



Microsoft (MSFT) [Reval]

Spring 2021

Technology

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I. Investment Overview

Trim to standard allocation (1.5% allocation), replace with XLK

- Although we have already realized significant gains, Cloud Computing growth will continue to drive revenue and net income
- AWS continues to be the top player in the IaaS Cloud Market; however, Microsoft's Total Cloud revenues (Azure, Office 365, etc.) provide additional SaaS and PaaS services that maintain its high growth rates
- Movements to breakup Big Tech from the Biden Administration pose a threat to future acquisitions by MSFT

Original Investment Thesis

- Cloud computing as a catalyst for growth
- Diverse revenue streams
- Strong Product/Software Ecosystems
- Strong Dividend

Original Price Target

- Original Price Target - \$127.31
 - Implied upside of 6%
- Current Share Price - \$242.47
 - 90.46% premium over thesis

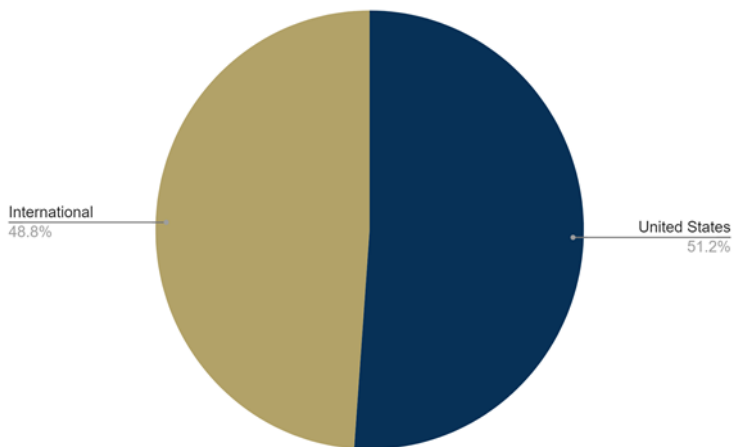
Business Description

- One of the top tech companies with products such as the Windows operating system, Office, Azure, and LinkedIn
- In the gaming industry, it is second only to Sony's PlayStation
- Customers range from general consumers and small businesses to corporations and government agencies
- Operates in 3 segments: More Personal Computing, Productivity and Business, and Intelligent Cloud

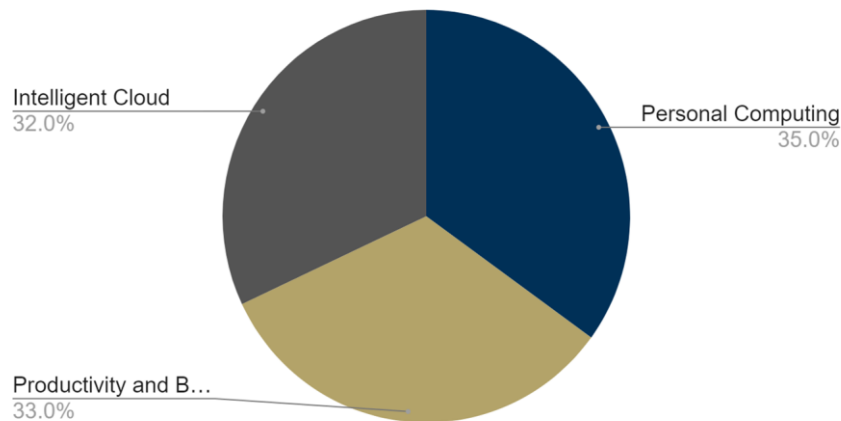
Key Statistics

Current Price	\$242.20
Purchase Price	\$120.12
Buy-to-Date Return	101.63%
Premium over Thesis	90.24%
52-Week Range	\$132.52 / \$245.09
Beta	0.82
Dividend Yield	0.92%
Credit Rating	AAA

