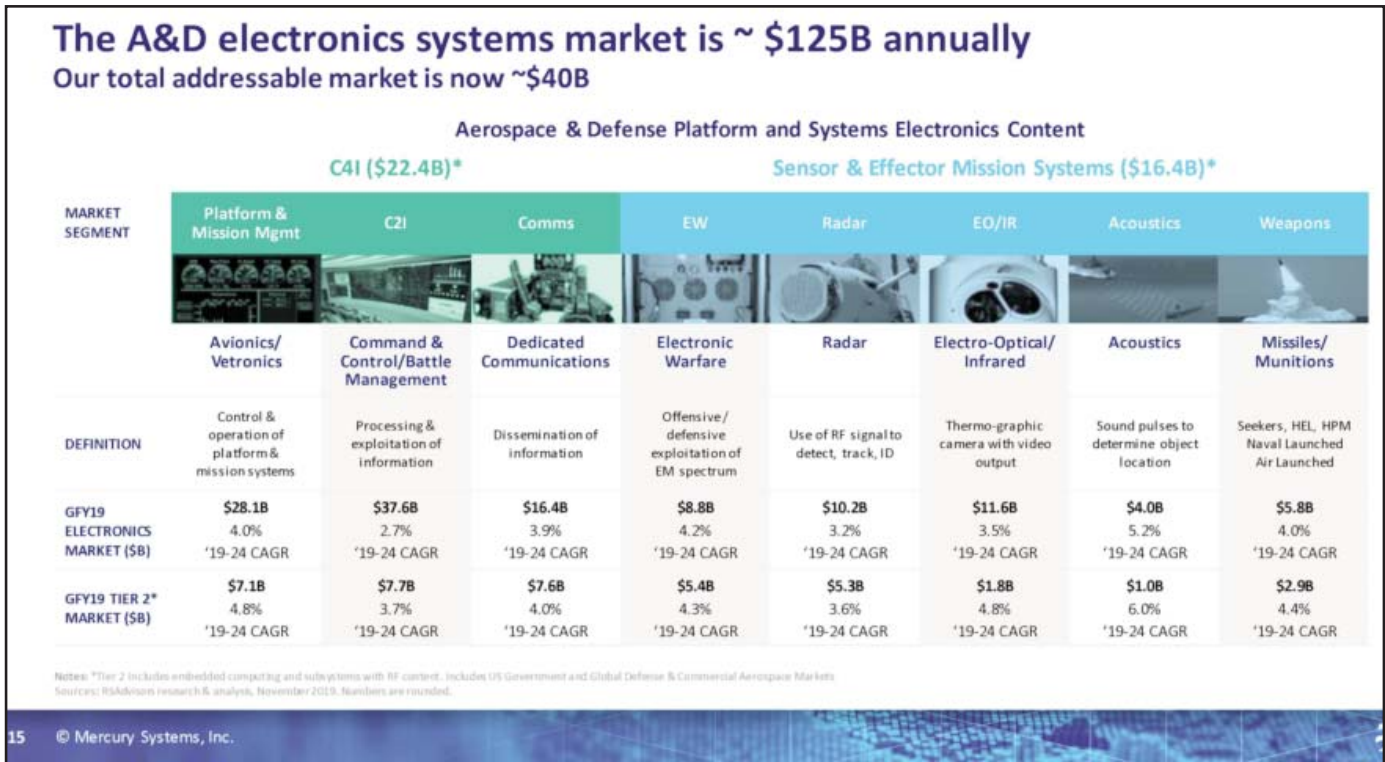
## PPA Dividend History

1Q21	\$0.134
2020	\$0.598
2019	\$0.651
2018	\$0.444
2017	\$0.363
2016	\$0.708
2015	\$0.501
2014	\$0.215
2013	\$0.383

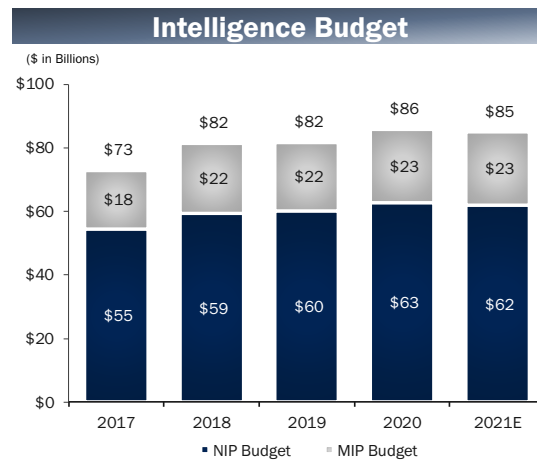
2012	\$0.444
2011	\$0.199
2010	\$0.155
2009	\$0.202
2008	\$0.145
2007	\$0.055
2006	\$0.051
2005	\$0.022



Valuable insight into the defense sector market can be found inside companies annual and quarterly reports, and public presentations to investors. Below are two such examples from Mercury Systems and ManTech International...two long-time constituents of the SPADE Defense Index.



Source: 2021 DoD Budget Request; excludes funding for emergency disaster relief



Source: Director of National Intelligence



MIP: Military Intelligence Budget NIP: National Intelligence Budget  
Table: Courtesy of Mantech International

**Total Price Return**  
(Annual %)

	SPADE Defense Index
1-Yr	<b>0.48%</b>
3-Yr	<b>9.08%</b>
5-Yr	<b>15.03%</b>
10-Yr	<b>15.17%</b>
Inception	<b>11.69%</b>

Data through 12/31/20

**Index Performance (ex div)**

	SPADE Defense Index	S&P500	Alpha (bps)
2020	[0.73%]	<b>16.26%</b>	[1699]
2019	<b>38.49%</b>	28.88%	961
2018	[8.15%]	<b>[6.24%]</b>	191
2017	<b>28.92%</b>	19.43%	949
2016	<b>17.95%</b>	9.53%	842
