

Penumbra Inc.
PEN - \$255 – NYSE

Recommendation: Sell Short

Reasons For Short Sale Recommendation

- **Insanely expensive, 17 x sales, 164 x EBITDA.**
- **Losing market share from 100% to 57% in Neuro.**
- **Much larger competitors.**
- **Revenue growth declining sharply from 40% to 5%.**
- **Gross margin declining from 69+% to 59+%.**
- **Negative cash flow.**
- **Inventory increasing.**
- **Heavy insider sales and people leaving.**
- **Defective medical product responsible for at least 15 deaths.**
- **Probable product recall.**

Financials

Market Capitalization	\$9.28B	Revenue/Shr (TTM)	\$15.21
Enterprise Value	\$9.09B	EBITDA (TTM)	-\$13.31M
Trailing P/E	813	Diluted Earnings/Shr mrq)	-\$0.27
Forward P/E	416	Total Cash (MRQ)	\$268.7M
PEG ratio (5 Yr Expected)	N/A	Total Cash/Shr (mrq)	\$7.40
Price/Sales (TTM)	16.96	Total Debt (MRQ)	\$78.21M
Price/ Book (MRQ)	14.91	Current Ratio (MRQ)	5.46
Enterprise Value/Revenue	16.87	Book Value/Share (MRQ)	\$17.15
Enterprise Value/ EBITDA	-611.00%	Operating cash Flow (TTM)	-\$26.39M
Profit Margin %	-1.79%	Levered Free Cash Flow(TTM)	-\$54.31M
Operating Margin (TTM)	-4.48%	52 Week Change	13.53%
Return on Assets (TTM)	-2.12%	Shares Short	4.61M
Return on Equity (TTM)	-2.32%	% of Float Short	16.11%
Revenue (TTM)	\$538.78M	Short Ratio	10.65

(TTM) = Trailing 12 months, (MRQ) = Most recent quarter, M = Millions, B = Billions, m = Thousands

Short Thesis

There are two parts to our short thesis. 1). Extreme overvaluation given any fundamentals much less rapidly deteriorating ones. 2). Defective medical catheter that has been responsible for at least 15 deaths, 39 injuries and well over 200 malfunctions. Other medical products have been recalled with less.

We think the company is a short on number one alone. Number 2 could massively cripple it as well.

Business 10K

Penumbra is a global healthcare company focused on innovative therapies. We design, develop, manufacture and market medical devices and have a broad portfolio of products that addresses challenging medical conditions in markets with significant unmet need. Our team focuses on developing, manufacturing and marketing novel products for use by specialist physicians and healthcare providers to drive improved clinical outcomes. We believe that the cost-effectiveness of our products is attractive to our customers.

Since our founding in 2004, we have had a strong track record of organic product development and commercial expansion that has established the foundation of our global organization. We have successfully developed, obtained regulatory clearance or approval for, and introduced products into the neurovascular market since 2007, vascular market since 2013 and neurosurgical market since 2014, respectively. We continue to expand our portfolio of product offerings, while developing and iterating on our currently available products. We attribute our success to our culture built on cooperation, our highly efficient product innovation process, our disciplined approach to product and commercial development, our deep understanding of our target end markets and our relationships with specialist physicians and healthcare providers. We believe these factors have enabled us to rapidly innovate in a highly efficient manner.

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We sell our products to healthcare providers primarily through our direct sales organization in the United States, most of Europe, Canada and Australia, as well as through distributors in select international markets. We generated revenue of \$547.4 million, \$444.9 million and \$333.8 million for the years ended December 31, 2019, 2018 and 2017, respectively. This represents an annual increase of 23.0% and 33.3%, respectively. We generated operating income of \$47.5 million and \$1.2 million for the years ended December 31, 2019 and 2017, respectively, and **an operating loss of \$0.9 million for the year ended December 31, 2018.**

Our Markets

We concentrate on **improving treatment outcomes for patients with certain forms of vascular disease** and strive to improve the long-term quality of life for patients recovering from other diseases or injuries requiring rehabilitation. Vascular disease refers to any condition that affects the circulatory system and typically manifests as a blockage or rupture of an artery or a vein. **When the treatment for vascular disease is performed from within a vessel, it is referred to as an endovascular procedure.** Rehabilitation includes exercises which aim to restore a patient to health or normal function through training and therapy after illness or disability. **Endovascular device markets are conventionally classified according to the anatomic location of the disorder, and are generally divided into neuro, which includes neurovascular and neurosurgical, and vascular, which includes peripheral vascular and cardiovascular.** In both of these markets, **our main product technologies include thrombectomy devices to remove clots and embolization devices to treat aneurysms and to occlude vessels.**

We generated revenue of \$331.7 million, \$294.3 million and \$232.4 million from our neuro product category for the years ended December 31, 2019, 2018 and 2017, respectively. We generated revenue of \$215.7 million, \$150.6 million, and \$101.3 million from our vascular product category for the years ended December 31, 2019, 2018 and 2017, respectively. The Company designs, develops, manufactures and markets novel medical devices, and operates as one operating segment.

While reliable third party data is not available for many markets outside the United States, we believe that there is a substantial additional market for our neuro and vascular products throughout the world.

The Neuro Market (55% of Revenue)

The neuro market is comprised of **vascular diseases and disorders in the brain**, including ischemic stroke, brain aneurysms, hemorrhagic stroke and other conditions. Our solutions address the intervention of these diseases and the rehabilitation of these conditions.

Globally, stroke is the second-leading cause of death, and the third-leading cause of serious long-term disability. It is estimated that nearly 14 million strokes occur annually and that there are more than 80 million survivors of stroke globally. In the United States, the American Heart Association (“AHA”) and American Stroke Association (“ASA”) estimate that nearly 800,000 strokes occur annually, and lead to approximately 140,000 deaths per year. It is estimated that there are more than 7 million survivors of stroke in the United States. The majority of stroke survivors require rehabilitation in order to relearn motor skills lost through the brain damage caused by stroke. Within the United States, nearly 66% of stroke survivors receive some form of rehabilitation.

The Vascular Market (45% of Revenue)

Vascular diseases are **diseases occurring in vessels in the body outside of the brain**. Such diseases are very similar to those experienced in the neurovasculature. Just as the disruption of blood flow to the brain has high mortality and morbidity, disruptions in the peripheral vasculature can also have serious adverse consequences. There are approximately 1.4 million incidences of clot in the peripheral vasculature each year in the United States.

Part 1 - Overvaluation

PEN is extremely overvalued on virtually any metric. Worse, most financial metrics are deteriorating. PEN trade at over 800 times trailing earnings and 400 times forward earnings. It trades at **186 times peak earnings** of \$1.34 in 2019. PEN has lost money for the first nine months of 2020 and is estimated to earn \$0.08 in Q4, giving it a loss for the year of \$0.54.

Its peak EBITDA was \$56 million in 2019 for a company with a market capitalization of \$9.2 billion? That's only **164 times EBITDA**, and that was peak EBITDA. EBITDA for 2020 so far is negative \$25 million. We estimate EBITDA for Q4 of \$8 million, so 2020 full year EBITDA of negative \$17 million, give or take.

Boston Scientific, a much better company, trades at 26 times EBITDA. If PEN traded at 26 times peak EBITDA of \$156 million it would be worth \$4.1 billion, 55% less than today. And EBITDA now is far less.

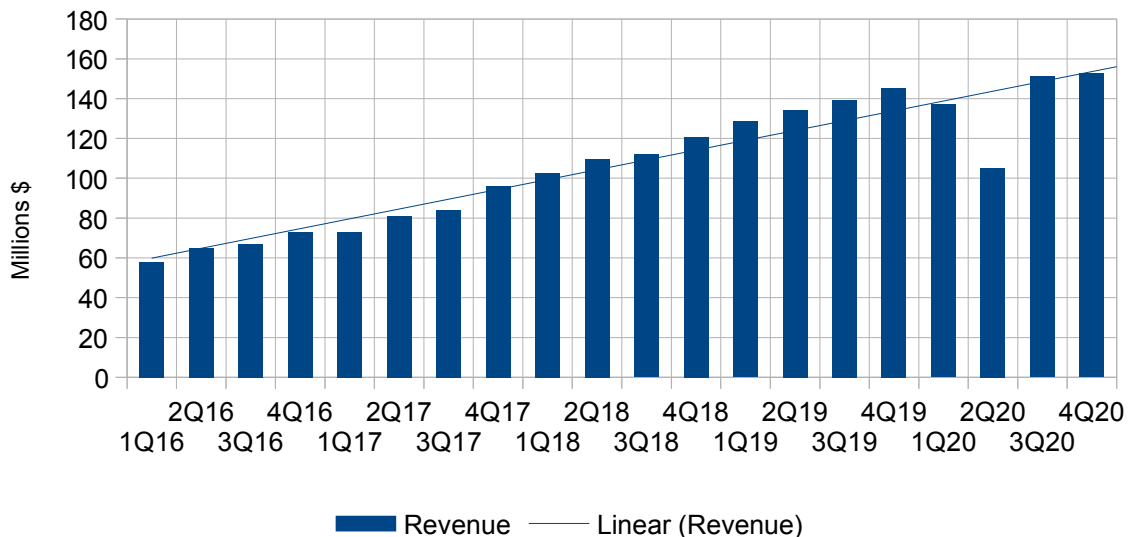
PEN trades at 15 times book value of \$17.15 and has negative cash flow and negative return on assets and equity.

It is hard to understand why this company has over a \$9 billion market capitalization with only \$547 million in sales.

Revenue

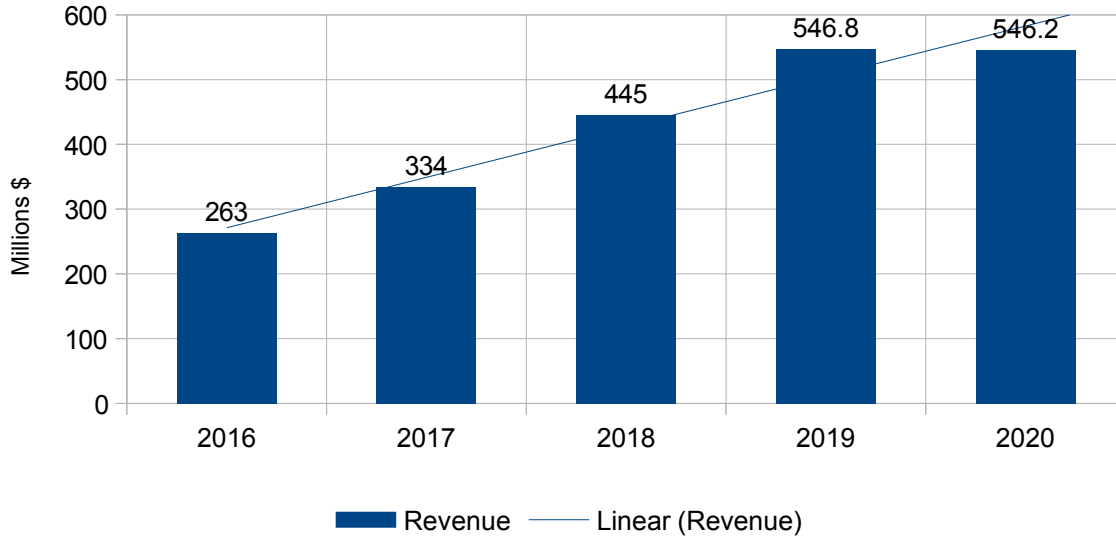
Revenue was growing nicely in 2017 and 2018, going from +25% to +41% in 1Q18, although this was off a small base. In 2019 revenue growth started to decline going from 41% to 19%, a 50% decline in one year. Worse, the decline deteriorated even more so far in 2020. Revenue growth is estimated to be flat to down 0.3% in 2020. Should you pay 400 times earnings, and 164 times EBITDA for no growth?

PEN Revenue



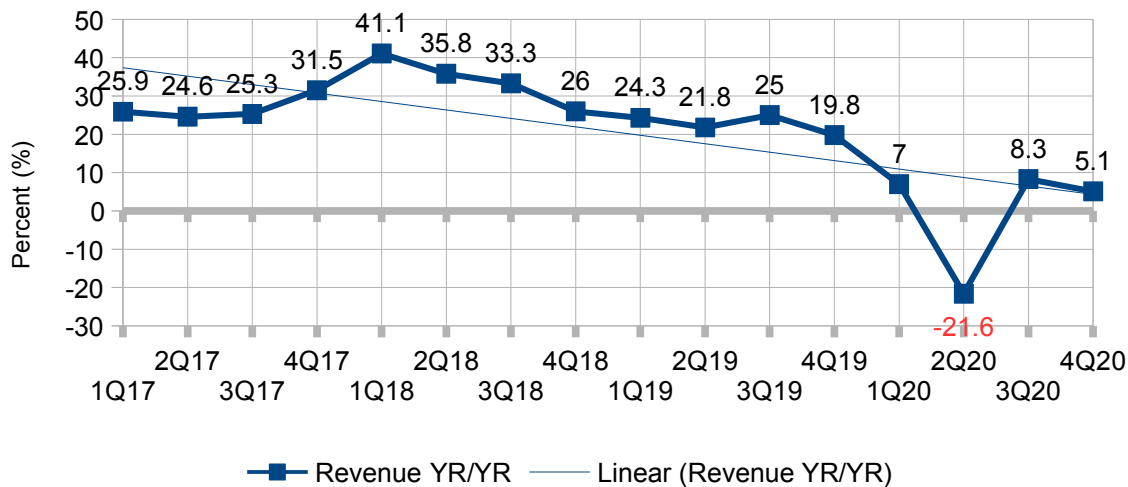
As you can see, revenue growth was increasing nicely until 2020, when it started to flatten out to zero.

PEN Revenue



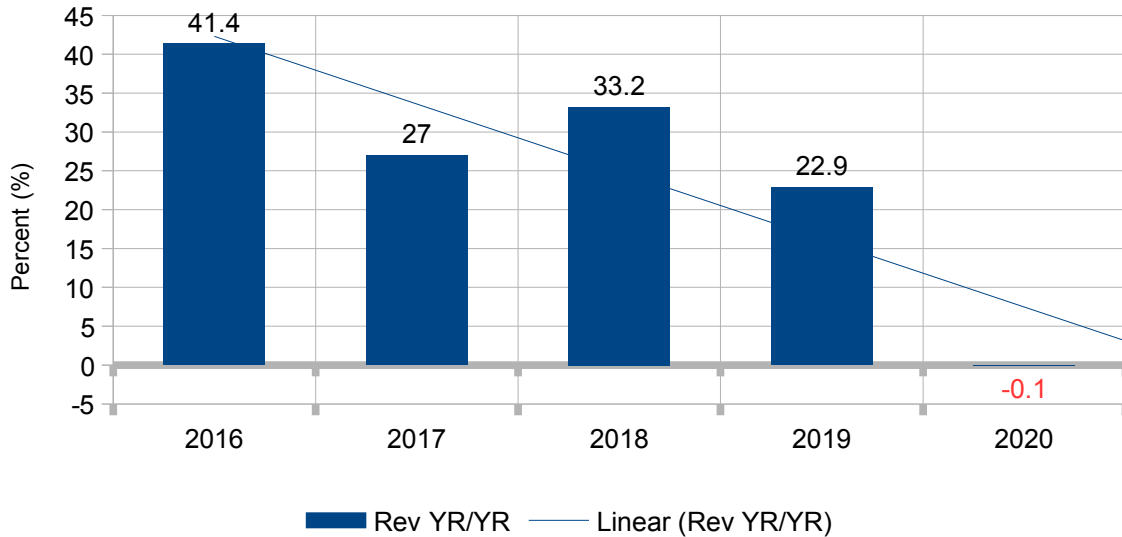
PEN YR/YR Revenue Growth

2017 to 2020 Est.



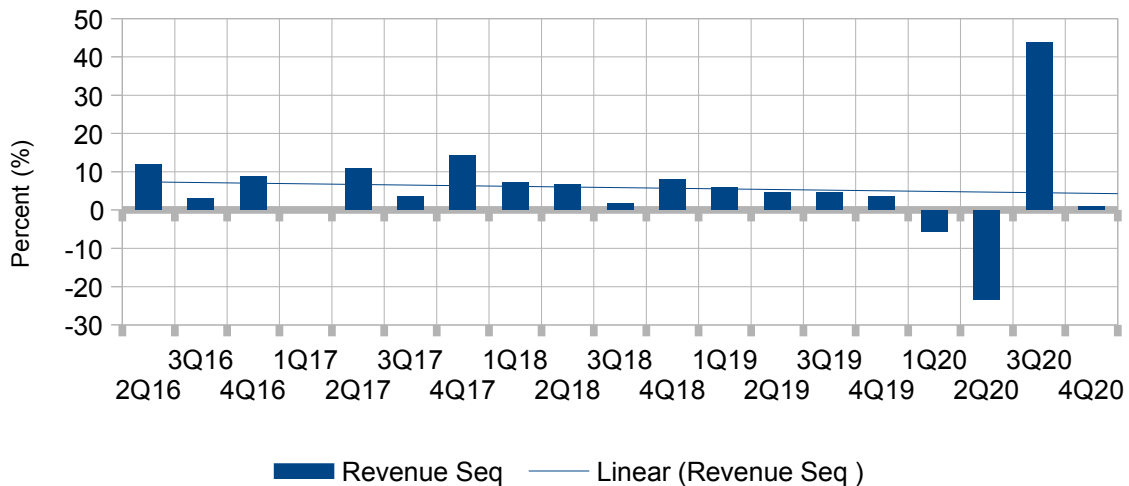
This no longer looks like a growth stock to us. Why does it have a huge growth stock multiple?

PEN YR/YR Revenue Growth %



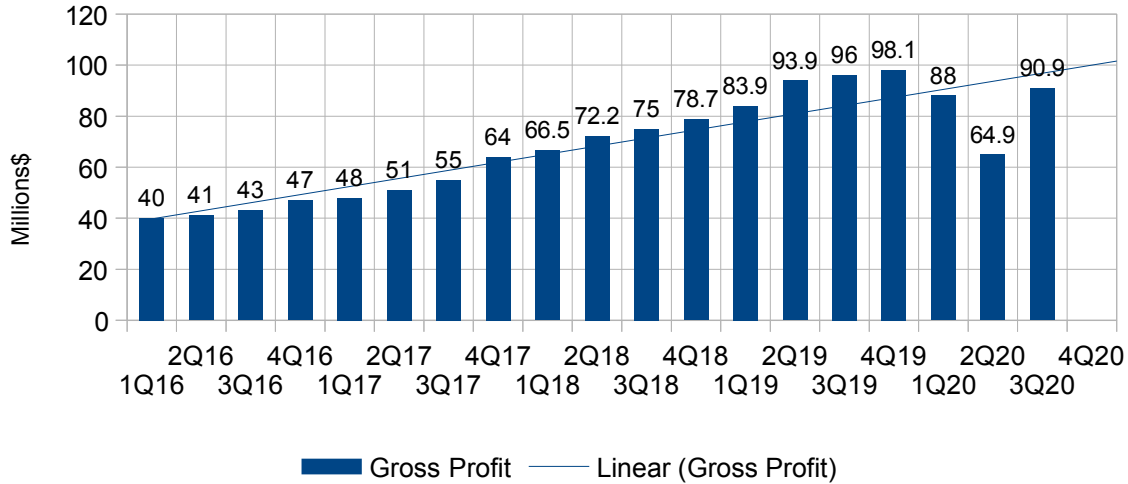
PEN Sequential Revenue Growth

2016 To 2020 Est.



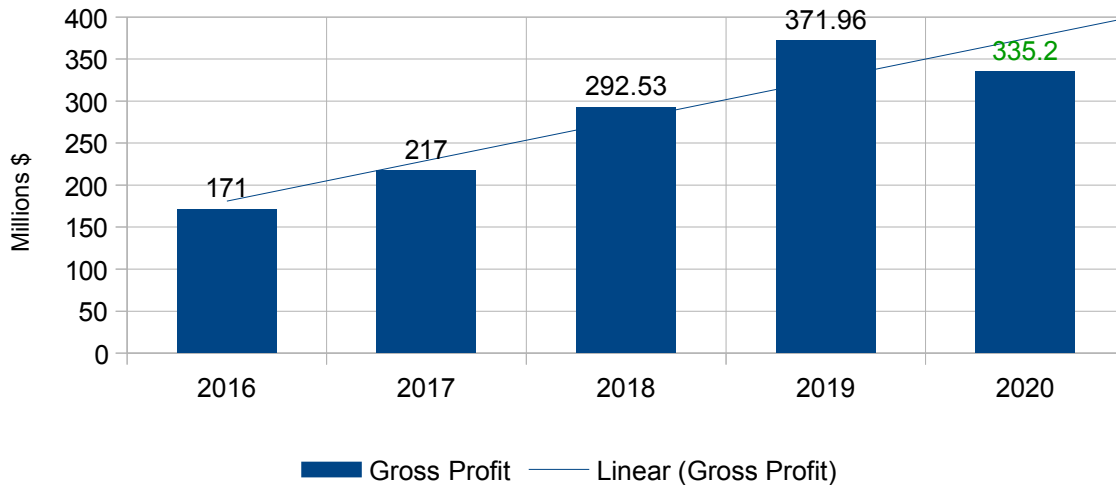
PEN Gross Profit

2016 To 2020 Est.



PEN Gross Profit

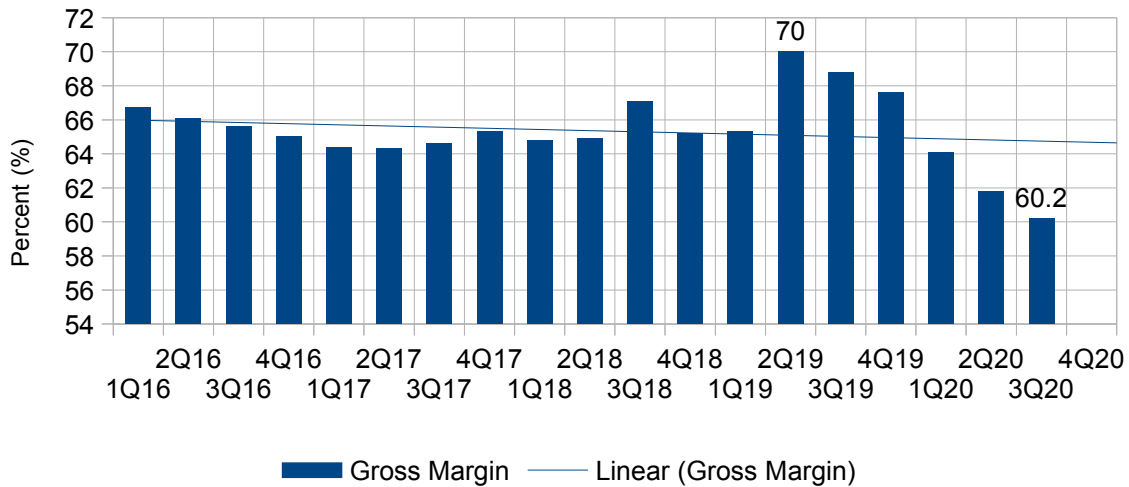
2016 To 2020 Est.



Gross profit has tracked revenue growth, now rolling over.

