

August 5, 2015

# T2 Biosystems Inc

## The Funnel is Filling

Industry View	Stock Rating	Price Target
<b>In-Line</b>	<b>Equal-weight</b>	<b>\$20.00</b>

2Q trends confirm the positive traction in the business and support near term upside for the stock. No negative fundamental signal in CFO transition. Maintain PT \$20, 39% upside.

**Key metrics above our estimates.** TTOO had 8 contracts signed in 2Q, tracking ahead of our forecast (6) and bringing total contracts in '15 to 10, providing us additional confidence that our forecast for 34 contracts (+4 versus guidance) should be achievable given the trends in customer receptivity. TTOO affirmed a goal of 30 contracts in '15, the key metric for the year, and the funnel continued to grow to contact with 40% of the top 450 accounts, up from 30% in 1Q15. Given the sales force is scaling on track and headcount appears to be the key gate for the funnel, we would expect the 5-10% incremental penetration rate to continue qtr/qtr. System install and validation processes are tracking slightly ahead of plan, suggesting first test revenues should emerge before YE15 mark.

**No material changes to our '15E estimates.** 2Q15 revenue of \$564k from the Canon collaboration was ahead of consensus by \$177K, but below MSe estimates of \$715K, due to (1) the lack of instrument revenues in the quarter and (2) lower than forecasted Canon collaboration revenues. EPS for the quarter of -\$0.54 beat both consensus (-\$0.57) and MSe (-\$0.59) on both higher gross margins from collaboration revenues and lower opex spend. Our updated revenue estimates for '15E of \$2.7mn reflects lower collaboration revenues; management indications of sequentially increasing opex yield a bigger EPS loss at -\$2.31 (from -\$2.27 previously). Beyond '15E, our revenue estimates have been revised upward by 18% and 13% in '16E and '17E on higher test ASP (\$185-\$195 range) as initial contracts signings revealed \$200-\$250 test price.

**T2Bacteria panel awaiting critical clinical trials.** T2 expectations to initiate the bacterial clinical trials shifted into the first months of 2016, yet we remain comfortable with expectations for the launch of the critical bacterial panel in early 2017 as we believe the T2 Bacteria panel pathway to FDA approval should be no longer than the 13 month Candida approval process. The FDA has indicated clinical trials will be structured similarly to those for T2 Candida and T2 is only seeking approval for an assay, not both an assay and the accompanying platform. T2Bacteria panel remains a critical driver of uptake as it would round out the sepsis diagnosis toolkit and bacterial infections are a more common driver of sepsis than are candida infections by at least a factor of three.

**CFO transition surprising, but doesn't change timelines.** The announcement that Maurice Castonguay will take over for Marc Jones

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### T2 Biosystems Inc ( TTOO.O, TTOO US )

**Life Science Tools & Diagnostics** / United States of America

<b>Stock Rating</b>	<b>Equal-weight</b>
<b>Industry View</b>	<b>In-Line</b>
<b>Price target</b>	<b>\$20.00</b>
Shr price, close (Aug 4, 2015)	\$14.36
Mkt cap, curr (mm)	\$290
52-Week Range	\$24.50-13.40

Fiscal Year Ending	12/14	12/15e	12/16e	12/17e
Co.-rpt'd rev (\$mm)*	-	-	-	-
<b>ModelWare EPS (\$)</b>	<b>(4.15)</b>	<b>(2.31)</b>	<b>(2.25)</b>	<b>(0.14)</b>
<b>P/E</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
Div yld (%)	0.0	0.0	0.0	0.0

Unless otherwise noted, all metrics are based on Morgan Stanley ModelWare framework  
 \* = GAAP or approximated based on GAAP  
 e = Morgan Stanley Research estimates

