

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	29.7%	15.9%	11.1%	14.3%	1.90x	12.6x	17.9x
Governmental IT Professional Services - North America	24.1	8.5	17.3	11.1	1.19	12.6	18.4
IT Professional Services - Europe	13.7	12.2	3.5	11.7	1.06	8.4	14.0
IT Professional Services - India	25.6	18.0	19.0	13.9	1.86	10.0	16.6
IT Professional Services - China	24.8	5.3	23.1	25.7	1.07	19.2	29.1
IT Staff Augmentation	28.5	5.3	15.4	8.2	0.77	10.1	14.8
IT SUPPLY CHAIN SERVICES							
IT Solution Providers - North America	15.9%	3.9%	5.7%	14.5%	0.36x	9.8x	15.0x
IT Solution Providers - Europe	14.6	5.3	21.7	9.0	0.72	10.5	20.4
IT Products Distributors	11.2	4.1	10.0	10.4	0.33	7.1	9.1
BUSINESS PROCESS OUTSOURCING							
Business Process Outsourcing - North America	42.4%	19.9%	12.7%	11.7%	4.22x	11.5x	18.0x
Business Process Outsourcing - India	25.0	12.7	21.1	10.2	2.19	12.4	16.4
SOFTWARE							
SaaS	72.9%	- 1.8%	24.3%	27.2%	9.14x	33.5x	60.1x
Enterprise Applications	83.9	29.9	14.1	10.9	6.27	19.7	27.1

Commercial IT Professional Services - North America

As of March 1, 2019

\$ in millions except per share data

Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		'18 - '19E			Valuation Multiples						EPS
					LTM	2019E	LTM	2019E	Growth Rate	Gross Margin LTM	EBITDA Margin LTM	EV/Rev		EV/EBITDA		P/E		Growth Rate
												LTM	2019E	LTM	2019E	LTM	2019E	
Accenture Plc Class A	\$164.20	93.5%	\$104,669	\$103,118	\$42,154	\$43,855	\$6,953	\$7,333	20.4%	30.2%	16.5%	2.45x	2.35x	14.8x	14.1x	25.2x	22.1x	8.7%
DXC Technology Co.	67.27	62.4	18,047	24,187	21,767	20,757	4,903	4,934	1.9	19.7	22.5	1.11x	1.17x	4.9	4.9	12.4	7.5	7.9
CGI Inc. Class A	67.44	99.0	16,550	20,281	8,822	9,159	1,614	1,696	6.8	13.3	16.6	2.30x	2.21x	12.6	12.0	21.4	18.7	11.0
EPAM Systems, Inc.	163.55	99.3	8,861	8,523	1,843	2,255	287	397	55.4	33.8	15.6	4.62x	3.78x	29.7	21.5	38.6	32.1	19.0
Globant SA	70.58	95.4	2,541	2,502	522	640	91	122	54.8	35.8	17.4	4.79x	3.91x	27.5	20.5	50.1	32.7	20.0
Virtusa Corporation	50.77	86.6	1,519	1,911	1,200	1,358	94	132	38.4	29.2	7.8	1.59x	1.41x	20.3	14.5	NA	19.0	20.0
Perficient, Inc.	29.20	93.9	969	1,053	498	531	60	79	9.5	31.7	12.1	2.11x	1.98x	17.5	13.3	39.8	17.1	12.0
Unisys Corporation	13.66	65.2	697	1,050	2,825	2,846	448	423	3.7	24.3	15.9	0.37x	0.37x	2.3	2.5	10.5	6.9	NA
Hackett Group, Inc.	16.43	71.9	485	524	286	287	39	49	0.4	34.8	NA	1.83x	1.83x	13.4	10.6	22.2	15.6	16.7
RCM Technologies, Inc.	4.55	70.3	58	80	196	211	9	10	12.8	24.5	3.8	0.41x	0.38x	9.0	8.0	23.7	10.8	NA
Median									11.1%	29.7%	15.9%	1.97x	1.90x	14.1x	12.6x	23.7x	17.9x	14.3%
Mean									20.4%	27.7%	14.2%	2.16x	1.94x	15.2x	12.2x	27.1x	18.3x	14.4%

Source: FactSet; based on consensus estimates.

