

AeroVironment, Inc

NASDAQ:AVAV

Analyst: Sofian Belhadj

Sector: Industrial

BUY

Price Target: \$34.04

Key Statistics as of 4/18/2015

Market Price:	\$25.98
Industry:	Aerospace and Defense
Market Cap:	\$606.14 M
52-Week Range:	\$24.73-36.97
Beta:	0.84

Thesis Points:

- An underestimated market segment
- R&D expansion with new clients portfolio
- A worldwide expansion

Company Description:

AeroVironment Inc. is a manufacturer of unmanned aircraft systems (UAS) and unmanned aerial vehicles, and energy systems. The Company supplies unmanned aircraft systems, tactical missile systems and related services to organizations within the United States Department of Defense (DoD). The Company also supplies charging systems and services for electric vehicles (EVs), and power cycling and test systems to commercial, consumer and government sectors. The Company operates through two segments: unmanned aircraft systems (UAS) and efficient energy systems (EES). The Company's UAS business segment focuses on the design, development, production, marketing, support and operation of UAS and tactical missile systems that provide situational awareness, multi-band communications, force protection, and other information and mission. The EES business segment addresses the electric transportation market with solutions for developing, manufacturing and charging electric vehicles. AeroVironment has over 40 years of working tenaciously to solve some of the biggest challenges of our day—from achieving the first human powered flight to deploying the most widely used portfolio of small unmanned aircraft systems; from developing ground breaking solar and electric powered cars to leading the charge in today's Electric Vehicle revolution. At AeroVironment, its long range thinking that is transforming the way we live, work, protect ourselves and preserve our planet.



Thesis

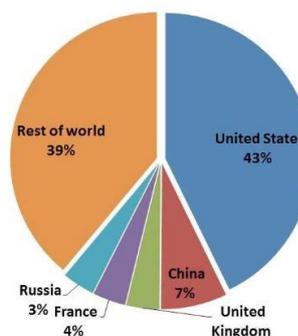
AeroVironment is a multi-disciplinary technology innovator; currently the company provides 86% of all unmanned aircraft system (UAS) in U.S Department of Defense (DoD) also known in the general public as drone. AVAV is also a leader in the deployment of Electrical Vehicle charging systems in North America. The company vision is clear and is on the alignment of positive outlook trends in both of its segments. AeroVironment understood the customer's need for the long run by providing Networked Information and Communication with high quality innovative products and service to customers around the world. The company is also in a long run trend of providing alternative transportation fuel solutions, a segment that is in term of economic cycle in a trough time. The electrical vehicle are experimenting the starting point of the growth in term of industry life cycle. AVAV will increase its R&D by more than 50% in the coming year for their own internal research and continue to receive an increasing number of clients shared R&D financing by customers. The company works closely with the U.S DoD for a technology transfer with India; the Cheel is a joint project between AVAV and Dynamatic's an Indian engineering company to provide small UAS military equipment for the Indian army growing needs. The company will increase its internal funded R&D by over 50%. The company is in a moving phase when they have to allocate scarce resources to multiply high productivity activity. The cash position of the company is more than a third of its market capitalization and an increase number of international clients in AVAV portfolio makes the stock undervalued with the potential of increasing margin that are already at 43% and a guidance for the final year range between 250-270 million by the management. The next two-quarter would be surpassingly attractive in term of contracts and in technology advancement that would ultimately attract attention of individual investors and not only institutional investors. The investment represents a long-term investment because of the lack of exposure due to classified program that are not providing enough advancement in term of innovation and the current analyst that do not deliver guidance publicly