### QUARTERLY MODELWARE EPS (\$)

Quarter	2014	2015e Prior	2015e Current	2016e Prior	2016e Current
Q1	(0.63)	-	(0.53)a	(0.57)	(0.62)
Q2	(0.66)	-	(0.54)a	(0.58)	(0.61)
Q3	(0.71)	(0.56)	(0.61)	(0.48)	(0.53)
Q4	(0.45)	(0.59)	(0.63)	(0.41)	(0.49)

e = Morgan Stanley Research estimates, a = Actual Company reported data

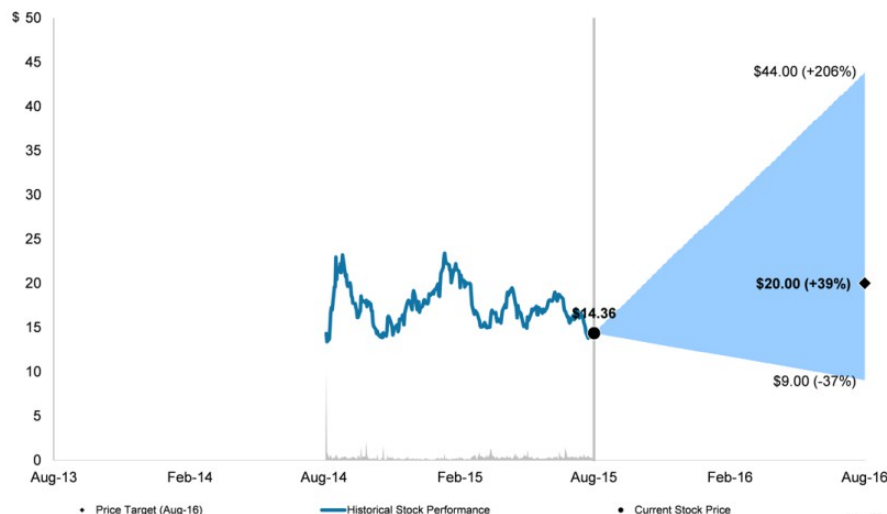
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effectively immediately was unanticipated. The transition poses no risk to our TTOO thesis and is supportive of the expansion of the long-term expansion of the business given Castonguay's experience with larger public companies.

## Risk Reward

### Early Phases of a Revolution in Rapid Sepsis Diagnostics



Source: Thomson Reuters, Morgan Stanley Research estimates

#### Price Target \$20.00

Value base case CY18 revenues and a 3.9x EV/Sales multiple, below fast-growing diagnostic peers with demonstrated commercial traction. Assuming a fully loaded share base and 30% discount rate, we arrive at a 12-month target price.

#### Bull \$44 5.0x Bull Case 2020E Rev

Forecasted 2020E revenues capturing significant upside from the launches of T2Bacteria panel and hemostasis panels in 2017 leading to site expansion although gradual test price declines to ~\$135 by 2020 to capture smaller-scale hospitals. Discount rate of 15% applied for upside case.

#### Base \$20 3.9x Base Case 2018E Rev

Forecast penetration of top 200 hospitals by end of 2016 expanding to 259 sites (out of top 450 hospitals) by end of 2018 driven by availability of both T2Candida and T2Bacteria test panels, with pricing of ~\$185 per test.

#### Bear \$9 2.5x Bear Case 2018E Rev

Forecast only 90% of penetration from base case, or +100 sites with T2Candida panel and assumes T2Bacteria and hemostasis panels do not launch commercially before 2017.

### Investment Thesis

- T2 Biosystem's T2Dx system is serving a critical unmet need through its rapid diagnosis of sepsis in as little as three hours, faster by 24 hours or more than the current standard of care to curb unnecessary drug treatments for the uninfected and accelerate appropriate therapies for infected patients
- We believe T2 has at least two years of runway in the US before competition could emerge with a technology that yields a diagnosis in less than 24 hours

### Key Value Drivers

- Speed, providing results from a whole blood sample in three hours — beating competing sepsis diagnosis technologies by at least 24 hours and curbing unnecessary drug treatment for uninfected patients
- Ease of use, eliminating manual prep steps that can introduce risks of cross-contamination
- Clinical validation, with clinical data that demonstrates +80% sensitivity and +90% specificity
- International expansion in 2017
- FDA approval of Lyme disease diagnostic test for collaboration with Canon

### Potential Catalysts

- Successful commercial launch of T2Dx and T2Candida in 2015
- Initiation of clinical trials for T2Bacteria launch targeted for early 2017, adding an additional 2.0MM patients to its addressable market
- Clinical trial initiation for T2Stat, T2HemoStat, and T2Lyme

