



3M Science.
Applied to Life.™

THE VALUE BAND

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OVERVIEW

Ticker: MMM

Headquarters: Maplewood, MN

Stock Price: \$170.49

Market Cap: \$97.63 Billion

Revenues (FY2018): \$31.97 Billion

BACKGROUND



GENERAL DESCRIPTION

- 3M operates as a diversified technology company, manufacturing more than 55,000 unique products including adhesives, abrasives, laminates, and many more.



INDUSTRIES



AUTOMOTIVE



COMMERCIAL
SOLUTIONS



CONSUMER



DESIGN &
CONSTRUCTION



ELECTRONICS



ENERGY

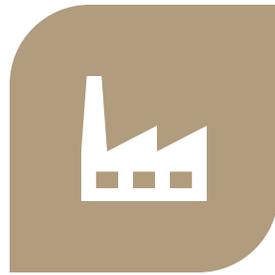
INDUSTRIES



GOVERNMENT



HEALTH CARE



MANUFACTURING



MINING, OIL,
AND GAS



SAFETY



TRANSPORTATION

BRANDS



Nexcare™



HISTORY



HISTORY

1902

Minnesota Mining and Manufacturing is founded to extract corundum, a mineral ideal for making sandpaper.



1914

The 3M Three-M-ite Abrasive Cloth became 3M's first exclusive product.



1905

Company moves to Duluth, MN to make sandpaper with abrasive minerals purchased from another source thanks to investment from businessman Lucius Ordway.

1921

The company patented and introduced Wetordry Waterproof Sandpaper, a water-resistant coated abrasive which automobile manufacturers could use with water to reduce dust and decrease the friction that marred auto finishes.

HISTORY

1925
 3M lab assistant Richard Drew invents masking tape in response to difficulties related to masking car parts.



1954
 RCA uses Scotch Magnetic Tape to record television programs for the first time.



1947
 3M Sound Recording Tape revolutionized the entertainment industry, allowing consumers to record and play back music and voice recordings at a later time.

1980
 3M introduced Post-it Notes, creating a whole new category in the marketplace and changing people's communication and organization behavior forever.

RECENT NEWS

RECENT NEWS



February 20, 2018: 3M and the State of Minnesota Establish Environmental Partnership, Settle Lawsuit with \$850 million grant to the State for a special “3M Grant for Water Quality and Sustainability Fund.”



March 5, 2018: 3M announces that Michael Roman be appointed as the new CEO of 3M effective July 1, 2018, succeeding Inge Thulin who will assume the role of executive chairman of the board



February 1, 2019: 3M completes acquisition of M*Modal’s Technology Business for a total enterprise value of \$1 billion.

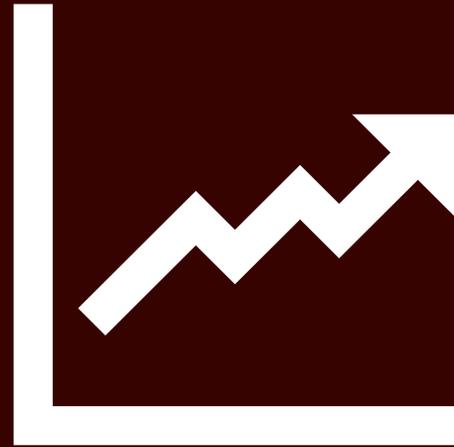


April 25, 2019: 3M announced a \$548 million charge in the quarter to resolve current and future litigation, reflecting a reserve of \$235 million for “certain environmental matters and litigation” and an additional \$313 million to address current and expected coal mine dust lawsuits in Kentucky and West Virginia.



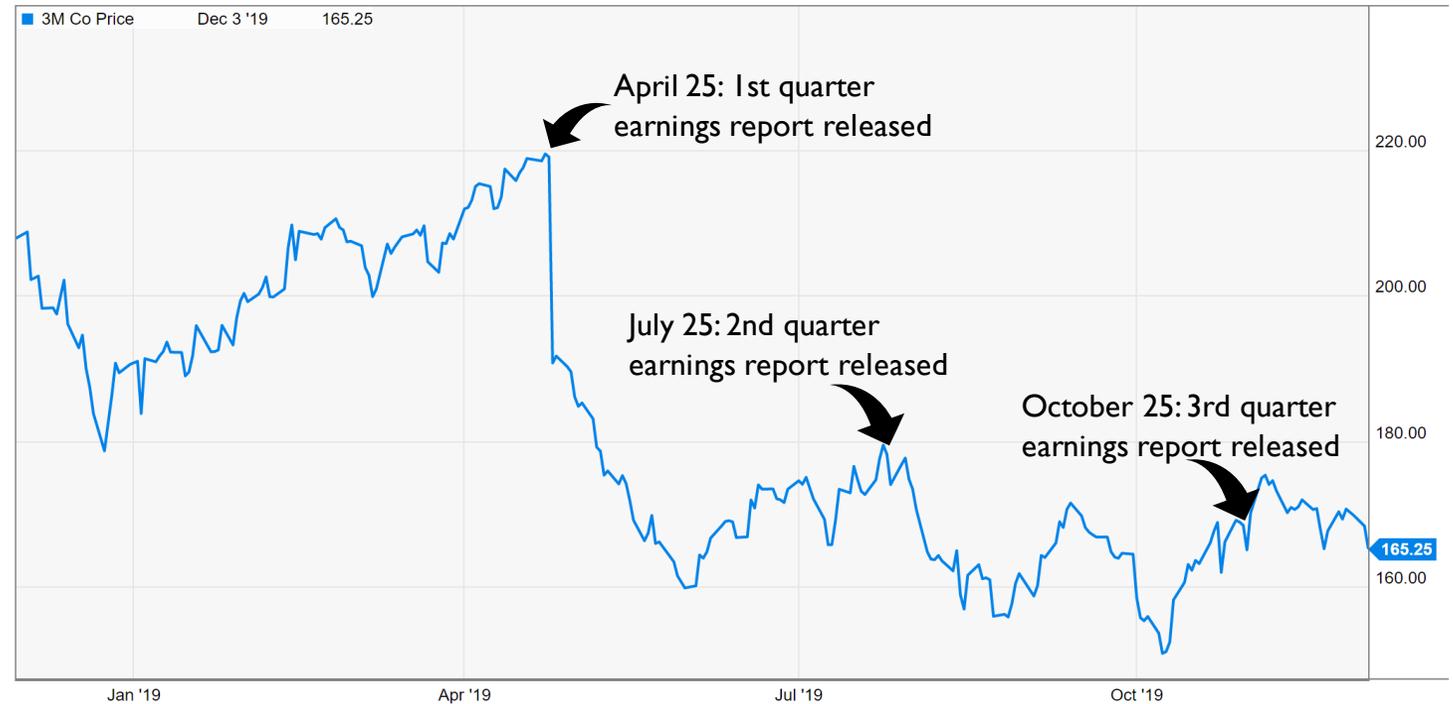
October 11, 2019: 3M completes the acquisition of Acelyt, Inc. for a total enterprise value of approximately \$6.7 billion.

STOCK PERFORMANCE



STOCK PERFORMANCE

- **April 25, 2019:** Management reveals decline in organic sales of 5% in first fiscal quarter, causing 3M stock to drop 13%
- **May-June:** Stock continued to drop as analysts made dire predictions about the company's litigation risks and future economic growth, as the company faced end-market softness in China, automotive, and electronics.



BUSINESS SEGMENTS

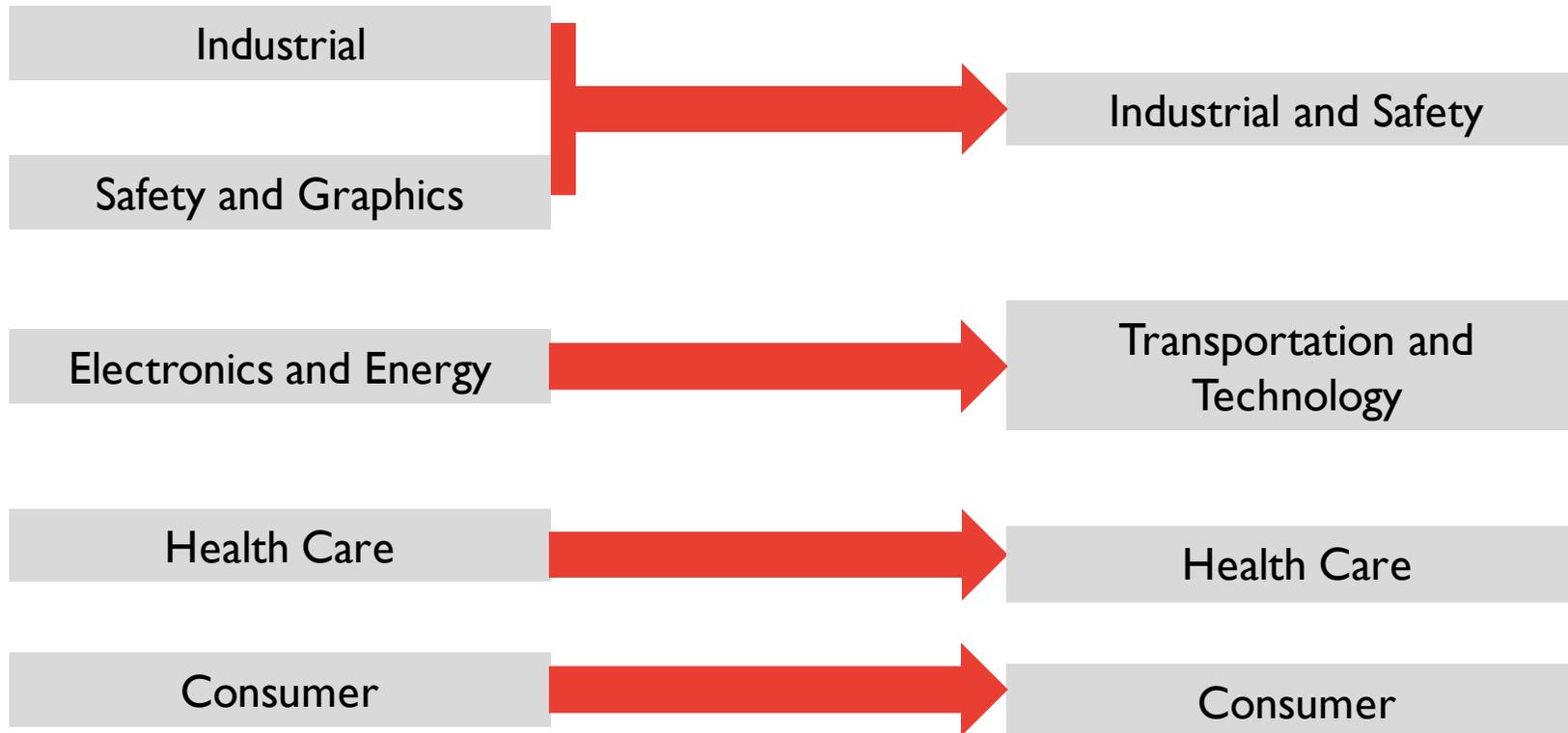


HOW AND WHAT DO THEY SELL

- Over 55,000 Products and 6000 Patents
- Sells its products both directly to consumers and through a host of wholesalers, retailers, and distributors
- Products tend to be Miscellaneous components rather than completed goods



BUSINESS SEGMENTS



- Segment realignment from 5 to 4
- Segment change was made to account for elimination of Dual Credit Sales recording

CONSUMER



- Familiar home and office goods
- Scotch Tape and other Scotch products
- Post-it



- Adhesive bandages
- Waterproof tapes, adhesives
- Medical Braces, boo boo fixes
- Skin care



- Scotch-Brite
- ScotchGard
- Sponges, brushes, pads wipes, gauze, and more



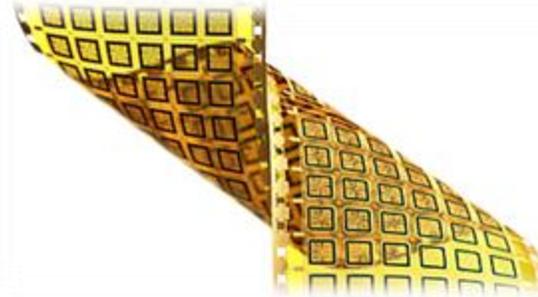
- Maintenance products
- Sandpaper, polishes, and other abrasives.
- Command products
- Painters' tape, duct tape

TRANSPORTATION AND TECHNOLOGY



Automotive, marine, aerospace repair and care:

- Abrasives
- Adhesives
- Fillers
- Painting tools
- Insulation and noise dampeners



Components galore:

- Touch screen display
- Battery materials
- Protective insulators
- Tapes for assembly
- Flexible Circuitry



Generation, storage, and distribution of energy:

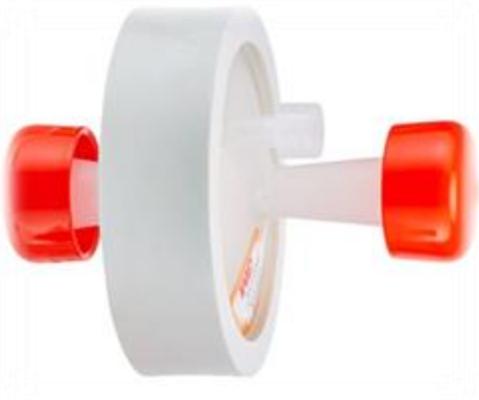
- Solar tape
- Wind blade coatings
- Neutron fuel components
- Battery materials



Fixed Asset Life expansion:

- Anti-corrosive paints
- Weather and abrasion resistant materials

HEALTHCARE



Pharmaceutical purification:

- Gene therapy cell purifiers
- Advanced filters
- Pharmaceutical manufacturing components



Information systems:

- Record Keeping
- Consulting tools
- Performance analytics
- Patient monitoring
- Artificial intelligence



Medical devices:

- Drug delivery systems
- Adhesives, splints, tapes
- Wound care equipment



Oral Health:

- Recognized dental tool and component maker
- Growing offerings in orthodontic components

INDUSTRIAL AND SAFETY



Personnel protection:

- Communications equipment
- Hearing protection
- Hazmat Protection
- Respirators
- Ballistic protection
- High visibility equipment and clothing
- Welding equipment
- Fire retardant gear
- Fall protection
- Eye protection
- Cold weather gear



Manufacturing:

- Tools for bonding and assembly
- Metalworking
- Woodworking, paints and coatings,
- Hygiene monitoring for assembly lines
- Filtration and purification of food and other items



Niche and Component

- Advanced Materials
- Tapes for markings, floor safety, friction and grip, visibility and conspicuity

