

Morningstar Upgrades Invesco Defense ETF (NYSE: PPA) to a 5-Star Rating

Since February 2022 invasion of Ukraine, shares of PPA (which tracks the SPADE Defense Index) have risen by more than 100% to 19.1M shares and AUM has doubled to \$1.32 Billion.

1H22: Index OutPerformed the Broader Market by More Than 1700 bps.

SPADE Defense Index Statistics

6/30/22 Close	8199.78
12/31/21 Close	8456.65

All-time Intraday High: 25 March 2022	9357.25
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All-time Closing High: 25 March 2022	9314.78
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	SPADE Defense	S&P500
YTD	[3.03%]	[20.58%]
2Q22	[10.44%]	[16.45%]
1Q22	8.25%	[4.95%]

Commentary

M&A Impacting the Index (see page 4)

A Baker's Dozen of "Things I Think..."

1. Russia is attempting to succeed in Ukraine by using brawn over brains. They may eventually succeed, but at a tremendous cost. According to the Royal United Services Institute, a British think tank, Russia is firing more than 7,000 artillery rounds per day. In contrast, the US would run out at this level of activity in just two weeks based on current annual US production. Likewise, if Ukrainian military estimates (and US estimates on pre-war Russia equipment supplies) are correct, nearly 1/3 of Russian tanks and vehicles have already been destroyed. The cost of this lost equipment is already approaching \$100 billion. (See table on page 3.)

2. The US would decimate Russia in a ground war—the Russians are unorganized, unmotivated, and poorly trained. While I can't comment on the quality of NATO troops as a whole, in comparison to Russia, the US has a professionally-trained fighting force with a clear management structure. Russia has been relying on untrained troops and mercenaries from other nations, seen a number of field commanders and generals killed or captured, and experienced a higher-than-expected desertion rate—including seeing some troops leaving to fight for Ukraine.

3. What is the end-game for Russia? I'm not sure anyone knows what Vladimir Putin will accept other than total victory. Enough articles have been published to lend credence to the belief that he is either ill or become unhinged. As the old adage goes, a trapped animal is the most dangerous. Is it any wonder, fears over Russian use of nuclear weapons remains on the table? The nuclear threat is the greatest reason Western nations haven't responded directly yet. Comments by Russian leaders that

Continued on page 2

SPADE Defense Index June 2022 Rebalance

No companies were added or removed from the index during the rebalance. Ball Corporation changed its ticker from BLL to BALL during the quarter.

Corporate Actions Affecting the Index During the Quarter

There are a number of pending deals that could impact the Index during 2H22. See Commentary (page 4).

Dividend

Invesco's Aerospace & Defense ETF issued a dividend of \$0.30 on 21 June 2022. YTD, \$0.394 has been returned.

Recent Commentaries

<https://www.defensenews.com/opinion/commentary/2022/03/21/how-sanctions-on-russia-impact-western-defense-companies/>

<https://www.investorideas.com/news/2022/defense/01121Stocks.asp>

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 in November 2019.

Commentary (continued from page 1)

London would be the first target [or taking Alaska back] can likely be attributed to posturing, but there is not 100% conviction it is just politics. The use of nukes is too big a threat and cannot be discounted.

4. Based on the continued narrative of war crimes being committed by Russia, ie. bombing civilian targets, raping and murdering innocents, mass movement of people from their homes to areas controlled by Russia, there is becoming little doubt that Putin's Russia is this generation's Nazi war criminal. Were it not for the nuclear threat, NATO and the US engaging Russia directly would be imminent. From a historical perspective, politicians and military strategists will likely be judged on how they navigate this fine line.

5. Major changes are coming to the US military infrastructure via the lessons they are learning in the early days of this conflict. Among these:

- a) A shrinking supplier base creates issues that need to be addressed.
- b) Our stockpile of weapons for a conventional war is lacking. (more on this below)
- c) The US needs to train its allies on how to use US weapons systems "just in case" we have to supply them in the future. The learning curve in Ukraine is costing them lives and delaying their ability to effectively fight back.

