

VALUE FOCUS

MedTech Industry



Year-End 2016

The second half of 2016 reinforced the idea that the Med-Tech industry is cooling off. MedTech faced constrained capital markets and low exit activity, consistent with the broader technology industry. Industry multiples stabilized after falling in the first half of the year, despite revenue and EBITDA growth overall.

Exit activity through both IPOs and M&A fell in both number and value during the year. However, several large pharmaceutical and device companies continued to make their mark on the M&A market. Venture capital funding fell

as well, with investors showing more hesitance towards investing in unproven technologies.

Potential regulatory changes pose threats and opportunities for the industry. 2016 marked the passage of the 21st Century Cures Act and heightened debates regarding the future of the Affordable Care Act. As the stock market continues to ride the election boost and the healthcare industry is poised for major changes, the MedTech industry could see substantial changes in the near future.



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- Healthcare Technology
- Healthcare Supplies
- Medical Equipment
- Life Science Tools & Services

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- Valuations for purchase accounting and impairment testing
- Fairness and solvency opinions
- Litigation support for economic damages and valuation and shareholder disputes

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Pfizer Acquires Medivation

Allocating Purchase Price for a Biopharma Transaction

This article first appeared on [The Financial Reporting Blog](#) in [September 2016](#).

In August 2016, Pfizer (“PFE”) **announced it would acquire** the biopharmaceutical company Medivation (“MDVN”) for \$81.50 per share, or a total enterprise value of approximately \$14 billion, in an all-cash deal. The transaction made headlines for how the size of the deal escalated over a period of approximately six months prior to the PFE announcement, as well as the potential implications regarding the attractiveness of (relatively) smaller biopharmaceutical targets in an environment where larger deals face an inordinate amount of regulatory scrutiny.

Mercer Capital vice president Sujan Rajbhandary discusses the intangible assets acquired beyond Medivation’s commercialized product and how such intangibles are treated post-acquisition.

Allocations for Similar Transactions

In thinking about the allocation of the purchase price for the PFE MDVN transaction, a brief review of three recent transactions is useful. In February 2015, **PFE announced the acquisition of Hospira Inc. for \$16 billion** in cash (an estimated 39% premium over pre-announcement Hospira share price). Hospira manufactured and sold generic acute-care and oncology injectables, biosimilars, and integrated infusion therapy and medication management systems. The **transaction closed** in September 2015. Notably, the erstwhile Hospira operations are part of PFE’s Established Products segment, which includes products that have exhausted (or are imminently expected to lose) patent protection including branded generics, generic sterile injectable products, biosimilars, and some contract manufacturing. Assets acquired as part of the MDVN transaction would, in contrast, be housed under PFE’s Innovative Products business, which includes patent protected products. Innovative Products also engages in significant research and development efforts to produce an array of new assets including pharmaceutical, vaccine, and oncology products. Accordingly, expected unit pricing, gross margins, and pre tax profitability for the MDVN products should be different from those of Hospira, suggesting likely variance on the relative allocation of intangible assets between the two transactions.

In March 2015, **AbbVie announced the acquisition of Pharmacyclics, Inc. for \$20.8 billion** in a cash (\$12.4 billion) and equity (\$8.4 billion) deal. Pharmacyclics sold, and was developing additional extensions of, one product – Imbru-

vica (ibrutinib). The **transaction closed** in May 2015. Imbruvica received FDA approval and EC marketing authorization for patients with Waldenström's macroglobulinemia (a rare form of **blood cancer**) in January 2015 and July 2015, respectively. Subsequent to the transaction, the FDA granted Imbruvica orphan drug designation for the treatment of extranodal marginal zone lymphoma. Pharmacyclics had entered into a collaboration and license agreement with Janssen (a subsidiary of Johnson & Johnson) in December 2011 that provided for the sharing of pre-tax profits and losses between the two companies. Pursuant to the agreement, Janssen has an exclusive license to commercialize Imbruvica outside the U.S. and co-exclusive rights (with AbbVie) for the U.S. market, shares development costs, and is liable for milestone payments of up to \$200 million.

In May 2015, **Alexion Pharmaceuticals announced the acquisition of Synageva BioPharma for \$8.4 billion** in a cash and equity deal (an estimated 124% premium over Synageva average share price for the week prior to the announcement). At the time, Synageva did not have a commercial product, but was in late stage development of Kanuma, an enzyme replacement therapy for patients suffering from lysosomal acid lipase deficiency (LAL-D), a rare, life-threatening, genetic disease. By the **close of the transaction** in June 2015, total consideration equaled \$9.5 billion including \$4.9 billion in equity and \$4.6 billion in cash. Subsequent to the transaction, Kanuma received **European approval** for LAL-D in September 2015.

Identifiable Intangible Assets

As discussed already, the primary assets acquired by PFE in the MDVN deal include:

- » Xtandi, a developed product being commercialized. Extensions of the product could expand the total addressable market.
- » Talazoparib, a developmental product with Phase 3 clinical trials underway. MDVN recently increased the estimate of expected contingent consideration payments related to the asset.
- » Pidilizumab, a developmental product with Phase 2 clinical trials underway.

	PFE acquisition of Hospira	AbbVie acquisition of Pharmacyclics	Alexion acquisition of Synageva
Allocations of Similar Transactions (\$ millions)			
Working capital	\$2,198	\$1,486	\$650
Property, plant and equipment	2,410	-	-
Other noncurrent assets	408	212	-
Identifiable intangible assets			
Developed technology (definite-lived)	7,720	11,370	-
In-process research and development	995	7,180	4,236
Other intangible assets	550	-	-
Goodwill	7,284	7,610	4,794
Total assets	21,565	27,858	9,680
Liabilities acquired	(5,478)	(7,088)	(197)
Total consideration / Net assets acquired	\$16,087	\$20,770	\$9,483
Relative Allocations			
Working capital	10.2%	5.3%	6.7%
Property, plant and equipment	11.2%	0.0%	0.0%
Other noncurrent assets	1.9%	0.8%	0.0%
Identifiable intangible assets			
Developed technology (definite-lived)	35.8%	40.8%	0.0%
In-process research and development	4.6%	25.8%	43.8%
Other intangible assets	2.6%	0.0%	0.0%
Goodwill	33.8%	27.3%	49.5%
Total assets	100.0%	100.0%	100.0%

Sources:

2015 10-K filed by PFE. Allocation shown for the Hospira transaction is provisional.

2015 10-K filed by AbbVie. Allocation shown for the Pharmacyclics transaction is preliminary.

Developed technology includes developed product rights (\$4.6 billion) and licence agreements (\$6.8 billion).

2015 10-K filed by Alexion. Allocation shown for the Synageva transaction is preliminary.

Mercer Capital analysis.

Based on the nature of assets acquired, the primary identifiable intangible assets for the PFE-MDVN transaction should be definite-lived developed technology, and indefinite-lived in-process research and development assets.

