

Emergent BioSolutions (EBS - \$43.55)

Global Chemical and Biological Public Health Threats Growing at Alarming Rate

We recently attended EBS' first investor/analyst day in NYC and came away incrementally more positive as EBS has evolved into a strong USG partner well equipped to deal with growing global public biochemical threats. While far from comforting, we were particularly encouraged by US Congressman and former Chairman of the US House Mike Rogers' discussion about the USG's perspective on public health threats. In fact, he believes chemical and biological weapons (e.g. weaponized anthrax, ricin and smallpox) are a top priority in terrorist organizations and wouldn't be surprised if counter-measure funding were to grow in the future. Additionally, we were encouraged to hear EBS reiterate their ambitious 2020 \$1B topline goal ($\geq 10\%$ OUS) goal. Recent acquisitions of ACAM2000 (smallpox vaccine) and raxibacumab (fully human monoclonal antibody approved by the FDA for prophylaxis of inhalation anthrax) are encouraging. We also expect more M&A activity targeting the CBRN, explosives, and emerging infectious disease companies or products in order to achieve their topline goal. EBS's M&A strategy targets: 1) government-procured medical countermeasures, 2) dual market products and 3) commercial products that leverage their capabilities (USG or manufacturing). Although follow-on contracts will be a key part of the growth at EBS, we continue to see them as extremely qualified for USG negotiations. We look forward to 2018 guidance ahead of an upcoming healthcare conference hosted by another firm, and reiterate our Buy rating and \$52 price target.

- **Chemical and biological warfare, a growing global concern.** From EBS's perspective, we see as a real positive the continued need for biological and chemical countermeasures as the public health threats unfortunately seem to be growing.
- **\$1B 2020 topline goal reiterated, more M&A to be expected.** As we forecast YE17 topline revenues of \$544.6M, we are encouraged by EBS reiterating their ambitious \$1B topline 2020 goal with at least 10% from OUS. We are impressed with their recent acquisitions and believe their technical expertise, facilities, licensing capabilities and proven track-record of delivering make them very well-suited for future follow-on contract negotiations as well as M&A activity in the CBRN, explosives, and emerging infectious disease space.
- **Reiterate Buy rating, maintaining \$52 PT.** Our price target is based on a sum-of-the-parts analysis, with a base business DCF value of \$43/share, cash (net of debt) and tech value of \$9/share.

Adj-Earnings Estimates: (per share)

(Dec)	1Q	2Q	3Q	4Q	FY	P/E
FY18E	0.54	0.72	0.76	0.83	2.85	15.3x
FY17E	0.29A	0.13A	0.73A	0.68	1.84	237x
FY16A	0.16	(0.18)	0.64	0.74	1.39	31.3x
FY15A	(0.50)	0.36	0.83	0.78	1.60	27.2x

Source: Laidlaw & Company estimates

Healthcare / Biotechnology

Ticker:	EBS
Rating:	Buy
Price Target:	\$52

Trading Data:

Last Price (12/08/2017)	\$43.55
52-Week High (12/04/2017)	\$44.97
52-Week Low (04/06/2017)	\$27.94
Market Cap. (MM)	\$1,800
Shares Out. (MM)	41.4

Analyst

Francois Brisebois, MSc
(857) 317-5362
fbrisebois@laidlawltd.com

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Figure 1: Valuation

Sum-of-the-parts valuation		
Segment	Valuation (000's)	Per share value
DCF of base business	\$2,174,063	\$43
Net Cash & tech end '17E	\$465,049	\$9
SUM	\$2,639,112	\$52
Fully diluted shares out '17E (000)		50,458

