

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	29.6%	15.6%	6.3%	15.3%	1.73x	11.8x	17.1x
Governmental IT Professional Services - North America	22.7	8.6	6.9	10.0	1.12	12.2	17.1
IT Professional Services - Europe	17.5	11.8	-2.5	10.2	1.01	8.8	14.3
IT Professional Services - India	26.1	17.2	10.1	15.9	1.97	10.8	17.0
IT Professional Services - China	24.8	5.3	10.1	25.7	0.94	16.0	29.9
IT Staff Augmentation	27.4	6.1	9.6	13.8	0.63	9.7	13.6
IT SUPPLY CHAIN SERVICES							
IT Solution Providers - North America	16.1%	4.7%	0.3%	12.7%	0.47x	8.7x	13.2x
IT Solution Providers - Europe	14.6	3.9	4.5	9.0	0.57	11.1	19.9
IT Products Distributors	10.4	3.6	5.9	11.4	0.29	6.6	7.9
BUSINESS PROCESS OUTSOURCING							
Business Process Outsourcing - North America	42.7%	18.3%	7.1%	12.9%	4.09x	11.8x	19.1x
Business Process Outsourcing - India	25.9	12.7	10.0	11.9	2.05	9.7	14.4
SOFTWARE							
SaaS	72.4%	- 3.1%	32.0%	28.6%	9.10x	31.6x	61.6x
Enterprise Applications	83.6	29.6	7.6	10.8	5.30	14.8	24.3

Commercial IT Professional Services - North America

As of January 2, 2019

\$ in millions except per share data

Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		'17 - '18E			Valuation Multiples						EPS
					LTM	2018E	LTM	2018E	Growth Rate	Gross Margin LTM	EBITDA Margin LTM	EV/Rev		EV/EBITDA		P/E		Growth Rate
												LTM	2018E	LTM	2018E	LTM	2018E	
Accenture Plc Class A	\$140.59	80.0%	\$89,619	\$87,720	\$42,154	\$40,676	\$6,953	\$6,943	11.7%	30.1%	16.5%	2.08x	2.16x	12.6x	12.6x	21.6x	20.4x	8.9%
DXC Technology Co.	54.49	50.5	15,263	20,156	22,775	21,769	5,072	4,686	6.8	19.9	22.5	0.89x	0.93x	4.0	4.3	8.5	6.7	7.1
CGI Group Inc. Class A	61.05	91.8	15,226	18,877	8,563	8,771	1,418	1,602	2.2	13.2	16.6	2.20x	2.15x	13.3	11.8	20.4	18.8	11.0
EPAM Systems, Inc.	114.32	79.3	6,174	5,852	1,737	1,839	260	343	26.8	33.6	14.6	3.37x	3.18x	22.5	17.1	43.9	26.5	21.5
Globant SA	54.47	82.0	1,955	1,925	498	522	56	96	26.1	33.5	19.0	3.87x	3.69x	34.6	20.0	38.1	31.7	20.0
Virtusa Corporation	41.26	70.4	1,234	1,489	1,147	1,194	83	96	21.8	29.0	7.2	1.30x	1.25x	18.0	15.6	NA	19.6	20.0
Perficient, Inc.	22.11	71.1	734	818	500	495	57	69	2.0	30.4	11.4	1.64x	1.65x	14.4	11.8	31.8	14.5	14.0
Unisys Corporation	11.62	55.5	593	767	2,811	2,815	460	406	2.6	25.2	16.6	0.27x	0.27x	1.7	1.9	7.7	7.3	NA
Hackett Group, Inc.	16.10	70.5	475	523	292	290	39	50	1.3	32.8	13.5	1.79x	1.81x	13.4	10.6	15.5	15.4	16.7
RCM Technologies, Inc.	3.40	51.9	43	66	196	197	9	9	5.7	24.5	3.8	0.33x	0.33x	7.4	7.4	17.7	9.4	NA

Median									6.3%	29.6%	15.6%	1.71x	1.73x	13.4x	11.8x	20.4x	17.1x	15.3%
Mean									10.7%	27.2%	14.2%	1.77x	1.74x	14.2x	11.3x	22.8x	17.0x	14.9%

Source: FactSet; based on consensus estimates.