Based on the nature of assets acquired, the primary identifiable intangible assets for the PFE-MDVN transaction should be definite-lived developed technology, and indefinite-lived in-process research and development assets. The three similar transactions provide some additional perspectives regarding the identifiable intangible assets for the PFE-MDVN transaction. PFE was the common acquirer in both the MDVN and Hospira transactions. At the time of both the Hospira and MDVN transactions, PFE was considering splitting the company along its two primary business lines – Established Products and Innovative Products.¹ Both transactions could have appealed to PFE management's pursuit of growing each of the two businesses to a significant enough size and reach to make stand alone operations viable and valuable. To this end, while prior to the MDVN transaction management indicated a greater desire to add to the Innovation Products business, the deal appears to have **sated (at least for now) the need for an acquisition stance** biased towards patented (or patentable) products. Accordingly, PFE could have been especially motivated to acquire both MDVN and Hospira, which would likely be reflected in a similar relative (implied) allocation to goodwill. There are differences between the two transactions, however. Broadly, the Hospira transaction is likely to have included a greater proportion of tangible assets relative to the MDVN transaction. For reference, almost a quarter of the acquired Hospira assets were tangible, while the reported balance of MDVN tangibles assets at June 30, 2016 represent 7% of the proposed deal value.²

The AbbVie acquisition of Pharmacyclics is similar to the PFE acquisition of MDVN's Xtandi assets (as shown on the following page). At the time of the transaction, both Imbruvica and Xtandi had a newly approved product (application) with a long patent life, as well as advanced development of additional extensions for more indications. Given its prior experience with selling to urologists, PFE management appears to view favorably the potential to expand the addressable market once (if) Xtandi is approved for earlier-stage prostate cancer indications. In addition, both Imbruvica and Xtandi are subject to collaboration agreements, with the risks associated with developing and commercializing the products and the eventual economic rewards being shared with an outside entity. While the finer details of the two collaboration agreements differ, PFE will likely record developed technology – including both product rights and license agreements components – assets as part of the acquisition accounting exercise. PFE will likely also record an IPR&D intangible asset for the extension cases of Xtandi. Notably, owing to the accounting treatment of R&D, no corresponding asset appears in the pre-acquisition MDVN balance sheet.³

There are differences between the Pharmacyclics and MDVN transactions, however. Unlike the Pharmacyclics deal, the MDVN acquisition involves more than one (developed) product. The talazoparib and pidilizumab assets do not currently produce revenue and are in the developmental stage. MDVN has reported progress with clinical trials and data collection, but regulatory approval is not yet certain for applications of either asset. In this regard, PFE's acquisition of the two developmental assets is similar to the Alexion acquisition of Synageva. Excluding a small balance of working capital assets (including cash), the purchase price in the Synageva acquisition was allocated entirely to IPR&D and goodwill. The portion of MDVN purchase consideration that is related to the two developmental assets should also represent the same two assets, IPR&D and goodwill.

Brief Comments on Measurement Methods

The developed technology PFE would acquire in the MDVN deal includes two cash flow components, i) shared profits from sales within the U.S., and ii) royalties from sales outside the U.S. In our experience, the values of developed technology assets are measured most commonly using the **relief from royalty method**. This method should also be useful in measuring the value of the first component of MDVN's developed technology assets. Primary inputs used in the relief from royalty method include the expected stream of future revenues, an appropriate royalty rate, and an appropriate discount rate. Earlier sections of this article discussed various considerations around the potential future revenues for the currently approved applications of Xtandi including addressable market, implied current market share, and remaining life of the related patent.⁴ A survey of royalty rates for similar products can inform the appropriate rate to use for the relief from royalty method. In MDVN's case, the royalties available from sales outside the U.S. would naturally be an observation to be included in the royalty rate survey.

Methods under the **income approach are most appropriate** in measuring the value of an IPR&D asset. Common methods include multi-period excess earnings method (MPEEM), relief from royalty method, and decision tree analysis. For all three similar transactions discussed in a prior section, the MPEEM was used to measure the value of the IPR&D assets. Applying MPEEM for IPR&D assets requires development of a number of inputs including the likelihood of regulatory success (approval to market product), expected future revenue stream, likely realizable profit

margins, contributory charges for other assets expected to be used in the business, and the applicable discount rate. For perspective, Alexion filings provide one observation on the discount rate – the company assumed a weighted average cost of capital of 10% in measuring the value of IPR&D assets acquired in the Synageva deal.

Conclusion

In summary, after accounting for a modest balance of tangible assets, the PFE-MDVN purchase price will likely be allocated primarily to two identified intangible assets – developed technology (with two potential components) and IPR&D – and the residual asset, goodwill. The sale process was drawn out, involved a number of potential acquirers, and the winning bidder appeared to be very motivated as demonstrated by both i) the implied revenue multiple using the only currently commercialized product (whatever its flaws), and ii) the sizable premium over (any measure of) the pre-acquisition share price. As in the case of the three similar transactions, these observations suggest a healthy allocation of the PFE-MDVN purchase price to goodwill.



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End Notes

- ¹ Subsequent to the first publication of this article, PFE announced it had **decided not to split** into the two business lines. Reportedly, PFE spent \$600 million pondering and preparing for the decision.
- ² Some constituent elements of the tangible asset base are likely to be written up (or down) from their reported values as part of the purchase price allocation process. However, at a reported value of \$70 million, the most likely candidate for a write-up (property and equipment) is a small portion of the MDVN balance sheet (and likely to remain so given the business model of the company).
- ³ While IPR&D is an identifiable intangible asset for the purposes of a purchase price allocation, R&D expenditures incurred during the course of operations are expensed and not capitalized pursuant to current accounting rules. Accordingly, the MDVN balance sheet does not include entries, IPR&D or otherwise, related to the Xtandi extension applications.
- ⁴ As technologies age, competitive products or platforms can erode the revenue potential of incumbent solutions (sometimes even when patent protection is available). Accordingly, based on a survey of similar products in the market or in development, it may be appropriate to assume an obsolescence curve to isolate the expected future revenue stream applicable to the currently developed technology.

Public Market Indicators

The MedTech industry overall generally continued to show strong fundamentals. High multiple growth in the medical technology segment persisted, as interest in biotechnology appears to have slowed.

LTM P/E multiples weakened modestly with a median of 34.7x:

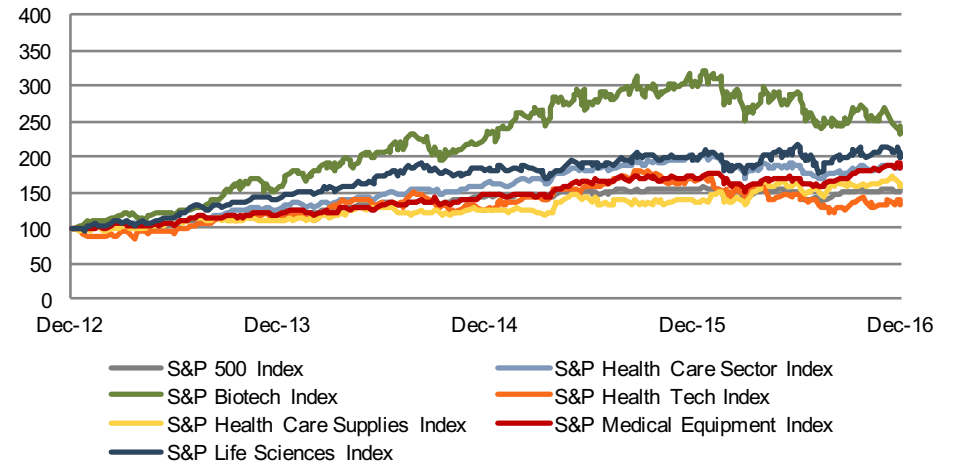
- Healthcare Technology multiple strengthened to 104.9x (vs. 75.1x in 1H16)

Revenue and EBITDA grew in all segments except biotechnology:

- Healthcare Technology showed a positive market outlook at 49.8x (vs. 24.1x in 1H16)
- The industry median multiple of 21.9x was above the S&P 500 forward P/E of 16.9x (per FactSet)

Source: NASDAQ

Medical Technology Industry Total Returns



Source: S&P Capital IQ

MedTech industry consists of Biotechnology, Healthcare Technology, Healthcare Supplies, Medical Equipment, and Life Science Tools and Services

MedTech Industry Multiples

as of December 31, 2016

Segment	EV/ Revenue	EV/ EBITDA	EBITDA Margin	LTM P/E	Forward P/E	Revenue Growth (from LTM)	EBITDA Growth (from LTM)	Forward Price to Earnings / Growth*
Biotechnology	5.6	18.3	29.5%	33.4	17.8	12.2%	12.1%	0.6
Health Care Technology	3.7	34.9	17.3%	104.9	49.8	17.6%	14.2%	(0.5)
Health Care Supplies	5.0	18.2	21.3%	37.3	25.3	9.4%	7.3%	1.8
Medical Equipment	4.1	16.0	23.0%	34.7	21.9	12.7%	13.5%	2.0
Life Science Tools and Services	2.9	15.5	21.5%	26.5	19.8	7.7%	9.7%	1.1
MedTech Industry	4.1	17.1	23.3%	34.7	21.9	11.5%	12.1%	1.6

