



AeroVironment, Inc (NASDAQ:AVAV)

AeroVironment™

Krause Fund Research – Fall 2019

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Industrials – Aerospace & Defense

Stock Rating:

SELL

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Company Description

AeroVironment, Inc is an aerospace and defense company headquartered in Monrovia, California. They are the United States primary supplier of Unmanned Air Systems (UAS) for the United States Military. AeroVironment started implementing their technology into the commercial space to diversify their revenue streams by developing commercial agriculture drones as well as paring with Softbank on a High-Altitude Pseudo Satellite (HAPS) compatible with 5G technology.

Investment Thesis

We recommend a sell rating for AeroVironment as we believe the company is currently fairly valued, and we see limited potential for significant growth. The Department of Defense's future budget cut is expected to have a significant negative impact on the UAS industry's revenue within our forecast period. The budget cut paired with the uncertainty of the commercial market AeroVironment currently operates in, leads us to a sell recommendation.

Drivers of Thesis:

- Primary customer's budget is expecting cuts
- Commercial market uncertainty and slow initial growth

Risks to Thesis:

- HAPS could be future of communication technology
- Sale of UAS possibly gaining international approval

Target Price \$60 - \$64

DCF Model	\$61.67
DDM Model	\$41.74
Relative Valuation	\$66.12

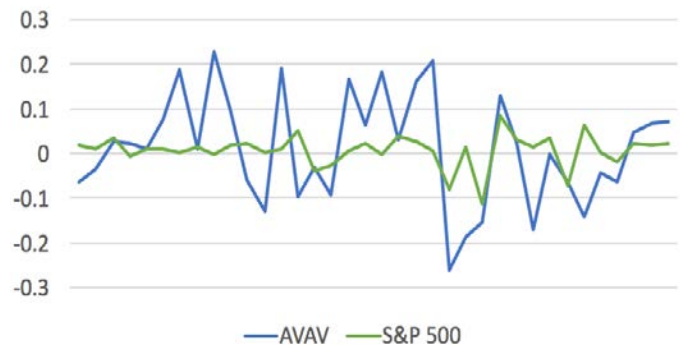
Price Statistics

Current Price	\$62.68
52 Week Range	\$48.61 - \$100.78
Market Cap	1.481M
Shares Outstanding	23.663M
Current Beta	0.983
EPS	\$2.00
P/E (TTM)	40.1

Company Performance

ROA (TTM)	9.32%
ROE (TTM)	10.25%
Operating Margin	16.06%

3Y Monthly Return Performance



Year	2018	2019	2020E	2021E	2022E	2023E
EPS	\$0.86	\$2.00	\$2.18	\$2.55	\$3.11	\$2.90
Growth	62.79%	132.56%	9.13%	17.02%	21.86%	-6.88%

Executive Summary

As of November 15, 2019, our team is recommending a sell rating on AeroVironment, Inc (NASDAQ: AVAV). We believe a decreasing Department of Defense budget along with increasing competition in the UAS market limits the potential revenue that will be generated from their largest income stream. However, AeroVironment's expansion into international markets, along with the diversification of their technology into the commercial market, makes them less susceptible to the possible decrease in defense spending in coming years. Even with the diversification into commercial markets there is still worry about the initial growth of these markets as well as the uncertainty of the future of these markets.

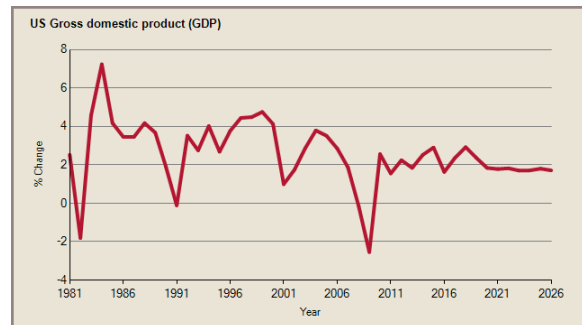
After Evaluating the Discounted Cash Flow and Relative Valuation models we have estimated AeroVironment's stock price to be valued at \$61.67 after the partial year adjustment. AeroVironment is currently trading at \$62.68, but we believe there is very limited room for growth, so we recommend a sell rating.

Economic Outlook

Real Gross Domestic GDP

Real GDP is a full measure of economic activity happening within the United States including the increased adjustment for inflation. This is the most critical factor for growth outlook for business in the United States. As the subsequent graph shows, the real growth has been and will continue to decrease at a slow pace in the future. In Q2 the United States real GDP decreased to 2.1% from 3.1% in Q1. Part of the reason for this slow growth is due to the slight growth in inflation in recent years.¹

Over the next five years real GDP is expected to grow steadily at a rather slow constant rate of 1.77%. This is most likely due to the current administration wanting to decrease defense spending along with growing tensions about international trade expected to continue.² The slow GDP growth makes us slightly bearish; however, with AeroVironment being a defense company which receives 58% of its revenue from government contracts it might not be affected by the slow GDP growth as significantly as other industries will.

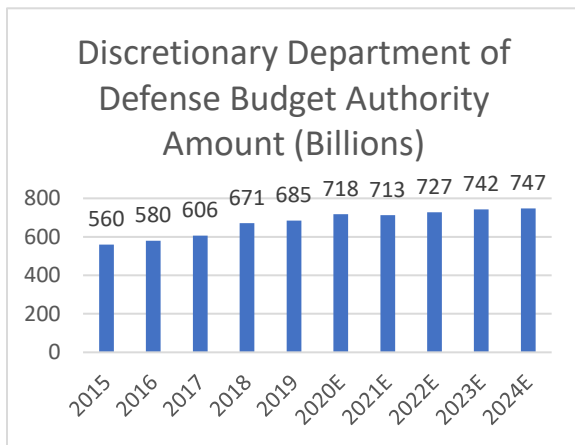


Source: IBIS World

Defense Spending and Government Regulation

The current Administration has increased defense spending by 13% since 2018, but with an election coming in 2020 it is difficult to accurately predict how defense spending will change in the future.³ However, due to the increased conflicts in the Middle East it is expected that no matter what party is in office defense spending will continue to grow at an annualized rate of 2.8% over the next five years. The main concern for the defense budget continuing to grow at its current pace is the increased national debt pressure the United States continues to face which is expected to be the reason defense spending will grow at a slower rate than in has over the last five years and even possibly decrease.⁴

Even with defense spending getting cut the demand for UAV's, Unmanned Aerial Vehicles, looks to be growing in the public and commercial sector⁴. Agencies like boarder patrol and the agriculture industry and beginning to see the increasing benefits of UAV's, but they will not make up for the lost production from the government shrinking the defense budget. This defense budget cuts particularly affects AeroVironment negatively because over 58% of their revenue comes from defense contracts from the United States Government.⁵ This defense budget cut is concerning for AeroVironment as it shrinks their possibility for increasing their revenue significantly in the upcoming years as UAV contracts are their largest source of revenue.⁴



Source: Defense Budget Overview

Interest Rates

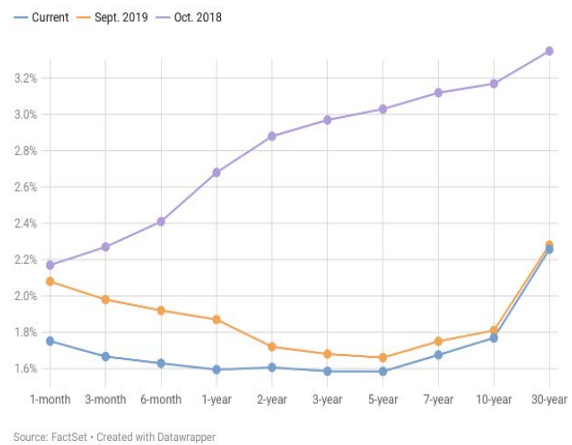
Interest Rates are extremely important for every industry, but especially for the Industrials industry. The Federal Reserve has cut interest rates three times this year and the current Fed Funds Rate range sits at 1.5-1.75%. Current Federal Reserve Chairman, Jerome Powell, has stated that is where the committee plans on keeping the Fed Funds Rate if there is economic growth.⁶ Based on Powell's comments and the economy continuing to

look strong we do not anticipate any changes anytime soon to the Fed Funds Rate.

Although the Fed Funds Rate is important the 10-year T Note is arguably more important for an industrials company as it is the indicator for the rate at which companies can acquire long term debt. Today the 10-year T Note closed at 1.84% just above the Fed Funds Rate of 1.59%.⁷ This does not have a large impact on AeroVironment as they do not have any long-term debt, but this low interest rate environment is allowing their competitors to take advantage of the low cost of debt. AeroVironment doesn't currently have any debt on their balance sheet, and management has not led us to believe that will change anytime soon.

AeroVironment has significant holdings in cash which will allow them to maintain liquidity and continue to operate without any debt. This is a significant advantage as their competitors become increasingly leveraged as interest rates increase in the future moving towards their historic averages.

US Treasury yield curve



Source: CNBC

Industry Outlook- Aerospace and Defense

Although the Dow Jones and S&P 500 are sitting at almost record highs, there is some evidence showing the market will begin to slow in 2020. The bond market is overvalued compared to the equity market which has pushed the stock market to record highs as investors are not able to receive the returns they seek from the bond market. Although the yield curve is no longer inverted, many experts are predicting a recession at some point in 2020 due to the weak economic numbers, increased trade tensions, and slowing GDP growth.⁸

Due to this possible recession coming, the industrials sector is projected to grow at just 1.3% which is half of the 2.7% the industry was projected to grow in 2019.⁹ However, the Aerospace and Defense category is expected to grow over the next seven years. Boeing has projecting the Aerospace and Defense industry to grow to \$8.7 trillion by 2028.¹⁰ This growth is expected to come from increasing demand for commercial airplanes, a steady defense industry, and increased spending on space technology.

