

Company Description: Cleveland-Cliffs. is a leading mining and natural resources company. Founded in 1847, they are recognized as the largest and oldest independent iron ore mining company in the United States. They are a major supplier of iron ore pellets to the North American steel industry from their mines and pellet plants located in Michigan and Minnesota. Additionally, they operate an iron ore-mining complex in Western Australia. By 2020, Cliffs expects to be the sole producer of hot briquetted iron in the Great Lakes region with the development of its first production plant in Toledo, Ohio.

BUY

Current Price:	\$7.29
Target Price:	\$17.42
Market Cap:	2.16B
Beta:	2.74
ROIC:	24.93%
Average Volume:	7,237,565
EBITA Margin	16.89%



Thesis: CLF has strong growth factors due to their control over the iron ore business in the Great Lakes region, their ability to maintain profitable long-term relationships due to their high quality standard, and emergence into the EAF market with an innovative product. The value creation for this stock will be based around their implementation of their HBI production plant. Furthermore, China's decrease in production will lead to an increase in domestic demand of which CLF controls 55%. We can expect the net income and adjusted EBITA to more than double through 2018 due to an increase in revenue.

Catalysts:

- **Short Term(within the year):** Tailwinds provided by Washington D.C. and the highly probable 1T USD infrastructure program.
- **Mid Term(1-2 years):** Recent milestone achieved of becoming the sole producer of high-quality HBI for the EAF steel market in the Great Lakes region.
- **Long Term(3+):** Reduction in Chinese production due to environmental policies combined with eventual import tariffs will lead to an increase of CLF's exports as well as an increase in domestic demand.

Business Description:

As the largest iron ore producer in North America, Cliffs is well positioned to serve the region's steel producers. With the unique advantage of being the low-cost producer of pellets in this market, the fluctuations of the commoditized price of seaborne iron ore has a limited impact on them. Cliffs' U.S. Iron Ore operations located in Michigan and Minnesota had an annual rate capacity of 27.4 million tons of iron ore pellet production in 2016, which represents approximately 55 percent of total U.S. pellet production capacity. Today, Cliffs continues to be a leading iron ore mining company and operator. Pioneers in developing the beneficiation and pelletizing process, the Company holds the top position as the largest iron ore producer of pellets in North America, as well as one of the lowest cost producers in the world. Cliffs made clear that they own the iron ore business in the great lake area. They are the only supplier in this area and are able to ship products at low costs due to cheap logistics and a top tier logistics network.

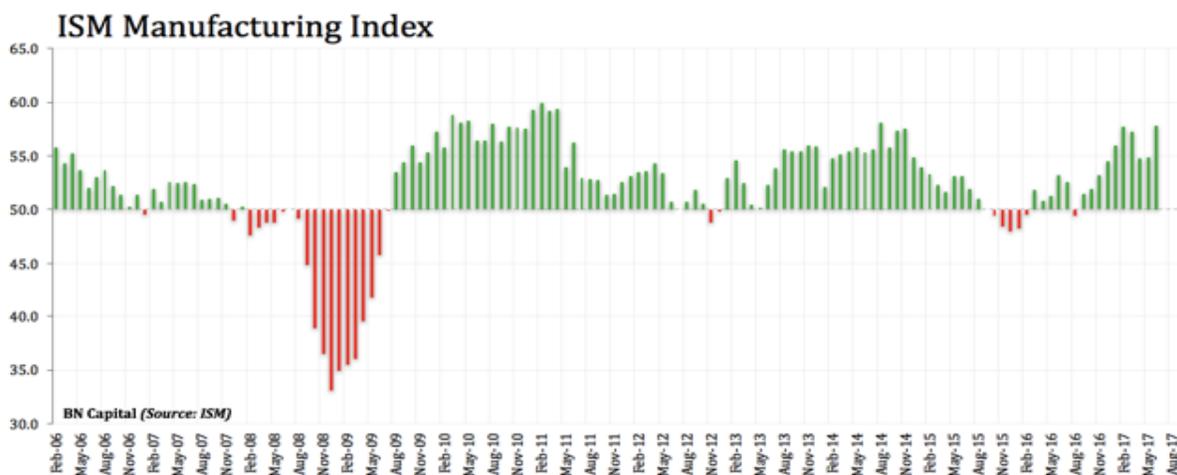
One of the main reasons why Cliffs is able to sustain profitable long term relations with clients and exploiting the US iron ore market is the high quality standard. Blast furnaces need to be fed with pellets of a constant quality to keep operating at high levels, which makes substituting suppliers difficult for consumers. Cliffs also makes pallets for special operations, which puts even more pressure on customers to stick to one supplier. This is something many competitors are unable to match, especially given the low transportation costs of Cliffs.