IT Professional Services - Europe										'17 - '18E		Valuation Multiples						EPS	
As of January 2, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2018E	LTM	2018E	LTM	2018E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2018E	LTM	2018E	LTM	2018E	Rate	
Capgemini SE	\$95.67	68.4%	\$16,005	\$18,987	\$14,618	\$15,034	\$1,996	\$2,141	-5.8%	26.1%	13.7%	1.30x	1.26x	9.5x	8.9x	18.6x	14.3x	7.1%	
Atos SE	81.50	50.4	8,693	8,868	14,092	14,071	1,890	1,967	-10.0	26.0	13.4	0.63x	0.63x	4.7	4.5	12.2	8.9	10.1	
Sage Group plc	7.55	65.3	8,200	9,072	2,338	2,401	666	667	4.3	89.3	28.5	3.88x	3.78x	13.6	13.6	21.9	18.6	3.6	
Alten SA	82.26	73.9	2,783	2,848	2,380	2,562	244	267	5.3	14.5	10.3	1.20x	1.11x	11.7	10.7	16.2	15.2	10.3	
Tieto Oyj	27.18	72.4	2,014	2,245	1,806	1,834	243	244	-3.7	25.0	13.7	1.24x	1.22x	9.2	9.2	14.1	13.4	2.1	
Altran Technologies SA	7.73	45.7	1,987	3,513	2,848	3,316	361	446	19.1	14.1	12.7	1.23x	1.06x	9.7	7.9	14.0	9.6	13.6	
Reply S.p.A.	50.78	71.8	1,900	1,841	1,071	1,143	126	156	5.8	46.6	11.8	1.72x	1.61x	14.6	11.8	18.8	19.0	NA	
Sopra Steria Group SA	91.97	42.0	1,889	2,673	4,501	4,650	374	381	-2.5	17.5	8.1	0.59x	0.57x	7.1	7.0	11.4	9.2	10.2	
Indra Sistemas, S.A. Class A	9.23	60.4	1,630	2,591	3,426	3,479	343	349	-5.4	28.7	10.0	0.76x	0.74x	7.5	7.4	11.0	11.8	22.2	
EVRY ASA	3.61	85.9	1,337	1,919	1,496	1,493	212	186	-7.1	21.4	16.4	1.28x	1.28x	9.1	10.3	20.7	10.9	NA	
Devoteam SA	95.15	68.5	793	750	672	740	72	87	11.1	15.1	10.8	1.12x	1.01x	10.4	8.6	23.6	18.3	NA	
NNIT A/S	28.04	90.2	701	766	457	460	82	81	-5.3	19.4	17.9	1.68x	1.66x	9.4	9.4	19.0	19.1	1.9	
Neurones SA	21.35	60.1	518	376	550	560	50	60	-7.3	9.0	9.2	0.68x	0.67x	7.5	6.3	17.2	16.8	NA	
Aubay SA	31.00	58.0	407	422	433	459	43	49	5.3	10.5	9.9	0.98x	0.92x	9.8	8.6	14.4	12.7	10.9	
Endava Plc Sponsored ADR Class A	23.75	75.4	285	1,224	293	321	49	56	NA	33.2	16.7	4.18x	3.82x	25.0	21.8	49.3	30.8	22.0	
Allgeier SE	28.27	68.4	283	436	771	805	26	50	14.4	13.9	6.2	0.57x	0.54x	16.9	8.8	35.1	15.1	101.1	
Columbus A/S	2.01	69.0	244	262	186	295	21	29	46.1	8.2	11.4	1.41x	0.89x	12.3	9.1	16.5	17.2	NA	
Proware SA	10.28	60.8	80	180	194	195	35	36	-5.7	13.6	17.9	0.93x	0.92x	5.2	4.9	5.6	5.9	7.0	
ITS Group SA	5.13	56.5	40	57	204	179	9	9	NA	3.9	4.1	0.28x	0.32x	6.5	6.0	13.0	11.5	NA	
Median									-2.5%	17.5%	11.8%	1.20x	1.01x	9.5x	8.8x	16.5x	14.3x	10.2%	
Mean									3.4%	22.9%	12.8%	1.35x	1.27x	10.5x	9.2x	18.6x	14.6x	17.1%	

Source: FactSet; based on consensus estimates.