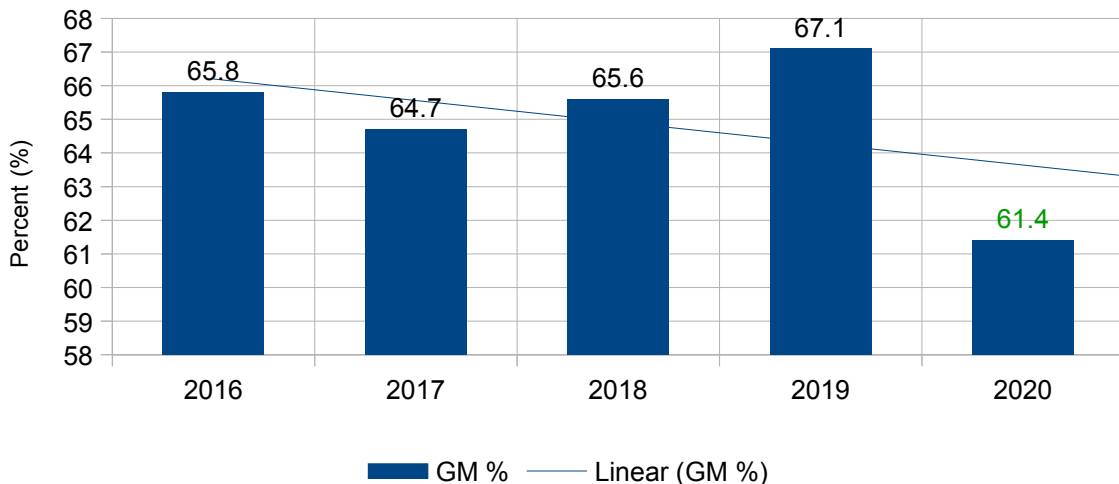
PEN Gross Margin %

2016 To 2020 Est.



PEN Gross Margin %

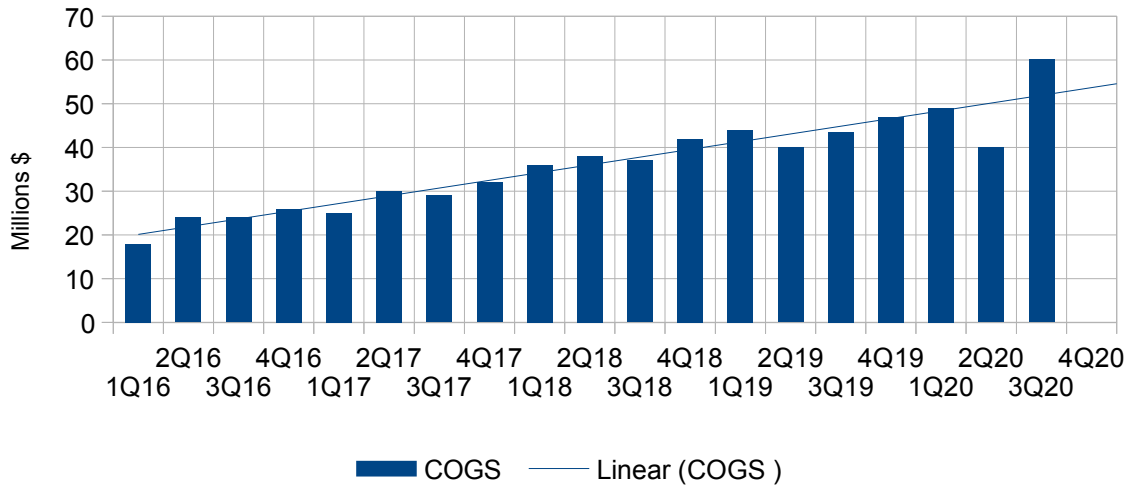
2016 To 2020 Est.



Gross margin has taken a sharp recent drop from years of steady margin.

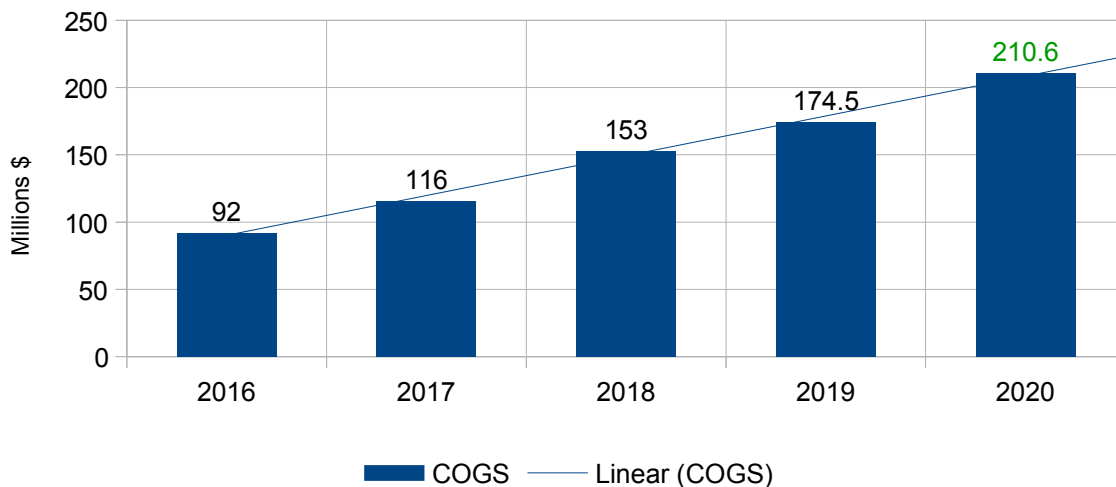
PEN Cost Of Goods Sold

2016 To 2020 Est.



PEN Cost Of Goods Sold

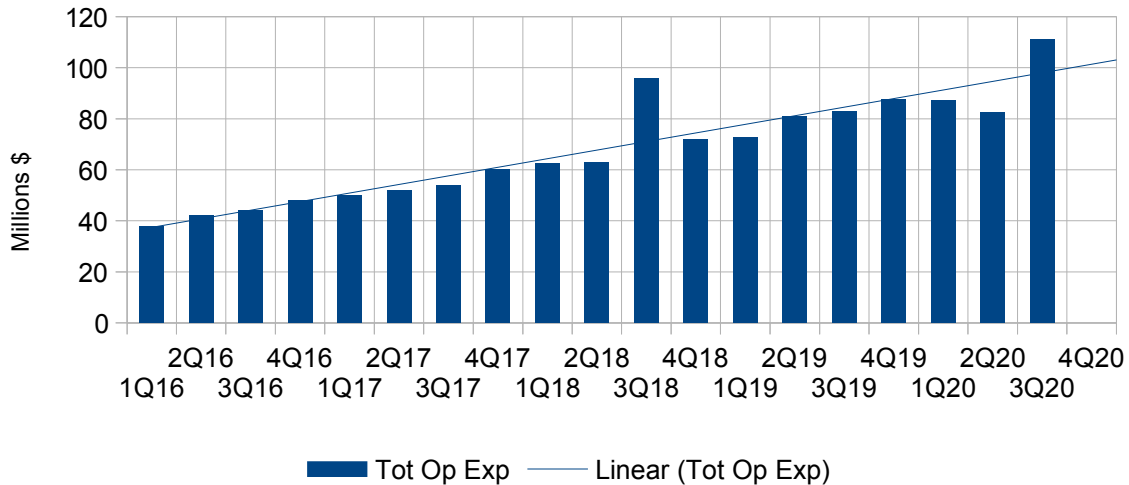
2016 To 2020 Est.



Unlike revenue, COGS has continued to increase, hence the decline in GM.

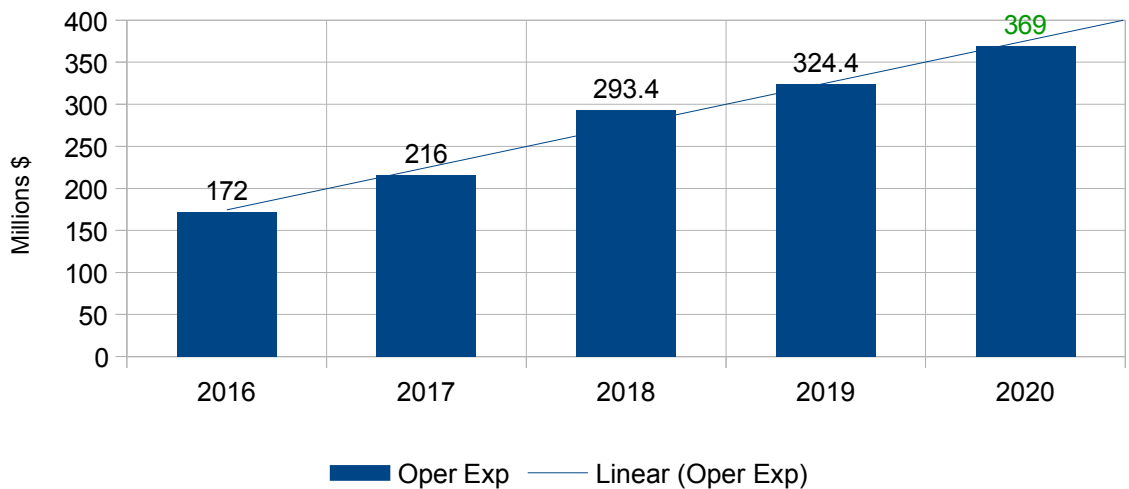
PEN Total Operating Expense

2016 To 2020 Est.



PEN Total Operating Expense

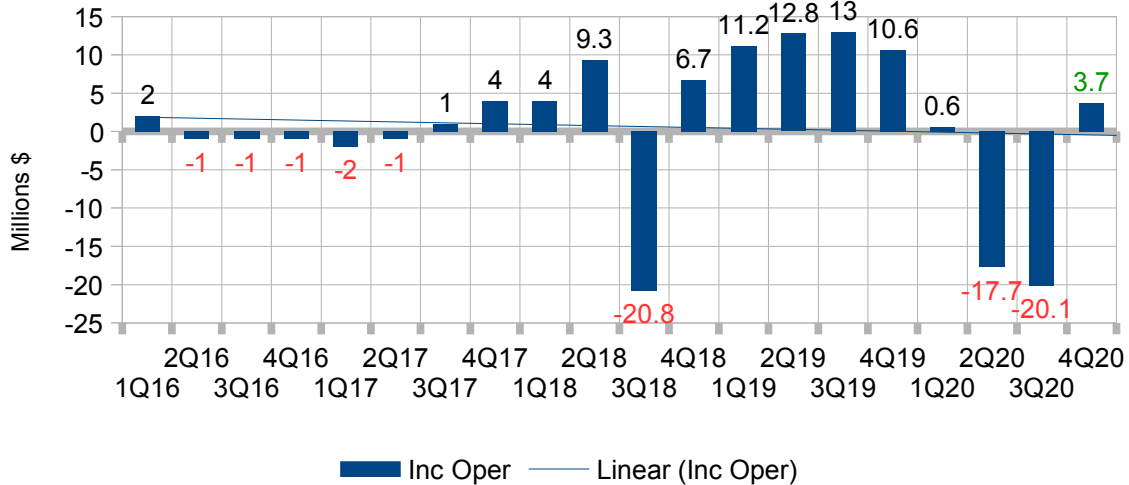
2016 To 2020 Est.



Unlike revenue, operating expenses have kept on increasing.

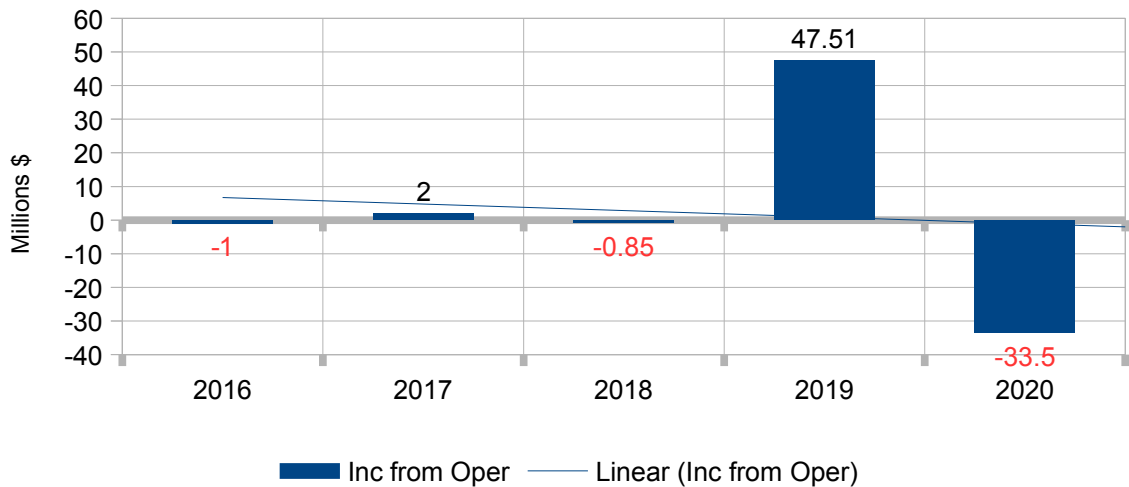
PEN Income From Operations

2016 To 2020 Est.



PEN Income From Operations

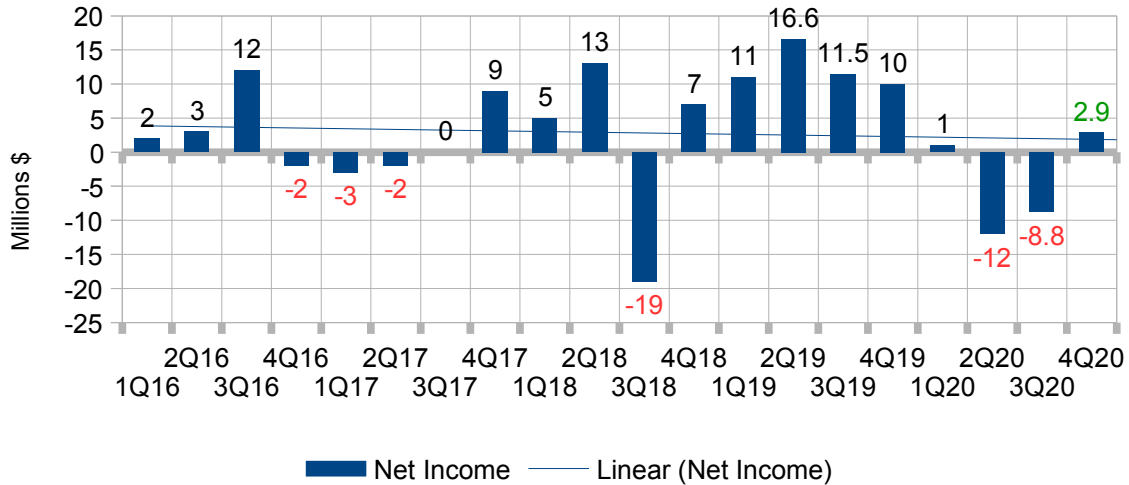
2016 To 2020 Est.



Despite solid revenue growth for several years, PEN barely made any profit. Does \$47 million before taxes support a \$9.2 billion market cap?

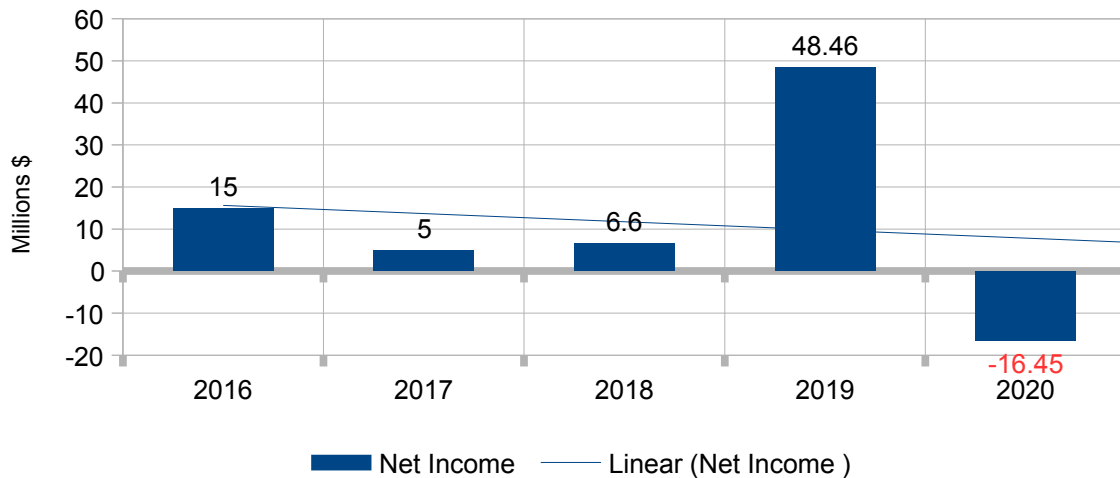
PEN Net Income

2016 To 2020 Est.



PEN Net Income

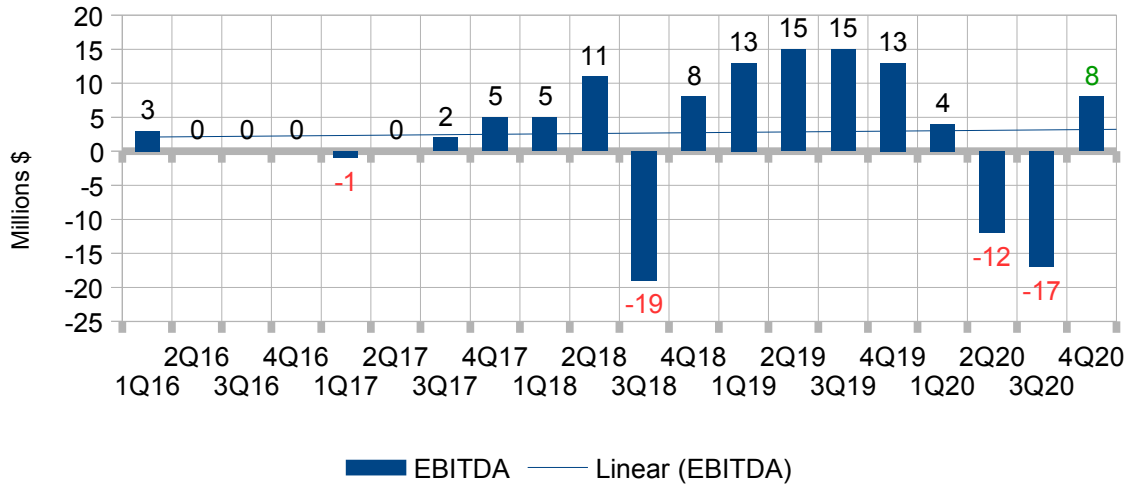
2016 To 2020 Est.



Net income for 2016, 2017, 2018 & 2019 was higher than operating income because of tax benefits. Not worth a high multiple.

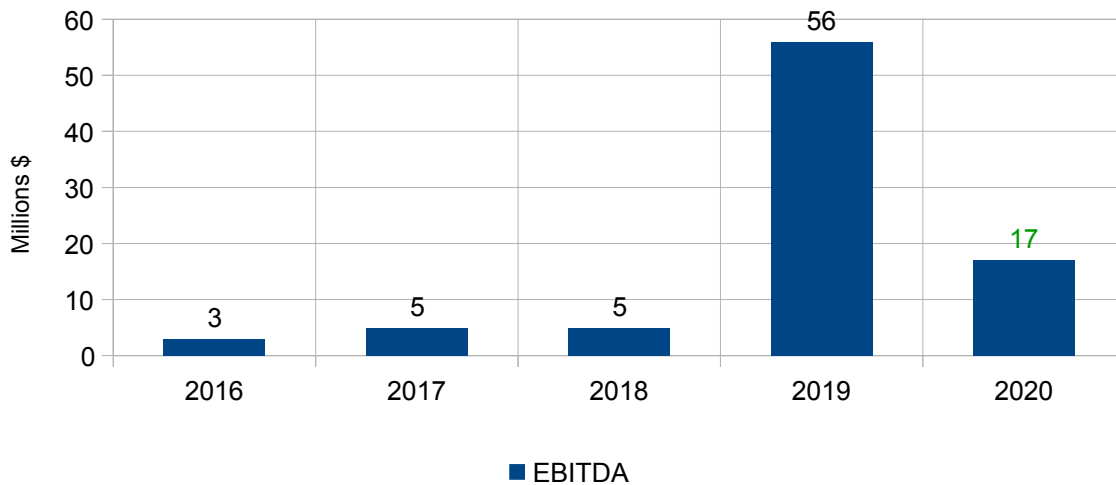
PEN EBITDA

2016 To 2020 Est.



PEN EBITDA

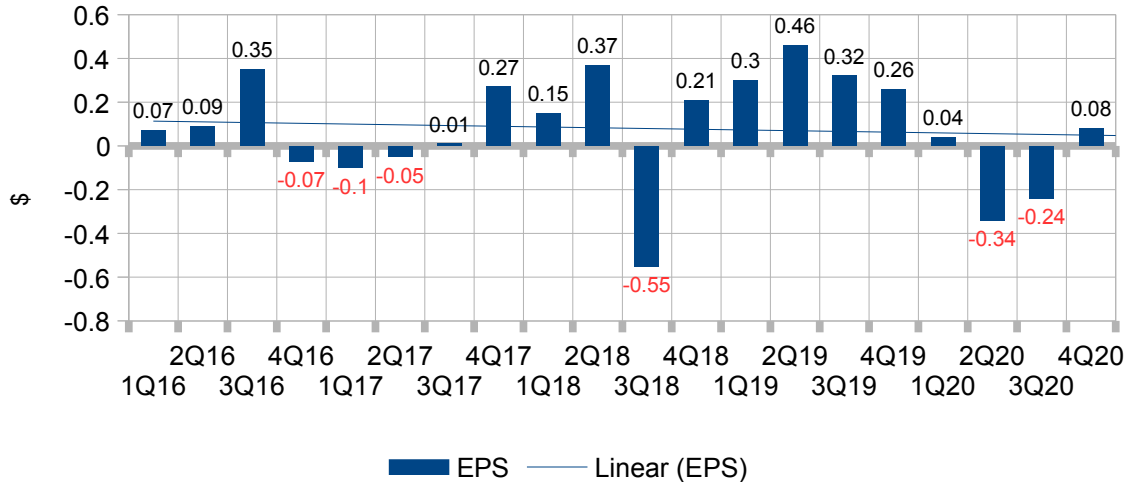
2016 To 2020 Est.



Maybe the big jump in EBITDA in 2019 is the reason the stock trades at nosebleed levels, but still, it was only \$56 million.

