

Reason for report:

EARNINGS**T2 BIOSYSTEMS, INC.****Progress on Track; Estimates Little Changed**

• **Bottom Line:** Following TTOO's on-pace winning of contracts in 2Q, we are keeping our estimates largely unchanged. We maintain our Outperform rating and our \$23 price target.

• **Eight more contracts in 2Q; totaling 10 hospitals.** TTOO reported the closing of 8 more contracts to adopt the T2Candida test, bringing the total number of accounts to 10 hospitals as of the end of 2Q. Management suggested that some of these hospitals are high up on their target list, but could not disclose further details. As previously guided, the target of 30 contracts by the end of 2015 will be more back-loaded in 2H, and TTOO is confident in achieving that goal.

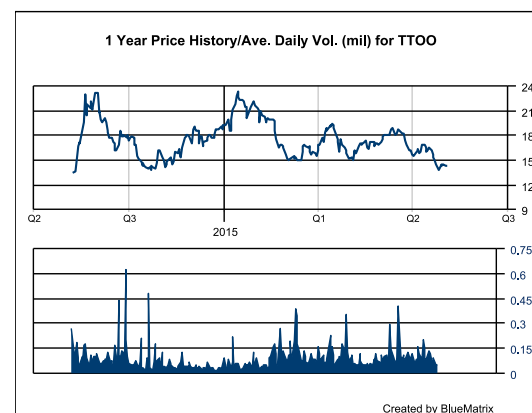
• **Economic study improving sales cycle.** Management attributes the shorter-than-expected sales cycles of 3 to 10 months for some accounts to the IMS Health study published in April in *Future Microbiology*. Sales reps have been able to resonate with clients by building a more simplified economic model based on the study to show the potential cost savings each hospital can achieve. An important data point from the study suggests that patients that die from fungal infections inflict costs that are 2.7x higher than that of surviving patients. We believe this highlights the limitations of current blood cultures, which have lower-than-ideal positive predictive values for candida.

• **Sales force expands to increase bandwidth.** Currently, TTOO sales force is operating at full efficiency. Since 1Q, the sales representative headcount has increased from 9 to 13 as of the end of July. TTOO anticipates further expansion to 15 reps by year-end, going into 2016.

Key Stats:

(NASDAQ:TTOO)

Sector:	Life Science Tools and Diagnostics
S&P 600 Health Care Index:	1,768.16
Price:	\$14.36
Price Target:	\$23.00
Methodology:	~7x Dec.-17E TTM revs., discounted 1 year back at ~20% rate
52 Week High:	\$24.50
52 Week Low:	\$11.00
Shares Outstanding (mil):	20.3
Market Capitalization (mil):	\$291.5
Book Value/Share:	\$1.68
Cash Per Share:	\$2.63
Net Debt to Total Capital:	NM
Dividend (ann):	\$0.00
Dividend Yield:	0.0%



Dec Yr	1Q	2Q	3Q	4Q	FY Rev	1Q	2Q	3Q	4Q	FY EPS	P/E
2014A	0.0	0.0	0.0	\$0.1	\$0.1	(\$4.90)	(\$6.35)	(\$0.71)	(\$0.45)	(\$4.15)	NM
2015E - New	\$0.2A	\$0.6A	\$0.9	\$1.4	\$3.0	(\$0.53)A	(\$0.54)A	(\$0.58)	(\$0.60)	(\$2.24)	NM
2015E - Old	\$0.2A	\$0.4	\$0.9	\$1.4	\$2.8	(\$0.53)A	(\$0.55)	(\$0.58)	(\$0.60)	(\$2.26)	NM
2016E - New	--	--	--	--	\$28.8	--	--	--	--	(\$2.21)	NM
2016E - Old	--	--	--	--	\$28.8	--	--	--	--	(\$2.22)	NM
2017E - New	--	--	--	--	\$100.0	--	--	--	--	(\$1.30)	NM
2017E - Old	--	--	--	--	\$100.0	--	--	--	--	(\$1.31)	NM

Source: Company Information and Leerink Partners LLC Research
Revenues in \$MM.

GAAP EPS presented. Quarterly figures may not sum to annual total due to change in shares out. IPO was 8.7.14.

INVESTMENT THESIS

TTOO is a developmental stage manufacturer of a novel detection platform with broad application. Its initial focus is to commercialize instruments and diagnostic tests for sepsis and hemostasis, and the company has received FDA clearance for its first product, a test to detect Candida infection in the bloodstream. TTOO's instruments and tests are based on a unique technology which capitalizes on the magnetic properties of water to detect a broad range of analytes in solution. We believe the market opportunities for TTOO's technology are broad and view the risk/reward on the stock favorably at current levels.