Source: Company reports; Laidlaw & Company estimates

Figure 2: Quarterly Income Statement

Emergent BioSolutions										
Quarterly income statement										
(\$000 except per share)	2016A				2016A Year	2017E				2017E Year
	1QA	2QA	3QA	4QA		1QA	2QA	3QA	4QE	
BioThrax - US sales	\$59,100	\$40,000	\$94,100	\$43,800	\$237,000	\$43,800	\$52,300	\$83,500	\$102,500	\$282,100
NuThrax - US sales										
OUS Biodefense sales						0	0		5,000	5,000
Other Biodefense	4,658	8,300	2,598	43,693	59,249	38,169	11,310	30,800	32,500	112,779
Total Biodefense	63,758	48,300	96,698	87,493	296,249	81,969	63,610	114,296	140,000	399,875
Total Biosciences	7,948	10,200	3,109		21,257					
Contract manufacturing	7,587	10,200	14,712	16,683	49,182	17,628	16,160	18,912	17,500	70,200
Contracts & grants	31,709	32,787	31,504	47,487	143,487	17,261	21,002	16,226	20,000	74,489
Total revenues	\$111,002	\$101,487	\$146,023	\$151,663	\$510,175	\$116,858	\$100,772	\$149,434	\$177,500	\$544,564
Expenses										
COGS	25,803	35,612	38,460	36,159	136,034	43,922	33,524	42,103	61,500	181,049
Gross margin	85,199	65,875	107,563	115,504	374,141	72,936	67,248	107,331	116,000	363,515
% product sales	67%	48%	66%	65%	63%	56%	58%	68%	61%	61%
R&D	34,154	33,947	27,188	27,117	122,406	20,476	25,751	22,659	22,500	91,386
SG&A	37,484	40,148	27,388	30,858	135,878	31,850	29,868	31,603	40,000	133,321
Operating income	13,561	(8,220)	52,987	57,529	115,857	20,610	11,629	53,069	53,500	138,808
Interest expense	1,524	1,509	2,049	2,535	7,617	1,938	1,805	1,991	2,500	8,234
Interest income, net	186	220	358	289	1,053	373	583	637	250	1,843
Other income/(expense)	116	17	(134)	439	438	300	(586)	(101)	100	(287)
Pretax income (loss)	12,339	(9,492)	51,162	55,722	109,731	19,345	9,821	51,614	51,350	132,130
Tax exp/(benefit)	4,818	(2,345)	19,565	19,136	41,174	5,160	3,205	14,563	16,432	39,360
Loss to non-ctrl interest										
Adjusted Net Income	7,521	(7,147)	31,597	36,586	68,557	14,185	6,616	37,051	34,918	92,770
Non-cash charges	(3,530)	(3,800)	(8,100)	(4,300)	(19,730)	(3,800)	(2,000)	(3,500)		
GAAP net income	3,991	(10,947)	23,497	32,286	48,827	10,385	4,616	33,551		
EPS ex non-cash items	\$0.16	(\$0.18)	\$0.64	\$0.74	\$1.39	\$0.29	\$0.13	\$0.73	\$0.68	\$1.84
EPS as reported	\$0.08	(\$0.27)	\$0.48	\$0.65	\$0.99	\$0.25	\$0.11	\$0.81		
Fully diluted shares (000)	48,360	40,203	49,440	49,573	49,335	49,718	50,079	50,468	51,568	50,458

Source: Bloomberg LP; Company reports; Laidlaw & Company estimates

Figure 3: Annual Income Statement

Emergent BioSolutions Annual income statement							
(\$000 except per share)	2015A	2016A	2017E	2018E	2019E	2020E	Comments
BioThrax - US sales	\$293,900	\$237,000	\$282,100	\$270,000	\$297,500	\$25,500	'17E guide: \$280M-\$290M
NuThrax - US sales					25,000	318,500	Launch 2019
OUS Biodefense sales			5,000	24,000	25,000	26,000	OUS sales ~10% of US sales
Other Biodefense	34,994	59,249	112,779	223,571	251,429	172,500	RSDL, BAT, other Biodefense here
Total Biodefense	328,894	296,249	399,875	517,571	598,929	542,500	
Total biosciences	28,068	21,257					Spun out mid-2016
Contract manufacturing	42,968	49,182	70,200	85,000	100,000	111,000	Acquired with Cangene 3Q13
Contracts & grants	122,905	143,487	74,489	92,000	90,000	85,000	Offset in R&D
Total revenues	\$522,789	\$510,175	\$544,564	\$694,571	\$788,929	\$738,500	'17E guide: \$540M-\$560M 2020 guide: \$1B in revenue
Expenses							
COGS	112,895	136,034	181,049	252,386	289,339	246,863	
Gross margin	409,894	374,141	363,515	442,186	499,589	491,638	
% product sales	72%	63%	61%	58%	59%	62%	Cangene impacts margins
R&D	153,997	122,406	91,386	105,000	115,000	125,000	ex-Biosciences R&D in 2017
SG&A	141,758	135,878	133,321	124,000	130,000	132,000	
Operating income	114,139	115,857	138,808	213,186	254,589	234,638	'17E EBITDA: \$150M-\$160M from \$135M-\$145M
Interest expense	6,523	7,617	8,234	0	0	0	
Interest income, net	572	1,053	1,843	0	0	0	
Other inc/(exp)	(319)	438	(287)	400	400	400	
Pretax income	107,869	109,731	132,130	213,586	254,989	235,038	
Tax expense	32,299	41,174	39,360	64,076	76,497	70,511	
Loss to non-cont. int	0	0	0	0	0	0	
Adj-Net income	75,570	68,557	92,770	149,510	178,493	164,526	'17E adj-NI: \$85M-\$95M from \$70M-\$80M
Non-cash charges	(12,700)	(19,730)					
GAAP net income	62,870	48,827					'17E GAAP NI: \$70M-\$80M from \$60M-\$70M
EPS ex non-cash items	\$1.60	\$1.39	\$1.84	\$2.85	\$3.33	\$2.95	+10% CAGR 2016-2020E
EPS as reported	\$1.33	\$0.99					
Fully diluted shares (000)	47,256	49,335	50,458	52,368	53,618	55,743	