2015	<b>3.23%</b>	[0.73%]	396
2014	<b>11.77%</b>	11.39%	38
2013	<b>48.27%</b>	29.60%	1867
2012	<b>16.30%</b>	13.41%	289
2011	[2.75%]	<b>[0.00%]</b>	[275]
2010	9.62%	<b>12.78%</b>	[316]
2009	21.71%	<b>23.45%</b>	[174]

	SPADE Defense Index	S&P500	Alpha (bps)
2008	<b>[38.03%]</b>	[38.49%]	46
2007	<b>22.17%</b>	3.53%	1864
2006	<b>19.33%</b>	13.62%	571
2005	<b>5.30%</b>	3.00%	230
2004	<b>20.47%</b>	8.99%	1148
2003	<b>37.27%</b>	26.38%	1089
2002	<b>[2.87%]</b>	[23.37%]	2050
2001	<b>0.94%</b>	[13.04%]	1488
2000	<b>4.98%</b>	[10.14%]	1512
1999	15.31%	19.53%	[422]
1998	6.63%	26.67%	[2004]

**Price Return by Decade (ex div)**

	SPADE Defense	S&P500	Alpha (bps)
<b>2010-2019</b>	<b>310.26%</b>	<b>189.73%</b>	<b>12,053 (120.53%)</b>
<b>2000-2009</b>	<b>97.07%</b>	<b>-24.11%</b>	<b>12,118 (121.18%)</b>

**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 and its homeland security, and space components.

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 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. Each firm is considered to be systematically important to the defense of the United States and defense is systematically important to the business, revenues, and health of the firm.

Full details are available on our website.

