

# INSIGHT



**PHARMA SERVICES**

**2019 Valuation Report**

January 2020

BOURNE PARTNERS

# CDMO – Transaction Comps

## CDMO - Transaction Comps

USD in millions

Announced Date	Target	Target Description	Buyer	Geographic Location	Enterprise Value	LTM Revenue	LTM EBITDA	EV / LTM Revenue	EV / LTM EBITDA
Dec-19	Majority of Drug Delivery Business of 3M	Comprises development and manufacturing operations for pharma products using inhalation, microneedle, and conventional drug delivery technologies	Altaris Capital Partners	USA	\$650.0	\$380.0	NA	1.7x	NA
Dec-19	Consort Medical	One-stop developer and manufacturer of drugs and premium delivery devices internationally	Recipharm	United Kingdom	800.0	392.7	59.7	2.1x	13.6x
Aug-19	Cambrex Corporation	Operates as a CDMO for the development and commercialization of new and generic therapeutics worldwide	Permira Advisers	USA	2,545.2	574.1	\$146.6	4.4x	17.4x
Apr-19	Paragon Bioservices <sup>1</sup>	Operates as a CDMO that focuses on the development and manufacturing of biopharmaceuticals	Catalent Pharma Solutions	USA	1,285.7	101.0	56.0	12.7x	23.0x
Mar-19	Biogen (Denmark) Manufacturing Facility	Biopharmaceutical CDMO facility with 90,000L biologic production capacity	Fujifilm Diosynth Biotechnologies	Denmark	890.0	NA	NA	NA	NA
Mar-19	Brammer Bio	CDMO developing and manufacturing cell and gene therapies	Thermo Fisher	USA	1,700.0	NA	NA	NA	NA
Nov-18	Avista Pharma Solutions <sup>2</sup>	CDMO offering services including analytical testing, API and drug product development, early stage discovery, and microbiology testing support	Cambrex Corporation	USA	252.0	65.0	NA	3.9x	NA
Jul-18	AMPAC Fine Chemicals <sup>3</sup>	Operates as a custom manufacturer of APIs and registered intermediates for the pharmaceutical industry	SK Holdings	USA	455.0	200.0	NA	2.3x	NA
Jul-18	Halo Pharma	Provides contract development and manufacturing services in various dosage forms and drug delivery platforms	Cambrex Corporation	USA	425.0	105.0	27.0	4.0x	15.7x
Sep-17	Cook Pharmica	Provides contract development and manufacturing services to pharmaceutical and biopharmaceutical companies	Catalent Pharma Solutions	USA	950.0	177.8	NA	5.3x	NA
Jul-17	Aptuit	Provides drug discovery and development services, as well as API development and manufacturing services	Evotec	USA	300.0	92.9	11.6	3.2x	25.8x
Jun-17	PCAS SA	Provides chemical and analytical development and custom manufacturing services	Novacap	France	335.9	243.7	19.7	1.4x	17.0x
Jun-17	Albany Molecular Research	Contract research and manufacturing company that provides integrated drug discovery, development, and manufacturing	The Carlyle Group	USA	1,593.5	628.7	71.8	2.5x	22.2x
May-17	Patheon	Provides outsourced pharmaceutical development and manufacturing services	Thermo Fisher	USA	7,205.3	1,933.0	351.2	3.7x	20.5x

Notes:

NA - Not Available

1) "Biopharma Dive": 2018 Revenue Estimate; "Catalent : Paragon Gene Therapy Acquisition Fuels Further High-Growth High-Margin Biologics Mix Shift, As LT Targets Are Increased - ALERT": 2018 EBITDA Estimate

2) \$65.0 is approximate revenue from the Cambrex press release "Cambrex Completes Acquisition of Avista Pharma Solutions"

3) AMPAC Fine Chemicals transaction EV is according to Korean Herald

Source: S&P Capital IQ as of year-end 2019

Median	\$845.0	\$221.9	\$57.9	3.5x	18.9x
Mean	1,384.8	407.8	93.0	3.9x	19.4x
Min	252.0	65.0	11.6	1.4x	13.6x
Max	7,205.3	1,933.0	351.2	12.7x	25.8x