IT Professional Services - India										'17 - '18E		Valuation Multiples						EPS	
As of January 2, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Rate	Margin	Margin	LTM	2018E	LTM	2018E	LTM	2018E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA												
			Equity	Enterprise	LTM	2018E	LTM	2018E		LTM	LTM	LTM	2018E	LTM	2018E	LTM	2018E		
Tata Consultancy Services Limited	\$27.43	87.9%	\$102,911	\$100,256	\$18,953	\$20,600	\$5,129	\$5,616	10.1%	32.2%	27.1%	5.29x	4.87x	19.5x	17.9x	25.8x	23.6x	12.2%	
Infosys Limited	9.54	91.2	41,698	38,030	10,688	11,657	2,889	3,054	8.4	35.8	27.0	3.56x	3.26x	13.2	12.5	18.0	17.6	10.7	
Cognizant Technology Solutions Corp	63.09	74.1	36,531	32,553	15,824	16,112	3,154	3,460	8.8	35.6	19.9	2.06x	2.02x	10.3	9.4	25.8	14.0	14.4	
Wipro Limited	4.64	88.6	20,976	17,958	7,909	8,410	1,375	1,619	2.2	28.6	17.4	2.27x	2.14x	13.1	11.1	19.4	17.0	9.0	
HCL Technologies Limited	13.49	81.0	18,784	18,345	7,735	8,366	1,768	1,948	11.4	27.0	23.0	2.37x	2.19x	10.4	9.4	14.3	13.1	10.1	
Tech Mahindra Limited	10.15	92.5	9,961	8,456	4,627	4,910	799	862	8.3	25.7	17.5	1.83x	1.72x	10.6	9.8	15.4	15.2	11.2	
Oracle Financial Services Software Lir	52.84	76.9	4,531	4,232	663	723	268	305	6.7	46.7	40.7	6.38x	5.85x	15.8	13.9	24.9	21.4	NA	
Mphasis Limited	14.10	77.5	2,623	2,480	1,009	1,079	175	183	11.9	17.6	17.5	2.46x	2.30x	14.2	13.5	19.6	18.6	22.0	
L&T Technology Services Ltd.	24.30	96.6	2,526	2,502	628	678	105	119	25.1	20.1	15.2	3.98x	3.69x	23.8	21.1	26.2	26.9	29.0	
Mindtree Limited	12.24	74.1	2,011	1,904	882	966	133	146	16.8	31.6	15.1	2.16x	1.97x	14.3	13.0	20.6	19.6	38.7	
Sonda S.A.	1.59	73.8	1,385	1,608	1,168	1,161	143	134	-18.1	17.5	12.2	1.38x	1.39x	11.3	12.0	19.8	42.0	5.6	
NIIT Technologies Limited	16.43	82.6	1,013	928	463	506	80	89	14.1	33.4	17.0	2.00x	1.83x	11.6	10.5	19.9	18.3	36.5	
Cyient Limited	8.83	67.0	998	885	609	658	81	92	12.2	23.9	13.5	1.45x	1.34x	10.9	9.6	16.9	14.8	16.5	
Zensar Technologies Limited	3.30	67.1	742	759	492	537	62	70	14.0	22.3	12.4	1.54x	1.41x	12.2	10.8	17.1	16.0	NA	
Persistent Systems Limited	8.91	65.9	713	574	454	488	75	81	7.3	22.2	16.9	1.26x	1.18x	7.6	7.0	14.8	13.7	15.9	
KPIT Technologies Limited	3.08	67.8	608	566	561	612	68	76	12.9	22.5	11.9	1.01x	0.93x	8.4	7.5	13.9	13.1	23.7	
Sonata Software Limited	4.30	72.8	452	410	378	380	39	42	3.3	18.5	9.4	1.08x	1.08x	10.5	9.8	14.1	13.8	18.8	
Roit India Limited	0.12	09.2	20	362	375	-	103	-	NA	26.5	27.3	0.97x	NA	3.5	NA	NA	NA	NA	
Median									10.1%	26.1%	17.2%	2.03x	1.97x	11.4x	10.8x	19.4x	17.0x	15.9%	
Mean									9.1%	27.1%	18.9%	2.39x	2.30x	12.3x	11.7x	19.2x	18.8x	18.3%	

Source: FactSet; based on consensus estimates.

IT Professional Services - China										'17 - '18E		Valuation Multiples						EPS	
As of January 2, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		EPS
\$ in millions except per share data										Growth	Margin	Margin	LTM	2018E	LTM	2018E	LTM	2018E	Growth
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2018E	LTM	2018E	LTM	2018E	Rate	
Inspur Electronic Information Industry (\$2.31	53.5%	\$2,980	\$4,364	\$6,167	\$6,402	\$143	\$198	57.9%	10.8%	2.9%	0.71x	0.68x	30.5x	22.1x	37.3x	32.9x	25.8%	
Neusoft Corporation Class A	1.67	61.9	2,080	2,073	1,033	1,109	55	-	-2.1	31.5	5.3	2.01x	1.87x	37.7	NA	14.1	29.9	NA	
Chinasoft International Ltd.	0.48	48.9	1,170	1,514	1,524	1,619	250	153	10.1	30.6	10.8	0.99x	0.94x	6.0	9.9	11.1	11.9	25.5	
Beijing Teamsun Technology Co., Ltd.	0.85	40.5	937	1,280	759	-	30	-	NA	17.5	4.4	1.69x	NA	42.3	NA	68.5	NA	NA	
Beyondsoft Corporation Class A	1.08	51.7	565	474	381	-	38	-	NA	24.8	10.5	1.24x	NA	12.6	NA	15.2	NA	NA	
Median									10.1%	24.8%	5.3%	1.24x	0.94x	30.5x	16.0x	15.2x	29.9x	25.7%	
Mean									22.0%	23.0%	6.8%	1.33x	1.16x	25.8x	16.0x	29.3x	24.9x	25.7%	