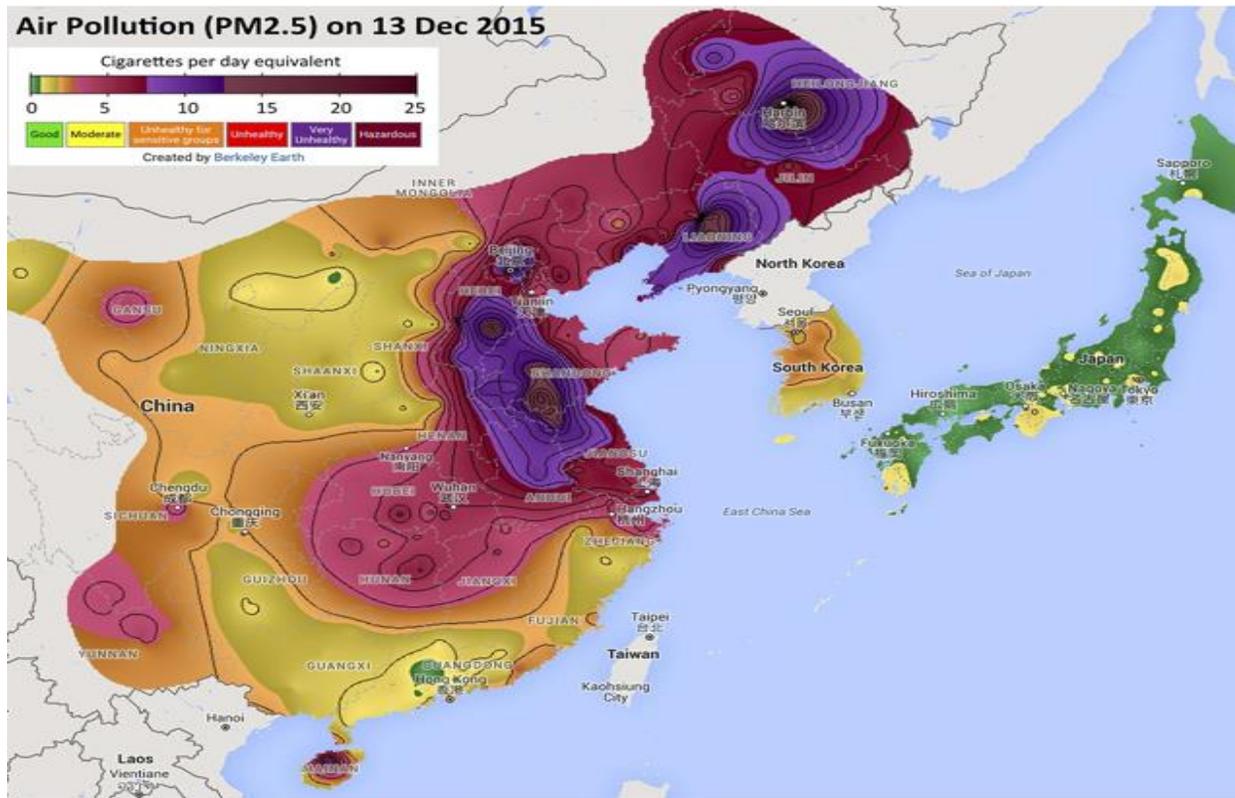
- **2016 Production volume: 23.4 million tons**
- **Remaining Proven and Probable mineral reserves: 1,945 million long tons**