Macro overview AVAV market

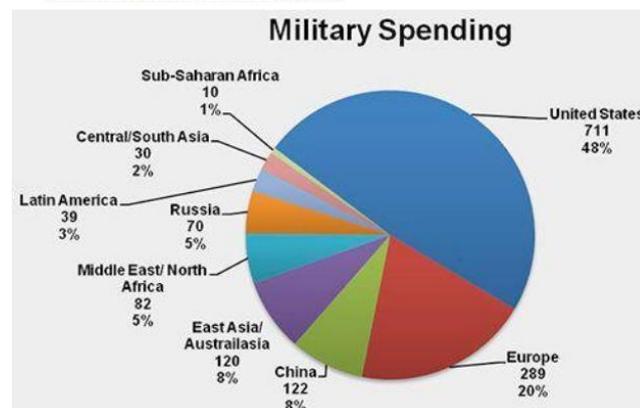
In term of macro environment, the increase number of conflicts worldwide and governments protecting their citizen against terrorism for the past decade. The market for Unmanned Aircraft system would developed in this budget "creates a smaller, more agile, flexible joint force that will be prepared to defend U.S. national interests in a rapidly changing security environment."

The defense business expenditure worldwide is driven by the U.S budget that account for 43% that is decreasing on average but still remain very high. There is high competition worldwide but the market is well diversified and the possible number of contracts could potentially increase regarding other parts of the world accounting for 39% of the global expenditure.

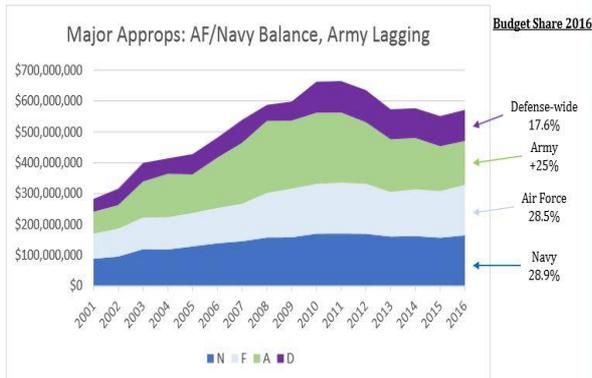
Percent of global military expenditure



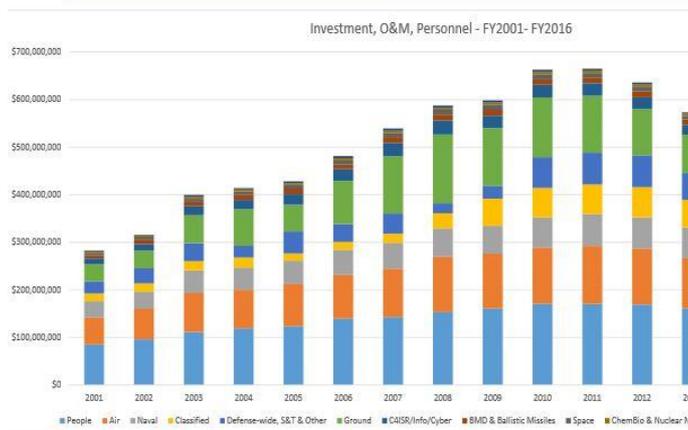
Howard
Howard Steven Friedman, 5 Countries With the Highest Military Expenditure, Huffington Post, Posted: 11/29/11 03:13 PM ET, http://www.huffingtonpost.com/howard-steven-friedman/military-spending-united-states_1118851.html, based on SIPRI data.



There is a shift to reducing the number of troops and risk linked to soldiers to unmanned aircraft systems. Presently AVAV had signed a contract with Navy and would represent 28.9% of the U.S budget share of 2016 with 147.7 billion.



The Aircraft and Naval segments outlooks are positive with a 2.3% increase in 2016. Unmanned aircraft are persistent, cost-effective platforms that will continue to be used for missions such as counter-terrorism and counter-insurgency, as well as new surveillance applications and communications relays. There is definitely increased interest in leveraging UAS to function as resilient nodes in airborne communication networks. Unmanned aircraft are modular platforms that enable multiple mission configurations with varying capabilities, so their future is strong with the defense.