Industry Analysis – Aerospace and Defense

Description and Categories

The Aerospace and Defense Industry designs, develops, and manufactures advanced aircraft, space systems, and defense capabilities. Although this is one sector, it is split into two categories as they do not have a significant correlation with one another. The aerospace category is dominated by large commercial companies such as Boeing and Airbus that manufacture commercial planes and jets. These companies account for over 50% of large aircraft orders and both are backlogged suggesting strong demand in this industry. The

other part of this industry is completed by space systems such as spaceships and satellites which are predominantly purchased by the government.¹¹

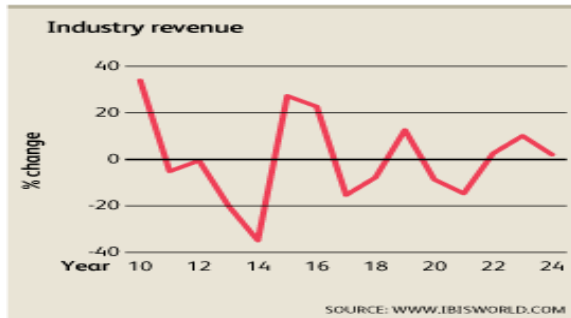
The defense capabilities category has more components than the aerospace category, but most of this category comes from ground equipment, tanks, jets, surveillance and shipbuilding for the Navy. This is the category most UAV's and AeroVironment fall under. Most of the revenue these companies generate comes from military contracts, so the defense budget has a huge impact on their performance unlike the aerospace category which follows real GDP as a performance guide.

Defense Budget and future of UAV's

The Department of Defense has their 2020 budget approved at \$718 billion, but they have submitted a series of planned budgets through 2024. Over the five-year period the average yearly budget is down about 3% to \$700 billion after adjusting for inflation.⁸ Although this is the planned budget, the Department of Defense often sees fluctuations in their forecasted budget due to congressional decisions, international events, and other national emergencies.⁸

With the budget falling one of the key areas that is expected to receive a budget cut is UAV's due to the Department of Defense's already significant fleet.⁴ This would be a significant hit in revenue for AeroVironment as most of their revenue comes from government contracts for their small UAV's. The subsequent graph shows the change per year in industry revenue for UAV's, and how it will decrease in the future along with the defense budget.

Although AeroVironment will most likely sell less UAV's, their margins on them will continue to grow as the price for semiconductors continues to decrease. Cheaper semiconductors will allow AeroVironment to push margins up to 11.4% in 2020.⁴ Although the UAV market is expected to receive a budget cut, if there is any additional international conflict the UAV budget is expected to increase.



Source: IBIS World

Key Investment Considerations

Positives:

- The Defense sector is not tied to real GDP, so there is still room for significant growth if any international conflict arises.
- AeroVironment is starting to enter the commercial market which allows them to diversify their revenue streams and makes them less reliant on defense contracts.

Negatives:

- AeroVironment is in a niche defense market that is expected to receive a budget cut which could significantly decrease their revenue in the future.
- Research and Development is needed to increase the capabilities and technology of UAV's and tactical missiles, but there is not a guaranteed return on this costly investment.

- AeroVironment's commercial information systems is growing slower than management anticipated and there is still uncertainty about the potential growth of this emerging market.

Company Analysis

Company Summary:

AeroVironment, Inc. engages in the design and development of unmanned aircraft systems ("UAS") primarily for the United States Department of Defense and international allied governments. Headquartered in Monrovia, California, AeroVironment contributes their success to their investments in research and development improving their ability to fulfill specific customer needs.⁵

Products and Markets

Recognized as the largest supplier of unmanned aircraft systems to the United States government, AeroVironment also offers products in emerging markets such as Tactical Missile Systems, High-Altitude Pseudo Satellites, and Commercial Information Solutions.

Small Unmanned Aircraft Systems (UAS)

Small Unmanned Aircraft Systems accounted for nearly 60% of AeroVironment's revenue in 2019.⁵ UAS provide military combatants with tactical intelligence, surveillance, and reconnaissance from drones. Attached with infrared sensors, live video capabilities, and geographic analysis tools, users are better equipped to assess potential combat fields. The UAS is wirelessly transmitted from a handheld control system that can be assembled and launched within five minutes clear of harm's way.¹²

We expect to see the UAS product line revenue grow by 12% in 2020 and 2021 before doubling due to access of international markets.

Tactical Missile Systems (TMS)

AeroVironment produces technologies and weapons that allow combatants to call in precision airstrikes from remote controls. These GPS and laser-guided missiles improve the accuracy of tactical strikes in environments that may be populated with civilians or friendlies. These Tactical Missile Systems mitigate collateral damage and provide users with wave-off capabilities.¹²

Tactical Missile Systems account for 20% of AeroVironment’s revenue and we forecast the TMS product line to grow 4% annually.⁵

High-Altitude Pseudo Satellite (HAPS)

AeroVironment’s High-Altitude Pseudo Satellites aim to improve worldwide wireless communications. AeroVironment’s joint venture with Japanese telecommunications company, SoftBank, strives to create a constellation of solar HAPS aircrafts for improved bandwidth and 5G technologies.¹²

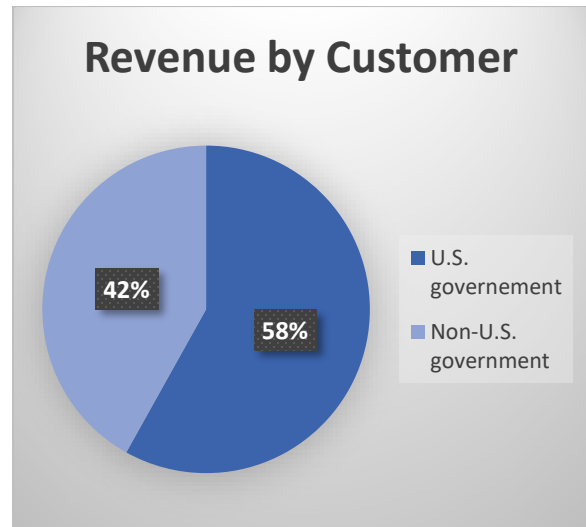
Although AeroVironment’s HAPS product line only accounted for 18% of total revenue, we expect HAPS to grow by 20% in 2020 and 2021 as 5G technologies continue to emerge.⁵

Commercial Information Systems (CIS)

AeroVironment’s Commercial Information Systems product line aims to provide the agriculture sectors with drones for aerial imagery and improved field analytics. Their Quantix data collection drone has the ability scan 400 acres of vegetation in 45 minutes fully automated.¹²

We expect the Commercial Information Systems product to grow at 10% annually.

Customer Base



Source: AeroVironment 10K

AeroVironment’s primary customer is the United States government and its allies. The UAS is used by multiple branches of the armed forces (Marines, Air Force, Army, and Navy) and has been sold to countless allied countries across the globe. The tactical missile system product line is strictly sold to the United States government but has the potential of being acquired by allies within the next three years. The joint venture with SoftBank, allows AeroVironment to provide HAPS to commercial customers in Japan. The agriculture market is the target base for AeroVironment’s growing Commercial Information Solutions segment.

Competition

AeroVironment’s competitive environment is comprised of many companies both large and small based on product line. For small UAS technologies competitors include Elbit Systems, Lockheed Martin, FLIR systems, and L3 Technologies.¹³

Competitors in the tactical missile systems market include Textron Inc., Raytheon Company, and Lockheed Martin.¹²

For HAPS, AeroVironment names Boeing, Airbus, Lockheed Martin, and Northrup Grumman as direct competitors.¹²

Although AeroVironment does not recognize commercial drone manufacturers as competitors, it acknowledges their potential to break into the defense market.

Many of the acknowledged competitors are much larger companies and have access to greater capital. The chart below compares AeroVironment’s size and earnings multiple with direct competition in the defense industry.

Company Name	Market Value	Enterprise Value	EBITDA	Enterprise Value / EBITDA
AeroVironment	1,503.1	1,212.7	51.2	23.67x
Aker A	4,066.8	10,189.4	300.9	33.86x
Lockheed Martin	111,009.0	123,147.0	9,616.0	12.81x
Elbit Systems	7,077.2	7,726.0	402.7	19.67x
Textron	10,742.1	14,146.1	1,536.0	9.21x
Airbus	117,298.0	123,155.0	7,742.0	15.91x

Source: FactSet

SWAT Analysis

Strengths

AeroVironment’s investments in research and development have allowed their technologies to stand out from the competition. These investments provide for early adaption to customer needs and the ability to do it in different product markets. Their reputation and customer relations has been a large factor in their ability to obtain future contracts with the United States government.

AeroVironment’s infrastructure has improved their manufacturing capabilities and provided them the ability to produce products at higher rates than ever.⁵

Weaknesses

AeroVironment has a limited number of suppliers that meet product quality requirements and quantity needs. Certain raw materials used in the manufacturing of products are periodically subject to shortages which delay production and increase prices. The delay of products may cause customer contract termination, increased production costs and financial instability.¹⁴

With the United States government being AeroVironment’s primary customer, the company’s revenue depends heavily on the Department of Defense budget. Many of AVAV’s contracts require complete disclosure which make it difficult for them to market their products to new customers.

Opportunities

An international market for Unmanned Aircraft Systems is expected to emerge in the next few years as the United States government looks to loosen sales restrictions, potentially doubling the current market. Technological advances and the demand for 5G capabilities and broader bandwidth provide potential growth in AeroVironment’s HAPS product line.