# CRO – Transaction Comps

## CRO - Transaction Comps

USD in millions

Announced Date	Target	Target Description	Buyer	Geographic			EV / LTM Revenue	EV / LTM EBITDA	
				Location	Enterprise Value	LTM Revenue			
Oct-19	Amarex	Amarex provides clinical regulatory strategy and product development services.	NSF International	USA	NA	NA	NA	NA	
Oct-19	Clinical Trial Centers Alliance (The Alliance)	CNS Network and the Hassman Research Institute merged to form Apex Innovation Sciences, which then acquired The Alliance	Apex Innovation Sciences	USA	NA	NA	NA	NA	
Sep-19	Site Business of BioClinica	AES acquired the clinical sites business from Bioclinica	Accelerated Enrollment Solutions (AES)	USA	NA	NA	NA	NA	
Feb-19	Citoxlab	Contract research laboratory that provides a range of preclinical services to the pharma industry	Charles River Laboratories International	France	\$510.0	NA	\$36.7	NA	13.8x
Mar-18	Accelovance	Full-service, clinical CRO that focuses on oncology, vaccines, and general medicine	Linal USA	USA	32.9	\$26.8	NA	1.2x	NA
Feb-18	MPI Research	Provides preclinical and early clinical contract research services	Charles River Laboratories International	USA	800.0	240.0	68.4	3.3x	11.7x
Sep-17	Optimal Research	SMO providing solutions to CROs and pharmaceutical, biotechnology, and medical device companies	Synexus	USA	NA	NA	NA	NA	NA
Jul-17	MAPI Development	Non-clinical CRO that provides mission-critical research services and products	ICON	France	139.5	NA	NA	NA	NA
Jul-17	Chiltern International	CRO that provides clinical development, scientific services, and collaborative technologies	Covance	UK	1,200.0	NA	NA	NA	NA
Jun-17	PAREXEL International	Outsourcing services company that provides clinical research, consulting, and commercialization	Pamplona Capital Management	USA	5,007.4	2,097.0	342.8	2.4x	14.6x
May-17	inVentiv Health	Provides clinical trial, bioanalytical, and commercial services	INC Research Holdings	USA	4,513.7	2,177.4	292.7	2.1	15.4
Sep-16	ExecuPharm	Offers CRO support services including clinical trial management, monitoring, and site management	PAREXEL International	USA	155.0	NA	NA	NA	NA
May-16	IMS Health Holdings	Provides information and technology services to the healthcare industry worldwide	Quintiles Transnational Holdings	USA	13,266.8	3,063.0	743.0	4.3	17.9
May-16	Synexus	Engages in the identification, recruitment, and retention of patients for clinical trials on behalf of sponsors	Pharmaceutical Product Development	UK	257.8	68.8	15.9	3.7x	16.2x

Notes:

NA - Not Available

Median	\$655.0	\$1,168.5	\$180.5	2.9x	15.0x
Mean	2,588.3	1,278.8	249.9	2.9x	14.9x
Min	32.9	26.8	15.9	1.2x	11.7x
Max	13,266.8	3,063.0	743.0	4.3x	17.9x

# Specialty Packaging – Transaction Comps

## Specialty Packaging - Transaction Comps

USD in millions

Announced Date	Target	Target Description	Buyer	Geographic Location	Enterprise Value	LTM Revenue	LTM EBITDA	EV / LTM Revenue	EV / LTM EBITDA
Oct-19	Winpak Control Group	Offers printed packaging solutions to pharma, healthcare, nutraceutical, cosmetic, and personal care markets	Winpak	USA	\$42.2	\$25.0	NA	1.7x	NA
Jun-19	Pregis Corporation	Pregis Corporation markets and supplies protective and specialty packaging solutions. The company operates in two segments: Protective Packaging and Specialty Packaging	Warburg Pincus	USA	1,300.0	NA	NA	NA	NA
Jun-19	Three Flexible Packaging Plants in the United Kingdom and Ireland of Amcor plc	Nelipak acquired Three Flexible Packaging Plants in the United Kingdom and Ireland	Nelipak Corporation	United Kingdom	394.0	170.0	NA	2.3x	NA
Apr-19	Three manufacturing facilities of Amcor	Provides packaging for med devices; 3 facilities in EU previously owned by Bemis	Tekni-Plex	USA	215.0	100.0	NA	2.2x	NA
Jan-19	RPC Group	Packaging segment designs plastic packaging for end markets, including the food, beverage, personal care, and healthcare markets	Apollo Management	United Kingdom	5,786.7	4,855.0	\$730.2	1.2x	7.9x
Dec-18	Carastar Industries	Manufactures and supplies recycled paperboard and converted paperboard products, including for pharmaceutical and healthcare markets	Greif Packaging	USA	1,800.0	1,376.0	174.0	1.3x	10.3x
Aug-18	Bemis Company	Manufactures and sells packaging products in medical and pharmaceutical markets globally	Amcor	USA	6,777.9	4,099.4	573.0	1.7x	11.8x
Jul-18	CSP Technologies	Manufactures and distributes custom polymeric products for the medical device, diagnostics, and pharmaceutical markets, among others	AptarGroup	USA	529.4	140.0	40.7	3.8x	13.0x
Jul-18	Expera Specialty Solutions	Specialty paper and packaging company in North America that offers food packaging papers	Ahlstrom Munksjo Oyj	USA	615.0	721.0	66.0	0.9x	9.3x
Jun-18	Papeles y Cartones de Europa	Manufactures and sells paper and corrugated cardboard packaging products in Europe	DS Smith	Spain	2,100.6	1,049.5	203.6	2.0x	10.3x
Jan-18	Foam Fabricators	Designs and manufactures molded and fabricated foam and packaging products	Compass Diversified Holdings	USA	247.5	126.0	30.0	2.0x	8.3x
Nov-17	PAC SERVICE	Manufactures customized packaging paperboards	Reno De Medici	Italy	17.7	24.1	2.2	0.7x	7.9x
Jan-17	Multi Packaging Solutions	Prints, manufactures, and sells paperboard, paper, and plastic packaging products globally	WestRock Company	USA	2,256.5	1,567.0	214.5	1.4x	10.5x

