

# Q4: Quarterly Industry Update

AS OF December 31, 2018

## Medical Devices

### INDUSTRY SUMMARY

COGENT VALUATION identified **Medical Devices** publicly traded companies, IPOs, and recent M&A transactions within the Medical Devices industry, which provides a basis for market and transaction pricing that can be used by your firm in estimating market sentiment and its impact on your firm's value. Over the last year since December 31, 2017, the median 52-week share price return of the Medical Devices industry was 35.1%. Between December 31, 2016 and December 31, 2018, the median EV/EBITDA multiple increased from 16.4 to 17.4. Furthermore, the median price-to-earnings multiple increased from 38.5 to 40.2 over the same period. The median revenue growth and EBITDA margins for the industry for the quarter were 1.9% and 10.4%, respectively.

### Public Company Key Statistics

Median 52-Week  
Return

16.8%

Median 3-Year CAGR  
Return

29%

Median EV/Revenue  
Multiple

4.4x

Median EV/EBITDA  
Multiple

20x

Median Price/Earnings  
Multiple

40.2x

Median EV/Gross CF  
Multiple

27.6x

## Comparable Public Company Market Price Returns as of December 31, 2018

	YTD	3 Month	1 Year	2 Year	3 Year	2016	2015	2014
<b>ABIOMED, Inc.</b>	140.0%	40.6%	1 Year	34.8%	89.4%	137.2%	42.3%	99.0%
<b>AngioDynamics, Inc.</b>	30.7%	28.9%	132.4%	13.8%	7.6%	-36.1%	10.8%	56.1%
<b>Atossa Genetics Inc.</b>	-44.6%	-58.9%	-0.6%	-78.6%	-70.3%	-77.6%	-38.4%	-40.5%
<b>AtriCure, Inc.</b>	92.1%	31.8%	-41.3%	1.0%	15.0%	12.4%	6.9%	170.7%
<b>Becton, Dickinson and Company</b>	21.9%	10.5%	7.2%	21.5%	19.9%	10.7%	25.9%	41.3%
<b>BIOLASE, Inc.</b>	-2.9%	-40.4%	18.1%	-18.2%	-37.7%	-68.0%	-6.6%	56.1%
<b>Boston Scientific Corporation</b>	55.3%	19.7%	-69.9%	33.3%	35.2%	39.2%	10.2%	109.8%
<b>Cardiovascular Systems, Inc.</b>	65.2%	47.5%	9.9%	33.3%	6.0%	-49.7%	-12.3%	173.2%
<b>CAS Medical Systems, Inc.</b>	196.1%	54.8%	-22.4%	-14.2%	-22.0%	7.3%	-2.9%	-20.9%
<b>CryoLife, Inc.</b>	83.8%	38.9%	-13.1%	52.7%	32.0%	-4.9%	2.2%	78.0%
<b>Cutera, Inc.</b>	-28.2%	40.6%	20.4%	77.8%	60.0%	19.8%	4.9%	13.1%
<b>Cytosorbents Corporation</b>	98.5%	5.5%	142.8%	-0.9%	2.6%	-44.0%	218.4%	-3.8%
<b>Daxor Corporation</b>	9.3%	-12.2%	56.7%	-23.1%	-6.2%	8.9%	2.2%	-10.1%
<b>InspireMD, Inc.</b>	149.2%	-30.5%	29.5%	-24.5%	7.0%	48.8%	55.5%	160.6%
<b>LeMaitre Vascular, Inc.</b>	-64.3%	9.0%	-97.0%	-39.7%	-25.1%	-35.3%	-12.3%	22.5%
<b>Merit Medical Systems, Inc.</b>	57.2%	-67.7%	47.1%	-64.0%	-53.7%	-34.2%	-18.3%	107.3%
<b>NeuroMetrix, Inc.</b>	38.1%	-8.1%	56.9%	19.9%	14.7%	17.0%	17.8%	92.4%
<b>NuVasive, Inc.</b>	-95.1%	-40.1%	-71.6%	-90.1%	-91.0%	-88.7%	-68.4%	-36.9%
<b>Median of Industry Public Companies</b>	<b>16.8%</b>	<b>19.9%</b>	<b>88.6%</b>	<b>75.2%</b>	<b>75.9%</b>	<b>125.5%</b>	<b>-4.5%</b>	<b>39.5%</b>

Multiple year periods are calculated as the average annual return.