AeroVironment anticipates great growth in the very young Commercial Information Systems market and considers themselves as one of the early adopters.

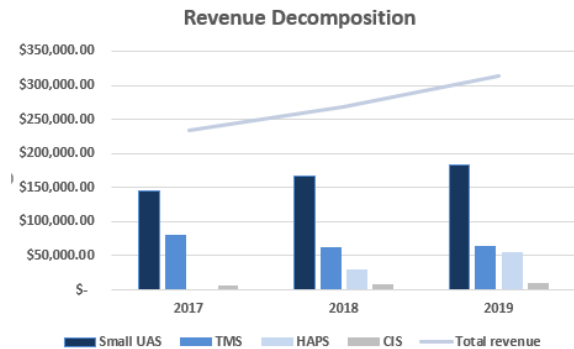
Threats

The Aerospace and Defense Industries are subject to substantial regulations and security measures. The UAS product line is regulated by the Federal Aviation Administration and the High-Altitude Pseudo System products are regulated by the Federal Communications Commission so failure to obtain approval prohibits growth.

Times of war largely effect the increase and decrease of defense spending. The United States presence in Iraq and Afghanistan in the past led to greater sales but times of war are unpredictable.

Valuation Analysis

Revenue Decomposition



Source: AeroVironment 10K

We broke down AeroVironment’s revenue streams based on their four product lines which are small Unmanned Aircraft Systems, Tactical Missile Systems, High-Altitude Pseudo Satellite, and Commercial Information Systems.

The small UAS is AeroVironment’s largest revenue stream as it makes up over 58% of their total revenue. We estimate this product line to grow by 12% until 2022 before we expect this product line to become available internationally. AeroVironment has not been legally allowed to sell this product line outside of the United States. We expect the market for small UAS to double in 2022 once it’s available internationally pending approval by the Department of Defense. After international growth, we estimate CV growth to be 6% as the defense budget is expected to decrease slightly in the future.

The Tactical Missile Systems market is extremely competitive and is largely dominated by the largest defense contract companies such as Raytheon and

Lockheed Martin. This is an established market, so we expect AeroVironment to grow this product line at 4% in 2020 as the CV growth.

The High-Altitude Pseudo Satellite is an emerging technology market used for commercial purposes. This satellite technology is used for 5G communication capabilities. This is an emerging market and AeroVironment is one of the leaders of this product, so we expect high growth initially. However, because this is a new market there is also potential for volatility as companies begin adapting to 5G technology. We are estimating 50% growth in 2020, 40% in 2021, and 20% in 2022 before reaching its CV growth of 5% in 2023.

The Commercial Information Systems product is an emerging market in the agriculture industry. This market is in its early stages and it is currently difficult to tell if there will be widespread adaption of this product line. Because of uncertainty in adaption of this product, we estimated it will continue to grow at 10% in 2020 and beyond. Management has commented growth was slower than expected which is why we choose a more conservative estimate for this product line.

Key Assumptions

Expenses

We forecasted Cost of Sales to be a constant percentage of product and contract revenue at 38.5% and 20% respectively. Although Cost of Sales have been declining in prior years, we do not forecast margin expansion as raw material suppliers are scarce and dictate prices.

Selling, General and Administrative expense have been significant and remained relatively consistent the previous three years. We expect these costs to remain around 19% of revenue.

Research & Development expenses have a three-year historical average of being 11% of revenue. R&D accounts for significant advances in AeroVironment's technology and products so we do not expect these expenses to lessen over time. AeroVironment owns their Research & Development and plans on contributing resources to advance products.

Property, Plant, and Equipment

We forecasted Property, Plant, & Equipment to remain a constant 33% of revenue. As an industrials company, AeroVironment relies on PP&E to produce goods and services. As revenue grows, more PP&E is needed to fulfill customer demands and meet expected growth.

CV Growth of NOPLAT and EPS

We are forecasting a CV Growth of NOPLAT to be 2.5% and an EPS growth of 4.7%. We believe that AeroVironment's NOPLAT will grow with the United States GDP and EPS growth will be contributed to income generation.

WACC

We estimated AeroVironment's WACC to be 6.9102% based on 99.99% equity and .01% debt from their operating leases. We used this number throughout our valuation models and do not expect AeroVironment to change their company structure in future altering WACC. We used the risk-free rate of 2.3% from a 30-year T-bond yield as of market close on November 15, 2019. We used .983 as the beta as that is the raw beta from Bloomberg.¹⁵ We estimated WACC using a market risk premium of 4.69% as that is the geometric mean spread between the returns of the S&P 500 and a 10-year treasury bond from 1928-2018. The after-tax cost of debt we used was 2.62% which was the FactSet estimate. Overall, AeroVironment

has a relatively low WACC because they do not carry any long-term debt which gives them a low beta resulting in a low WACC.

Valuation Models

Discounted Cash Flow (DCF) and Economic Profit

We used the Discounted Cash Flow and Economic Profit models to calculate the intrinsic value of \$61.67 which is about \$1.00 less than the stock is currently trading at. We believe these to be the most accurate of the models because they allow us to use more assumptions which ultimately leads us to believe this is a more accurate model. The discounted cash flow model involves estimating cash flows for seven years and then determining a value we believe the company will continue to grow at for the foreseeable future. We then discounted these cashflows using the WACC we estimated to find the total value of operating assets. We then adjusted for non-operating activities to find the total value of equity. After dividing the total value of equity by shares outstanding we came to a stock price of \$61.67.

Dividend Discount Model (DDM)

We used the Dividend Discount Model as another way to find the intrinsic value of AeroVironment. We found the value of the stock at the continuing growth period and discounted it to today using the cost of equity and added this year's partial adjustment to reach a stock price of \$41.74. However, we do not believe this model accurately predicts the value of AeroVironment because they do not pay dividends and management has not indicated they will in the future. We do not believe AeroVironment will start paying out dividends within our forecast period, therefore we do not put as much emphasis on this model as we do on the Discounted Cash Flow and Economic Profit models.

Relative Valuation Model

We used companies within the aerospace and defense industry that AeroVironment identified as competitors in their annual reports to complete a Relative Valuation model. Using P/E, EPS, and PEG ratios of competitors for both 2019 and 2020, we computed industry averages to compare against AeroVironment's performance. We believe the PEG ratios are the most accurate as they incorporate AeroVironment's CAGR and account for the estimated growth over the next five years. This relative valuation model gave us a stock price range of \$38.63 to \$66.12. We used this model as a comparison to our Dividend Discount and Economic Profit model. Our DCF and EP models calculated a price of \$61.67 which falls within the range of the relative valuation model.

Sensitivity Analysis

We conducted a variety of sensitivity analysis tests to measure the implications of our input assumptions.

Marginal Tax Rate/Market Risk Premium

We tested the changes in Marginal Tax Rate and the Market Risk Premium to determine the how political implications and changes in risk impact AeroVironment's stock price. A 3% change in marginal tax rates effects the stock price by approximately \$3.50 in each direction. The market risk premium and stock price have an inverse relationship causing the stock price to fall as the market risk premium increases. An increase of 100 bps in market risk premium decreases AeroVironment stock price by more than \$8.00.

		Marginal Tax Rate				
Market Risk Premium	\$ 61.67	15%	18%	21%	24%	27%
	3.50%	87.07	83.58	80.09	76.61	73.12
	4.00%	76.82	73.78	70.75	67.71	64.67
	4.69%	66.46	63.88	61.29	58.71	56.13
	5.00%	62.78	60.36	57.94	55.52	53.10
	6.00%	53.63	51.61	49.60	47.58	45.56

Risk-free rate/Research & Development

We forecasted R&D expense as 11% of total revenue and compared its changes with changes in the risk-free rate. With changes in long-term treasury notes and a change in risk-free rate of 20 bps we can expect the stock price to move inversely between \$2.00 and \$2.50. If AeroVironment decides to contribute more capital to research & development, and R&D expense as a percentage of revenue increases by 2%, we should expect stock price to decrease by approximate \$7.75.

		Risk Free Rate				
R&D as % of Revenue	\$ 61.67	1.90%	2.10%	2.30%	2.50%	2.70%
	7%	83.53	80.01	76.82	73.91	71.25
	9%	75.00	71.89	69.06	66.48	64.11
	11%	66.48	63.76	61.29	59.04	56.98
	13%	57.95	55.63	53.53	51.61	49.85
	15%	49.43	47.51	45.76	44.17	42.71

CV Growth/PP&E

We tested CV Growth against Property, Plant, & Equipment expense as a percentage of revenue. If the defense budget were to change and alter the company's expected CV Growth by 50 bps, we should expect to see a price change of around \$3.00.

If PP&E expense increases to fulfill an increase in customer contracts and PP&E expense as a percentage of revenue increases by 2%, stock price is not dramatically changed and moves by less than \$0.70.

		CV Growth				
PPE %	\$ 61.67	1.50%	2.00%	2.50%	3.00%	3.50%
	29.00%	55.92	58.89	62.53	67.10	73.02
	31.00%	55.41	58.33	61.91	66.41	72.23
	33.00%	54.90	57.77	61.29	65.72	71.44
	35.00%	54.38	57.21	60.67	65.02	70.65
	37.00%	53.87	56.65	60.05	64.33	69.86

WACC/SG&A

Historically, AeroVironment's SG&A expenses are 19% of revenue. If AeroVironment is required to attract more talent and SG&A expense as a percentage of revenue grows by 2%, we see a significant change in stock price of more than \$7.00.