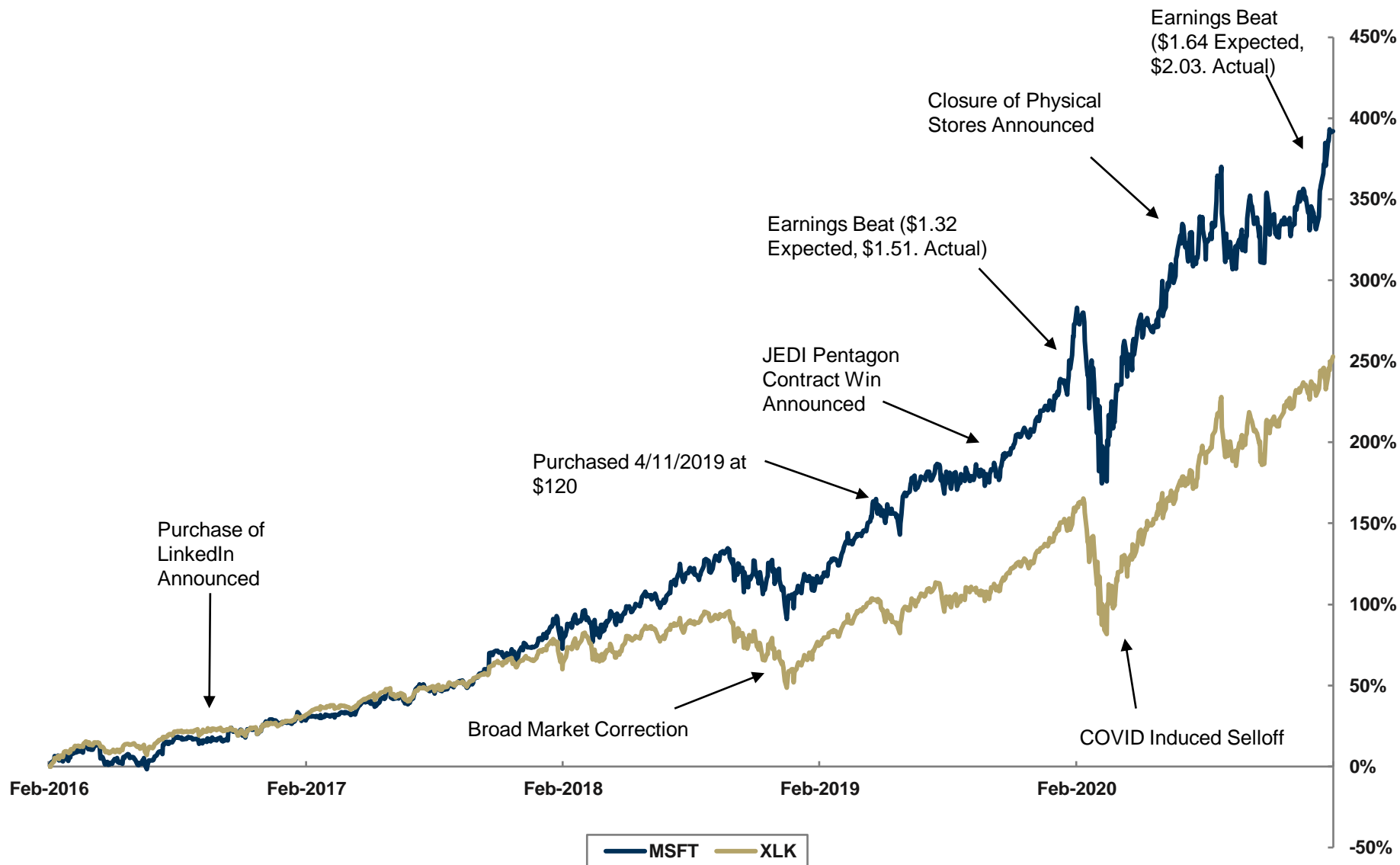
Geographic Breakdown



Segment Breakdown



Microsoft vs. SPDR Tech ETF



Cloud Computing

- As of Fall 2020, the worldwide cloud computing industry grew 33% to \$36.5 billion for Q4 2020
- The pandemic validated cloud's value proposition. SaaS expected to grow 16%, PaaS expected to grow 26.6%, IaaS expected to grow 26.9% for 2021 (CRN)
- Azure continues to outpace competitors with more revenue than AWS and Google Cloud combined