Source: FactSet; based on consensus estimates.

Gvt. IT Professional Services - North America

As of January 2, 2019

\$ in millions except per share data

Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		'17 - '18E			Valuation Multiples						EPS
					LTM	2018E	LTM	2018E	Growth Rate	Gross Margin LTM	EBITDA Margin LTM	EV/Rev		EV/EBITDA		P/E		Growth Rate
												LTM	2018E	LTM	2018E	LTM	2018E	
Booz Allen Hamilton Holding Corporat	\$44.33	83.8%	\$6,310	\$7,815	\$6,397	\$6,517	\$625	\$639	7.2%	22.6%	9.8%	1.22x	1.20x	12.5x	12.2x	18.4x	17.8x	14.4%
CACI International Inc Class A	141.93	70.7	3,527	4,629	4,548	4,638	448	429	5.1	31.9	9.8	1.02x	1.00x	10.3	10.8	10.6	12.9	10.0
Kratos Defense & Security Solutions, I	13.87	86.2	1,439	1,582	656	642	53	59	-14.6	25.3	8.1	2.41x	2.47x	29.7	26.7	NA	NA	NA
ManTech International Corporation Cl	51.56	75.7	1,369	2,044	1,924	1,955	160	168	13.9	14.5	8.3	1.06x	1.05x	12.8	12.2	15.7	24.8	8.0
ICF International, Inc.	64.62	78.6	1,218	1,474	1,281	1,314	110	123	6.9	34.3	8.6	1.15x	1.12x	13.4	12.0	17.8	17.1	10.0
Engility Holdings, Inc.	28.28	73.4	1,045	1,933	1,901	1,900	164	172	-1.6	11.5	8.6	1.02x	1.02x	11.8	11.3	NA	13.5	5.0
KEYW Holding Corporation	7.02	69.8	350	615	507	509	44	48	15.2	22.7	8.3	1.21x	1.21x	14.0	12.7	NA	NA	NA
Median									6.9%	22.7%	8.6%	1.15x	1.12x	12.8x	12.2x	16.7x	17.1x	10.0%
Mean									4.6%	23.3%	8.8%	1.30x	1.29x	14.9x	14.0x	15.6x	17.2x	9.5%

Source: FactSet; based on consensus estimates.

IT Staff Augmentation										'17 - '18E		Valuation Multiples						EPS	
As of January 2, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2018E	LTM	2018E	LTM	2018E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2018E	LTM	2018E	LTM	2018E	Rate	
Robert Half International Inc.	\$56.54	70.8%	\$6,868	\$6,505	\$5,665	\$5,771	\$628	\$642	9.6%	40.2%	11.1%	1.15x	1.13x	10.4x	10.1x	18.8x	16.0x	15.7%	
ManpowerGroup Inc.	65.06	47.5	4,023	4,710	22,236	22,116	944	882	5.1	16.3	4.2	0.21x	0.21x	5.0	5.3	7.0	7.6	8.5	
Insperty, Inc.	91.98	75.9	3,846	3,518	3,688	3,821	191	236	15.8	9.7	5.2	0.95x	0.92x	18.4	14.9	30.9	24.8	16.5	
ASGN Inc	54.31	57.6	2,850	3,994	3,149	3,403	349	404	29.6	28.1	11.1	1.27x	1.17x	11.5	9.9	16.0	12.4	11.8	
Kelly Services, Inc. Class A	20.65	63.9	805	790	5,522	5,528	108	-	2.9	17.7	2.0	0.14x	0.14x	7.3	NA	12.7	9.2	NA	
Kforce Inc.	30.36	69.8	791	851	1,403	1,412	86	89	4.0	29.0	6.1	0.61x	0.60x	9.9	9.6	16.1	13.8	NA	
Heidrick & Struggles International, Inc.	31.57	69.7	599	448	719	711	75	80	11.1	27.4	10.4	0.62x	0.63x	6.0	5.6	NA	13.6	NA	
Mastech Digital, Inc.	6.44	56.0	71	112	173	-	14	-	NA	22.3	7.9	0.65x	NA	8.2	NA	10.7	NA	NA	
Hudson Global, Inc.	1.47	60.2	47	10	172	-	NA	-	NA	46.4	-1.8	0.06x	NA	NA	NA	NA	NA	NA	
Median									9.6%	27.4%	6.1%	0.62x	0.63x	9.1x	9.7x	16.0x	13.6x	13.8%	
Mean									11.1%	26.4%	6.2%	0.63x	0.69x	9.6x	9.2x	16.0x	13.9x	13.1%	