If AeroVironment's capital structure changes and they finance more operations with debt, we can expect an increase of 20 bps in the companies' WACC to lower the stock price by more than \$2.00.

		WACC				
SG&A as % of Rev	\$ 61.67	6.50%	6.70%	6.91%	7.10%	7.30%
	15%	83.68	80.15	76.80	74.02	71.35
	17%	75.15	72.02	69.05	66.59	64.21
	19%	66.62	63.89	61.30	59.15	57.08
	21%	58.09	55.76	53.55	51.72	49.95
	23%	49.56	47.63	45.80	44.28	42.82

Normal Cash/CV COGS product

We forecasted CV COGS product to remain slightly below the historical average assuming AeroVironment has the ability to scale. If CV COGS product as a percentage of revenue increase 5% due to the scarcity of supplies, we expect to see AeroVironment stock fall by nearly \$20.

If AeroVironment were to change Normal Cash by 5%, we can expect to see a small change in stock price of approximately \$1.20.

		Normal Cash				
CV COGS Product	\$ 61.67	20%	25%	30%	35%	40%
	25.00%	102.68	101.40	100.12	98.84	97.56
	30.00%	83.27	81.99	80.71	79.43	78.15
	35.00%	63.85	62.57	61.29	60.01	58.73
	40.00%	44.44	43.16	41.88	40.60	39.32
	45.00%	25.03	23.75	22.47	21.19	19.91

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Disclaimer

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AeroVironment, Inc

Income Statement

In Thousands

<i>Fiscal Years Ending Apr. 30</i>	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Revenue - product sales	193338	195330	212089	261011.71	304844.73	363428.79	383605.09	404940.97	427505.88	451373.64	476622.76
Revenue - contract services	71535	75722	102185	106610.41	124514.04	148442.74	156683.77	165398.42	174615.08	184363.88	194676.90
Total revenues	264873	271052	314274	367622.12	429358.77	511871.53	540288.85	570339.39	602120.95	635737.52	671299.66
Cost of sales - product sales	115513	111990	113489	128667.74	150275.57	179155.04	189101.10	199618.79	210742.33	222508.13	234954.88
Cost of sales - contract services	47250	50174	72382	62854.80	73524.42	85871.75	102374.31	108057.77	114067.88	120424.19	127147.50
Total cost of sales	162763	162164	185871	191522.54	223799.99	265026.79	291475.41	307676.56	324810.21	342932.32	362102.39
Total gross margin	102110	108888	128403	176099.58	205558.78	246844.74	248813.45	262662.83	277310.74	292805.20	309197.28
Selling, general & administrative expenses	56537	50826	60343	69848.20	81578.17	97255.59	102654.88	108364.48	114402.98	120790.13	127546.94
Research & development expenses	33042	26433	34234	40438.43	47229.46	56305.87	59431.77	62737.33	66233.30	69931.13	73842.96
Income (loss) from continuing operations	12531	31629	33826	65812.94	76751.15	93283.28	86726.79	91561.02	96674.46	102083.94	107807.38
Interest income, net	1618	2240	4672	2139.88	2189.10	2239.45	2290.95	2343.65	2397.55	2452.69	2509.11
Other income (expense), net	60	-49	11980	3308.60	3864.23	4606.84	4862.60	5133.05	5419.09	5721.64	6041.70
Income (loss) from continuing operations before income taxes	14209	33820	50478	71261.42	82804.47	100129.57	93880.35	99037.72	104491.09	110258.27	116358.18
Total deferred provision (benefit) for income taxes	-143	2889	2460	14964.90	17388.94	21027.21	19714.87	20797.92	21943.13	23154.24	24435.22
Change in valuation allowance	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Provision (benefit) for income taxes	1752	10177	4641	14964.90	17388.94	21027.21	19714.87	20797.92	21943.13	23154.24	24435.22
Equity method investment income (loss), net of tax	-	-1283	-3944	-3944.00	-3944.00	-3944.00	-3944.00	-3944.00	-3944.00	-3944.00	-3944.00
Net income (loss) from continuing operations	-	22360	41893	52352.52	61471.53	75158.36	70221.47	74295.80	78603.96	83160.04	87978.96
Net income (loss) from discontinued operations	-	-	5526	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net income (loss)	12457	19852	47419	52352.52	61471.53	75158.36	70221.47	74295.80	78603.96	83160.04	87978.96
Net income (loss) attributable to noncontrolling interest	22	216	19								
Net income (loss) attributable to AeroVironment, Inc.	12479	20068	47438	52352.52	61471.53	75158.36	70221.47	74295.80	78603.96	83160.04	87978.96
Weighted average shares outstanding - basic	23059.045	23471.241	23663.41	23986.81	24067.85	24148.88	24229.92	24310.96	24391.99	24473.03	24554.07
Year end shares outstanding	23630.419	23908.736	23946.293	24027.33	24108.37	24189.40	24270.44	24351.47	24432.51	24513.55	24594.58
EPS	0.54	0.86	2.00	2.18	2.55	3.11	2.90	3.06	3.22	3.40	3.58

AeroVironment, Inc

Balance Sheet

In Thousands

<i>Fiscal Years Ending Apr. 30</i>	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Cash & cash equivalents	79904	143517	172708	\$172,137.16	#####	#####	#####	\$373,874.65	\$439,105.99	\$508,148.16	\$581,222.55
Short-term investments	119971	113649	150487	\$ 153,948.20	\$ 157,489.01	\$ 161,111.26	\$ 164,816.82	\$ 168,607.60	\$ 172,485.58	\$ 176,452.75	\$ 180,511.16
Accounts receivable, net	74361	56813	31051	58819.54	68697.40	81899.44	86446.22	91254.30	96339.35	101718.00	107407.95
Inventories	60076	38640	54056	68010.09	79431.37	94696.23	99953.44	105512.79	111392.38	117611.44	124190.44
Prepaid expenses & other current assets	5653	5103	7418	7352.44	8587.18	10237.43	10805.78	11406.79	12042.42	12714.75	13425.99
Income taxes receivable	-	-	821	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deferred income taxes	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unbilled Receivables and retentions	-	16872	53047	53047.00	53047.00	53047.00	53047.00	53047.00	53047.00	53047.00	53047.00
Current assets of discontinued operations	-	28349	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total current assets	354085	399147	469588	513314.44	577279.16	655008.97	727337.92	803703.13	884412.72	969692.11	1059805.09
Long-term investments	42096	40656	9386	31247.88	36495.50	43509.08	45924.55	48478.85	51180.28	54037.69	57060.47
Property & equipment, gross	101941	88266	92368	121315.30	141688.39	168917.61	178295.32	188212.00	198699.91	209793.38	221528.89
Less: accumulated depreciation & amortization	82721	69047	75463	95581.75	111633.28	133086.60	140475.10	148288.24	156551.45	165291.76	174537.91
Property & equipment, net	19220	19219	16905	25733.55	30055.11	35831.01	37820.22	39923.76	42148.47	44501.63	46990.98
Deferred income taxes	15089	11168	6685	6818.70	6955.07	7094.18	7236.06	7380.78	7528.40	7678.96	7832.54
Other assets	2010	2721	6280	2573.35	3005.51	3583.10	3782.02	3992.38	4214.85	4450.16	4699.10
Total assets	432500	472911	508844	579687.92	653790.36	745026.33	822100.77	903478.89	989484.71	1080360.55	1176388.18
Accounts payable	20283	21340	15972	24630.68	28767.04	34295.39	36199.35	38212.74	40342.10	42594.41	44977.08
Wages & related accruals	12966	16851	18507	20219.22	23614.73	28152.93	29715.89	31368.67	33116.65	34965.56	36921.48
Income taxes payable	1418	4085	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Customer advances	3317	2145	2962	5146.71	6011.02	7166.20	7564.04	7984.75	8429.69	8900.33	9398.20
Other current liabilities	10079	6892	7425	11028.66	12880.76	15356.15	16208.67	17110.18	18063.63	19072.13	20138.99
Current liabilities of discontinued operations	-	9184	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total current liabilities	48063	60497	44866	61025.27	71273.56	84970.67	89687.95	94676.34	99952.08	105532.43	111435.74
Deferred rent	1719	1536	1173	1746.21	2039.45	2431.39	2566.37	2709.11	2860.07	3019.75	3188.67
Capital lease obligations - net of current portion	161	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Deferred tax liability	116	67	29	24.60	149.65	173.89	210.27	197.15	207.98	219.43	231.54
Other non-current liabilities	184	622	150	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liability for uncertain tax positions	64	49	51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Liabilities			46269.00	62796.08	73462.66	87575.95	92464.59	97582.60	103020.13	108771.61	114855.96
Additional paid-in capital/ common stock	\$ 162,152.00	\$ 170,141.00	\$ 176,218.00	178182.32	180146.64	182110.96	184075.28	186039.61	188003.93	189968.25	191932.57
Accumulated other comprehensive income (loss)	-127	-21	2	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Retained earnings (accumulated deficit)	219929	239997	286351	338703.52	400175.06	475333.42	545554.89	619850.69	698454.65	781614.69	869593.65
Total AeroVironment, Inc. stockholders' equity (deficit)	381954	410117	462571	516887.84	580323.70	657446.38	729632.18	805892.29	886460.58	971584.93	1061528.22
Noncontrolling interest	239	23	4	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Total equity (deficit)	382193	410140	462575	516891.84	580327.70	657450.38	729636.18	805896.29	886464.58	971588.93	1061532.22
Total Liabilities & Equity				579687.92	653790.36	745026.33	822100.77	903478.89	989484.71	1080360.55	1176388.18

