

Scoreboard

	Margin %		Growth %		Multiples		
	GM	EBITDA	Revenue	5 Yr EPS	EV/Revenue	EV/EBITDA	P/E
IT & IT-ENABLED OUTSOURCED SERVICES							
Commercial IT Professional Services - North America	30.0%	15.1%	6.8%	15.3%	2.09x	12.8x	18.5x
Governmental IT Professional Services - North America	26.5	9.0	10.6	10.0	1.35	15.4	21.3
IT Professional Services - Europe	17.2	11.5	3.8	12.4	1.09	8.6	15.6
IT Professional Services - India	26.8	17.8	10.1	10.7	1.80	9.8	16.1
IT Professional Services - China	22.9	4.0	11.8	NA	0.93	16.6	30.0
IT Staff Augmentation	27.5	6.3	2.8	9.6	0.61	9.5	13.4
IT SUPPLY CHAIN SERVICES							
IT Solution Providers - North America	15.9%	4.0%	2.0%	8.0%	0.31x	8.5x	13.1x
IT Solution Providers - Europe	14.2	3.4	5.2	12.7	0.88	14.2	22.5
IT Products Distributors	11.4	4.2	2.3	9.7	0.33	7.4	9.2
BUSINESS PROCESS OUTSOURCING							
Business Process Outsourcing - North America	42.2%	20.6%	3.1%	12.0%	4.03x	11.9x	23.2x
Business Process Outsourcing - India	28.4	14.2	10.9	10.7	1.71	10.8	14.4
SOFTWARE							
SaaS	74.1%	- 3.8%	26.7%	27.3%	9.96x	61.1x	85.2x
Enterprise Applications	83.4	29.7	7.9	12.2	7.55	18.5	27.4

Commercial IT Professional Services - North America

As of August 1, 2019

\$ in millions except per share data

Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		'18 - '19E												
									Revenue			Gross Margin			EBITDA			Valuation Multiples			EPS
									Growth Rate	LTM	2019E	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	LTM	2019E
Accenture Plc Class A	\$194.16	98.3%	\$123,707	\$121,725	\$42,802	\$44,209	\$7,111	\$7,395	8.4%	30.7%	16.6%	2.84x	2.75x	17.1x	16.5x	27.0x	25.7x	8.1%			
CGI Inc. Class A	77.24	96.0	18,576	22,615	9,119	9,368	1,653	1,727	5.3	13.5	16.8	2.48x	2.41x	13.7	13.1	22.7	21.0	10.2			
DXC Technology Co.	55.13	57.0	14,689	20,351	20,753	20,776	4,304	4,802	-4.2	18.5	20.7	0.98x	0.98x	4.7	4.2	12.3	6.7	6.9			
EPAM Systems, Inc.	193.74	96.4	10,584	10,350	1,940	2,256	319	422	22.4	33.6	15.6	5.33x	4.59x	32.5	24.5	46.6	37.0	19.6			
Globant SA	110.20	98.1	4,000	3,956	522	644	91	127	23.2	35.8	17.4	7.57x	6.15x	43.4	31.2	78.2	49.8	16.8			
Virtusa Corporation	44.83	76.5	1,356	1,645	1,249	1,341	103	131	12.5	29.3	8.2	1.32x	1.23x	16.0	12.6	NA	17.7	20.0			
Perficient, Inc.	37.92	99.8	1,249	1,315	511	561	62	84	12.5	32.1	12.2	2.57x	2.35x	21.1	15.7	46.9	19.4	14.0			
Unisys Corporation	12.50	59.7	647	1,141	2,899	2,926	438	435	3.6	23.1	14.5	0.39x	0.39x	2.6	2.6	21.9	6.2	NA			
Hackett Group, Inc.	16.35	71.6	486	525	283	286	38	50	-0.1	33.1	13.9	1.85x	1.84x	14.0	10.5	22.3	15.5	16.7			
RCM Technologies, Inc.	3.20	63.2	41	75	201	208	8	10	3.8	24.3	3.5	0.37x	0.36x	9.0	7.5	12.9	8.1	NA			

Median									6.8%	30.0%	15.1%	2.17x	2.09x	15.0x	12.8x	22.7x	18.5x	15.3%
Mean									8.7%	27.4%	13.9%	2.57x	2.30x	17.4x	13.8x	32.3x	20.7x	14.0%

Source: FactSet; based on consensus estimates.