- \* Market Cap: Minimum \$250M
- \* Share Price: Minimum \$5.00
- \* Sufficient Liquidity

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**Contact Information**

SPADE Indexes LLC  
 PO Box 5752  
 Bethesda, MD 20824-5752  
 Tel: (202) 596-1812  
 info@spadeindex.com  
<http://www.spadeindex.com/defense>

End of 1Q21		100%					Market	Forward	Price/	Price/	PEG	
							Cap	P/E	Sales	Book	5 yr	Div Yld
		Percent	31-Dec-20	31-Mar-21	YTD	QTD	intraday	(ttm)	ttm	mrq	expected	forward %
Company	Ticker	31 Mar 21	Price	Price	% Ch	% Ch						
AXON International Inc.	AXON	1.76%	122.53	142.42	16.23%	16.23%	9.08	8613.00	12.64	9.10		
AAR Corp	AIR	0.28%	36.22	41.65	14.99%	14.99%	1.31	19.65	0.90	1.59	2.65	
Aerojet Rocketdyne	AJRD	0.73%	52.85	46.96	-11.14%	-11.14%	3.76	23.64	1.87	16.21	5.25	
ATI	ATI	0.52%	16.77	21.06	25.58%	25.58%	2.67	4.84	0.90	5.18	1.25	
AeroVironment	AVAV	0.55%	86.9	116.06	33.56%	33.56%	2.86	94.10	7.22	5.53	3.13	
Boeing Co	BA	7.63%	214.06	254.72	18.99%	18.99%	148.67	49.09	2.46	1626.81	---	
Booz Allen	BAH	2.15%	87.18	80.53	-7.63%	-7.63%	11.09	20.08	1.43	10.36	1.91	1.83%
Ball Corp	BLL	3.83%	93.18	84.74	-9.06%	-9.06%	27.80	24.39	2.39	8.47	4.90	0.71%
BWX Technologies	BWXT	1.21%	60.28	65.94	9.39%	9.39%	6.27	21.32	2.98	10.16	3.41	1.27%
CACI Intl	CACI	1.21%	249.33	246.66	-1.07%	-1.07%	6.22	14.88	1.07	2.15	1.26	
CAE	CAE	1.62%	27.74	28.49	2.70%	2.70%	8.37	36.1	3.13	3.77	3.55	
Comtech	CMTL	0.13%	20.69	24.84	20.06%	20.06%	0.65	71.32	1.07	1.38	0.58	1.64%
Cubic Corp	CUB	0.46%	62.04	74.57	20.20%	20.20%	2.37	29.15	1.63	2.52	5.32	0.35%
Curtiss Wright	CW	0.94%	116.35	118.6	1.93%	1.93%	4.85	26.74	2.09	2.72	0.12	0.57%
Ducommun	DCO	0.14%	53.7	60	11.73%	11.73%	0.71	18.55	1.07	2.02	2.90	
Elbit Systems	ESLT	1.22%	130.8	143	9.33%	9.33%	6.26	24.67	1.34	2.82	1.71	1.24%
FireEye	FEYE	0.90%	23.06	19.57	-15.13%	-15.13%	4.67	---	4.58	6.28	0.59	
Flir Systems	FLIR	1.44%	43.83	56.47	28.84%	28.84%	7.41	22.42	3.86	3.91	3.07	1.21%
General Dynamics	GD	5.16%	148.82	181.56	22.00%	22.00%	51.97	16.55	1.38	3.30	2.56	
Heico	HEI	1.32%	132.4	125.8	-4.98%	-4.98%	16.27	57.8	10.01	8.17	5.90	0.13%
Huntington Ingalls	HII	1.61%	170.48	205.85	20.75%	20.75%	8.30	16.84	0.89	4.36	1.99	2.22%
Honeywell Intl	HON	7.52%	212.7	217.07	2.05%	2.05%	150.97	27.70	4.75	8.64	2.39	1.71%
Howmet	HWM	2.70%	28.54	32.13	12.58%	12.58%	13.93	35.34	2.65	3.91	1.25	
Hexcel	HXL	0.91%	48.49	56	15.49%	15.49%	4.689	148.15	3.12	3.1	3.99	
Iridium	IRDM	1.07%	39.33	41.25	4.88%	4.88%	5.54	21.95	9.11	3.72	27.51	