Industry Outlook:

The predictable manufacturing economic environment in the US is due to maturity and legal aspects. As seen in the graph, the economic trends in both China and the US have contributed to the bullish outlook with the leading indicators at 2014 peak levels showing massive momentum in manufacturing.



China is increasingly starting to worry about pollution and finally taking serious steps to reduce it. This already led to a 120 million tons reduction of low-quality steel in the first half of this year. One of the reasons is the poor quality of the steel production in China. Sinter feed is the main source for sinter plants that produce large quantities of low quality steel at very low prices in China. In other words, this is the heart of the steel dumping machinery causing trouble all over the world. These environmental changes have caused an effect that has to be solved since it is causing serious health problems in the biggest metropolitan areas.



China's government is seeking a 45% reduction of energy intensity by 2020. This is currently being executed and has to deliver results as soon as possible. China has two solutions to this problem; they can change their production methods by using iron ore pellets or by switching to electric arc furnaces (EAF). Changing their methods would be a huge boost to Cliffs because the production of iron ore pellets needs waters and other producers simply don't have enough water supply to feed China's needs. Cliffs productions circumstances being located in the Great Lakes region is perfect. Secondly, China's shift towards EAF's has three main outcomes; demand for Australian and Brazilian steel will be reduced, China's scrap demand will increase, China's scrap market is not developed and unable to handle demand. The second and third will provide enormous opportunity for Cliffs because China is going to need to import scrap from the US to satisfy domestic demand. This will squeeze the US scrap market, which will dramatically increase prices. This will lead to the need for substitutes in the US market, and substitutes is where Cliffs saves the day.

Product Overview/Growth Strategy:

Five iron ore mines located in Michigan and Minnesota produce various grades of iron ore pellets, including standard and fluxed, for use in blast furnaces. As the mines are located near the Great Lakes, the majority of the pellets are transported by rail to loading ports for shipments via boat. EAF steel producers require a reliable and quality source of iron-based metallic, which only Cliffs can provide. In 2015, Cliffs developed at its Northshore Mining operation a new product, DR-grade pellets, for feedstock in DRI production. Cliffs is well positioned to enter the market for ferrous scrap substitutes and sell to leading mini mills in the United States and China. They are pursuing this opportunity to further capitalize on the growing potential of electric arc furnace (EAF) steel production in North America and become a supplier of DR-grade pellets, pig iron and other alternative iron units (HBI). Cliffs is heavily investing in an HBI plant in Toledo Ohio. This plant should be completed by 2020 and deliver high quality hot briquetted iron needed in EAF. Estimated at producing a nominal capacity of 1.6 million metric tons of HBI per year. The products resulting from these operations can be used in high tech products much higher up the value chain. One of the problems for Cliffs is that the US is importing roughly 3 million metric tons of alternative iron ore from Brazil, Russia and Ukraine and HBI from Venezuela. These imports have two problems that can be solved by Cliffs natural resources. First, these imports are coming from unreliable sources. The second point is that it comes in varying qualities, which means that furnaces cannot produce the quality they are supposed to deliver. This increasingly becomes a problem when companies keep investing in electric arc furnaces, as China will be. That is why demand is/will be increasing. As the chart above illustrates, China begins to tighten up on pollution restrictions, meaning EAF's start to gain more importance and market share. When EAF's gain market share, the scrap market will follow and begin to tighten thus, pushing prices up. As prices increase and Trump's import tariffs start to solidify US steelmakers, are/will seek alternative iron units. Cliffs has all alternative units available now with their new facility in Toledo. It will be the sole producer in its region, and have the lowest cost distribution network available, making Cliffs the main supplier in North America.