IT Professional Services - Europe										'18 - '19E		Valuation Multiples						EPS	
As of August 1, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2019E	LTM	2019E	LTM	2019E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	Rate	
Capgemini SE	\$128.78	97.2%	\$21,543	\$23,337	\$15,405	\$15,799	\$2,046	\$2,365	6.2%	20.1%	13.8%	1.51x	1.48x	11.4x	9.9x	23.8x	18.0x	12.4%	
Sage Group plc	8.95	86.2	9,728	10,316	2,374	2,413	731	614	1.7	89.2	30.8	4.35x	4.28x	14.1	16.8	24.8	24.2	2.0	
Atos SE	81.83	62.6	8,936	13,471	13,454	12,876	1,972	1,735	-7.4	24.5	14.7	1.00x	1.05x	6.8	7.8	12.2	8.7	5.2	
Alten SA	123.86	98.1	4,199	4,198	2,546	2,899	262	310	12.5	16.5	10.3	1.65x	1.45x	16.0	13.5	23.3	20.3	12.4	
Altran Technologies SA	15.92	96.5	4,093	5,109	3,271	3,617	462	546	8.9	15.3	14.1	1.56x	1.41x	11.1	9.4	40.6	16.4	19.1	
Sopra Steria Group SA	130.16	72.3	2,673	2,987	4,809	4,919	490	506	5.9	17.2	10.1	0.62x	0.61x	6.1	5.9	15.9	12.1	21.4	
Reply S.p.A.	65.69	89.9	2,457	2,383	1,162	1,314	146	195	12.2	46.2	12.5	2.05x	1.81x	16.4	12.2	21.9	20.6	NA	
Tieto Oyj	25.43	76.1	1,885	2,291	1,795	1,811	254	285	-0.5	30.1	13.2	1.28x	1.26x	9.0	8.0	14.7	12.4	NA	
Indra Sistemas, S.A. Class A	8.61	67.0	1,522	2,363	3,574	3,570	358	388	0.8	22.3	9.9	0.66x	0.66x	6.6	6.1	11.6	10.0	10.0	
EVRY ASA	3.61	86.4	1,337	2,121	1,500	1,499	224	227	0.1	15.9	10.6	1.41x	1.41x	9.5	9.3	17.0	11.2	NA	
Devoteam SA	122.75	88.4	1,023	975	732	862	84	103	16.9	16.6	11.5	1.33x	1.13x	11.6	9.4	23.0	19.7	NA	
Endava Plc Sponsored ADR Class A	37.06	84.4	653	1,933	358	385	49	72	20.6	33.5	15.8	5.41x	5.02x	39.5	26.8	73.8	38.4	24.5	
Neurones SA	24.99	85.8	607	440	550	570	53	62	2.9	9.5	9.6	0.80x	0.77x	8.3	7.1	20.8	17.9	NA	
Aubay SA	35.72	73.9	471	472	449	476	48	52	4.5	11.2	10.6	1.05x	0.99x	9.9	9.1	15.3	14.8	5.4	
NNIT A/S	15.52	46.9	388	480	459	472	83	78	2.6	17.2	18.0	1.05x	1.02x	5.8	6.2	11.0	12.2	NA	
Allgeier SE	26.32	63.7	293	490	809	892	40	72	16.2	13.5	5.7	0.61x	0.55x	12.4	6.8	47.0	18.7	76.7	
Columbus A/S	1.76	60.5	219	248	284	293	27	35	3.0	18.6	9.2	0.88x	0.85x	9.3	7.1	12.1	13.4	NA	
Prodware SA	7.00	44.9	54	162	197	198	36	39	0.0	11.2	18.1	0.82x	0.82x	4.5	4.1	5.3	3.6	6.3	
ITS Group SA	5.08	58.6	40	45	150	-	8	-	NA	4.8	5.5	0.30x	NA	5.3	NA	5.3	NA	NA	
Median									3.8%	17.2%	11.5%	1.05x	1.09x	9.5x	8.6x	17.0x	15.6x	12.4%	
Mean									5.9%	22.8%	12.9%	1.49x	1.48x	11.2x	9.8x	22.1x	16.3x	17.8%	

Source: FactSet; based on consensus estimates.