AeroVironment, Inc*Cash Flow Statement*

In Thousands

<i>Fiscal Years Ending Apr. 30</i>	2017	2018	2019
Net income (loss)	12457	19852	47419
Net income (loss) from continuing operations	-	22360	41893
Depreciation & amortization	7054	5982	7669
Loss (gain) from equity method investments	119	1283	3944
Impairment of long-lived assets	46	255	4398
Provision for doubtful accounts	56	977	-39
Deferred income taxes	-52	3835	4792
Stock-based compensation	3709	4956	6985
Amortization of held-to-maturity investments	2382	1424	-1506
Accounts receivable	-18627	11211	25821
Unbilled receivables & retentions	4779	903	-36175
Inventories	-22590	2268	-16631
Income tax receivable	-	-	-821
Prepaid expenses & other assets	-1466	419	-2401
Accounts payable	2843	5736	-7054
Other liabilities	-946	7872	-4043
Net cash flows from operating activities	-10499	70436	26946
Acquisition of property & equipment	-9862	-9563	-8896
Equity method investments	-	-3267	-7598
Redemptions of held-to-maturity investments	121522	227663	260918
Purchases of held-to-maturity investments	-148991	-221680	-267122
Redemptions of available-for-sale investments	400	450	2250
Net cash flows from investing activities	-37354	-6397	11546
Purchase & retirement of common stock	-	-	-
Principal payments of capital lease obligations	-390	-288	-161
Excess tax benefit from stock-based compensation	-	-	-
Tax withholding payment related to net settlement of equit	-5	-397	-1094
Exercise of stock options	3865	2705	71
Net cash flows from financing activities	3470	2020	-1184
Operating activities of discontinued operations	-	-1227	-7686
Investing activities of discontinued operations	-	-1219	-431
Net cash flows from discontinued operations	-	-2446	-8117
Net increase (decrease) in cash & cash equivalents	-44383	63613	29191
Cash & cash equivalents at beginning of period	124287	79904	143517
Cash & cash equivalents at end of period	79904	143517	172708
Cash paid, net during the period for income taxes	1804	1813	6780

AeroVironment, Inc
Cash Flow Statement

In Thousands

<i>Fiscal Years Ending Apr. 30</i>	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Net income (loss)	\$ 52,352.52	\$ 61,471.53	\$ 75,158.36	\$ 70,221.47	\$ 74,295.80	\$ 78,603.96	\$ 83,160.04	\$ 87,978.96
Depreciation & amortization	\$ 20,118.75	\$ 16,051.53	\$ 21,453.32	\$ 7,388.50	\$ 7,813.14	\$ 8,263.21	\$ 8,740.31	\$ 9,246.16
Accounts receivable, net	\$ (27,768.54)	\$ (9,877.86)	\$ (13,202.04)	\$ (4,546.77)	\$ (4,808.09)	\$ (5,085.05)	\$ (5,378.65)	\$ (5,689.94)
Inventories	\$ (13,954.09)	\$ (11,421.28)	\$ (15,264.86)	\$ (5,257.20)	\$ (5,559.35)	\$ (5,879.59)	\$ (6,219.07)	\$ (6,579.00)
Prepaid expenses & other current assets	\$ 65.56	\$ (1,234.73)	\$ (1,650.26)	\$ (568.35)	\$ (601.01)	\$ (635.63)	\$ (672.33)	\$ (711.24)
Accounts payable	\$ 8,658.68	\$ 4,136.36	\$ 5,528.35	\$ 1,903.96	\$ 2,013.39	\$ 2,129.36	\$ 2,252.31	\$ 2,382.66
Deferred Income Tax	\$ (133.70)	\$ (136.37)	\$ (139.10)	\$ (141.88)	\$ (144.72)	\$ (147.62)	\$ (150.57)	\$ (153.58)
Income Taxes Receivable	\$ 821.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Customer Advances	\$ 2,184.71	\$ 864.31	\$ 1,155.18	\$ 397.84	\$ 420.71	\$ 444.94	\$ 470.63	\$ 497.87
Other Current Liabilities	\$ 3,603.66	\$ 1,852.10	\$ 2,475.38	\$ 852.52	\$ 901.52	\$ 953.45	\$ 1,008.50	\$ 1,066.86
Deferred Rent	\$ 573.21	\$ 293.25	\$ 391.94	\$ 134.98	\$ 142.74	\$ 150.96	\$ 159.68	\$ 168.92
Deferred Tax Liability	\$ (4.40)	\$ 125.05	\$ 24.24	\$ 36.38	\$ (13.12)	\$ 10.83	\$ 11.45	\$ 12.11
Wages & related accruals	\$ 1,712.22	\$ 3,395.52	\$ 4,538.20	\$ 1,562.95	\$ 1,652.78	\$ 1,747.99	\$ 1,848.91	\$ 1,955.92
Other Non-current Liabilities	\$ (150.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Unbilled receivables and retentions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Liability for Uncertain Tax Positions	\$ (51.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net cash flows from operating activities	\$ 48,028.58	\$ 65,519.39	\$ 80,468.71	\$ 71,984.41	\$ 76,113.77	\$ 80,556.82	\$ 85,231.21	\$ 90,175.70
Investing Activities								
Capital Expenditure	\$ (28,947.30)	\$ (20,373.09)	\$ (27,229.21)	\$ (9,377.72)	\$ (9,916.68)	\$ (10,487.92)	\$ (11,093.47)	\$ (11,735.51)
Decrease (Increase) in Other Assets	\$ 3,706.65	\$ (432.16)	\$ (577.59)	\$ (198.92)	\$ (210.35)	\$ (222.47)	\$ (235.32)	\$ (248.93)
Decrease (Increase) LT Investments	\$ (21,861.88)	\$ (5,247.62)	\$ (7,013.58)	\$ (2,415.47)	\$ (2,554.30)	\$ (2,701.43)	\$ (2,857.41)	\$ (3,022.78)
Decrease (Increase) in Short-term Investments	\$ (3,461.20)	\$ (3,540.81)	\$ (3,622.25)	\$ (3,705.56)	\$ (3,790.79)	\$ (3,877.97)	\$ (3,967.17)	\$ (4,058.41)
Net cash flows from investing activities	\$ (50,563.74)	\$ (29,593.67)	\$ (38,442.63)	\$ (15,697.67)	\$ (16,472.11)	\$ (17,289.79)	\$ (18,153.36)	\$ (19,065.64)
Financing Activities								
ESOP	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32
Net Cash flows from Financing activities	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32	\$ 1,964.32
Net Increase (Decrease) in cash and cash equivalents	\$ (570.84)	\$ 37,890.04	\$ 43,990.40	\$ 58,251.06	\$ 61,605.98	\$ 65,231.34	\$ 69,042.17	\$ 73,074.39
Cash and cash equivalents, beginning of period	\$ 172,708.00	\$ 172,137.16	\$ 210,027.20	\$ 254,017.60	\$ 312,268.67	\$ 373,874.65	\$ 439,105.99	\$ 508,148.16
Cash and cash equivalents, end of period	\$ 172,137.16	\$ 210,027.20	\$ 254,017.60	\$ 312,268.67	\$ 373,874.65	\$ 439,105.99	\$ 508,148.16	\$ 581,222.55

AeroVironment, Inc
Common Size Income Statement

In Thousands

<i>Fiscal Years Ending Apr. 30</i>	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Revenue - product sales	72.99%	72.06%	67.49%	71.00%	71.00%	71.00%	71.00%	71.00%	71.00%	71.00%	71.00%
Revenue - contract services	27.01%	27.94%	32.51%	29.00%	29.00%	29.00%	29.00%	29.00%	29.00%	29.00%	29.00%
Total revenues	264,873.00	271,052.00	314,274.00	367,622.12	429,358.77	511,871.53	540,288.85	570,339.39	602,120.95	635,737.52	671,299.66
Cost of sales - product sales	43.61%	41.32%	36.11%	30.87%	29.97%	29.36%	33.16%	33.16%	33.15%	33.15%	33.15%
Cost of sales - contract services	17.84%	18.51%	23.03%	17.10%	17.12%	16.78%	18.95%	18.95%	18.94%	18.94%	18.94%
Total cost of sales	61.45%	59.83%	59.14%	52.10%	52.12%	51.78%	53.95%	53.95%	53.94%	53.94%	53.94%
Total gross margin	38.55%	40.17%	40.86%	47.90%	47.88%	48.22%	46.05%	46.05%	46.06%	46.06%	46.06%
Selling, general & administrative expenses	21.34%	18.75%	19.20%	19.00%	19.00%	19.00%	19.00%	19.00%	19.00%	19.00%	19.00%
Research & development expenses	12.47%	9.75%	10.89%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%	11.00%
Income (loss) from continuing operations	4.73%	11.67%	10.76%	17.90%	17.88%	18.22%	16.05%	16.05%	16.06%	16.06%	16.06%
Interest income, net	0.61%	0.83%	1.49%	0.58%	0.51%	0.44%	0.42%	0.41%	0.40%	0.39%	0.37%
Other income (expense), net	0.02%	-0.02%	3.81%	0.90%	0.90%	0.90%	0.90%	0.90%	0.90%	0.90%	0.90%
Income (loss) from continuing operations before income taxes	5.36%	12.48%	16.06%	19.38%	19.29%	19.56%	17.38%	17.36%	17.35%	17.34%	17.33%
Total deferred provision (benefit) for income taxes	-0.05%	1.07%	0.78%	4.07%	4.05%	4.11%	3.65%	3.65%	3.64%	3.64%	3.64%
Provision (benefit) for income taxes	0.66%	3.75%	1.48%	4.07%	4.05%	4.11%	3.65%	3.65%	3.64%	3.64%	3.64%
Net income (loss)	4.70%	7.32%	15.09%	14.24%	14.32%	14.68%	13.00%	13.03%	13.05%	13.08%	13.11%
Net income (loss) attributable to noncontrolling interest	0.01%	0.08%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Net income (loss) attributable to AeroVironment, Inc.	4.71%	7.40%	15.09%	14.24%	14.32%	14.68%	13.00%	13.03%	13.05%	13.08%	13.11%