Notes:

NA - Not Available

Median	\$615.0	\$445.5	\$174.0	1.7x	10.3x
Mean	1,698.7	1,187.7	226.0	1.8x	9.9x
Min	17.7	24.1	2.2	0.7x	7.9x
Max	6,777.9	4,855.0	730.2	3.8x	13.0x

# Distribution – Transaction Comps

## Distribution - Transaction Comps

USD in millions

Announced Date	Target	Target Description	Buyer	Geographic Location	Enterprise Value	LTM Revenue	LTM EBITDA	EV / LTM Revenue	EV / LTM EBITDA
Aug-19	PCX International	PCX operates as a courier service agency in clinical trial industry	Marken Limited	Japan	NA	NA	NA	NA	NA
Jul-19	HRTL Logistic SRL / HETO Transport und Logistik GmbH / DER KURIER KFT	HRTL Logistic SRL offers courier services to the clinical trials industry. HETO Transport und Logistik GmbH and DER KURIER KFT. Offers clinical trial shipment	Marken Limited	Italy	NA	NA	NA	NA	NA
Aug-18	Aquilant	Aquilant Limited distributes and sells IV therapy, regional anesthesia and pain management products, and other devices for the medical and scientific sectors	H2 Equity Partners	United Kingdom	\$26.7	\$94.5	NA	0.3x	NA
Nov-17	H. D. Smith	Distributes and supplies healthcare products and business solutions to manufacturers and healthcare providers	AmerisourceBergen	USA	815.0	NA	NA	NA	NA
Nov-17	Cardinal Health (L)	Distributes pharmaceutical products, medical devices, and specialty pharmaceuticals to pharmacies and hospitals	Shanghai Pharma Century Global	Malaysia	557.0	3,845.7	\$83.3	0.1x	6.7x
Mar-17	Pelion	Engages in the trade of pharmaceuticals, cosmetics, and parapharmaceuticals, operating through wholesale, retail, services, and other segments	Korporacja Inwestycyjna Polskiej Farmacji	Poland	323.4	2,399.5	31.5	0.1x	10.3x
Aug-16	Anda	Distributes generic, branded, specialty, and over-the-counter pharmaceutical products	Teva Pharmaceutical Industries	USA	500.0	NA	NA	NA	NA
Jul-16	Pharmapar	Distributes generic drugs for privately insured individuals ,offering a range of medication types	Alliance Pharma	Canada	11.1	\$17.3	NA	0.6x	NA
May-16	Symmetry Surgical	Manufactures and distributes medical devices worldwide	RoundTable Healthcare Partners	USA	129.5	84.1	\$9.1	1.5x	14.2x
Mar-16	Rexall Pharma Plus	Operates a network of retail pharmacy stores in Canada, offering prescription centers that focus primarily on prescription and OTC products	McKesson Canada Corporation	Canada	2,154.3	2,000.0	200.0	1.1x	11.1x

Notes:

NA - Not Available

Median	\$411.7	\$1,047.3	\$57.4	0.5x	10.7x
Mean	564.6	1,406.9	81.0	0.6x	10.6x
Min	11.1	17.3	9.1	0.1x	6.7x
Max	2,154.3	3,845.7	200.0	1.5x	14.2x

# CDMO – Trading Comps

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USD in millions

Company	Ticker	Enterprise Value	LTM			Margin Analysis			Enterprise Value/			Debt/		
			Sales	EBITDA	EBIT	Gross Profit	EBITDA	EBIT	Sales	EBITDA	EBIT	Enterprise Value	Equity Value	EBITDA
Bachem Holding AG	SWX:BANB	\$2,297.7	\$313.7	\$85.0	\$62.7	29.5%	27.1%	20.0%	7.3x	27.0x	36.6x	5.1%	5.3%	1.4x
Balchem Corporation	NasdaqGS:BCPC	3,437.5	640.7	153.5	109.1	32.5%	24.0%	17.0%	5.4x	22.4x	31.5x	6.6%	7.0%	1.5x
Catalent, Inc.	NYSE:CTLT	10,994.0	2,630.9	552.6	316.3	31.7%	21.0%	12.0%	4.2x	19.9x	34.8x	27.3%	36.4%	5.4x
Consort Medical plc	LSE:CSRT	811.6	386.1	58.7	39.7	10.4%	15.2%	10.3%	2.1x	13.8x	20.4x	20.2%	24.6%	2.8x
Eurofins Scientific SE	ENXTPA:ERF	13,602.3	4,785.5	845.4	500.0	19.4%	17.7%	10.4%	2.8x	16.1x	27.2x	29.7%	40.7%	4.8x
Johnson Matthey Plc	LSE:JMAT	9,470.8	15,492.5	874.5	676.5	8.2%	5.6%	4.4%	0.6x	10.8x	14.0x	21.0%	26.1%	2.3x
Lonza Group Ltd	SWX:LONN	30,531.5	5,863.9	1,545.4	1,057.6	38.8%	26.4%	18.0%	5.2x	19.8x	28.9x	12.7%	14.3%	2.5x
Recipharm AB (publ)	OM:RECI B	1,474.8	734.7	118.1	47.3	70.1%	16.1%	6.4%	2.0x	12.5x	31.2x	33.0%	45.2%	4.1x
Siegfried Holding AG	SWX:SFZN	2,082.3	831.1	132.8	82.7	20.6%	16.0%	9.9%	2.5x	15.7x	25.2x	4.2%	4.3%	0.7x
Thermo Fisher Scientific Inc.	NYSE:TMO	146,768.0	25,220.0	6,455.0	4,196.0	44.6%	25.6%	16.6%	5.8x	22.7x	35.0x	12.1%	13.6%	2.8x