CORE TECHNOLOGIES

Ab Abrasives												
Ad Adhesives	Em Electronic Materials									Di Display Components	Hd Healthcare Data Management	
Bi Biomaterials	Fi Films	Nw Nonwovens						Ms Modeling & Simulation	Ac Acoustic Management	Ec Energy Components	Lm Light Management	
Ce Ceramics	Fl Fluoro-materials	Pm Performance Materials	Am Additive Manufacturing	Pc Precision Coating & Web Processing	Rp Radiation Processing	An Analytical Science	Pr Process Design & Control	Cv Computer Vision	Ro Advanced Robotics	Bd Biodetection & Microbial Management	Eg Engineered Graphics	Mf Mechanical Fasteners
Co Advanced Composites	Mm Metamaterials	Po Porous Materials & Membranes	Mo Molding	Pd Particle & Dispersion Processing	Su Surface Modification	Cp Converting & Packaging	Sd Sustainable Design	Ds Data Science & Analytics	Se Sensors	Cs Connected Systems	Fe Flexible Electronics	Sw Skin & Wound Management
Do Dental & Orthodontic Materials	Nt Nano-technology	Rm Release Materials	Mr Micro-replication	Pp Polymer Processing	Tf Thin Film & Plasma Processing	In Inspection & Measurement	We Accelerated Weathering	Es Electronic Systems	Ss Software Solutions	Dd Drug Delivery	Fp Filtration & Purification	Tm Thermal Management

REVENUES

SALES BY SEGMENT

2018 Results



\$32.8B Sales
22.0% Operating Margin



Health Care

\$6.8B



Safety & Industrial

\$12.5B



Transportation & Electronics

\$10.1B

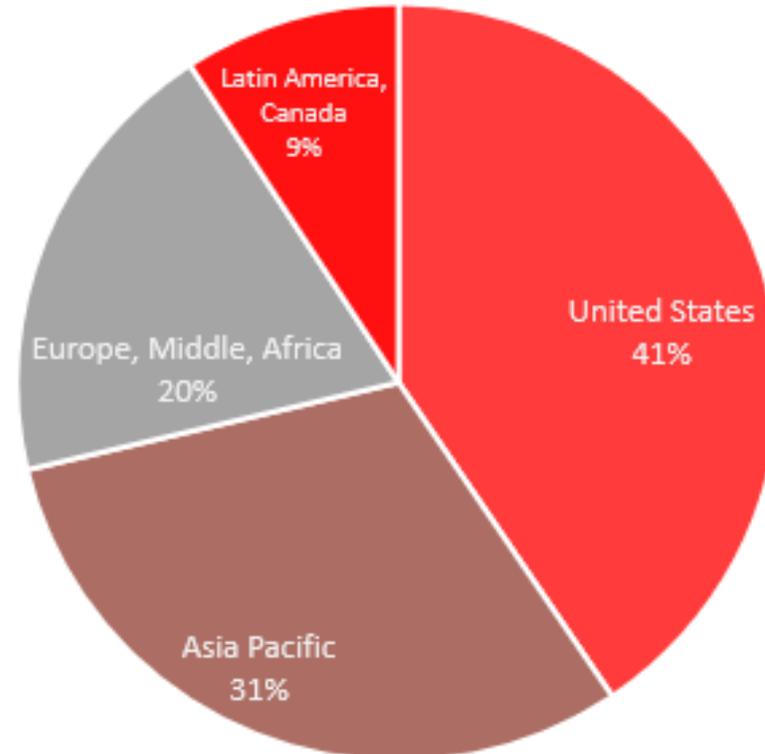


Consumer

\$5.1B

SALES BY GEOGRAPHY

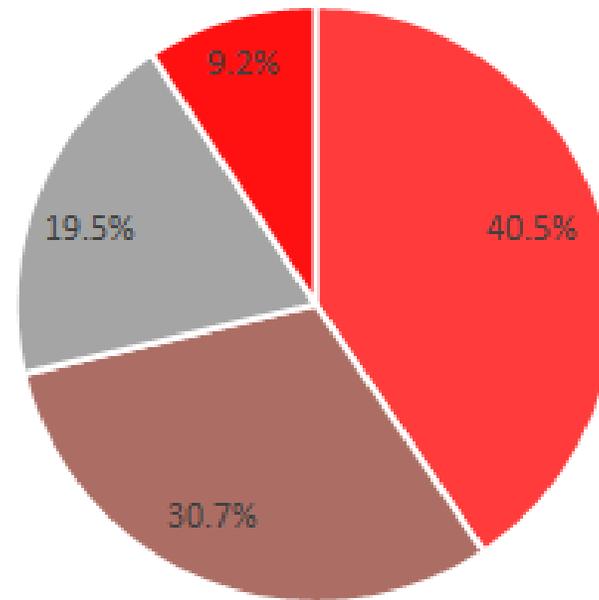
Revenues by Geography



- Decline in sales in Asia Pacific, EMEA (Q3 2019)
- Management outlines expansion of safety and industrial and healthcare goods in Asia Pacific and EMEA as target locations

SALES BY SEGMENT 2019

9 Month 2019 Sales by Segment



■ US ■ Asia Pacific ■ EMEA ■ Latin America and Canada

MANAGEMENT



MANAGEMENT



Nicholas Gangestad
Began as a systems analyst in the company's finance office 3 decades ago, now holds the position as Controller and CFO



Michael Roman
Appointed CEO in July 2018. In prior roles, he served as chief operating officer, led 3M's largest business group and was the company's chief strategist



Inge Thulin
Former CEO, helped with the formation of their strategic plan 2020. Helped increase free cash flow conversion despite increasing R&D spending



ECONOMIC MOAT

ECONOMIC MOAT

Diversification of Products

- **Variety of industries**
- **Embedded in products of clients**
- **Vertically integrated, produces raw materials**



Economies of Scale

- **Expanding Gross Margins**
- **Manufacturing efficiencies**



Intangible Assets

- **Patents**
- **Powerful Brands (Scotch, Post-it, Ace Bandages)**



RISK FACTORS

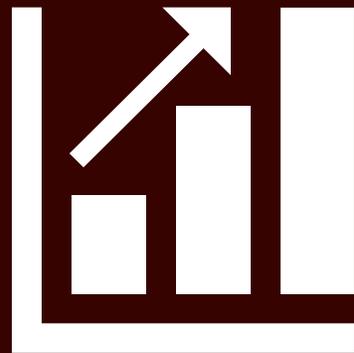


CONSUMER PREFERENCES

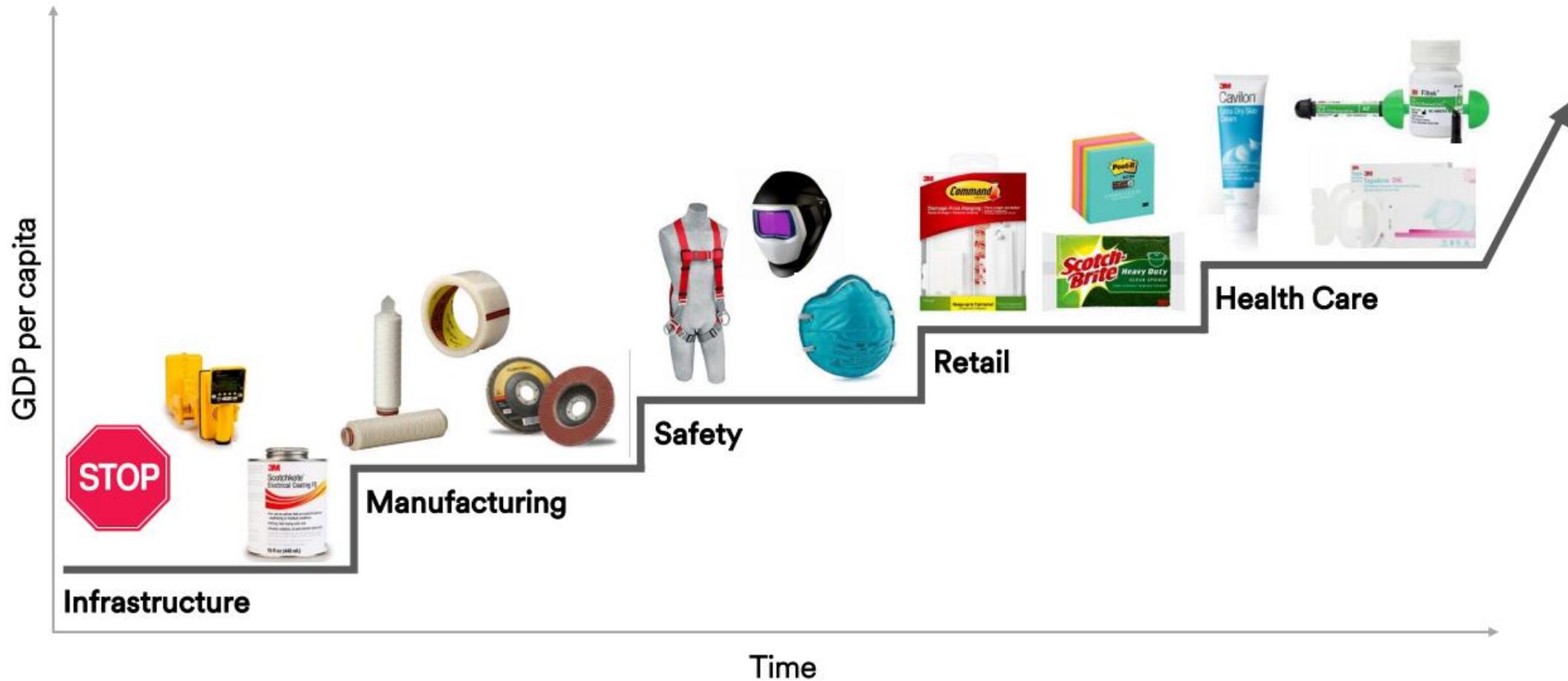


- **Kraft Heinz comes to mind, generic brands for consumer product**
- **Are people still willing to pay a premium for 3m branded products?**
- **Consumer only makes up ~10% of sales**

GROWTH OPPORTUNITIES



GROWTH OPPORTUNITIES



GROWTH OPPORTUNITIES

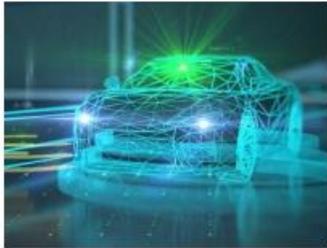
Increasing investment in Priority Growth Platforms



Wound Care



Population Health



Automotive Electrification



Connected Roads



Food Safety



Biopharmaceutical Filtration



Connected Safety



Structural Bonding



Surface Finishing



Air Quality



Grid Modernization



Custom Orthodontics

GROWTH OPPORTUNITIES

Personal Protection Equipment



Wound Care/Medical Devices



Traffic Safety Items

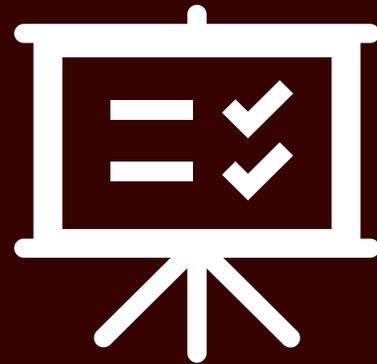
~6% future growth

~5% future growth

~5%+ future growth



ACQUISITIONS



ACELITY: OCT 11, 2019



- 3M's most recent acquisition
- \$6.7B purchase including debt assumption
- The business has annual revenue of approximately \$1.5 billion with year-to-date organic growth of 5 percent through September 30, 2019
- "This addition further accelerates 3M as a leader in advanced wound care, which is a significant and growing market segment." - *Mike Roman: 3M CEO*

M*MODAL TECHNOLOGY: FEB 1, 2019

- 2nd most recent acquisition
- \$1 Billion Purchase
- M*Modal's tech business provides cloud-based, conversational Artificial Intelligence (AI)-powered systems that will expand the capabilities of 3M's Health Information Systems business
- These AI-powered systems help physicians efficiently capture & improve the patient narrative so they can spend more time with their patients and provide higher quality of care.
- Annual revenue of M*Modal's technology business is estimated to be approximately \$200 million according to management.



SCOTT SAFETY: OCT 4, 2017



- Purchased from Johnson Controls: **Total Enterprise Value of \$2 Billion**
- Scott Safety is a premier manufacturer of innovative products, including self-contained breathing apparatus systems, gas and flame detection instruments, and other safety devices that complement 3M's personal safety portfolio, such as hearing, and fall protection solutions that help improve the safety and health of workers.
- The business supplies products in even more safety categories such as head, eye, and face protection, reflective materials for high-visibility apparel and protective clothing.
- Many of their products are utilized by police and fire departments across the nation, giving them a VERY secure market
- The business had \$575 million in revenues for the 12 months ended Sept. 30, 2017.
- Projected Revenues of \$570 million for 2019