US Weapons Stockpile: According to the *Wall Street Journal* and Royal United Services Institute data, "Over the last decade, the US has focused on producing low-yield precision bombs and missiles favored in counter terrorism campaigns, such as those in Afghanistan and Iraq, cutting back on legacy munitions such as the antitank Javelin and anti-aircraft Stinger missiles. Four months of support to Ukraine has already depleted much of the stockpile of such weapons including 1/3 of Javelins and 1/4 of Stingers. US stockpiles of artillery ammunitions are similarly dwindling. Smart munitions such as HIMARS precision-strike missiles Tomahawk land attack cruise missile and the Joint Air-to-Surface Stand-off Missile could furnish an alternative but these too are in short supply." Compounding the issue is that the Army hasn't bought Stinger missiles in decades, leading to the challenge of locating obsolete parts and workforce-related issues. (The Javelin is still in production, Lockheed is doubling it.)

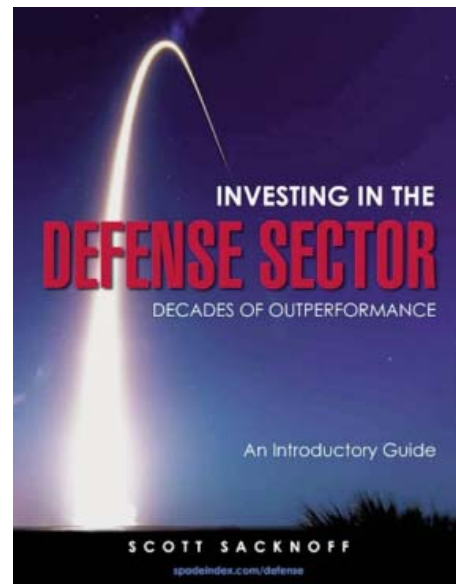
6. Why didn't we see this coming? A recent interview in *The Guardian* with a member of the band Pussy Riot, detailed how the invasion of Ukraine had been obvious to those inside the country for years. The situation inside Russia has experienced a steady deterioration of rights, torture, assassinations, and jailings of anyone opposing the current Putin regime. Many people living in Russia knew that following Russia's invasion of Crimea in 2014, it was only a matter of time before Ukraine was next.

7. Also, how inaccurate were US intelligence estimates of Russian military and equipment capabilities? Expect DoD and Congressional investigations on how analysts got this so wrong. (In disclosure, I wouldn't have thought Russia's capabilities were this poor either and I would have expected their target was one of the other former USSR satellite nations, not one the size of Ukraine who had a relationship with the West and the EU.)

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Download a free copy of our 56-page guide,
Investing in the Defense Sector

https://spadeindex.com/Files/Investing_Defense_Sector_Guide.pdf



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

8. An invasion of Taiwan at some point in the next decade should not be a surprise based on the West’s fear of engaging a nuclear regime. The reality is that, as an island, it may be too small to truly weaponize or provide the supplies necessary to defend.

9. Has anyone noticed that the rest of the world appears to be quiet? Media coverage of hotspots such as Iran, North Korea, etc. is lacking with the focus on Ukraine. Turkish inflation and economic issues in Sri Lanka have gotten brief coverage but on the ground, at the local level, things are dire. This typically leads to uprisings and turmoil.

10. What does the rest of the world outside Europe and the US make of the conflict between Russia and Ukraine? Does anyone in Latin America, Africa, the Middle East, Southeast Asia, India, or China really care what happens? Do they feel they have no vested interest in the outcome? Media coverage of this in the US has been largely silent.

11. Mergers and acquisitions between the largest, Top 100 defense firms in the world are likely done. The proposed Lockheed Martin—Aerojet Rocketdyne merger was pulled after the US government expressed concerns about consolidation. Following an early 2022 report by the DoD detailing how few suppliers are engaged in the production of specific items for the military (although the report did have some notable errors), it is clear that Pentagon approval will be rare for transactions of this size in forthcoming years.