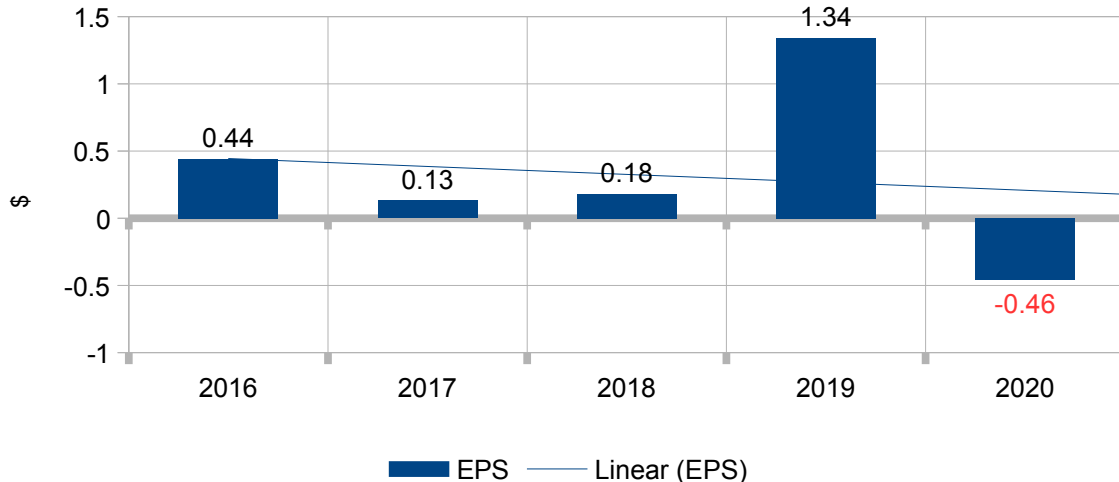
PEN Earnings Per Share

2016 To 2020 Est.



PEN Earnings Per Share

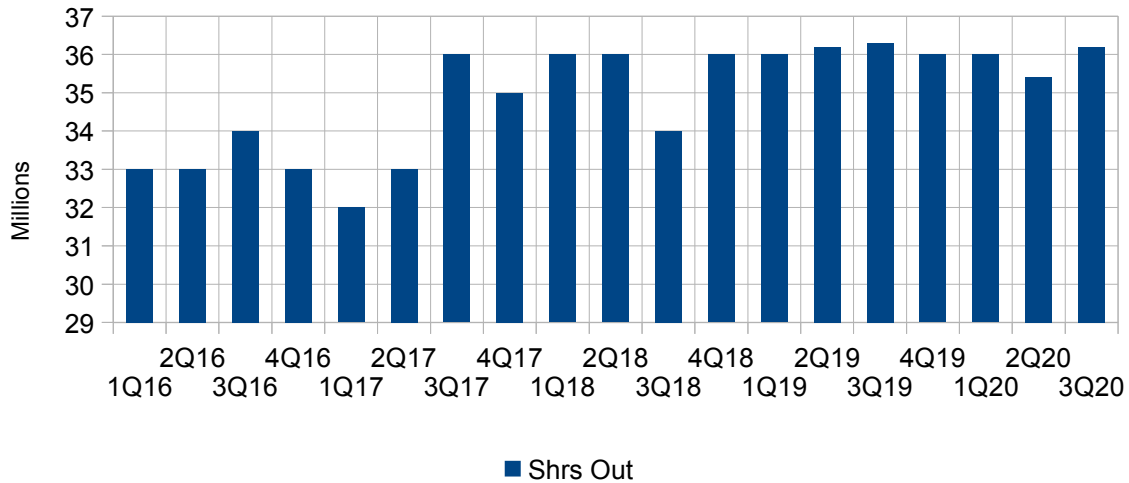
2016 To 2020 Est.



Shouldn't a stock that traded at \$277 have more like \$11.34 per share in EPS instead of \$1.34? This is insane!

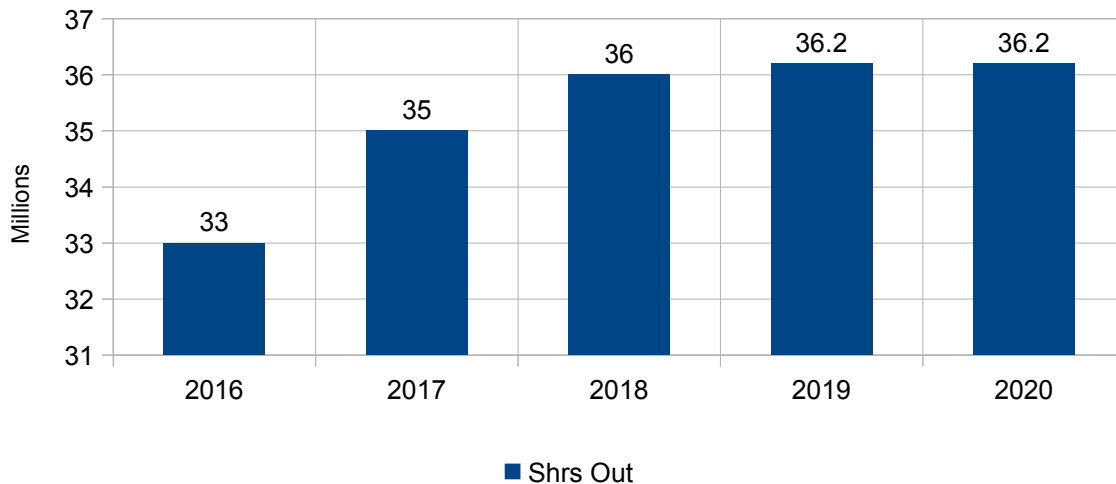
PEN Shares Outstanding (FD)

2016 To 2020 Est.



PEN Shares Outstanding (FD)

2016 To 2020 Est.



Question? Why wasn't the company selling more shares at such a ridiculous share price. The insiders sure were. At prices far lower, \$150.

Insider Transactions Reported - Last Two Years

Insider	Transaction	Type	Value	Date	Shares
PRAY JAMES ROBERT Officer	Sale at price 254.12 - 263.19 per share.	Indirect	1,293,039	Nov 17, 2020	5,000
GREWAL HARPREET S Director	Sale at price 262.77 per share.	Direct	148,991	Nov 16, 2020	567
O'ROURKE BRIDGET A Director	Sale at price 271.46 per share.	Direct	17,645	Nov 13, 2020	65
ELSESSER ADAM Chief Executive Officer	Sale at price 255.95 - 269.86 per share.	Indirect	2,121,260	Nov 11, 2020	8,000
BOSE ARANI Officer and Director	Sale at price 255.42 - 256.50 per share.	Direct	2,042,957	Nov 10, 2020	7,998
BOSE ARANI Officer and Director	Sale at price 255.19 - 255.99 per share.	Direct	510,970	Nov 09, 2020	2,002
O'ROURKE BRIDGET A Director	Sale at price 207.58 per share.	Direct	13,493	Oct 13, 2020	65
ELSESSER ADAM Chief Executive Officer	Sale at price 209.42 - 216.97 per share.	Indirect	1,701,146	Oct 12, 2020	8,000
KASSING DON W Director	Sale at price 206.88 - 214.50 per share.	Direct	149,346	Oct 09, 2020	712
WILDER THOMAS C III Director	Sale at price 196.06 per share.	Direct	22,547	Oct 01, 2020	115
O'ROURKE BRIDGET A Director	Sale at price 200.97 per share.	Direct	13,063	Sep 14, 2020	65
ELSESSER ADAM Chief Executive Officer	Sale at price 199.23 - 202.89 per share.	Indirect	1,605,862	Sep 11, 2020	8,000

Insider	Transaction	Type	Value	Date	Shares
PRAY JAMES ROBERT Officer	Sale at price 209.16 - 213.32 per share.	Indirect	1,063,678	Sep 01, 2020	5,000
PRAY JAMES ROBERT Officer	Sale at price 234.28 - 237.01 per share.	Indirect	1,175,537	Aug 18, 2020	5,000
ROBERTS JOHANNA General Counsel	Sale at price 235.07 - 238.06 per share.	Direct	472,145	Aug 17, 2020	2,000
O'ROURKE BRIDGET A Director	Sale at price 237.16 per share.	Direct	15,415	Aug 13, 2020	65
ELSESSER ADAM Chief Executive Officer	Sale at price 229.77 - 233.68 per share.	Indirect	1,857,160	Aug 11, 2020	8,000
ROTHMAN LYNN D Officer	Sale at price 195.12 - 200.07 per share.	Direct	1,911,917	Jul 20, 2020	9,675
ROTHMAN LYNN D Officer	Conversion of Exercise of derivative security at price 3.98 per share.	Direct	38,506	Jul 20, 2020	9,675
O'ROURKE BRIDGET A Director	Sale at price 189.23 per share.	Direct	8,705	Jul 17, 2020	46
WILDER THOMAS C III Director	Sale at price 192.47 per share.	Direct	44,268	Jul 13, 2020	230
ELSESSER ADAM Chief Executive Officer	Sale at price 186.31 - 194.88 per share.	Indirect	1,535,167	Jul 13, 2020	8,000
ROTHMAN LYNN D Officer	Sale at price 195.00 per share.	Direct	39,000	Jul 13, 2020	200
ROTHMAN LYNN D Officer	Conversion of Exercise of derivative security at price 3.98 per share.	Direct	796	Jul 13, 2020	200
O'ROURKE BRIDGET A	Sale at price 192.47 per share.	Direct	36,377	Jul 13, 2020	189

Insider	Transaction	Type	Value	Date	Shares
Director					
ELSESSER ADAM					
Chief Executive Officer	Sale at price 166.66 - 168.22 per share.	Indirect	1,335,062	Jun 11, 2020	8,000
ELSESSER ADAM					
Chief Executive Officer	Sale at price 177.05 - 192.16 per share.	Indirect	1,501,356	May 11, 2020	8,000
BOSE ARANI					
Officer and Director	Sale at price 185.07 per share.	Direct	1,850,700	May 07, 2020	10,000
BOSE ARANI					
Officer and Director	Sale at price 185.50 - 186.17 per share.	Direct	1,688,286	Apr 23, 2020	9,100
BOSE ARANI					
Officer and Director	Sale at price 185.11 per share.	Direct	166,599	Apr 20, 2020	900
KOSARAJU SRIDHAR					
President	Sale at price 164.89 - 171.46 per share.	Indirect	423,204	Apr 15, 2020	2,500
ELSESSER ADAM					
Chief Executive Officer	Sale at price 154.99 - 161.12 per share.	Indirect	1,262,493	Apr 13, 2020	8,000
O'ROURKE BRIDGET					
A Director	Sale at price 162.56 per share.	Direct	7,153	Apr 06, 2020	44
KOSARAJU SRIDHAR					
President	Sale at price 150.00 - 155.46 per share.	Indirect	385,901	Mar 16, 2020	2,500
ELSESSER ADAM					
Chief Executive Officer	Sale at price 167.94 - 176.91 per share.	Indirect	1,376,096	Mar 09, 2020	8,000
KASSING DON W					
Director	Sale at price 185.79 - 186.66 per share.	Direct	56,635	Feb 24, 2020	304
KOSARAJU SRIDHAR					
President	Sale at price 189.93 - 191.51 per share.	Indirect	476,761	Feb 18, 2020	2,500
GREWAL HARPREET					
S Director	Stock Award(Grant) at price 0.00 per share.	Direct	0	Feb 11, 2020	756

Insider	Transaction	Type	Value	Date	Shares
<u>WILDER THOMAS C</u> <u>III</u> Director	Stock Award(Grant) at price 0.00 per share.	Direct	0	Feb 11, 2020	756
<u>KASSING DON W</u> Director	Stock Award(Grant) at price 0.00 per share.	Direct	0	Feb 11, 2020	756
<u>ROTHMAN LYNN D</u> Officer	Sale at price 185.25 per share.	Direct	926,250	Feb 11, 2020	5,000
<u>ROTHMAN LYNN D</u> Officer	Conversion of Exercise of derivative security at price 3.98 per share.	Direct	19,900	Feb 11, 2020	5,000
<u>BOSE ARANI</u> Officer and Director	Sale at price 185.30 per share.	Direct	1,853,000	Feb 11, 2020	10,000
<u>O'ROURKE BRIDGET</u> <u>A</u> Director	Stock Award(Grant) at price 0.00 per share.	Direct	0	Feb 11, 2020	756
<u>LEEDS JANET</u> Director	Stock Award(Grant) at price 0.00 per share.	Direct	0	Feb 11, 2020	756
<u>SARNA SURBHI</u> Director	Stock Award(Grant) at price 0.00 per share.	Direct	0	Feb 11, 2020	756
<u>KOSARAJU SRIDHAR</u> President	Sale at price 175.09 - 178.08 per share.	Indirect	440,373	Jan 30, 2020	2,500
<u>ROTHMAN LYNN D</u> Officer	Sale at price 175.10 - 178.40 per share.	Direct	1,760,108	Jan 30, 2020	10,000
<u>ROTHMAN LYNN D</u> Officer	Conversion of Exercise of derivative security at price 3.98 per share.	Direct	39,800	Jan 30, 2020	10,000
<u>ROBERTS JOHANNA</u> General Counsel	Sale at price 175.15 - 178.25 per share.	Direct	616,892	Jan 30, 2020	3,500
<u>O'ROURKE BRIDGET</u> <u>A</u> Director	Sale at price 169.07 - 174.13 per share.	Direct	28,117	Jan 27, 2020	163
<u>SARNA SURBHI</u>	Sale at price 168.79 per share.	Direct	46,080	Jan 27, 2020	273



Insider	Transaction	Type	Value	Date	Shares
Director					
GREWAL HARPREET					
S Director	Sale at price 164.16 per share.	Direct	38,906	Jan 02, 2020	237
WILDER THOMAS C					
III Director	Sale at price 164.16 per share.	Direct	19,371	Jan 02, 2020	118
PRAY JAMES					
ROBERT Officer	Sale at price 162.75 - 163.67 per share.	Indirect	870,517	Jan 02, 2020	5,335



Report Date:
November 25, 2020

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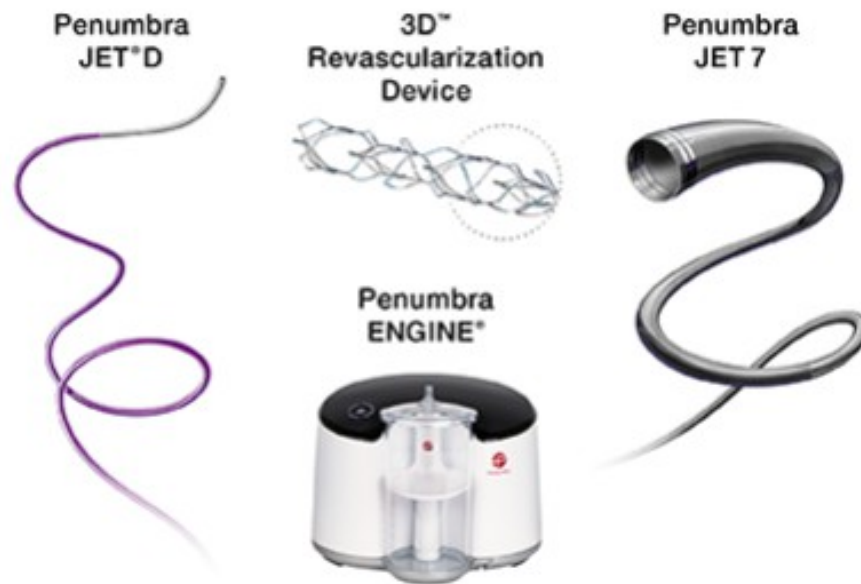
Penumbra	1Q	2Q	3Q	4Q	FY - 2018	1Q	2Q	3Q	4Q	FY - 2019	1Q	2Q	3Q	4Q	FY - 2020
(PEN)	FY-2018	FY-2018	FY-2018	FY-2018		FY-2019	FY-2019	FY-2019	FY-2019		FY-2020	FY-2020	FY-2020	FY-2020	
As of 3Q ending 9/30/2019	03/31/18	06/30/18	09/30/18	12/31/18	12/31/18	03/31/19	06/30/19	09/30/19	12/31/19	12/31/19	03/31/20	06/30/20	09/31/19	12/31/20	12/31/20
Income Statement															
(\$ millions, except per share data)															
Revenue	102.701	109.638	111.806	120.793	444.938	128.439	134.201	139.502	145.263	547.405	137.329	105.109	151.076	152.700	546.214
Growth % (Yr/Yr)															
Cost of Revenue	36.144	37.386	36.794	42.081	152.405	44.529	40.273	43.504	47.135	175.441	49.320	40.179	60.153	61.000	210.652
Gross Profit	66.557	72.252	75.012	78.712	292.533	83.910	93.928	95.998	98.128	371.964	88.009	64.930	90.923	91.700	335.562
Gross Margin %	64.8%	65.9%	67.1%	65.2%	65.7%	65.3%	70.0%	68.8%	67.6%	68.0%	64.1%	61.8%	60.2%	60.0%	61.4%
Research & Development	8.013	8.193	9.092	10.000	35.298	11.667	13.462	13.733	14.000	52.862	12.946	22.725	34.923	30.000	100.594
Sales and Marketing expense	54.499	54.776	55.934	62.043	227.252	61.091	67.665	69.289	73.549	271.594	74.453	59.854	76.158	58.000	268.465
General and Administrative expense			30.835												
Depreciation and Amortization															
Restructuring															
Gain on sale															
Total costs and expenses	62.512	62.969	95.861	72.043	293.385	72.758	81.127	83.022	87.549	324.456	87.399	82.579	111.081	88.000	369.059
Opex % of sales	60.9%	57.4%	85.7%	59.6%	65.9%	56.6%	60.5%	59.5%	60.3%	59.3%	63.6%	78.6%	73.5%	57.6%	67.6%
Income (loss) from operations	4.045	9.283	-20.849	6.669	-0.852	11.152	12.801	12.976	10.579	47.508	0.610	(17.65)	-20.158	3.700	-33.497
Operating Margin %	3.90%	8.80%	-18.60%	5.50%		8.70%	9.53%	9.30%	7.30%	8.70%	0.40%	-16.80%			
Interest income	0.749	0.720	0.771	0.770		0.733	0.784	0.759			0.299	0.108	0.413	0.400	
Interest expense	-0.290	-0.340	0.170												
Other Income (expense), net						0.024	0.071	-0.772			-1.655	0.511	0.014		
Income (Loss) before income taxes	4.504	9.663	-19.908	7.349	1.608	11.909	13.514	12.963	11.749	50.135	-0.746	(17.03)	-19.731	4.100	
Income tax benefit (expense)	1.938	4.948	-1.598	-0.885	4.403	-1.455	2.735	-1.963	3.814	3.131	1.634	4.13	9.855		
Tax Rate %	-43.0%	-51.2%	8.0%			10.5%	-20.2%	15.1%	-32.5%	6.2%	-119.00%	-24.30%	-49.90%		
Net income (Loss)	6.442	14.611	-21.506	3.363	2.910	10.454	16.249	11.000	9.301	47.004	0.888	(12.90)	-9.88		
Net loss to non-control interest	(0.951)	(1.230)	(3.496)	1.986	(3.691)	(0.244)	0.339	(0.483)	(1.066)	(1.454)	-0.537	(0.94)	-1.06	-1	
Net Income(loss) to Penumbra	5.491	13.381	(18.930)	6.659	6.601	10.698	16.588	11.483	9.689	48.458	1.425	(11.96)	-8.82	2.896	-16.454
EPS (Basic) \$	\$0.16	\$0.39	(\$0.55)	\$0.19	\$0.19	\$0.31	\$0.48	\$0.33	\$0.27	\$1.39	\$0.04	-\$0.34	-\$0.24	\$0.08	-\$0.46
EPS (Diluted) \$	\$0.15	\$0.37	(\$0.55)	\$0.15	\$0.18	\$0.30	\$0.46	\$0.32	\$0.26	\$1.34	\$0.04	-\$0.34	-\$0.24	\$0.08	-\$0.46
YR/YR EPS Growth % (Diluted)															
Weighted Shares Out Basic	33.846	34.072	34.248	34.250	34.138	34.507	34.694	34.840	34.900	34.750	35.043	35.400	36.207	36.200	36.200
Weighted Shares Out Diluted	35.917	36.116	34.248	36.000	36.087	36.213	36.214	36.271	36.200	36.266	36.363	35.400	36.207	36.200	36.200
EBITDA	5.00	11.00	(19.00)	8.00	5.00	13.00	15.00	15.00	13.00	56.00	4	-12	-17	8	-17

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Part 2 – The Jet 7 Catheter

The Jet 7 is Penumbra's main product. It is used for the treatment of ischemic stroke and accounts for approximately 41% of total revenue for PEN.

Penumbra System[®]



The Penumbra System[®] is a fully-integrated system designed specifically for mechanical thrombectomy. It is intended for use in the revascularization of patients with acute ischemic stroke secondary to intracranial large vessel occlusions.

The Penumbra System is comprised of several devices:

- Penumbra JET[®] 7 and Penumbra JET D Reperfusion Catheters
- ACE[™] Reperfusion Catheters
- MAX[™] Reperfusion Catheters
- 3D Revascularization Device[™]
- Penumbra ENGINE[®] aspiration source
- Penumbra ENGINE Canister
- Hi-Flow Aspiration Tubing

The Penumbra System is engineered for quick and effective clot removal. Penumbra ENGINE generates nearly pure vacuum to power clot capture by the Penumbra JET 7, Penumbra JET D, ACE, and MAX Reperfusion Catheters. The 3D Revascularization Device is a next generation thrombus removal device designed for use with the Penumbra JET 7 and ACE Reperfusion Catheters.

The Jet 7 removes blood clots, thrombectomy, in a stroke patient, by the doctor inserting a small tube (catheter) into the artery. Once the catheter reaches the clot, the clot is removed by suction (aspiration).

Penumbra was the first company to develop aspiration catheters for the treatment of acute ischemic stroke. That was the reason for their strong revenue growth. However, in 2018 and 2019, other companies developed similar catheters, that was the reason for the slowdown in revenue growth for PEN starting in 2019 and continuing today.

While PEN was the early leader, competitors started to develop and introduce better catheters. In 2018, Microvention introduced a device called “Sofia”. It was far superior to the Jet 7 because it was far more flexible and trackable, two huge advantages in a catheter. Soon, other much larger competitors, Boston Scientific, Medtronic, and Stryker started to introduce their superior catheters as well, which further cut into PEN's market share. PEN's market share went from 100% in neuro to under 60% today.