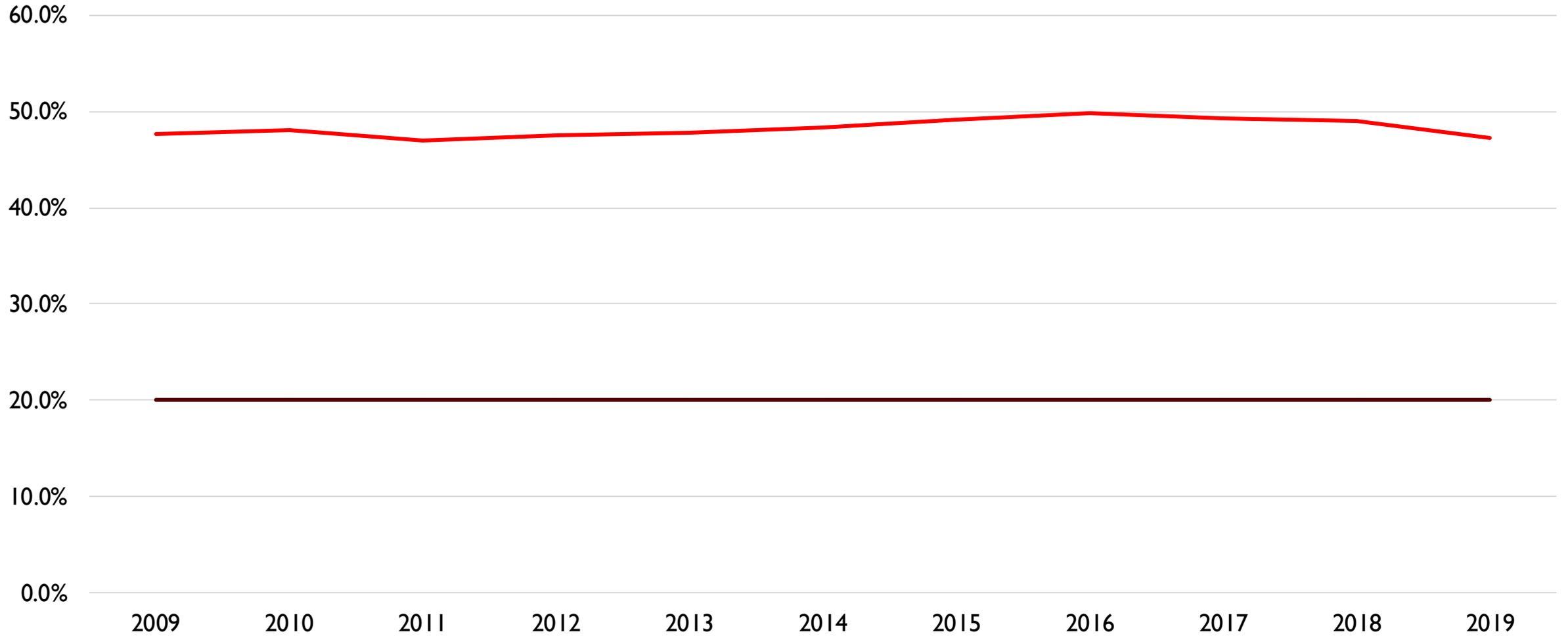
INTERPRETATION OF FINANCIAL STATEMENTS



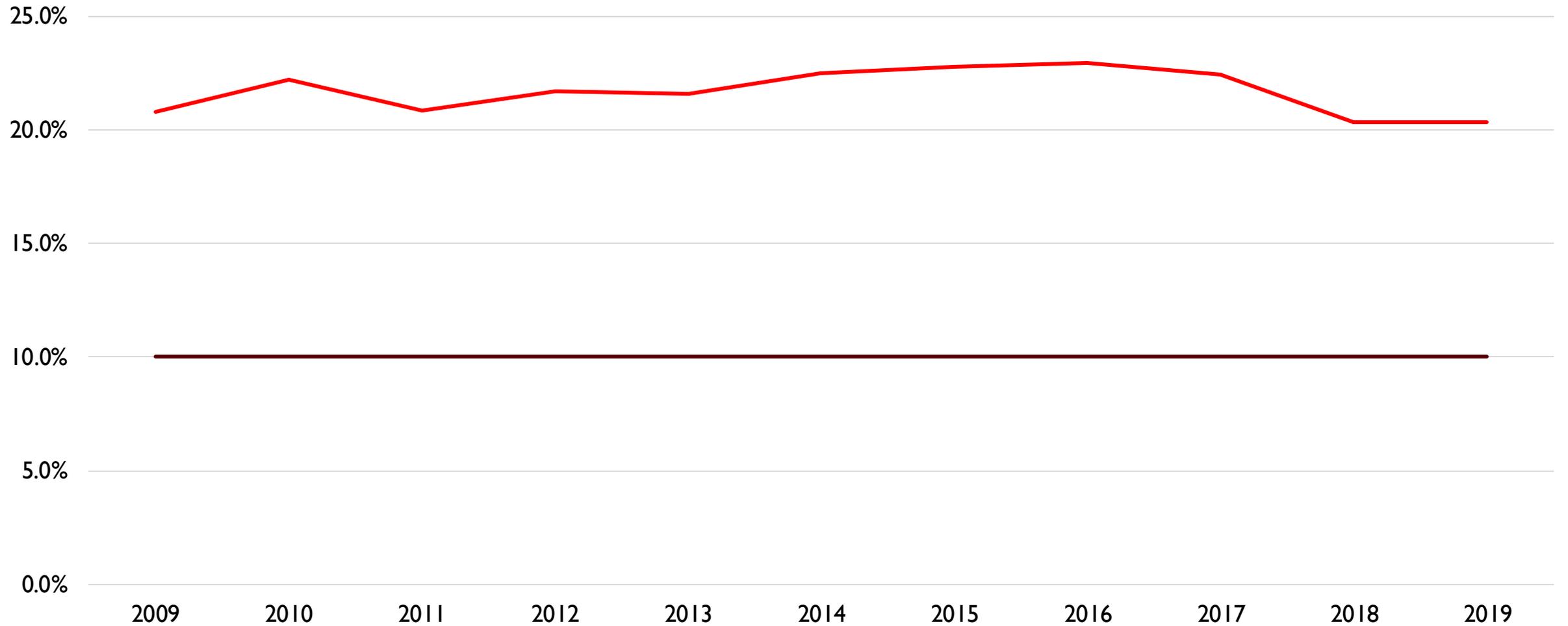
QUANTITATIVE ANALYSIS

2019	Value	Threshold	Pass/Fail
Gross Profit Margin	47.23%	Above 20%	Pass
Operating Expenses to GP	44.84%	Below 80%	Pass
R&D to Gross Profit Margin	38.68%	Below 10%	Fail
Depreciation	9.90%	Below 10%	Pass
Interest to Operating Income	1.20%	Below 15%	Pass
Net Profit Margin	15.48%	Above 10%	Pass
Current Ratio	2.30	Above 1	Pass
Obligation Ratio	2.87 years	Below 5	Pass
Adjusted Debt to SE	1.89	Below 0.8	Fail
Return on Equity	48.96%	Above 15%	Pass
Return on Invested Capital	18.76%	Above 15%	Pass