12. In consideration of #11, we should anticipate that DoD encouragement to fortify small and midsize defense firms via new procurement policies will be announced. They believe that there is too much reliance on just a few firms. Additionally, the cost may be higher for maintenance and operations, but supporting multiple prime manufacturing competitors or multiple systems may become in vogue again.

13. In the 1940s/1950s, GM, Ford, Chrysler were among the top defense companies using their manufacturing operations to support the war effort and build military equipment. It was a small part of their business but vital to the nation’s war efforts. We should expect that the Pentagon will encourage firms with US manufacturing capabilities to create defense divisions to leverage existing capacity rather than trying to build up new suppliers from scratch. Capturing the impact from diversified firms will be a problem for most indexes. SPADE Indexes’ TRUE Cap methodology was designed to address just this type of situation.

Russian Military Losses Since It Invaded Ukraine

Estimate as of July 9th (Cost is nearly \$76 billion)

- 1,638 Tanks
- 3,815 Armored Combat Vehicles
- 832 Artillery Systems
- 247 Multiple-Launch Rocket Systems
- 108 Air Defense Systems
- 217 Warplanes
- 187 Helicopters
- 15 Ships
- 674 UAV Operational/Tactical Level
- 155 Cruise Missiles
- 2,687 Motor Vehicles and Fuel Tankers
- 37,200 Personnel

source: Ukrainian Military of Defense

M&A Activity Impacting Index Holdings

* Leonardo DRS is acquiring Nasdaq-listed RADA and will emerge a public company.

* Vectrus is expecting to close its merger with Vertex in 3Q22; the company name will change to V2X and the ticker to V V X.

* TTM expects a deal to buy Telephonics will close in 3Q22.

* ViaSat expects its deal to acquire Inmarsat will close in 4Q22.

* Mandiant is being acquired by Google. It expects the deal to closes in 2H22.

* Mantech is being acquired by the private equity firm Carlyle. The deal is expected to close in 2H22.

PPA Dividend History

YTD	\$0.394	2015	\$0.501	2008	\$0.145
2021	\$0.426	2014	\$0.215	2007	\$0.055
2020	\$0.598	2013	\$0.383	2006	\$0.051
2019	\$0.651	2012	\$0.444	2005	\$0.022
2018	\$0.444	2011	\$0.199		
2017	\$0.363	2010	\$0.155		
2016	\$0.708	2009	\$0.202		

2022 Leaders

1	Mantech	10.74%
2	Huntington Ingalls	9.22%
3	Northrop Grumman	7.01%
4	Parsons	4.44%
5	Elbit Systems	4.03%
6	Aerojet Rocketdyne	3.18%
7	Booz Allen	2.87%
8	BWX Tech.	2.28%
9	SAIC	1.01%
10	OSI Systems	0.38%

2022 Laggards

1	BBAI	[55.34%]
2	Triumph Group	[47.43%]
3	Comtech	[42.19%]
4	Spirit Aerosystems	[40.07%]
5	ViaSat	[37.23%]
6	Palantir	[33.94%]
7	Maxar	[33.93%]
8	RADA	[33.67%]
9	Axon	[32.35%]
10	Kratos	[28.61%]

Morningstar Says:

PPA is a Five-Star Fund ****
Avg Risk in the Industrials Category

2022 YTD Results

1	Alleghany Tech.	42.56%
2	Aerovironment	32.52%
3	Elbit Systems	31.71%
4	Mantech	30.88%
5	Mandiant	24.40%
6	Northrop Grumman	23.64%
7	Lockheed Martin	20.98%
8	Parsons	20.12%
9	Mercury Systems	16.84%
10	Huntington Ingalls	16.64%
11	BWX Technologies	15.06%
12	L3 Harris	13.35%
13	Leidos	13.28%
14	Raytheon Tech.	11.68%
15	SAIC	11.38%
16	AAR Corp	7.20%
17	Booz Allen	6.57%
18	General Dynamics	6.13%
19	CACI	4.67%
20	KBR	1.62%
21	Hexcel	0.98%
22	Howmet	[1.19%]
23	RADA	[1.91%]
24	Moog	[1.95%]
25	CAE	[2.46%]
26	Curtiss Wright	[4.77%]
27	Ducommun	[7.98%]