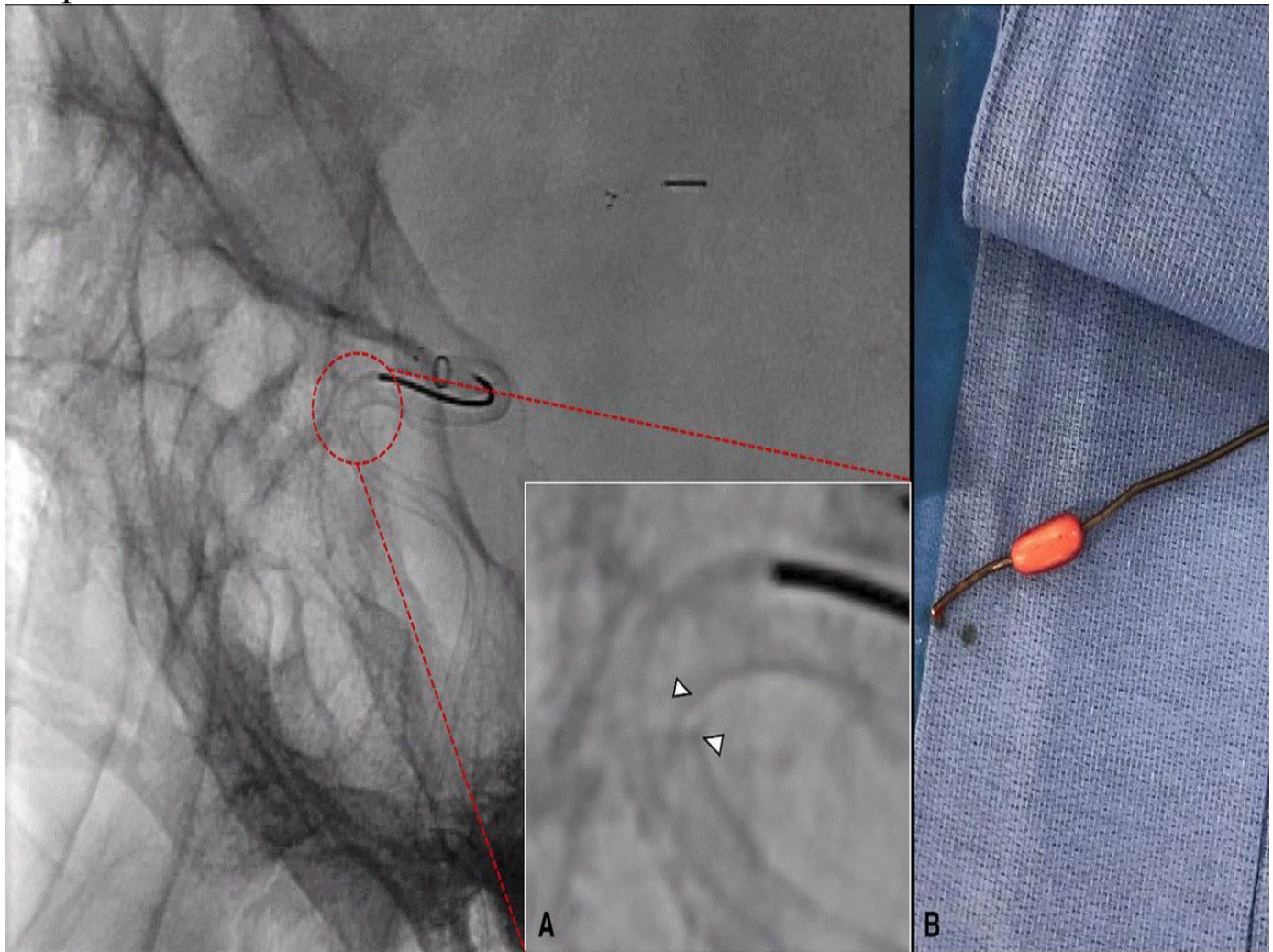
While, PEN was the early leader, their research and development budget was **under \$60 million dollars**. Compare that to **Medtronic, which spends close to \$2.4 billion, or Boston Scientific which spends over \$1 billion, or Stryker, that spends almost one billion** or Microvention that spends almost \$500 million. PEN is a small fish in a large pond.

Do to the huge success of the Sofia, PEN realized after they lost market share, that they had to improve their Jet 7. **In July 2019, they introduced the Jet 7 Xtra Flex**. With new technology, it was far more flexible and now comparable to the Sofia.

However, by increasing the flexibility, it seems that it weakened the catheter.

Less than a year later, in June 2020, **there were 11 deaths in Japan** caused by the Jet 7 Xtra Flex. PEN's Japanese distributor, Hiragana, sent a letter to hospitals there, warning about the Jet 7 malfunctioning. The letter said that the catheter expanded like a balloon, rupturing the artery in the brain, causing death to the patient. The Jet 7 was removed from the market in Japan.

During a thrombectomy, it is common for doctors to inject, by hand, a liquid to monitor the blood flow better. When the doctor injected the liquid, instead of traveling straight through it like in a hose, the catheter expanded to a size greater than the patients artery causing a massive rupture and instant death to the patient.



New devices and technologies

JET 7 XTRA Flex reperfusion catheter related complications during endovascular thrombectomy



Shahram Majidi¹,  Devin V Bageac¹, Islam Fayed², Benjamin Yim¹,  Reade De Leacy¹, Rocco A Armonda²

Author affiliations +

Abstract

Endovascular thrombectomy has revolutionized the management of acute ischemic stroke from emergent large vessel occlusion. Continued technological advancement in the field, as evidenced by successive introduction of large bore aspiration catheters with enhanced trackability and large inner diameter, has played a major role in achieving fast and robust recanalization and improved clinical outcome. Here, we present three patients with intraprocedural device malfunction related to the JET 7 XTRA Flex reperfusion catheter.

[View Full Text](#)

<http://dx.doi.org/10.1136/neurintsurg-2020-016826>

MAUDE's unflattering accounts

After Penumbra's decade plus of success, the company now faces a very real quandary. The FDA's [Manufacturer and User Facility Device Experience](#) (MAUDE) database **lists 11 deaths that occurred after operations in January through the end of July that involved the Jet 7 Xtra Flex.** The MAUDE database has one such [report](#) of a death after an operation last year; Penumbra rolled out the new catheter commercially in mid-2019.

MAUDE is an informal, **voluntary reporting system** for public tracking of adverse events like injuries and deaths involving any piece of medical equipment approved for use in the U.S. A wide array of individuals, including medical professionals, family members of people operated on, as well as company representatives, can submit entries to MAUDE, so the reports vary in their amount of detail. And unlike a clinical study or an autopsy, MAUDE entries are not necessarily recorded in a scientific or medical fashion.

(In this manner, MAUDE resembles another database, the FDA Adverse Event Reporting System, which is a repository of adverse pharmaceutical event reports. The Foundation for Financial Journalism used FAERS data to reveal a

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pattern of significant numbers of fatal drug reactions from products sold by [Corcept Therapeutics](#), [Acadia Pharmaceuticals](#) and [Insys Therapeutics](#).)

Despite their limitations, MAUDE records are certainly valuable for anyone hoping to detect a possible trend.

All 12 MAUDE entries detailing deaths after 2019 and 2020 operations that involved the Jet 7 Xtra Flex catheter **mentioned the device's distal tip suddenly expanding or fracturing**. And eight reports noted at least one arterial rupture – with many of the ruptures cited as occurring in the [internal carotid artery](#), which supplies blood to the brain and eyes.

Reported Deaths After Use of Jet 7 Xtra Flex			
Surgery date	Contrast use	Comments by the filer	Penumbra's response
Jan. 2	Yes	Internal coratid artery ruptured after contrast administered, "cause of death is unknown"	Noted product not returned for evaluation, re-emphasized published risks.
Jan. 16	Yes	Catheter tip lodged in internal coratid artery, "metal braiding exposed" when removed. Role of Jet 7 in patient death is "unknown."	Said device investigation not complete.
Jan. 17	No	"Last centimeter" of the catheter lodged in carotid artery, catheter had "exposed metal braiding" when removed.	None
Jan. 30	Yes	Internal coratid artery ruptured after contrast administered.	Noted product not returned for evaluation, re-emphasized published risks.
March 15	No	"A [blood] vessel rupture was noted."	None
April 24	Yes	"Upon removal it was noticed that the distal end of the Jet 7 had fractured," patient presented with COVID-19.	Suggested Jet 7 "damage typically occurs due to forceful retraction against resistance."
April 28	Yes	Jet 7 tip broke and ruptured choroidal artery, cause of death "determined to be related to the Jet 7."	Re-emphasized published risks.
May 13		"Distal tip of the Jet 7 had broken off and had lodged in the distal pseudoaneurysm, which was actively hemorrhaging."	Suggested Jet 7 "damage typically occurs due to forceful retraction against resistance."
May 26	Yes	Tip of the catheter broke and caused a rupture in the internal carotid artery.	None
June 8	Yes	After injection of contrast, distal tip of Jet 7 expanded. "The patient's death was determined to be related to the Jet 7."	"The device has been returned and the investigation results are pending."
July 25	Yes	Jet 7 expanded while in left distal internal carotid artery and in middle cerebral artery. "Consequently, the brain vessel ruptured" aneurysm.	Noted the device has not yet been returned and a report will be submitted after the investigation is completed.

Source: 2020 MAUDE data

Nine MAUDE entries describing 2020 operations, however, claimed the Jet 7 Xtra Flex either fractured or expanded shortly after a surgeon began a [cerebral angiography](#). In the latter type of procedure, a catheter is injected with an iodine contrast dye to make the artery — and the clot — visible on X-rays.

Angiography has been a standard component of clot-removal surgery for years. It is estimated that 20% to 50% of doctors routinely use it.

The Maude database now lists 18 deaths from the Jet 7 Xtra Flex. And it shows over 200 malfunctions over the past 16 months. Most of these are from the Distal tip breaking in the same spot. This is likely the result of a design flaw.

Maybe the most problematic aspect for Penumbra concerning MAUDE lies with **what is not described there: deaths related to competitors' aspiration catheters. MAUDE carries no entries** (filed through July 31) for Medtronic's React 68 and 71, Stryker's AXS Vecta 71 and Terumo's Sofia Plus aspiration catheters.

And a key Penumbra competitor has seized on Jet 7 Xtra Flex's troubles as a marketing opportunity. Medtronic has been running a [digital advertisement](#) on its neurovascular unit's LinkedIn page, **touting its aspiration catheter's ability to "manually deliver contrast injections."** The logic behind Medtronic's running the ad is simple: While few surgeons probably spend much time on LinkedIn, Penumbra sales staffers — unaccustomed to marketing a device whose safety profile is being questioned — might be weighing their career options, and some of them may be tempted to defect.

Asked about a description of a "voluntary recall" in Japan, Penumbra's Barry [replied](#), "No, this is not true. The product has not been recalled in Japan." Penumbra's **Japanese distributor "paused sales"** while her company updated the Jet 7 Xtra Flex's "instructions for use," she said. After Japanese regulators approve the catheter's new instructions, the device will be restocked, Barry claimed.

The Japanese market accounted for [7.8 percent](#) of Penumbra's sales in 2019, or \$42.5 million, according to its annual report.

It seems to us, that PEN seeing the threat to its cash cow, **rushed the rollout of the Jet 7 Xtra Flex without sufficient testing**. They pressure tested it at 45 psi for 45 seconds, to meet FDA guidelines. However, hand injecting contrast media into a catheter often times exceeds 80 psi, according to experts. PEN should have known that 45 psi, while meeting FDA requirements, was far inadequate in the operating room. The Sofia catheter has been tested to 300 psi. Obviously, the Sofia was tested to be far more than necessary, the Jet 7? Not so much.

Warning Letters

So, in June 2020, PEN's distributor was warning hospitals in Japan about the Jet 7. It took another 5 weeks before Penumbra issued a letter on July 27, 2020 warning doctors to exercise caution with the Jet 7 and NOT to inject contrast media into the Jet 7 because there was **only a risk of death or injury**. This letter was one year after the launch of the Jet 7, at the time of this letter, 15 people had already died in the U.S, 3 died in Japan and perhaps 200 more were injured.

The Japan letter by their distributor, mentions that **deaths occurred BECAUSE of the Jet 7**, and explained how the device failed. The distributor "paused" sales of the unit in Japan. Others say it was taken off the market. We are unclear which is correct. In either case, it is not being used in Japan currently.

The US letter by Penumbra 5 weeks later, only says that there is a risk of death or injury, not that there already have been 18 deaths. **We are not clear if this letter was received by most surgeons that use the product and if the letter was powerful enough to warn them of the extreme danger of death**. Penumbra implied in the letter that doctors did not follow the instructions and warnings. There was no warning in their original instructions about hand

injections of contrast media. There was a warning about using high pressure machine injections. In the July 27th letter, they warned not to do hand injections of contrast media, but that was not in the original instructions.

We think that lawyers for patients families that died will find these warnings a day late and a dollar short. [GoldenbergLaw](#)

“Did you or a loved one undergo an operation to remove a blood clot and come out with a brain bleed? The Defective Catheter Attorneys at [GoldenbergLaw](#) are currently investigating cases where an individual has suffered a stroke or brain bleed during a thrombectomy procedure in which a Penumbra Jet 7 Xtra Flex catheter was used. [Contact us today](#) for a free consultation”.

[Call 855-751-6465 >](#)

As far as we know, there have not been any additional deaths since July 27, 2020 according to the Maude database. But remember, that database is a voluntary database, it may not catch every case.

Possible Recall

We think that it is extremely likely that the Jet 7 will be recalled. Why do we think that? Because other catheters have been recalled with LESS incidents of injury or death. Cook Medical had a catheter recalled after only 4 injuries. Boston Scientific had a catheter recalled after 13 injuries. We would say that at 18 deaths it is a near certainty that the Jet 7 XF will have a Class 1 recall. We would think that many/most doctors will switch away from Penumbra's products so that they are not sued for now knowingly using a defective product. The damage to the brand could be epic.

Perhaps this is why there has been so much insider selling. The CEO has sold 5 times since deaths were announced. The CIO and founder, Arani Bose has sold 50% of his holdings since the Jet 7 Xtra Flex launch. The former CFO & President, Sri Kosaraju has sold over 50% of his shares. Surely, it's just a coincidence, right?

Indigo System

Indigo[®] System



The Jet 7 Xtra Flex is not the only possible flawed product. The Indigo System was launched in July 2020, and according to Maude, **already has 65 malfunctions!** Is this a sign of poor quality control? It sure looks like it to us, and probably to any attorney that discovers this as well.

Liability

We are not exactly sure what their liability exposure is. Estimates run from \$2 million to \$10 million per death. Based on 2018 paid claim data from the top 25 malpractice insurers in Florida, carriers paid an average of \$1,037,009 in indemnity costs per paid claim. Those were standard malpractice, not necessarily deaths. So, \$2 million to \$10 million sounds about right. It also depends on if there are punitive damages or not. One hundred million dollars is not out of the question.

Resignations

One of our historical indicators of a good short candidate is if there are a lot of resignations of senior leadership (Tesla, being the exception). Penumbra has had 6 senior management resignations, VP's, director, CFO/President, CMO, Global head and almost a dozen sales managers and several others.

Conclusion

We think the valuation of PEN all by itself, without any product recalls and losing 40% of its business, is ridiculous. At 16 times sales, 164 times peak EBITDA, 186 times peak earnings for a company with zero sales growth and margins declining, makes no sense. A much bigger and better competitor Boston Scientific trades at 26 times EBITDA. If PEN would trade there it would decline 55% from here.

Given that there is an extremely likely product recall that could affect 40% of their revenue, we think that there is tremendous down side risk from here.

Short term price target: \$200

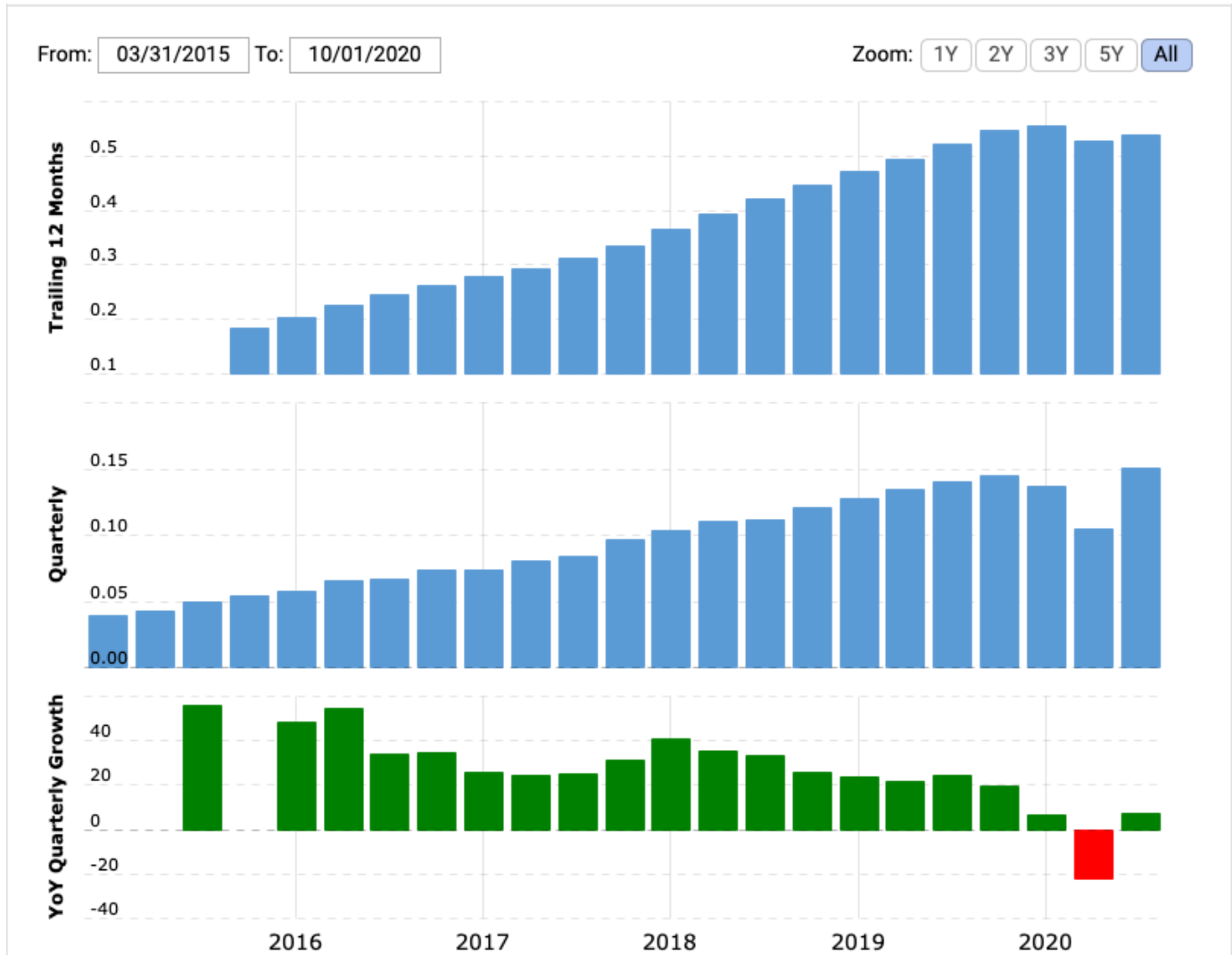
Medium price target:\$150-\$175

Long term price target:\$100-\$125

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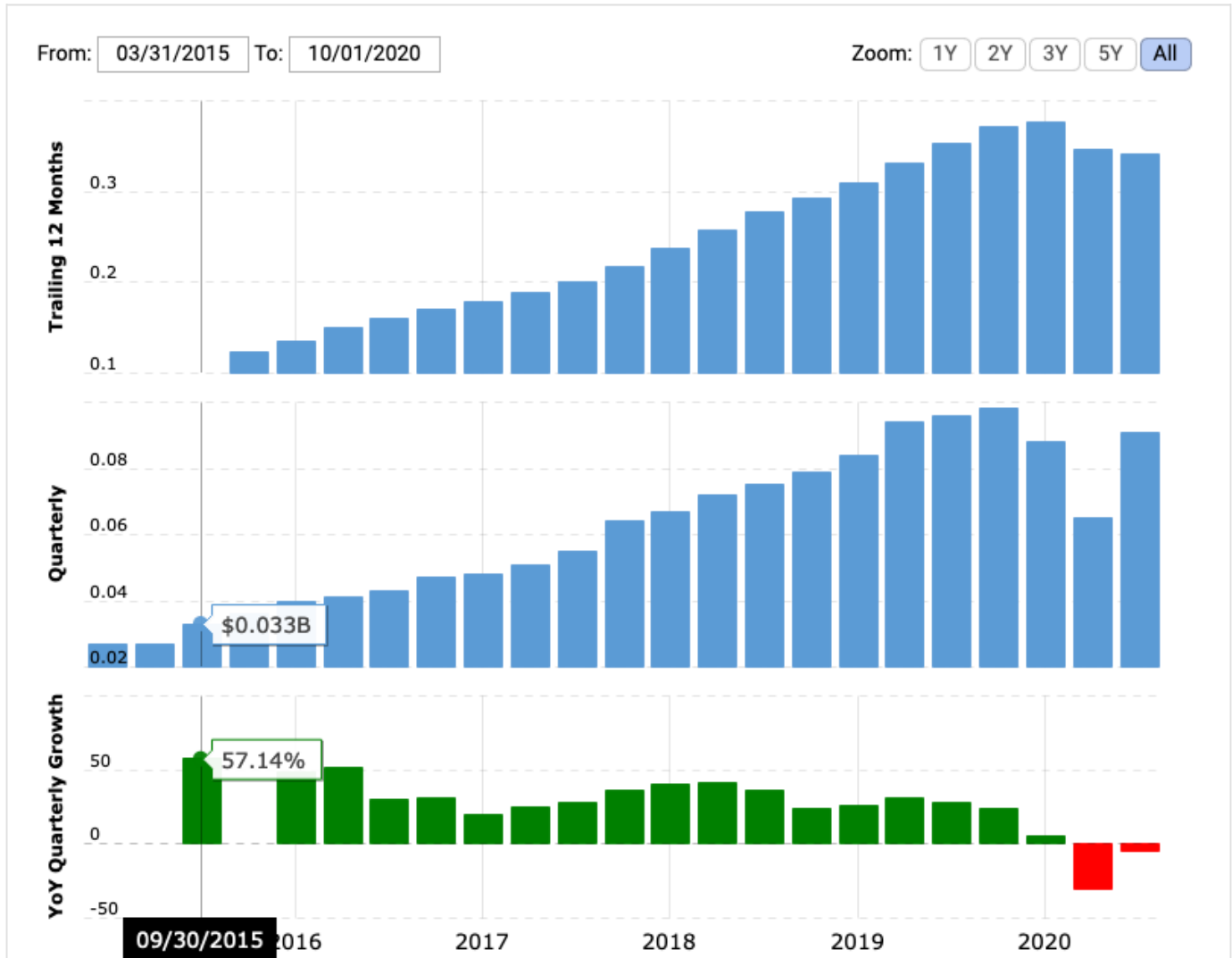
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Revenue



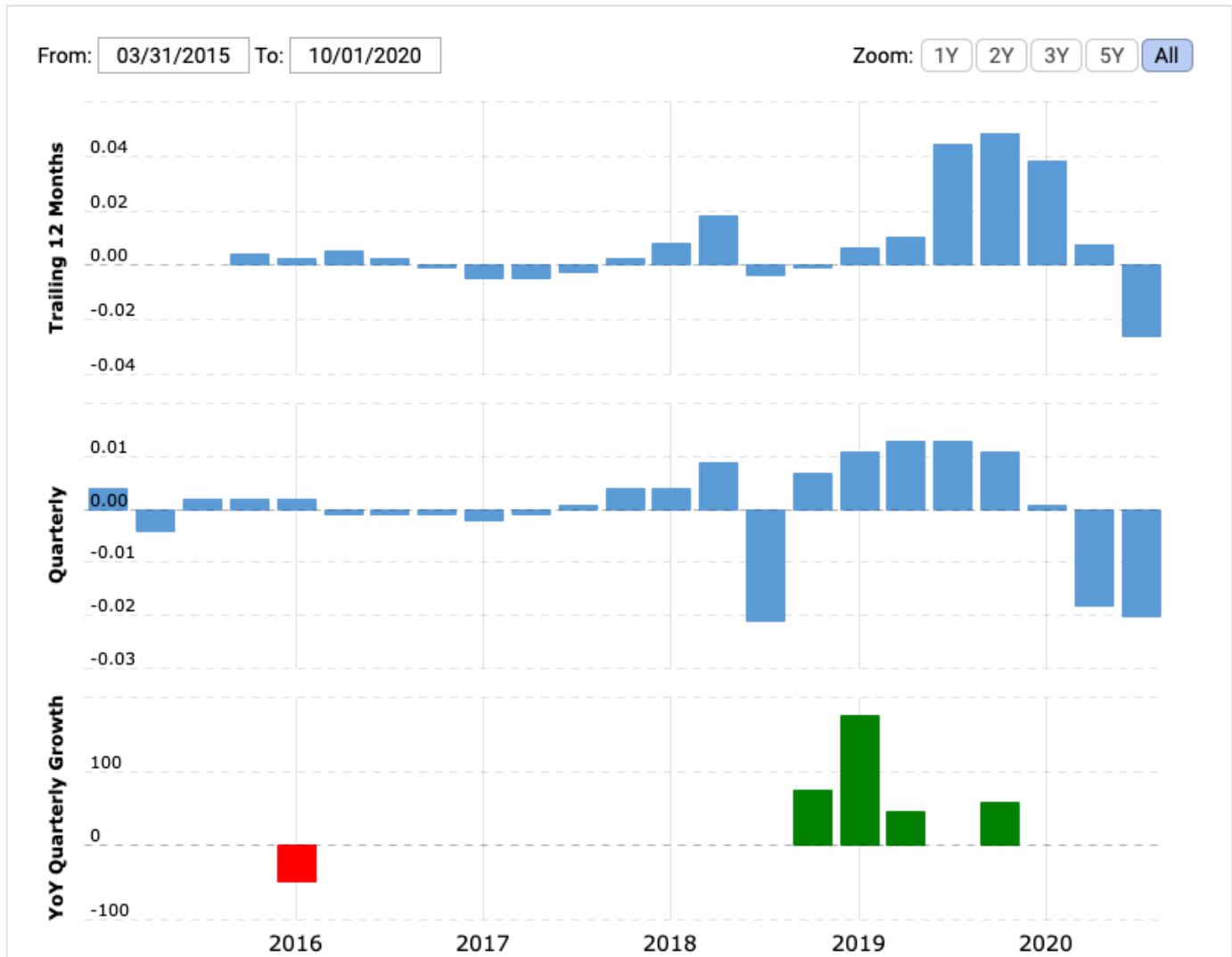
- Penumbra revenue for the quarter ending September 30, 2020 was **\$0.151B**, a **8.3% increase** year-over-year.
- Penumbra revenue for the twelve months ending September 30, 2020 was **\$0.539B**, a **3.03% increase** year-over-year.
- Penumbra annual revenue for 2019 was **\$0.547B**, a **23.03% increase** from 2018.
- Penumbra annual revenue for 2018 was **\$0.445B**, a **33.31% increase** from 2017.
- Penumbra annual revenue for 2017 was **\$0.334B**, a **26.75% increase** from 2016.