IT Professional Services - India										'18 - '19E		Valuation Multiples						EPS	
As of August 1, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2019E	LTM	2019E	LTM	2019E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	Rate	
Tata Consultancy Services Limited	\$31.57	95.9%	\$118,447	\$113,336	\$21,867	\$22,543	\$5,885	\$6,125	10.2%	36.3%	27.1%	5.18x	5.03x	19.3x	18.5x	25.4x	24.5x	8.9%	
Infosys Limited	11.14	95.5	47,830	45,557	12,411	12,750	3,102	3,171	10.0	34.0	25.0	3.67x	3.57x	14.7	14.4	21.3	20.6	8.7	
Cognizant Technology Solutions Corp	66.41	84.2	37,806	35,198	16,458	16,698	3,100	3,259	3.6	35.6	19.2	2.14x	2.11x	11.4	10.8	18.4	16.9	7.5	
Wipro Limited	3.92	90.7	23,640	19,253	8,626	8,693	1,840	1,756	4.1	29.8	20.5	2.23x	2.21x	10.5	11.0	17.5	16.9	8.9	
HCL Technologies Limited	14.81	86.5	20,082	19,505	8,787	9,787	2,046	2,237	15.3	26.8	23.3	2.22x	1.99x	9.5	8.7	13.8	13.2	10.7	
Tech Mahindra Limited	9.06	74.3	8,738	7,224	5,052	5,204	935	902	6.8	26.8	18.5	1.43x	1.39x	7.7	8.0	12.9	13.0	8.4	
Oracle Financial Services Software Lir	47.21	73.5	4,051	3,653	721	754	307	326	7.8	50.1	42.6	5.07x	4.84x	11.9	11.2	20.0	18.5	NA	
Mphasis Limited	13.21	72.6	2,461	2,375	1,159	1,224	200	221	13.5	27.7	17.5	2.05x	1.94x	11.8	10.7	16.0	15.0	24.4	
L&T Technology Services Ltd.	21.14	81.1	2,199	2,206	767	808	144	153	18.0	16.5	18.8	2.88x	2.73x	15.3	14.4	19.5	19.4	10.7	
Mindtree Limited	10.01	61.1	1,646	1,576	1,049	1,089	149	158	12.8	29.5	14.2	1.50x	1.45x	10.6	10.0	16.4	16.3	12.6	
Sonda S.A.	1.33	75.1	1,157	1,413	1,222	1,242	141	147	1.1	17.6	11.5	1.16x	1.14x	10.0	9.6	37.1	23.4	21.6	
NIIT Technologies Limited	17.41	87.4	1,077	982	555	588	95	104	15.5	35.7	17.2	1.77x	1.67x	10.3	9.4	18.2	16.0	15.7	
Zensar Technologies Limited	3.07	62.5	692	695	577	639	70	83	17.1	21.4	12.2	1.21x	1.09x	9.9	8.3	15.2	13.2	20.0	
Cyient Limited	6.28	54.9	690	662	673	678	94	99	5.4	21.3	14.1	0.98x	0.98x	7.1	6.7	10.0	10.0	8.7	
Persistent Systems Limited	7.49	58.7	573	452	488	502	88	82	5.8	22.7	18.1	0.93x	0.90x	5.1	5.5	11.7	11.2	11.2	
Sonata Software Limited	4.51	76.3	474	422	431	472	49	55	15.8	19.7	11.5	0.98x	0.89x	8.5	7.7	12.9	11.9	NA	
Birlasoft Limited	1.09	24.0	299	159	371	-	47	-	NA	22.3	12.6	0.43x	NA	3.4	NA	5.5	NA	NA	
Roitla India Limited	0.06	10.5	11	548	314	-	NA	-	NA	12.3	-165.7	1.74x	NA	NA	NA	NA	NA	NA	
Median									10.1%	26.8%	17.8%	1.76x	1.80x	10.3x	9.8x	16.4x	16.1x	10.7%	
Mean									10.2%	27.0%	8.8%	2.09x	2.12x	10.4x	10.3x	17.2x	16.3x	12.7%	

Source: FactSet; based on consensus estimates.

