

## Cardiovascular Equipment

### INDUSTRY SUMMARY

COGENT VALUATION identified **Cardiovascular Equipment** publicly traded companies, IPOs, and recent M&A transactions within the Cardiovascular Equipment 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 September 30, 2017, the median 52-week share price return of the Cardiovascular Equipment industry was 39.0%. Between September 30, 2016 and September 30, 2018, the median EV/EBITDA multiple increased from 17.2 to 23.0. Furthermore, the median price-to-earnings multiple increased from 32.9 to 46.6 over the same period. The median revenue growth and EBITDA margins for the industry for the quarter were 3.0% and 26.9%, respectively.

### Public Company Key Statistics

Median 52-Week  
Return

39%

Median 3-Year CAGR  
Return

34.8%

Median EV/Revenue  
Multiple

6x

Median EV/EBITDA  
Multiple

23x

Median Price/Earnings  
Multiple

46.6x

Median EV/Gross CF  
Multiple

55.2x

## Comparable Public Company Market Price Returns as of September 30, 2018

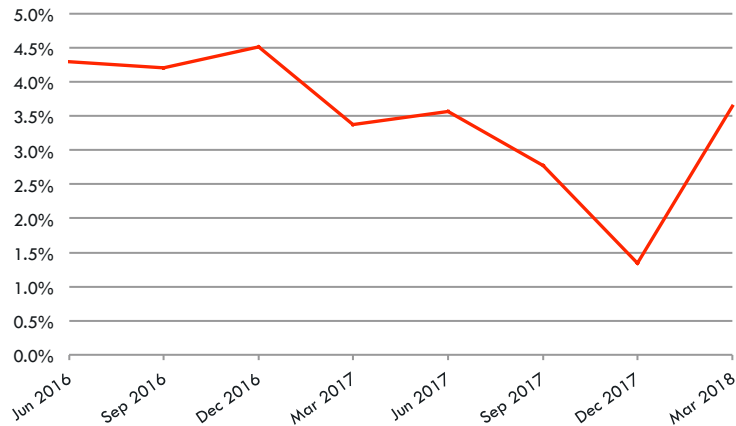
	YTD	3 Month	1 Year	2 Year	3 Year	2016	2015	2014
<b>ABIOMED, Inc.</b>	140.0%	9.9%	66.3%	75.2%	78.6%	24.8%	137.2%	42.3%
<b>BioTelemetry, Inc.</b>	115.6%	43.2%	33.8%	63.0%	67.1%	91.4%	16.5%	26.3%
<b>Boston Scientific Corporation</b>	55.3%	17.7%	14.6%	20.5%	29.5%	17.3%	39.2%	10.2%
<b>Cardiovascular Systems, Inc.</b>	65.2%	21.0%	-2.1%	45.4%	1.1%	60.1%	-49.7%	-12.3%
<b>CryoLife, Inc.</b>	83.8%	26.4%	20.3%	25.8%	30.6%	77.6%	-4.9%	2.2%
<b>Edwards Lifesciences Corporation</b>	54.5%	19.6%	13.4%	3.4%	40.2%	18.6%	24.0%	93.7%
<b>Medtronic plc</b>	21.8%	14.9%	32.4%	7.4%	11.7%	-7.4%	6.5%	25.8%
<b>St. James's Place plc</b>	-9.9%	-1.4%	66.3%	27.4%	5.6%	-15.8%	17.1%	5.3%
<b>Teleflex Incorporated</b>	6.9%	-0.8%	105.2%	27.4%	18.8%	62.7%	-56.4%	38.3%
<b>Median of Industry Public Companies</b>	55.3%	17.7%	34.4%	75.2%	29.5%	22.6%	14.5%	24.4%

Multiple year periods are calculated as the average annual return.