28	OSI Systems	[8.33%]
29	Jacobs	[8.69%]
30	Iridium,	[9.03%]
31	Heico	[9.08%]
32	Maxar	[11.65%]
33	Aerojet Rocketdyne	[13.17%]
34	Teledyne	[14.14%]
35	Woodward	[15.50%]
36	Transdigm	[15.66%]
37	TTM	[16.11%]
38	Honeywell	[16.64%]
39	Textron	[20.89%]
40	Vectrus	[26.90%]
41	Oshkosh	[27.12%]
42	Kaman	[27.58%]
43	Triumph Group	[28.28%]
44	Kratos	[28.45%]
45	Ball	[28.57%]
46	Viasat	[31.23%]
47	Sprit Aerosystems	[32.00%]
48	Boeing	[32.09%]
49	Keysight	[33.25%]
50	BBAI	[34.98%]
51	VSE Corporation	[38.22%]
52	Axon	[40.66%]
53	Telos	[47.60%]
54	Palantir	[50.19%]
55	Comtech	[61.71%]

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

Exchange / Ticker Symbol:	NYSE / PPA
Assets (6/30/22)	\$1.27M
Closing Price (6/30/22)	\$70.09
Dividend Yield*	1.26%
2Q22 Volume**	14,649,294
Turnover*	22%
Morningstar Rating	***** (5 Star)

source: * Morningstar & ** Yahoo Finance 6/30/22

Capture Ratio*	3-Yr	5-Yr	10-Yr
Upside	79	102	105
Downside	92	97	70

Portfolio Price / Earnings*	20.25
Portfolio Price / Book*	2.97
Portfolio Price / Sales*	1.62
Portfolio Price / Cash Flow*	14.33
Beta (3-year) *	1.07
Alpha (3-years)*	[4.07]
R-squared (3 years)*	64.71
Sharpe Ratio	0.38
Long-Term Earnings*	10.60%
Historical Earnings*	12.20%
Sales Growth*	[1.76%]
Cash Flow Growth*	2.10%
Book Value Growth*	8.60%
Historical Sustainability Score (% Rank)	82

source: * Morningstar 6/30/22

By the Numbers

\$2.1T – SIPRI estimate for total global defense spending in 2021. The US, China, India, UK, and Russia combined accounted for more than 60% of this figure.

\$40B – Aid package to support Ukraine by the US, including \$35B for military efforts.

\$24.5B – FY2023 budget request for Space Force represents a significant increase over the 2022 budget.

\$21B – Amount the US DoD is devoting toward the development of hypersonic weapons.

\$20B – VietJet's order for 200 Boeing Max 737 aircraft.

\$8B – Amount US Space Force will invest in the coming years to build 2 geostationary constellations for classified communications including support for US nuclear forces. The Evolved Strategic Satcom program is slated to receive \$5B from 2023 to 2027.

\$5.5B – Switzerland to buy 36 Lockheed Martin F-35 jets, likely a post-2027 delivery.

\$4.4B – US Navy to Pratt & Whitney (Raytheon Technologies) for production and delivery of 178 F-135 engines. The contract has a ceiling value of \$8 billion.

\$4B – Germany to order 60 Boeing CH-47F Chinook helicopters as part of a major upgrade to its military equipment.

\$3.83B – Australia to buy 29 Boeing AH-64E Apache helicopters to replace its Tiger Fleet.

\$3.7B – US Space Force plans to commission two additional satellites for the MUOS constellation (development and launch costs). Four operational satellites were previously built by Lockheed Martin under a Navy contract.

\$3.5B – Approved by the US Congress to replenish US stockpiles of weapons sent to Ukraine.

\$3.1B – Approved by the US State Department, 23 H-47F Chinook helicopters to Egypt, 20 M142 HiMARS launchers to Australia; and AIM-9X tactical missiles to the Netherlands.