HOW DOES THIS BENEFIT CLIFFS?	
CHINA	CLIFFS
<ul style="list-style-type: none"> China begins serious crackdown on pollution Government invests in energy and natural gas infrastructure EAF's rapidly gain market share from Blast Furnaces Australia has nowhere to sell seaborne fines Global scrap market tightens Scrap prices increase 	<ul style="list-style-type: none"> American steelmakers' demand for alternative iron units increases Investment into alternative iron unit infrastructure expands in the United States Cliffs supplies DR-grade pellets and/or alternative iron units The use of alternative iron units enables American EAFs to supply more sophisticated specs of steel Cliffs becomes the "go-to" raw material supplier in North America for both BOF's and EAF's

Earnings/Debt:

Their abnormally high debt/capital ratio of 247.77% and LT debt/ total assets ratio of 115% can be attributed to their increase of capital expenditures budget from \$10 million to \$115 million in relation to early spending related to the HBI production plant in Toledo, OH. Also their increase in SG&A expense from \$10 million to \$110 million to incorporate HBI prefeasibility spending and higher-than-anticipated incentive compensation accruals. The company's full year 2017 interest expense is expected to be approximately \$135

Overview	Comp Sheets	Markets	EPS Preview	Ownership	Credit	Custom	Settings			
Equity Valuation	CDS Spreads	Op Stats	Profitability	Balance Sheet	ESG					
Name (BI Peers)	Debt/EBITDA	Net Debt/EBITDA	Debt/Capital	Financial Leverage	Tangible BV/Share	LT Debt/Total Assets	Quick Ratio	Current Ratio		
Median	0.34	1.17	0.98	27.83%	2.18	3.12	18.06%	1.01	1.82	
100) CLEVELAND-CLIFFS INC	0.56	3.42	2.75	247.77%	--	-2.85	115.05%	1.16	2.11	
101) FERREXPO PLC	0.47	1.17	0.98	69.41%	4.20	0.84	43.48%	0.70	1.13	
102) VALE SA-PREF	0.43	1.99	1.58	41.68%	2.59	6.46	27.94%	0.71	2.01	
103) FORTESCUE METALS GRO...	0.30	0.96	0.56	31.47%	2.12	3.12	22.76%	0.89	1.18	
104) RIO TINTO PLC	0.21	0.98	0.48	27.83%	2.36	21.36	18.95%	1.15	1.60	
105) CAP SA	0.39	1.78	1.40	29.70%	3.02	8.17	18.24%	0.58	1.84	
106) ATLAS IRON LTD	0.64	0.70	0.16	24.53%	2.03	0.03	17.88%	1.14	1.80	
107) KUMBA IRON ORE LTD	0.08	0.00	-0.62	10.97%	2.24	--	7.87%	2.18	3.18	
108) AFRICAN RAINBOW MINER...	0.14	2.99	1.38	10.30%	1.42	8.18	6.21%	0.40	1.57	

(Accounting Adjustments: Adjusted for Abnormal Items When Applicable)

10 Analyze List

million. In the short term however, their current ratio of 2.11 and quick ratio of 1.16 show that they are covered for short term liabilities.

Cliffs recorded net income from continuing operations of \$77 million in the second quarter of 2017, including a \$5 million, or \$0.02 per share, loss on extinguishment of debt. This compares to net income from continuing operations of \$30 million recorded in the prior-year quarter, which included a \$4 million gain on