Source: FactSet; based on consensus estimates.

IT Solution Provider - North America										'17 - '18E		Valuation Multiples						EPS	
As of January 2, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2018E	LTM	2018E	LTM	2018E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2018E	LTM	2018E	LTM	2018E	Rate	
CDW Corp.	\$79.17	81.8%	\$11,874	\$15,540	\$16,004	\$16,196	\$1,231	\$1,280	6.6%	16.4%	7.7%	0.97x	0.96x	12.6x	12.1x	18.0x	15.6x	17.0%	
Insight Enterprises, Inc.	40.94	72.0	1,453	1,867	7,132	7,107	264	277	6.0	13.7	3.7	0.26x	0.26x	7.1	6.7	11.3	9.3	NA	
Presidio, Inc.	13.24	67.1	1,090	2,236	2,843	2,866	209	224	1.0	17.7	7.3	0.79x	0.78x	10.7	10.0	9.8	9.4	8.0	
ePlus inc.	70.08	65.3	960	938	1,369	1,385	84	104	-0.4	22.5	5.7	0.69x	0.68x	11.2	9.0	16.7	14.4	12.7	
ConvergeOne Holdings, Inc. Class A	12.44	97.6	937	1,637	1,102	1,572	89	162	71.1	25.9	8.0	1.48x	1.04x	18.5	10.1	NA	13.2	NA	
PC Connection, Inc.	30.30	70.4	810	713	2,752	2,685	95	97	-7.8	14.2	3.4	0.26x	0.27x	7.5	7.4	12.7	13.5	8.0	
PCM, Inc.	18.51	73.4	225	396	2,163	2,111	44	59	-3.7	15.7	2.0	0.18x	0.19x	9.0	6.7	16.6	8.2	20.0	
Pivot Technology Solutions, Inc.	0.73	37.9	29	142	1,404	1,448	21	17	-4.2	10.8	1.5	0.10x	0.10x	6.8	8.5	NA	NA	NA	
Median									0.3%	16.1%	4.7%	0.47x	0.47x	9.9x	8.7x	14.6x	13.2x	12.7%	
Mean									8.6%	17.1%	4.9%	0.59x	0.53x	10.4x	8.8x	14.2x	11.9x	13.1%	

Source: FactSet; based on consensus estimates.

IT Solution Provider - Europe										'17 - '18E		Valuation Multiples						EPS	
As of January 2, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2018E	LTM	2018E	LTM	2018E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2018E	LTM	2018E	LTM	2018E	Rate	
Bechtle AG	\$77.66	73.4%	\$3,262	\$3,504	\$4,598	\$4,842	\$243	\$264	10.6%	14.6%	5.3%	0.76x	0.72x	14.4x	13.3x	22.9x	21.2x	16.4%	
Softcat Plc	7.31	63.3	1,447	1,359	1,370	1,462	89	95	18.6	16.2	6.5	0.99x	0.93x	15.3	14.3	20.7	19.3	2.0	
Computacenter Plc	12.54	58.0	1,431	1,386	5,194	5,438	182	184	2.5	12.7	3.5	0.27x	0.25x	7.6	7.5	14.0	13.3	NA	
Atea ASA	12.74	74.0	1,385	1,632	4,004	4,000	135	131	-3.0	5.2	3.6	0.41x	0.41x	12.1	12.5	22.4	23.4	NA	
CANCOM SE	32.84	52.4	1,151	1,124	1,497	1,527	115	122	6.4	8.1	7.7	0.75x	0.74x	9.8	9.3	23.5	19.9	9.0	
Datatec Limited	1.89	40.1	436	590	3,717	3,909	75	61	-6.5	15.0	2.2	0.16x	0.15x	7.8	9.7	NA	NA	NA	
Plaisio Computers SA	4.33	73.3	96	69	336	-	13	-	NA	21.3	3.9	0.20x	NA	5.3	NA	16.3	NA	NA	
Median									4.5%	14.6%	3.9%	0.41x	0.57x	9.8x	11.1x	21.6x	19.9x	9.0%	
Mean									4.8%	13.3%	4.7%	0.51x	0.53x	10.3x	11.1x	20.0x	19.4x	9.1%	

Source: FactSet; based on consensus estimates.