Gaming

- Next gen consoles significantly reducing load times and adding "Smart Delivery", allowing for free games on new consoles if you have previously owned that game
- Reboots of classical games significantly increasing sales of consoles
- Cloud gaming (PS Now and Xbox Game Pass) allowing for instantaneous streaming and higher popularity by subscription users

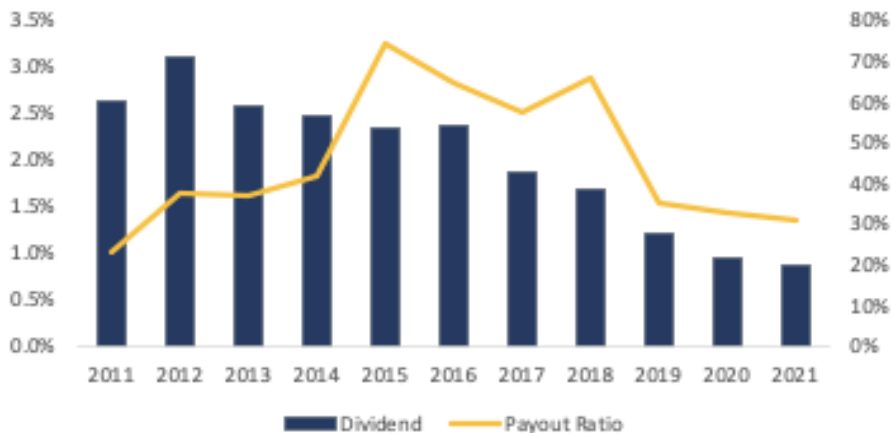
Break Up Big Tech

- House of Representatives called for antitrust regulation against Apple, Amazon, Facebook, and Google in an October Report
- Most likely outcome is some form of restriction on M&A activity which could be blocking deals above a certain value or blocking Big Tech firms from further M&A
- Another potential outcome is companies could not own and participate on the same platform (> \$25B in revenue)
ex. Amazon Basics could not sell on Amazon Marketplace

II. Business Analysis

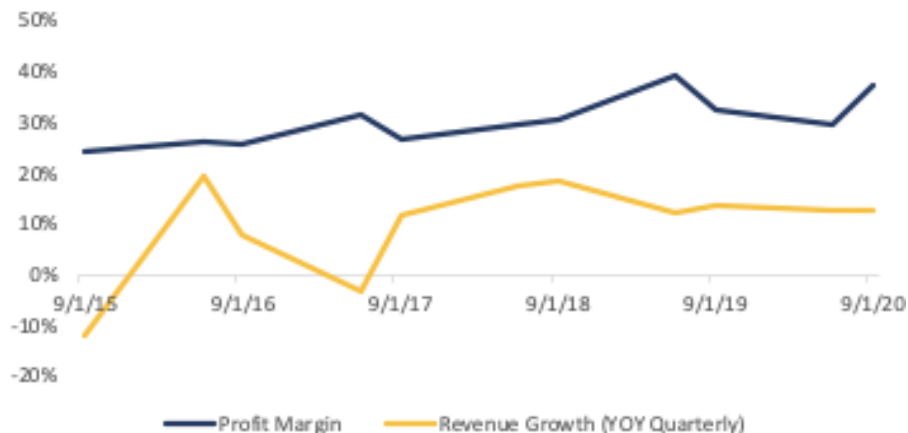
Dividend Growth

Dividend Yield/Payout Ratio



Profit Margins and Revenue Growth

Profit Margin/Revenue Growth



Acquisitions

- 2020 – **Softomotive**, world-leading provider of Robotic Process Automation. Combined with Microsoft Power Automate capabilities, Microsoft plans to further democratize RPA to automate manual business processes.
- 2020 – **Metaswitch Networks**, virtualized network software and voice and data solutions for operators. Azure plans on deploying these capabilities for a more sustainable ecosystem.
- 2019 – **Movere**, software for moving data to cloud computing environments, helping migrate Microsoft customers to the Azure cloud.