Gross Profit



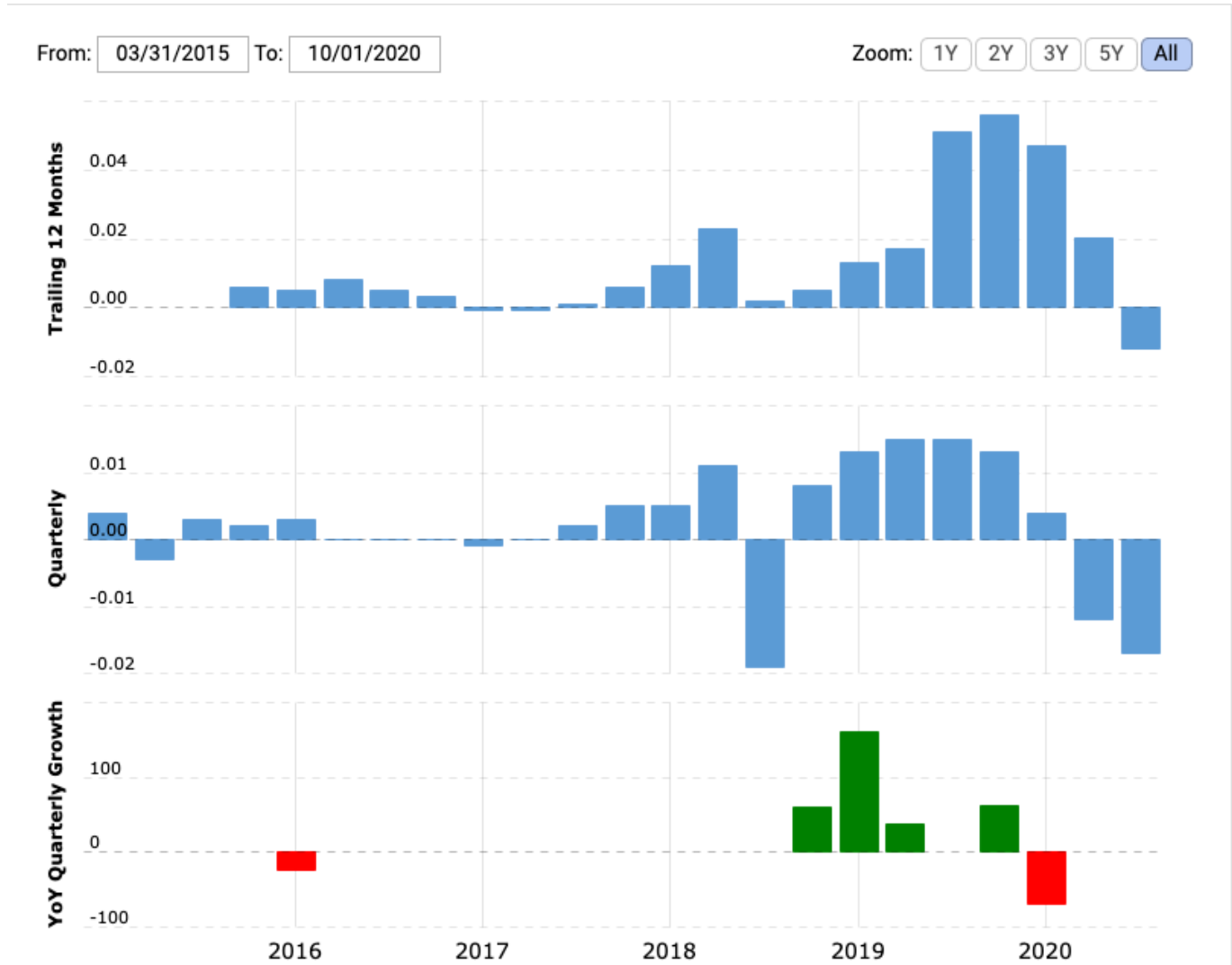
- Penumbra gross profit for the quarter ending September 30, 2020 was **\$0.091B**, a **5.29% decline** year-over-year.
- Penumbra gross profit for the twelve months ending September 30, 2020 was **\$0.342B**, a **2.99% decline** year-over-year.
- Penumbra annual gross profit for 2019 was **\$0.372B**, a **27.15% increase** from 2018.
- Penumbra annual gross profit for 2018 was **\$0.293B**, a **34.72% increase** from 2017.
- Penumbra annual gross profit for 2017 was **\$0.217B**, a **27.11% increase** from 2016.

Operating Income



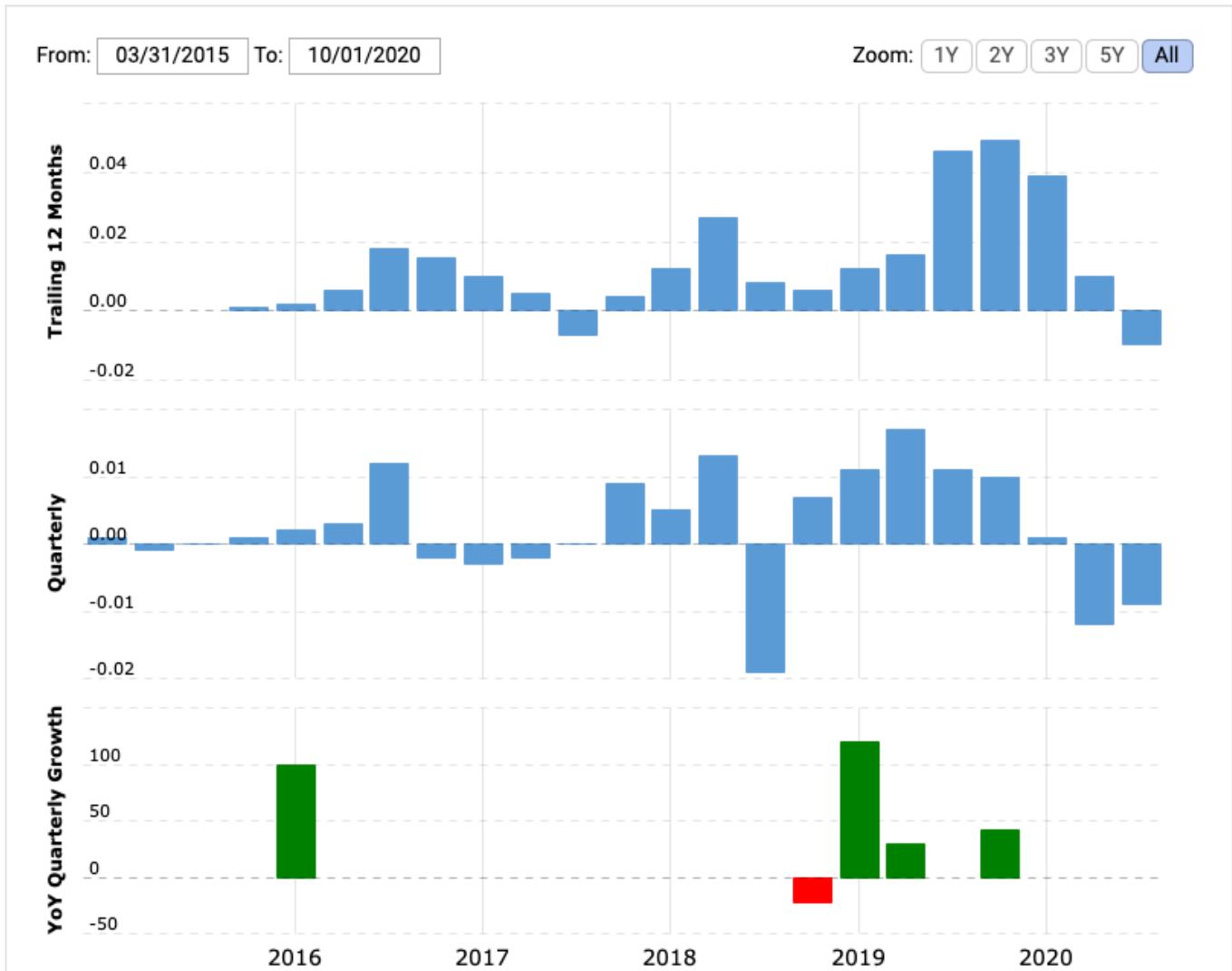
- Penumbra operating income for the quarter ending September 30, 2020 was **\$-0.020B**, a **255.35% decline** year-over-year.
- Penumbra operating income for the twelve months ending September 30, 2020 was **\$-0.027B**, a **161.05% decline** year-over-year.
- Penumbra annual operating income for 2019 was **\$0.048B**, a **5676.06% decline** from 2018.
- Penumbra annual operating income for 2018 was **\$-0.001B**, a **173.13% decline** from 2017.
- Penumbra annual operating income for 2017 was **\$0.001B**, a **186.3% decline** from 2016.

EBITDA



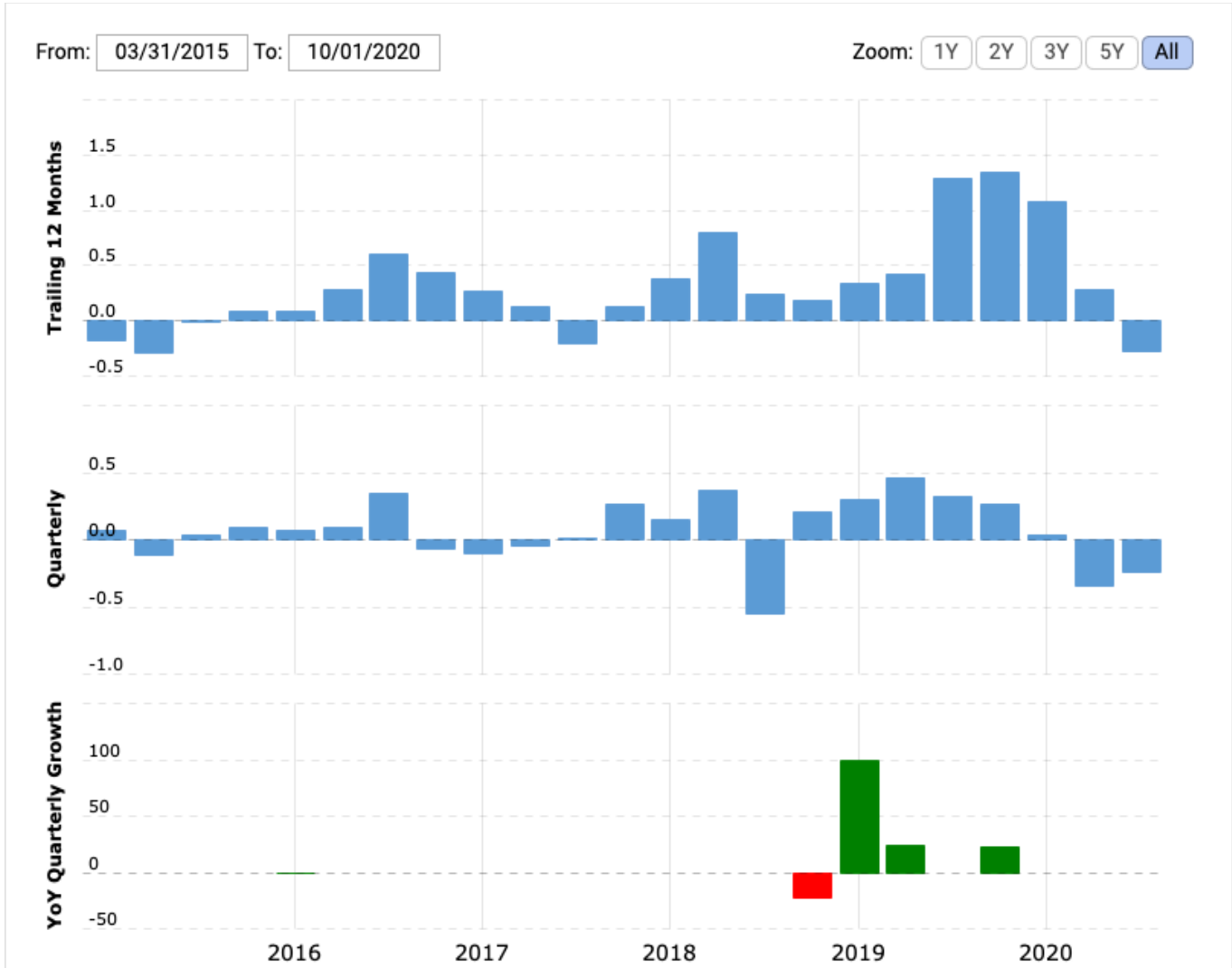
- Penumbra EBITDA for the quarter ending September 30, 2020 was **-\$0.017B**, a **211.88% decline** year-over-year.
- Penumbra EBITDA for the twelve months ending September 30, 2020 was **-\$0.012B**, a **124.21% decline** year-over-year.
- Penumbra 2019 annual EBITDA was **\$0.056B**, a **946.12% increase** from 2018.
- Penumbra 2018 annual EBITDA was **\$0.005B**, a **7.48% increase** from 2017.
- Penumbra 2017 annual EBITDA was **\$0.005B**, a **154.42% increase** from 2016.

Net Income



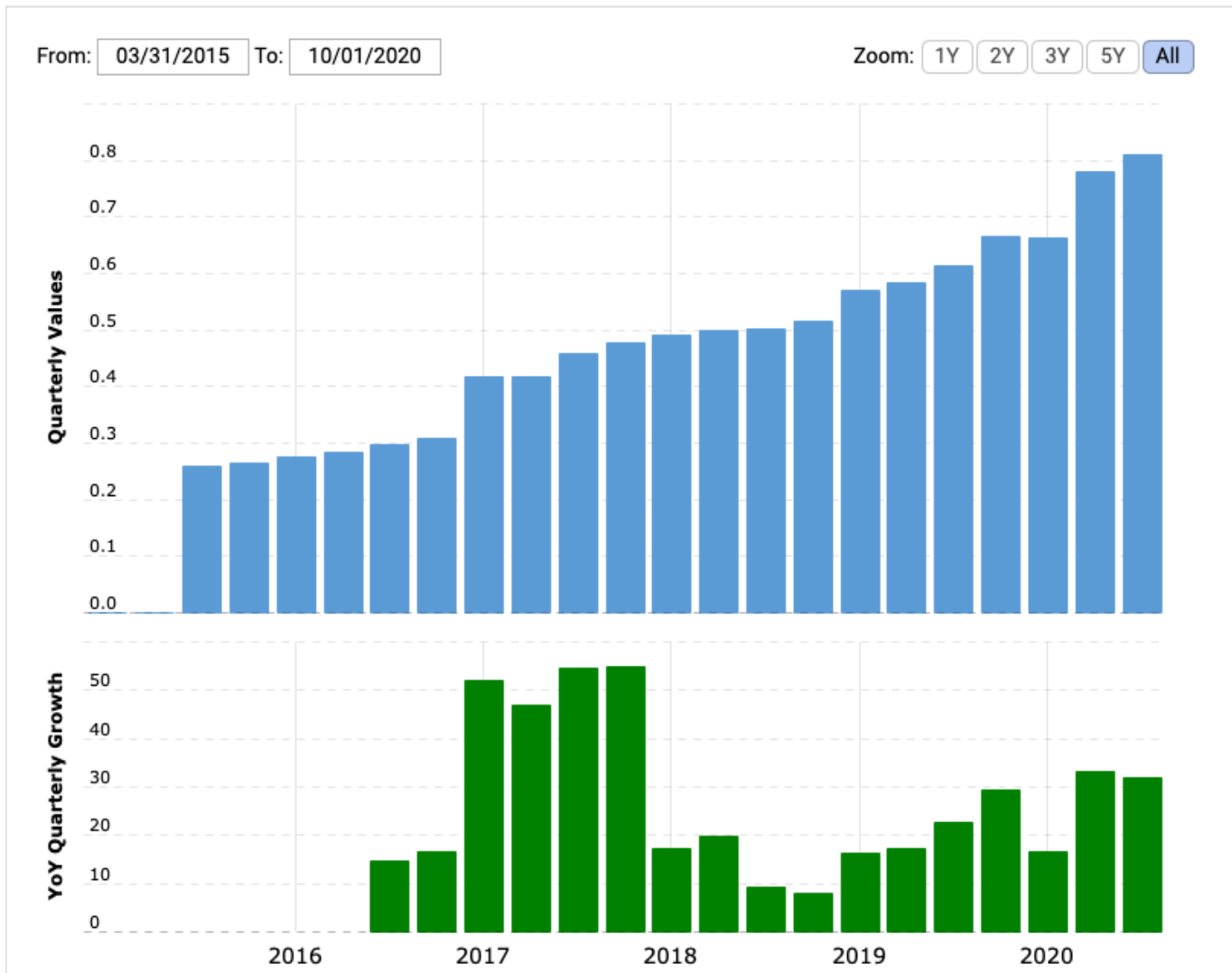
- Penumbra net income for the quarter ending September 30, 2020 was **-\$0.009B**, a **176.77% decline** year-over-year.
- Penumbra net income for the twelve months ending September 30, 2020 was **-\$0.010B**, a **121.27% decline** year-over-year.
- Penumbra annual net income for 2019 was **\$0.048B**, a **634.1% increase** from 2018.
- Penumbra annual net income for 2018 was **\$0.007B**, a **41.74% increase** from 2017.
- Penumbra annual net income for 2017 was **\$0.005B**, a **68.56% decline** from 2016.

Earnings Per Share



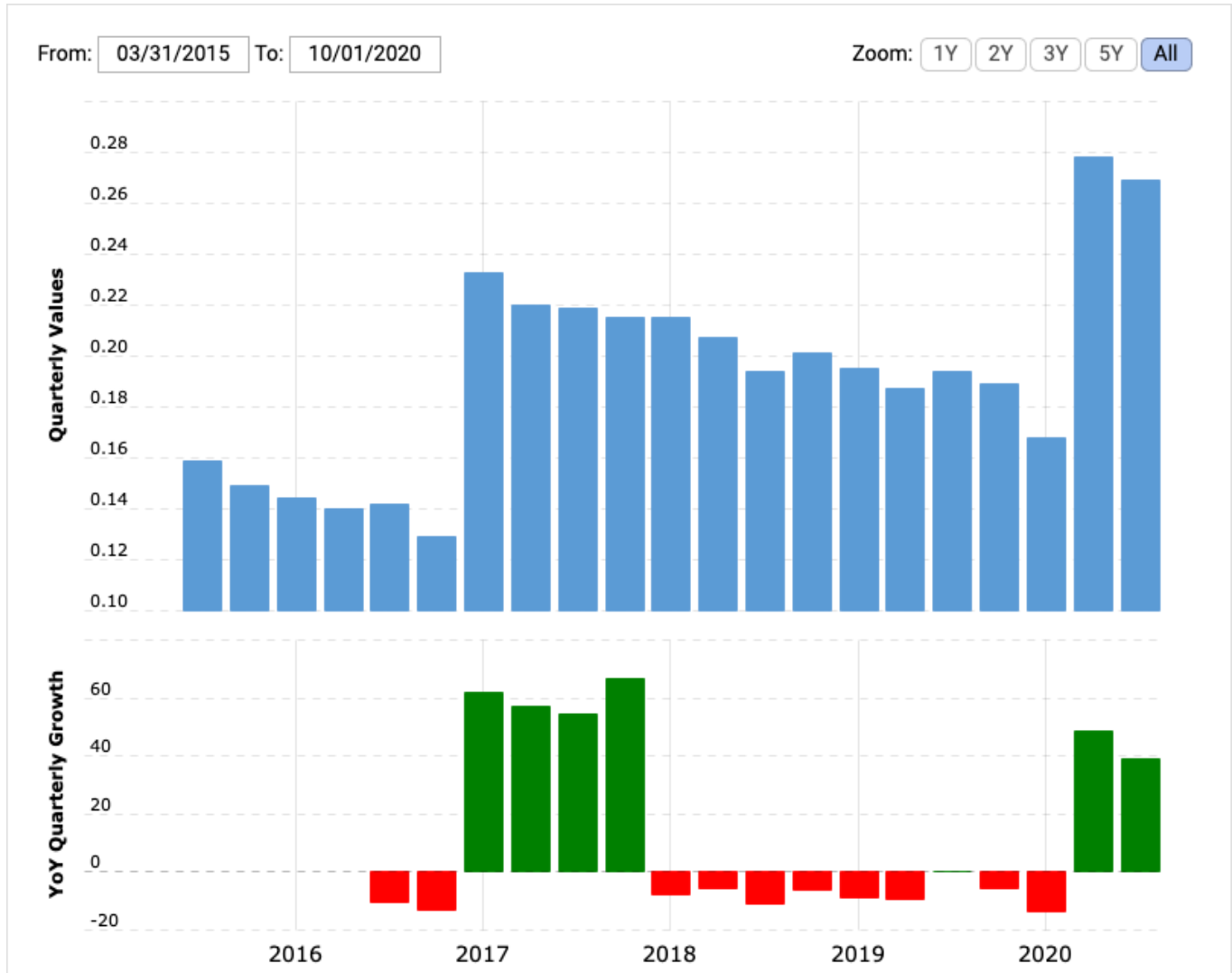
- Penumbra EPS for the quarter ending September 30, 2020 was **\$-0.24**, a **175% decline** year-over-year.
- Penumbra EPS for the twelve months ending September 30, 2020 was **\$-0.28**, a **121.71% decline** year-over-year.
- Penumbra 2019 annual EPS was **\$1.34**, a **644.44% increase** from 2018.
- Penumbra 2018 annual EPS was **\$0.18**, a **38.46% increase** from 2017.
- Penumbra 2017 annual EPS was **\$0.13**, a **70.45% decline** from 2016.