IT Distributor - North America										'17 - '18E		Valuation Multiples						EPS	
As of January 2, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2018E	LTM	2018E	LTM	2018E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2018E	LTM	2018E	LTM	2018E	Rate	
Arrow Electronics, Inc.	\$69.55	79.7%	\$6,063	\$9,249	\$29,392	\$29,698	\$1,373	\$1,411	10.8%	11.8%	4.7%	0.31x	0.31x	6.7x	6.6x	11.5x	7.9x	8.7%	
SYNNEX Corporation	81.16	57.2	4,152	4,813	19,743	19,950	718	805	15.4	8.4	3.6	0.24x	0.24x	6.7	6.0	11.7	7.9	NA	
Tech Data Corporation	83.12	76.5	3,102	3,968	37,867	37,380	715	800	4.2	5.9	1.9	0.10x	0.11x	5.5	5.0	14.2	7.7	12.9	
Anixter International Inc.	54.92	61.8	1,839	3,067	8,295	8,395	391	398	5.9	19.2	4.7	0.37x	0.37x	7.8	7.7	16.3	9.5	11.4	
ScanSource, Inc.	34.45	77.8	882	1,150	3,895	3,914	142	147	5.6	10.5	3.6	0.30x	0.29x	8.1	7.9	20.4	10.2	NA	
Wayside Technology Group, Inc.	10.13	60.5	46	38	259	-	5	-	NA	10.3	2.9	0.15x	NA	7.6	NA	15.5	NA	NA	
Median									5.9%	10.4%	3.6%	0.27x	0.29x	7.2x	6.6x	14.9x	7.9x	11.4%	
Mean									8.4%	11.0%	3.6%	0.25x	0.26x	7.1x	6.6x	14.9x	8.6x	11.0%	

Source: FactSet; based on consensus estimates.

Business Process Outsourcing - North America

As of January 2, 2019

\$ in millions except per share data

Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		'17 - '18E		Valuation Multiples						EPS		
					LTM	2018E	LTM	2018E	Growth Rate	Gross Margin LTM	EBITDA Margin LTM	EV/Rev		EV/EBITDA		P/E		Growth Rate	
												LTM	2018E	LTM	2018E	LTM	2018E		LTM
Automatic Data Processing, Inc.	\$130.14	84.8%	\$56,966	\$58,087	\$13,570	\$13,763	\$3,058	\$3,147	7.1%	45.5%	22.6%	4.28x	4.22x	19.0x	18.5x	33.4x	26.5x	14.2%	
Fidelity National Information Services,	101.43	91.5	33,217	42,064	8,585	8,471	3,146	3,164	-7.2	33.7	36.6	4.90x	4.97x	13.4	13.3	22.1	19.9	12.8	
Paychex, Inc.	65.07	85.6	23,366	22,821	3,459	3,549	1,415	1,488	8.0	69.3	41.9	6.60x	6.43x	16.1	15.3	24.4	23.8	8.4	
Iron Mountain, Inc.	32.10	85.2	9,188	17,330	4,156	4,234	1,403	1,442	10.1	42.7	33.8	4.17x	4.09x	12.4	12.0	40.1	29.9	7.2	
LiveRamp Holdings, Inc.	38.75	75.2	3,009	3,140	771	438	54	9	-51.8	53.1	2.2	4.07x	7.17x	NA	NA	68.4	NA	25.0	
TTEC Holdings, Inc.	28.92	68.4	1,336	1,526	1,536	1,500	194	192	1.5	20.2	12.7	0.99x	1.02x	7.9	7.9	NA	NA	18.0	14.0
CSG Systems International, Inc.	32.04	65.6	1,068	1,212	833	864	151	196	9.4	47.7	18.3	1.46x	1.40x	8.0	6.2	17.6	11.8	NA	
Sykes Enterprises, Incorporated	24.80	77.1	1,061	958	1,629	1,628	153	167	2.6	29.5	9.4	0.59x	0.59x	6.2	5.7	71.9	11.8	10.0	
CBIZ, Inc.	19.87	81.5	1,103	1,260	918	925	105	109	8.2	13.0	11.5	1.37x	1.36x	11.9	11.5	16.6	18.4	13.0	
Median									7.1%	42.7%	18.3%	4.07x	4.09x	12.1x	11.8x	28.9x	19.1x	12.9%	
Mean									-1.3%	39.4%	21.0%	3.16x	3.47x	11.9x	11.3x	36.8x	20.0x	13.1%	

Source: FactSet; based on consensus estimates.