Key Takeaways

- Dividend CAGR 10.5% over the last five years. Strong fundamentals suggest growth will continue.
- Double digit YOY quarterly revenue growth posted for last 14 consecutive quarters.
- Profit margin steadily improving for past 5 years. Fueled largely by expansion into cloud services. Continued growth expected.
- Strategic acquisitions possible to continue – Microsoft potential target of congressional "big tech" breakup agenda.

Summary

- AWS is the main Cloud Computing player - \$45.4B
- Microsoft Azure is the second largest player - \$36.8B
- Azure has better growth rate – 50% Q4 '19 to Q4 '20
- Alibaba emerging player in the cloud market – 59% YoY growth but still \$5.7B in revenue
- Market share gap is decreasing between AWS and Azure as growth rates are 28% and 48%, respectively for Q4 2020

Key Customers

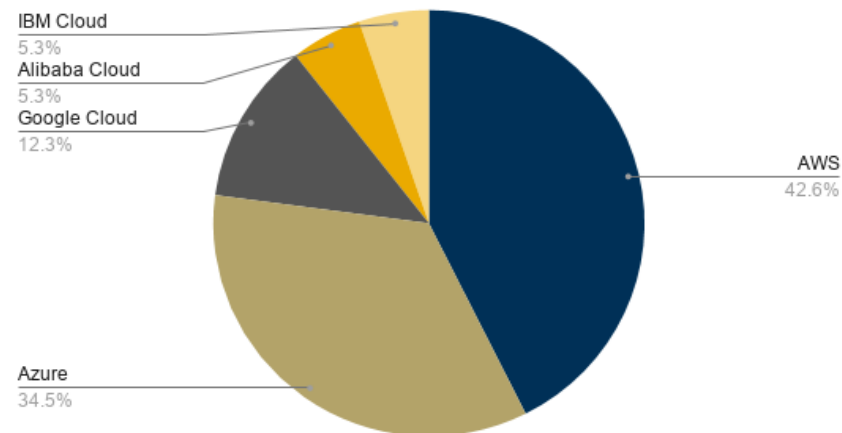
- **Azure** – eBay, Verizon, GE, LG Electronics, Samsung, Intel, BMW
- **AWS** – Netflix, Twitch, Expedia, Hulu, Spotify, Ubisoft, ESPN
- **Google Cloud** – Twitter, PayPal, UPS, Airbus, P&G, The Home Depot
- **Alibaba Cloud** – Gartner, KPMG, Ford, IHG
- **IBM Cloud** – Allianz, American Airlines, Anthem, Deloitte, ExxonMobil

Features

- AWS has significant focus on Public Cloud and Infrastructure as a Service
- Azure has less market share in IaaS, but Microsoft also offers Platform and Software as a Service in Office 365
- Adding this revenue in brings Microsoft's total cloud revenue to \$59.5B, 31% larger than Amazon

IaaS Revenue Share 2020

2020 revenue



III. Valuation

Relative Valuation

Company	Market Cap	P/E	Dividend Yield	Forward PEG	5 YR CAGR Growth	Net Margin	EPS Growth	P/B	P/S
Microsoft	1.83T	36.0x	0.88%	2.26x	11.3%	31.0%	13.9%	14.1x	12.0x
Amazon	1.67T	79.6x	0.00%	1.32x	28.6%	5.5%	81.8%	17.9x	4.3x
Dropbox	10.27B	128.9x	0.00%	0.72x	--	-3.2%	90.4%	12.1x	5.6x
IBM	110.14B	15.0x	5.27%	1.26x	-1.6%	7.6%	-41.9%	5.4x	1.5x
Google	1.41T	42.3x	0.00%	1.28x	21.7%	22.1%	19.3%	6.3x	7.8x
Median	1.41T	42.23x	0.00%	1.28x	22.0%	7.6%	19.3%	12.1x	5.6x

Positives

- **High Net Profit Margin** – profits are strong and outpacing expenses, strong performance can increase
- **Dividend Yield** - strong dividend yield for technology sector

Negatives

- **High P/S and High Forward PEG**- low sales compared to its competitors, signals high valuation
- **5 YR CAGR Growth** - lower than relative comps, less of a future upside compared to competitors