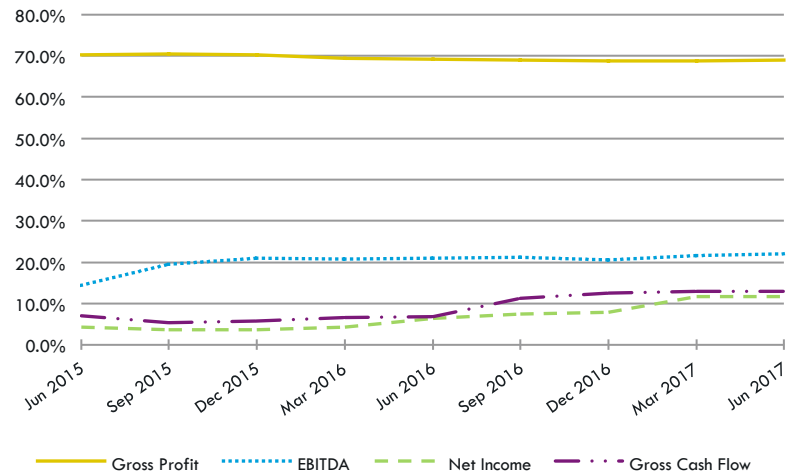
■ Highest Return
 ■ Lowest Return
 ■ Median Return

# Industry Revenue Growth and Profit Margins for the Past Two Years

**Median Quarterly Revenue Growth of Cardiovascular Equipment Companies**



**Median Gross Profit, EBITDA, Net Income, and Gross Cash Flow Margins**



## Public Company Median Multiples by Quarter

	9/30/18	6/30/18	3/31/18	12/31/17	9/30/17	6/30/17	3/31/17	12/31/16
<b>EV/Revenues Multiple</b>	6.0x	5.4x	4.5x	4.5x	5.2x	4.9x	4.5x	4.1x
<b>EV/EBITDA Multiple</b>	23.0x	20.0x	19.9x	20.3x	22.3x	22.3x	19.0x	15.7x
<b>Price/Earnings Multiple</b>	46.6x	46.4x	45.6x	44.1x	44.3x	44.7x	36.0x	34.8x
<b>EV/Gross Cash Flows Multiple</b>	55.2x	64.1x	45.8x	54.7x	40.7x	39.2x	31.9x	30.6x

■ Highest Multiple    
 ■ Lowest Multiple    
 ■ Median Multiple

## Industry Initial Public Offerings—Cardiovascular (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
5/31/18	Hancock Jaffe Laboratories, Inc.	\$5.00	15.1	\$22.1	\$1.5	\$3.8	\$0.3	(\$6.3)	(\$7.0)	(\$6.3)
11/17/11	Sphere Medical Holding PLC	\$1.46	7.0	\$10.4	\$4.4	\$1.5	\$0.0	(\$7.0)	(\$3.4)	(\$3.0)
4/18/11	InspireMD, Inc.	\$1.50	2.1	\$16.5	\$7.2	\$0.0	\$4.5	(\$3.3)	(\$10.2)	(\$8.6)
2/10/11	Kips Bay Medical, Inc.	\$8.00	4.5	\$81.0	\$103.0	\$2.8	\$0.2	(\$8.6)	(\$0.4)	\$8.9
3/18/08	BioTelemetry, Inc.	\$18.00	6.8	\$54.4	\$62.0	\$31.1	\$64.9	\$4.8	(\$17.8)	\$0.5
6/14/06	Volcano Corporation	\$8.00	14.4	\$47.0	\$11.8	\$7.4	\$95.3	(\$4.2)	(\$13.0)	(\$8.2)
12/12/05	Lombard Medical Technologies Limited	\$2.82	4.0	\$48.0	\$12.4	\$0.0	\$0.1	(\$9.5)	(\$9.7)	(\$3.7)
8/5/05	AtriCure, Inc.	\$12.00	5.5	\$44.0	\$41.1	\$6.0	\$25.5	(\$5.8)	(\$30.5)	(\$29.2)
<b>Median of all IPOs</b>		<b>nm</b>	<b>nm</b>	<b>\$45.5</b>	<b>\$12.1</b>	<b>\$3.3</b>	<b>\$2.4</b>	<b>(\$6.1)</b>	<b>(\$9.9)</b>	<b>(\$5.0)</b>

Multiple year periods are calculated as the average annual return.