In Millions of USD except Per Share	FY 2014	FY 2015	FY 2016	FY 2017 Est	FY 2018 Est*
12 Months Ending	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018
EBIT					
Consensus Estimate	296.5	132.4	235.0	502.8	393.0
Comparable Actual	--	--	--	--	--
EBIT Surprise %	--	--	--	--	--
GAAP Actual	130.1	151.3	240.8		
Adjusted Actual	788.9	829.7	267.2		
EBITDA					
Consensus Estimate	694.8	268.7	349.5	591.0	511.4
Comparable Actual	929.7	292.9	373.5		
EBITDA Surprise %	33.8	9.0	6.9		
GAAP Actual	634.1	285.3	356.2		
Adjusted Actual	1,292.9	963.7	382.6		
Gross Margin %					
Consensus Estimate	8.85	11.60	17.90	23.70	27.30
GAAP Actual	26.3	11.7	18.5		
Adjusted Actual	26.3	11.7	18.5		
Pretax Income (Loss)					
Consensus Estimate	-73.5	57.2	67.6	311.0	314.4
Comparable Actual	--	--	40.8		
Pretax Income (Loss) Surpri.	--	--	-39.6		
GAAP Actual	-19.7	313.1	207.0		
Adjusted Actual	622.9	598.6	67.1		
Net Income					
Consensus Estimate	-1,699.2	-105.7	54.1	313.3	273.0
Comparable Actual	258.5	-124.2	113.8		
Net Income Surprise %	--	-17.5	110.3		
GAAP Actual	-7,275.4	-787.7	174.1		

extinguishment of debt. A 2017-second quarter net income of \$30 million included a \$46 million non-cash loss from discontinued operations. Cliffs' net interest expense during the second quarter was \$31 million, a 38 percent decrease when compared to the second-quarter 2016 expense of \$51 million, because of approximately \$930 million in principal amount of debt reduced over the previous 12 months. Total debt at the end of the second quarter of 2017 was \$1.6 billion; approximately \$900 million lower than the \$2.5 billion total debt at the end of the prior-year quarter. Cliffs had net debt of \$1.3 billion at the

end of the second quarter of 2017, compared to \$2.3 billion of net debt at the end of the second quarter of 2016. Based on the assumption that iron ore and steel prices will average for the remainder of 2017 their respective year-to-date averages, the company estimates they would generate approximately \$310 million of net income and \$650 million of adjusted EBITDA1 for the full-year 2017. Based on the Bloomberg estimates above, the EBITA, Gross Margin, and Net Income all will be considerably increasing through 2018. These increases will mitigate the fact that they took such a large hit in terms of financing expenses through debt.

Conclusion:

Cleveland-Cliffs, Inc. would be a great addition to our portfolio. Their second quarter results show how powerful the US iron ore business is. Cliffs is unrivaled in their operational, commercial, logistical, and quality giving them a clear advantage against competitors. Moving forward Cliffs will continue to capitalize on their strength as a leading supplier of customized iron units with the development of their HBI production plant in Toledo, OH. As President Trump begins to make headway on his infrastructure package, the increase in domestic steel production will positively respond. Coupled with his powerful determination to implement a tariff on China, Cliffs new and current client list should begin to grow. As domestic and global steel production trends start moving towards the adoption of EAF's the demand for HBI will sky rocket, and Cliffs will be ready to answer. Being in such a cyclical industry, the low production during the colder month will provide a great low price buying opportunity for us.

Cleveland-Cliffs Inc. (CLF)

CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Analysis by Michael Vitale
9/29/2017

Current Price: **\$7.29**
Divident Yield: **0.0%**

Intrinsic Value: **\$17.27**
Target Price: **\$20.12**

Target 1 year Return: **176.01%**
Probability of Price Increase: **100%**



Description	
Cleveland-Cliffs Inc, a mining and natural resources company, produces and supplies iron ore.	
General Information	
Sector	Materials
Industry	Metals and Mining
Last Guidance	November 3, 2015
Next earnings date	October 20, 2017
Estimated Country Risk Premium	6.29%
Effective Tax rate	35%
Effective Operating Tax rate	35%