### Risks to Achieving Price Target

- Slower-than-expected commercial uptake for the new diagnostic modality for sepsis testing since it requires lab directors to add a new system to their lineup
- The launch of a competing product with a similarly distinguishable clinical profile and process timeline within the next two years
- International penetration fails to materialize

## Supplementary Exhibits and Valuation

**Exhibit 1:** Changes to forecasts

	F2014	F2015E	F2016E	F2017E	F2018E
<b>Total Revenues (\$000s)</b>					
<i>Current</i>	\$119	\$2,704	\$15,591	\$100,182	\$250,565
<i>y/y growth</i>	-55.3%	2172.1%	476.6%	542.6%	150.1%
<i>Prior</i>	\$119	\$2,846	\$13,161	\$88,707	\$223,133
<i>y/y growth</i>	-55.3%	2291.2%	362.5%	574.0%	151.5%
<b>Gross Profit (\$000s)</b>					
<i>Current</i>	\$119	\$1,139	\$10,134	\$68,124	\$180,407
<i>% of sales</i>	100.0%	42.1%	65.0%	68.0%	72.0%
<i>Prior</i>	\$119	\$717	\$8,554	\$62,095	\$160,656
<i>% of sales</i>	100.0%	25.2%	65.0%	70.0%	72.0%
<b>SG&amp;A (\$000s)</b>					
<i>Current</i>	\$11,019	\$20,651	\$26,786	\$37,766	\$60,600
<i>% of sales</i>	9260%	764%	172%	38%	24%
<i>Prior</i>	\$11,019	\$25,182	\$28,592	\$39,814	\$68,930
<i>% of sales</i>	9260%	885%	217%	45%	31%
<b>R&amp;D (\$000s)</b>					
<i>Current</i>	\$19,781	\$25,624	\$28,025	\$31,820	\$41,246
<i>% of sales</i>	16623%	948%	180%	32%	16%
<i>Prior</i>	\$19,781	\$19,826	\$19,924	\$28,166	\$33,470
<i>% of sales</i>	16623%	697%	151%	32%	15%
<b>Operating Income (\$000s)</b>					
<i>Current</i>	(\$30,681)	(\$45,135)	(\$44,678)	(\$1,462)	\$78,561
<i>Prior</i>	(\$30,681)	(\$44,291)	(\$39,962)	(\$5,886)	\$58,255
<b>Net Income (\$000s)</b>					
<i>Current</i>	(\$35,960)	(\$46,614)	(\$46,419)	(\$3,064)	\$78,446
<i>Prior</i>	(\$35,960)	(\$45,758)	(\$41,700)	(\$7,502)	\$57,954
<b>EPS, diluted</b>					
<i>Current</i>	(\$4.15)	(\$2.31)	(\$2.25)	(\$0.14)	\$3.67
<i>Prior</i>	(\$4.15)	(\$2.27)	(\$2.03)	(\$0.36)	\$2.74
<b>Diluted Shares Outstanding</b>					
<i>Current</i>	8,675	20,206	20,651	21,312	21,398
<i>Prior</i>	8,675	20,194	20,565	21,082	21,169

Source: Company data, Morgan Stanley Research

**Exhibit 2: Results variance**

<i>Dollars in 000s, except per share</i>	2Q15E	2Q15A	A vs E (%)	Cons Est.	2Q14A	Y/Y % Chg
<b>Total Revenues</b>	<b>\$715</b>	<b>\$564</b>	<b>(21.1%)</b>	<b>\$393</b>	<b>\$0</b>	<b>N/A</b>
Foreign Exchange	\$0	\$0				
COGS	\$572	\$0	(100.0%)	\$163	\$0	N/A
<b>Gross Profit</b>	<b>\$143</b>	<b>\$564</b>	<b>294.6%</b>	<b>\$230</b>	<b>\$0</b>	<b>N/A</b>
<b>Op. Exps:</b>						
SG&A	\$6,432	\$4,437	(31.0%)		\$2,446	81.4%
R&D	\$5,360	\$6,651	24.1%		\$4,703	41.4%
<b>Total Op. Exps</b>	<b>\$11,792</b>	<b>\$11,088</b>	<b>(6.0%)</b>		<b>\$7,149</b>	<b>55.1%</b>
<b>Op. Inc. (Loss)</b>	<b>(\$11,649)</b>	<b>(\$10,524)</b>	<b>N/A</b>	<b>(\$10,963)</b>	<b>(\$7,149)</b>	<b>N/A</b>
Total Non-op. Expense	(\$266)	(\$471)	N/A		(\$154)	N/A
Inc. Taxes	\$0	\$0	N/A		\$0	N/A
<b>Net Inc. (Loss)</b>	<b>(\$11,915)</b>	<b>(\$10,995)</b>	<b>N/A</b>	<b>(\$11,278)</b>	<b>(\$9,209)</b>	<b>N/A</b>
Diluted Shares Out	\$20,210	20,261	0.3%		14,036	44.3%
<b>EPS, Diluted</b>	<b>(\$0.59)</b>	<b>(\$0.54)</b>	<b>N/A</b>	<b>(\$0.57)</b>	<b>(\$0.66)</b>	<b>N/A</b>