Total ssets



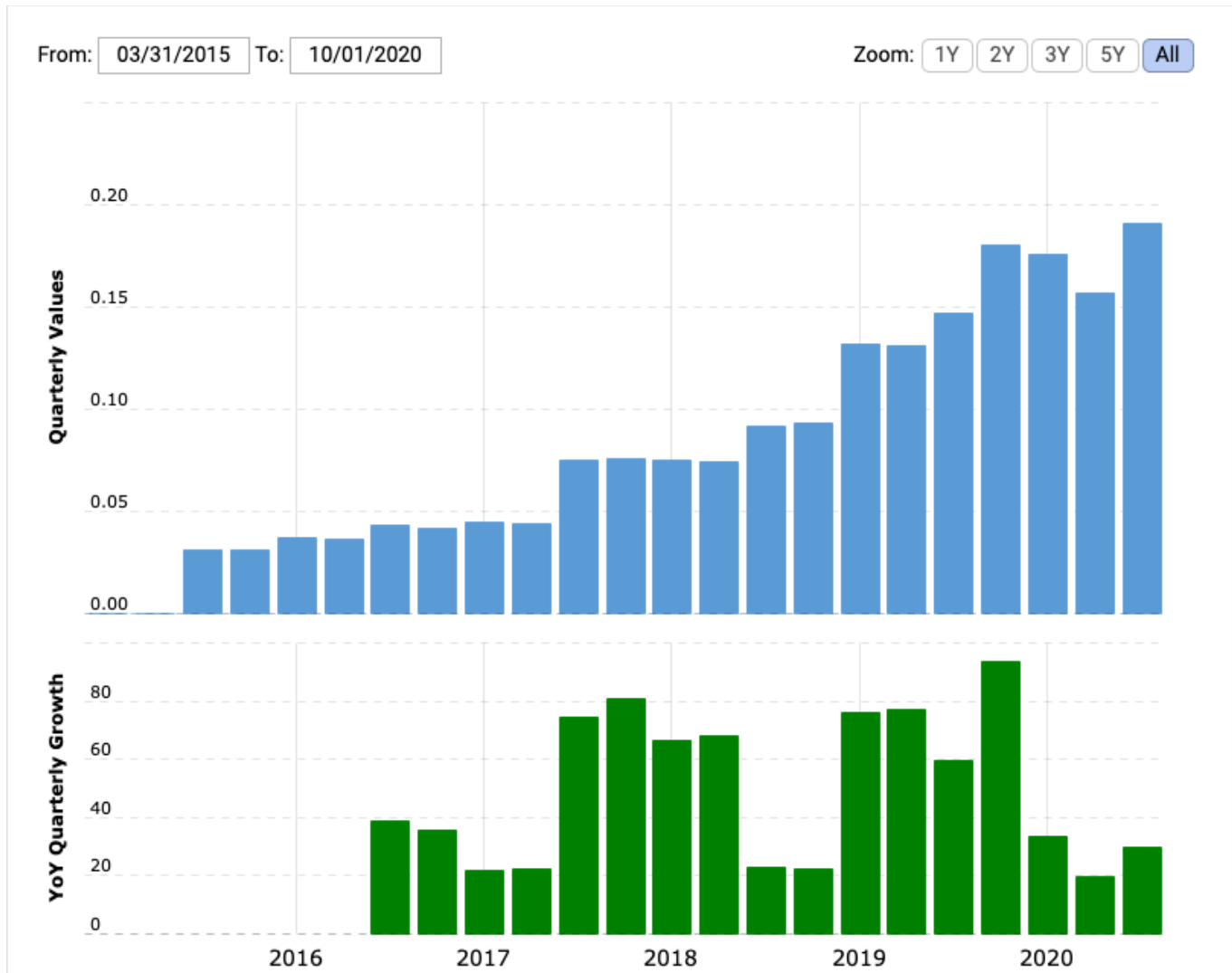
- Penumbra total assets for the quarter ending September 30, 2020 were **\$0.810B**, a **31.93% increase** year-over-year.
- Penumbra total assets for 2019 were **\$0.666B**, a **29.3% increase** from 2018.
- Penumbra total assets for 2018 were **\$0.515B**, a **8.04% increase** from 2017.
- Penumbra total assets for 2017 were **\$0.477B**, a **54.63% increase** from 2016.

Cash On Hand



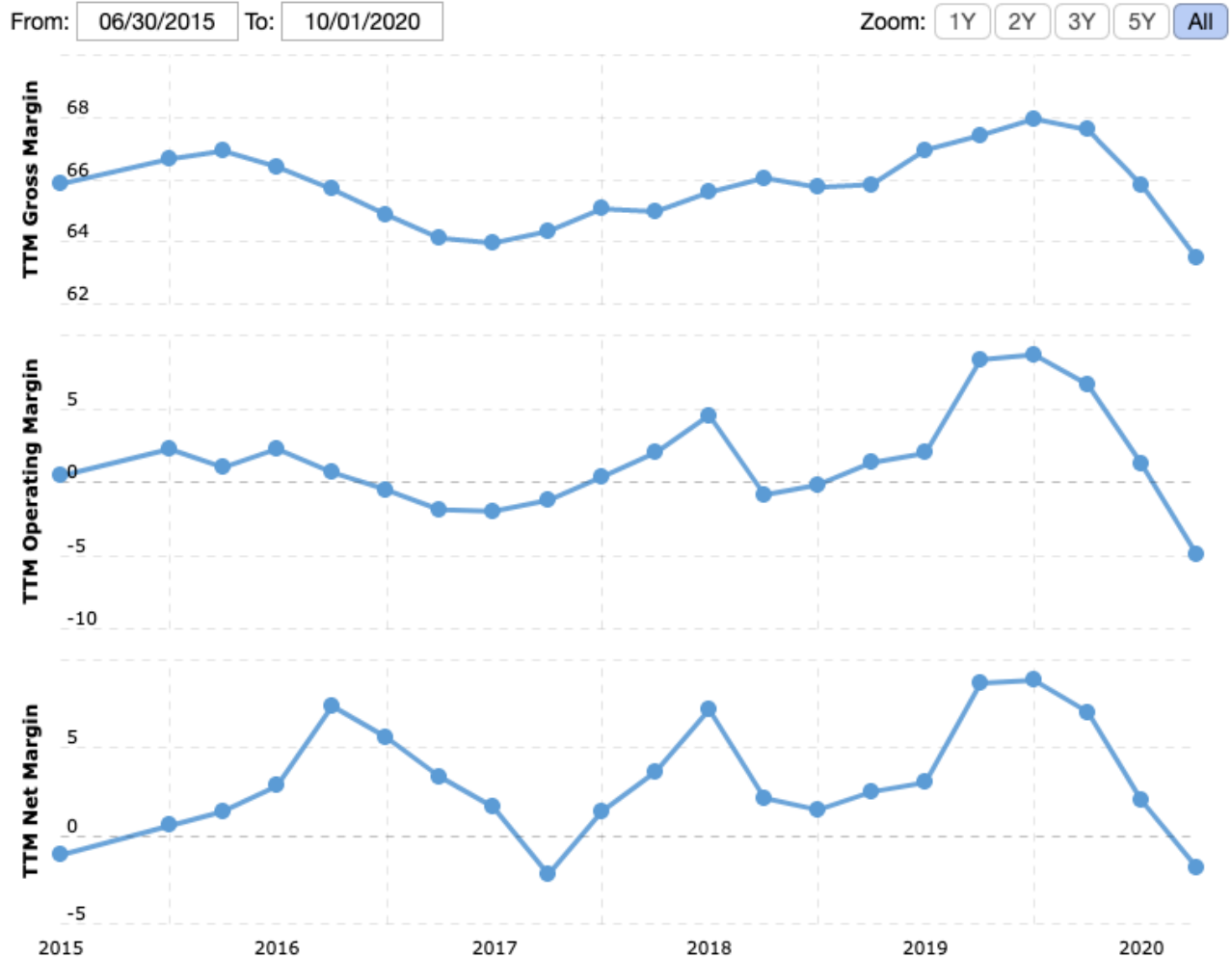
- Penumbra cash on hand for the quarter ending September 30, 2020 was **\$0.269B**, a **38.2% increase** year-over-year.
- Penumbra cash on hand for 2019 was **\$0.189B**, a **5.72% decline** from 2018.
- Penumbra cash on hand for 2018 was **\$0.201B**, a **6.39% decline** from 2017.
- Penumbra cash on hand for 2017 was **\$0.215B**, a **66.67% increase** from 2016.

Total Liabilities



- Penumbra total liabilities for the quarter ending September 30, 2020 were **\$0.191B**, a **29.45% increase** year-over-year.
- Penumbra total liabilities for 2019 were **\$0.18B**, a **94.71% increase** from 2018.
- Penumbra total liabilities for 2018 were **\$0.093B**, a **21.42% increase** from 2017.
- Penumbra total liabilities for 2017 were **\$0.076B**, a **82.84% increase** from 2016.

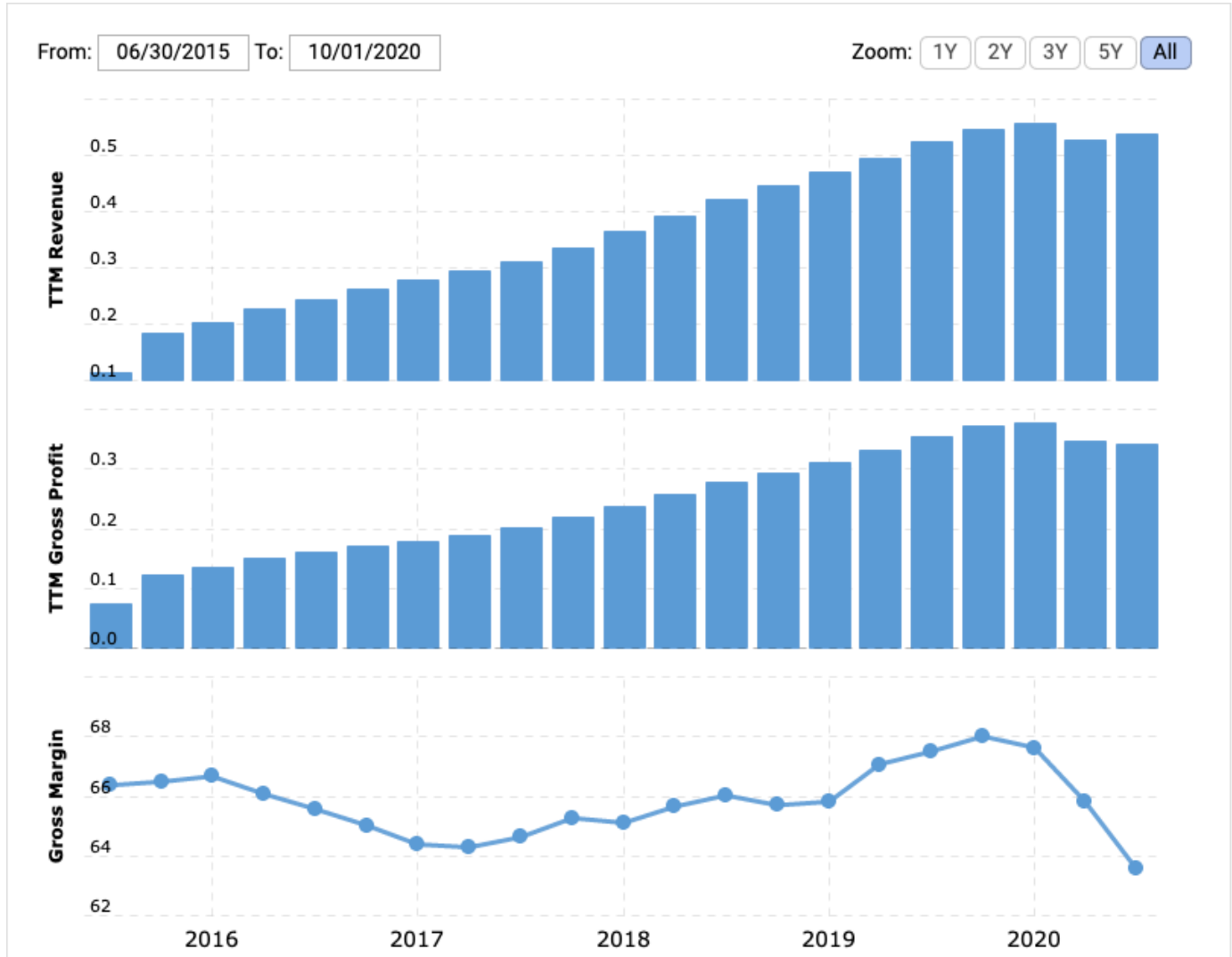
Gross Margin, Operating Margin & Net Margin



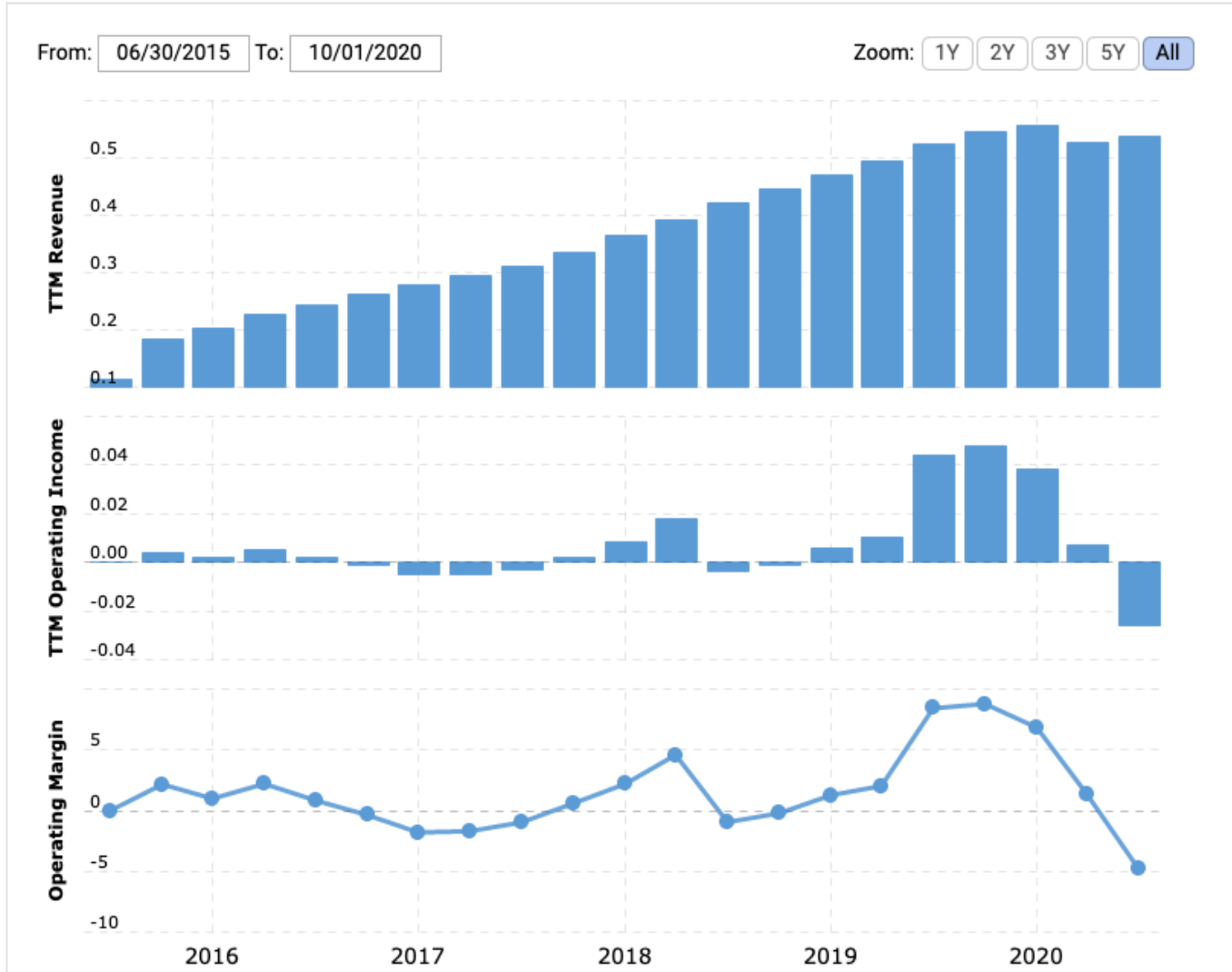
All three margins, Gross, Operating and Net are plunging!

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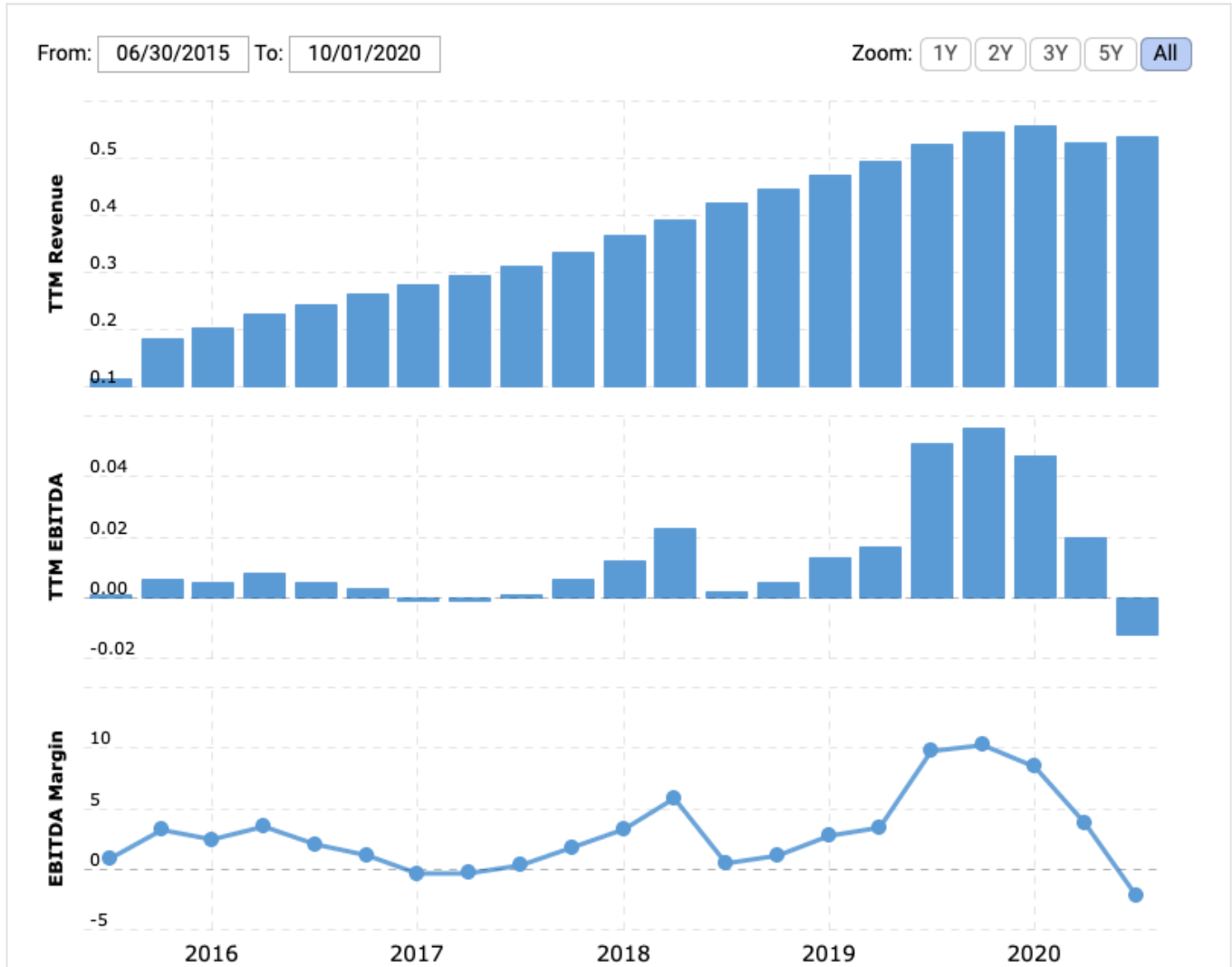
Revenue Vs Gross Profit Vs Gross Margin