IT Professional Services - China										'18 - '19E		Valuation Multiples						EPS	
As of August 1, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2019E	LTM	2019E	LTM	2019E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	Rate	
Inspur Electronic Information Industry I	\$3.13	68.4%	\$4,040	\$4,236	\$7,121	\$8,441	\$218	\$255	20.9%	11.7%	3.2%	0.59x	0.50x	19.4x	16.6x	39.9x	30.0x	NA	
Neusoft Corporation Class A	1.59	61.8	1,975	1,934	1,047	1,193	41	111	11.8	30.3	4.0	1.85x	1.62x	47.1	17.4	NA	31.7	NA	
Beijing Teamsun Technology Co., Ltd.	1.65	78.9	1,821	1,963	802	-	21	-	NA	16.2	2.7	2.45x	NA	NA	NA	NA	NA	NA	
Chinasoft International Ltd.	0.50	61.6	1,271	1,565	1,526	1,679	251	163	6.1	30.6	10.8	1.03x	0.93x	6.2	9.6	11.5	11.5	NA	
Beyondsoft Corporation Class A	1.20	69.1	629	496	451	-	33	-	NA	22.9	8.0	1.10x	NA	15.0	NA	19.2	NA	NA	
Median									11.8%	22.9%	4.0%	1.10x	0.93x	17.2x	16.6x	19.2x	30.0x	NA	
Mean									12.9%	22.3%	5.7%	1.40x	1.02x	21.9x	14.5x	23.5x	24.4x	NA	

Source: FactSet; based on consensus estimates.

Gvt. IT Professional Services - North America

As of August 1, 2019

\$ in millions except per share data

Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		'18 - '19E			Valuation Multiples						EPS		
					Equity	Enterprise	LTM	2019E	LTM	2019E	Revenue Growth Rate	Gross Margin LTM	EBITDA Margin LTM	EV/Rev		EV/EBITDA		P/E		Growth Rate
														LTM	2019E	LTM	2019E	LTM	2019E	
Booz Allen Hamilton Holding Corporati	\$68.95	95.9%	\$9,668	\$11,223	\$6,882	\$7,118	\$692	\$729	8.3%	22.9%	10.2%	1.63x	1.58x	16.2x	15.4x	22.9x	23.0x	13.0%		
CACI International Inc Class A	216.03	98.2	5,373	7,140	4,783	5,303	467	526	12.1	31.9	9.8	1.49x	1.35x	15.3	13.6	20.5	19.0	10.0		
Kratos Defense & Security Solutions, I	21.21	84.6	2,246	2,493	672	733	66	75	18.6	26.5	8.6	3.71x	3.40x	37.8	33.1	NA	NA	NA		
ManTech International Corporation Cl	71.74	99.8	1,915	2,905	2,033	2,166	171	181	10.6	14.2	8.4	1.43x	1.34x	17.0	16.0	32.9	31.2	8.0		
ICF International, Inc.	82.30	95.3	1,550	1,812	1,376	1,478	124	141	10.5	33.7	9.0	1.32x	1.23x	14.6	12.8	24.7	19.6	10.0		

Median									10.6%	26.5%	9.0%	1.49x	1.35x	16.2x	15.4x	23.8x	21.3x	10.0%
Mean									12.0%	25.8%	9.2%	1.92x	1.78x	20.2x	18.2x	25.2x	23.2x	10.2%

Source: FactSet; based on consensus estimates.

IT Staff Augmentation										'18 - '19E															
As of August 1, 2019										Revenue			Gross Margin			EBITDA			Valuation Multiples						EPS
\$ in millions except per share data										Growth		Margin	Margin		EV/Rev		EV/EBITDA		P/E		Growth				
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	LTM	2019E	Rate					
Robert Half International Inc.	\$59.07	73.9%	\$6,998	\$6,911	\$5,933	\$6,086	\$674	\$686	4.9%	41.2%	11.4%	1.16x	1.14x	10.2x	10.1x	15.5x	15.1x	7.8%							
ManpowerGroup Inc.	89.67	91.5	5,364	5,781	21,230	21,176	857	813	-3.7	16.2	3.8	0.27x	0.27x	6.7	7.1	11.3	11.8	2.0							
Insperty, Inc.	105.45	72.8	4,343	4,055	4,088	4,315	231	281	12.7	9.3	5.6	0.99x	0.94x	17.6	14.4	26.4	22.8	18.0							
ASGN Inc	61.03	64.8	3,222	4,285	3,732	3,901	390	450	14.7	29.4	10.7	1.15x	1.10x	11.0	9.5	18.7	13.4	9.1							
Kelly Services, Inc. Class A	27.58	96.5	1,081	1,121	5,527	5,668	126	140	2.8	17.8	2.3	0.20x	0.20x	8.9	8.0	69.5	11.1	NA							
Kforce Inc.	34.41	79.1	875	842	1,379	1,344	86	85	-5.2	28.9	6.3	0.61x	0.63x	9.8	9.9	6.4	14.6	NA							
Heidrick & Struggles International, Inc.	29.30	64.7	561	425	738	711	85	86	-0.7	27.5	11.4	0.58x	0.60x	5.0	4.9	10.5	11.3	10.0							
Mastech Digital, Inc.	6.11	53.2	67	97	183	-	13	-	NA	22.6	7.3	0.53x	NA	7.5	NA	7.3	NA	NA							
Hudson Global, Inc.	10.45	58.1	31	4	67	100	NA	0	NA	61.8	-6.7	0.06x	0.04x	NA	NA	NA	NA	35.0							
Median									2.8%	27.5%	6.3%	0.58x	0.61x	9.4x	9.5x	13.4x	13.4x	9.6%							
Mean									3.6%	28.3%	5.8%	0.62x	0.61x	9.6x	9.1x	20.7x	14.3x	13.7%							