Source: Company data, Morgan Stanley Research

**Valuation methodology/risk section**

Our price target for T2 Biosystems is \$20, or 3.9x CY18E revenues. Given the T2Bacteria panel will not launch until 2H2016, we believe 2018 revenue estimates are a more appropriate reflection of the company's revenue generation capacity. We apply a 3.9x multiple to T2 forecasted revenues, which is below fast-growing diagnostic peers with demonstrated commercial traction and assuming a fully loaded share base and a 30% discount rate, to reflect the greater commercial uncertainty of a fast-growing diagnostic company, and we arrive at a 12-month target price.

Key risks to our price target include slower-than-expected commercial uptake for the new diagnostic modality for sepsis testing, the launch of a competing product with a similarly distinguishable clinical profile, and failure to achieve international penetration.



## Exhibit 3: Income Statement

Dollars in 000s, except per share data

Fiscal year ends Dec 31

	2012A	2013A	2014A	2015E					2016E					2017E	2018E
	2012A	2013A	2014A	Mar-15	Jun-15	Sep-15	Dec-15	2015E	Mar-16	Jun-16	Sep-16	Dec-16	2016E	2017E	2018E
Revenue, net	\$19	\$266	\$119	\$188	\$564	\$790	\$1,162	\$2,704	\$1,235	\$2,478	\$4,458	\$7,419	\$15,591	\$100,182	\$250,565
Cost of Goods Sold	\$0	\$0	\$0	\$3	\$0	\$632	\$929	\$1,564	\$432	\$867	\$1,560	\$2,597	\$5,457	\$32,058	\$70,158
Gross Profit	\$19	\$266	\$119	\$185	\$564	\$158	\$232	\$1,139	\$803	\$1,611	\$2,898	\$4,823	\$10,134	\$68,124	\$180,407
R&D	\$11,727	\$14,936	\$19,781	\$5,868	\$6,651	\$6,717	\$6,389	\$25,624	\$6,485	\$7,434	\$6,687	\$7,419	\$28,025	\$31,820	\$41,246
SG&A	\$2,945	\$5,022	\$11,019	\$4,468	\$4,437	\$5,531	\$6,214	\$20,651	\$6,485	\$6,195	\$6,687	\$7,419	\$26,786	\$37,766	\$60,600
Total Operating Expenses	\$14,672	\$19,958	\$30,800	\$10,336	\$11,088	\$12,248	\$12,603	\$46,275	\$12,970	\$13,629	\$13,375	\$14,838	\$54,812	\$69,586	\$101,846
EBITDA	(\$14,082)	(\$19,108)	(\$29,990)	(\$9,898)	(\$10,189)	(\$11,746)	(\$12,018)	(\$43,851)	(\$11,831)	(\$11,678)	(\$10,127)	(\$9,651)	(\$43,287)	(\$1,462)	\$78,561
Operating Income	(\$14,653)	(\$19,692)	(\$30,681)	(\$10,151)	(\$10,524)	(\$12,090)	(\$12,371)	(\$45,135)	(\$12,167)	(\$12,018)	(\$10,477)	(\$10,016)	(\$44,678)	(\$1,462)	\$78,561
Interest Income (Exp)	(\$154)	(\$403)	(\$721)	(\$477)	(\$477)	(\$217)	(\$335)	(\$1,506)	(\$437)	(\$466)	(\$480)	(\$394)	(\$1,777)	(\$1,638)	(\$151)
Other Income (Expense)	\$352	(\$515)	\$12	\$9	\$6	\$6	\$6	\$27	\$9	\$9	\$9	\$9	\$36	\$36	\$36