IT Professional Services - Europe										'18 - '19E		Valuation Multiples						EPS			
As of March 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	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA		Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	LTM	2019E	Rate	
Capgemini SE	\$121.96	87.2%	\$20,403	\$18,649	\$14,973	\$16,064	\$1,990	\$2,312	0.6%	12.1%	13.7%	1.25x	1.16x	9.4x	8.1x	24.6x	16.6x	9.6%			
Atos SE	97.07	65.0	10,375	15,878	13,908	14,952	1,874	2,216	-4.4	26.4	13.5	1.14x	1.06x	8.5	7.2	14.4	9.7	5.9			
Sage Group plc	8.81	90.1	9,568	10,443	2,403	2,635	685	687	14.5	89.3	28.5	4.35x	3.96x	15.3	15.2	24.9	21.7	3.8			
Alten SA	106.59	95.8	3,606	3,672	2,575	2,881	243	304	18.4	14.5	10.3	1.43x	1.27x	15.1	12.1	20.1	17.0	12.3			
Altran Technologies SA	10.91	67.8	2,804	4,167	2,840	3,655	360	529	31.3	14.1	12.7	1.47x	1.14x	11.6	7.9	19.8	10.9	16.3			
Tieto Oyj	29.65	79.0	2,198	2,354	1,815	1,880	235	258	-1.3	8.1	12.9	1.30x	1.25x	10.0	9.1	15.7	14.0	NA			
Sopra Steria Group SA	118.66	54.2	2,437	3,213	4,647	4,934	386	456	3.5	6.4	8.3	0.69x	0.65x	8.3	7.0	16.9	10.3	12.3			
Reply S.p.A.	62.57	88.5	2,341	2,282	1,067	1,282	126	179	18.6	46.6	11.8	2.14x	1.78x	18.1	12.7	23.3	20.5	NA			
Indra Sistemas, S.A. Class A	11.23	75.6	1,984	3,117	3,416	3,580	342	370	-2.6	NA	NA	0.91x	0.87x	9.1	8.4	13.4	12.3	14.5			
EVRY ASA	3.67	90.7	1,362	1,827	1,503	1,553	211	212	-3.4	12.3	14.0	1.22x	1.18x	8.7	8.6	18.2	10.3	NA			
Devoteam SA	116.15	83.6	968	923	670	870	72	107	30.6	15.1	10.8	1.38x	1.06x	12.8	8.6	28.9	18.4	NA			
NNIT A/S	29.30	88.6	733	805	457	483	85	89	-0.6	18.0	18.6	1.76x	1.67x	9.4	9.1	20.1	19.2	NA			
Neuron SA	24.03	67.8	584	441	548	588	50	63	-2.5	9.0	9.2	0.80x	0.75x	8.8	7.0	19.4	17.5	NA			
Aubay SA	32.45	60.7	428	442	432	490	43	53	12.4	10.5	9.9	1.02x	0.90x	10.3	8.4	15.1	12.2	11.1			
Endava Plc Sponsored ADR Class A	30.10	95.6	361	1,566	293	419	49	78	NA	33.2	16.7	5.35x	3.74x	32.0	20.1	62.5	29.4	23.6			
Allgeier SE	29.72	71.9	300	451	768	915	26	60	30.0	13.9	6.2	0.59x	0.49x	17.5	7.5	37.0	16.2	NA			
Columbus A/S	2.04	70.2	249	266	185	308	21	32	52.8	8.2	11.4	1.44x	0.86x	12.6	8.4	16.8	13.6	NA			
Proware SA	11.32	67.0	88	191	193	203	35	40	-1.9	13.6	17.9	0.99x	0.94x	5.5	4.8	6.1	5.8	7.0			
ITS Group SA	5.57	61.3	44	60	203	159	9	10	NA	3.9	4.1	0.30x	0.38x	6.9	5.8	14.1	9.1	NA			
Median									3.5%	13.7%	12.2%	1.25x	1.06x	10.0x	8.4x	19.4x	14.0x	11.7%			
Mean									11.5%	19.7%	12.8%	1.55x	1.32x	12.1x	9.3x	21.6x	15.0x	11.6%			

Source: FactSet; based on consensus estimates.