VALUATION

The median emerging growth tools and diagnostics company currently trades for ~5x forward-twelve month revenue. We believe TTOO deserves a multiple with a premium to the peer group due to its unique, patent-protected technology, large market opportunity, and revenue growth prospects. We consider ~7x FTM revenue a fair reflection of these positive attributes, offset by inherent uncertainties over the revenue ramp for TTOO's products. When calculating a 12-month price target, we would normally calculate an enterprise value, using projected levels of debt and cash, that is a multiple of revenue for the twelve months ended Dec.-16 (the forward twelve month revenue estimate, twelve months from now). However, for TTOO, we project out a year further given the company's stage in its product adoption. Therefore, we apply our revenue multiple of ~7x to our revenue estimate of ~\$100M for the twelve months ended Dec.-17 to yield a price of \$28 in two years. We discount that back at a rate of 20% to arrive at a \$23 12-month price target.

RISKS TO VALUATION

The primary risks to our price target for TTOO include, but are not limited to: a slower-than-projected adoption curve for the company's sepsis products, a smaller-than-projected market opportunity for the company's sepsis products, an unforeseen detrimental impact from an evolving competitive environment, regulatory risk, product development risk, and financing risk.

TTOO Biosystems (TTOO)

Income Statement

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	2013	Mar-14	Jun-14	Sep-14	Dec-14	2014	Mar-15	Jun-15	Sep-15e	Dec-15e	2015e	2016e	2017e
Revenue													
Product	\$0	\$0	\$0	\$0	\$0	\$0	\$10	\$0	\$550	\$950	\$1,510	\$26,800	\$97,000
Other	<u>266</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>119</u>	<u>119</u>	<u>178</u>	<u>564</u>	<u>350</u>	<u>400</u>	<u>1,492</u>	<u>2,000</u>	<u>3,000</u>
Total revenue	266	0	0	0	119	119	188	564	900	1,350	3,002	28,800	100,000
COGS	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>0</u>	<u>400</u>	<u>600</u>	<u>1,003</u>	<u>11,520</u>	<u>40,000</u>
Gross profit	266	0	0	0	119	119	185	564	500	750	1,999	17,280	60,000
SG&A	5,022	1,842	2,446	2,984	3,747	11,019	4,468	4,437	5,200	5,400	19,505	30,240	45,000
R&D	<u>14,936</u>	<u>5,065</u>	<u>4,703</u>	<u>4,803</u>	<u>5,210</u>	<u>19,781</u>	<u>5,868</u>	<u>6,651</u>	<u>6,500</u>	<u>7,000</u>	<u>26,019</u>	<u>30,240</u>	<u>39,463</u>
Operating income (loss)	(19,692)	(6,907)	(7,149)	(7,787)	(8,838)	(30,681)	(10,151)	(10,524)	(11,200)	(11,650)	(43,525)	(43,200)	(24,463)
Interest expense (income)	403	86	80	304	251	721	477	477	498	505	1,958	2,154	2,660
Other expense, net	<u>515</u>	<u>(73)</u>	<u>74</u>	<u>0</u>	<u>(13)</u>	<u>(12)</u>	<u>(9)</u>	<u>(6)</u>	<u>0</u>	<u>0</u>	<u>(15)</u>	<u>0</u>	<u>0</u>
Pretax income	(20,610)	(6,920)	(7,303)	(8,091)	(9,076)	(31,390)	(10,619)	(10,995)	(11,698)	(12,155)	(45,468)	(45,354)	(27,122)
Taxes	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net income	(\$20,610)	(\$6,920)	(\$7,303)	(\$8,091)	(\$9,076)	(\$31,390)	(\$10,619)	(\$10,995)	(\$11,698)	(\$12,155)	(\$45,468)	(\$45,354)	(\$27,122)
Accretion of redeemable preferred	<u>(6,908)</u>	<u>(1,906)</u>	<u>(1,906)</u>	<u>(758)</u>	<u>0</u>	<u>(4,570)</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net income applicable to common	(\$27,518)	(\$8,826)	(\$9,209)	(\$8,849)	(\$9,076)	(\$35,960)	(\$10,619)	(\$10,995)	(\$11,698)	(\$12,155)	(\$45,468)	(\$45,354)	(\$27,122)
Basic shares outstanding	2,373	1,412	1,451	12,379	20,042	8,675	20,081	20,261	20,311	20,361	20,253	20,548	20,911
Diluted shares outstanding	2,373	1,412	1,451	12,379	20,042	8,675	20,081	20,261	20,311	20,361	20,253	20,548	20,911
EPS diluted	(\$8.69)	(\$4.90)	(\$6.35)	(\$0.71)	(\$0.45)	(\$4.15)	(\$0.53)	(\$0.54)	(\$0.58)	(\$0.60)	(\$2.24)	(\$2.21)	(\$1.30)
<i>EPS growth</i>													
Sales growth							nm	nm	nm	1034.5%	2422.7%	859.4%	247.2%
Gross margin	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	98.4%	100.0%	55.6%	55.6%	66.6%	60.0%	60.0%
SG&A % of revenue	1888.0%	nm	nm	nm	3148.7%	9259.7%	2376.6%	786.7%	577.8%	400.0%	649.7%	105.0%	45.0%
R&D % of revenue	5615.0%	nm	nm	nm	4378.2%	16622.7%	3121.3%	1179.3%	722.2%	518.5%	866.7%	105.0%	39.5%
Operating margin	(7403.0%)	nm	nm	nm	(7426.9%)	(25782.4%)	(5399.5%)	(1866.0%)	(1244.4%)	(863.0%)	(1449.9%)	(150.0%)	(24.5%)
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%
D&A	\$584	\$144	\$0	\$0	\$0	\$144	\$0	\$0	\$350	\$300	\$650	\$2,680	\$2,910
EBITDA	(\$19,108)	(\$6,763)	(\$7,149)	(\$7,787)	(\$8,838)	(\$30,537)	(\$10,151)	(\$10,524)	(\$10,850)	(\$11,350)	(\$42,875)	(\$40,520)	(\$21,553)
Free cash flow													
Operarating cash flow	(\$18,053)	(\$5,791)	(\$6,400)	(\$7,508)	(\$8,485)	(\$28,184)	(\$7,394)				(\$49,877)	(\$40,575)	(\$17,038)
CapX	<u>(513)</u>	<u>(263)</u>	<u>(245)</u>	<u>(531)</u>	<u>(1,045)</u>	<u>(2,084)</u>	<u>(1,460)</u>				<u>(2,960)</u>	<u>(1,221)</u>	<u>(10,610)</u>
Free cash flow	(\$18,566)	(\$6,054)	(\$6,645)	(\$8,039)	(\$9,530)	(\$30,268)	(\$8,854)				(\$52,837)	(\$41,796)	(\$27,648)