AeroVironment, Inc
Common Size Balance Sheet

In Thousands

<i>Fiscal Years Ending Apr. 30</i>	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Cash & cash equivalents	18.47%	30.35%	33.94%	29.69%	32.12%	34.10%	37.98%	41.38%	44.38%	47.04%	49.41%
Short-term investments	27.74%	24.03%	29.57%	26.56%	24.09%	21.62%	20.05%	18.66%	17.43%	16.33%	15.34%
Accounts receivable, net	17.19%	12.01%	6.10%	10.15%	10.51%	10.99%	10.52%	10.10%	9.74%	9.42%	9.13%
Inventories	13.89%	8.17%	10.62%	11.73%	12.15%	12.71%	12.16%	11.68%	11.26%	10.89%	10.56%
Prepaid expenses & other current assets	1.31%	1.08%	1.46%	1.27%	1.31%	1.37%	1.31%	1.26%	1.22%	1.18%	1.14%
Income taxes receivable	0.00%	0.00%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Deferred income taxes	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total current assets	81.87%	84.40%	92.29%	88.55%	88.30%	87.92%	88.47%	88.96%	89.38%	89.76%	90.09%
Long-term investments	9.73%	8.60%	1.84%	5.39%	5.58%	5.84%	5.59%	5.37%	5.17%	5.00%	4.85%
Property & equipment, net	4.44%	4.06%	3.32%	4.44%	4.60%	4.81%	4.60%	4.42%	4.26%	4.12%	3.99%
Deferred income taxes	3.49%	2.36%	1.31%	1.18%	1.06%	0.95%	0.88%	0.82%	0.76%	0.71%	0.67%
Other assets	0.46%	0.58%	1.23%	0.44%	0.46%	0.48%	0.46%	0.44%	0.43%	0.41%	0.40%
Total assets	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Accounts payable	4.69%	4.51%	3.14%	4.25%	4.40%	4.60%	4.40%	4.23%	4.08%	3.94%	3.82%
Wages & related accruals	3.00%	3.56%	3.64%	3.49%	3.61%	3.78%	3.61%	3.47%	3.35%	3.24%	3.14%
Income taxes payable	0.33%	0.86%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Customer advances	0.77%	0.45%	0.58%	0.89%	0.92%	0.96%	0.92%	0.88%	0.85%	0.82%	0.80%
Other current liabilities	2.33%	1.46%	1.46%	1.90%	1.97%	2.06%	1.97%	1.89%	1.83%	1.77%	1.71%
Total current liabilities	11.11%	12.79%	8.82%	10.53%	10.90%	11.41%	10.91%	10.48%	10.10%	9.77%	9.47%
Deferred rent	0.40%	0.32%	0.23%	0.30%	0.31%	0.33%	0.31%	0.30%	0.29%	0.28%	0.27%
Deferred tax liability	0.03%	0.01%	0.01%	0.00%	0.02%	0.02%	0.03%	0.02%	0.02%	0.02%	0.02%
Additional paid-in capital	37.49%	35.98%	34.63%	30.74%	27.55%	24.44%	22.39%	20.59%	19.00%	17.58%	16.32%
Accumulated other comprehensive income (loss)	-0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Retained earnings (accumulated deficit)	50.85%	50.75%	56.27%	58.43%	61.21%	63.80%	66.36%	68.61%	70.59%	72.35%	73.92%
Total AeroVironment, Inc. stockholders' equity (d)	88.31%	86.72%	90.91%	89.17%	88.76%	88.24%	88.75%	89.20%	89.59%	89.93%	90.24%
Noncontrolling interest	0.06%	0.00%	0.00%								
Total equity (deficit)	88.37%	86.73%	90.91%	89.17%	88.76%	88.25%	88.75%	89.20%	89.59%	89.93%	90.24%

AeroVironment, Inc
Common Size Balance Sheet

In Thousands

<i>Fiscal Years Ending Apr. 30</i>	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
Cash & cash equivalents	30.17%	52.95%	54.95%	46.82%	48.92%	49.63%	57.80%	65.55%	72.93%	79.93%	86.58%
Short-term investments	45.29%	41.93%	47.88%	41.88%	36.68%	31.47%	30.51%	29.56%	28.65%	27.76%	26.89%
Accounts receivable, net	28.07%	20.96%	9.88%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%	16.00%
Inventories	22.68%	14.26%	17.20%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%	18.50%
Prepaid expenses & other current assets	2.13%	1.88%	2.36%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Income taxes receivable	0.00%	0.00%	0.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Deferred income taxes	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total current assets	133.68%	147.26%	149.42%	139.63%	134.45%	127.96%	134.62%	140.92%	146.88%	152.53%	157.87%
Long-term investments	15.89%	15.00%	2.99%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%
Property & equipment, net	7.26%	7.09%	5.38%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
Deferred income taxes	5.70%	4.12%	2.13%	1.85%	1.62%	1.39%	1.34%	1.29%	1.25%	1.21%	1.17%
Other assets	0.76%	1.00%	2.00%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%	0.70%
Total assets	163.29%	174.47%	161.91%	157.69%	152.27%	145.55%	152.16%	158.41%	164.33%	169.94%	175.24%
Accounts payable	7.66%	7.87%	5.08%	6.70%	6.70%	6.70%	6.70%	6.70%	6.70%	6.70%	6.70%
Wages & related accruals	4.90%	6.22%	5.89%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
Income taxes payable	0.54%	1.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Customer advances	1.25%	0.79%	0.94%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%	1.40%
Other current liabilities	3.81%	2.54%	2.36%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Total current liabilities	18.15%	22.32%	14.28%	16.60%	16.60%	16.60%	16.60%	16.60%	16.60%	16.60%	16.60%
Deferred rent	0.65%	0.57%	0.37%	0.48%	0.48%	0.48%	0.48%	0.48%	0.48%	0.48%	0.48%
Deferred tax liability	0.04%	0.02%	0.01%	0.01%	0.03%	0.03%	0.04%	0.03%	0.03%	0.03%	0.03%
Additional paid-in capital	61.22%	62.77%	56.07%	48.47%	41.96%	35.58%	34.07%	32.62%	31.22%	29.88%	28.59%
Retained earnings (accumulated deficit)	83.03%	88.54%	91.12%	92.13%	93.20%	92.86%	100.97%	108.68%	116.00%	122.95%	129.54%
Total AeroVironment, Inc. stockholders' equity (d)	144.20%	151.31%	147.19%	140.60%	135.16%	128.44%	135.04%	141.30%	147.22%	152.83%	158.13%
Noncontrolling interest	0.09%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total equity (deficit)	144.29%	151.31%	147.19%	140.60%	135.16%	128.44%	135.05%	141.30%	147.22%	152.83%	158.13%