Total Non-op. Expense	\$198	(\$918)	(\$709)	(\$468)	(\$471)	(\$211)	(\$329)	(\$1,479)	(\$428)	(\$457)	(\$471)	(\$385)	(\$1,741)	(\$1,602)	(\$115)
Pre-Tax Income	(\$14,455)	(\$20,610)	(\$31,390)	(\$10,619)	(\$10,995)	(\$12,300)	(\$12,700)	(\$46,614)	(\$12,595)	(\$12,475)	(\$10,947)	(\$10,401)	(\$46,419)	(\$3,064)	\$78,446
Tax Rate	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Income Taxes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
NOL (Add) / Use	(\$14,455)	(\$20,610)	(\$31,390)					(\$46,614)					(\$46,419)	(\$3,064)	\$27,456
NOL Balance	(\$14,455)	(\$35,065)	(\$66,455)					(\$113,069)					(\$159,488)	(\$162,552)	(\$135,096)
Accretion of Conv Pref.	\$4,412	\$6,908	\$4,570	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Income	(\$18,867)	(\$27,518)	(\$35,960)	(\$10,619)	(\$10,995)	(\$12,300)	(\$12,700)	(\$46,614)	(\$12,595)	(\$12,475)	(\$10,947)	(\$10,401)	(\$46,419)	(\$3,064)	\$78,446
Fully Diluted Shares	8,348	13,112	8,675	20,081	20,261	20,231	20,253	20,206	20,274	20,296	20,777	21,258	20,651	21,312	21,398
Period End Basic Shares	9,870	14,015	20,042	20,199	20,221	20,242	20,264	20,264	20,285	20,307	21,248	21,269	21,269	21,355	21,442
Diluted EPS	(\$2.26)	(\$2.10)	(\$4.15)	(\$0.53)	(\$0.54)	(\$0.61)	(\$0.63)	(\$2.31)	(\$0.62)	(\$0.61)	(\$0.53)	(\$0.49)	(\$2.25)	(\$0.14)	\$3.67
Gross Margin	100%	100%	100%	98%	100%	20%	20%	42%	65.0%	65.0%	65.0%	65.0%	65.0%	68.0%	72.0%
SG&A	15500%	1888%	9260%	2377%	787%	700%	535%	764%	525.0%	250.0%	150.0%	100.0%	171.8%	37.7%	24.2%
R&D	61721%	5615%	16623%	3121%	1179%	850%	550%	948%	525.0%	300.0%	150.0%	100.0%	179.8%	31.8%	16.5%
Operating Income	-77121%	-7403%	-25782%	-5399%	-1866%	-1530%	-1065%	-1669%	-985.0%	-485.0%	-235.0%	-135.0%	-286.6%	-1.5%	31.4%
Pre-Tax Income	-76079%	-7748%	-26378%	-5648%	-1949%	-1557%	-1093%	-1724%	-1019.6%	-503.4%	-245.6%	-140.2%	-297.7%	-3.1%	31.3%
Net Income	-99300%	-10345%	-30218%	-5648%	-1949%	-1557%	-1093%	-1724%	-1019.6%	-503.4%	-245.6%	-140.2%	-297.7%	-3.1%	31.3%
<b>Growth Rates</b>															
Sales		1300%	-55%	NM	NM	NM	876%	2172%	557%	339%	464%	539%	477%	543%	150%
Gross Profit		1300%	-55%	NM	NM	NM	95%	857%	334%	186%	1734%	1976%	789%	572%	165%
SG&A		71%	119%	143%	81%	85%	66%	87%	45%	40%	21%	19%	30%	41%	60%
R&D		27%	32%	16%	41%	40%	23%	30%	11%	12%	0%	16%	9%	14%	30%
Operating Income		34%	56%	47%	47%	55%	40%	47%	20%	14%	-13%	-19%	-1%	-97%	-5475%
EPS		-7%	98%	-16%	-17%	-15%	38%	-44%	17%	13%	-13%	-22%	-3%	-94%	-2650%