Notes:

Source: Company reports and Leerink Partners estimates

Disclosures Appendix

Analyst Certification

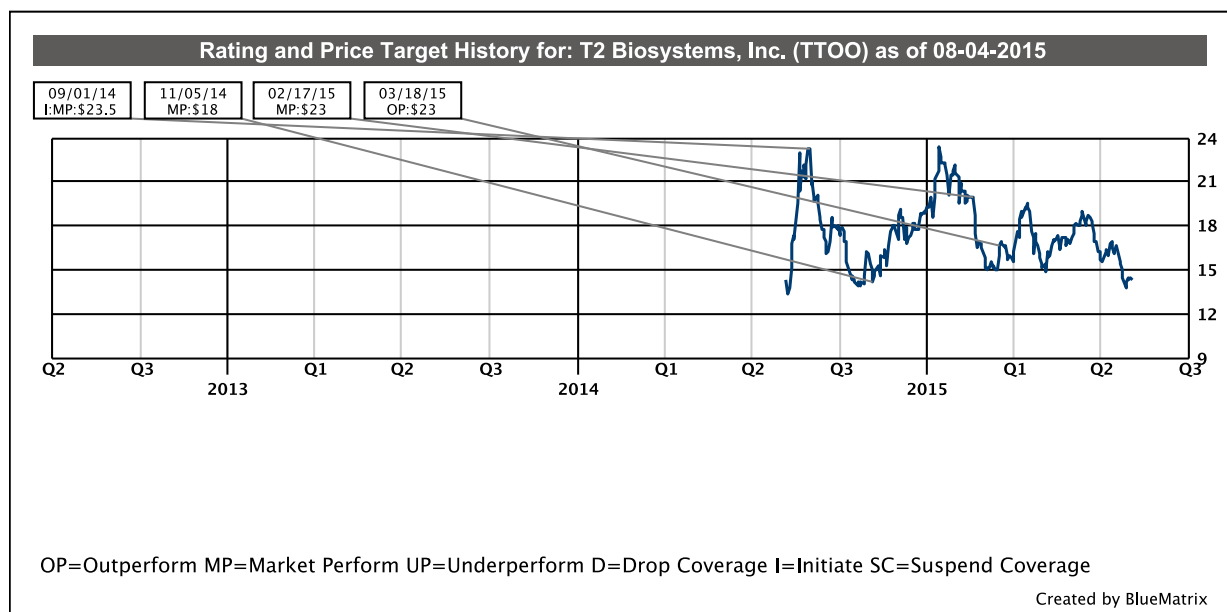
I, Dan Leonard, certify that the views expressed in this report accurately reflect my views and that no part of my compensation was, is, or will be directly related to the specific recommendation or views contained in this report.