*Price to Earnings to Growth (PEG) multiples calculated using forward P/E ratios and forward EPS growth estimates

Source: S&P Capital IQ

Market Trends & Outlook

Biotechnology

- Big pharma companies now buy in approximately 75% of product pipeline from startups and smaller companies
- The FDA issued new guidance on quality agreements for contract service provider relationships in drug manufacturing
- Government investigation into *Centers for Medicare & Medicaid Services* over monitoring quality of Medicaid Drug Rebate Program
- Passage of 21st Century Cures aims to speed up FDA approval process for certain medical devices and drugs

Sources: WSJ, The Economist, Life Science Leader, MassDevice

Healthcare Technology

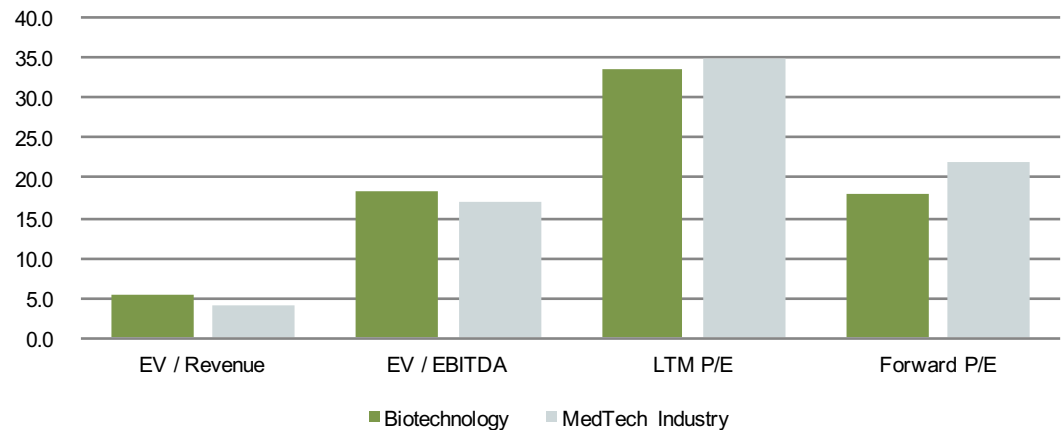
- Trend towards personalized healthcare with genome-based diagnoses and therapies
- Trends towards data collection for procedure outcomes, patient satisfaction, consumer habits:
 - Has the potential for use in tailored treatments, hospital management, and development of cures

Continued focus on cybersecurity and protection of personal data:

- According to HHS, there were 92 privacy breaches through November 2016. This is 64% higher than the same period in 2015
- Quest diagnostics patient portal breach exposed 34,000 patient records

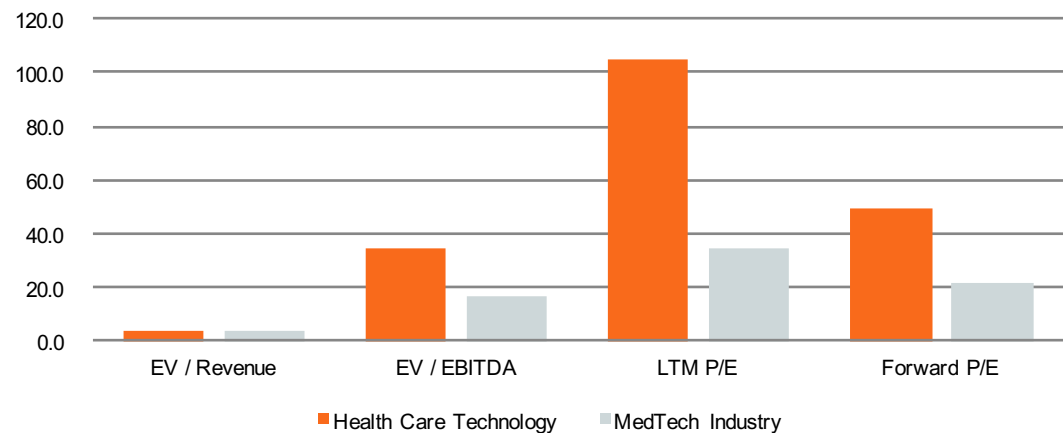
Sources: Modern Healthcare, Forbes

Median Biotechnology Multiples // as of December 31, 2016



Source: Capital IQ

Median Healthcare Technology Multiples // as of December 31, 2016



Source: Capital IQ

Market Trends & Outlook

Healthcare Supplies

- Experimentation with continuous manufacturing in pharmaceutical production:
 - Removes the need for batch drug production and allows for flexible manufacturing
- Proposed tax on Mexican imports could increase input prices of raw materials used in medical supply production

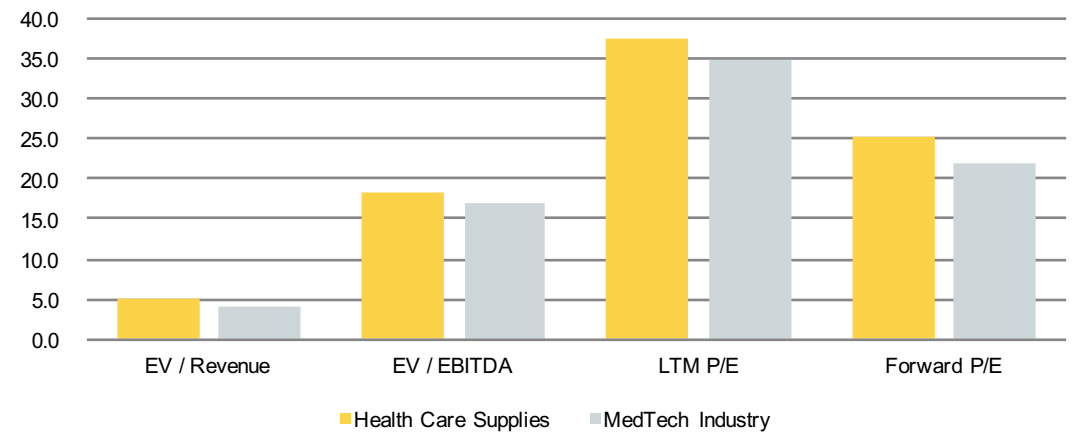
Sources: *Life Science Leader, Modern Healthcare*

Medical Equipment

- Passage of the 21st Century Cures Act aims to speed up FDA approval process for certain medical devices and drugs
- Slowing demand observed in the market for wearable technologies:
 - 4Q 2016 expected to be slowest growth in two years for Fitbit
- Increased demand for 3-D enabled imaging equipment:
 - Buyers paid 33% more for X-ray systems in 2016 as health centers upgraded to new technology with additional features