Source: Company data, Morgan Stanley Research

## Exhibit 4: Revenue Build

Dollars, except per share data

	2014A	2015E					2016E					2017E	2018E
	2014A	Mar-15	Jun-15	Sep-15	Dec-15	2015F	Mar-16	Jun-16	Sep-16	Dec-16	2016F	2017F	2018F
T2 Candida Revenue													
Test Revenue													
Direct Customer Test Price		\$ 180	\$ 181	\$ 182	\$ 183	\$ 183	\$ 184	\$ 185	\$ 185	\$ 186	\$ 186	\$ 189	\$ 193
Reagent Rental Test Price		\$ 180	\$ 181	\$ 182	\$ 183	\$ 183	\$ 184	\$ 185	\$ 185	\$ 186	\$ 186	\$ 189	\$ 193
T2 Candida Tests		-	-	320	1,760	2,080	4,320	10,320	20,920	36,220	71,780	373,298	612,850
T2 Candida Revenue		-	-	58,177	321,576	379,753	793,269	1,904,507	3,879,990	6,751,237	13,329,003	70,571,880	118,001,169
Instrument Revenue													
Total Candida Sites EOP						34					132	144	196
New Sites		2	8	9	15	34	18	25	25	30	98	-	-
Instruments per site		1.5	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Sites Adopting Candida & Bacteria		-	-	-	-	-	-	-	-	-	-	12	52
Instruments per site		-	-	-	-	-	-	-	-	-	-	-	-
T2 Instruments - new		3	8	14	23	48	27	38	38	45	148	-	-
Instrument Price		\$ 16,667	\$ -	\$ 60,000	\$ 60,000	\$ 59,046	\$ 58,500	\$ 58,500	\$ 58,500	\$ 58,500	\$ 58,500	\$ -	\$ -
T2Dx Instrument Revenue		10,000	-	168,000	276,000	454,000	315,900	444,600	444,600	526,500	1,731,600	-	-
Support Revenue													
HW maintenance		12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%	12%
Instrument Vintage - Direct Sales (EOP)		1	2	3	5	9	5	8	8	9	39	39	39
Under Support (EOP)		-	-	-	-	-	1	2	3	5	9	39	39
New Support Revenue		-	-	-	-	-	1,053	2,808	4,739	7,898	16,497	50,435	-
Total Support Revenue		-	-	-	-	-	1,053	3,861	8,600	16,497	30,011	183,029	267,730
Total T2 Candida Revenue		\$10,000	\$0	\$226,177	\$597,576	\$833,753	\$1,110,222	\$2,352,968	\$4,333,189	\$7,294,234	\$15,090,613	\$70,754,909	\$118,268,898
T2 Bacteria													
Test Revenue													
Direct Customer Test Price										\$ 186		\$ 190	\$ 193
Reagent Rental Test Price										\$ 186		\$ 190	\$ 193
T2 Bacteria Tests												96,048	571,032
T2 Bacteria Revenue												18,222,478	110,096,016
Instrument Revenue													
Total Sites EOP						-						115	259
Sites Converted from Candida						-						92	40
Additional Instruments per site						-	1.0	1.0	1.0	1.0	1.0	1.0	1.0
New Sites						-						23	104
Instruments per site						-	2.0	2.0	2.0	2.0	2.0	2.0	2.0
T2 Instruments- new						-						138	200
Instrument Price		\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 58,500	\$ 58,500	\$ 58,500	\$ 58,500	\$ 58,500	\$ 57,038	\$ 55,612
T2Dx Instrument Revenue												1,574,237	2,224,463
Support Revenue													
HW maintenance							12%	12%	12%	12%	12%	12%	12%
Instrument Vintage - Direct Sales (EOP)												28	67
Under Support (EOP)												-	28
New Support Revenue												-	46,046
Total Support Revenue												-	106,107
Total T2 Bacteria Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,796,715	\$112,426,586

Source: Company data, Morgan Stanley Research

## Disclosure Section

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Steve Beuchaw, David R. Lewis.

