

Building Value in Pharma Services



Pat Walsh

*CEO, Avista
Pharma
Solutions*



George Svokos

*Former Chief
Commercial
Officer for AMRI*



Roger Lias

*President & CEO of
Avid Bioservices*



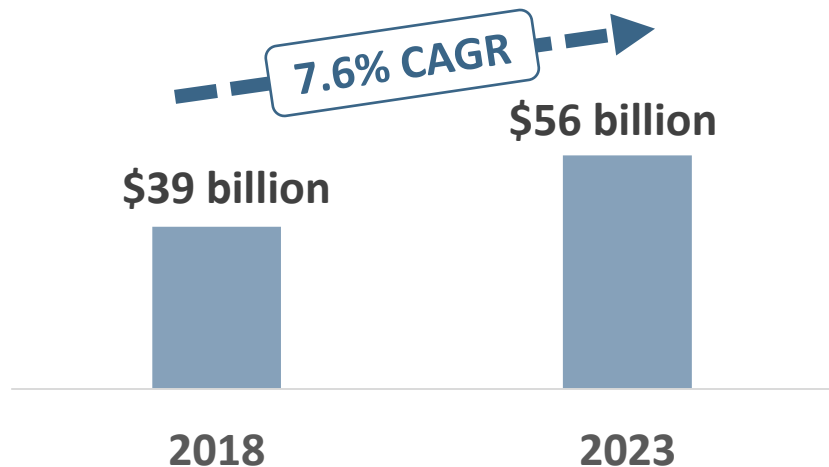
Stephen Trevisan

*Former CEO of
Accelovance*

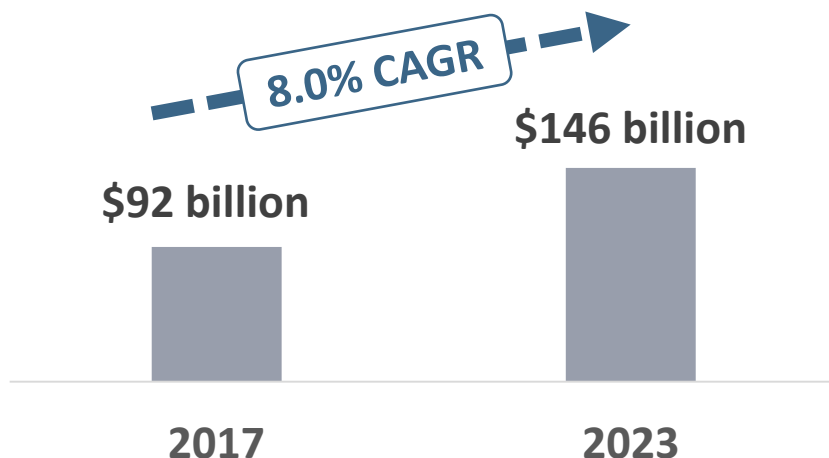
CRO & CDMO Markets

Contract Research Organizations

- The CRO market is currently valued at \$39 billion and is expected to grow to \$56 billion by 2023, indicating a CAGR of 7.6%
- Only 41% of clinical development is currently outsourced, but that is expected to rise to 50% by 2020



Contract Development & Manufacturing Organizations



- The global CMO market is currently valued at \$92 billion and expected to grow to \$146 billion by 2023, a CAGR of 8.0%
- Only 32% is currently outsourced

CDMO Trading Multiples

Contract Development & Manufacturing Organizations Trading Comps

\$USD millions

Company	Enterprise Value	Last 12 Months		Margin Analysis		Enterprise Value	
		Revenue	EBITDA	Gross Profit	EBITDA	Revenue	EBITDA
Bachem	1,928.1	254.7	68.6	30.2%	26.9%	7.6 x	28.1 x
Cambrex	1,933.9	586.9	186.4	40.9%	31.8%	3.3 x	10.4 x
Catalent	8,539.2	2,463.4	491.3	30.6%	19.9%	3.5 x	17.4 x
Johnson Matthey	10,236.2	19,821.7	934.8	6.4%	4.7%	0.5 x	11.0 x
Jubilant Life Sciences	2,048.2	1,174.1	224.5	56.3%	19.1%	1.7 x	9.1 x
Lonza Group	28,366.7	5,912.3	1,482.6	38.6%	25.1%	4.8 x	19.1 x
Recipharm	1,482.1	662.8	96.8	68.6%	14.6%	2.2 x	15.3 x
Siegfried Holding	2,039.7	783.6	119.0	19.7%	15.2%	2.6 x	17.1 x
West Pharmaceutical Services	8,802.8	1,677.0	346.5	31.6%	20.7%	5.2 x	25.4 x

- Median EV / LTM revenue = **3.3x**
- Median EV / LTM EBITDA = **17.1x**

Median	31.6%	19.9%	3.3 x	17.1 x
Mean	35.9%	19.8%	3.5 x	17.0 x
Low	6.4%	4.7%	0.5 x	9.1 x
High	68.6%	31.8%	7.6 x	28.1 x