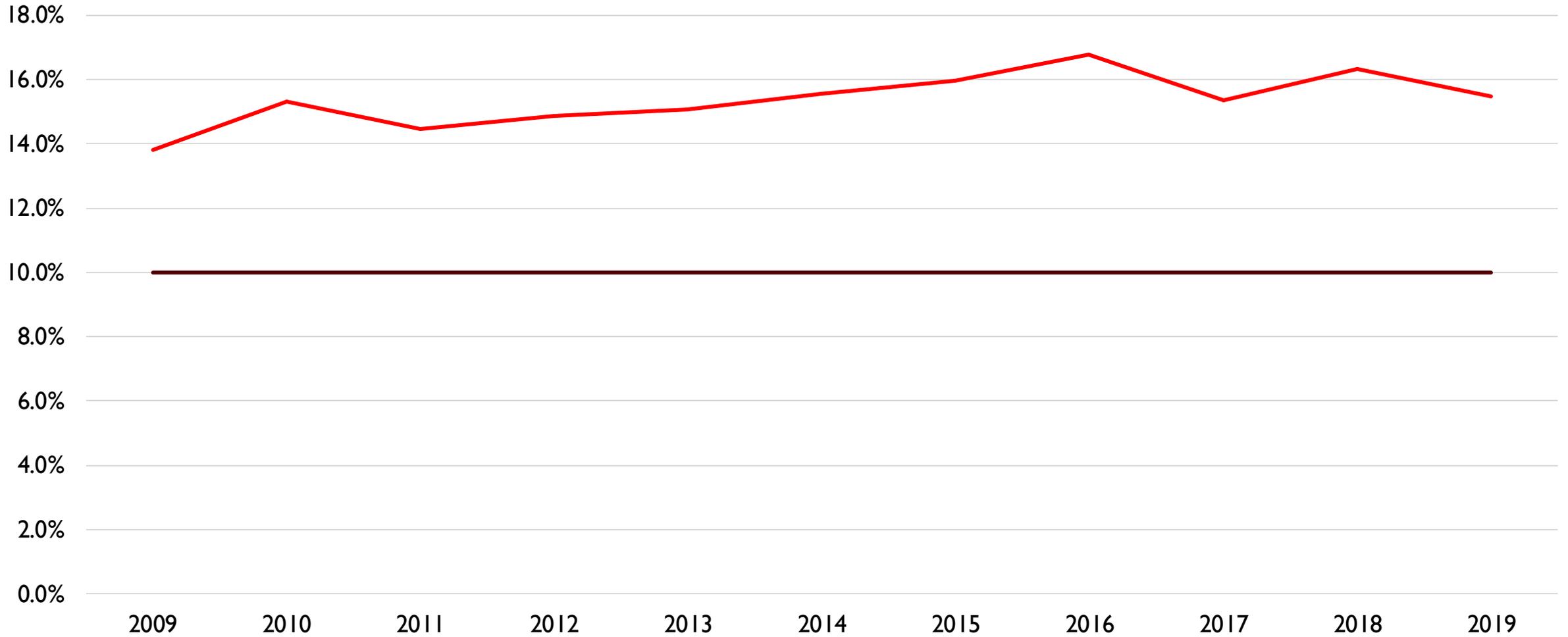
GROSS PROFIT MARGIN



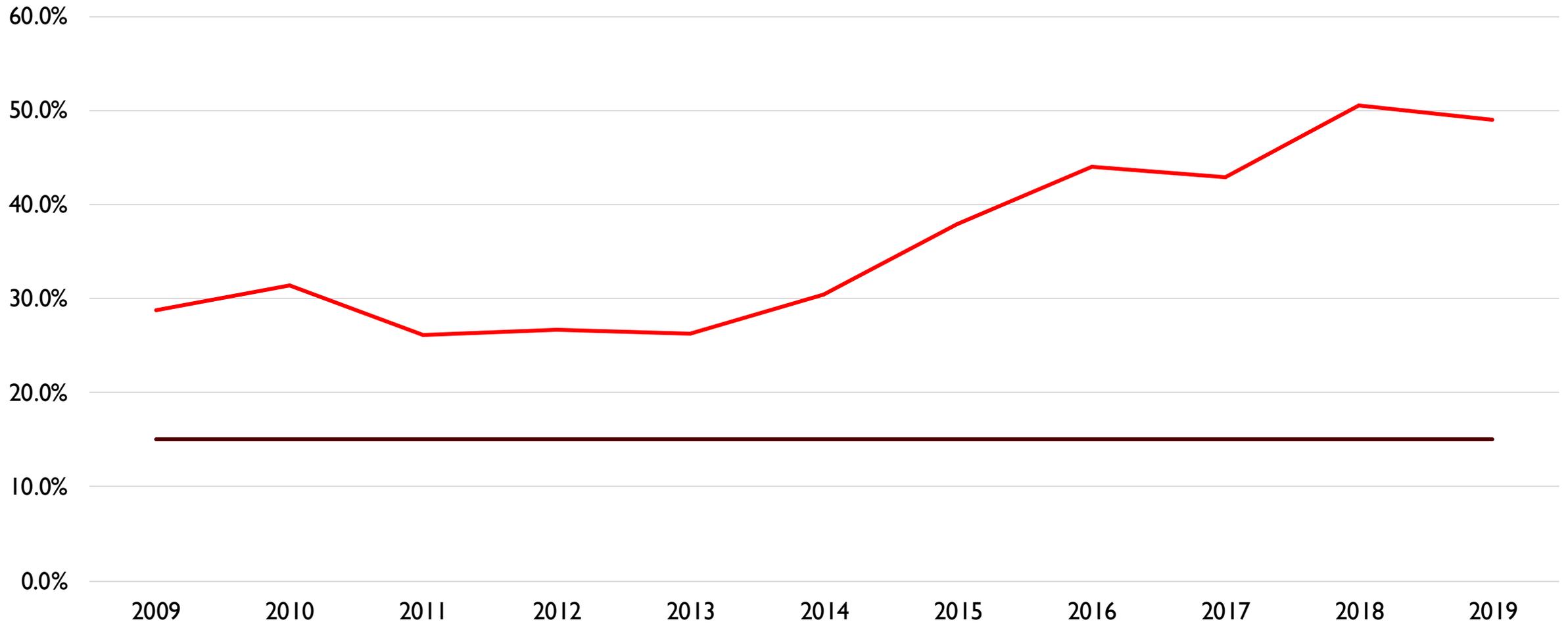
OPERATING MARGIN



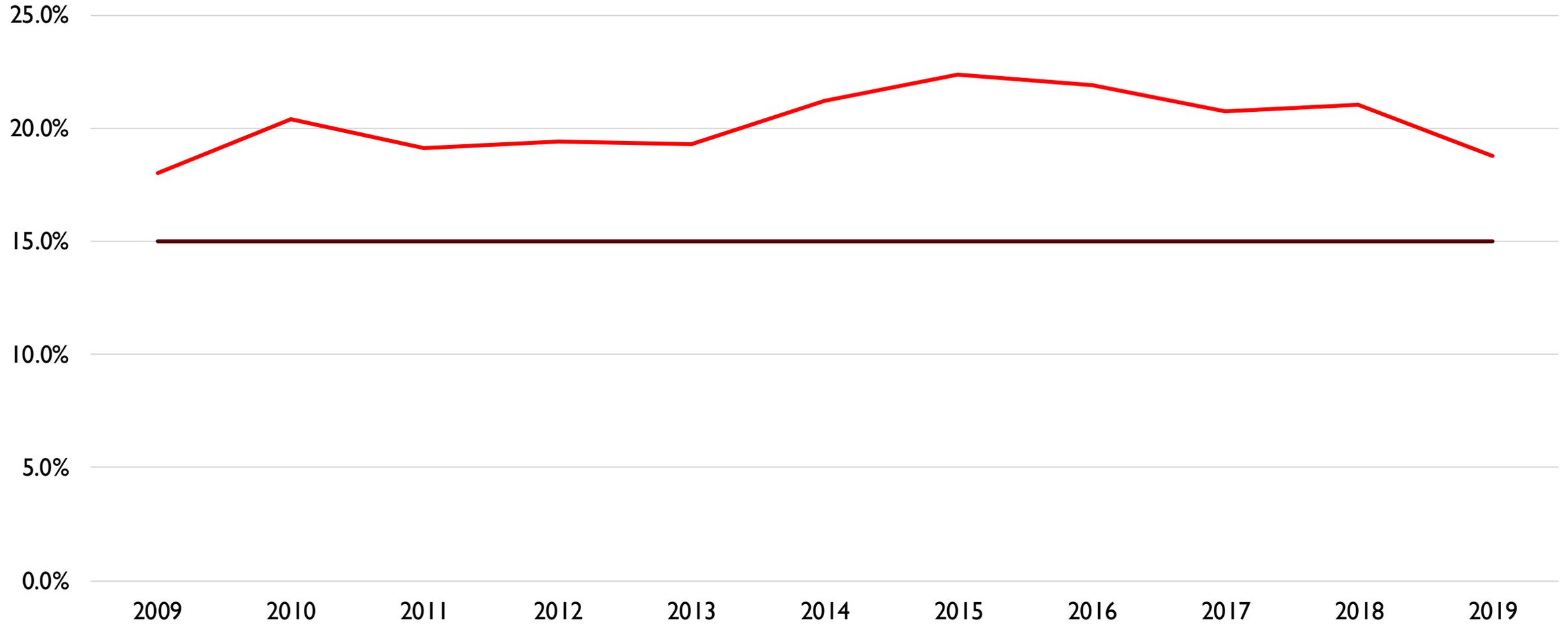
NET PROFIT MARGIN



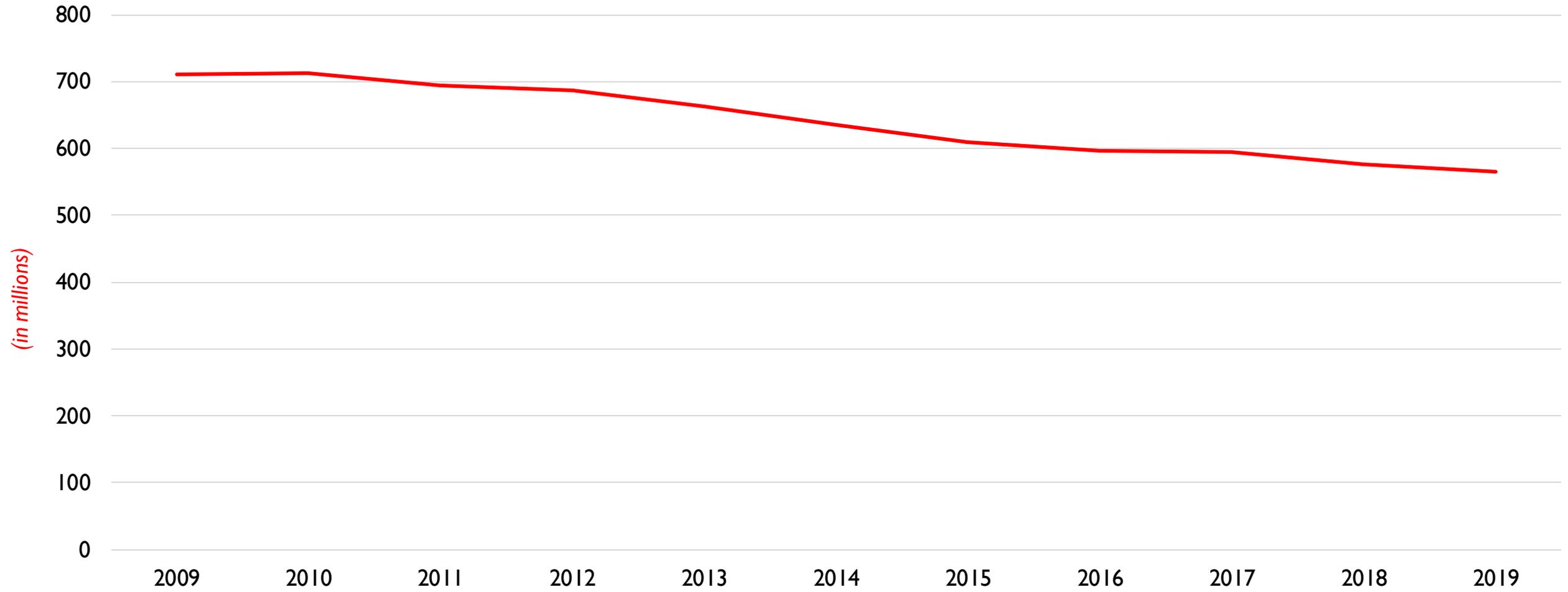
RETURN ON EQUITY



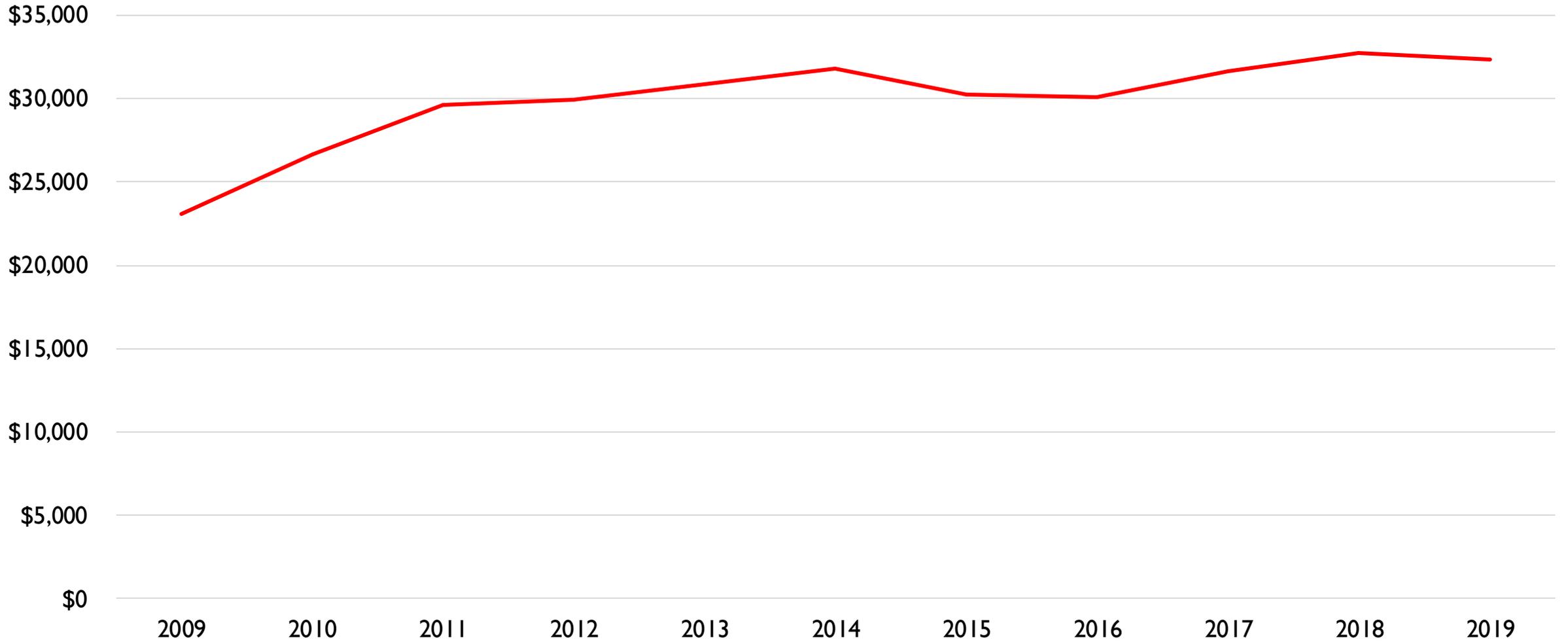
RETURN ON INVESTED CAPITAL



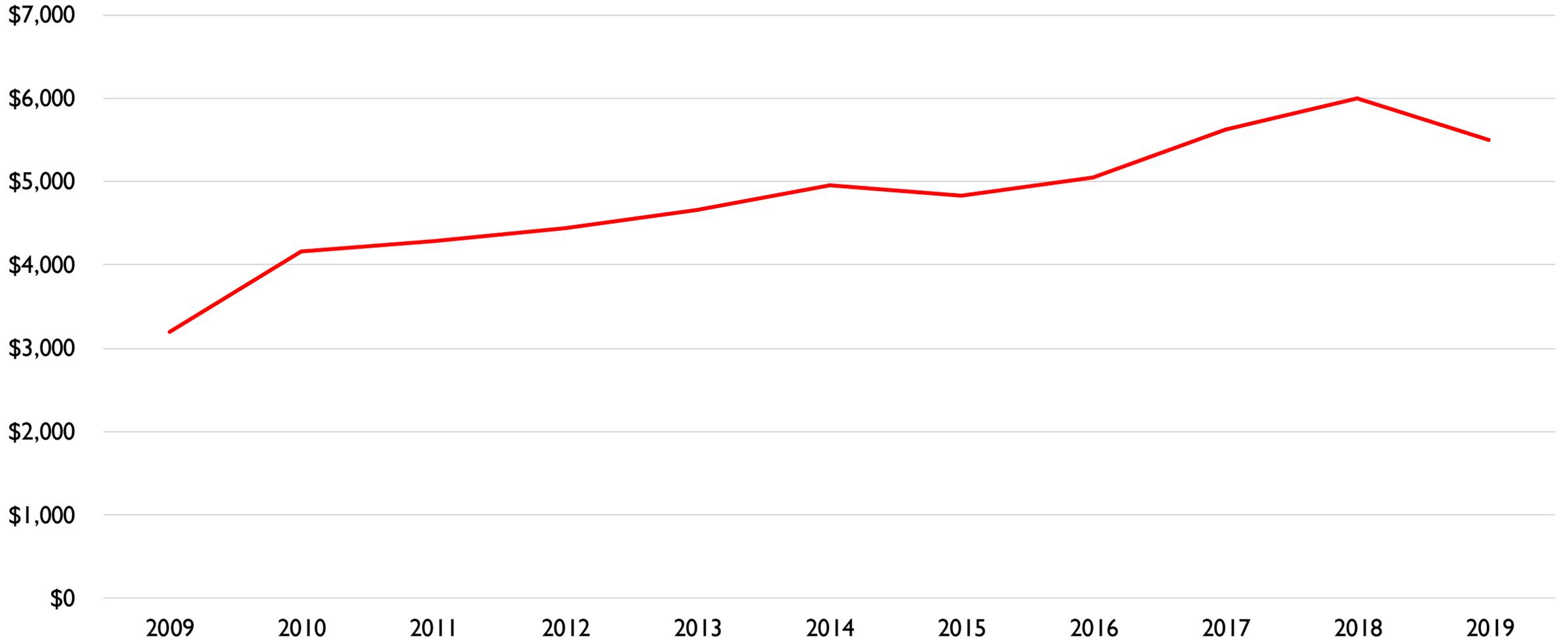
SHARES OUTSTANDING



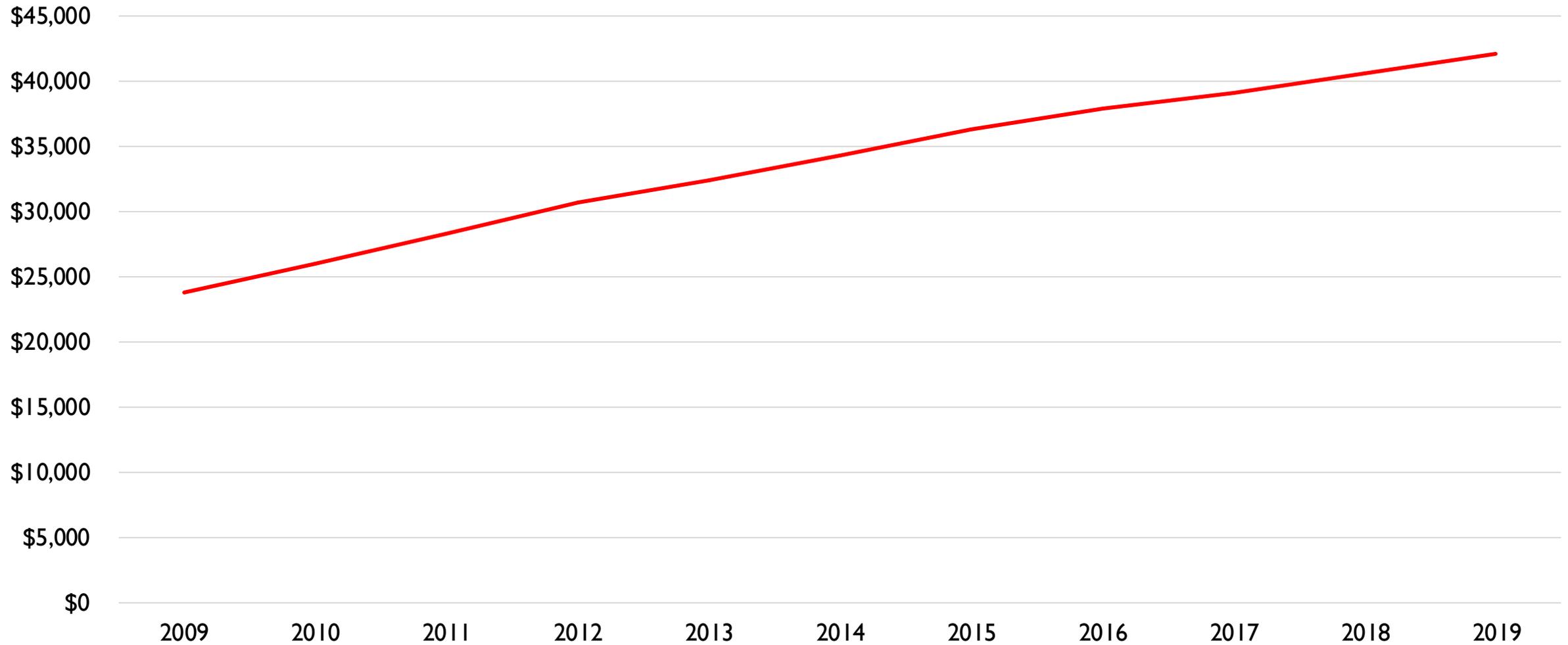
REVENUES



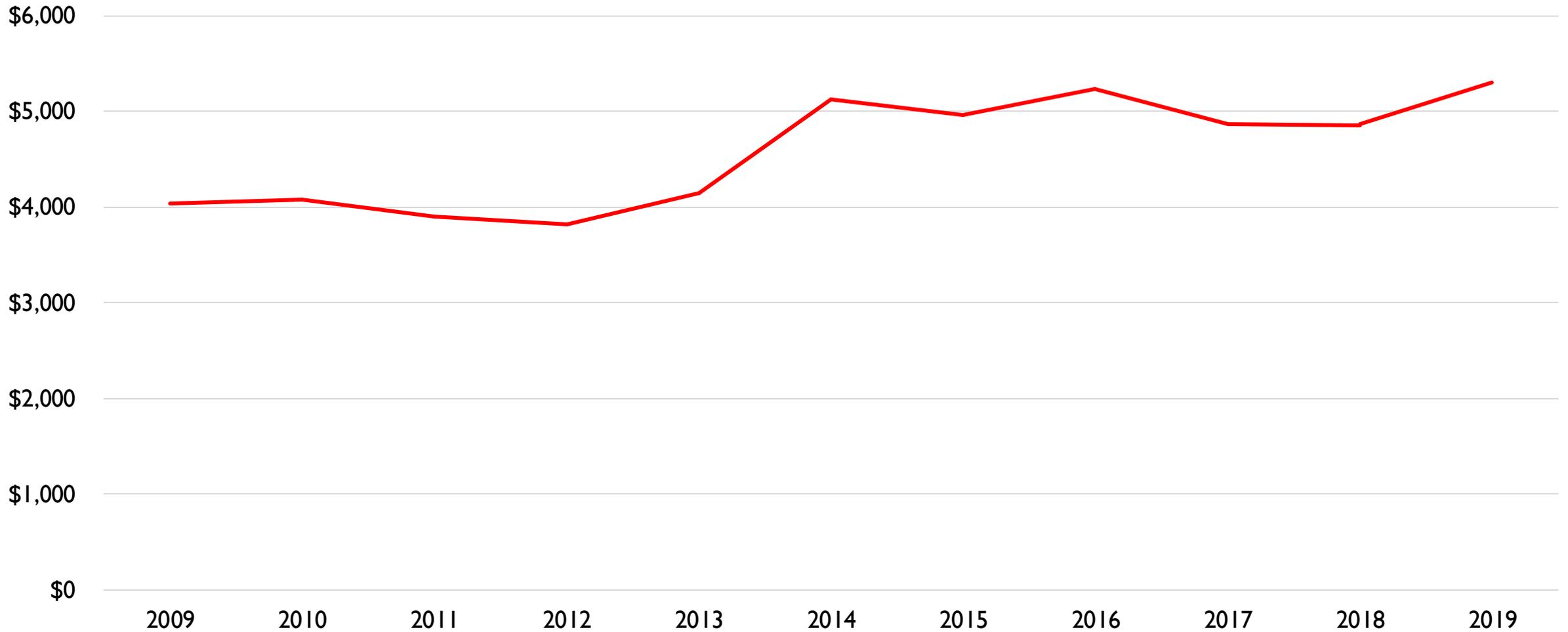
NET INCOME



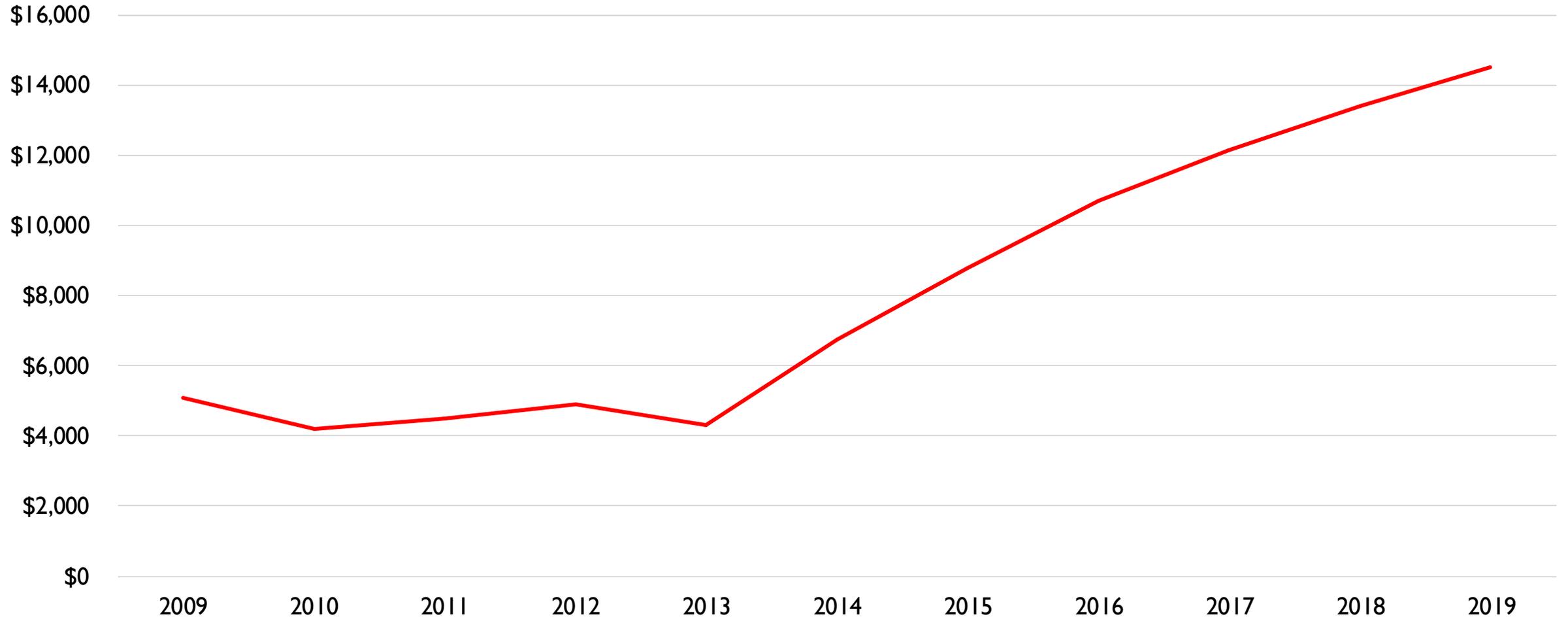
RETAINED EARNINGS



FREE CASH FLOW



LONG-TERM DEBT



OBLIGATION RATIO

LONG TERM DEBT

\$14.90B

+ LEASES (7)

+ \$1.98B

+ PENSION SHORTFALL