AeroVironment, Inc															
<i>Value Driver Estimation</i>															
<i>In Thousands</i>															
<i>Fiscal Years Ending Apr. 30</i>	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E
EBITA Calculation															
Total Net Sales	\$ 240,152.00	\$ 251,703.00	259398	264098	264873	271052	314274	367622	429359	511872	540289	570339	602121	635738	671300
(COGS) Including Depreciation and Amortization	\$ 147,616.00	\$ 158,090.00	155130	151995	162763	162164	185871	191523	223800	265027	291475	307677	324810	342932	362102
SG&A including R&C	\$ 51,520.00	\$ 55,679.00	55763	60077	56537	50826	60343	69848	81578	97256	102655	108364	114403	120790	127547
Research & Development	\$ 37,214.00	\$ 25,515.00	46491	42291	33042	26433	34234	40438	47229	56306	59432	62737	66233	69931	73843
Interest on Operating Lease:	\$ 727.84	\$ 996.32	827	1308	1048	1207	1413	1653	1931	2302	2429	2565	2707	2859	3019
EBITDA	\$ 4,529.84	\$ 13,415.32	2841	11043	13579	32836	35239	67466	78682	95585	89156	94126	99382	104943	110826
Marginal Tax Calculation															
Statutory Tax Rate	35%	35%	35%	35%	35%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
Foreign Differential	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Marginal Rate	35%	35%	35%	35%	35%	21%	21%	21%	21%	21%	21%	21%	21%	21%	21%
Adjusted Taxes Calculation															
Tax Provision	\$ 347.00	\$ 1,178.00	-1002	-898	1752	10177	4641	14965	17389	21027	19715	20798	21943	23154	24435
(+) Tax on Operating Lease	\$ 254.74	\$ 348.71	289	458	367	253	297	347	405	483	510	539	569	600	634
(+) Other income (expense), net	\$ 2,185.75	\$ 567.70	-351	-945	21	-10	2516	695	811	967	1021	1078	1138	1202	1269
(-) Interest Income Net	\$ 254.10	\$ 299.25	309	361	566	470	981	449	460	470	481	492	503	515	527
Total Adjusted Taxes	\$ 2,533.39	\$ 1,795.16	-1372	-1746	1574	9950	6472	15557	18146	22008	20765	21922	23146	24441	25811
Change in Deferred Taxes															
Deferred Tax Asset	\$ 5,606.00	\$ 6,721.00	7426	9319	15089	11168	6685	0	0	0	0	0	0	0	0
Deferred Tax Liability	\$ -	\$ -	0	0	116	67	29	25	150	174	210	197	208	219	232
Difference	\$ (5,606.00)	\$ (6,721.00)	-7426	-9319	-14973	-11101	-6656	25	150	174	210	197	208	219	232
Changes in Deferred Taxes	#REF!	\$ (1,115.00)	-705	-1893	-5654	3872	4445	6681	125	24	36	-13	11	11	12
NOPLAT Adjustment															
EBITDA	\$ 4,529.84	\$ 13,415.32	2841	11043	13579	32836	35239	67466	78682	95585	89156	94126	99382	104943	110826
Total Adjusted Taxes	\$ 2,533.39	\$ 1,795.16	-1372	-1746	1574	9950	6472	15557	18146	22008	20765	21922	23146	24441	25811
Change in Deferred Taxes	#REF!	\$ (1,115.00)	-705	-1893	-5654	3872	4445	6681	125	24	36	-13	11	11	12
NOPLAT	#REF!	\$ 10,505.16	3508	10896	6352	26758	33212	58589	60661	73601	68427	72190	76247	80513	85027
Invested Capital Calculation															
Normal Cash	\$ 72,045.60	\$ 75,510.90	77819	79229	79462	81316	94282	110287	128808	153561	162087	171102	180636	190721	201390
Accounts receivable, Net	\$ 19,770.00	\$ 31,739.00	33607	56045	74361	56813	31051	58820	68697	81899	86446	91254	96339	101718	107408
Inventories	\$ 62,561.00	\$ 50,699.00	39414	37486	60076	38640	54056	68010	79431	94696	99953	105513	111392	117611	124190
Unbilled receivables and retentions			18899	14120	16872	53047	53047	53047	53047	53047	53047	53047	53047	53047	53047
Prepaid expenses & other current assets	\$ 4,303.00	\$ 4,260.00	4599	4150	5653	5103	7418	7352	8587	10237	10806	11407	12042	12715	13426
Operating CA	\$158,679.60	\$ 162,208.90	155439	195809	233672	198744	239854	297516	338571	393442	412339	432323	453457	475812	499461
Accounts payable	\$ 16,144.00	\$ 13,906.00	19243	17712	20283	21340	15972	24631	28767	34295	36199	38213	40342	42594	44977
Wages & related accruals	\$ 12,116.00	\$ 14,083.00	13395	13973	12966	16851	18507	20219	23615	28153	29716	31369	33117	34966	36921
Income taxes payable	-	-	692	943	1418	4085	0	0	0	0	0	0	0	0	0
Customer advances	\$ 7,519.00	\$ 2,984.00	4235	2544	3317	2145	2962	5147	6011	7166	7564	7985	8430	8900	9398
Other current liabilities	\$ 6,408.00	\$ 6,762.00	9170	11173	10079	6892	7425	11029	12881	15356	16209	17110	18064	19072	20139
Total Operating CL	\$ 42,187.00	\$ 37,735.00	46735	46345	48063	51313	44866	61025	71274	84971	89688	94676	99952	105532	111436
Operating WC	\$116,492.60	\$ 124,473.90	108704	149464	185609	147431	194988	236490	267297	308471	322651	337646	353505	370280	388026
Net PPE	\$ 24,429.00	\$ 19,997.00	13499	16762	19220	19219	16905	25734	30055	35831	37820	39924	42148	44502	46991
Other Assets	\$ 1,060.00	\$ 874.00	741	750	2010	2721	6280	2573	3006	3583	3782	3992	4215	4450	4699
Total Present Value Operating Lease:	\$ 9,098.00	\$ 12,454.00	10334	16352	13102	15087	17664	20663	24133	28770	30368	32057	33843	35733	37731
Other LT Operating Liabilities	\$ 771.00	\$ 1,239.00	1381	2347	2064	2158	1323	1746	2039	2431	2566	2709	2860	3020	3189
Invested Capita	\$ 150,308.60	\$ 156,559.90	131897	180981	217877	182300	234514	283714	322451	374224	392055	410910	430852	451945	474258
FCF Method															
FCF	\$ 4,253.86		28171	-38188	-30544	62335	-19003	9390	21924	21828	50597	53335	56305	59420	62713
ROIC	6.99%		2.24%	8.26%	3.51%	12.28%	18.22%	24.98%	21.38%	22.83%	18.29%	18.41%	18.56%	18.69%	18.81%
EP	\$ 118.51		-7311	1782	-6155	11702	20614	42384	41055	51319	42568	45098	47852	50740	53797

AeroVironment, Inc*Weighted Average Cost of Capital (WACC) Estimation*

WACC		6.9102%
US Market Risk Premium		4.69%
Raw Beta 2 year		0.983
CAPM		6.91027
Risk free Rate		2.30%
Equity		1,439,000,000
Cost of Operating Leases	\$	17,664.22
Cost of Debt after tax		0.0262
Percent of Equity		99.9988%
Percent of Operating Leases		0.0012%
Marginal Tax Rate		21%

AeroVironment, Inc*Discounted Cash Flow (DCF) and Economic Profit (EP) Valuation Models*

Key Inputs:

CV Growth	2.50%
CV ROIC	18.29%
WACC	6.91%
Cost of Equity	6.91%

NOPLAT CV \$ 68,427.50

Fiscal Years Ending	2019E	2020E	2021E	2022E	2023CV	2024E	2025E	2026E	2027E
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DCF Model

FCF	\$ 9,389.65	\$ 21,923.61	\$ 21,828.29	\$ 50,596.86	\$ 53,334.78	\$ 56,304.97	\$ 59,420.04	\$ 62,713.35
CV				1,339,432.72				
Discount Factor	1.0691	1.1430	1.2220	1.2220				
Present Value	\$ 8,782.75	\$ 19,181.10	\$ 17,863.32	1,096,133.04				
Value of Operating Assets				\$ 1,141,960.21				
(+)Excess Cash				\$ 120,895.60				
(-)PV operating leases				\$ 17,664.22				
(+)Short Term Investments				\$ 150,487.00				
(-)ESOP				\$ 1,964.32				
Value of Equity				\$ 1,393,714.26				
Shares outstanding				24027				
Stock Price				\$ 58.01				
Partial Year Adjustment				\$ 61.67				

EP Model

EP	\$ 42,383.64	\$ 41,055.42	\$ 51,319.39	\$ 42,567.80	\$ 45,098.35	\$ 47,851.73	\$ 50,740.19	\$ 53,796.69
CV				\$ 965,208.64				
Discount Factor	1.0691	1.1430	1.2220	1.2220				
Present Value	\$ 39,644.14	\$ 35,919.65	\$ 41,997.54	\$ 789,884.45				
Invested Capital (T0)				\$ 234,514.42				
Value of Operating Assets				\$ 1,141,960.21				
(+)Excess Cash				\$ 120,895.60				
(-)PV operating leases				\$ 17,664.22				
(+)Short Term Investments				\$ 150,487.00				
(-)ESOP				\$ 1,964.32				
Value of Equity				\$ 1,393,714.26				
Shares outstanding				24027				
Stock Price				\$ 58.01				
Partial Year Adjustment				\$ 61.67				

AeroVironment, Inc*Dividend Discount Model (DDM) or Fundamental P/E Valuation Model*

<i>Fiscal Years Ending</i>	2019E	2020E	2021E	2022E	2023E
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EPS	\$ 2.00	\$ 2.18	\$ 2.55	\$ 3.11	\$ 2.90
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Key Assumptions

CV growth					2.50%
CV ROE					9.62%
Cost of Equity					6.91%

Future Cash Flows

P/E Multiple (CV Year)					
EPS (CV Year)	\$ 2.00	\$ 2.18	\$ 2.55	\$ 3.11	\$ 2.90
Dividend	\$ -	\$ -	\$ -	\$ -	\$ 2.15
Future Stock Price					\$ 51.29
Dividends Per Share	\$ -	\$ -	\$ -	\$ -	\$ -
Future Cash Flows					
Discount	1.0691022	1.142979	1.221962	1.306402	1.306402039
Discounted Cash Flows	\$ -	\$ -	\$ -	\$ -	\$ 39.26
Intrinsic Value	\$ 39.26				
Partial Year Adjustment	\$ 41.74				

AeroVironment, Inc*Relative Valuation Models*

Ticker	Company	Price	EPS		P/E 19	P/E 20	Est. 5yr		
			2019E	2020E			EPS gr.	PEG 19	PEG 20
LMT	Lockheed Martin Corporation	\$375.88	\$21.62	\$24.12	17.40	15.60	14.0	1.24	1.11
ESLT	Elbit Systems Ltd	\$161.77	\$5.91	\$7.26	27.40	22.30	2.2	12.45	10.14
FLIR	FLIR Systems, Inc.	\$53.34	\$2.31	\$2.55	22.80	20.70	10.5	2.17	1.97
LHX	L3Harris Technologies Inc.	\$197.01	\$11.40	\$13.22	17.30	14.90	9.5	1.82	1.57
NOC	Northrop Grumman Corporation	\$344.00	\$20.27	\$23.00	17.00	15.00	17.2	0.99	0.87
Average					20.38	17.70		3.74	3.13
AVAV	AeroVironment, Inc	\$62.68	\$2.00	\$2.18	31.3	28.7	8.84950007	3.5	3.2

Implied Relative Value:

P/E (EPS19)	\$ 40.76
P/E (EPS20)	\$ 38.63
PEG (EPS19)	\$ 66.12
PEG (EPS20)	\$ 60.50

AeroVironment, Inc
Key Management Ratios

<i>Fiscal Years Ending</i>															
<i>0.0691021733610712</i>	2013	2014	2015	2016	2017	2018	2019	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027CV
Liquidity Ratios															
Current Ratio	6.24	8.13	7.04	7.55	7.37	6.60	10.47	8.41	8.10	7.71	8.11	8.49	8.85	9.19	9.51
Quick Ratio	4.50	6.96	6.36	7.34	7.27	6.16	8.63	6.31	6.12	5.85	6.28	6.69	7.08	7.45	7.80
Activity or Asset-Management Ratios															
Total Asset Turnover Ratio	66.07%	65.39%	65.26%	64.35%	61.24%	57.32%	61.76%	63.42%	65.67%	68.71%	65.72%	63.13%	60.85%	58.84%	57.06%
Inventory Turnover Ratio	3.839	4.965	6.581	7.045	4.409	7.015	5.814	5.405	5.405	5.405	5.405	5.405	5.405	5.405	5.405
Receivables Turnover Ratio	12.147	7.930	7.719	4.712	3.562	4.771	10.121	6.250	6.250	6.250	6.250	6.250	6.250	6.250	6.250
Financial Leverage Ratios															
Debt Ratio	23.43%	19.93%	23.86%	23.16%	22.73%	26.06%	17.90%	21.36%	22.14%	23.16%	22.16%	21.28%	20.51%	19.84%	19.24%
Debt to Equity Ratio	15.32%	12.41%	13.92%	13.60%	13.17%	15.31%	10.00%	12.15%	12.66%	13.32%	12.67%	12.11%	11.62%	11.20%	10.82%
Equity Ratio	86.72%	88.96%	87.78%	88.03%	88.31%	86.72%	90.91%	89.17%	88.76%	88.24%	88.75%	89.20%	89.59%	89.93%	90.24%
Profitability Ratios															
Return on Assets	2.87%	3.56%	0.73%	2.18%	2.88%	4.20%	9.32%	9.03%	9.40%	10.09%	8.54%	8.22%	7.94%	7.70%	7.48%
Return on Equity	3.31%	4.01%	0.83%	2.48%	3.26%	4.84%	10.25%	10.13%	10.59%	11.43%	9.62%	9.22%	8.87%	8.56%	8.29%
Operating Margin	4.49%	5.92%	0.73%	3.05%	5.36%	12.48%	16.06%	19.38%	19.29%	19.56%	17.38%	17.36%	17.35%	17.34%	17.33%
Payout Policy Ratios															
No dividends paid															

Present Value of Operating Lease Obligations (2017)

Fiscal Years Ending Apr. 30	Operating	
	Leases	
2017	3492	
2018	3046	
2019	2888	
2020	2042	
2021	1648	
Thereafter	2631	
Total Minimum Payments	15747	
Less: Interest	3366	
PV of Minimum Payments	12381	

Present Value of Operating Lease Obligations (2016)

Fiscal Years Ending Apr. 30	Operating	
	Leases	
2016	4347	
2017	3450	
2018	3012	
2019	2854	
2020	2006	
Thereafter	4236	
Total Minimum Payments	19905	
Less: Interest	4508	
PV of Minimum Payments	15397	

Present Value of Operating Lease Obligations (2015)

Fiscal Years Ending	Operating	
	Leases	
2015	3720	
2016	2367	
2017	1678	
2018	1581	
2019	1528	
2020	1298	
Thereafter	12172	
Total Minimum Payments	12172	
Less: Interest	2346	
PV of Minimum Payments	9826	

Present Value of Operating Lease Obligations (2014)

Fiscal Years Ending	Operating	
	Leases	
2015	3667	
2016	3136	
2017	2275	
2018	1583	
2019	1484	
Thereafter	2809	
Total Minimum Payments	14954	
Less: Interest	3179	
PV of Minimum Payments	11775	

Present Value of Operating Lease Obligations (2013)

Fiscal Years Ending	Operating	
	Leases	
2014	4324	
2015	2952	
2016	1919	
2017	856	
2018	137	
Thereafter	0	
Total Minimum Payments	10188	
Less: Interest	1408	
PV of Minimum Payments	8780	

Present Value of Operating Lease Obligations (2012)

Fiscal Years Ending	Operating	
	Leases	
2013	298	
2014	246	
2015	225	
2016	29	
2017	56	
Thereafter	142	
Total Minimum Payments	996	
Less: Interest	187	
PV of Minimum Payments	809	

Capitalization of Operating Leases

Pre-Tax Cost of Debt	8.00%
Number Years Implied by Year 6 Paym	1.6

Year	Lease		PV Lease
	Commitment	Payment	
1	3492	3233.3	
2	3046	2611.5	
3	2888	2292.6	
4	2042	1500.9	
5	1648	1121.6	
6 & beyond	1648	1621.0	
PV of Minimum Payments	12380.9		

Capitalization of Operating Leases

Pre-Tax Cost of Debt	8.00%
Number Years Implied by Year 6 Paym	2.1

Year	Lease		PV Lease
	Commitment	Payment	
1	4347	4025.0	
2	3450	2957.8	
3	3012	2391.0	
4	2854	2097.8	
5	2006	1365.2	
6 & beyond	2006	2559.8	
PV of Minimum Payments	15396.7		

Capitalization of Operating Leases

Pre-Tax Cost of Debt	8.00%
Number Years Implied by Year 6 Paym	1.0

Year	Lease		PV Lease
	Commitment	Payment	
1	3720	3444.4	
2	2367	2029.3	
3	1678	1332.1	
4	1581	1162.1	
5	1528	1039.9	
6 & beyond	1298	818.0	
PV of Minimum Payments	9825.8		

Capitalization of Operating Leases

Pre-Tax Cost of Debt	8.00%
Number Years Implied by Year 6 Paym	1.9

Year	Lease		PV Lease
	Commitment	Payment	
1	3667	3395.4	
2	3136	2688.6	
3	2275	1806.0	
4	1583	1163.6	
5	1484	1010.0	
6 & beyond	1484	1711.5	
PV of Minimum Payments	11774.9		

Capitalization of Operating Leases

Pre-Tax Cost of Debt	8.00%
Number Years Implied by Year 6 Paym	1.0

Year	Lease		PV Lease
	Commitment	Payment	
1	4324	4003.7	
2	2952	2530.9	
3	1919	1523.4	
4	856	629.2	
5	137	93.2	
6 & beyond	0	0.0	
PV of Minimum Payments	8780.4		

Capitalization of Operating Leases

Pre-Tax Cost of Debt	8.00%
Number Years Implied by Year 6 Paym	2.5

Year	Lease		PV Lease
	Commitment	Payment	
1	298	275.9	
2	246	210.9	
3	225	178.6	
4	29	21.3	
5	56	38.1	
6 & beyond	56	84.5	
PV of Minimum Payments	809.3		

Effects of ESOP Exercise and Share Repurchases on Common Stock Balance Sheet Account and Number of Shares Outstanding

Number of Options Outstanding (shares): 351,328
 Average Time to Maturity (years): 4.34
 Expected Annual Number of Options Exercised: 81,036

Current Average Strike Price: \$ 24.24
 Cost of Equity: 6.91%
 Current Stock Price: \$62.68

	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E	2027E	2028E
Increase in Shares Outstanding:	81,036	81,036	81,036	81,036	81,036	81,036	81,036	81,036	81,036	81,036
Average Strike Price:	\$ 24.24	\$ 24.24	\$ 24.24	\$ 24.24	\$ 24.24	\$ 24.24	\$ 24.24	\$ 24.24	\$ 24.24	\$ 24.24
Increase in Common Stock Account:	1,964,321	1,964,321	1,964,321	1,964,321	1,964,321	1,964,321	1,964,321	1,964,321	1,964,321	1,964,321
Change in Treasury Stock	0	0	0	0	0	0	0	0	0	0
Expected Price of Repurchased Shares:	\$ 62.68	\$ 67.01	\$ 71.64	\$ 76.59	\$ 81.89	\$ 87.54	\$ 93.59	\$ 100.06	\$ 106.98	\$ 114.37
Number of Shares Repurchased:	-	-	-	-	-	-	-	-	-	-
Shares Outstanding (beginning of the year)	23,946,293	24,027,329	24,108,366	24,189,402	24,270,438	24,351,475	24,432,511	24,513,547	24,594,584	24,675,620
Plus: Shares Issued Through ESOP	81,036	81,036	81,036	81,036	81,036	81,036	81,036	81,036	81,036	81,036
Less: Shares Repurchased in Treasury	-	-	-	-	-	-	-	-	-	-
Shares Outstanding (end of the year)	24,027,329	24,108,366	24,189,402	24,270,438	24,351,475	24,432,511	24,513,547	24,594,584	24,675,620	24,756,657

VALUATION OF OPTIONS GRANTED IN ESOP

Ticker Symbol	AVAV
Current Stock Price	\$62.68
Risk Free Rate	2.30%
Current Dividend Yield	0.00%
Annualized St. Dev. of Stock Returns	40.00%

Range of Outstanding Options	Number of Shares	Average Exercise Price	Average Remaining Life (yrs)	B-S Option Price	Value of Options Granted
Range 1	68,302	14.56	3.36	\$ 49.33	\$ 3,369,667
Range 2	58,500	20.54	3.86	\$ 44.58	\$ 2,607,841
Range 3	80,000	26.70	6.15	\$ 42.40	\$ 3,392,019
Range 4	50,000	27.27	4.56	\$ 40.30	\$ 2,015,208
Range 5	94,526	29.85	3.68	\$ 37.43	\$ 3,538,099
Total	351,328	\$ 24.24	4.34	\$ 42.18	\$ 14,922,834