Source: FactSet; based on consensus estimates.

IT Solution Provider - North America										'18 - '19E		Valuation Multiples						EPS	
As of August 1, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2019E	LTM	2019E	LTM	2019E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	Rate	
CDW Corp.	\$118.52	98.1%	\$17,307	\$21,127	\$17,036	\$17,608	\$1,309	\$1,397	8.4%	16.7%	7.7%	1.24x	1.20x	16.1x	15.1x	25.8x	20.2x	13.4%	
Insight Enterprises, Inc.	55.05	91.6	1,969	2,237	7,019	7,215	280	302	1.9	14.2	4.0	0.32x	0.31x	8.0	7.4	11.6	11.4	NA	
Presidio, Inc.	14.00	78.6	1,159	1,939	2,989	3,004	217	236	3.1	17.9	7.3	0.65x	0.65x	8.9	8.2	32.7	8.8	6.0	
ePlus inc.	75.26	70.2	1,016	990	1,364	1,404	86	100	1.6	22.7	6.3	0.73x	0.71x	11.5	9.9	16.2	15.3	7.3	
PC Connection, Inc.	32.57	75.7	859	770	2,708	2,771	104	106	2.7	14.8	3.8	0.28x	0.28x	7.4	7.3	13.2	12.9	8.0	
PCM, Inc.	34.89	87.9	430	566	2,155	2,206	57	66	2.0	15.9	2.7	0.26x	0.26x	9.9	8.5	18.0	13.3	20.0	
Pivot Technology Solutions, Inc.	1.16	76.7	46	186	1,300	1,232	17	21	-10.3	11.4	1.3	0.14x	0.15x	10.7	8.7	NA	NA	NA	
Median									2.0%	15.9%	4.0%	0.32x	0.31x	9.9x	8.5x	17.1x	13.1x	8.0%	
Mean									1.3%	16.2%	4.7%	0.52x	0.51x	10.4x	9.3x	19.6x	13.7x	10.9%	

Source: FactSet; based on consensus estimates.

IT Solution Provider - Europe										'18 - '19E		Valuation Multiples						EPS		
As of August 1, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth	
\$ in millions except per share data										Growth	Margin	Margin	LTM	2019E	LTM	2019E	LTM	2019E	LTM	2019E
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	LTM	2019E	Rate
Bechtle AG	\$112.69	91.0%	\$4,733	\$4,958	\$5,168	\$5,664	\$269	\$322	15.7%	14.2%	5.2%	0.96x	0.88x	18.5x	15.4x	29.3x	26.1x	11.4%		
Softcat Plc	11.55	91.7	2,291	2,227	1,300	1,329	99	106	-2.3	18.7	7.7	1.71x	1.68x	22.5	21.1	29.0	27.4	2.0		
Computacenter Plc	18.22	89.1	2,080	2,030	5,426	5,905	184	203	3.6	12.5	3.4	0.37x	0.34x	11.0	10.0	20.5	18.4	NA		
CANCOM SE	57.01	92.5	1,998	1,968	1,616	1,731	123	138	11.6	7.7	7.4	1.22x	1.14x	16.0	14.2	41.5	29.4	14.0		
Atea ASA	12.57	76.3	1,376	1,547	4,166	4,261	136	168	5.2	4.4	3.2	0.37x	0.36x	11.4	9.2	25.0	18.9	14.9		
Datatec Limited	2.27	85.7	483	709	4,180	-	93	-	NA	15.0	2.2	0.17x	NA	7.6	NA	42.6	15.1	NA		
Plaisio Computers SA	4.74	94.2	105	71	346	-	10	-	NA	20.4	2.8	0.20x	NA	7.4	NA	24.2	NA	NA		
Median									5.2%	14.2%	3.4%	0.37x	0.88x	11.4x	14.2x	29.0x	22.5x	12.7%		
Mean									6.8%	13.3%	4.6%	0.72x	0.88x	13.5x	14.0x	30.3x	22.6x	10.6%		

Source: FactSet; based on consensus estimates.