\$3B – The rising cost of fuel is costing the DoD more than anticipated during this budget cycle.

\$2.3B – Army to Sikorsky for 120 H-60 Mike-model Black Hawks, including Foreign Military Sales.

\$2B – United Launch Alliance has contracted with Northrop Grumman for production of solid rocket boosters.

\$1.9B – Northrop Grumman, L3Harris, and Lockheed Martin were awarded Stand-in Attack Weapon contracts by the US Air Force, a program with a \$1.9 billion development budget that starts next year.

\$1.67B – FMS agreement with Bulgaria for 8 Lockheed Martin F-16 fighter jet, missiles, and bombs received State Dept approval

\$1B – NATO has created a joint venture fund to invest in technologies with defense applications with a focus on AI, autonomy, and quantum computing

\$1B – US Space Force plans to invest in NEW line items for missile tracking and resilient warning systems.

~\$1B – The State Dept approved the sale of a dozen Bell AH-1Z Cobra attack helicopters to Nigeria. The almost \$1B deal includes 28 GE T700-401C engines and 2000 Advanced Precision Kill Weapon Systems.

\$896M – DARPA plans to invest heavily in microelectronics research next year. AI and biotech will receive \$410M each.

\$867M – US Missile Defense Agency to Raytheon for Standard Missile-3 Block IIA interceptors.

\$651M – US Navy to Raytheon for AN/SPY-6 radar system. Top potential value of \$3.2B if all options exercised.

\$600M – South Korea is ordering additional Lockheed Martin Patriot Advanced Capability-3 missiles over the next five years.

\$482M – The Royal Canadian Air Force to L3Harris for continued support of the CF-18 Hornet.

Total Price Return (Annual %)

	SPADE Defense Index
1-Yr	[6.55%]
3-Yr	3.09%
5-Yr	9.65%
10-Yr	15.12%
15-Yr	9.33%
Inception	10.75%

Through 6/30/2022
(Morningstar)

Index Performance (ex div)

	SPADE Defense Index	S&P500	Alpha (bps)
YTD	[3.03%]	[20.58%]	1755
2021	6.61%	26.89%	[2028]
2020	[0.73%]	16.26%	[1699]
2019	38.49%	28.88%	961
2018	[8.15%]	[6.24%]	191
2017	28.92%	19.43%	949
2016	17.95%	9.53%	842
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]

	SPADE Defense Index	S&P500	Alpha (bps)
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]

Price Return by Decade (ex div)

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

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—naval vessels, military aircraft, armored vehicles, helicopters, drones and remotely piloted vehicles, missiles and missile defense, command and control, secure communications, battlespace awareness, intelligence and reconnaissance, and space systems, as well as national/homeland security activities including border security, biometric screening systems, and military cybersecurity efforts.

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

Rules

The SPADE Defense Index was designed to be RIC (registered investment company) compliant for the purpose of enabling financial products. Companies are required to meet an eligibility criteria that includes market valuation (>\$250M), listing on a major U.S. exchange, and have sufficient liquidity. Importantly, each firm must be considered systematically important to the defense of the United States and that their defense business is systematically important to the revenues and health of the firm. We follow an enhanced modified market cap methodology that employs the True Cap™ strategy, which enables the index to more accurately handle firms with diversified operations.