Median	31.7%	21.0%	12.0%	4.2x	19.8x	31.2x	12.7%	14.3%	2.5x
Mean	30.8%	19.6%	12.8%	4.0x	19.0x	29.4x	15.9%	20.0%	2.6x
Min	8.2%	5.6%	4.4%	0.6x	10.8x	14.0x	2.4%	2.4%	0.7x
Max	70.1%	27.1%	20.0%	7.3x	28.5x	38.9x	33.0%	45.2%	5.4x

- The median EV multiples for CDMOs at the end of Q4 were 4.2x and 19.8x for Sales and EBITDA, respectively
- Expansion amongst the largest CDMO players, especially in the biologics market, persisted throughout Q4 2019 as manufacturers attempt to meet customer demand
  - Many CDMOs have announced recent investments in their facilities to expand capabilities and/or increase capacity
  - Fujifilm's \$890mm investment in Biogen's biologics facility sheds light on the overall industry strategy of acquiring scale-up capabilities to improve efficiencies within biologics manufacturing processes
- Early-stage development capabilities remain a key importance that give larger one-stop-shop CDMOs a cost advantage during the scale-up process

# CRO – Trading Comps

## CRO - Trading Comps

USD in millions

Company	Ticker	Enterprise Value	LTM			Margin Analysis			Enterprise Value/			Debt/		
			Sales	EBITDA	EBIT	Gross Profit	EBITDA	EBIT	Sales	EBITDA	EBIT	Enterprise Value	Equity Value	EBITDA
Charles River Laboratories International	NYSE:CRL	\$9,348.1	\$2,531.6	\$554.7	\$366.8	36.6%	21.9%	14.5%	3.7x	16.9x	25.5x	22.0%	27.5%	3.7x
ICON Public Limited Company	NasdaqGS:ICLR	9,224.3	2,759.5	480.6	419.9	29.6%	17.4%	15.2%	3.3x	19.2x	22.0x	5.0%	4.9%	1.0x
IQVIA Holdings Inc.	NYSE:IQV	41,184.7	10,881.0	1,892.0	889.0	34.4%	17.4%	8.2%	3.8x	21.8x	46.3x	29.4%	40.4%	6.4x
Linal Co., Ltd.	TSE:2183	232.4	102.6	14.5	10.5	32.5%	14.2%	10.2%	2.3x	16.0x	22.2x	19.4%	19.3%	3.1x
Medpace Holdings, Inc.	NasdaqGS:MEDP	2,987.3	823.2	149.4	121.8	63.1%	18.2%	14.8%	3.6x	20.0x	24.5x	1.9%	1.9%	0.4x
PRA Health Sciences, Inc.	NasdaqGS:PRAH	8,444.9	2,995.7	477.5	364.0	49.3%	15.9%	12.1%	2.8x	17.7x	23.2x	18.9%	22.7%	3.3x
Syneos Health, Inc.	Nasdaq:SYNH	9,083.0	4,608.3	572.8	320.6	22.1%	12.4%	7.0%	2.0x	15.9x	28.3x	33.4%	49.2%	5.3x
<b>Median</b>						34.4%	17.4%	12.1%	3.3x	17.7x	24.5x	19.4%	22.7%	3.3x
<b>Mean</b>						38.2%	16.8%	11.7%	3.1x	18.2x	27.4x	18.6%	23.7%	3.3x
<b>Min</b>						22.1%	12.4%	7.0%	2.0x	15.9x	22.0x	1.9%	1.9%	0.4x
<b>Max</b>						63.1%	21.9%	15.2%	3.8x	21.8x	46.3x	33.4%	49.2%	6.4x