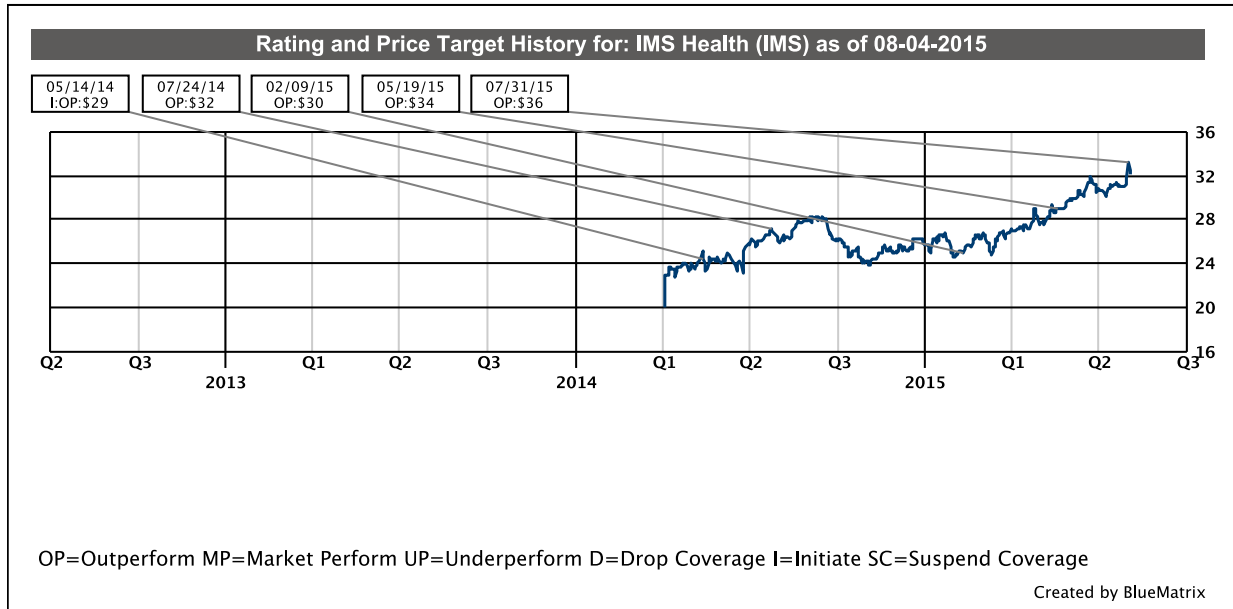
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Distribution of Ratings/Investment Banking Services (IB) as of 06/30/15				
Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [OP]	165	73.66	66	40.00
HOLD [MP]	59	26.34	1	1.69
SELL [UP]	0	0.00	0	0.00

Explanation of Ratings

Outperform (Buy): We expect this stock to outperform its benchmark over the next 12 months.

Market Perform (Hold/Neutral): We expect this stock to perform in line with its benchmark over the next 12 months.

Underperform (Sell): We expect this stock to underperform its benchmark over the next 12 months. The degree of outperformance or underperformance required to warrant an Outperform or an Underperform rating should be commensurate with the risk profile of the company.

For the purposes of these definitions the relevant benchmark will be the S&P 600® Health Care Index for issuers with a market capitalization of less than \$2 billion and the S&P 500® Health Care Index for issuers with a market capitalization over \$2 billion.

Important Disclosures

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In the past 12 months, the Firm has received compensation for providing investment banking services to T2 Biosystems, Inc. and IMS Health .

Leerink Partners LLC makes a market in T2 Biosystems, Inc. and IMS Health.

Leerink Partners LLC is willing to sell to, or buy from, clients the common stock of IMS Health on a principal basis.

Leerink Partners LLC has acted as a co-manager for a public offering of T2 Biosystems, Inc. and IMS Health in the past 12 months.

While IMS Health has been used as a source, the analysis contained herein has been arrived at independently by the firm and IMS is not responsible for the analysis or use of the data.

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