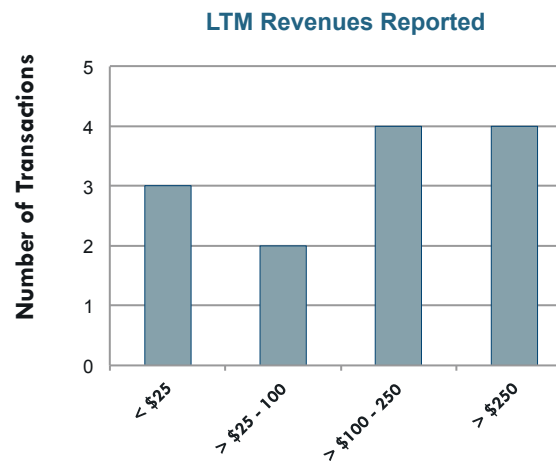
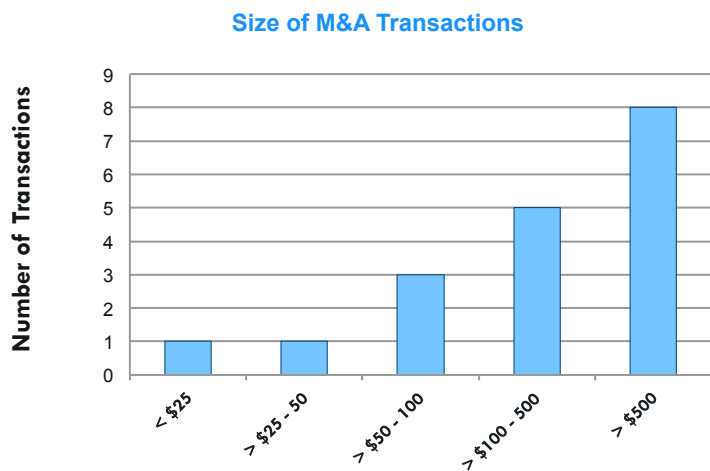
■ Highest Return   
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## Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions)

Transaction Date	Target	Acquirer	Transaction Size	% Bought	LTM Revenues	EV/ Revenues
12/29/17	<b>C. R. Bard, Inc.</b>	Becton, Dickinson	\$25,785.2	100%	\$3,779.3	6.6x
12/29/17	<b>JOTEC GmbH</b>	CryoLife, Inc.	\$253.6	100%	\$51.0	5.0x
12/29/17	<b>The Spectranetics Corporation</b>	Philips Holding USA Inc.	\$2,117.3	<b>100%</b>	\$277.6	7.5x
12/1/17	<b>Vascular Solutions, Inc.</b>	Teleflex Incorporated	\$1,007.2	100%	\$160.0	6.1x
8/9/17	<b>St. Jude Medical, Inc.</b>	Abbott Laboratories	\$30,336.5	100%	\$5,644.0	5.3x
2/17/17	<b>Selexys Pharmaceuticals</b>	Novartis AG	\$665.0	100%	N/A	N/A
1/4/17	<b>Creganna-Tactx Medical</b>	Tyco Electronics UK Holdings Ltd.	\$895.0	100%	\$249.0	3.6x
11/18/16	<b>Thoratec Corp.</b>	St. Jude Medical, Inc.; SJM International, Inc.	\$3,683.3	100%	\$483.8	7.0x
4/4/16	<b>Lazarus Effect, Inc.</b>	Medtronic plc	\$100.0	100%	N/A	N/A
10/8/15	<b>Altura Medical, Inc.</b>	Lombard Medical, Inc.	\$49.0	81%	N/A	N/A
9/28/15	<b>CardioInsight Technologies</b>	Medtronic plc	\$123.0	100%	N/A	N/A
7/30/15	<b>CardioMEMS, Inc.</b>	St. Jude Medical Inc.	\$375.0	100%	N/A	N/A
6/18/15	<b>Oscor Inc., Lead Business</b>	Sorin SpA	\$20.0	100%	N/A	N/A
5/30/14	<b>CircuLite, Inc.</b>	Heartware International	\$401.8	<b>100%</b>	\$1.3	N/A
2/20/14	<b>Cardiacom</b>	Medtronic	\$200.0	100%	\$50.0	4.0x
12/1/13	<b>eResearchTechnology</b>	Genstar Capital	\$423.5	100%	\$193.7	1.9x
8/11/13	<b>SunTech Medical Group</b>	Halma	\$57.0	81%	\$23.0	2.3x
7/3/12	<b>ZOLL Medical</b>	Asahi Kasei	\$2,216.2	100%	\$544.3	3.9x
<b>Median of the 19 M&amp;A Transaction Targets</b>			<b>\$452.0</b>	<b>100%</b>	<b>\$160.0</b>	<b>5.0x</b>

■ Highest    
 ■ Lowest    
 ■ Median

## Recent Merger and Acquisition Transactions for a Majority Stake (dollars in millions) as of September 30, 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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