Market Data	
Market Capitalization	\$2,161.53
Daily volume (mil)	14.02
Shares outstanding (mil)	296.51
Diluted shares outstanding (mil)	253.62
% shares held by institutions	84%
% shares held by investments Managers	42%
% shares held by hedge funds	11%
% shares held by insiders	0.73%
Short interest	11.54%
Days to cover short interest	3.17
52 week high	\$12.37
52-week low	\$4.91
Volatility	78.47%

Past Earning Surprises		
Quarter ending	Revenue	EBITDA
6/30/2016	9.54%	3.47%
9/30/2016	-8.68%	-53.78%
12/31/2016	7.87%	24.03%
3/31/2017	-6.11%	-39.78%
6/30/2017	12.96%	6.20%
Mean	3.11%	-11.97%
Standard error	4.4%	14.8%

Management		
Management	Position	Total compensations growth
Tompkins, P.	Chairman, President & CEO	0.31% per annum over 2y
Harapiak, Maurice	Executive VP & COO	3.53% per annum over 5y
Smith, Clifford	Executive Vice President of	-19.85% per annum over 1y
Fedor, Terry	Executive Vice President of	-24.79% per annum over 2y
Flanagan, Timothy	Executive VP, CFO & Treasurer	-14.14% per annum over 1y
		N/M

Profitability		
	CLF (LTM)	CLF (5 years historical average)
Return on Capital (GAAP)	43.6%	9.51%
Operating Margin	11%	13.28%
Revenue/Capital (GAAP)	4.05	0.72
ROE (GAAP)	-4.3%	-1.2%
Net margin	2.4%	9.4%
Revenue/Book Value (GAAP)	-1.76	-0.13

Invested Funds		
	CLF (LTM)	CLF (5 years historical average)
Cash/Capital	32.3%	14.8%
NWC/Capital	19.2%	7.6%
Operating Assets/Capital	48.5%	70.8%
Goodwill/Capital	0.0%	0.0%

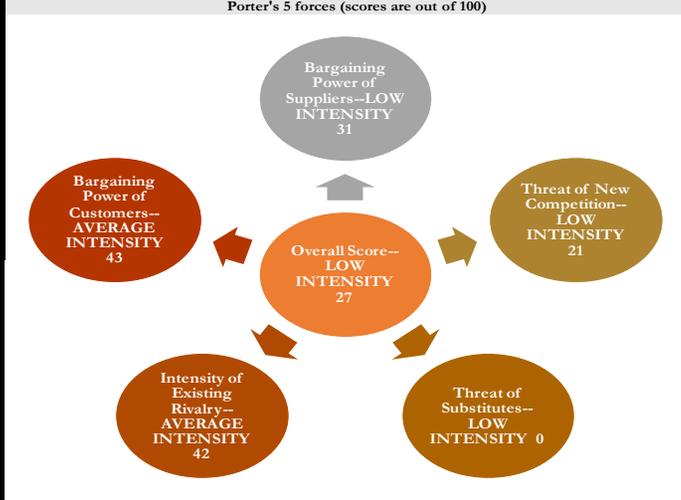
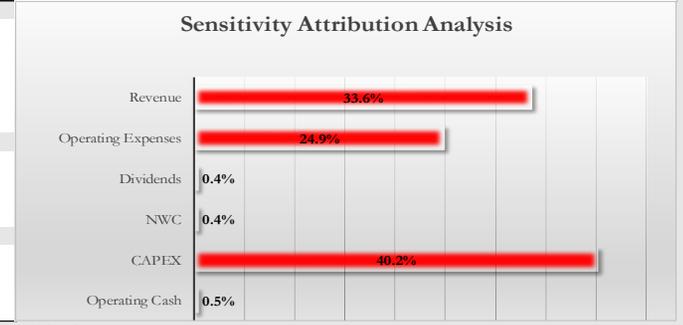
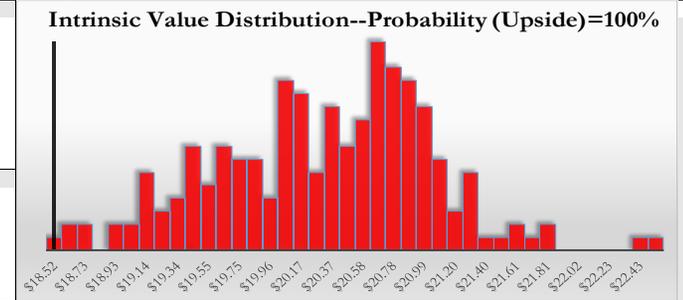
Capital Structure		
	CLF (LTM)	CLF (5 years historical average)
Total Debt/Market Capitalization	1.67	1.45
Cost of Existing Debt	7.9%	6.8%
CGFS Rating (F-score, Z-score, and default Probability)	AA	BBB
WACC	13.3%	7.9%