U.S. Army and its allies have a need for rapid identification for the accomplishment of their mission. The number of UAS mission is increasing worldwide with military (Army, Navy, Air Force, Marines, Reserve and National Guard units, and the Coast Guard), public (Departments of Homeland Security, Justice, Interior, Transportation, and FAA, the FBI, and others at the federal level. State police and militias are in this class, as are local law enforcement agencies. Environmental, public health, and other government services at all levels are in the class of public users), commercial and private. The objective of UAS and AVAV Company is to provide intelligence, surveillance and reconnaissance.

Ownership

Insider of the company held 14% of the stock and the sell and purchase of the stock activity has been reduced since 2014. Institutional investors own 62% of the firm including Vanguard Group with 5.82% and BlackRock with 5.41%, Dimensional Fund Advisors with 4.37%, Bank of New York Mellon Corporation with 4.05% Goldman Sachs Group with 2.84%.



New products, innovation that is underestimated

The company segmentation is continuously developing their energy and environmental science with electrical vehicle. AVAV had introduced TurboDock, a residential vehicle solution that would help increase the rate of adoption for electrical car. The company had previously entered into partnership with Nissan, FIAT, and Ford to provide them complete charging station for their electrical car. AVAV is making huge progress into the electrical market with the introduction of this new feature, the charging time for the battery has been lowered thank to the research and development and is presently lower than four hours of charges which perfect for the introduction into commercial and workplaces. In addition to that the company is bringing innovation to electrical car with smartphone App. It gives to drivers the ability to access charging stations through their smartphone with an easy to use, convenient, cost-effective and secure.



Simple Access Control.
Broadcasting TurboDock uses Bluetooth Low Energy (BLE) for access control, eliminating the need for costly annual fees.



Modular.
Maximum flexibility for a wide variety of parking configurations. Scales easily with growth.



Configurable.
Set up each charger for either Open Access, one code for all drivers or individual codes for each driver. You decide.



Upgradeable.
Easily download future software upgrades right from the smartphone app.

Despite the innovation proposed by the company and the scalability of the business plan throw the US, the company can already account 17% of its revenue in 2014 coming from the electric vehicle and is in line with what other company such as Tesla that is working on how to increase its car float. AVAV is able to provide a portable

plug-in charger that increases range confidence, reduces costs to drivers, workplaces, businesses and governments. The TurboDock fits in palm of hand it could directly be plugs into electrical socket; no charger installation required; weighs less than five pounds, including 20-foot cord. The specificity of the TurboDocks operates on 120 or 240 volts; at 240 volts it charges nearly three times faster than standard cordsets – less than three hours for plug-in hybrids and less than four hours for full battery electrics.

The most important innovation is coming from UAS (Unmanned aircraft systems) with more than 25 years of experience as a prime contractor and supplier for the U.S Department of Defense. AeroVironment's family of small UAS includes Raven®, Wasp™, Puma™ and Shrike VTOL™.



These back packable/ man portable, hand-launched unmanned aircraft systems are carried and used by armed forces, who frequently operate across large geographic areas, often far removed from their bases and dependent mainly on what they can carry in their packs or vehicles deliver front-line, real-time situational awareness to increase combat effectiveness and force protection. The technology transmits live streaming in color or even infrared from on board cameras directly to a ground control system with color monitor. AeroVironment's UAS provide real-time information that helps U.S. and allied armed forces operate more safely and effectively.

The company began shipment to Navy and maritime contracts on the Q3 2015 that is expected to continue

with the U.S defense sustain its technological edge contract with a positive outlook in Southeast Asia region with allies' countries.

Current Year performance

Revenue from Q3 2015 decrease by 0.8% compared to Q3 2014. The revenue per segment for UAS are increasing by 1% compared to last years and is due to a customer R&D that is increasing. The electrical vehicle have seen a decrease of 12% compared to last year, the oil price has impacted the number of products delivery due to a shift to substitutes with oil price low compared to last year. In term of gross margin the UAS operation increased by 4% for Q3 compared to last year that give the company comfortable margin with 43%. The gross margin for the electrical segment had decrease from 27% to 21% due to higher manufacturing cost and decline in sales. The SG&A have been steady year over year to account for 19% of the revenue. The company R&D had been increasing compared to last years to reach 13% compared to 8% a year ago. The operating margin are decrease from 12% of the revenue in 3Q 2014 to 8% for 3Q 2015