■ Highest Return
 ■ Lowest Return
 ■ Median Return

## Public Company Median Multiples by Quarter

	12/31/18	9/30/18	6/30/18	3/31/18	12/31/17	9/30/17	3/31/17	12/31/16
<b>EV/Revenues Multiple</b>	4.4x	5.0x	4.1x	4.4x	3.9x	3.7x	3.1x	3.1x
<b>EV/EBITDA Multiple</b>	17.4x	19.7x	15.6x	17.3x	16.4x	17.1x	15.8x	14.9x
<b>Price/Earnings Multiple</b>	40.2x	48.4x	46.6x	45.9x	38.5x	42.2x	35.3x	35.7x
<b>EV/Gross Cash Flows Multiple</b>	27.6x	36.3x	29.3x	29.6x	27.6x	29.1x	27.7x	27.7x

 Highest Multiple
  Lowest Multiple
  Median Multiple

## Industry Initial Public Offerings—Medical Devices

(dollars in millions, except share prices)

Offer Date	Company Name	Offer Price	Shares Offered	Amount Raised	Total Assets	Debt	LTM Revenues	LTM EBITDA	LTM Net Income	LTM Cash Flows
11/23/18	<b>M.I.Tech Co., Ltd.</b>	\$3.98	1.5	\$130.5	\$3.4	\$1.2	\$107.8	\$16.7	(\$0.0)	\$0.0
10/16/18	<b>SI-BONE, Inc.</b>	\$15.00	2.2	\$34.6	N/A	N/A	\$1.4	(\$5.6)	N/A	N/A
3/22/18	<b>Medartis Holding AG</b>	\$50.56	2.5	\$45.2	\$7.1	\$0.5	\$3.3	\$0.0	(\$5.1)	(\$4.2)
11/22/17	<b>IRRAS AB</b>	\$5.37	6.4	\$11.4	\$18.5	\$9.9	\$3.9	(\$0.0)	(\$17.8)	(\$16.3)
10/11/17	<b>Biom'Up S.A.</b>	\$12.44	3.6	\$15.3	\$379.1	\$10.5	N/A	N/A	\$48.3	\$91.6
6/20/17	<b>Sedana Medical AB (publ)</b>	\$2.22	5.1	\$5.4	\$0.8	\$0.0	\$0.1	(\$2.3)	(\$2.3)	\$0.0
10/5/16	<b>Acarix A/S</b>	\$1.93	8.0	\$75.0	\$3.9	(\$0.3)	\$3.6	(\$16.5)	(\$1.1)	\$0.0
7/12/16	<b>Neurotech International Limited</b>	\$0.15	35.0	\$16.4	\$208.7	\$23.2	\$59.6	\$11.6	(\$18.2)	\$10.1
4/28/16	<b>Obalon Therapeutics, Inc.</b>	\$15.00	5.0	\$5.3	\$102.7	\$39.5	<b>\$0.0</b>	\$0.0	(\$58.0)	(\$34.1)
2/28/16	<b>Invent Medic Sweden AB (publ)</b>	\$0.13	89.3	\$1.1	\$24.4	\$28.7	\$0.1	\$0.0	(\$32.0)	(\$22.0)
11/10/15	<b>Advanced Accelerator Applications S.A.</b>	\$5.00	1.5	\$75.0	\$2.6	\$0.0	\$95.8	\$1.8	(\$0.7)	(\$0.7)
6/4/15	<b>EndoChoice Holdings, Inc.</b>	\$15.00	6.4	\$95.3	\$56.1	\$0.0	\$64.3	(\$39.7)	(\$29.1)	(\$27.6)
1/30/15	<b>Avinger, Inc.</b>	\$13.00	5.0	\$132.4	\$301.9	\$57.9	\$11.2	(\$23.6)	(\$41.8)	(\$2.7)
12/19/14	<b>MedoveX Corp.</b>	\$5.75	1.4	\$78.0	\$58.6	\$47.7	\$0.0	(\$0.7)	(\$53.4)	(\$45.0)
11/13/13	<b>Nevro Corp.</b>	\$18.00	7.0	\$120.0	\$48.6	\$29.3	\$29.1	(\$37.1)	(\$48.1)	(\$34.2)
10/8/13	<b>LDR Holding Corporation</b>	\$15.00	2.5	\$75.0	\$77.7	\$53.2	\$104.6	\$2.6	(\$15.3)	\$5.7
8/2/12	<b>Globus Medical, Inc.</b>	\$12.00	8.3	\$100.0	\$367.3	\$0.0	<b>\$363.0</b>	\$127.1	\$67.0	\$144.5
6/27/12	<b>Tesaro, Inc.</b>	\$13.50	6.0	\$81.0	\$93.0	\$0.0	<b>\$0.0</b>	(\$23.2)	(\$23.2)	(\$23.2)
4/30/12	<b>Supernus Pharmaceuticals, Inc.</b>	\$5.00	3.4	\$50.0	\$43.2	\$29.1	\$1.0	(\$35.5)	\$55.6	(\$34.9)
11/17/11	<b>Sphere Medical Holding PLC</b>	\$1.46	15.1	\$22.1	\$12.4	\$0.0	<b>\$0.0</b>	(\$4.5)	(\$5.1)	(\$4.2)
5/20/15	<b>Median of all IPOs</b>	<b>nm</b>	<b>nm</b>	<b>\$62.5</b>	<b>\$43.2</b>	<b>\$9.1</b>	<b>\$11.2</b>	<b>(\$4.3)</b>	<b>(\$10.9)</b>	<b>(\$3.6)</b>

## Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions)

Transaction Date	Target	Acquirer	Transaction Size	% Bought
11/9/18	K2M Group Holdings, Inc.	Stryker Corporation	\$1,406.2	76%
10/10/18	Cartiva, Inc.	Wright Medical Group, Inc.	\$435.0	100%
4/20/18	Cogentix Medical, Inc.	BTG plc	\$150.0	100%
4/16/18	nVision Medical Corporation	Boston Scientific Corporation	\$275.0	100%
1/23/18	Argon Medical Devices	Weigao International Medical HK	\$844.2	100%
12/1/17	Harpoon Medical, Inc.	Edwards Lifesciences Corporation	\$250.0	100%
12/1/17	JOTEC GmbH	CryoLife, Inc.	\$253.6	100%
8/31/17	Eternity Healthcare, Inc.	Team Youn Bio Medicine	\$1.2	100%
8/9/17	The Spectranetics Corporation	Philips Holding USA Inc.	\$2,117.3	100%
7/21/17	Electrical Geodesics, Inc.	Philips Holding USA Inc.	\$38.6	100%
7/13/17	Spirox, Inc.	Aytu BioScience, Inc.	\$81.3	100%
12/8/16	WOM World of Medicine AG	InnovaDerma PLC	\$132.2	100%
11/21/16	EndoChoice Holdings, Inc.	Boston Scientific	\$7.3	100%
9/16/16	Laborie Medical Technologies, Inc.	Patricia Industries AB	\$640.0	97%

■ USA
 ■ International
 ■ Highest
 ■ Lowest
 ■ Median

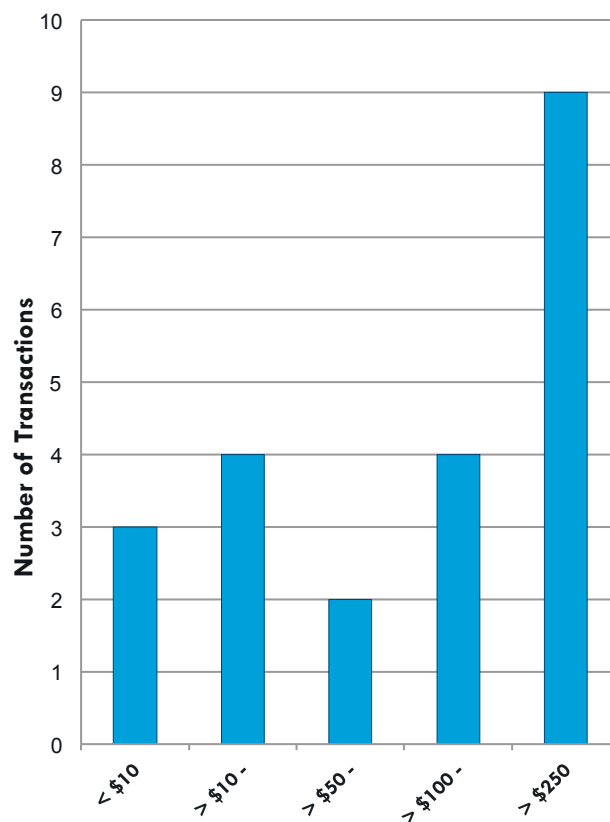
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## Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions)

Transaction Date	Target	Acquirer	Transaction Size	% Bought
9/1/16	Magellan Diagnostics, Inc.	Meridian Bioscience, Inc.	\$66.0	100%
8/22/16	TriVascular Technologies, Inc.	Endologix, Inc.	\$173.1	100%
7/14/16	Inova Labs, Inc.	ResMed Inc.	\$110.0	100%
6/29/16	Cardiac Science Corporation	CFS 915 LLC	\$82.7	100%
5/2/16	NorMedix, Inc.	SurModics, Inc.	\$14.0	100%
4/29/16	Lazarus Effect, Inc.	Medtronic plc	\$100.0	100%
4/8/16	DreamCIS, Inc.	Hangzhou Tigermed Consulting Co.	\$28.6	98%
4/4/16	CardioInsight Technologies Inc.	Medtronic plc	\$123.0	100%
9/1/16	Magellan Diagnostics, Inc.	Meridian Bioscience, Inc.	\$66.0	100%
8/22/16	TriVascular Technologies, Inc.	Endologix, Inc.	\$173.1	100%
Median of the 22 M&A Transaction Targets			\$162.0	100%

■ USA
 ■ International
 ■ Highest
 ■ Lowest
 ■ Median

## Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions) as of December 31, 2018



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**Definitions of Financial Terms Used in this Quarterly Industry Update:**

**Enterprise Value (EV):** Market Value of Equity + Market Value of Debt —Cash

**Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA):** Profitability metric sometimes also referred to as operating profit or operating earnings.

**Gross Cash Flows:** Net Income + Depreciation and Amortization Expense

**Latest Twelve Months (LTM):** Financial information is as of the latest twelve months through the date of this Quarterly Industry Update.

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