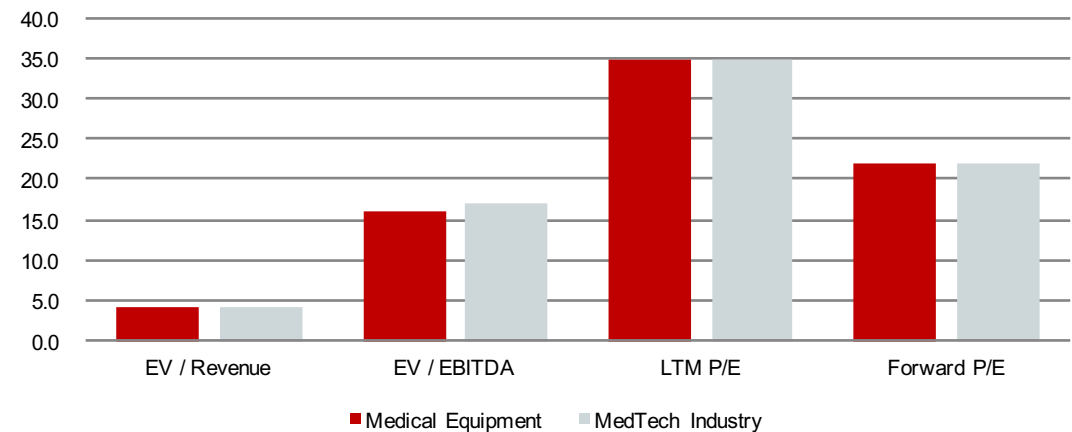
Sources: *WSJ, Modern Healthcare*

Median Healthcare Supplies Multiples // as of December 31, 2016



Source: *Capital IQ*

Median Medical Equipment Multiples // as of December 31, 2016



Source: *Capital IQ*

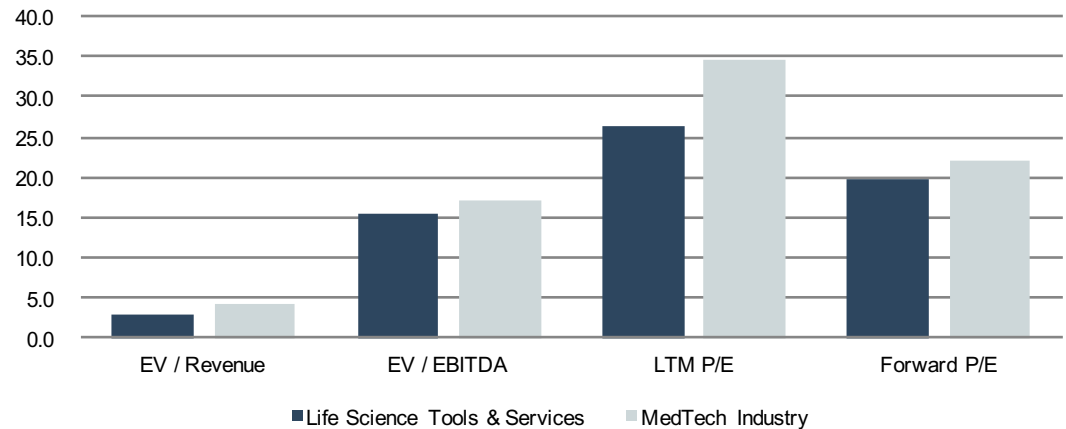
Market Trends & Outlook

Life Science Tools & Services

- Increased consolidation and introduction of unconventional collaborations in the industry:
 - Pharmaceutical company Bayer and VC firm Versant Ventures to form BlueRock Therapies with \$225M funding for stem-cell research
- Continued move toward bundled payments and outcome-based reimbursements for Medicare:
 - CMS aims to shift 50% of spending on fee-for-service contracts to value-based payments by 2018
- 21% decline in hospital acquired conditions over past five years:
 - Resulted in \$28 billion savings on healthcare expenditures

Source: Bloomberg

Median Life Science Multiples // as of December 31, 2016



Source: Capital IQ

What We're Reading

Bayer Teams Up with Versant Ventures to Develop Stem-Cell Therapies

The Wall Street Journal (subscription required)

Rethinking the Customer Relationship in MedTech

TechCrunch

Fitbit's Challenge: Move From "Nice-to-Have" to "Need-to-Have"

The Wall Street Journal (subscription required)

How Computer Analytics Offers Medicine Better Answers

U.S. News & World Report

Senate Clears Bill to Ease FDA Drug and Device Approvals

The Wall Street Journal (subscription required)

How the Microbiome Will Lead a Revolution in the Consumerization of Personalized Medicine and Diet

TechCrunch

MedTech M&A Trends & Outlook

2H16 vs. 1H16

- M&A activity weakened in 2H16 all around:
 - 209 transactions (compared to 252 in 1H16)
 - Average deal value fell 34% to \$625M (from \$950M in 1H16)
 - Top ten transactions in 2H16 totaled \$45.5B (32% decrease from \$66.8B in 1H16)
- Allergan Plc was the most active buyer with 3 deals
- Largest deal was Pfizer's acquisition of biopharmaceutical company Medivation, Inc. for \$14.3B

Year-over-Year Comparison 2016 vs. 2015

- Yearly trends show a decline in M&A exits:
 - Deal count fell to 461 during 2016 from 453 in 2015
 - Total deal value fell to \$129B from \$273B in 2015

Niche M&A Highlights

- Healthcare Technology continues to be the most active sector for M&A with 65 deals in 2H16.
- Companies compete to obtain healthcare and patient data from a breadth of sources, including companies and specialty data providers.

MedTech Deal Activity

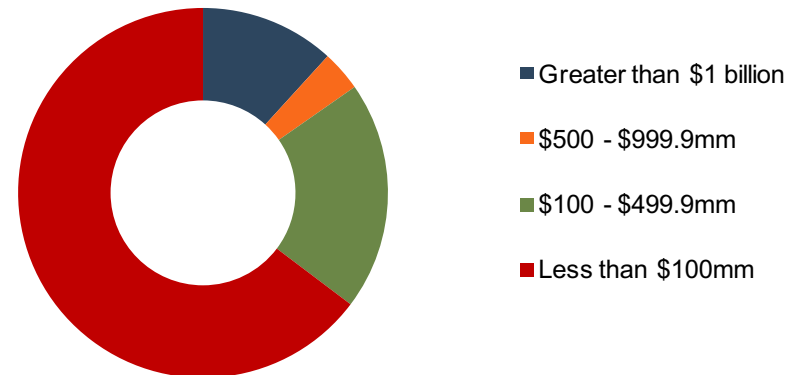
2H16 vs. 1H16

	2H16	1H16	% Change
# of Deals	209	252	-17%
Total Reported Deal Value (\$M)	\$53,167	\$75,064	-29%
Average Reported Deal Value (\$M)	\$625	\$950	-34%

Source: Capital IQ

MedTech Deal Sizes

2H16



Source: Capital IQ

MedTech M&A Trends & Outlook

Important Deals

- **Pfizer** acquisition of **Medivation** for \$14.3B (September 27, 2016):
 - Added Medivation's leading prostate cancer pharmaceutical, which produces \$2B in revenue annually, to Pfizer's portfolio
 - Implied EV/EBITDA: 30.7x
- **EQT Partners** acquisition of healthcare survey company **Press Ganey** for \$2.4B (October 21, 2016):
 - Increased focus on healthcare data, including patient and outcome feedback
 - Implied EV/EBITDA: 22.7x
- **IMS Health Holdings** acquisition of **Quintiles IMS Holdings**:
 - Merger of equals to expand pool of data for pharmaceutical companies and realize cost efficiencies
 - Implied EV/EBITDA: 17.7x

MedTech Deal Activity

2H16

Buyer	Target	Industry Segment	Date Closed	Total Trans. Value (\$M)	Implied EV/ EBITDA
Pfizer Inc. (NYSE:PFE)	Medivation, Inc.	Biotechnology	9/27/16	\$14,330.90	30.7
Quintiles IMS Holdings, Inc. (NYSE:Q)	IMS Health Holdings, Inc.	Health Care Technology	10/3/16	\$13,549.36	17.7
Danaher Corporation (NYSE:DHR)	Cepheid	Biotechnology	11/4/16	\$4,412.03	na
Advent International Corporation	inVentiv Health Inc.	Life Sciences Tools and Services	11/10/16	\$4,094.87	19.3
EQT Partners AB	Press Ganey Holdings, Inc.	Health Care Technology	10/21/16	\$2,428.56	22.7
Allergan plc (NYSE:AGN)	Tobira Therapeutics, Inc.	Biotechnology	11/1/16	\$1,541.02	na
Jazz Pharmaceuticals Public Limited Company (NasdaqGS:JAZZ)	Celator Pharmaceuticals, Inc.	Biotechnology	7/11/16	\$1,538.91	na
Medtronic, Inc.	Heartware International Inc.	Healthcare Equipment	8/22/16	\$1,254.61	na
Merck & Co., Inc. (NYSE:MRK)	Afferent Pharmaceuticals, Inc.	Biotechnology	7/26/16	\$1,250.00	na
Zimmer Biomet Holdings, Inc. (NYSE:ZBH)	LDR Holding Corporation	Healthcare Equipment	7/13/16	\$1,146.56	na
Average				\$4,554.68	22.6
Median				\$1,984.79	21.0