Business Process Outsourcing - India

As of January 2, 2019

\$ in millions except per share data

Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		'17 - '18E			Valuation Multiples						EPS Growth Rate
									Revenue Growth Rate	Gross Margin LTM	EBITDA Margin LTM	EV/Rev		EV/EBITDA		P/E		
												LTM	2018E	LTM	2018E	LTM	2018E	
Genpact Limited	\$26.79	77.0%	\$5,092	\$6,110	\$2,902	\$2,977	\$396	\$482	8.8%	34.0%	13.6%	2.11x	2.05x	15.4x	12.7x	19.4x	15.2x	9.4%
WNS (Holdings) Limited Sponsored AI	41.10	75.6	2,052	2,120	773	780	128	145	11.3	32.8	17.3	2.74x	2.72x	16.6	14.7	21.5	16.8	11.9
ExlService Holdings, Inc.	52.06	77.6	1,783	1,885	846	882	104	125	15.7	29.9	15.3	2.23x	2.14x	18.2	15.1	42.4	18.9	12.0
eClerx Services Limited	15.46	61.2	598	494	199	207	47	51	2.8	36.2	23.5	2.48x	2.39x	10.5	9.7	16.8	14.4	NA
Firstsource Solutions Limited	0.69	55.7	477	562	517	545	72	73	3.1	21.8	11.8	1.09x	1.03x	7.8	7.8	9.0	9.1	NA
Hinduja Global Solutions Limited	9.29	57.3	194	206	599	640	52	53	11.9	11.2	8.3	0.34x	0.32x	4.0	3.9	7.4	7.2	NA
Datamatics Global Services Limited	1.65	71.3	97	97	143	144	15	18	NA	21.6	10.7	0.68x	0.67x	6.4	5.4	10.3	9.6	NA
R Systems International Limited	0.68	85.0	84	60	94	-	6	-	NA	21.2	5.2	0.64x	NA	9.6	NA	17.7	NA	NA
HOV Services Limited	2.38	43.4	30	30	2	-	0	-	NA	NA	NA	15.57x	NA	NA	NA	88.6	NA	NA
Median									10.0%	25.9%	12.7%	2.11x	2.05x	10.1x	9.7x	17.7x	14.4x	11.9%
Mean									8.9%	26.1%	13.2%	3.10x	1.62x	11.1x	9.9x	25.9x	13.1x	11.1%

Source: FactSet; based on consensus estimates.

SaaS										'17 - '18E		Valuation Multiples						EPS	
As of January 2, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Growth	Margin	Margin	LTM	2018E	LTM	2018E	LTM	2018E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2018E	LTM	2018E	LTM	2018E	Rate	
salesforce.com, inc.	\$135.55	84.1%	\$103,696	\$107,348	\$12,530	\$13,005	\$1,379	\$2,933	26.3%	72.6%	11.0%	8.57x	8.25x	NA	36.6x	NA	54.2x	23.5%	
ServiceNow, Inc.	178.32	86.4	31,973	33,457	2,440	2,611	84	673	35.1	75.9	3.5	13.71x	12.81x	NA	49.7	NA	75.4	32.2	
Workday, Inc. Class A	159.74	92.5	24,121	34,379	2,621	2,750	NA	455	31.3	70.5	-8.3	13.12x	12.50x	NA	NA	NA	NA	34.7	
Splunk Inc.	103.32	79.5	15,269	14,069	1,601	1,698	NA	217	36.6	79.7	-15.0	8.79x	8.28x	NA	NA	NA	92.3	35.7	
Tableau Software, Inc. Class A	118.60	90.0	8,486	8,918	1,068	979	NA	NA	11.7	86.9	-7.9	8.35x	9.11x	NA	NA	NA	NA	56.8	
Ultimate Software Group, Inc.	242.96	73.1	7,597	7,591	1,087	1,136	121	276	20.8	62.3	11.2	6.98x	6.68x	NA	27.5	NA	45.0	25.0	
Twilio, Inc. Class A	86.97	86.6	7,016	8,208	561	630	NA	16	57.8	52.9	-12.1	14.63x	13.04x	NA	NA	NA	NA	28.7	
Zendesk, Inc.	57.59	79.2	6,165	6,113	550	592	NA	34	37.5	70.0	-16.6	11.12x	10.32x	NA	NA	NA	NA	28.5	
HubSpot, Inc.	125.28	77.2	4,915	4,603	475	506	NA	53	34.8	80.2	-6.0	9.68x	9.09x	NA	NA	NA	NA	50.0	
New Relic, Inc.	79.47	69.2	4,526	4,175	413	441	5	54	32.7	83.7	-0.1	10.10x	9.46x	NA	NA	NA	NA	14.0	
LogMeIn, Inc.	81.80	60.7	4,185	4,291	1,170	1,204	361	443	17.5	63.3	30.8	3.67x	3.57x	11.9	9.7	30.8	15.3	15.0	
Cornerstone OnDemand, Inc.	50.62	85.5	2,967	2,868	532	529	28	91	9.9	72.3	5.7	5.40x	5.42x	NA	31.6	NA	68.9	14.0	
Median									32.0%	72.4%	-3.1%	9.24x	9.10x	11.9x	31.6x	30.8x	61.6x	28.6%	
Mean									29.3%	72.5%	-0.3%	9.51x	9.04x	11.9x	31.0x	30.8x	58.5x	29.9%	