Peers	
AK Steel Holding Corporation	8.53% per annum over 2y
Commercial Metals Company	-11.37% per annum over 5y
Worthington Industries, Inc.	432.28% per annum over 1y
Carpenter Technology Corporation	8.53% per annum over 2y
Ryerson Holding Corporation	432.28% per annum over 1y
Steel Dynamics, Inc.	N/M
Allegheny Technologies Incorporated	N/M
Nucor Corporation	N/M

Peers' Median (LTM)		
Return on Capital (GAAP)	14.36%	9.51%
Operating Margin	4.35%	13.28%
Revenue/Capital (GAAP)	3.30	0.72
ROE (GAAP)	17.9%	-1.2%
Net margin	3.2%	9.4%
Revenue/Book Value (GAAP)	5.63	-0.13

Peers' Median (LTM)		
Cash/Capital	10.3%	14.8%
NWC/Capital	34.9%	7.6%
Operating Assets/Capital	42.9%	70.8%
Goodwill/Capital	11.9%	0.0%

Peers' Median (LTM)		
Total Debt/Market Capitalization	0.53	1.67
Cost of Existing Debt	6.0%	7.9%
CGFS Rating (F-score, Z-score, and default Probability)	BBB	AA
WACC	9.2%	13.3%



Period	Revenue Growth Forecast
Base Year	25%
6/30/2018	-2%
6/30/2019	-2%
6/30/2020	-1%
6/30/2021	-1%
6/30/2022	-1%
6/30/2023	0%
6/30/2024	0%
6/30/2025	1%
6/30/2026	1%
6/30/2027	2%
Continuing Period	2%

Period	Return on Capital Forecast
Base Year	2.3%
6/30/2018	2.6%
6/30/2019	1.8%
6/30/2020	1.9%
6/30/2021	2.1%
6/30/2022	2.3%
6/30/2023	2.6%
6/30/2024	2.8%
6/30/2025	3.1%
6/30/2026	3.3%
6/30/2027	3.6%
Continuing Period	4.0%

Valuation	NOPAT Margin Forecast	Revenue to Capital Forecast
Base Year	11.1%	0.21
6/30/2018	12.8%	0.20
6/30/2019	9.0%	0.20
6/30/2020	9.8%	0.20
6/30/2021	10.8%	0.20
6/30/2022	11.7%	0.20
6/30/2023	13.1%	0.20
6/30/2024	14.2%	0.20
6/30/2025	15.3%	0.20
6/30/2026	16.5%	0.20
6/30/2027	17.7%	0.21
Continuing Period	18.9%	0.21

Valuation	WACC Forecast	Price per share Forecast
Base Year	13.3%	\$16.71
6/30/2018	17.0%	\$19.59
6/30/2019	16.8%	\$22.07
6/30/2020	16.7%	\$24.45
6/30/2021	16.6%	\$26.71
6/30/2022	16.5%	\$28.82
6/30/2023	16.4%	\$30.75
6/30/2024	16.3%	\$32.44
6/30/2025	16.2%	\$33.86
6/30/2026	16.1%	\$34.95
6/30/2027	16.0%	\$35.64
Continuing Period	15.9%	