Source: Bloomberg LP; Company reports; Laidlaw & Company estimates

Major Risks

Exogenous events could impact our outlook. We believe pharmaceutical companies have the least control over competitive, political, and regulatory risks. Although we have incorporated competitive assumptions into our forecasts, there may be other risks beyond the scope of our analysis. Changes in the drug reimbursement system, as well as any political or regulatory amendments, may significantly influence the earnings power of these companies.

Actual clinical results and the FDA's conclusions may deviate from expectations. Many of our assumptions are based on a review of incomplete clinical trial data available in the public domain. Often, our conclusions are drawn from early stage data, which may not be reflected by pivotal studies. Furthermore, the FDA's conclusions may not coincide with our own, materially changing our revenue and earnings assumptions.

Compliance issues, product recalls, and other mandates by regulatory authorities could materially change our expectations. Regulatory compliance issues, ranging from accounting irregularities to defective manufacturing practices, could materially change our assumptions and earnings outlook. Unanticipated product recalls and labeling changes could also have adverse consequences on our earnings assumptions.

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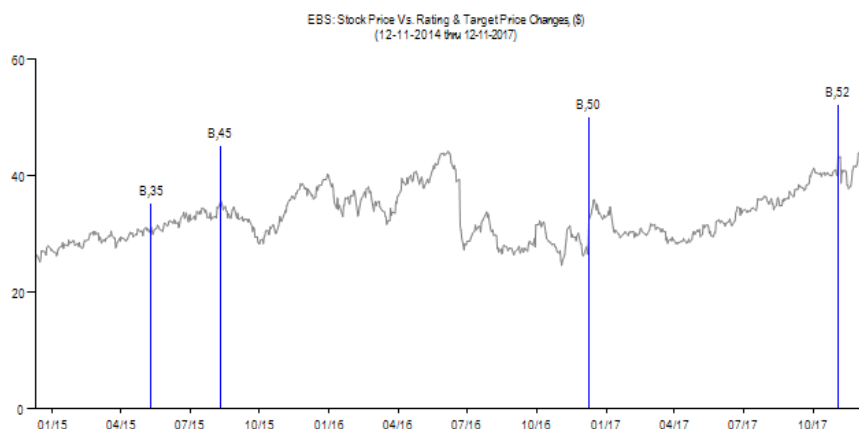
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Rating and Price Target Change History



3 Year Rating Change History

Date	Rating	Closing Price (\$)
05/11/2...	Buy (B)	31.11

3 Year Price Change History

Date	Target Price (\$)	Closing Price, (\$)
05/11/2...	35.00	31.11
08/10/2...	45.00	35.29
12/09/2...	50.00	32.3/
11/03/2...	52.00	43.03

Source: Laidlaw & Company

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			Investment Banking	Brokerage
Strong Buy (SB)	Expected to significantly outperform the sector over 12 months.	0.00%	0.00%	0.00%
Buy (B)	Expected to outperform the sector average over 12 months.	66.00%	30.00%	2.00%
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Sell (S)	Returns expected to significantly underperform the sector average over 12 months.	0.00%	0.00%	0.00%

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Sanofi (SNY – Not Rated)

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