Source: S&P Capital IQ

MedTech IPOs

- Consistent with the slowdown in technology IPOs in 2016, MedTech IPOs slowed during the year
- Nine IPOs in the second half of 2016 vs. 17 in the first half of 2016
- Total gross proceeds of \$2.1M (median \$90M) in 2H16 vs. \$989.5M in 1H16
- One company went public with a market cap greater than \$1B, Convatec Group Plc (\$5.64B)
- Median return since IPO of 10% in 2H16 vs. 7.0% in 1H16

Source: Capital IQ

2H16 MedTech IPOs

Ticker	Name	IPO Price	IPO Date	Gross Proceeds (\$M)	% Return Since IPO	12/31/16 Price	12/31/16 Mkt Cap (\$M)	12/31/16 Ent Val (\$M)	Rev. (\$M)	LTM		MedTech Niche	Description
										EBITDA (\$M)	Net Income (\$M)		
CELLNK B	Cellink AB (publ)	\$2.92	11/2/16	\$2.58	107.8%	\$9.20	59.98	59.98	\$0.72	\$0.00	(\$0.17)	Pharmaceuticals, Biotechnology and Life Sciences	CELLINK AB (publ), a biotechnology company, develops a range of bioinks for various applications.
CTEC	Convatec Group Plc	\$2.25	10/26/16	\$1,484.40	57.0%	\$2.89	\$5,635.74	\$9,139.82	\$1,675.20	\$401.30	(\$181.10)	Healthcare Equipment and Services	Convatec Group Plc develops, manufactures, and markets medical products and technologies worldwide.
MYOV	Myovant Sciences Ltd.	\$15.00	10/26/16	\$217.50	5.5%	\$12.44	\$749.50	\$749.43	\$0.00	\$0.00	(\$9.94)	Pharmaceuticals, Biotechnology and Life Sciences	Myovant Sciences Ltd., a clinical-stage biopharmaceutical company, focuses on developing and commercializing therapies for women's health diseases and other endocrine-related disorders.
RARX	Ra Pharmaceuticals, Inc.	\$13.00	10/25/16	\$91.64	9.0%	\$15.19	\$342.48	\$397.76	\$5.75	(\$20.24)	(\$22.54)	Pharmaceuticals, Biotechnology and Life Sciences	Ra Pharmaceuticals, Inc., a clinical-stage biopharmaceutical company, engages in the discovery and development of novel therapeutics for the treatment of diseases caused by excessive or uncontrolled activation of the complement system.
IRTC	iRhythm Technologies, Inc.	\$17.00	10/19/16	\$107.00	10.4%	\$30.00	\$663.81	\$790.89	\$56.22	(\$17.28)	(\$22.34)	Healthcare Equipment and Services	iRhythm Technologies, Inc., a digital healthcare company, focuses on the provision of ambulatory electrocardiogram, or ECG, monitoring for patients at risk for arrhythmias in the United States.

Source: Capital IQ

2H16 MedTech IPOs (cont.)

Ticker	Name	IPO Price	IPO Date	Gross Proceeds (\$M)	% Return Since IPO	12/31/16 Price	12/31/16 Mkt Cap (\$M)	12/31/16 Ent Val (\$M)	Rev. (\$M)	LTM		MedTech Niche	Description
										EBITDA (\$M)	Net Income (\$M)		
OBLN	Obalon Therapeutics, Inc.	\$15.00	10/5/16	\$75.00	3.9%	\$8.85	\$148.44	\$214.67	\$3.60	(\$16.46)	(\$17.81)	Healthcare Equipment and Services	Obalon Therapeutics, Inc., a commercial-stage medical device company, focuses on developing and commercializing medical devices to treat obese and overweight people by facilitating weight loss.
CRSP	CRISPR Therapeutics AG	\$14.00	10/18/16	\$56.00	10.3%	\$20.26	\$806.53	\$763.43	\$3.07	(\$54.41)	(\$52.55)	Pharmaceuticals, Biotechnology and Life Sciences	CRISPR Therapeutics AG focuses on the development of transformative gene-based medicines for serious diseases using its proprietary CRISPR/Cas9 gene-editing platform.
AZRX	AzurRx BioPharma, Inc.	\$5.50	10/11/16	\$5.28	nm	\$4.74	\$45.65	\$55.45	\$0.00	(\$3.99)	(\$9.63)	Pharmaceuticals, Biotechnology and Life Sciences	AzurRx BioPharma, Inc. engages in the research and development of non-systemic biologics for the treatment of patients with gastrointestinal disorders.
PTGX	Protagonist Therapeutics, Inc.	\$12.00	8/10/16	\$90.00	15.3%	\$21.99	\$367.55	\$269.03	\$0.00	(\$25.94)	(\$31.42)	Pharmaceuticals, Biotechnology and Life Sciences	Protagonist Therapeutics, Inc., a clinical-stage biopharmaceutical company, focuses on discovering and developing peptide-based new chemical entities to address significant unmet medical needs.
Median				\$90.00	10.4%	\$12.44	\$367.55	\$397.76	\$3.07	(\$16.46)	(\$22.34)		

Source: Capital IQ

MedTech Venture Capital Activity Overview

- Consistent with the decline in exit activity (IPOs and M&A), Med-Tech venture capital funding activity declined in 2016:
 - Total deal value fell to \$15.0B in 2016 (down 20% from \$18.7B in 2015)
- Drop in number of financing rounds to 1,504 in 2016 (down 15% from 1,777 in 2015)
- Biotechnology remains the most active segment

Source: National Venture Capital Association

Company	Amount (\$M)	Company Description
Microbot Medical	397	Transformational micro-robotic medical technologies
Insulet Corp.	345	Insulin pump and developing an artificial pancreas
Intarcia	206	Implantable pump for type 2 diabetes
Bioventus	183	Injections for fracture healing and bone graft substitutes
CVRx Inc.	93	Device-based management of high blood pressure
iRhythm	86	Cardiac rhythm monitoring device
Obalon	75	Intragastric device for obesity
AcuFocus	75	Corneal inlay and intraocular lens for vision correction
Astute Medical	43	Diagnostics for acute kidney injury

A summary of selected MedTech venture capital financing activity in the second half of 2016. Covers selected financing rounds larger than \$15 million.

Source: PWC MoneyTree

MedTech Venture Capital Activity Overview (cont.)

Company	Amount (\$M)	Company Description
SentreHEART	35	Suture delivery system
Neurona Therapeutics	29	Treatment for intractable neurological disease using neuronal stem cell transplants
Minerva Surgical, Inc.	27	Endometrial ablation to reduce menstruation
Torax Medical	25	Minimally invasive treatments for digestive disorders, incontinence and obesity
Stereotaxis	24	Magnetic navigation technology for use in cardiac interventions including for arrhythmia and electrophysiology
Relievant	22	Nerve ablation for the treatment of chronic pain
Cambridge	20	Robotics for use during minimal access surgery
Spirometrix	17	Point of care breathalyzer

A summary of selected MedTech venture capital financing activity in the second half of 2016. Covers selected financing rounds larger than \$15 million.

Source: PWC MoneyTree

IPO Case Study



“The idea of gene correction is not new at all. But before CRISPR it just never worked well enough so that people could do it routinely.”

– Dr. Carl June
University of Pennsylvania

“What we need to do is really engage the public, to make sure people understand what are the really exciting potential applications and what are the immediate limitations of the technology...”

– Feng Zhang,
Biomedical Engineer
Broad Institute

“Having this technology enables humans to alter human evolution.”