An increase of 50% of independent R&D

The company R&D had been divided into three sections to support the core business. AVAV continue its internally funded R&D to be in a strength position regarding the emerging market where the level of adoption of UAS is increasing. The second interesting approach of the company is its customer funded R&D that was increasing significantly over the two previous quarters is a possible sign for the company especially when company is creating tailored need for their customer. The company will increase its internal funded R&D by over 50%. The company is in a moving phase when they have to allocate scarce resources to multiply high productivity activity. The cash position of the company is more than a third of its market capitalization and an increase number of international clients in AVAV portfolio makes the stock undervalued with the potential of increasing margin that are already at 43% and a guidance for the final year range between 250-270 million by the management. The next two-quarter would be surpassingly attractive in term of contracts and in

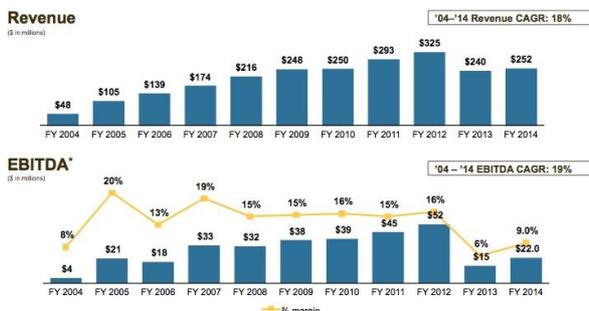
technology advancement that would ultimately attract attention of individual investors and not only institutional investors. The investment represents a long-term investment because of the lack of exposure due to classified program that are not providing enough advancement in term of innovation and the current analyst that do not deliver guidance publicly.

Strong accounting position

AVAV have currently \$258 million in cash, short and long term investments and no debt makes the company to freely develop their R&D program and a potential share repurchase would send good signal to the market.

	January 31, 2015 (Unaudited)	April 30, 2014
Assets		
Current assets:		
Cash and cash equivalents	\$ 125,977	\$ 126,969
Short-term investments	77,581	70,639
Accounts receivable, net of allowance for doubtful accounts of \$622 at January 31, 2015 and \$791 at April 30, 2014	37,834	31,739
Unbilled receivables and retentions	8,345	10,929
Inventories, net	48,799	50,699
Income tax receivable	1,940	6,584
Deferred income taxes	5,217	5,938
Prepaid expenses and other current assets	4,203	4,260
Total current assets	309,896	306,857
Long-term investments	54,575	50,505
Property and equipment, net	16,143	19,997
Deferred income taxes	4,638	6,721
Other assets	1,219	874
Total assets	\$ 386,471	\$ 384,954
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 16,215	\$ 13,906
Wages and related accruals	12,968	14,083
Customer advances	4,213	2,984
Other current liabilities	10,264	6,762
Total current liabilities	43,660	37,735
Deferred rent	1,336	1,239
Liability for uncertain tax positions	645	3,513
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, \$0.0001 par value:		
Authorized shares — 10,000,000; none issued or outstanding	—	—
Common stock, \$0.0001 par value:		
Authorized shares — 100,000,000		
Issued and outstanding shares — 23,330,876 at January 31, 2015 and 23,176,576 at April 30, 2014	2	2
Additional paid-in capital	147,374	143,648
Accumulated other comprehensive loss	(1,441)	(263)
Retained earnings	194,895	199,080
Total stockholders' equity	340,830	342,467
Total liabilities and stockholders' equity	\$ 386,471	\$ 384,954

AVAV had significant growth and profitability driven by technological innovation with consistent financial performance over the long-term, despite a turbulent environment