- The median EV multiples for CROs were 3.3x and 17.7x for Sales and EBITDA, respectively
- Since 2017, there has been a strong trend of consolidation in the CRO space. Strategic acquirers and private equity investors continue to show robust interest in the space
- The growth in the biosimilars and biologics markets, adoption of new technologies, rising demand for specialized testing services, and the emerging Asian markets further drive the CRO market<sup>1</sup>
- While we haven't seen 'megadeals' in 2019 in the CRO space (unlike with CDMOs), M&A activity for smaller, bolt-on acquisitions has remained strong through Q4
  - Pharma companies look to large CROs for more expansive, global clinical trials, but there is still a need for small- to mid-sized CROs who specialize in very focused indications such as immunology and oncology

1) Marketwatch: Global Contract Research Organization (CRO) Market 2019  
Source: S&P Capital IQ as of year-end 2019

# Specialty Packaging – Trading Comps

## Specialty Packaging - Trading Comps

USD in millions

Company	Ticker	Enterprise Value	LTM			Margin Analysis			Enterprise Value/			Debt/		
			Sales	EBITDA	EBIT	Gross Profit	EBITDA	EBIT	Sales	EBITDA	EBIT	Enterprise Value	Equity Value	EBITDA
Ancor plc	ASX:AMC	\$23,444.9	\$10,336.5	\$1,388.1	\$911.9	18.9%	13.4%	8.8%	2.3x	16.9x	25.7x	27.1%	36.2%	4.6x
AptarGroup, Inc.	NYSE:ATR	8,378.7	2,873.4	604.0	410.8	36.4%	21.0%	14.3%	2.9x	13.9x	20.4x	15.0%	17.0%	2.1x
Berry Global Group, Inc.	NYSE:BERY	16,969.4	8,878.0	1,461.0	848.0	18.2%	16.5%	9.6%	1.9x	11.6x	20.0x	67.5%	182.5%	7.8x
CCL Industries Inc.	TSX:CCL.B	9,095.7	4,061.1	770.3	552.3	28.6%	19.0%	13.6%	2.2x	11.8x	16.5x	21.4%	25.6%	2.5x
Gerresheimer AG	DB:GXI	640.4	1,556.0	319.0	157.2	28.9%	20.5%	10.1%	0.4x	2.0x	4.1x	116.6%	NM	2.3x
Mondi plc	LSE:MNDI	14,043.3	8,562.8	1,998.2	1,500.9	45.5%	23.3%	17.5%	1.6x	7.0x	9.4x	19.6%	24.2%	1.4x
Sonoco Products Company	NYSE:SON	7,922.9	5,421.0	752.5	520.0	19.7%	13.9%	9.6%	1.5x	10.5x	15.2x	23.5%	30.1%	2.5x
West Pharmaceutical Services, Inc.	NYSE:WST	10,995.4	1,791.8	386.2	282.8	32.7%	21.6%	15.8%	6.1x	28.5x	38.9x	2.4%	2.4%	0.7x
WestRock Company	NYSE:WRK	20,992.4	18,289.0	2,968.3	1,514.8	19.5%	16.2%	8.3%	1.1x	7.1x	13.9x	47.9%	90.8%	3.4x
Winpak Ltd.	TSX:WPK	1,942.3	878.5	198.4	156.6	31.4%	22.6%	17.8%	2.2x	9.8x	12.4x	0.2%	0.1%	0.0x

Median	28.7%	19.7%	11.9%	2.1x	11.1x	15.9x	22.4%	25.6%	2.4x
Mean	28.0%	18.8%	12.5%	2.2x	11.9x	17.6x	34.1%	45.4%	2.7x
Min	18.2%	13.4%	8.3%	0.4x	2.0x	4.1x	0.2%	0.1%	0.0x
Max	45.5%	23.3%	17.8%	6.1x	28.5x	38.9x	116.6%	182.5%	7.8x

- The median EV multiples for Specialty Packaging were 2.1x and 11.1x for Sales and EBITDA, respectively
- Expect further consolidation as strategic buyers look to roll up niche capabilities and capacity, and as private equity looks for cash flow reliable packagers from which to build a platform
- The most successful pharma packagers experience sticky customer relationships and a steady revenue stream
- The new wave of medicines, including biologics and gene therapies, are pressuring packagers to acquire specialized capabilities such as cold-chain technologies and aseptic fill/finish operations