IT Distributor - North America										'18 - '19E		Valuation Multiples						EPS	
As of August 1, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2019E	LTM	2019E	LTM	2019E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	Rate	
Arrow Electronics, Inc.	\$71.91	83.0%	\$6,092	\$9,622	\$29,957	\$29,260	\$1,380	\$1,243	-1.3%	11.7%	4.6%	0.32x	0.33x	7.0x	7.7x	8.8x	9.9x	0.3%	
SYNNEX Corporation	95.96	87.5	4,901	8,133	21,501	22,613	1,037	1,175	11.6	11.2	4.8	0.38x	0.36x	7.8	6.9	11.9	7.9	12.5	
Tech Data Corporation	99.33	89.4	3,624	4,323	37,097	37,170	765	818	-0.1	6.0	2.1	0.12x	0.12x	5.7	5.3	10.4	8.2	11.5	
Anixter International Inc.	62.31	83.5	2,101	3,382	8,669	8,874	429	454	5.6	19.5	5.0	0.39x	0.38x	7.9	7.4	11.1	9.3	8.0	
ScanSource, Inc.	33.06	74.6	850	1,179	3,906	3,971	145	152	2.3	10.8	3.7	0.30x	0.30x	8.1	7.7	15.1	9.2	NA	
Wayside Technology Group, Inc.	11.27	80.5	51	36	186	-	5	-	NA	14.4	2.5	0.19x	NA	7.7	NA	15.0	NA	NA	
Median									2.3%	11.4%	4.2%	0.31x	0.33x	7.8x	7.4x	11.5x	9.2x	9.7%	
Mean									3.6%	12.3%	3.8%	0.28x	0.30x	7.4x	7.0x	12.0x	8.9x	8.1%	

Source: FactSet; based on consensus estimates.

Business Process Outsourcing - North America

As of August 1, 2019

\$ in millions except per share data

Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		'18 - '19E									
									Revenue		Growth Rate	Gross Margin LTM	EBITDA Margin LTM	Valuation Multiples				EPS Growth Rate
									LTM	2019E				EV/Rev		EV/EBITDA		
			Equity	Enterprise	LTM	2019E	LTM	2019E	Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	Rate
Automatic Data Processing, Inc.	\$164.30	95.5%	\$71,339	\$71,951	\$14,175	\$14,617	\$3,329	\$3,589	6.3%	46.4%	23.8%	5.08x	4.92x	21.6x	20.0x	31.4x	28.4x	15.5%
Fidelity National Information Services,	131.21	95.8	80,421	51,420	8,414	8,460	3,155	3,291	0.4	34.2	37.5	6.11x	6.08x	16.3	15.6	53.1	17.7	9.8
Paychex, Inc.	83.88	94.9	30,142	30,381	3,773	3,992	1,558	1,645	10.6	68.8	41.3	8.05x	7.61x	19.5	18.5	29.3	28.1	7.6
Iron Mountain, Inc.	30.83	82.6	8,845	17,267	4,237	4,289	1,404	1,428	1.5	42.2	33.1	4.08x	4.03x	12.3	12.1	30.2	29.8	3.3
LiveRamp Holdings, Inc.	51.61	81.6	3,563	2,810	286	348	NA	NA	-21.1	57.7	-49.0	9.84x	8.07x	NA	NA	3.8	NA	25.0
TTEC Holdings, Inc.	46.94	96.2	2,177	2,365	1,543	1,629	190	207	8.5	19.9	12.5	1.53x	1.45x	12.4	11.4	43.4	27.3	20.0
CSG Systems International, Inc.	51.16	97.0	1,699	1,877	918	915	172	213	6.5	42.3	20.6	2.04x	2.05x	10.9	8.8	23.4	15.8	NA
CBIZ, Inc.	23.12	94.9	1,269	1,408	929	950	116	120	3.1	13.5	11.6	1.52x	1.48x	12.1	11.7	19.4	19.0	14.0
Sykes Enterprises, Incorporated	28.00	89.0	1,188	1,108	1,607	1,636	158	172	0.6	30.1	9.8	0.69x	0.68x	7.0	6.5	22.0	13.3	10.0
Median									3.1%	42.2%	20.6%	4.08x	4.03x	12.4x	11.9x	29.3x	23.2x	12.0%
Mean									1.8%	39.5%	15.7%	4.33x	4.04x	14.0x	13.1x	28.4x	22.4x	13.1%

Source: FactSet; based on consensus estimates.