Government program award in 2016

A DARPA (Defense Advanced Research Projects Agency) program is intended to create the next generation of UAS. The TERN is a ship based with a vertical take-off and landing at medium altitude and a

long endurance platform. Presently the company passed the phase 1 and was competing with five other companies and presently AVAV is competing with one company. The company is confident and has for objectives to be awarded for the phase III in 2016. The program develop new prototype military capabilities that create an asymmetric technological advantage and provide U.S. forces with decisive superiority and the ability to overwhelm their opponents. The objective is to provide or prevent strategic and tactical surprise with very high-payoff, high-risk development of revolutionary new platforms, weapons, critical technologies and systems, approaches addressing affordability, as well as rapid agile development. Currently AVAV is enrolled in the Phase III of DARPA program to fulfill its mission, the Agency relies on diverse performers to apply multi-disciplinary approaches to both advance knowledge through basic research and create innovative technologies that address current practical problems through applied research

Government program award in 2016

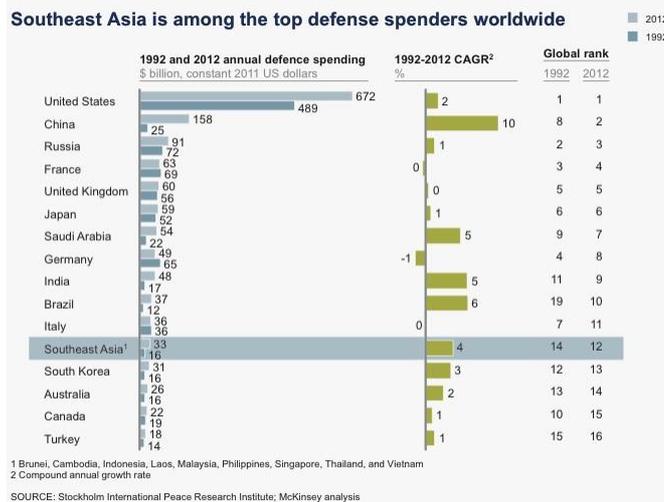
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International market expansion

AeroVironment have more than 30 international UAS customers, most with additional procurement potential, and many other countries evaluating small UAS.



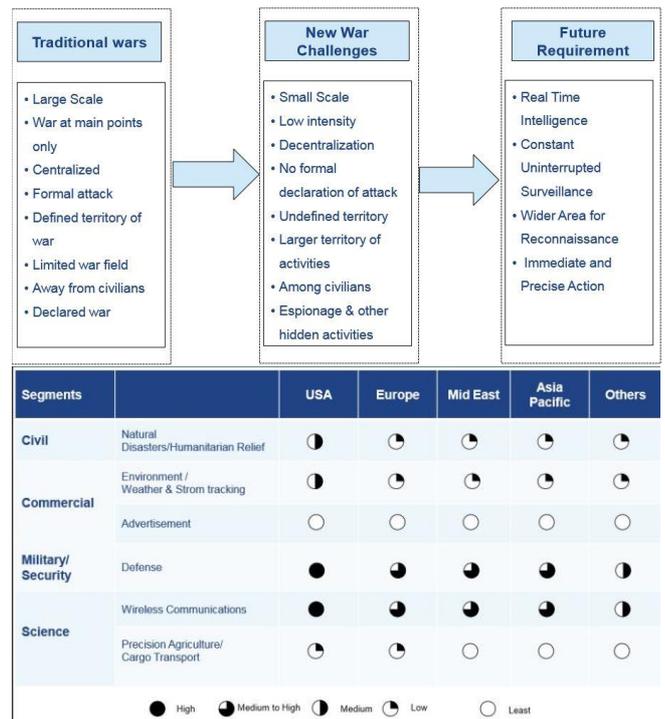
Despite McKinsey; the ongoing dynamic growth of economies in Southeast Asia presents defense companies with significant opportunities. Following a sustained period of positive growth, many Southeast Asian countries are building up military capabilities, with an eye toward better protection of their assets, especially the shipping lanes, ports and maritime boundaries that are critical to exports and supply chains. They also seek to defend their territorial integrity in the context of a fast changing security landscape. While defense spending for the region is growing, the scale and pace varies significantly from country to country. Indonesia, for instance, has more than doubled its spending in the past 5 years, whereas Cambodia and Laos are expanding their budgets more slowly.