Source: FactSet; based on consensus estimates.

Enterprise Applications										'17 - '18E		Valuation Multiples						EPS			
As of January 2, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth		
\$ in millions except per share data										Growth	Margin	Margin	LTM	2018E	LTM	2018E	LTM	2018E	LTM	2018E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2018E	LTM	2018E	LTM	2018E	LTM	2018E	Rate	
Microsoft Corporation	\$101.12	87.0%	\$776,350	\$730,322	\$114,740	\$117,428	\$47,738	\$49,296	13.4%	64.6%	41.3%	6.37x	6.22x	15.3x	14.8x	42.0x	24.3x	13.1%			
Oracle Corporation	45.22	84.6	162,291	181,735	39,777	39,694	17,005	18,211	1.6	75.5	42.8	4.57x	4.58x	10.7	10.0	44.3	13.8	8.6			
SAP SE	98.80	77.5	121,371	121,982	27,404	28,072	7,520	8,977	-3.6	69.8	27.4	4.45x	4.35x	16.2	13.6	24.4	20.2	10.8			
Adobe Inc.	224.57	80.9	109,620	112,696	9,030	9,208	3,071	4,006	23.6	86.8	32.6	12.48x	12.24x	36.7	28.1	43.2	32.8	18.5			
Intuit Inc.	194.47	83.9	50,472	50,433	6,094	6,276	1,789	2,309	13.4	83.0	29.4	8.28x	8.04x	28.2	21.8	40.4	32.0	15.5			
Red Hat, Inc.	174.18	97.0	30,788	30,997	3,255	3,299	571	888	16.2	84.8	19.1	9.52x	9.39x	NA	34.9	NA	50.9	16.7			
VMware, Inc. Class A	136.16	80.4	14,963	47,116	8,691	8,748	2,599	3,376	19.8	86.0	29.9	5.42x	5.39x	18.1	14.0	38.2	22.3	15.5			
Citrix Systems, Inc.	102.21	87.5	13,774	15,426	2,950	2,963	932	1,081	4.9	85.0	31.0	5.23x	5.21x	16.6	14.3	NA	18.3	9.7			
Symantec Corporation	18.94	63.7	12,101	14,535	4,762	4,795	1,228	2,054	0.5	74.1	25.7	3.05x	3.03x	11.8	7.1	10.3	12.0	4.9			
Aspen Technology, Inc.	81.31	68.4	5,754	5,973	491	529	200	258	7.6	89.6	40.8	12.17x	11.30x	29.9	23.2	38.7	28.8	4.3			
Manhattan Associates, Inc.	42.19	67.6	2,758	2,686	559	554	152	155	-6.8	56.1	27.2	4.81x	4.85x	17.7	17.3	27.4	24.8	NA			
Tenable Holdings, Inc.	21.45	54.5	1,996	1,329	246	265	NA	NA	NA	84.1	-22.5	5.40x	5.02x	NA	NA	NA	NA	9.8			
Median									7.6%	83.6%	29.6%	5.41x	5.30x	17.1x	14.8x	38.7x	24.3x	10.8%			
Mean									8.2%	78.3%	27.1%	6.81x	6.63x	20.1x	18.1x	34.3x	25.5x	11.6%			

Source: FactSet; based on consensus estimates.