Revenue Vs Operating Income Vs Operating Margin

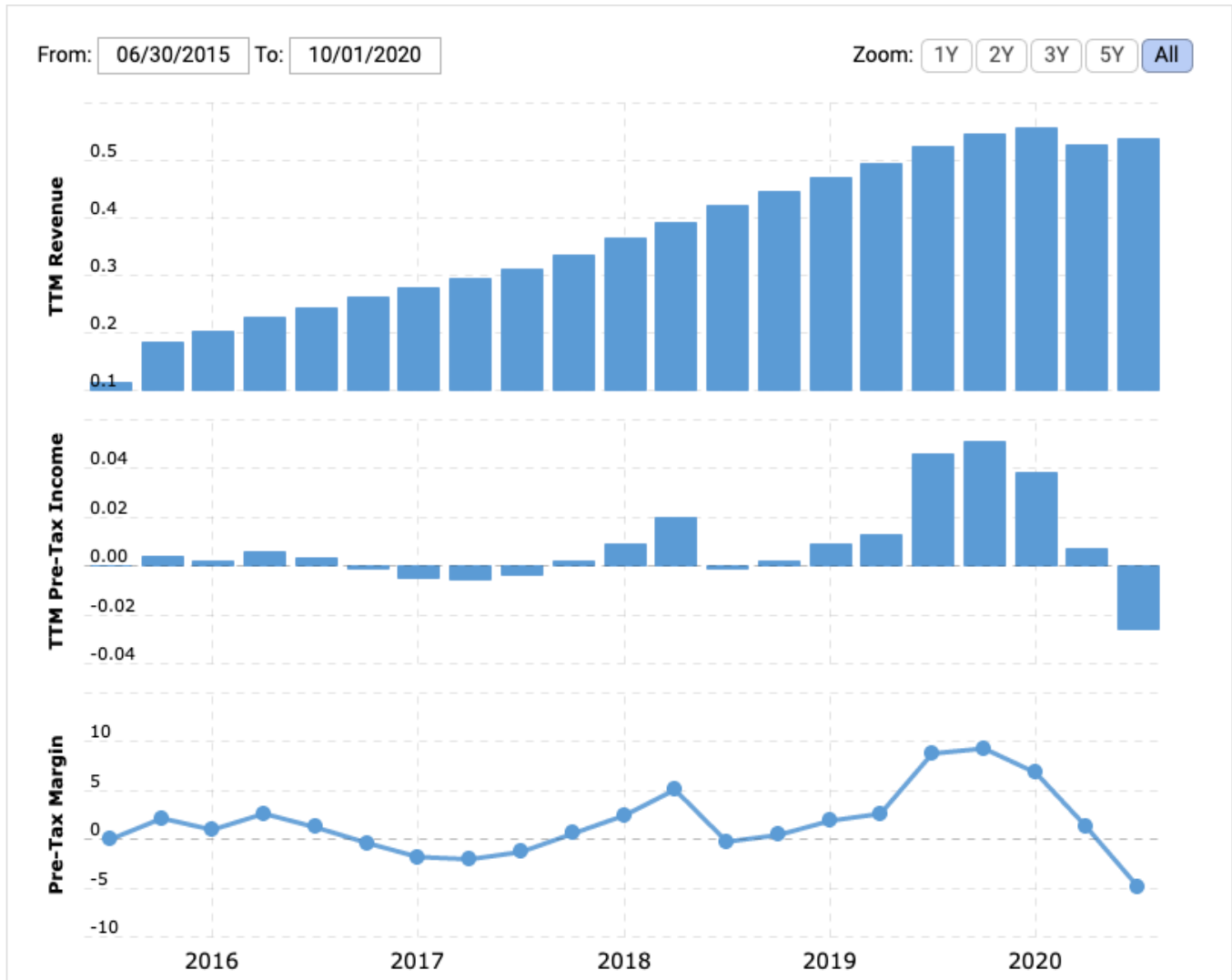


Revenue Vs EBITDA Vs EBITDA Margin

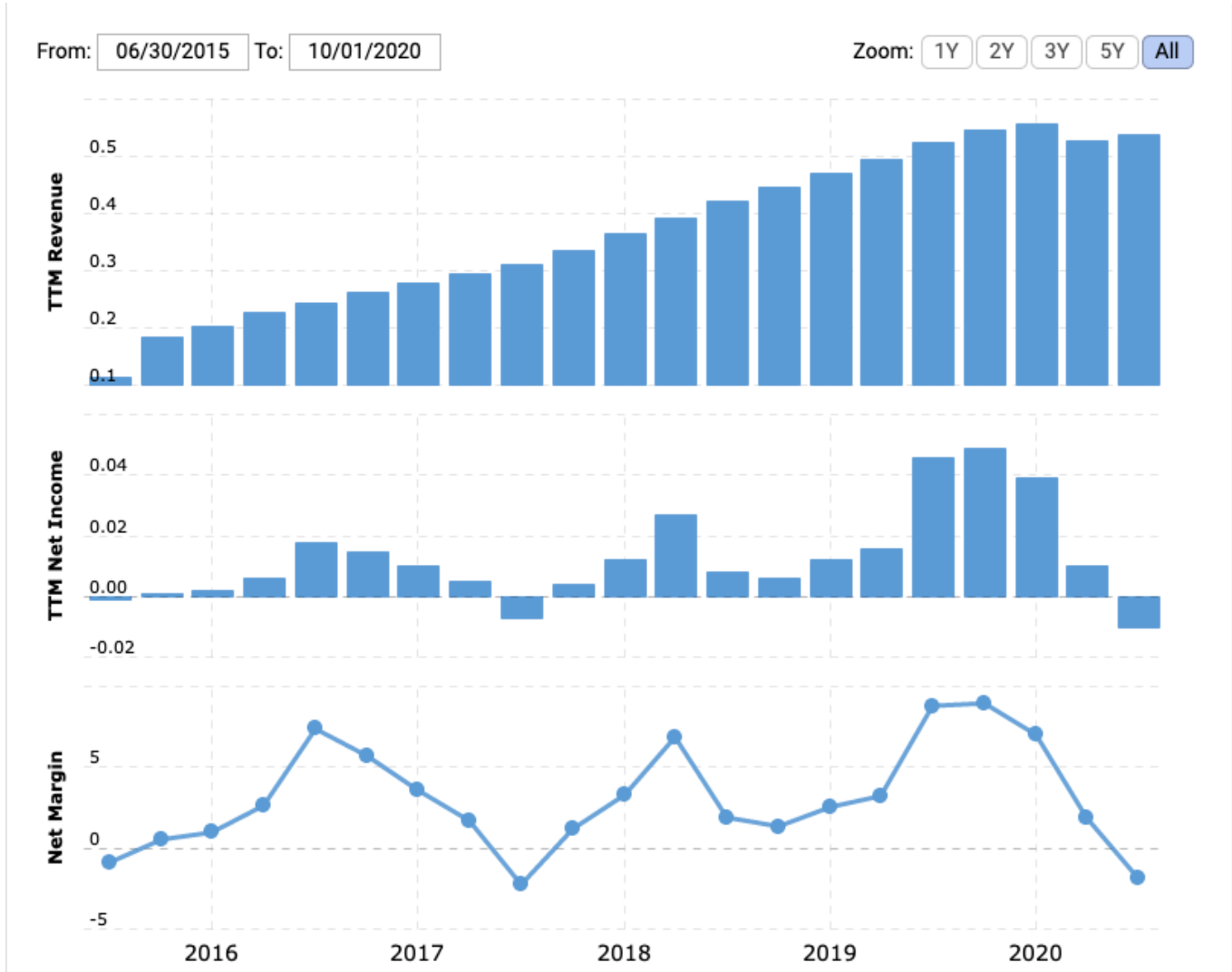


EBITDA and EBITDA margin have both collapsed!

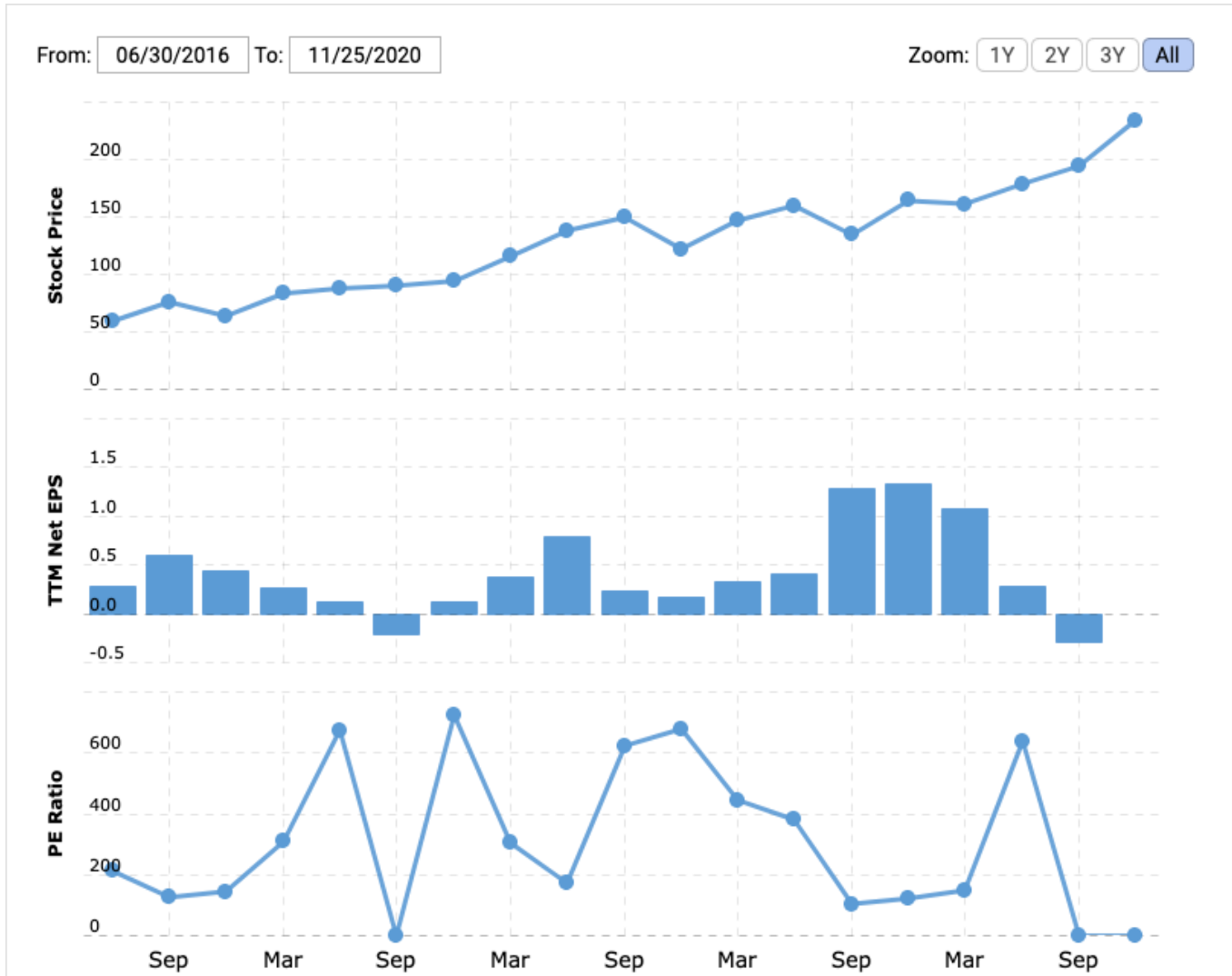
Revenue Vs Pre-Tax Income Vs Pre-Tax Margin



Revenue Vs Net Income Vs Net Margin

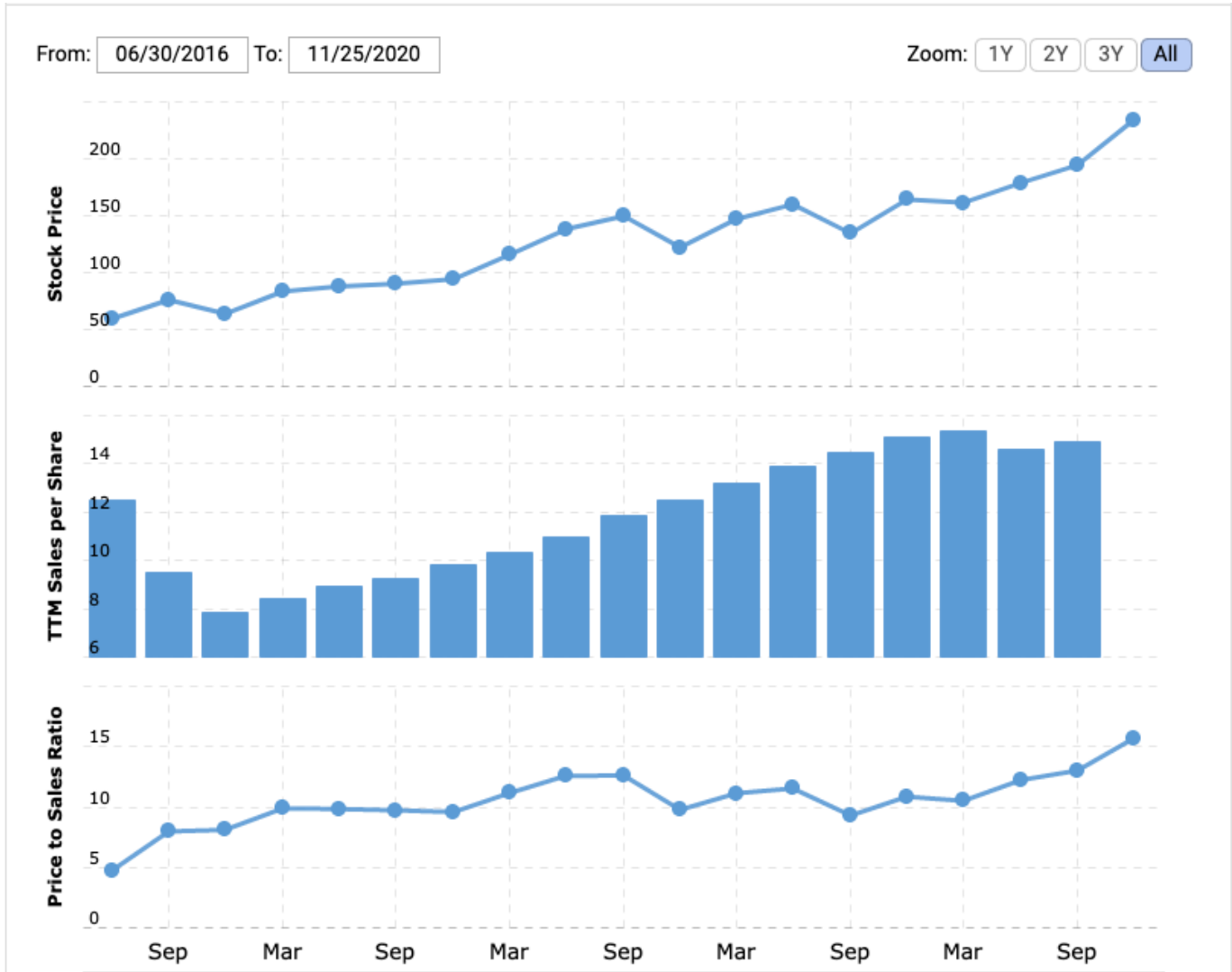


Stock Price Vs EPS Vs PE Ratio

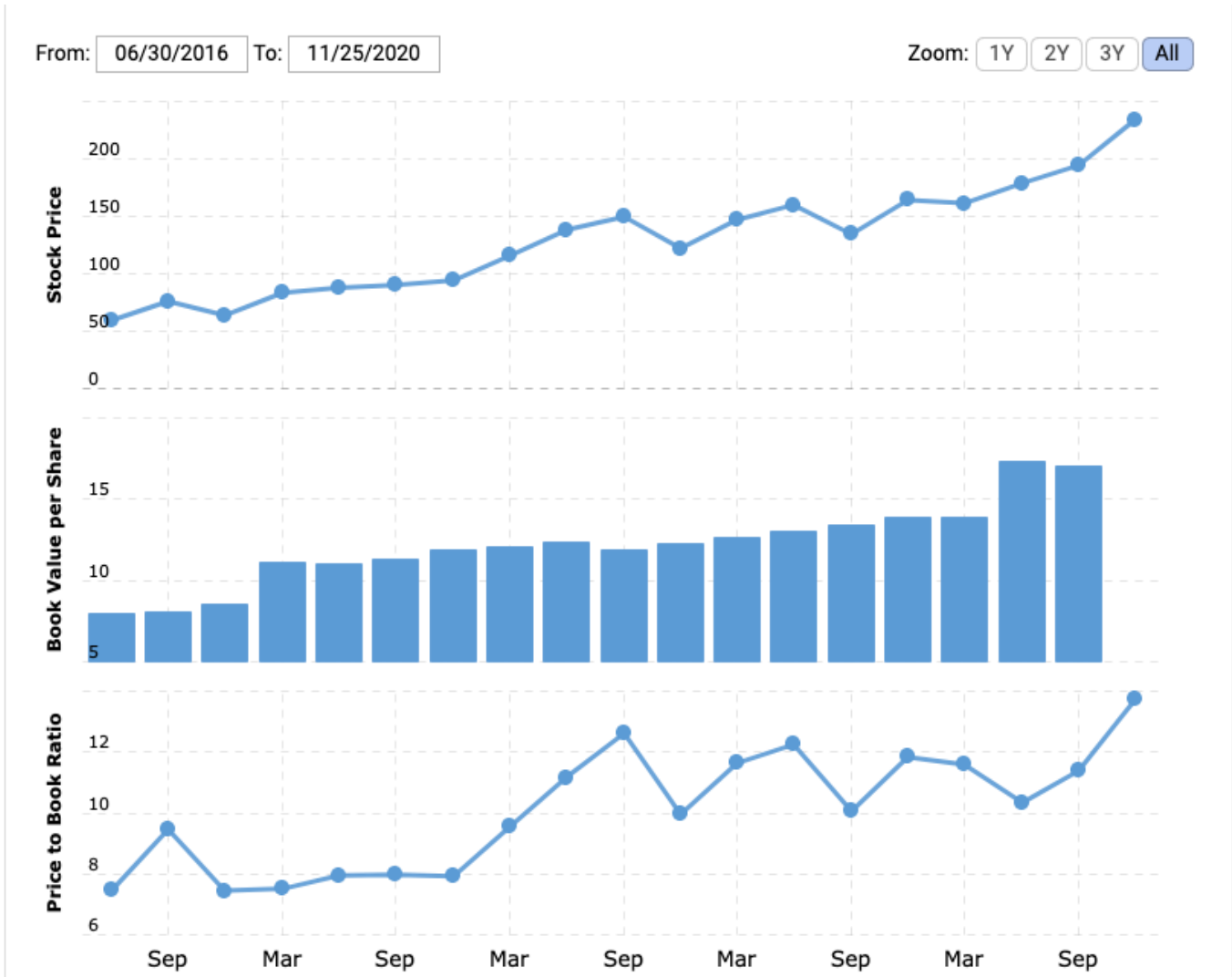


Most financials are going down, while the stock price was going straight up?

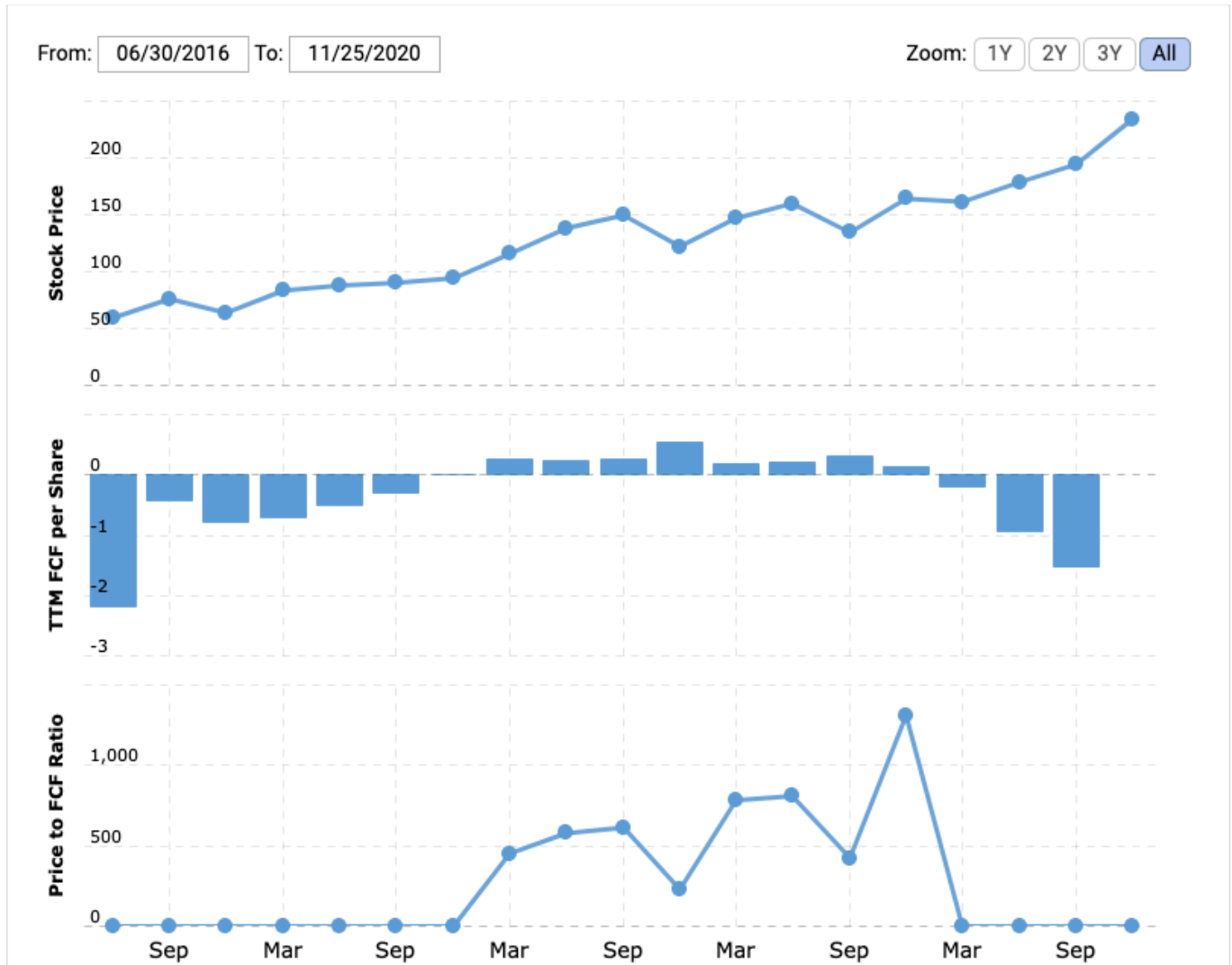
Stock Price Vs Sales Per Share Vs Price To Sales Ratio



Stock Price Vs Book Value Vs Price To Book



Stock Price Vs FCF/Share Vs Price to FCF Ratio



Market Capitalization



Lots of room to the downside here!