Full details are available at: www.spadeindex.com/defense

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End of 2Q22		100.0%					Market	Forward	Price/	Price/	PEG	
							Cap	P/E	Sales	Book	5 yr	Div Yld
		Percent	31-Mar-22	30-Jun-22	YTD	QTD	intraday	(ttm)	ttm	mrq	expected	forward %
Company	Ticker	30-Jun-22	Price	Price	% Ch	% Ch						
AAR Corp	AIR	0.49%	48.43	41.84	7.20%	-13.61%	1.47	12.76	0.83	1.43	1.21	---
Aerojet Rocketdyne	AJRD	1.04%	39.35	40.60	-13.17%	3.18%	3.27	19.15	1.48	5.93	1.67	---
ATI	ATI	0.56%	26.84	22.71	42.56%	-15.39%	2.82	11.95	0.96	4.28	3.35	---
AeroVironment	AVAV	0.68%	94.14	82.20	32.52%	-12.68%	2.05	35.58	4.60	3.35	2.68	---
AXON International Inc.	AXON	2.21%	137.73	93.17	-40.66%	-32.35%	6.62	39.31	7.15	5.88	2.71	---
Boeing Co	BA	6.51%	191.50	136.72	-32.09%	-28.61%	80.89	24.37	1.32	5.25	7.50	---
Booz Allen	BAH	3.03%	87.84	90.36	6.57%	2.87%	11.96	18.59	1.43	11.45	2.62	1.94%
BigBear.ai	BBAI	0.14%	8.24	3.68	-34.98%	-55.34%	0.47	28.31	3.20	9.25	---	---
Ball Corp	BALL	1.06%	90.00	68.77	-28.57%	-23.59%	21.99	15.52	1.53	5.66	1.42	1.17%
BWX Technologies	BWXT	1.36%	53.86	55.09	15.06%	2.28%	5.02	17.22	2.36	7.61	4.41	1.66%
CACI Intl	CACI	1.62%	301.26	281.78	4.67%	-6.47%	6.60	14.34	1.08	2.23	6.41	---
CAE	CAE	2.48%	26.08	24.62	-2.46%	-5.60%	7.81	21.60	2.32	1.95	4.62	---
Comtech	CMTL	0.08%	15.69	9.07	-61.71%	-42.19%	0.24	45.35	0.48	0.52	0.38	4.08%
Curtiss Wright	CW	1.12%	150.16	132.06	-4.77%	-12.05%	5.08	14.96	2.06	2.75	0.11	0.58%
Ducommun	DCO	0.16%	52.39	43.04	-7.98%	-17.85%	0.52	10.32	0.81	1.06	0.76	---
Elbit Systems	ESLT	3.29%	220.45	229.34	31.71%	4.03%	10.16	26.36	1.84	3.97	1.75	0.91%
General Dynamics	GD	6.69%	241.18	221.25	6.13%	-8.26%	61.44	15.69	1.60	3.40	1.55	2.30%
Heico	HEI	1.97%	153.54	131.12	-9.08%	-14.60%	15.74	43.56	7.83	7.48	3.95	0.14%
Huntington Ingalls	HII	2.51%	199.44	217.82	16.64%	9.22%	8.72	12.02	0.89	3.10	1.06	2.19%
Honeywell Intl	HON	5.19%	194.58	173.81	-16.64%	-10.67%	118.32	17.79	3.45	6.44	1.98	2.26%
Howmet	HWM	2.68%	35.94	31.45	-1.19%	-12.49%	13.14	16.91	2.58	3.86	0.80	0.26%
Hexcel	HXL	1.23%	59.47	52.31	0.98%	-12.04%	4.40	26.69	3.13	2.95	0.38	0.77%
Iridium	IRDM	0.40%	40.32	37.56	-9.03%	-6.85%	4.81	163.30	7.56	4.04	54.04	---
Jacobs Engineering	J	1.01%	137.81	127.13	-8.69%	-7.75%	16.35	15.60	1.14	2.70	1.25	0.74%
Kaman	KAMN	0.20%	43.48	31.25	-27.58%	-28.13%	0.87	14.14	1.26	1.11	1.59	2.54%
KBR	KBR	1.92%	54.73	48.39	1.62%	-11.58%	6.75	15.36	0.89	4.33	1.17	1.01%