# Distribution – Trading Comps

## Distribution - Trading Comps

USD in millions

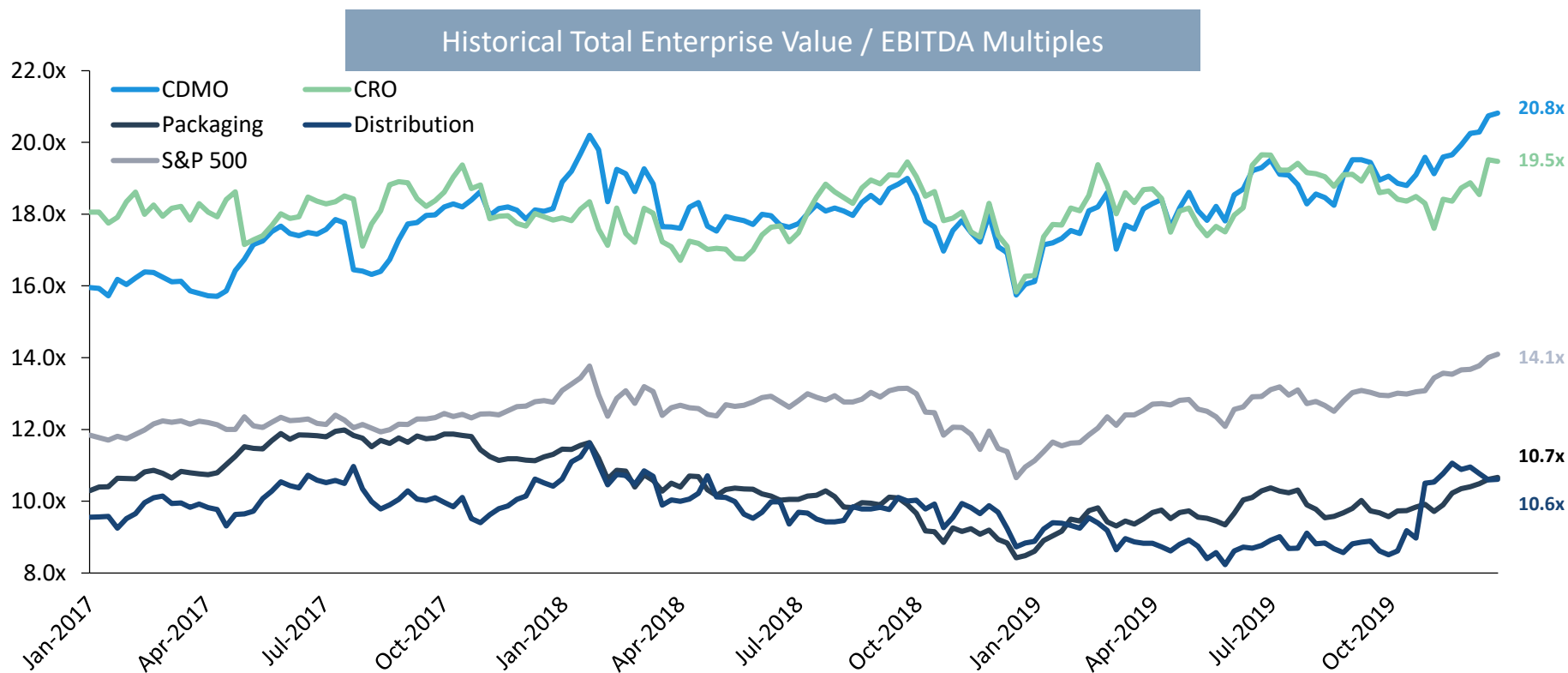
Company	Ticker	Enterprise Value	LTM			Margin Analysis			Enterprise Value/			Debt/		
			Sales	EBITDA	EBIT	Gross Profit	EBITDA	EBIT	Sales	EBITDA	EBIT	Enterprise Value	Equity Value	EBITDA
AmerisourceBergen Corporation	NYSE:ABC	\$18,626.7	\$179,589.1	\$2,356.9	\$1,866.5	2.8%	1.3%	1.0%	0.1x	7.9x	10.0x	24.1%	25.7%	1.9x
Cardinal Health, Inc.	NYSE:CAH	21,988.1	147,662.0	2,860.0	1,871.0	4.6%	1.9%	1.3%	0.1x	7.7x	11.8x	38.2%	56.8%	2.9x
Henry Schein, Inc.	NasdaqGS:HSIC	11,054.4	13,573.8	1,166.9	930.1	27.4%	8.6%	6.9%	0.8x	9.5x	11.9x	12.1%	13.7%	1.1x
McKesson Europe AG	HMSE:CLS1	6,154.4	23,767.5	208.4	93.3	9.6%	NM	NM	0.3x	NM	NM	18.0%	18.5%	5.3x
McKesson Corporation	NYSE:MCK	33,902.6	221,981.0	3,896.0	2,959.0	5.3%	1.8%	1.3%	0.2x	8.7x	11.5x	30.5%	41.5%	2.7x
Owens & Minor, Inc.	NYSE:OMI	2,096.6	9,887.6	181.4	77.7	14.7%	1.8%	NM	0.2x	11.6x	27.0x	89.1%	575.0%	10.3x
Patterson Companies, Inc.	NasdaqGS:PDCO	2,559.8	5,580.8	209.2	127.1	21.6%	3.7%	2.3%	0.5x	12.2x	20.1x	29.6%	39.1%	3.6x
UDG Healthcare plc	LSE:UDG	2,765.8	1,298.5	178.3	122.8	29.1%	13.7%	9.5%	2.1x	15.5x	22.5x	8.7%	9.0%	1.3x