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(as of July 31, 2015)

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STOCK RATING CATEGORY	COVERAGE UNIVERSE		INVESTMENT BANKING CLIENTS (IBC)		
	COUNT	% OF TOTAL	COUNT	% OF TOTAL IBC	% OF RATING CATEGORY
<b>Overweight/Buy</b>	<b>1198</b>	<b>36%</b>	<b>321</b>	<b>44%</b>	<b>27%</b>
<b>Equal-weight/Hold</b>	<b>1449</b>	<b>43%</b>	<b>325</b>	<b>44%</b>	<b>22%</b>
<b>Not-Rated/Hold</b>	<b>93</b>	<b>3%</b>	<b>10</b>	<b>1%</b>	<b>11%</b>
<b>Underweight/Sell</b>	<b>623</b>	<b>19%</b>	<b>78</b>	<b>11%</b>	<b>13%</b>
<b>TOTAL</b>	<b>3,363</b>		<b>734</b>		

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months.

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Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

## Analyst Industry Views

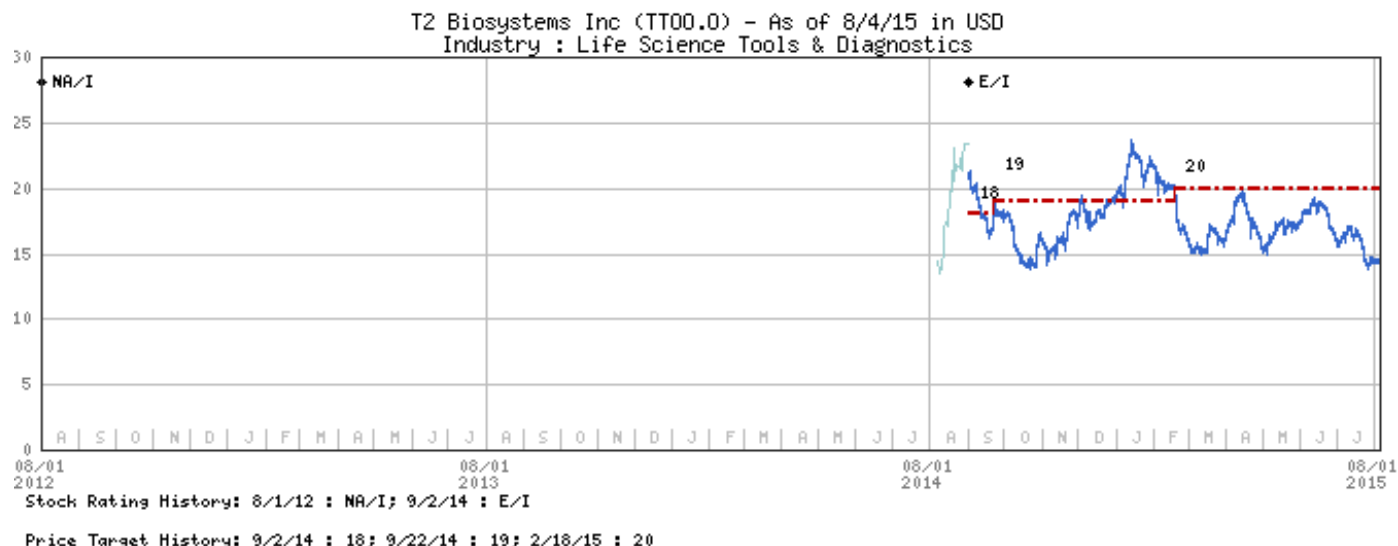
Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

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Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index or MSCI sub-regional index or MSCI AC Asia Pacific ex Japan Index.