CDMO Transaction Multiples

Contract Development & Manufacturing Organizations Transaction Comps

Announced Date	Target	Buyer	Geographic Location	Enterprise Value	LTM Revenue	LTM EBITDA	EV / LTM Revenue	EV / LTM EBITDA
Sep '18	Hovid Berhad	TAEL Pantaleon Investments	Malaysia	\$92.8	\$51.8	5.8	1.8x	15.9x
Jul '18	AMPAC Fine Chemicals	SK Holdings	USA	\$455.0	\$200.0	N/A	N/A	N/A
Jul '18	Halo Pharma	Cambrex Corporation	USA	425.0	\$105.0	\$27.0	4.0x	15.7x
Jun '18	Alcami Corporation	Madison Dearborn Partners	USA	N/A	N/A	N/A	N/A	N/A
Sep '17	Cook Pharmica	Catalent Pharma Solutions	USA	950.0	177.8	N/A	5.3x	N/A
Jul '17	Aptuit	Evotec	USA	300.0	92.9	11.6	3.2x	25.8x
Jun '17	PCAS	Novacap	France	342.4	255.2	28.5	1.3x	12.0x
Jun '17	AMRI	The Carlyle Group	USA	1,593.5	628.7	71.8	2.5x	22.2x
May '17	Patheon	Thermo Fisher	USA	7,205.3	1,933.0	351.2	3.7x	20.5x
Dec '16	Capsugel	Lonza Group	USA	5,500.0	1,000.0	344.0	5.5x	16.0x
Sep '16	PharmaCore	Cambrex Corporation	USA	25.0	17.0	2.0	1.5x	12.5x
Aug '16	Ash Stevens	Piramal Pharma Solutions	USA	53.0	18.3	N/A	2.9x	N/A
Jul '16	Gland Pharma	Fosun Pharma Industrial	India	1,588.6	188.2	N/A	8.4x	N/A
May '16	Euticals	AMRI	Italy	353.1	243.1	26.8	1.5x	13.2x

\$USD millions

- Median EV / LTM revenue = **3.1x**
- Median EV / LTM EBITDA = **15.9x**

Median	\$425.0	\$188.2	\$27.0	3.1x	15.9x
Mean	1,452.6	377.8	96.5	3.5x	17.1x
High	7,205.3	1,933.0	351.2	8.4x	25.8x
Low	25.0	17.0	2.0	1.3x	12.0x

CRO Trading Multiples

Contract Research Organizations Trading Comps

\$USD millions

Company	Enterprise Value	Last 12 Months		Margin Analysis		Enterprise Value	
		Revenue	EBITDA	Gross Profit	EBITDA	Revenue	EBITDA
Charles River Laboratories Internati	\$6,849.9	\$1,905.8	\$449.4	38.5%	23.6%	3.6 x	15.2 x
ICON Public Limited Company	7,523.3	1,946.6	413.4	46.1%	21.2%	3.9 x	18.2 x
IQVIA Holdings Inc.	35,137.8	8,475.0	1,786.0	42.6%	21.1%	4.1 x	19.7 x
Linical Co., Ltd.	322.6	85.8	19.4	38.8%	22.6%	3.8 x	16.7 x
Medpace Holdings, Inc.	2,383.3	455.8	113.6	51.5%	24.9%	5.2 x	21.0 x
PRA Health Sciences, Inc.	8,055.4	2,162.5	361.5	36.3%	16.7%	3.7 x	22.3 x
Syneos Health, Inc.	7,949.1	2,658.0	370.0	39.5%	13.9%	3.0 x	21.5 x

- Median EV / LTM revenue = **3.8x**
- Median EV / LTM EBITDA = **19.7x**

Median	39.5%	21.2%	3.8 x	19.7 x
Mean	41.9%	20.6%	3.9 x	19.2 x
Low	36.3%	13.9%	3.0 x	15.2 x
High	51.5%	24.9%	5.2 x	22.3 x

CRO Transaction Multiples

Contract Research Organizations Transaction Comps

Announced Date	Target	Buyer	Geographic Location	Enterprise Value	LTM Revenue	LTM EBITDA	EV / LTM Revenue	EV / LTM EBITDA
Mar '18	Accelovance	Linical USA	USA	\$32.9	\$26.8	NA	1.2x	NA
Feb '18	MPI Research	Charles River Laboratories	USA	800.0	240.0	\$68.4	3.3x	11.7x
Sep '17	Optimal Research	Synexus	USA	NA	NA	NA	NA	NA
Jul '17	MAPI Development	ICON	France	139.5	NA	NA	NA	NA
Jul '17	Chiltern International	Covance	UK	1,200.0	NA	NA	NA	NA
Jun '17	PAREXEL International	Pamplona Capital Management	USA	5,007.4	2,097.0	342.8	2.4x	14.6x
May '17	inVentiv Health	INC Research	USA	4,513.7	2,177.4	292.7	2.1x	15.4x
Sep '16	ExecuPharm	PAREXEL International	USA	155.0	NA	NA	NA	NA
May '16	IMS Health	Quintiles	USA	13,266.8	3,063.0	743.0	4.3x	17.9x
May '16	Synexus	Pharmaceutical Product Development	UK	257.8	68.8	15.9	3.7x	16.2x