+ \$1.90B

- CASH

- \$2.98B

NET INCOME

\$5.50B

= OBLIGATION RATIO

= 2.87 YEARS

DUPONT ANALYSIS



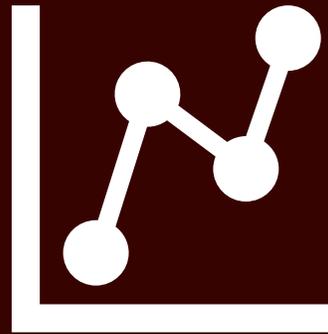
DUPONT ANALYSIS

Year	Total Asset Turnover	Net Profit Margin	Financial Leverage Multiplier	Return on Equity
2019	0.75	15.4%	3.97	45.85%
2018	0.89	16.3%	3.72	53.97%
2017	0.83	15.3%	3.28	41.65%
2016	0.91	16.7%	3.19	48.48%
2015	0.92	15.9%	2.87	41.98%

INDUSTRY DUPONT

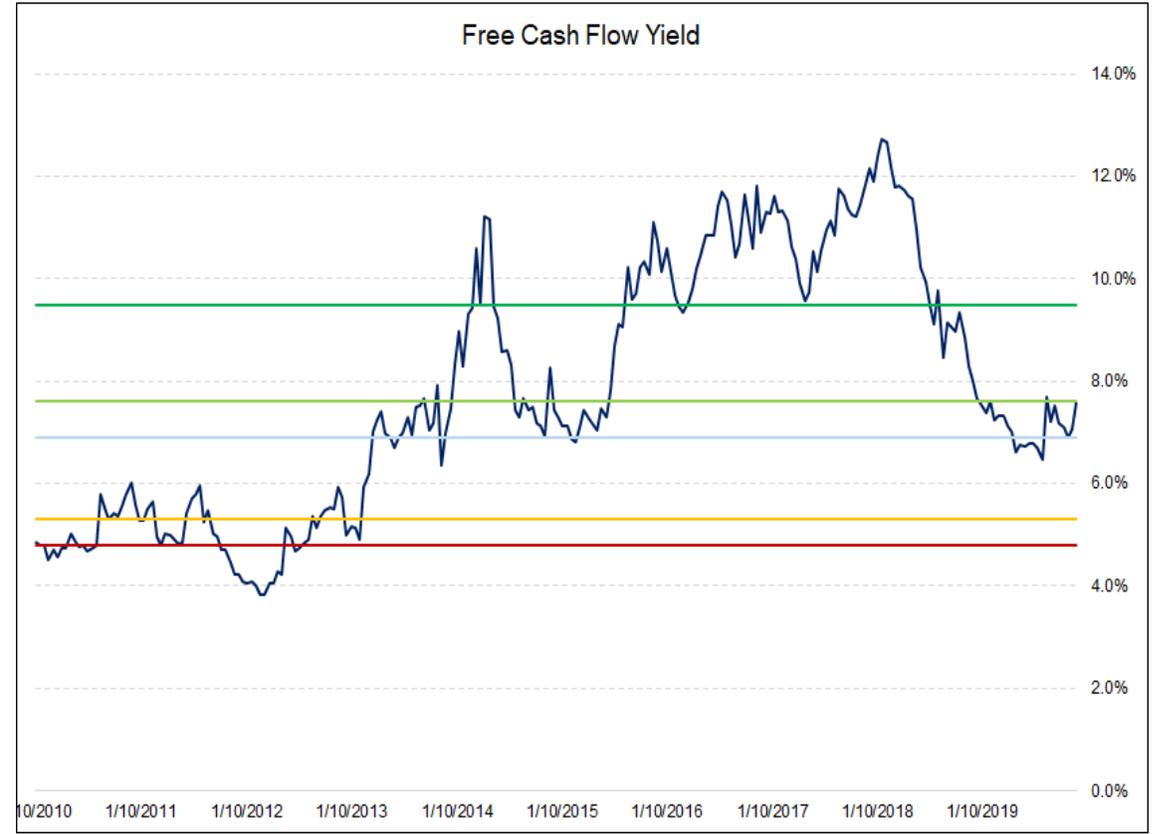
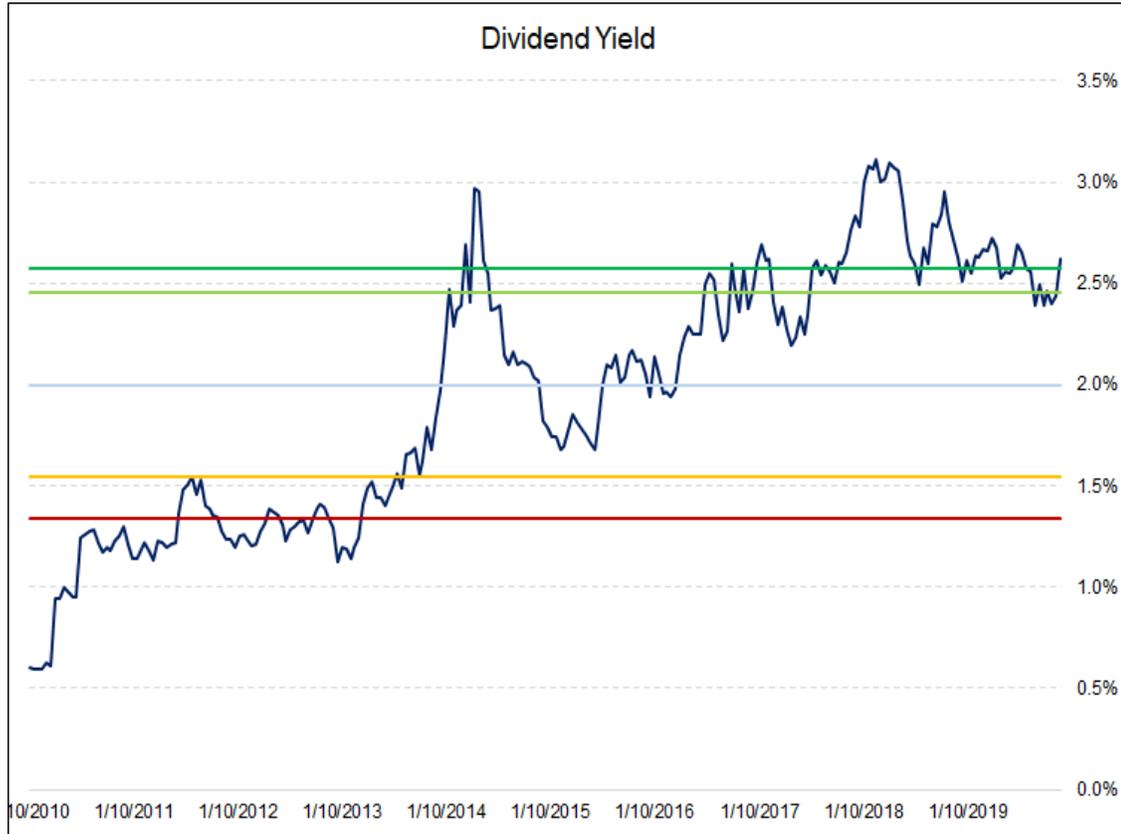
Company	Total Asset Turnover	Net Profit Margin	Financial Leverage Multiplier	Return on Equity
	0.75	15.4%	3.97	45.85%
	1.32	6.60%	5.05	44.00%
	0.52	17.30%	2.67	24.02%
	0.61	17.05%	3.31	34.43%