NM - Not Meaningful

Median	12.2%	1.9%	1.8%	0.2x	9.5x	11.9x	26.8%	32.4%	2.8x
Mean	14.4%	4.7%	3.7%	0.5x	10.4x	16.4x	31.3%	97.4%	3.7x
Min	2.8%	1.3%	1.0%	0.1x	7.7x	10.0x	8.7%	9.0%	1.1x
Max	29.1%	13.7%	9.5%	2.1x	15.5x	27.0x	89.1%	575.0%	10.3x

- The median EV multiples for Distribution were 0.2x and 9.5x for Sales and EBITDA, respectively
- Distributors look to streamline the supply chain, serving the entire continuum of care, including drug manufacturers, acute care, retailers, payors, and patients
- Increasing demand for pharmaceutical drugs in emerging markets is causing distributors to quickly implement global manufacturing supply chain networks

# Valuation Trends – Last 3 Years



**CDMO basket consists of:** Bachem (SWX:BANB), Balchem (NasdaqGS:BCPC), Cambrex (NYSE:CBM), Catalent (NYSE:CTLT), Consort Medical plc (LSE:CSRT), Eurofins Scientific SE (ENXTPA:ERF), Johnson Matthey Plc (LSE:JMAT), Lonza (SWX:LONN), Recipharm AB (OM:RECI B), Siegfried (SWX:SFZN), Thermo Fisher Scientific Inc. (NYSE:TMO), and West Pharmaceutical Services, Inc. (NYSE:WST)

**CRO basket consists of:** Charles River (NYSE:CRL), ICON (NasdaqGS:ICLR), IQVIA (NYSE:IQV), Medpace (NasdaqGS:MEDP), PRA Health Sciences (NasdaqGS:PRAH), and Syneos Health, Inc. (NasdaqGS:SYNH)

**Distribution basket consists of:** AmerisourceBergen (NYSE:ABC), Cardinal Health (NYSE:CAH), Henry Schlein (NasdaqGS:HSIC), McKesson Europe (HMSE:CLS1), McKesson (NYSE:MCK), Owens & Minor (NYSE:OMI), Patterson Companies (NasdaqGS:PDCO), and UDG Healthcare (LSE:UDG)

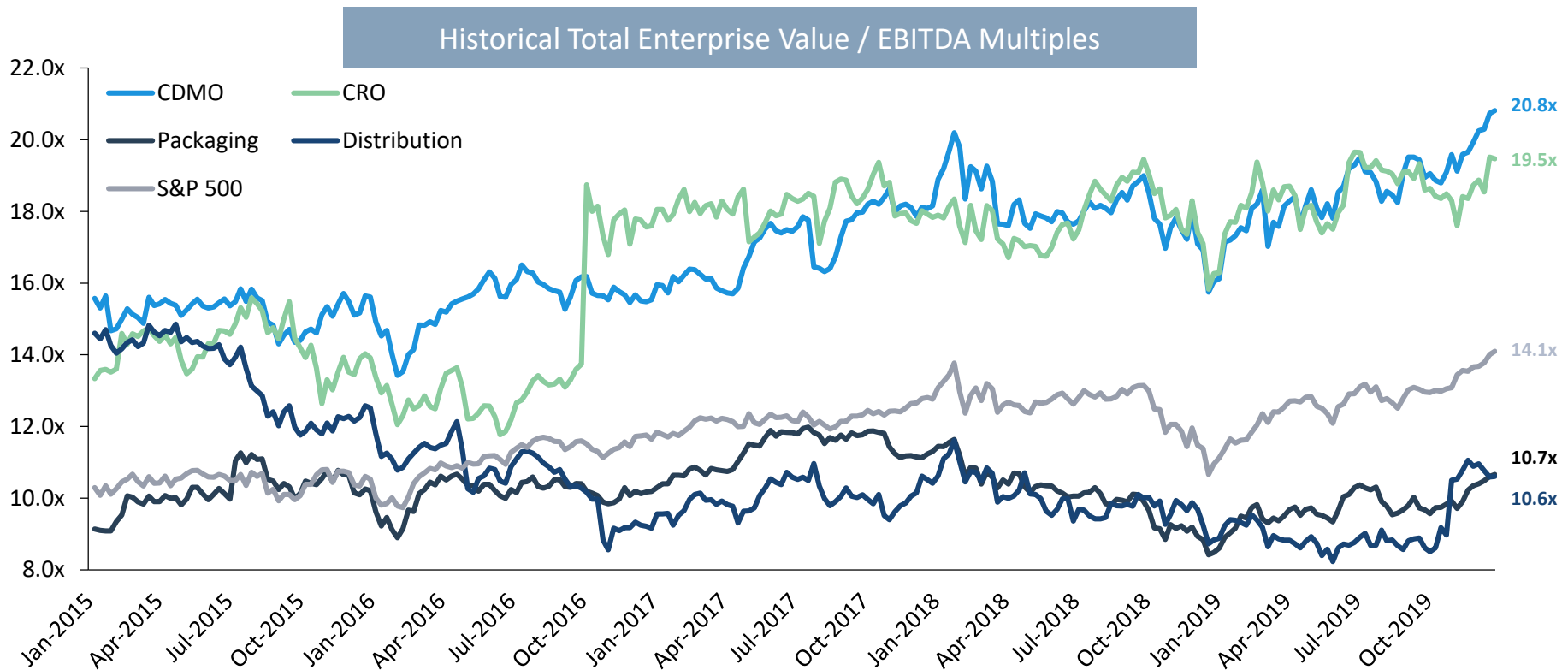
**Packaging basket consists of:** Amcor Limited (ASX:AMC), AptarGroup, Inc. (NYSE:ATR), Berry Global Group, Inc. (NYSE:BERY), CCL Industries Inc. (TSX:CCL.B), Gerresheimer AG (DB:GX1), Mondi plc (LSE:MNDI), RPC Group plc (LSE:RPC), Sonoco Products Company (NYSE:SON), West Pharmaceutical Services, Inc. (NYSE:WST), WestRock Company (NYSE:WRK), and Wipac Ltd. (TSX:WPK)