Jacobs Engineering	J	3.26%	108.96	129.27	18.64%	18.64%	16.82	21.83	1.24	2.73	1.80	0.61%
Kaman	KAMN	0.28%	57.13	51.29	-10.22%	-10.22%	1.42	27.13	1.84	1.93	3.20	1.56%
KBR	KBR	1.05%	30.93	38.39	24.12%	24.12%	5.41	17.33	0.93	3.36	0.94	1.17%
Kratos Defense & Security	KTOS	0.65%	27.43	27.28	-0.55%	-0.55%	3.37	41.06	4.43	3.73		
Leidos	LDOS	2.65%	105.12	96.28	-8.41%	-8.41%	13.61	15.29	1.13	3.54	1.53	1.39%
L3 Harris	LHX	4.49%	189.02	202.68	7.23%	7.23%	41.66	15.85	2.41	2.01	1.18	2.01%
Lockheed Martin	LMT	7.55%	354.98	369.5	4.09%	4.09%	102.98	14.04	1.59	17.17	3.69	2.81%
Mantech International'a'	MANT	0.46%	88.94	86.95	-2.24%	-2.24%	3.52	25.91	1.40	2.22	5.39	1.74%
Maxar Technologies	MAXR	0.53%	38.59	37.82	-2.00%	-2.00%	2.71	46.53	1.29	2.81	1.25	0.11%
Moog Inc.	MOGA	0.47%	79.3	83.15	4.85%	4.85%	2.67	17.89	0.95	2.02	2.80	1.22%
Mercury Computer Sys	MRCY	0.77%	88.06	70.65	-19.77%	-19.77%	3.97	25.06	4.52	2.70	2.55	
Northrop Grumman	NOC	5.36%	304.72	323.64	6.21%	6.21%	53.96	13.74	1.47	5.09	6.74	1.80%
OSI Systems	OSIS	0.33%	93.22	96.1	3.09%	3.09%	1.74	17.24	1.61	2.96	1.92	
Oshkosh Truck	OSK	1.57%	86.07	118.66	37.86%	37.86%	8.11	23.42	1.22	2.79	1.15	1.10%
PAE Systems	PAE	0.16%	9.18	9.02	-1.74%	-1.74%	0.85	13.93	0.28	6.77	0.15	
Perspecta	PRSP	0.91%	24.08	29.05	20.64%	20.64%	4.68	38.22	1.04	3.32	2.80	0.97%
Parsons	PSN	0.80%	36.41	40.44	11.07%	11.07%	4.14	21.88	1.04	2.27		
RADA Electronics	RADA	0.11%	9.75	12.01	23.18%	23.18%	0.59	29.67	6.77	7.88	1.74	
Raytheon Technologies	RTX	7.43%	71.51	77.27	8.05%	8.05%	117.14	108.39	1.87	1.63	0.88	2.94%
SAIC	SAIC	0.94%	94.64	83.59	-11.68%	-11.68%	4.85	23.51	0.69	3.14	1.24	1.77%
Spirit Aerosystems	SPR	0.99%	39.09	48.65	24.46%	24.46%	5.13	9.86	1.51	6.09	0.34	0.08%
Transdigm	TDG	3.89%	618.85	587.92	-5.00%	-5.00%	32.15	49.51	6.98	8.62	4.88	
Teledyne Technologies	TDY	2.97%	391.98	413.65	5.53%	5.53%	15.31	38.08	4.67	4.64	1.40	
Triumph Group	TGI	0.20%	12.56	18.38	46.34%	46.34%	1.01	48.31	0.46	2.60	6.16	
Telos Corp.	TLS	0.48%	32.98	37.92	14.98%	14.98%	2.45	887.5	8.46	18.05		0.11%
Textron	TXT	2.46%	48.33	56.08	16.04%	16.04%	12.73	19.92	1.09	2.15	0.87	0.14%
Vecrus	VEC	0.12%	49.72	53.44	7.48%	7.48%	0.63	17.19	0.45	2.07		
Viasat Inc	VSAT	0.64%	32.65	48.07	47.23%	47.23%	3.29	4773.00	4.46	1.42	4.77	
Woodward	WWD	1.47%	121.53	120.63	-0.74%	-0.74%	7.61	35.71	3.37	3.70	2.38	0.54%
Data Provided by Morningstar, Yahoo Finance/Thomson Reuters (PEG), Morningstar (div)							981.19					