Business Process Outsourcing - India										'18 - '19E		Valuation Multiples						EPS	
As of August 1, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2019E	LTM	2019E	LTM	2019E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	Rate	
Genpact Limited	\$39.73	97.3%	\$7,561	\$8,678	\$3,119	\$3,382	\$484	\$584	12.7%	34.6%	15.6%	2.78x	2.57x	17.9x	14.9x	27.7x	20.0x	10.9%	
WNS (Holdings) Limited Sponsored AI	62.35	95.9	3,121	3,363	826	860	153	190	10.1	35.1	19.1	4.07x	3.91x	22.0	17.7	28.1	22.0	11.6	
ExlService Holdings, Inc.	68.39	97.7	2,337	2,369	949	986	136	133	11.7	28.4	14.2	2.50x	2.40x	17.4	17.9	51.6	23.3	10.6	
Firstsource Solutions Limited	0.71	66.3	495	551	556	584	81	81	7.6	25.5	14.5	0.99x	0.94x	6.8	6.8	9.0	8.0	NA	
eClerx Services Limited	8.61	45.9	318	221	208	218	45	48	7.6	36.9	21.5	1.06x	1.01x	4.9	4.6	9.9	8.9	5.7	
Hinduja Global Solutions Limited	8.69	68.1	181	213	700	757	64	77	15.0	5.1	9.2	0.30x	0.28x	3.3	2.8	7.0	6.3	NA	
R Systems International Limited	0.60	73.3	72	52	108	-	9	-	NA	25.7	9.2	0.48x	NA	5.7	NA	8.5	NA	NA	
Datamatics Global Services Limited	1.04	50.3	62	55	165	-	19	-	NA	35.9	11.8	0.34x	NA	2.8	NA	5.7	NA	NA	
HOV Services Limited	1.32	36.7	17	16	2	-	0	-	NA	-2.5	2.4	10.50x	NA	NA	NA	NA	NA	NA	
Median									10.9%	28.4%	14.2%	1.06x	1.71x	6.3x	10.8x	9.4x	14.4x	10.7%	
Mean									10.8%	25.0%	13.1%	2.56x	1.85x	10.1x	10.8x	18.4x	14.7x	9.7%	

Source: FactSet; based on consensus estimates.

SaaS										'18 - '19E															
As of August 1, 2019										Revenue			Gross Margin			EBITDA			Valuation Multiples						EPS
\$ in millions except per share data										Growth	Margin		Margin		EV/Rev		EV/EBITDA		P/E		Growth				
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	LTM	2019E	Rate					
salesforce.com, inc.	\$150.81	90.0%	\$117,463	\$116,923	\$14,013	\$16,104	\$2,159	\$3,881	23.5%	65.6%	18.7%	8.34x	7.26x	54.2x	30.1x	102.0x	54.1x	23.5%							
ServiceNow, Inc.	274.00	90.4	50,608	50,174	3,011	3,459	153	956	32.6	76.4	5.4	16.66x	14.50x	NM	52.5	NM	85.2	22.0							
Workday, Inc. Class A	203.86	89.9	33,025	44,846	3,034	3,503	NA	686	26.7	70.3	-8.7	14.78x	12.80x	NM	65.4	NM	122.7	31.5							
Splunk Inc.	135.06	94.0	20,282	19,110	1,916	2,225	NA	364	26.6	81.1	-11.4	9.97x	8.59x	NM	52.4	NM	76.2	31.1							
Twilio, Inc. Class A	137.83	91.3	16,164	16,405	881	1,114	NA	90	71.3	53.0	-15.7	18.61x	14.73x	NM	182.1	NM	NM	31.5							
Tableau Software, Inc. Class A	169.53	95.5	13,040	13,656	1,231	1,370	NA	223	18.6	87.4	-4.7	11.09x	9.96x	NM	61.1	NM	97.4	18.5							
Zendesk, Inc.	82.68	87.1	9,059	9,137	703	810	NA	55	35.3	69.6	-16.9	13.00x	11.28x	NM	166.4	NM	NM	45.5							
HubSpot, Inc.	177.75	92.3	7,484	6,561	550	658	NA	82	28.2	80.5	-3.8	11.92x	9.98x	NM	80.3	NM	138.0	68.0							
New Relic, Inc.	94.45	83.3	5,515	5,037	479	574	NA	80	27.9	83.8	-1.0	10.51x	8.78x	NM	63.3	NM	154.4	20.0							
LogMeIn, Inc.	75.17	77.6	3,716	3,829	1,240	1,260	356	412	4.3	62.0	28.8	3.09x	3.04x	10.7	9.3	177.0	14.8	5.0							
Cornerstone OnDemand, Inc.	58.43	93.2	3,486	3,354	545	568	41	123	5.6	74.1	7.9	6.15x	5.90x	81.5	27.2	NM	56.1	NA							
Median									26.7%	74.1%	-3.8%	11.09x	9.96x	54.2x	61.1x	139.5x	85.2x	27.3%							
Mean									27.3%	73.1%	-0.1%	11.29x	9.71x	48.8x	71.8x	139.5x	88.8x	29.7%							