VALUE BANDS

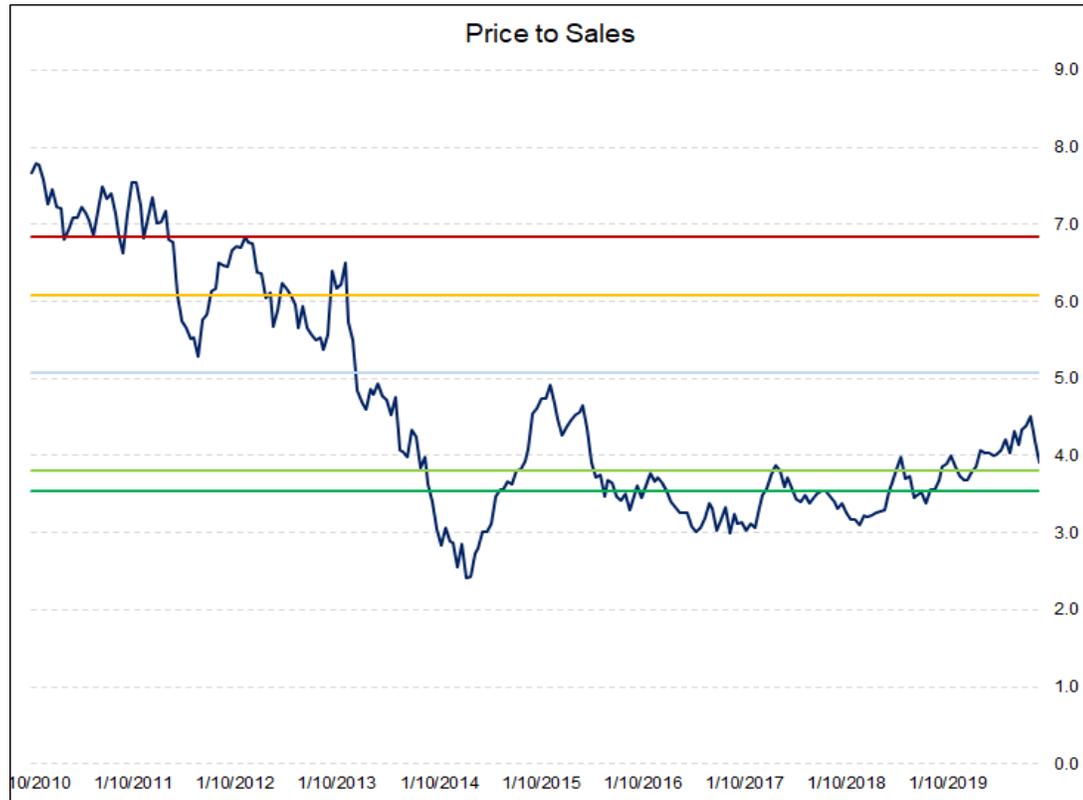


DIVIDEND YIELD

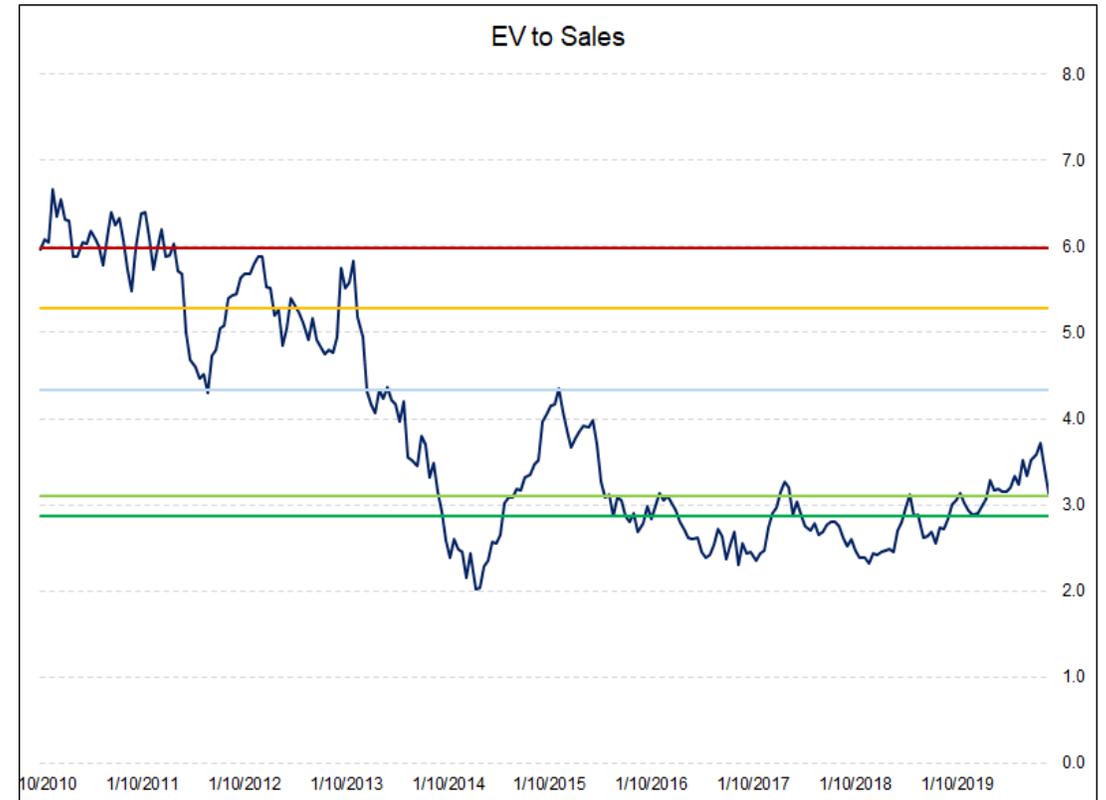
FREE CASH FLOW YIELD



PRICE TO SALES



EV TO SALES



PRICE TO BOOK

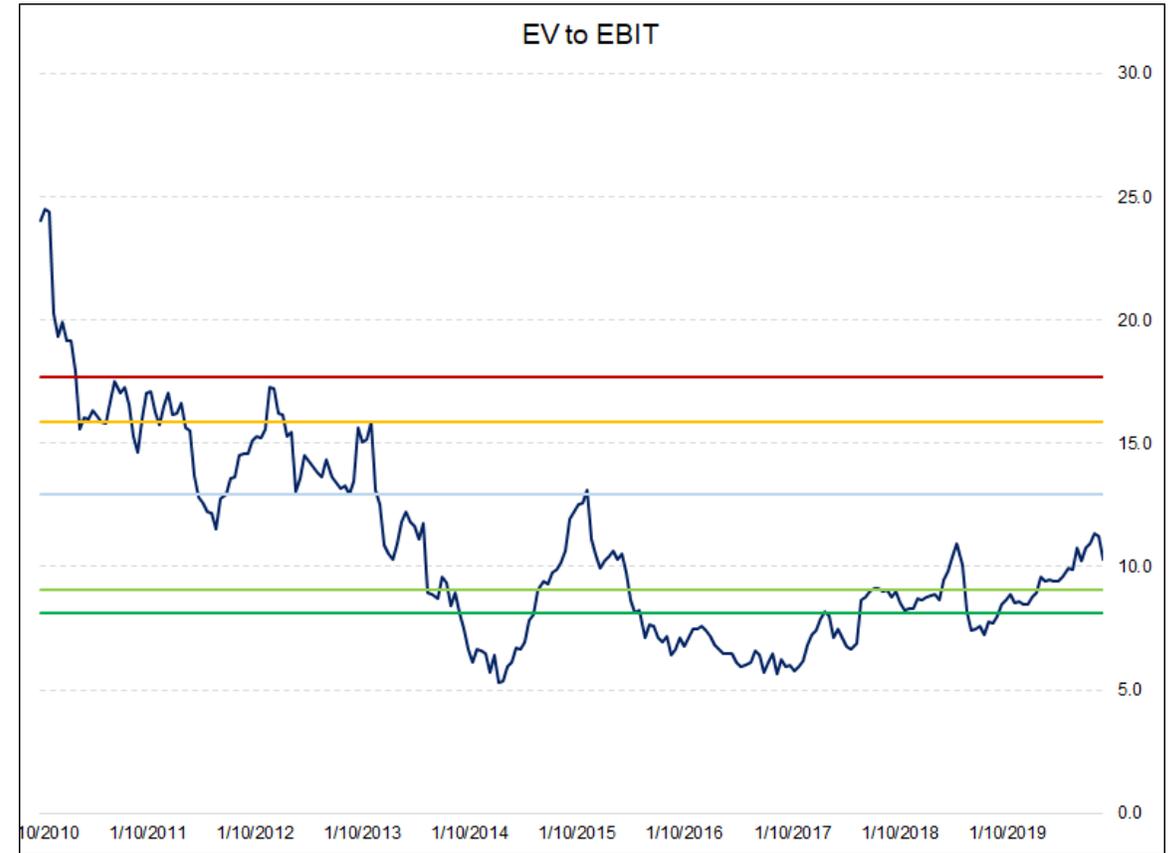
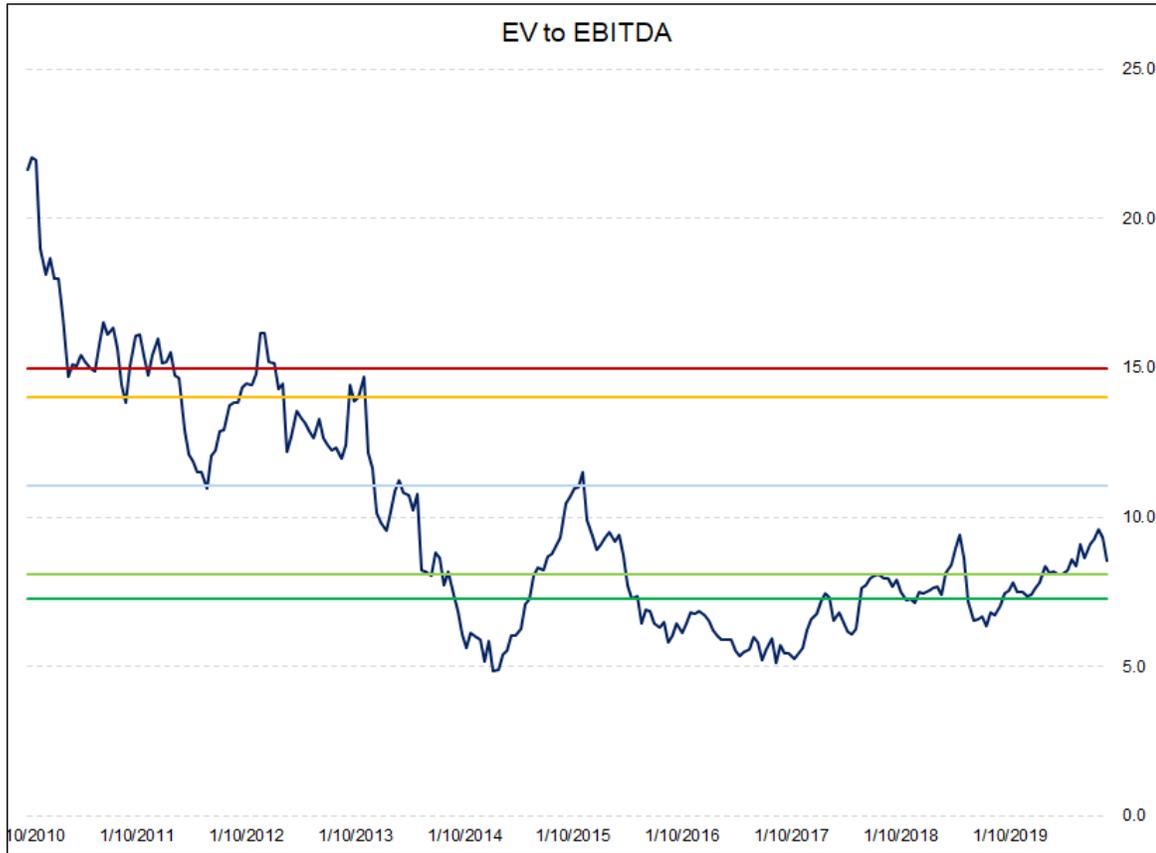


PRICE TO EARNINGS

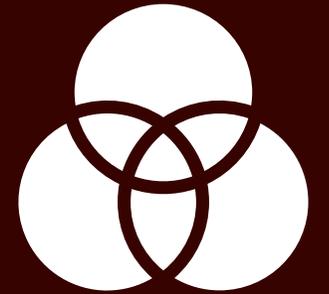


EV TO EBITDA

EV TO EBIT



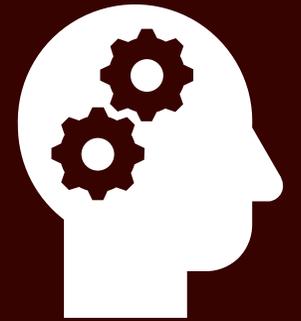
INDUSTRY BREAKDOWN



INDUSTRY BREAKDOWN

Company				
Market Cap	97.63B	10.89B	361.86B	127.58B
Revenue	31.97B	7.066B	81.71B	36.94B
P/E	20.16	47.06	26.19	20.86
P/S	3.12	1.574	4.54	3.56
P/B	9.12	10.30	6.21	7.05
EV/EBIT	16.60	51.40	22.32	17.04
ROA	12.72%	4.50%	9.20%	10.64
ROE	48.96%	23.29%	23.40%	34.56
Operating Margin	20.33%	11.45%	24.42%	18.07
Net Margin	15.48%	3.37%	17.32%	33.15%

CONSCIOUS INVESTOR



CONSCIOUS INVESTOR 10 YEAR

	12/09	12/10	12/11	12/12	12/13	12/14	12/15	12/16	12/17	12/18	EPSttm	Years
EPS(\$)	\$4.520	\$5.630	\$5.960	\$6.320	\$6.720	\$7.490	\$7.580	\$8.160	\$7.930	\$8.890	\$8.43	10
SPS(\$)	\$32.540	\$37.448	\$42.608	\$43.523	\$46.542	\$50.101	\$49.684	\$50.457	\$53.215	\$56.827		10

	HGROWTH	STAEGR
EPS (\$)	6.62%	95.20%
SPS (\$)	5.35%	95.97%

CONSCIOUS INVESTOR 6 YEAR

	12/09	12/10	12/11	12/12	12/13	12/14	12/15	12/16	12/17	12/18	EPSttm	Years
EPS(\$)	4.520	5.630	5.960	6.320	6.720	7.490	7.580	8.160	7.930	8.890	\$8.43	6
SPS(\$)	32.540	37.448	42.608	43.523	46.542	50.101	49.684	50.457	53.215	56.827		6

	HGROWTH	STAAGR
EPS (\$)	4.90%	97.58%
SPS (\$)	3.52%	98.37%

CONSCIOUS INVESTOR 4 YEAR

	12/09	12/10	12/11	12/12	12/13	12/14	12/15	12/16	12/17	12/18	EPSttm	Years
EPS(\$)	4.520	5.630	5.960	6.320	6.720	7.490	7.580	8.160	7.930	8.890	\$8.43	4
SPS(\$)	32.540	37.448	42.608	43.523	46.542	50.101	49.684	50.457	53.215	56.827		4

	HGROWTH	STAAGR
EPS (\$)	4.77%	98.00%
SPS (\$)	4.67%	99.19%

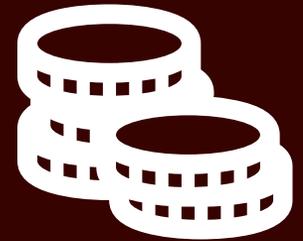
CONSCIOUS INVESTOR SAFETY

			-27%	-49%	-30%	-72%
	Price	EPSttm	P/E Ratio	HGROWTH	Payout	STRETD
Default	\$168.27	\$8.43	22.56	4.01%	57.8%	6.29%
Safety	\$168.27	\$8.43	16.53	2.06%	40.8%	1.74%

CONSCIOUS INVESTOR KILL IT

		CUT	-35%	-25%	-100%	-100%
	Price	EPSttm	P/E Ratio	HGROWTH	Payout	STRETD
Default	\$168.27	\$8.43	22.56	4.01%	57.8%	6.29%
Safety	\$168.27	\$8.43	14.58	3.00%	0.00%	0.00%

DISCOUNTED CASH FLOW



BEAR CASE

- Earnings Per Share: \$9.45
- 10 Year Growth Rate: 3%
- Discount Rate: 9.5%
- Fair Value: \$107.56
- Margin of Safety: -52.80%

BASE CASE

- Earnings Per Share: \$9.45
- 10 Year Growth Rate: 6%
- Discount Rate: 9.5%
- Fair Value: \$131.38
- Margin of Safety: -25.11%

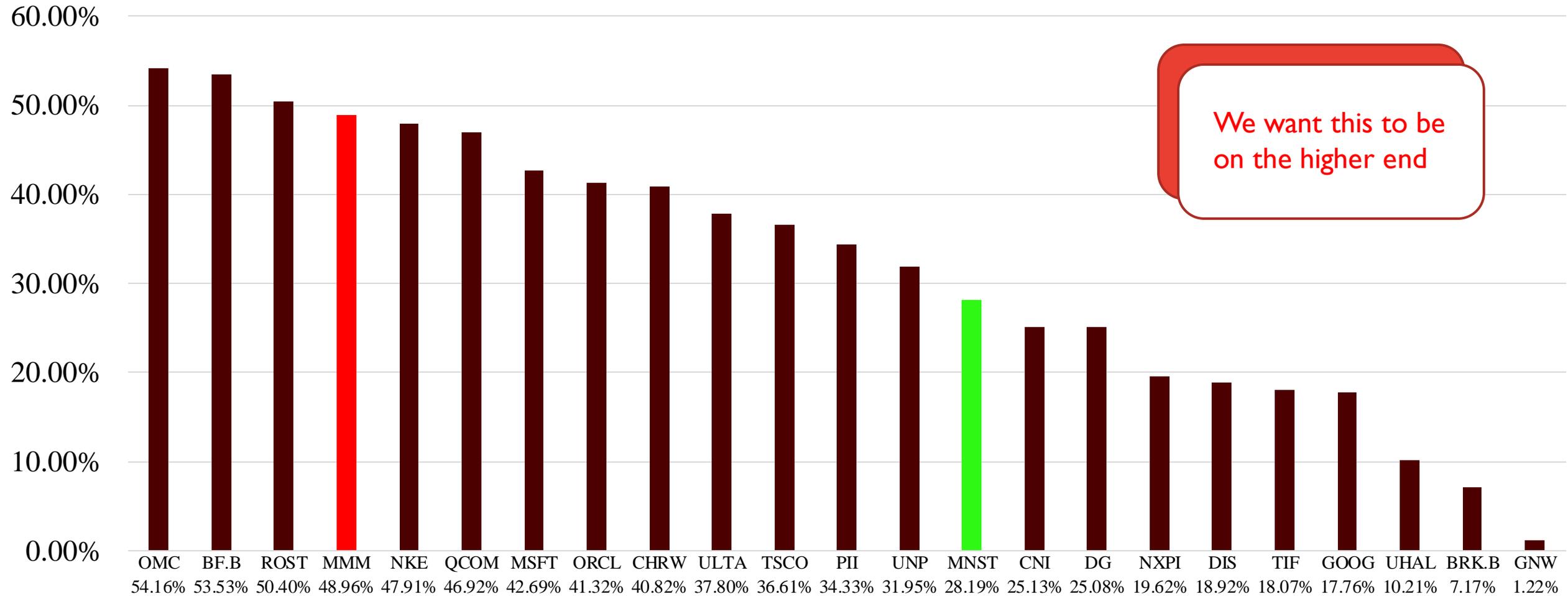
BULL CASE

- Earnings Per Share: \$9.45
- 10 Year Growth Rate: 10%
- Discount Rate: 9.5%
- Fair Value: \$172.22
- Margin of Safety: 4.56%