– Jennifer Doudna,
Molecular and Cell Biologist
University of California, Berkley

IPO Case Study

- **CRISPRs** (clustered regularly interspaced short palindromic repeats) are found in genome sequences and have a wide range of genome editing applications.
- CRISPR Therapeutics commercializes the CRISPR-Cas9 sequencing technology for human genetic diseases.
- The technology is focused on correcting DNA changes in somatic cells for disease modification or correction.
- CRISPR IPO was preceded by two other gene editing IPOs during the year:
 - Editas Medicine, Inc (EDIT) at \$16 per share (February 2, 2016)
 - Intellia Therapeutics, Inc (NTLA) at \$18 per share (May 5, 2016)

Source: The Broad Institute

Timeline

Year	Significant Corporate Events
2012	CRISPR technology proved viable for human cell editing by Jennifer Doudna and Emmanuelle Charpentier
2013	Company founded by a group of scientists, including Emmanuelle Charpentier
April 2014	Raised \$25M Series A funding First patent awarded to Feng Zhang of MIT/Broad Institute
April 2015	Raised \$64M Series B funding
October 2015	Entered into an agreement with Vertex Pharmaceuticals
December 2015	Entered into an agreement with Bayer Pharmaceuticals
June 2016	Raised additional \$38M Series B funding
October 2016	Public offering at \$14 per share
November 2016	CRISPR technology first used on a human
February 2017	CRISPR patent awarded to the Broad Institute

Source: Crunchbase

IPO Case Study



Gene Editing Industry

- The technology has provoked ethical debates surrounding the appropriate uses and extent of use of gene editing
- 2015 marked a significant year with the successful use of genome editing on a human
- Dispute over CRISPR-Cas9 patent ownership between Broad Institute (Harvard, MIT) and University of California

IPO Financials (October 19, 2016)

- CRISPR Therapeutics issued 4M shares at \$14s per share, raising \$56M
- The price range was initially marketed at \$15-17
- The Company concurrently offered 2.5M shares at the public offering price in a private placement to shareholder Bayer Global Investments B.V. and a joint venture partner

Subsequent Events

- At December 30, 2016 CRSP closed 45% above IPO at \$20.26:
 - NTLA fell 27% to \$13.11 since IPO
 - EDIT was flat at \$16.23 since IPO

Sources: TechCrunch, Yahoo Finance, NASDAQ

IPO Case Study



CRISPR Therapeutics Financials

Unlike many other product categories, investors in medical technology seem willing to place bets on ventures that have no clear road to profitability. While this is the industry norm for institutional investors, CRISPR Therapeutics opened the opportunity to the general public through its October 2016 IPO, with a warning to potential investors:

“We Have Never Generated Revenue From Product Sales And May Never Be Profitable.”

All product candidates remained in preclinical studies as of the offering date. Success of these studies will have significant impact on the ability to commercialize and profit from the technology.

Sources: CRISPR Therapeutics Form S-1

Statement of Operations

	LTM 9/30/16	2015	2014
Collaboration Revenue	\$3,067	\$247	\$0
R&D Expense	32,840	12,573	1,513
General & Admin Expense	25,213	13,403	54,114
Total Operating Expense	58,053	25,976	55,627
Operating Loss	(\$54,986)	(\$25,729)	(\$55,627)

CRISPR Therapeutics Forms S-1 and 10-Q
in \$ thousands

Publicly Traded Companies

Biotechnology

Company Name	Ticker	Price at 12/31/16	Market Cap (USD \$M) 12/31/16	5 Year Beta	EV/Rev.	EV/ EBITDA	EBITDA Margin	LTM P/E	Forward P/E	Revenue Growth (from LTM)	EBITDA Growth (from LTM)	Forward Price to Earnings / Growth*
AbbVie Inc.	ABBV	\$62.62	\$101,764	1.59	5.1	11.8	43.3%	16.9	12.0	12.2%	14.1%	1.1
Alexion Pharmaceuticals, Inc.	ALXN	122.35	27,437	1.40	9.6	24.9	38.5%	74.6	22.6	18.4%	42.5%	1.6
Amgen Inc.	AMAG	146.21	108,769	1.15	4.6	8.8	52.2%	14.6	12.2	6.1%	12.1%	0.6
Biogen Inc.	AMGN	283.58	61,700	0.72	5.6	10.0	55.6%	16.0	13.9	6.4%	13.4%	0.5
Celgene Corporation	BIIB	115.75	89,730	1.75	8.7	24.2	35.7%	44.0	17.1	21.3%	31.9%	1.4
China Biologic Products, Inc.	CELG	107.52	2,918	1.78	8.5	18.3	46.2%	29.5	21.1	11.9%	8.1%	0.3
Eagle Pharmaceuticals, Inc.	EBS	79.34	1,225	1.57	9.2	44.6	20.7%	51.7	9.9	91.0%	878.2%	nm
Emergent BioSolutions Inc.	FPRX	32.84	1,330	1.09	2.4	10.1	24.3%	33.4	17.8	1.4%	-8.9%	1.6
Five Prime Therapeutics, Inc.	GILD	50.11	1,425	4.45	2.6	3.7	69.4%	5.6	nm	1.6%	-7.3%	nm
Gilead Sciences Inc.	HZNP	71.61	94,343	1.12	3.6	5.7	63.2%	6.6	6.9	-6.9%	-17.5%	0.2
Incyte Corporation	INSY	100.27	18,889	0.75	17.0	98.6	17.3%	134.8	78.4	46.7%	209.1%	nm
INSYS Therapeutics, Inc.	LGND	9.20	660	0.23	1.8	11.7	15.3%	29.4	31.2	-16.7%	-60.8%	nm
MiMedx Group, Inc.	MDVN	8.86	970	0.97	4.2	37.8	11.1%	49.0	30.8	21.2%	-6.9%	nm
Myriad Genetics, Inc.	MDXG	16.67	1,140	0.28	1.6	8.3	19.2%	12.9	15.9	0.6%	-29.1%	(2.5)
Progenics Pharmaceuticals, Inc.	MYGN	8.64	605	3.10	7.2	31.1	23.3%	55.6	nm	705.3%	-144.3%	nm
Regeneron Pharmaceuticals, Inc.	OPK	367.09	39,394	1.45	7.9	26.7	29.5%	53.5	27.0	18.4%	8.2%	nm
Repligen Corporation	PDLI	30.82	1,043	1.59	9.5	36.8	25.9%	148.6	79.4	20.2%	16.0%	nm
United Therapeutics Corporation	REGN	143.43	1,043	1.59	9.5	36.8	25.9%	148.6	79.4	20.2%	16.0%	nm
Xencor, Inc.	RGEN	26.32	6,084	1.40	3.2	4.7	67.4%	9.7	9.2	8.8%	46.8%	0.2
Average		\$93.85	\$29,498	1.47	6.4	23.9	36.0%	49.2	28.5	52.0%	53.8%	0.5
Median		\$71.61	\$2,918	1.40	5.6	18.3	29.5%	33.4	17.8	12.2%	12.1%	0.6

Pricing as of December 31, 2016

*Price to Earnings to Growth (PEG) multiples calculated using forward P/E ratios and forward EPS growth estimates

Publicly Traded Companies

Healthcare Technology

Company Name	Ticker	Price at 12/31/16	Market Cap (USD \$M) 12/31/16	5 Year Beta	EV/Rev.	EV/ EBITDA	EBITDA Margin	LTM P/E	Forward P/E	Revenue Growth (from LTM)	EBITDA Growth (from LTM)	Forward Price to Earnings / Growth*
athenahealth, Inc.	ATHN	\$105.17	\$4,150	1.76	4.0	40.3	9.9%	224.5	49.8	17.1%	61.8%	nm
Cerner Corporation	CERN	47.37	16,082	1.04	3.4	12.1	27.9%	25.0	19.0	14.7%	14.4%	1.2
HealthEquity, Inc.	HQY	40.52	2,406	1.90	13.4	43.2	30.9%	96.4	64.9	44.6%	65.8%	nm
HealthStream, Inc.	HSTM	25.05	795	1.22	3.1	29.5	10.6%	138.2	122.5	6.7%	-7.0%	(16.0)
Inovalon Holdings, Inc.	INOV	10.30	1,514	0.00	2.4	11.3	20.9%	36.8	35.7	3.4%	-32.7%	nm
Medidata Solutions, Inc.	MDSO	49.67	2,861	1.62	6.0	42.6	14.1%	113.5	nm	18.1%	63.7%	nm
Omnicell, Inc.	OMCL	33.90	1,238	0.74	2.0	21.8	9.4%	155.4	20.4	42.9%	-0.3%	(0.5)
Veeva Systems Inc.	VEEV	40.70	5,583	1.65	10.0	48.6	20.5%	90.5	54.1	33.0%	14.0%	nm
Average		\$44.09	\$4,329	1.24	5.5	31.2	18.0%	110.0	52.3	22.6%	22.5%	(5.1)
Median		\$40.61	\$2,633	1.42	3.7	34.9	17.3%	104.9	49.8	17.6%	14.2%	(0.5)