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Income Statement- Quarterly

Quarterly Data Millions of US \$ except per share data		2020-09-30	2020-06-30	2020-03-31	2019-12-31	2019-09-30	2019-06-30	2019-03-31	2018-12-31	2018-09-30	2018-06-30
Revenue	Link	\$151.076	\$105.109	\$137.329	\$145.263	\$139.502	\$134.201	\$128.439	\$120.793	\$111.806	\$109.638
Cost Of Goods Sold	Link	\$60.153	\$40.179	\$49.32	\$47.135	\$43.504	\$40.273	\$44.529	\$42.081	\$36.794	\$37.386
Gross Profit	Link	\$90.923	\$64.93	\$88.009	\$98.128	\$95.998	\$93.928	\$83.91	\$78.712	\$75.012	\$72.252
Research And Development Expenses	Link	\$34.923	\$22.725	\$12.946	\$12.861	\$13.733	\$13.462	\$11.667	\$10.867	\$9.092	\$8.193
SG&A Expenses	Link	\$76.158	\$59.854	\$74.453	\$74.688	\$69.289	\$67.665	\$61.091	\$61.176	\$55.934	\$54.776
Other Operating Income Or Expenses		-	-	-	-	-	-	-	-	-	-
Operating Expenses	Link	\$171.234	\$122.758	\$136.719	\$134.684	\$126.526	\$121.4	\$117.287	\$114.124	\$132.655	\$100.355
Operating Income	Link	\$-20.158	\$-17.649	\$0.61	\$10.579	\$12.976	\$12.801	\$11.152	\$6.669	\$-20.849	\$9.283
Total Non-Operating Income/Expense	Link	\$0.427	\$0.619	\$-1.356	\$1.17	\$-0.013	\$0.713	\$0.757	\$0.68	\$0.941	\$0.38
Pre-Tax Income	Link	\$-19.731	\$-17.03	\$-0.746	\$11.749	\$12.963	\$13.514	\$11.909	\$7.349	\$-19.908	\$9.663
Income Taxes	Link	\$-9.855	\$-4.129	\$-1.634	\$2.448	\$1.963	\$-2.735	\$1.455	\$0.885	\$1.598	\$-4.948
Income After Taxes	Link	\$-9.876	\$-12.901	\$0.888	\$9.301	\$11	\$16.249	\$10.454	\$6.464	\$-21.506	\$14.611
Other Income		-	-	-	-	-	-	-	-	-	-
Income From Continuous Operations	Link	\$-9.876	\$-12.901	\$0.888	\$9.301	\$11	\$16.249	\$10.454	\$6.464	\$-22.426	\$13.381
Income From Discontinued Operations		-	-	-	-	-	-	-	-	-	-
Net Income	Link	\$-8.815	\$-11.96	\$1.425	\$9.689	\$11.483	\$16.588	\$10.698	\$6.659	\$-18.93	\$13.381
EBITDA	Link	\$-16.815	\$-12.018	\$3.569	\$12.893	\$15.029	\$14.734	\$12.956	\$8.378	\$-19.338	\$10.832
EBIT	Link	\$-20.158	\$-17.649	\$0.61	\$10.579	\$12.976	\$12.801	\$11.152	\$6.669	\$-20.849	\$9.283
Basic Shares Outstanding	Link	36	35	35	35	35	35	35	34	34	34
Shares Outstanding	Link	36	35	36	36	36	36	36	36	34	36
Basic EPS	Link	\$-0.24	\$-0.34	\$0.04	\$0.27	\$0.33	\$0.48	\$0.31	\$0.19	\$-0.55	\$0.39
EPS - Earnings Per Share	Link	\$-0.24	\$-0.34	\$0.04	\$0.26	\$0.32	\$0.46	\$0.30	\$0.21	\$-0.55	\$0.37

Income Statement - Annual

Annual Data Millions of US \$ except per share data		2019-12-31	2018-12-31	2017-12-31	2016-12-31	2015-12-31	2014-12-31	2013-12-31
Revenue	Link	\$547.405	\$444.938	\$333.764	\$263.317	\$186.095	\$125.51	\$88.848
Cost Of Goods Sold	Link	\$175.441	\$152.405	\$116.622	\$92.488	\$62.037	\$42.668	\$30.972
Gross Profit	Link	\$371.964	\$292.533	\$217.142	\$170.829	\$124.058	\$82.842	\$57.876
Research And Development Expenses	Link	\$51.723	\$36.165	\$31.661	\$23.875	\$18.027	\$15.575	\$14.084
SG&A Expenses	Link	\$272.733	\$226.385	\$184.316	\$148.304	\$101.852	\$64.258	\$44.918
Other Operating Income Or Expenses		-	-	-	-	-	-	-
Operating Expenses	Link	\$499.897	\$445.79	\$332.599	\$264.667	\$181.916	\$122.501	\$89.974
Operating Income	Link	\$47.508	\$-0.852	\$1.165	\$-1.35	\$4.179	\$3.009	\$-1.126
Total Non-Operating Income/Expense	Link	\$2.627	\$2.46	\$1.311	\$0.481	\$-0.155	\$0.13	\$-0.129
Pre-Tax Income	Link	\$50.135	\$1.608	\$2.476	\$-0.869	\$4.024	\$3.139	\$-1.255
Income Taxes	Link	\$3.131	\$-4.403	\$-3.611	\$-15.683	\$1.659	\$0.894	\$-5.354
Income After Taxes	Link	\$47.004	\$6.011	\$6.087	\$14.814	\$2.365	\$2.245	\$4.099
Other Income		-	-	-	-	-	-	-
Income From Continuous Operations	Link	\$47.004	\$2.91	\$4.657	\$14.814	\$2.365	\$2.245	\$4.099
Income From Discontinued Operations		-	-	-	-	-	-	-
Net Income	Link	\$48.458	\$6.601	\$4.657	\$14.814	\$1.084	\$-0.833	\$0.887
EBITDA	Link	\$55.612	\$5.316	\$4.946	\$1.944	\$6.014	\$3.76	\$-0.449
EBIT	Link	\$47.508	\$-0.852	\$1.165	\$-1.35	\$4.179	\$3.009	\$-1.126
Basic Shares Outstanding	Link	35	34	33	30	12	5	4
Shares Outstanding	Link	36	36	35	33	14	5	7
Basic EPS	Link	\$1.39	\$0.19	\$0.14	\$0.49	\$0.09	\$-0.18	\$0.21
EPS - Earnings Per Share	Link	\$1.34	\$0.18	\$0.13	\$0.44	\$0.08	\$-0.18	\$0.14

Balance Sheet – Quarterly

Quarterly Data Millions of US \$ except per share data		2020-09-30	2020-06-30	2020-03-31	2019-12-31	2019-09-30	2019-06-30	2019-03-31	2018-12-31	2018-09-30	2018-06-30
Cash On Hand	Link	\$268.726	\$278.295	\$168.222	\$189.389	\$194.445	\$187.257	\$194.847	\$200.889	\$193.918	\$206.89
Receivables	Link	\$112.817	\$97.613	\$103.963	\$105.901	\$101.828	\$99.011	\$94.679	\$81.896	\$80.435	\$74.059
Inventory	Link	\$191.547	\$183.442	\$166.152	\$152.992	\$140.359	\$132.735	\$121.691	\$115.741	\$109.706	\$97.556
Pre-Paid Expenses	Link	\$17.109	\$16.545	\$15.403	\$14.852	\$14.702	\$15.601	\$11.869	\$12.2	\$13.536	\$13.994
Other Current Assets	Link	-	-	-	-	-	-	-	-	-	-
Total Current Assets	Link	\$590.199	\$575.895	\$453.74	\$463.134	\$451.334	\$434.604	\$423.086	\$410.726	\$397.595	\$392.499
Property, Plant, And Equipment	Link	\$64.906	\$62.188	\$58.698	\$51.812	\$45.625	\$37.94	\$35.38	\$35.407	\$34.133	\$33.719
Long-Term Investments	Link	-	-	-	-	-	-	-	-	-	\$2.597
Goodwill And Intangible Assets	Link	\$18.644	\$18.31	\$32.533	\$33.063	\$32.946	\$33.796	\$34.472	\$35.058	\$35.207	\$35.321
Other Long-Term Assets	Link	\$8.068	\$6.737	\$3.869	\$2.946	\$9.63	\$1.632	\$1.613	\$0.875	\$1.085	\$1.049
Total Long-Term Assets	Link	\$220.104	\$204.305	\$210.5	\$202.767	\$162.836	\$150.505	\$145.703	\$104.28	\$103.41	\$106.815
Total Assets	Link	\$810.303	\$780.2	\$664.24	\$665.901	\$614.17	\$585.109	\$568.789	\$515.006	\$501.005	\$499.314
Total Current Liabilities	Link	\$108.055	\$77.612	\$88.074	\$91.048	\$86.167	\$69.761	\$69.412	\$66.062	\$65.052	\$49.687
Long Term Debt	Link	\$27.391	\$26.202	\$26.483	\$26.748	-	-	-	-	-	-
Other Non-Current Liabilities	Link	\$10.147	\$7.3	\$15.15	\$15.25	\$15.662	\$15.019	\$16.644	\$26.529	\$26.665	\$24.428
Total Long Term Liabilities	Link	\$82.536	\$79.427	\$88.049	\$89.24	\$61.062	\$61.165	\$62.714	\$26.529	\$26.665	\$24.428
Total Liabilities	Link	\$190.591	\$157.039	\$176.123	\$180.288	\$147.229	\$130.926	\$132.126	\$92.591	\$91.717	\$74.115
Common Stock Net	Link	\$0.036	\$0.036	\$0.035	\$0.035	\$0.035	\$0.035	\$0.034	\$0.034	\$0.034	\$0.034
Retained Earnings (Accumulated Deficit)	Link	\$36.974	\$45.789	\$57.749	\$57.522	\$47.833	\$36.35	\$19.762	\$9.064	\$2.403	\$21.333
Comprehensive Income	Link	\$0.101	\$-2.097	\$-4.575	\$-2.324	\$-4.01	\$-1.514	\$-2.578	\$-1.942	\$-0.899	\$-0.661
Other Share Holders Equity	Link	-	-	-	-	-	-	-	-	-	-
Share Holder Equity	Link	\$619.712	\$623.161	\$488.117	\$485.613	\$466.941	\$454.183	\$436.663	\$422.415	\$409.288	\$425.199
Total Liabilities And Share Holders Equity	Link	\$810.303	\$780.2	\$664.24	\$665.901	\$614.17	\$585.109	\$568.789	\$515.006	\$501.005	\$499.314

Balance Sheet – Annual

Annual Data Millions of US \$ except per share data		2019-12-31	2018-12-31	2017-12-31	2016-12-31	2015-12-31	2014-12-31	2013-12-31
Cash On Hand	Link	\$189.389	\$200.889	\$214.591	\$128.753	\$148.804	\$51.543	\$13.676
Receivables	Link	\$105.901	\$81.896	\$58.007	\$43.335	\$29.444	\$18.912	\$13.074
Inventory	Link	\$152.992	\$115.741	\$94.901	\$73.012	\$56.761	\$33.451	\$27.067
Pre-Paid Expenses	Link	\$14.852	\$12.2	\$14.735	\$18.727	\$9.352	\$5.115	\$3.287
Other Current Assets	Link	-	-	-	-	-	-	-
Total Current Assets	Link	\$463.134	\$410.726	\$382.234	\$263.827	\$244.361	\$115.301	\$62.238
Property, Plant, And Equipment	Link	\$51.812	\$35.407	\$30.899	\$21.464	\$8.951	\$5.181	\$2.031
Long-Term Investments	Link	-	-	\$3.872	-	-	-	\$6
Goodwill And Intangible Assets	Link	\$33.063	\$35.058	\$31.956	-	-	-	-
Other Long-Term Assets	Link	\$2.946	\$0.875	\$1.016	\$0.487	\$0.393	\$0.328	\$0.454
Total Long-Term Assets	Link	\$202.767	\$104.28	\$94.433	\$44.427	\$19.487	\$6.08	\$8.909
Total Assets	Link	\$665.901	\$515.006	\$476.667	\$308.254	\$263.848	\$121.381	\$71.147
Total Current Liabilities	Link	\$91.048	\$66.062	\$51.582	\$35.8	\$28.148	\$20.823	\$15.837
Long Term Debt	Link	\$26.748	-	-	-	-	-	\$6
Other Non-Current Liabilities	Link	\$15.25	\$26.529	\$24.677	\$5.907	\$3.178	\$1.461	\$1.15
Total Long Term Liabilities	Link	\$89.24	\$26.529	\$24.677	\$5.907	\$3.178	\$1.461	\$7.15
Total Liabilities	Link	\$180.288	\$92.591	\$76.259	\$41.707	\$31.326	\$22.284	\$22.987
Common Stock Net	Link	\$0.035	\$0.034	\$0.033	\$0.031	\$0.03	\$0.005	\$0.004
Retained Earnings (Accumulated Deficit)	Link	\$57.522	\$9.064	\$1.996	\$-2.661	\$-17.475	\$-19.84	\$-14.993
Comprehensive Income	Link	\$-2.324	\$-1.942	\$1.569	\$-4.688	\$-2.115	\$-0.864	\$0.796
Other Share Holders Equity	Link	-	-	-	-	\$-0.005	\$-0.117	\$-0.138
Share Holder Equity	Link	\$485.613	\$422.415	\$400.408	\$266.547	\$232.522	\$99.097	\$48.16
Total Liabilities And Share Holders Equity	Link	\$665.901	\$515.006	\$476.667	\$308.254	\$263.848	\$121.381	\$71.147

Cash Flow Statement - Quarterly

Quarterly Data Millions of US \$ except per share data		2020-09-30	2020-06-30	2020-03-31	2019-12-31	2019-09-30	2019-06-30	2019-03-31	2018-12-31	2018-09-30	2018-06-30
Net Income/Loss	Link	\$-9.876	\$-12.901	\$0.888	\$9.301	\$11	\$16.249	\$10.454	\$6.464	\$-22.426	\$13.381
Total Depreciation And Amortization - Cash Flow	Link	\$3.343	\$5.631	\$2.959	\$2.314	\$2.053	\$1.933	\$1.804	\$1.709	\$1.511	\$1.549
Other Non-Cash Items	Link	\$-4.588	\$4.282	\$4.355	\$6.668	\$8.195	\$2.543	\$6.569	\$5.534	\$37.837	\$1.192
Total Non-Cash Items	Link	\$-1.245	\$9.913	\$7.314	\$8.982	\$10.248	\$4.476	\$8.373	\$7.243	\$39.348	\$2.741
Change In Accounts Receivable	Link	\$-14.2	\$6.995	\$-0.238	\$-3.509	\$-3.968	\$-4.179	\$-13.373	\$-2.478	\$-6.987	\$-10.188
Change In Inventories	Link	\$-7.441	\$-16.226	\$-13.993	\$-11.911	\$-8.232	\$-10.783	\$-6.07	\$-6.239	\$-11.071	\$-3.786
Change In Accounts Payable	Link	\$-0.223	\$-0.927	\$0.921	\$2.715	\$2.908	\$1.918	\$-1.503	\$-0.359	\$1.063	\$0.003
Change In Assets/Liabilities	Link	\$-1.751	\$-2.711	\$-1.544	\$-0.613	\$0.424	\$-3.857	\$0.045	\$1.498	\$-0.672	\$-1.581
Total Change In Assets/Liabilities	Link	\$7.571	\$-18.701	\$-14.122	\$-13.516	\$0.802	\$-18.822	\$-20.895	\$-6.176	\$-6.477	\$-15.998
Cash Flow From Operating Activities	Link	\$-3.55	\$-21.689	\$-5.92	\$4.767	\$22.05	\$1.903	\$-2.068	\$7.531	\$10.445	\$0.124
Net Change In Property, Plant, And Equipment	Link	\$-4.153	\$-6.719	\$-10.131	\$-7.984	\$-7.917	\$-3.745	\$-2.463	\$-3.04	\$-1.458	\$-2.282
Net Change In Intangible Assets	Link	-	-	-	-	-	-	-	-	-	-
Net Acquisitions/Divestitures	Link	-	-	-	-	-	-	-	\$-0.5	\$-19.914	-
Net Change In Short-Term Investments	Link	\$-44.263	\$-45.765	\$20.168	\$-33.195	\$27.279	\$-10.368	\$34.318	\$13.165	\$0.725	\$15.106
Net Change In Long-Term Investments	Link	-	-	-	-	-	-	-	-	-	-
Net Change In Investments - Total	Link	\$-44.263	\$-45.765	\$20.168	\$-33.195	\$27.279	\$-10.368	\$34.318	\$13.165	\$0.725	\$15.106
Investing Activities - Other	Link	\$-1	\$-2.06	-	\$-2.555	\$-5.081	\$-1	-	-	-	-
Cash Flow From Investing Activities	Link	\$-49.416	\$-54.544	\$10.037	\$-43.734	\$14.281	\$-15.113	\$31.855	\$9.625	\$-20.647	\$12.824
Net Long-Term Debt	Link	\$-0.095	\$-1.018	\$-1.958	\$-2.57	-	-	-	\$-0.404	-	-
Net Current Debt	Link	-	-	-	-	-	-	-	-	-	-
Debt Issuance/Retirement Net - Total	Link	\$-0.095	\$-1.018	\$-1.958	\$-2.57	-	-	-	\$-0.404	-	-
Net Common Equity Issued/Repurchased	Link	\$3.208	\$141.495	\$0.396	\$4.759	\$1.301	\$5.973	\$1.071	\$4.417	\$1.123	\$5.427
Net Total Equity Issued/Repurchased	Link	\$3.208	\$141.495	\$0.396	\$4.759	\$1.301	\$5.973	\$1.071	\$4.417	\$1.123	\$5.427
Total Common And Preferred Stock Dividends Paid	Link	-	-	-	-	-	-	-	-	-	-
Financial Activities - Other	Link	\$-4.764	\$-2.016	\$-2.788	\$-2.691	\$-2.74	\$-11.281	\$-2.781	\$-0.845	\$-2.17	\$-10.619
Cash Flow From Financial Activities	Link	\$-1.651	\$138.461	\$-4.35	\$-0.502	\$-1.439	\$-5.308	\$-1.71	\$3.168	\$-1.047	\$-5.192
Net Cash Flow	Link	\$-54.266	\$61.925	\$-0.323	\$-38.802	\$34.32	\$-18.345	\$27.756	\$20.108	\$-11.963	\$6.9
Stock-Based Compensation	Link	\$6.238	\$5.559	\$5.689	\$5.014	\$6.241	\$5.135	\$5.095	\$4.871	\$4.412	\$4.985
Common Stock Dividends Paid	Link	-	-	-	-	-	-	-	-	-	-

Cash Flow Statement - Annual

Annual Data Millions of US \$ except per share data		2019-12-31	2018-12-31	2017-12-31	2016-12-31	2015-12-31	2014-12-31	2013-12-31
Net Income/Loss	Link	\$47.004	\$2.91	\$4.657	\$14.814	\$2.365	\$2.245	\$4.099
Total Depreciation And Amortization - Cash Flow	Link	\$8.104	\$6.168	\$3.781	\$3.294	\$1.835	\$0.751	\$0.677
Other Non-Cash Items	Link	\$23.975	\$48.29	\$16.705	\$2.61	\$4.729	\$0.883	\$-4.069
Total Non-Cash Items	Link	\$32.079	\$54.458	\$20.486	\$5.904	\$6.564	\$1.634	\$-3.392
Change In Accounts Receivable	Link	\$-25.029	\$-25.762	\$-9.118	\$-14.56	\$-11.063	\$-7.426	\$-1.55
Change In Inventories	Link	\$-36.996	\$-20.588	\$-17.789	\$-17.07	\$-23.963	\$-7.592	\$-2.887
Change In Accounts Payable	Link	\$6.038	\$1.329	\$1.851	\$1.375	\$0.132	\$1.299	\$-0.451
Change In Assets/Liabilities	Link	\$-4.001	\$2.231	\$2.436	\$-9.043	\$-4.013	\$-1.906	\$-0.961
Total Change In Assets/Liabilities	Link	\$-52.431	\$-28.56	\$-12.452	\$-33.525	\$-29.618	\$-10.268	\$-4.103
Cash Flow From Operating Activities	Link	\$26.652	\$28.808	\$12.691	\$-12.807	\$-20.689	\$-6.389	\$-3.396
Net Change In Property, Plant, And Equipment	Link	\$-22.109	\$-9.603	\$-12.532	\$-13.635	\$-5.474	\$-3.888	\$-0.798
Net Change In Intangible Assets	Link	-	-	\$-2.5	-	-	-	-
Net Acquisitions/Divestitures	Link	-	\$-20.414	\$-9.253	-	-	-	-
Net Change In Short-term Investments	Link	\$18.034	\$29.632	\$-53.368	\$14.322	\$-80.342	\$-33.113	\$-0.453
Net Change In Long-Term Investments	Link	-	-	-	-	-	-	-
Net Change In Investments - Total	Link	\$18.034	\$29.632	\$-53.368	\$14.322	\$-80.342	\$-33.113	\$-0.453
Investing Activities - Other	Link	\$-8.636	-	-	-	-	-	-
Cash Flow From Investing Activities	Link	\$-12.711	\$-0.385	\$-77.653	\$0.687	\$-85.816	\$-37.001	\$-1.251
Net Long-Term Debt	Link	\$-2.57	\$-0.404	\$-1.079	-	-	\$-6	\$2
Net Current Debt	Link	-	-	-	-	-	-	-
Debt Issuance/Retirement Net - Total	Link	\$-2.57	\$-0.404	\$-1.079	-	-	\$-6	\$2
Net Common Equity Issued/Repurchased	Link	\$13.104	\$12.295	\$117.124	\$9.75	\$125.359	\$-0.004	\$0.178
Net Total Equity Issued/Repurchased	Link	\$13.104	\$12.295	\$117.124	\$9.75	\$125.359	\$48.897	\$0.178
Total Common And Preferred Stock Dividends Paid	Link	-	-	-	-	-	-	-
Financial Activities - Other	Link	\$-19.493	\$-21.706	\$-11.686	\$-2.624	\$-2.525	-	-
Cash Flow From Financial Activities	Link	\$-8.959	\$-9.815	\$104.359	\$7.126	\$122.834	\$42.897	\$2.178
Net Cash Flow	Link	\$4.929	\$17.213	\$37.401	\$-6.311	\$16.257	\$-0.841	\$-3.304
Stock-Based Compensation	Link	\$21.485	\$18.422	\$17.812	\$14.637	\$7.271	\$1.433	\$1.018
Common Stock Dividends Paid	Link	-	-	-	-	-	-	-

Key Financial Ratios

Quarterly Data		2020-09-30	2020-06-30	2020-03-31	2019-12-31	2019-09-30	2019-06-30	2019-03-31	2018-12-31	2018-09-30	2018-06-30
Current Ratio	[a]	5.462	7.4202	5.1518	5.0867	5.2379	6.2299	6.0953	6.2173	6.112	7.8994
Long-term Debt / Capital	[a]	0.0423	0.0404	0.0515	0.0522	-	-	-	-	-	-
Debt/Equity Ratio	[a]	0.0464	0.0437	0.0593	0.0637	-	-	-	-	-	-
Gross Margin	[a]	60.1836	61.774	64.0863	67.5519	68.8148	69.9905	65.3306	65.1627	67.0912	65.9005
Operating Margin	[a]	-13.343	-16.7911	0.4442	7.2827	9.3017	9.5387	8.6827	5.521	-18.6475	8.467
EBIT Margin	[a]	-13.343	-16.7911	0.4442	7.2827	9.3017	9.5387	8.6827	5.521	-18.6475	8.467
EBITDA Margin		-	-	-	-	-	-	-	-	-	-
Pre-Tax Profit Margin	[a]	-13.0603	-16.2022	-0.5432	8.0881	9.2923	10.07	9.2721	6.084	-17.8058	8.8136
Net Profit Margin	[a]	-5.8348	-11.3787	1.0377	6.67	8.2314	12.3606	8.3292	5.5127	-16.9311	12.2047
Asset Turnover	[a]	0.1864	0.1347	0.2067	0.2181	0.2271	0.2294	0.2258	0.2345	0.2232	0.2196
Inventory Turnover Ratio	[a]	0.314	0.219	0.2968	0.3081	0.3099	0.3034	0.3659	0.3636	0.3354	0.3832
Receiveable Turnover	[a]	1.3391	1.0768	1.3209	1.3717	1.37	1.3554	1.3566	1.475	1.39	1.4804
Days Sales In Receivables	[a]	67.2081	83.5815	68.1332	65.6126	65.6945	66.4003	66.3436	61.0188	64.7474	60.7938
ROE - Return On Equity	[a]	-1.5936	-2.0703	0.1819	1.9153	2.3558	3.5776	2.3941	1.5302	-5.4793	3.147
Return On Tangible Equity	[a]	-1.6431	-2.1329	0.1949	2.0552	2.5346	3.8652	2.5993	1.6687	-5.995	3.4321
ROA - Return On Assets	[a]	-1.2188	-1.6536	0.1337	1.3968	1.791	2.7771	1.8379	1.2551	-4.4762	2.6799
ROI - Return On Investment	[a]	-1.5262	-1.9867	0.1726	1.8153	2.3558	3.5776	2.3941	1.5302	-5.4793	3.147
Book Value Per Share	[a]	17.0724	17.2927	13.918	13.8739	13.3752	13.0561	12.6335	12.2663	11.8624	12.368
Operating Cash Flow Per Share	[a]	-0.0807	-0.6171	-0.1628	0.1315	0.608	0.0525	-0.0571	0.177	0.3214	0.0018
Free Cash Flow Per Share	[a]	-0.1847	-0.8145	-0.4414	-0.0886	0.3899	-0.0509	-0.1251	0.1026	0.271	-0.0609



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