The opportunity for AVAV are enormous in the Southeast area, Given vast coastline, countries will likely require more aircrafts with special mission capabilities in marine patrol, airborne early warning systems, and, Unmanned aerial vehicle (UAV) units under consideration with a strong focus on modernization for customers.

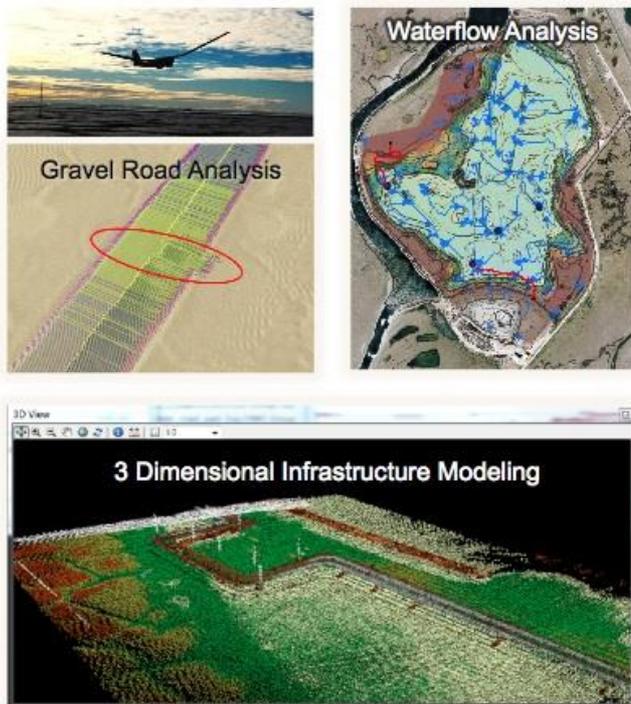
The UAS market is underestimated

The UAS business is not exclusively for military purpose; army is using UAS for targeting and decoy, the objective is to provide ground and aerial gunnery a target. The reconnaissance is a primordial objective to provide battlefield intelligence. The combat would provide attack capability for high-risk mission. The opportunities in the defense are enormous especially when we take in account the new challenge of war and all the implication it create for troops.



The demand for civilian use of UAS has been increasingly growing. Federal agency such as Customs and Border Patrol (CBP) use UAS for anti-terrorism through aiding in identification and interception of terrorist but also of cross border illegal activity. The potential of UAS for strip mall, office building, industrial complex, theater, train derailments has to be taken into account when evaluating the potential of the business. Within the commercial industry UAS could help meaningfully agriculture and conservation activity. The objectives are to monetize the soil erosion, crops and flood plain research. In the agriculture business UAS have the capacity to disperse insecticide and seeding. The other benefit would be to geo coded three dimensional mapping and topography analysis for precise land use and management. The Real Estate could benefit from UAS technology by creating high definition video and photo imagery for promotional purposes that ordinary

use of cameras would not be able to mimic. Due to the flexibility of navigating a UAS, it is capable of capturing the intended target, which might otherwise require the costly operation and expertise of helicopter or imagery software.



landing UAVs will prove useful in humanitarian aid missions. North America continues to be leading global UAV market with 60% - 70% followed by Asia Pacific and Europe with 20% and 16% respectively there has been a significant increase in demand for UAVs from emerging countries, currently used in more than 50 countries. A substantial increase of new entrants in the UAV supply chain will occur over the next decade. UAS market is opening up many new opportunities from UAV pilots to electronics and cameras. AVAV is well aligned to deliver future growth performance focused on executing fiscal 2015 plan to drive long-term value with profitable growth through technology-based innovation; strong and balanced pipeline with multiple high-value market opportunities. The consistency of the financial performance, the differentiated solutions with industry leading positions across multiple markets and a solid track record of performance.