Sensitivity Analysis

		Exit Multiple				
		17.0x	17.5x	18.0x	18.5x	19.0x
WACC	4.57%	\$ 228.54	\$ 234.44	\$ 240.35	\$ 246.25	\$ 252.16
	5.07%	\$ 223.23	\$ 229.00	\$ 234.77	\$ 240.53	\$ 246.30
	5.57%	\$ 218.08	\$ 223.71	\$ 229.34	\$ 234.97	\$ 240.60
	6.07%	\$ 213.06	\$ 218.56	\$ 224.06	\$ 229.56	\$ 235.06
	6.57%	\$ 208.19	\$ 213.56	\$ 218.93	\$ 224.30	\$ 229.67

Model Assumptions

- Revenue growth slowing and decreasing over time / negative growth
- Continued strong net margins

WACC Assumptions

Assumptions

Tax Rate	22%
Exit Multiple (EBITDA)	18.0x

WACC Calculation

Risk Free Rate	1.19%
Beta	0.82
Market Risk Premium	5.50%
Cost of Equity	5.7%
Pre-Tax Cost of Debt	3.47%
Market Cap	\$ 1,830,000.
BV of Debt	\$ 79,954
Equity-to-Value	95.8%
Debt-to-Value	4.2%
WACC	5.57%

IV. Conclusion

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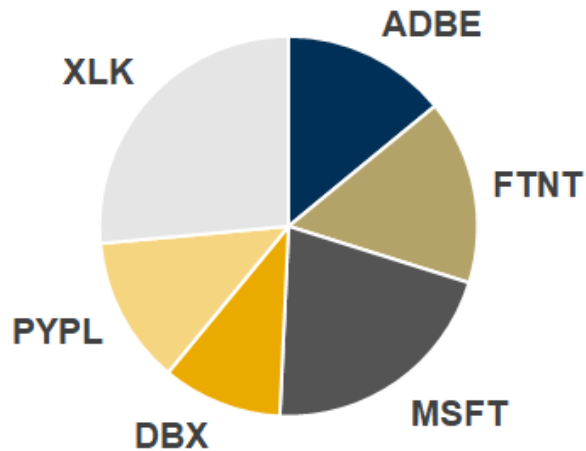
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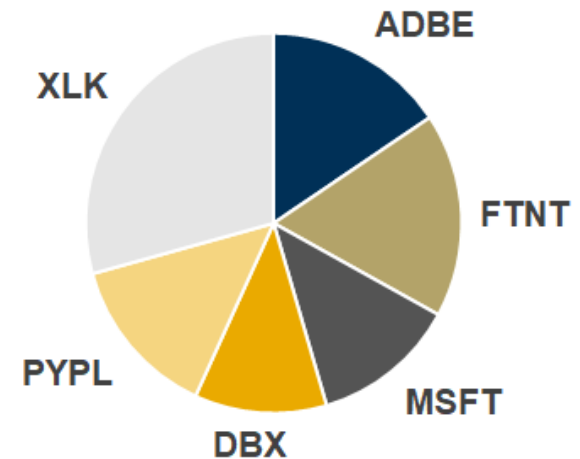
Rationale: Replace Excess MSFT (With XLK for now)

- Microsoft is currently more than double standard allocation (3.24%)
- Allows us to pitch a small / medium cap company with better value proposition
- Allocation was cut from 14.5% to 12.5%

Current Portfolio



Prospective Portfolio



<u>Name</u>	<u>Position</u>	<u>Phone Number</u>	<u>Email</u>
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Matthew Pinto	Analyst	470-218-5334	mpinto33@gatech.edu