# Valuation Trends (Current, 3 Year, & LTM Comparisons)

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- Below are the current EV / EBITDA multiples for each sector:
  - CDMO: 20.8x (47.6% above current S&P multiples)
  - CRO: 19.5x (38.1% above current S&P multiples)
  - Specialty Packaging: 10.7x (24.4% below current S&P multiples)
  - Distribution: 10.6x (24.8% below current S&P multiples)
  - S&P 500: 14.1x
  
- Below are the average EV / EBITDA multiples for each sector over the last 3 years:
  - CDMO: 17.9x (43.4% above average S&P multiples)
  - CRO: 18.2x (45.0% above average S&P multiples)
  - Specialty Packaging: 10.4x (17.0% below average S&P multiples)
  - Distribution: 9.7x (22.3% below average S&P multiples)
  - S&P 500: 12.5x
  
- Below are the % change in EV / EBITDA multiples for each sector over the last 3 years (and LTM):
  - CDMO: +30.5% (up 29.7% in the last 12 months)
  - CRO: +7.8% (up 19.7% in the last 12 months)
  - Specialty Packaging: 3.5% (up 25.7% in the last 12 months)
  - Distribution: -11.0% (up 20.1% in the last 12 months)
  - S&P 500: +19.1% (up 28.7% in the last 12 months)

# Valuation Trends – Last 5 Years



**CDMO basket consists of:** Bachem (SWX:BANB), Balchem (NasdaqGS:BCPC), Cambrex (NYSE:CBM), Catalent (NYSE:CTLT), Consort Medical plc (LSE:CSRT), Eurofins Scientific SE (ENXTPA:ERF), Johnson Matthey Plc (LSE:JMAT), Lonza (SWX:LONN), Recipharm AB (OM:RECI B), Siegfried (SWX:SFZN), Thermo Fisher Scientific Inc. (NYSE:TMO), and West Pharmaceutical Services, Inc. (NYSE:WST)

**CRO basket consists of:** Charles River (NYSE:CRL), ICON (NasdaqGS:ICLR), IQVIA (NYSE:IQV), Medpace (NasdaqGS:MEDP), PRA Health Sciences (NasdaqGS:PRAH), and Syneos Health, Inc. (NasdaqGS:SYNH)

**Distribution basket consists of:** AmerisourceBergen (NYSE:ABC), Cardinal Health (NYSE:CAH), Henry Schlein (NasdaqGS:HSIC), McKesson Europe (HMSE:CLS1), McKesson (NYSE:MCK), Owens & Minor (NYSE:OMI), Patterson Companies (NasdaqGS:PDCO), and UDG Healthcare (LSE:UDG)

**Packaging basket consists of:** Amcor Limited (ASX:AMC), AptarGroup, Inc. (NYSE:ATR), Berry Global Group, Inc. (NYSE:BERY), CCL Industries Inc. (TSX:CCL.B), Gerresheimer AG (DB:GX1), Mondi plc (LSE:MNDI), RPC Group plc (LSE:RPC), Sonoco Products Company (NYSE:SON), West Pharmaceutical Services, Inc. (NYSE:WST), WestRock Company (NYSE:WRK), and Winpak Ltd. (TSX:WPK)

# Valuation Trends (5 Year & LTM Comparisons)

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- Below are the average EV / EBITDA multiples for each sector over the last 5 years:
  - CDMO: 16.9x (43.0% above average S&P multiples)
  - CRO: 16.6x (40.0% above average S&P multiples)
  - Specialty Packaging: 10.3x (12.8% below average S&P multiples)
  - Distribution: 10.6x (10.0% below average S&P multiples)
  - S&P 500: 11.8x
- Below are the % change in EV / EBITDA multiples for each sector over the last 5 years (and LTM):
  - CDMO: +33.7% (up 29.1% in the last 12 months)
  - CRO: +46.0% (up 19.5% in the last 12 months)
  - Specialty Packaging: +16.7% (up 23.9% in the last 12 months)
  - Distribution: -27.4% (up 19.5% in the last 12 months)
  - S&P 500: +37.0% (up 26.7% in the last 12 months)