Puma AE a AVAV products is the first and only FAA restricted type certified UAS for commercial operations over U.S. land. AeroVironment is providing first FAA approved commercial UAS services over American soil in Alaska for the petroleum company BP. There are market opportunities in oil & gas, agriculture, mining and other global industries. As both civil and commercial applications are expected to further develop UAS have the potential to become a major component of commercial aviation within the United States. Specifically for civil government and commercial operators, UAS are seen to be come great asset s to reduce work related risk s but also increase efficiency and effectiveness

Conclusion

The total UAV opportunity is expected to surpass US \$7 billion over the next 10 years, driven by increasing UAV demand and UAV procurement. An increase in demand is expected in the HALE segment of UAV market. Degree of technical change will be very high in the UAS market in the coming years. Latest innovation: Solar powered UAV have endurance of more than 300 hours. UAVs are in development for a number of future roles that could greatly expand their numbers o Military uses will include the delivery of food, medicine and other supplies for troops o Short or vertical takeoff and

Valuation

The valuation of AVAV has been made using a proforma that is presented on the last page of this report.

Revenue growth for FY2015 has been estimated at -10%, FY2016 has been estimated at 10% in line with consensus estimations, and rapidly decremented by 2% year after year to a long term growth of 4% this growth is considered conservative regarding the company's growth potential over next years and according to its business remodeling and Investments in new businesses.

Adjusted operating costs over revenues have been decreased from 92.4% for FY2014 to 80% by 0.5% increments. This increase is also conservative regarding the company's initiatives put in place to gain in productivity and an increase in margin.

All these assumptions are considered conservative regarding company's potential and leads to a 1 year target price of \$34.04, representing an upside potential of 30.96% based on current market price.