V. Appendix

Discounted Cash Flow



	Historical			Expected	Projected				
	2017	2018	2019	2020	2021	2022	2023	2024	2025
Revenue	\$ 96,700	\$ 110,400	\$ 125,800	\$ 143,000	\$ 161,837	\$ 182,345	\$ 204,541	\$ 228,416	\$ 253,936
% YoY Growth	N/A	14.17%	13.95%	13.67%	13.17%	12.67%	12.17%	11.67%	11.17%
Cost of Goods Sold	\$ 34,620	\$ 38,970	\$ 42,910	\$ 46,078	\$ 52,957	\$ 60,579	\$ 68,976	\$ 78,170	\$ 88,173
Gross Profit	\$ 62,080	\$ 71,430	\$ 82,890	\$ 96,922	\$ 108,880	\$ 121,766	\$ 135,565	\$ 150,247	\$ 165,764
% Margin	64.20%	64.70%	65.89%	67.78%	67.28%	66.78%	66.28%	65.78%	65.28%
EBITDA	36,631	44,827	54,218	62,259	70,622	79,754	89,666	100,361	111,828
% Margin	37.88%	40.60%	43.10%	43.54%	43.64%	43.74%	43.84%	43.94%	44.04%
Less: Depreciation	6,100	7,700	9,700	10,700	12,271	14,009	15,918	18,005	20,271
EBIT	30,531	37,127	44,518	51,559	58,351	65,745	73,748	82,356	91,557
Less: Taxes	6,717	8,168	9,794	11,343	12,837	14,464	16,225	18,118	20,143
EBIT*(1-T)	23,814	28,959	34,724	40,216	45,513	51,281	57,523	64,238	71,415
Add: Depreciation	6,100	7,700	9,700	10,700	12,271	14,009	15,918	18,005	20,271
Less: Inc. in NWC	-	3,304	1,679	(829)	2,614	2,813	3,007	3,194	3,369
Less: CapEx	2,809	2,967	3,128	2,890	3,271	3,685	4,134	4,616	5,132
FCF to Firm	27,105	30,388	39,617	48,855	51,900	58,792	66,301	74,433	83,184
PV Factor					0.95	0.90	0.85	0.80	0.76
PV of FCF					49,159	52,747	56,343	59,914	63,423
PV of Terminal Value									1534701.3

Firm Value	1,816,286.6
Less: Debt	\$ 79,954
Equity Value	1,736,332.6
Shares Outstanding	7,571
Share Price	\$ 229.34

Drivers:

	Historical			Expected	Projected				
	2017	2018	2019	2020	2021	2022	2023	2024	2025
Revenue Growth	N/A	14.17%	13.95%	13.67%	13.17%	12.67%	12.17%	11.67%	11.17%
Margin Expansion:									
Gross Margin	64.20%	64.70%	65.89%	67.78%	67.28%	66.78%	66.28%	65.78%	65.28%
EBITDA Margin	37.88%	40.60%	43.10%	43.54%	43.64%	43.74%	43.84%	43.94%	44.04%
Depreciation (% of Sales)	6.3%	7.0%	7.7%	7.5%	7.58%	7.68%	7.78%	7.88%	7.98%
Net Working Capital:									
A/R	\$ 22,431.0	\$ 26,481.0	\$ 29,524.0	\$ 32,011.0	\$ 36,227.6	\$ 40,818.6	\$ 45,787.2	\$ 51,131.8	\$ 56,844.4
DSO	84.67	87.55	85.66	81.71	81.71	81.71	81.71	81.71	81.71
Inventory	\$ 2,181.0	\$ 2,662.0	\$ 2,063.0	\$ 1,895.0	\$ 2,177.9	\$ 2,491.4	\$ 2,836.7	\$ 3,214.8	\$ 3,626.2
DIO	23.0	24.9	17.5	15.0	15.0	15.0	15.0	15.0	15.0
A/P	\$ 7,390.0	\$ 8,617.0	\$ 9,382.0	\$ 12,530.0	\$ 14,415.1	\$ 16,506.6	\$ 18,813.4	\$ 21,342.3	\$ 24,097.6
DPO	77.9	80.7	79.8	99.3	99.4	99.5	99.6	99.7	99.8
NWC	\$ 17,222.0	\$ 20,526.0	\$ 22,205.0	\$ 21,376.0	\$ 23,990.5	\$ 26,803.4	\$ 29,810.5	\$ 33,004.2	\$ 36,373.0
Change in NWC		\$ 3,304.0	\$ 1,679.0	\$ (829.0)	\$ 2,614.5	\$ 2,812.9	\$ 3,007.1	\$ 3,193.7	\$ 3,368.8
CapEx (% of Sales)	2.90%	2.69%	2.49%	2.02%	2.02%	2.02%	2.02%	2.02%	2.02%