## Stock Price, Price Target and Rating History (See Rating Definitions)



Source: Morgan Stanley Research      Date Format : MM/DD/YY      Price Target ---      No Price Target Assigned (NA)  
 Stock Price (Not Covered by Current Analyst) --- Stock Price (Covered by Current Analyst) ---  
 Stock and Industry Ratings (abbreviations below) appear as ♦ Stock Rating/Industry View  
 Stock Ratings: Overweight (O) Equal-weight (E) Underweight (U) Not-Rated (NR) No Rating Available (NA)  
 Industry View: Attractive (A) In-line (I) Cautious (C) No Rating (NR)

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## INDUSTRY COVERAGE: Life Science Tools &amp; Diagnostics

COMPANY (TICKER)	RATING (AS OF)	PRICE* (08/04/2015)
<b>Beuchaw, Steve</b>		
Agilent Technologies, Inc. (A.N)	E (09/08/2014)	\$40.62
Illumina Inc. (ILMN.O)	E (09/08/2014)	\$214.31
Mettler-Toledo International Inc. (MTD.N)	E (04/02/2015)	\$330.00
Myriad Genetics Inc. (MYGN.O)	U (11/10/2014)	\$32.98
NanoString Technologies Inc (NSTG.O)	O (11/10/2014)	\$16.12
Natera Inc (NTRA.O)	E (07/27/2015)	\$17.20
PerkinElmer Inc. (PKI.N)	O (09/08/2014)	\$52.92
Thermo Fisher Scientific Inc. (TMO.N)	O (09/08/2014)	\$137.77
Veracyte Inc (VCYT.O)	E (11/10/2014)	\$11.30
Waters Corp. (WAT.N)	U (09/08/2014)	\$134.55
<b>Lewis, David R.</b>		
T2 Biosystems Inc (TTOO.O)	E (09/02/2014)	\$14.36

Stock Ratings are subject to change. Please see latest research for each company.

\* Historical prices are not split adjusted.

## INDUSTRY COVERAGE: Medical Technology

COMPANY (TICKER)	RATING (AS OF)	PRICE* (08/04/2015)
<b>Beuchaw, Steve</b>		
Accuray Inc (ARAY.O)	E (09/27/2011)	\$6.52
Align Technology Inc (ALGN.O)	O (04/21/2015)	\$61.44
Dentsply International Inc. (XRAY.O)	E (09/12/2011)	\$55.88
Sirona Dental Systems Inc. (SIRO.O)	O (09/12/2011)	\$103.04
Varian Medical Systems, Inc (VAR.N)	U (04/15/2013)	\$86.19
<b>Francescone CFA, James</b>		
Grifols (GRFS.O)	E (06/08/2015)	\$32.65
Haemonetics Corporation (HAE.N)	E (05/01/2012)	\$40.08
<b>Lewis, David R.</b>		
Abbott Laboratories (ABT.N)	O (01/06/2014)	\$50.51
Abiomed (ABMD.O)	E (02/06/2009)	\$88.80
Baxalta Inc (BXL.T.N)	++	\$37.10
Baxter International (BAXN)	++	\$40.31
Becton Dickinson (BDX.N)	O (02/12/2015)	\$152.35
Boston Scientific (BSX.N)	O (01/06/2014)	\$17.09
C.R. Bard (BCR.N)	E (01/05/2015)	\$196.29
Edwards Lifesciences (EW.N)	O (07/06/2015)	\$149.37
Halyard Health (HYH.N)	E (11/04/2014)	\$35.08
Hansen Medical, Inc. (HNSN.O)	U (01/08/2009)	\$0.81
Hill-Rom Holdings Inc. (HRC.N)	E (01/05/2015)	\$55.22
Hologic, Inc. (HOLX.O)	E (01/06/2014)	\$41.39
Hospira (HSP.N)	NA (03/27/2015)	\$89.60
Integra LifeSciences (IART.O)	E (11/11/2013)	\$62.04
Intuitive Surgical Inc. (ISRG.O)	U (07/06/2015)	\$526.75
Johnson & Johnson (JNJ.N)	E (08/10/2010)	\$99.80
Kamada Ltd (KMDA.O)	E (06/25/2013)	\$3.65
Medtronic Inc. (MDT.N)	O (06/17/2014)	\$77.77
Nervo Corp (NVRN.O)	O (12/01/2014)	\$49.94
Sagent Pharmaceuticals Inc (SGNT.O)	E (08/13/2012)	\$24.06
St. Jude Medical (STJ.N)	O (01/06/2014)	\$72.76
Stryker Corporation (SYK.N)	O (01/08/2010)	\$101.48
Teleflex Inc. (TFX.N)	E (01/05/2015)	\$133.05
Zimmer Biomet Holdings Inc (ZBH.N)	O (01/05/2015)	\$103.13

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