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AeroVironment, Inc.		AVAV	Analyst Sofian Belhadi	Current Price \$25.98	Intrinsic Value \$30.07	Target Value \$34.02	Dividend Yield 0%	Target Return 1-yr Return: 30.96%	BULLISH								
General Info		Peers		Market Cap.	Management												
Sector	Industrials	Mercury Systems, Inc.		\$523.52	Professional												
Industry	Aerospace and Defense	API Technologies Corp.		\$110.79	Conver, Timothy		Title	Comp. FY2012	Comp. FY2013	Comp. FY2014							
Last Guidance	Mar-03-2015	Sparton Corp.		\$262.83	Minson, Roy		Chairman, Chief Executive Officer	\$1,199,872	\$669,184	\$1,985,334							
Next earnings date	6/25/2015	The KEYW Holding Corporation		\$369.04	Nawabi, Wahid		Senior Vice President and General	\$0	\$954,179	\$454,278							
Market Data		Astronics Corporation		\$1,608.85	Covington, Teresa		Senior Vice President and General	\$657,998	\$970,280	\$726,407							
Enterprise value	\$402.41	LMI Aerospace Inc		\$152.68	Cline, Cathleen		Interim Chief Financial Officer	\$0	\$0	\$0							
Market Capitalization	\$605.96	Sypris Solutions Inc		\$26.73	Gitlin, Steven		Senior Vice President of Administ	\$783,025	\$0	\$0							
Daily volume	0.13	American Science & Engineering Inc		\$358.12	Historical Median Performance												
Shares outstanding	23.32	Current Capital Structure															
Diluted shares outstanding	22.82	Total debt/market cap	0.00%														
% shares held by institutions	65.41%	Cost of Borrowing	#DIV/0!														
% shares held by insiders	12.21%	Interest Coverage	11.6x														
Short interest	4.92%	Altman Z	11.62														
Days to cover short interest	8.06	Debt Rating	AAA														
52 week high	\$36.97	Levered Beta	1.12														
52-week low	\$24.73	WACC (based on market value weights)	8.82%														
5y Beta	0.83																
6-month volatility	29.76%																
Past Earning Surprises		Revenue		EBITDA		Norm. EPS											
Last Quarter	-1.8%			119.1%		66.7%											
Last Quarter-1	-4.6%			NM		NM											
Last Quarter -2	5.4%			NM		NM											
Last Quarter -3	5.6%			17.1%		17.4%											
Last Quarter -4	6.2%			31.6%		54.5%											
Proforma Assumptions		Forecast															
		Period		Rev. Growth		Adj. Op. Cost/Rev		Invested Capital		NOPLAT Margin		ROIC		WACC			
Money market rate as of today		LTM		4.8%		92.3%		\$345.44		9%		5.9%		8.8%			
Annual increase (decrease) in interest rates		NTM		10.0%		85.0%		\$392.53		15%		11.8%		8.9%			
Yield Spread acceleration		NTM+1		10.0%		84.0%		\$425.99		16%		11.8%		9.0%			
Marginal Tax Rate		NTM+2		9.3%		83.0%		\$461.74		16%		12.3%		9.1%			
Risk-Free rate		NTM+3		9.2%		82.0%		\$499.91		17%		12.9%		9.2%			
Tobin's Q		NTM+4		9.1%		81.0%		\$540.47		17%		13.4%		9.3%			
Op. Cash/Rev.		NTM+5		9.1%		80.0%		\$583.19		17%		13.6%		9.4%			
Growth in PPE		NTM+6		9.0%		80.0%		\$627.47		17%		13.7%		9.5%			
Long term Growth		NTM+7		8.9%		80.0%		\$671.56		17%		13.8%		9.6%			
Base Year Unlevered Beta		NTM+8		8.8%		80.0%		\$708.64		17%		13.9%		9.7%			
Long term Unlevered Beta		Continuing Period		8.7%		80.0%		\$963.87		5%		10.0%		9.8%			
		Valuation								Pricing Model							
		Invested Capital x (ROIC-WACC)		Total Debt		Other non-interest bearing claims		Shares Outstanding		DCF (Weight = 100%)		Relative (Weight = 0%) Distress (Weight = 0%)		Weighted Average Price Per Share			
LTM		\$0.00		\$0.00		-\$228.66		23.32		\$31.03		\$26.48		\$30.22		\$31.03	
NTM		\$9.98		\$0.00		-\$262.89		23.32		\$34.77		\$30.97		\$34.24		\$34.77	
NTM+1		\$10.97		\$0.00		-\$280.49		23.32		\$36.98		\$33.59		\$36.50		\$36.98	
NTM+2		\$13.71		\$0.00		-\$301.52		23.32		\$39.47		\$36.80		\$38.96		\$39.47	
NTM+3		\$16.88		\$0.00		-\$326.44		23.32		\$42.12		\$40.53		\$41.57		\$42.12	
NTM+4		\$20.50		\$0.00		-\$356.36		23.32		\$45.04		\$44.74		\$44.33		\$45.04	
NTM+5		\$22.61		\$0.00		-\$392.71		23.32		\$47.85		\$49.04		\$47.25		\$47.85	
NTM+6		\$24.27		\$0.00		-\$431.32		23.32		\$50.78		\$53.50		\$50.19		\$50.78	
NTM+7		\$26.06		\$0.00		-\$471.93		23.32		\$53.61		\$58.24		\$53.07		\$53.61	
NTM+8		\$27.90		\$0.00		-\$517.33		23.32		\$55.67		\$63.32		\$55.67		\$55.67	
Continuing Value		\$9.13															
		Monte Carlo Simulation Assumptions								Monte Carlo Simulation Results							
		Base		Stdev		Min		Max		Distribution		Intrinsic Value		1y-Target			
Revenue Variation		0		10%		N/A		N/A		Normal		Mean est.		\$31.03		\$34.77	
Op. Costs Variation		0		10%		N/A		N/A		Normal		σ(ε)		\$0.32		\$0.25	
Country Risk Premium		6%		N/A		5%		7%		Triangular		3σ(ε) adjusted price		\$30.07		\$34.02	
Long term Growth		4%		N/A		3%		8%		Triangular		Current Price		\$25.98			
												Analysts' median est.		\$30.71			