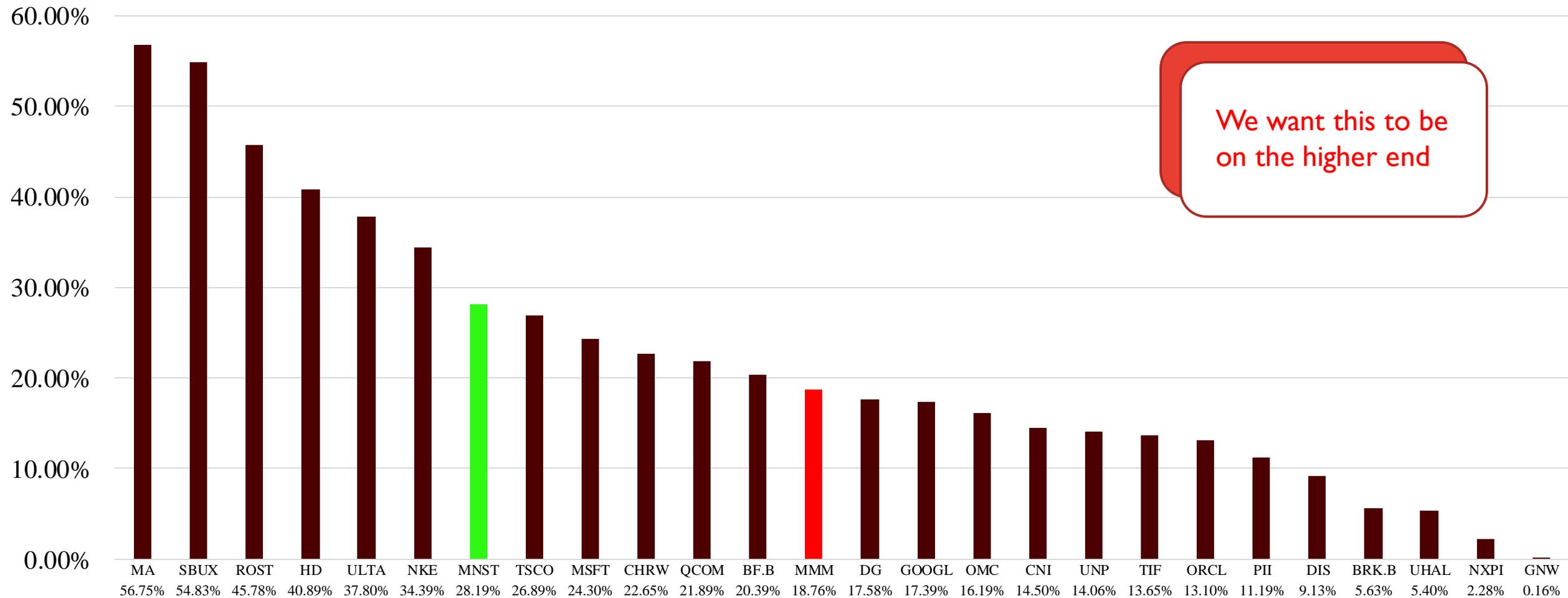
INTRAPORTFOLIO VALUATIONS



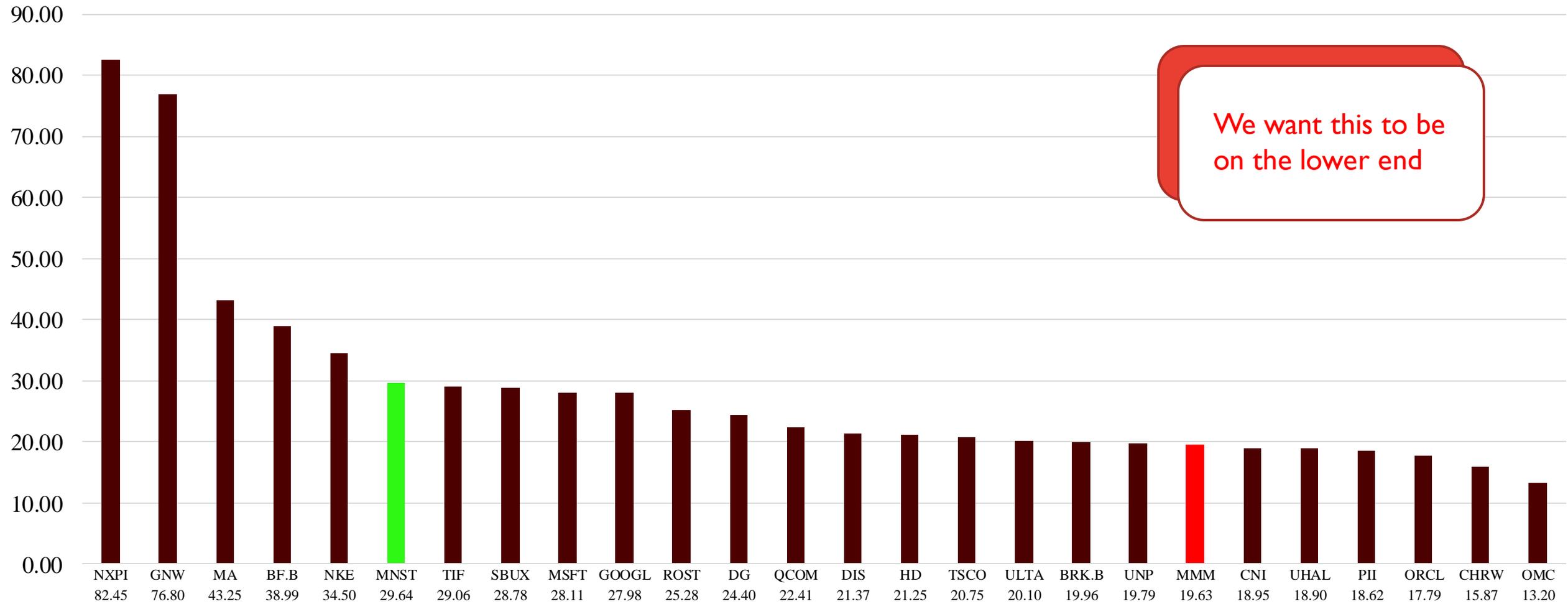
RETURN ON EQUITY



RETURN ON INVESTED CAPITAL

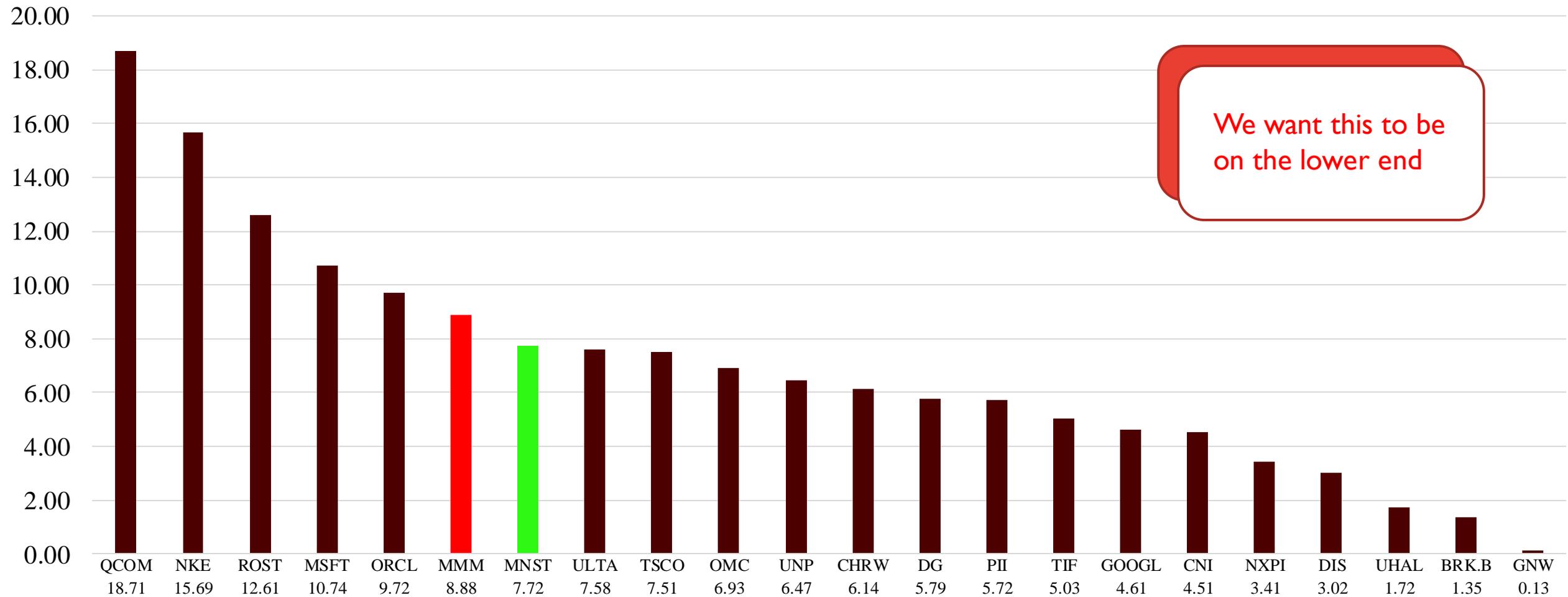


PRICE TO EARNINGS

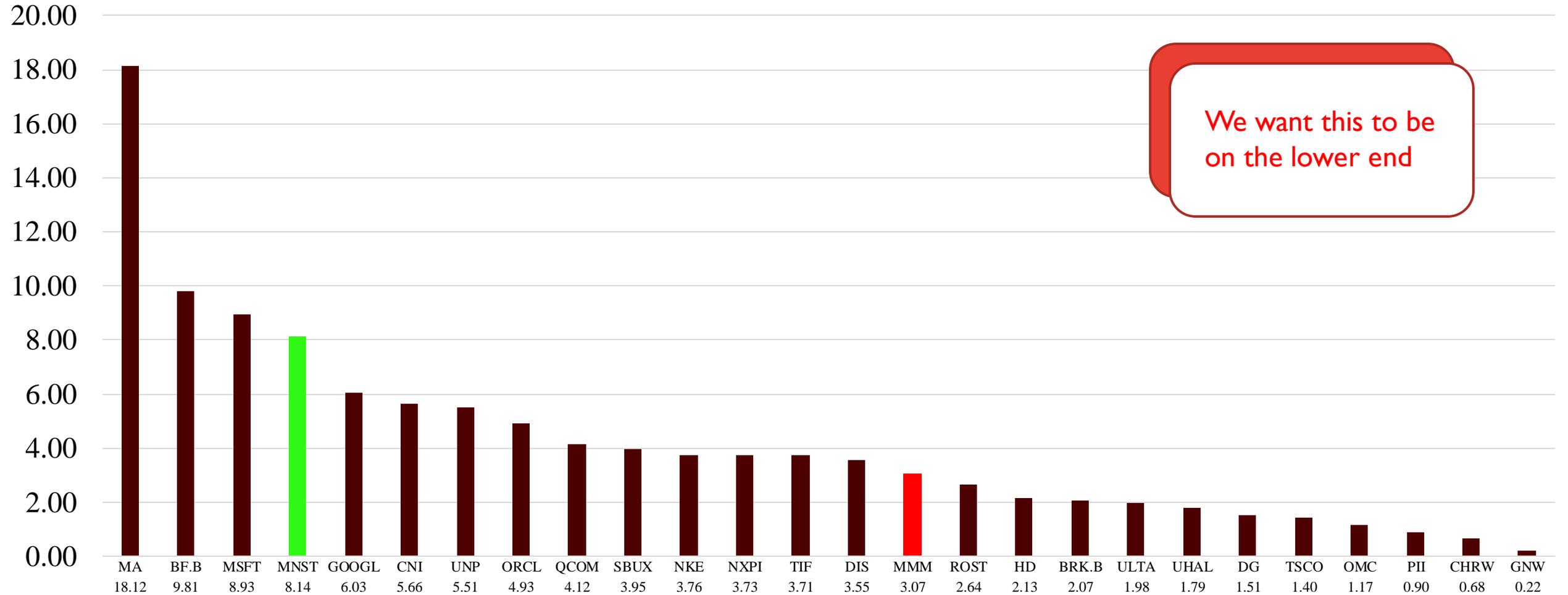


We want this to be on the lower end

PRICE TO BOOK

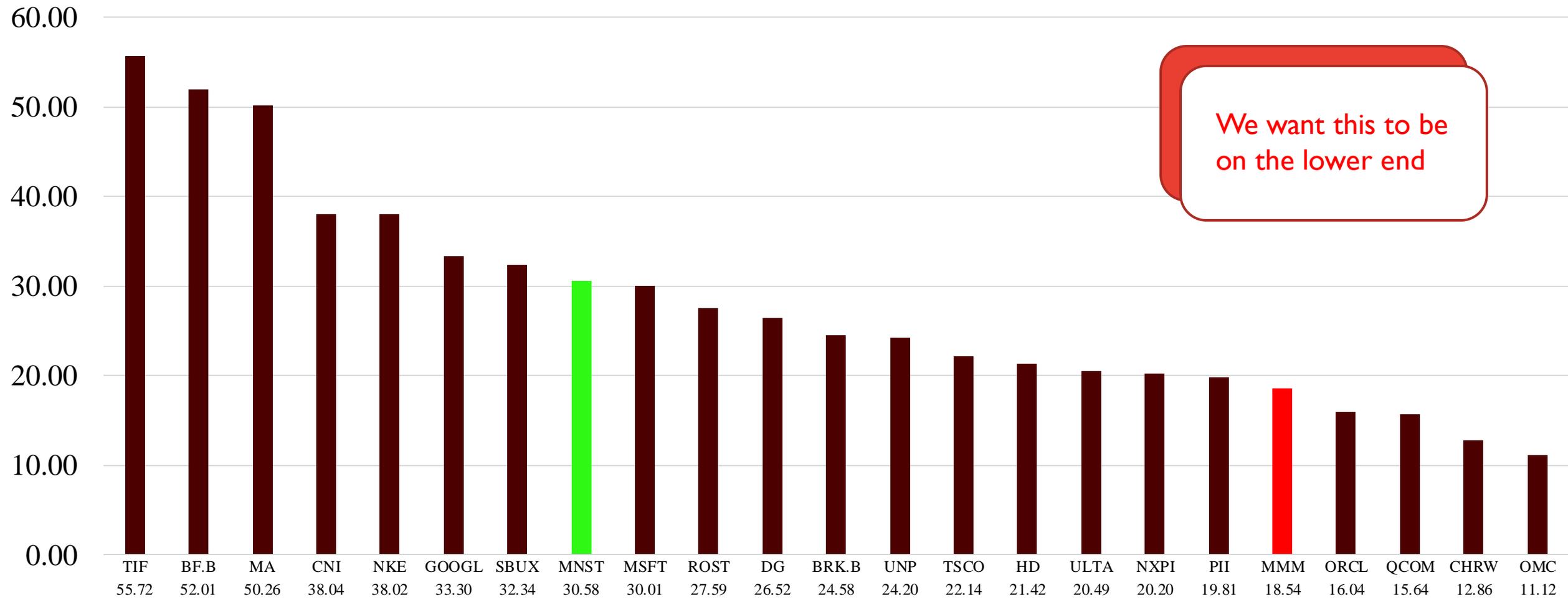


PRICE TO SALES

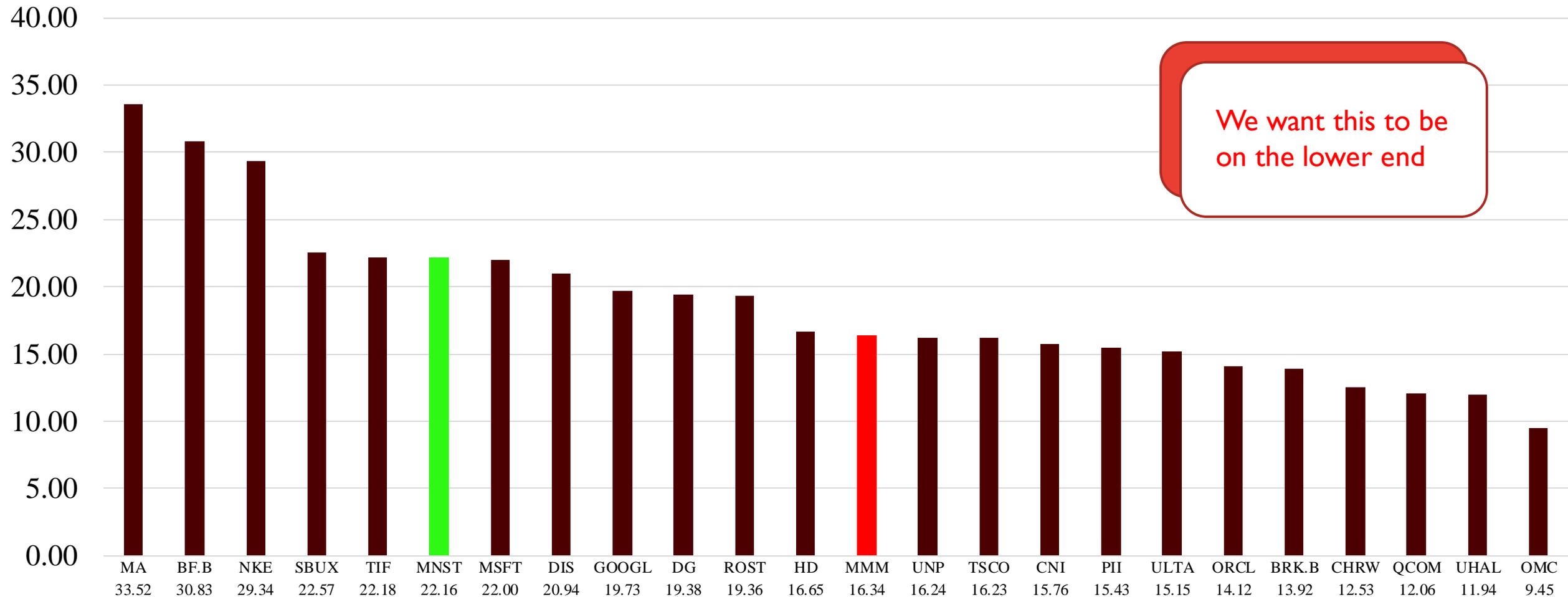


We want this to be on the lower end

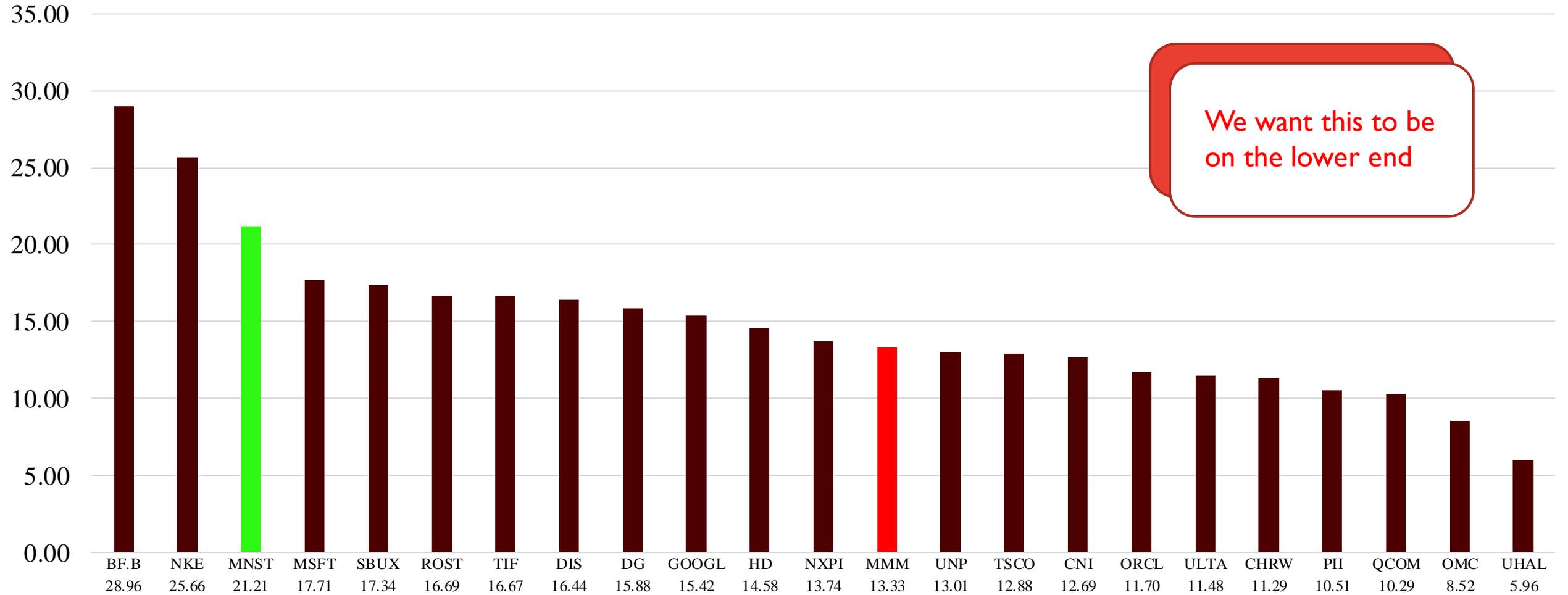
PRICE TO FREE CASH FLOW



ENTERPRISE VALUE TO EARNINGS BEFORE INTEREST TAX

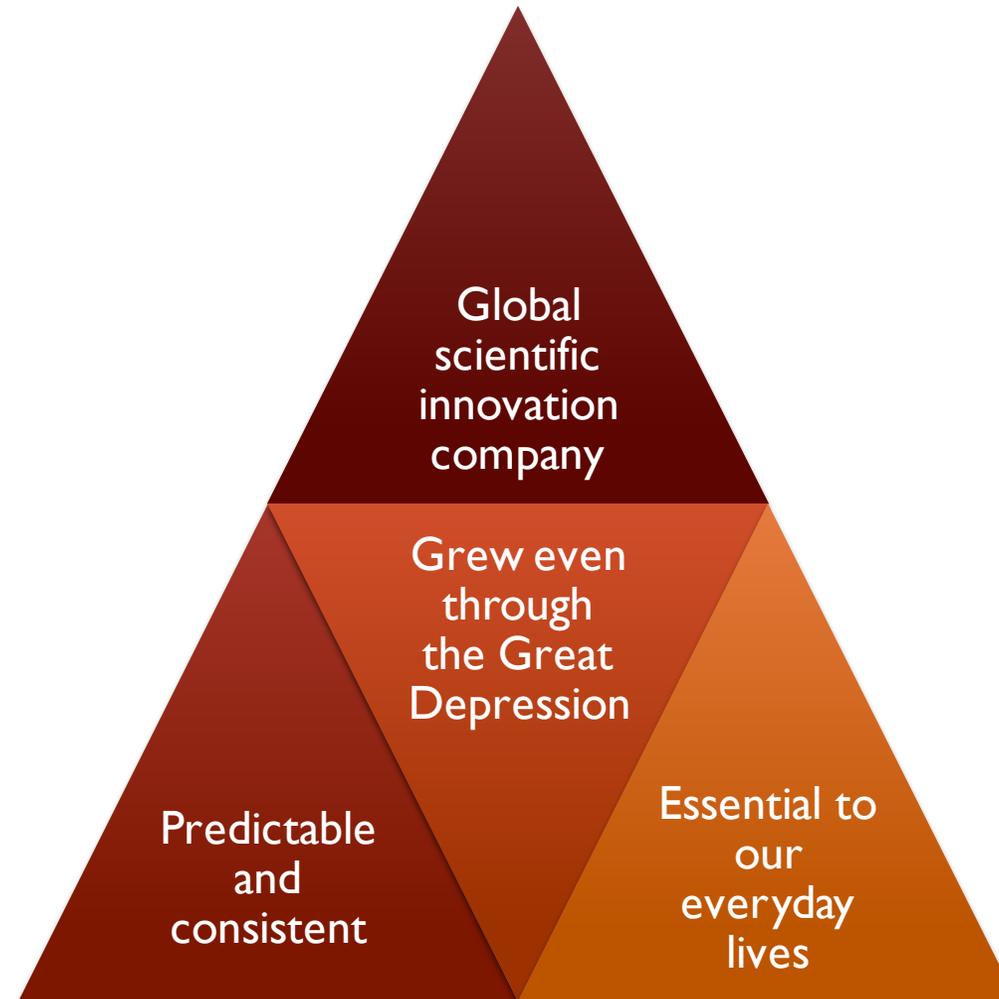


EV TO EBITDA



CONCLUSION

CONCLUSION



“AMERICANS ARE TYPICALLY
NO MORE THAN 10 FEET
FROM A 3M PRODUCT.”

-PAUL ACITO

CHIEF MARKETING OFFICER, 3M

RECOMMENDATION

Buy 75 shares at a 90 day Limit Order of \$150



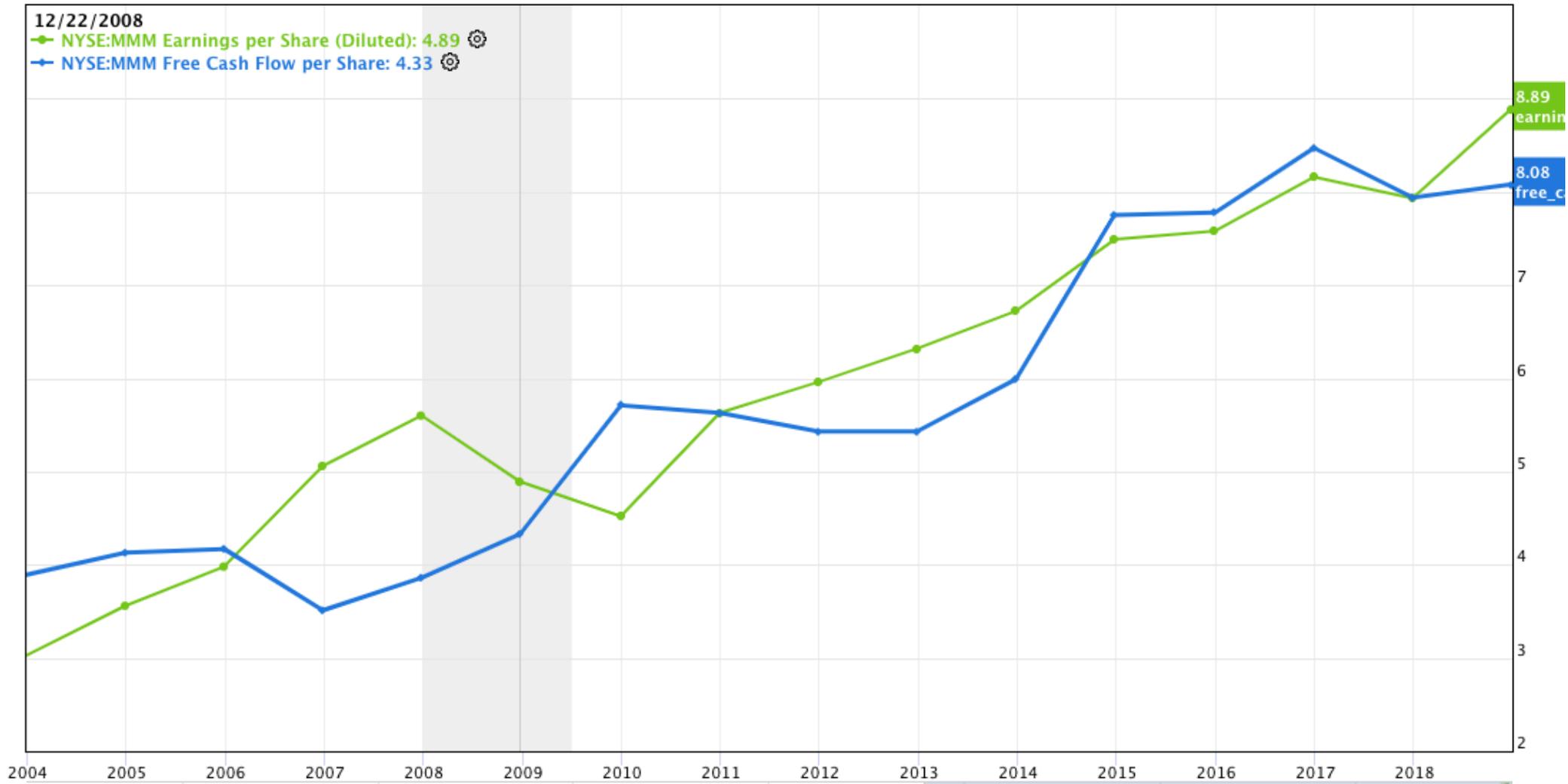
Write \$145 Put, expires April 2020,
premium of \$3.10



QUESTIONS?

APPENDIX

EPS & FREE CASH FLOW PER SHARE



BROAD NET SEGMENT

Net Sales (Millions)	December 31,		
	2018	2017	2016
Abrasives	\$ 1,804	\$ 1,746	\$ 1,626
Adhesives and Tapes	4,607	4,468	4,239
Advanced Materials	1,239	1,124	1,039
Automotive and Aerospace	2,063	1,994	1,871