Source: FactSet; based on consensus estimates.

Enterprise Applications									'18 - '19E		Valuation Multiples						EPS		
As of August 1, 2019									Revenue	Gross	EBITDA	EV/Rev				EV/EBITDA		P/E	Growth
\$ in millions except per share data									Growth	Margin	Margin	EV/Rev		EV/EBITDA		P/E		Growth	
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	Rate	
Microsoft Corporation	\$138.06	97.4%	\$1,055,193	\$1,008,738	\$125,843	\$132,620	\$54,641	\$57,970	12.2%	65.9%	43.4%	8.02x	7.61x	18.5x	17.4x	27.3x	27.7x	12.8%	
Oracle Corporation	55.88	92.4	186,406	227,462	39,506	39,985	16,974	18,966	0.8	75.5	43.0	5.76x	5.69x	13.4	12.0	18.8	15.0	9.6	
SAP SE	125.16	88.8	153,760	162,080	29,348	30,485	7,851	9,289	7.9	69.2	26.8	5.52x	5.32x	20.6	17.4	42.8	23.0	12.2	
Adobe Inc.	298.44	95.3	144,874	147,550	10,036	11,355	3,303	5,032	23.2	84.0	32.9	14.70x	12.99x	44.7	29.3	55.7	37.4	16.8	
Intuit Inc.	277.96	97.5	72,059	70,483	6,778	7,028	2,154	2,610	11.0	83.4	31.8	10.40x	10.03x	32.7	27.0	44.4	39.5	15.6	
VMware, Inc. Class A	177.40	85.8	19,374	75,118	9,231	9,952	2,738	3,841	12.7	85.8	29.7	8.14x	7.55x	27.4	19.6	37.1	27.2	14.8	
Symantec Corporation	21.54	82.6	13,302	16,647	4,731	4,791	1,239	1,984	-0.5	73.4	26.2	3.52x	3.47x	13.4	8.4	NA	13.0	3.3	
Citrix Systems, Inc.	94.25	82.3	12,408	12,835	3,002	2,993	772	1,060	0.6	85.0	25.7	4.28x	4.29x	16.6	12.1	25.4	17.1	7.3	
Aspen Technology, Inc.	133.13	95.6	9,181	9,495	529	566	230	286	6.1	89.5	43.5	17.96x	16.79x	41.3	33.2	48.1	37.9	4.3	
Manhattan Associates, Inc.	83.46	93.2	5,369	5,313	589	601	134	135	7.5	54.1	22.8	9.01x	8.84x	39.6	39.5	56.8	56.4	NA	
Tenable Holdings, Inc.	24.73	62.8	2,394	2,073	310	349	NA	NA	30.4	83.5	-25.5	6.68x	5.95x	NA	NA	NA	NA	NA	
Median									7.9%	83.4%	29.7%	8.02x	7.55x	24.0x	18.5x	42.8x	27.4x	12.2%	
Mean									10.2%	77.2%	27.3%	8.54x	8.05x	26.8x	21.6x	39.6x	29.4x	10.7%	

Source: FactSet; based on consensus estimates.