Pricing as of December 31, 2016

*Price to Earnings to Growth (PEG) multiples calculated using forward P/E ratios and forward EPS growth estimates

Publicly Traded Companies

Medical Supplies

Company Name	Ticker	Price at 12/31/16	Market Cap (USD \$M) 12/31/16	5 Year Beta	EV/Rev.	EV/ EBITDA	EBITDA Margin	LTM P/E	Forward P/E	Revenue Growth (from LTM)	EBITDA Growth (from LTM)	Forward Price to Earnings / Growth*
Align Technology, Inc.	ALGN	\$96.13	\$7,661	1.41	6.5	26.0	25.1%	41.1	34.2	27.7%	31.3%	1.5
Anika Therapeutics, Inc.	ANIK	48.96	716	1.84	5.8	11.0	52.5%	21.0	24.1	11.2%	3.2%	0.9
Atrion Corporation	ATRI	507.20	925	0.90	6.2	18.2	34.1%	33.5	0.0	-2.2%	-5.2%	0.0
DENTSPLY SIRONA Inc.	XRAY	57.73	13,329	1.22	4.3	20.1	21.3%	30.2	19.7	27.9%	22.7%	80.4
Haemonetics Corporation	HAE	40.20	2,077	0.92	2.6	17.3	14.9%	nm	25.3	0.8%	-15.9%	(1.0)
ICU Medical, Inc.	ICUI	147.35	2,406	0.33	5.5	17.8	30.7%	42.5	33.8	9.5%	14.4%	5.2
Meridian Bioscience, Inc.	VIVO	17.70	747	1.06	3.9	13.2	29.5%	23.3	21.6	1.4%	-7.5%	18.3
Merit Medical Systems, Inc.	MMSI	26.50	1,182	0.94	2.6	20.3	12.7%	63.1	24.3	7.9%	-3.2%	(3.7)
Neogen Corporation	NEOG	66.00	2,506	1.55	6.9	32.7	21.2%	64.1	53.0	13.2%	7.3%	4.9
OraSure Technologies, Inc.	OSUR	8.78	489	1.44	2.9	14.3	20.2%	29.2	38.2	7.1%	88.2%	nm
The Cooper Companies, Inc.	COO	174.93	8,534	0.55	5.0	16.0	31.0%	31.3	19.0	9.4%	11.7%	2.1
Vascular Solutions, Inc.	VASC	56.10	986	0.99	5.9	43.7	13.5%	81.5	39.8	9.9%	1.3%	(3.3)
West Pharmaceutical Services, Inc.	WST	84.83	6,208	0.94	4.1	21.7	19.0%	45.9	34.4	7.8%	30.6%	2.8
Average		\$102.49	\$3,674	1.08	4.8	20.9	25.1%	42.2	28.3	10.1%	13.8%	9.0
Median		\$57.73	\$2,077	0.99	5.0	18.2	21.3%	37.3	25.3	9.4%	7.3%	1.8

Pricing as of December 31, 2016

*Price to Earnings to Growth (PEG) multiples calculated using forward P/E ratios and forward EPS growth estimates

Publicly Traded Companies

Medical Equipment

Company Name	Ticker	Price at 12/31/16	Market Cap (USD \$M) 12/31/16	5 Year Beta	EV/Rev.	EV/ EBITDA	EBITDA Margin	LTM P/E	Forward P/E	Revenue Growth (from LTM)	EBITDA Growth (from LTM)	Forward Price to Earnings / Growth*
Abaxis, Inc.	ABAX	\$52.77	\$1,189	0.89	4.6	19.9	23.2%	34.7	37.3	5.6%	10.4%	6.6
ABIOMED, Inc.	ABMD	112.68	4,738	0.54	10.9	50.5	21.6%	116.2	74.9	36.8%	42.3%	2.0
Analogic Corporation	ALOG	82.95	1,033	0.85	1.7	15.3	11.3%	79.0	21.9	-4.1%	-8.7%	(5.4)
Baxter International Inc.	BAX	44.34	24,117	0.67	2.4	12.3	19.5%	5.0	21.5	2.0%	32.9%	11.0
Becton, Dickinson and Company	BDX	165.55	35,301	1.00	3.6	13.9	26.3%	36.9	17.4	10.7%	13.7%	1.6
Boston Scientific Corporation	BSX	21.63	29,453	1.06	4.1	15.2	27.1%	nm	17.9	13.3%	22.9%	1.3
C. R. Bard, Inc.	BCR	224.66	16,518	0.62	4.6	14.9	30.9%	33.9	20.3	9.6%	11.1%	2.1
Cantel Medical Corp.	CMD	78.75	3,285	1.39	4.9	26.2	18.7%	50.9	37.0	20.6%	15.8%	1.8
CONMED Corporation	CNMD	44.17	1,229	0.77	2.2	13.3	16.8%	78.9	22.6	6.2%	7.4%	3.7
CryoLife, Inc.	CRY	19.15	629	1.25	3.6	29.1	12.3%	58.2	64.9	23.6%	56.4%	2.7
Cynosure, Inc.	CYNO	45.60	1,088	1.64	2.2	18.7	11.5%	51.5	36.4	27.7%	8.1%	1.3
Edwards Lifesciences Corporation	EW	93.70	20,034	0.54	6.6	21.9	30.0%	37.0	29.1	18.8%	25.1%	1.5
Globus Medical, Inc.	GMED	24.81	2,377	0.63	3.8	11.0	34.8%	20.3	19.9	3.0%	3.9%	6.6
Hill-Rom Holdings, Inc.	HRC	56.14	3,689	1.20	2.1	12.5	17.0%	30.2	14.8	20.5%	48.8%	0.7
Hologic, Inc.	HOLX	40.12	11,162	1.11	4.9	13.4	36.4%	34.6	19.1	4.5%	5.3%	4.2
IDEXX Laboratories, Inc.	IDXX	117.27	10,514	0.47	6.3	26.2	24.1%	49.9	43.0	10.8%	13.4%	4.0

Pricing as of December 31, 2016

*Price to Earnings to Growth (PEG) multiples calculated using forward P/E ratios and forward EPS growth estimates

Publicly Traded Companies

Medical Equipment (cont.)