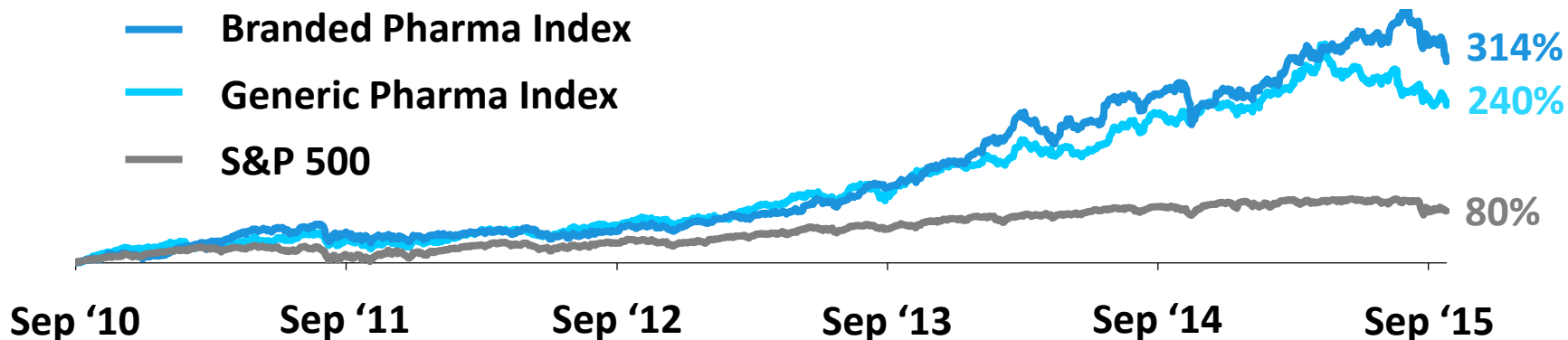
\$USD millions

- Median EV / LTM revenue = **2.9x**
- Median EV / LTM EBITDA = **15.4x**

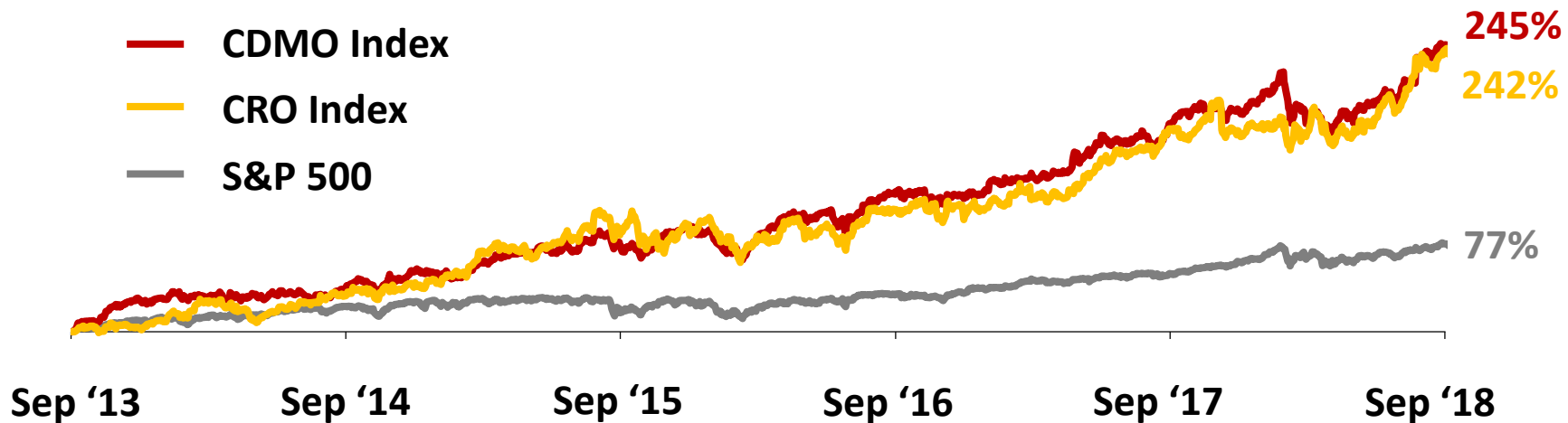
Median	\$800.0	\$1,168.5	\$292.7	2.9x	15.4x
Mean	2,819.2	1,278.8	292.6	2.9x	15.2x
High	13,266.8	3,063.0	743.0	4.3x	17.9x
Low	32.9	26.8	15.9	1.2x	11.7x

Pharma Services '13 - '18 vs. Spec Pharma '10 - '15

Branded & Generic Pharma vs. S&P 500 (2010 - 2015)



CRO & CDMO vs. S&P 500 (2013 - 2018)



Pharma Services Performance vs. Spec Pharma and S&P