Keysight Tech.	KEYS	0.87%	157.97	137.85	-33.25%	-12.74%	24.81	17.76	4.83	6.57	1.50	---
Kratos Defense & Security	KTOS	0.58%	20.48	13.88	-28.45%	-32.23%	1.74	27.22	2.13	1.86	1.92	---
Lidos	LDOS	3.00%	108.02	100.71	13.28%	-6.77%	13.74	14.03	0.99	3.49	2.37	1.45%
L3 Harris	LHX	5.84%	248.47	241.70	13.35%	-2.72%	46.62	17.11	2.69	2.42	0.42	1.88%
Lockheed Martin	LMT	6.76%	441.40	429.96	20.98%	-2.59%	114.42	15.14	1.74	11.39	1.90	2.67%
Mantech International'a'	MANT	1.23%	86.19	95.45	30.88%	10.74%	3.91	25.32	1.51	2.31	5.02	1.72%
Maxar Technologies	MAXR	0.64%	39.49	26.09	-11.65%	-33.93%	1.92	13.24	1.08	1.30	3.31	0.15%
Mandiant	MNDT	0.43%	22.31	21.82	24.40%	-2.20%	5.15	272.75	10.32	3.65	0.57	---
Moog Inc.	MOGA	0.53%	87.80	79.39	-1.95%	-9.58%	2.54	13.28	0.87	1.77	1.93	1.34%
Mercury Computer Sys	MRCY	1.24%	64.45	64.33	16.84%	-0.19%	3.71	24.46	3.91	2.38	6.26	---
Northrop Grumman	NOC	6.82%	447.22	478.57	23.64%	7.01%	74.39	17.54	2.11	5.60	3.07	1.50%
OSI Systems	OSIS	0.30%	85.12	85.44	-8.33%	0.38%	1.46	13.43	1.24	2.35	1.82	---
Oshkosh Truck	OSK	0.76%	100.65	82.14	-27.12%	-18.39%	5.40	9.78	0.75	1.83	0.68	1.79%
Palantir	PLTR	1.01%	13.73	9.07	-50.19%	-33.94%	18.56	37.79	11.27	7.85	1.53	---
Parsons	PSN	0.73%	38.70	40.42	20.12%	4.44%	4.19	18.80	1.12	2.19	---	---
RADA Electronics	RADA	0.15%	13.93	9.24	-1.91%	-33.67%	0.46	14.00	4.01	2.94	---	---
Raytheon Technologies	RTX	6.79%	99.07	96.11	11.68%	-2.99%	142.94	16.57	2.20	1.97	1.22	2.40%
SAIC	SAIC	1.14%	92.17	93.10	11.38%	1.01%	5.18	12.31	0.69	3.18	2.62	1.61%
Spirit Aerosystems	SPR	1.03%	48.89	29.30	-32.00%	-40.07%	3.12	13.14	0.74	8.06	2.04	0.13%
Transdigm	TDG	3.27%	651.54	536.67	-15.66%	-17.63%	29.31	24.25	5.84	10.10	1.27	---
Teledyne Technologies	TDY	1.58%	472.63	375.11	-14.14%	-20.63%	17.57	18.87	3.43	2.24	0.87	---
Triumph Group	TGI	0.28%	25.28	13.29	-28.28%	-47.43%	0.86	11.07	0.59	1.09	0.91	---
Telos Corp.	TLS	0.14%	9.97	8.08	-47.60%	-18.96%	0.55	11.54	2.32	3.13	---	---
	TTMI	0.14%	14.82	12.50	-16.11%	-15.65%	1.26	8.33	0.55	0.88	0.47	---
Textron	TXT	3.25%	74.38	61.07	-20.89%	-17.89%	13.14	14.07	1.05	1.90	0.68	0.13%
Vectrus	VEC	0.12%	35.86	33.46	-26.90%	-6.69%	0.40	4.90	0.22	1.12	---	---
Viasat Inc	VSAT	0.38%	48.80	30.63	-31.23%	-37.23%	2.28	145.86	0.82	0.87	3.90	---
	VSEC	0.16%	46.09	37.58	-38.22%	-18.46%	0.48	9.19	0.59	1.13	0.69	1.10%
Woodward	WWD	1.19%	124.91	92.49	-15.50%	-25.95%	5.61	20.37	2.49	2.77	1.65	0.82%

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

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