Automotive Aftermarket	1,642	1,645	1,590
Separation and Purification	913	886	859
Other Industrial	(1)	3	(7)
Total Industrial Business Group	\$ 12,267	\$ 11,866	\$ 11,217
Commercial Solutions	\$ 1,842	\$ 1,759	\$ 1,751
Personal Safety	3,681	3,012	2,597
Roofing Granules	353	372	344
Transportation Safety	950	1,091	1,259
Other Safety and Graphics	1	1	(3)
Total Safety and Graphics Business Group	\$ 6,827	\$ 6,235	\$ 5,948
Drug Delivery	\$ 444	\$ 486	\$ 451
Food Safety	332	306	280
Health Information Systems	837	791	780
Medical Solutions	3,049	2,947	2,824
Oral Care	1,353	1,322	1,274
Other Health Care	6	1	(3)
Total Health Care Business Group	\$ 6,021	\$ 5,853	\$ 5,606
Electronics	\$ 3,974	\$ 3,850	\$ 3,304
Energy	1,487	1,645	1,616
Other Electronics and Energy	11	6	6
Total Electronics and Energy Business Group	\$ 5,472	\$ 5,501	\$ 4,926
Consumer Health Care	\$ 389	\$ 421	\$ 382
Home Care	1,012	1,028	1,000
Home Improvement	1,961	1,858	1,723
Stationery and Office	1,383	1,377	1,435
Other Consumer	51	47	38
Total Consumer Business Group	\$ 4,796	\$ 4,731	\$ 4,578
Corporate and Unallocated	\$ 50	\$ 3	\$ 6
Elimination of Dual Credit	(2,668)	(2,532)	(2,172)
Total Company	\$ 32,765	\$ 31,657	\$ 30,109