Company Name	Ticker	Price at 12/31/16	Market Cap (USD \$M) 12/31/16	5 Year Beta	EV/Rev.	EV/ EBITDA	EBITDA Margin	LTM P/E	Forward P/E	Revenue Growth (from LTM)	EBITDA Growth (from LTM)	Forward Price to Earnings / Growth*
Inogen, Inc.	INGN	67.17	1,361	1.10	6.5	38.0	17.1%	94.6	92.7	21.0%	13.3%	4.4
Integra LifeSciences Holdings Corporation	IART	42.90	3,209	0.79	3.8	17.1	22.5%	55.9	22.3	11.5%	13.7%	1.9
Intuitive Surgical, Inc.	ISRG	634.17	24,572	0.54	8.3	21.4	38.7%	34.2	27.1	14.2%	24.7%	1.9
Masimo Corporation	MASI	67.40	3,348	0.97	4.9	20.1	24.1%	32.5	31.8	11.5%	28.2%	2.8
Medtronic plc	MDT	71.23	97,802	0.97	4.1	13.3	30.9%	23.7	14.8	12.4%	17.4%	1.2
Natus Medical Incorporated	BABY	34.80	1,127	1.02	2.7	14.4	18.5%	28.3	19.2	1.6%	0.3%	12.0
NuVasive, Inc.	NUVA	67.36	3,391	0.86	4.0	18.6	21.7%	85.1	34.3	18.6%	34.5%	1.8
ResMed Inc.	RMD	62.05	8,747	0.82	4.6	16.9	27.4%	25.3	22.0	13.0%	9.2%	1.7
Steris Plc	STE	67.39	5,742	1.29	2.7	11.7	22.9%	34.0	16.4	28.1%	124.7%	0.6
Stryker Corporation	SYK	119.81	44,863	0.80	4.3	15.7	27.4%	27.3	19.1	13.9%	16.5%	1.4
Teleflex Incorporated	TFX	161.15	7,099	0.92	4.2	16.3	25.6%	28.9	20.6	1.6%	12.8%	12.9
Varian Medical Systems, Inc.	VAR	89.78	8,386	0.69	2.5	12.8	19.6%	21.4	18.1	4.0%	-0.1%	4.5
ZELTIQ Aesthetics, Inc.	ZLTQ	43.52	1,740	1.02	5.2	862.6	0.6%	56.2	128.9	28.5%	-68.2%	4.5
Zimmer Biomet Holdings, Inc.	ZBH	103.20	20,671	1.18	4.1	12.8	32.3%	57.8	12.2	28.1%	6.4%	0.4
Average		\$95.21	\$13,281	0.92	4.4	46.9	23.0%	45.6	32.6	13.9%	18.1%	3.3
Median		\$67.38	\$5,240	0.90	4.1	16.0	23.0%	34.7	21.9	12.7%	13.5%	2.0

Pricing as of December 31, 2016

*Price to Earnings to Growth (PEG) multiples calculated using forward P/E ratios and forward EPS growth estimates

Publicly Traded Companies

Life Science Tools & Services

Company Name	Ticker	Price at 12/31/16	Market Cap (USD \$M) 12/31/16	5 Year Beta	EV/Rev.	EV/ EBITDA	EBITDA Margin	LTM P/E	Forward P/E	Revenue Growth (from LTM)	EBITDA Growth (from LTM)	Forward Price to Earnings / Growth*
Agilent Technologies, Inc.	A	\$45.56	\$14,659	1.10	3.4	15.8	21.5%	32.5	21.2	4.1%	14.5%	nm
Bio-Rad Laboratories, Inc.	BIO	182.28	5,390	0.88	2.4	17.4	13.9%	54.8	45.9	2.4%	-2.4%	nm
Bio-Techne Corporation	TECH	102.83	3,837	0.72	7.7	20.1	38.3%	39.3	27.7	13.5%	11.4%	(3.9)
Bruker Corporation	BRKR	21.18	3,397	0.95	2.1	13.6	15.2%	23.9	19.9	-0.8%	7.2%	1.7
Cambrex Corporation	CBM	53.95	1,735	1.95	3.4	10.6	31.6%	26.5	19.4	13.0%	19.9%	0.5
Charles River Laboratories International, Inc.	CRL	76.19	3,606	0.98	2.8	11.9	23.9%	25.6	15.7	23.3%	25.2%	2.1
Illumina, Inc.	ILMN	128.04	18,809	0.74	7.8	25.6	30.4%	43.0	36.5	10.7%	-6.0%	nm
Luminex Corporation	LMNX	20.23	882	0.58	2.9	18.4	16.0%	23.3	25.9	13.9%	-15.1%	(21.5)
PAREXEL International Corporation	PRXL	65.72	3,501	0.81	1.8	10.5	16.7%	21.1	16.8	1.9%	8.3%	0.5
PerkinElmer, Inc.	PKI	52.15	5,713	0.80	2.9	14.9	19.4%	24.6	17.9	0.2%	23.9%	1.3
PRA Health Sciences, Inc.	PRAH	55.12	3,385	0.52	2.7	15.5	17.5%	42.8	19.8	11.1%	10.1%	nm
Thermo Fisher Scientific Inc.	TMO	141.10	55,738	1.09	4.0	16.0	24.9%	28.1	15.7	7.7%	9.7%	1.1
Waters Corporation	WAT	134.39	10,829	0.83	4.6	13.5	33.7%	22.0	19.3	6.1%	9.4%	3.0
Average		\$82.98	\$10,114	0.92	3.7	15.7	23.3%	31.4	23.2	8.2%	8.9%	(1.7)
Median		\$65.72	\$3,837	0.83	2.9	15.5	21.5%	26.5	19.8	7.7%	9.7%	1.1

Pricing as of December 31, 2016

*Price to Earnings to Growth (PEG) multiples calculated using forward P/E ratios and forward EPS growth estimates

Publicly Traded Companies

Conglomerate Companies

Company Name	Ticker	Price at 12/31/16	Market Cap (USD \$M) 12/31/16	5 Year Beta	EV/Rev.	EV/ EBITDA	EBITDA Margin	LTM P/E	Forward P/E	Revenue Growth (from LTM)	EBITDA Growth (from LTM)	Forward Price to Earnings / Growth*
3M	MMM	\$178.57	\$107,404	1.04	3.9	13.5	28.9%	22.5	21.2	-0.5%	2.4%	3.3
Agilent Technologies	A	45.56	14,659	1.10	3.4	15.8	21.5%	32.5	21.2	4.1%	14.5%	(1.6)
Abbott Laboratories	ABT	38.41	56,551	0.95	2.9	12.1	24.0%	57.9	16.0	2.2%	12.2%	nm
Allergan	AGN	210.01	78,771	1.07	6.1	14.6	41.9%	nm	13.6	-3.3%	3.0%	nm
Baxter International	Bax	44.34	24,117	0.67	2.4	12.3	19.5%	5.0	21.5	2.0%	32.9%	1.2
Becton Dickinson	BDX	165.55	35,301	1.00	3.6	13.9	26.3%	36.9	17.4	10.7%	13.7%	5.3
Boston Scientific Corporation	BSX	21.63	29,453	1.06	4.1	15.2	27.1%	nm	17.9	13.3%	22.9%	(6.1)
Danaher	DHR	77.84	53,842	0.87	3.6	15.8	23.0%	19.6	20.5	-17.9%	-17.6%	9.6
Endo Health Solutions	ENDP	16.47	3,671	0.58	3.0	45.2	6.6%	6.6	3.2	17.6%	-64.6%	0.7
General Electric	GE	31.60	279,546	1.20	3.4	25.2	13.6%	36.0	20.6	6.6%	3.3%	(5.1)
Corning Life Sciences	GLW	24.27	23,086	1.35	2.6	9.6	27.3%	12.4	14.7	3.1%	2.4%	1.2
Hospira	HSP	2.72	87	0.41	0.4	7.3	4.9%	nm	23.8	-30.7%	-52.0%	nm
IDEXX Laboratories, Inc.	IDXX	117.27	10,514	0.47	6.3	26.2	24.1%	49.9	43.0	10.8%	13.4%	3.6
Johnson & Johnson	JNJ	115.21	313,432	0.75	4.2	12.6	33.2%	20.2	16.6	1.5%	5.4%	2.4
Kimberly-Clark	KMB	114.12	40,873	0.63	2.6	11.8	22.4%	20.8	18.5	-2.1%	-1.0%	2.2
Medtronic	MDT	71.23	97,802	0.97	4.1	13.3	30.9%	23.7	14.8	12.4%	17.4%	(18.0)
Pall	PLL	100.19	44,746	0.00	1.1	7.3	14.6%	0.0	0.0	-11.1%	-17.2%	0.0
Stryker	SYK	119.81	44,863	0.80	4.3	15.7	27.4%	27.3	19.1	13.9%	16.5%	4.0
Average		\$83.04	\$69,929	0.83	3.4	16.0	23.2%	24.8	18.0	1.8%	0.4%	0.2
Median		\$74.54	\$42,809	0.91	3.5	13.7	24.0%	22.5	18.2	2.6%	4.3%	1.2

Pricing as of December 31, 2016

*Price to Earnings to Growth (PEG) multiples calculated using forward P/E ratios and forward EPS growth estimates