IT Professional Services - India										'18 - '19E		Valuation Multiples						EPS	
As of March 1, 2019										Revenue	Gross	EBITDA	EV/Rev		EV/EBITDA		P/E		Growth
\$ in millions except per share data										Rate	Margin	Margin	LTM	2019E	LTM	2019E	LTM	2019E	Rate
Company	Current Price	% of 52 Wk. High	Market Value		Revenue		EBITDA												
			Equity	Enterprise	LTM	2019E	LTM	2019E		LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E		
Tata Consultancy Services Limited	\$28.10	90.1%	\$105,456	\$100,170	\$19,729	\$22,268	\$5,347	\$6,057	19.0%	32.2%	27.1%	5.08x	4.50x	18.7x	16.5x	25.1x	22.1x	14.7%	
Infosys Limited	10.46	96.7	45,688	41,707	11,122	12,541	2,954	3,222	16.6	35.4	26.4	3.75x	3.33x	14.1	12.9	21.6	18.9	10.3	
Cognizant Technology Solutions Corp	72.13	84.8	41,482	38,358	16,125	17,348	3,247	3,774	17.1	35.8	20.1	2.38x	2.21x	11.8	10.2	20.0	16.2	10.7	
Wipro Limited	5.30	95.0	23,978	20,288	8,051	8,721	1,551	1,782	5.9	29.0	19.3	2.52x	2.33x	13.1	11.4	20.4	17.5	9.2	
HCL Technologies Limited	14.86	89.2	20,689	19,946	8,089	9,294	1,875	2,172	23.7	27.6	23.3	2.47x	2.15x	10.6	9.2	15.0	13.4	10.4	
Tech Mahindra Limited	11.74	99.5	11,522	9,844	4,760	5,291	858	982	16.7	27.0	18.3	2.07x	1.86x	11.5	10.0	16.9	15.7	12.1	
Oracle Financial Services Software Lir	49.41	74.2	4,238	3,936	677	745	277	324	10.0	47.2	41.5	5.82x	5.28x	14.2	12.1	23.2	19.5	NA	
Mphasis Limited	14.62	80.4	2,721	2,693	1,046	1,207	182	212	25.1	11.9	17.5	2.57x	2.23x	14.8	12.7	19.3	16.6	13.3	
L&T Technology Services Ltd.	21.86	86.9	2,274	2,247	672	805	117	145	48.5	20.4	17.6	3.34x	2.79x	19.1	15.4	21.9	20.8	17.2	
Mindtree Limited	13.14	79.5	2,158	2,022	933	1,087	144	171	31.5	31.4	15.4	2.17x	1.86x	14.1	11.8	20.8	18.5	24.9	
Sonda S.A.	1.68	81.3	1,460	1,657	1,220	1,308	139	169	-7.7	17.6	11.4	1.36x	1.27x	11.9	9.8	89.7	21.2	7.1	
NIIT Technologies Limited	18.71	94.1	1,156	1,050	490	584	87	105	31.7	34.3	18.1	2.14x	1.80x	12.0	10.0	21.3	16.8	27.4	
Cyient Limited	9.18	69.7	1,038	925	634	718	85	102	22.4	24.2	13.6	1.46x	1.29x	10.8	9.1	17.6	14.4	14.5	
Zensar Technologies Limited	2.83	57.6	638	654	523	616	63	80	30.9	20.8	12.1	1.25x	1.06x	10.5	8.2	15.0	12.4	NA	
Persistent Systems Limited	9.42	70.7	753	602	461	512	80	91	12.6	20.3	17.9	1.31x	1.18x	7.5	6.6	15.7	13.1	15.2	
Sonata Software Limited	4.80	81.2	505	462	386	427	44	51	16.1	19.7	11.4	1.19x	1.08x	10.6	9.0	14.9	13.2	NA	
Birlasoft Limited	1.52	33.4	416	253	509	675	62	89	24.6	1.4	13.1	0.50x	0.38x	4.1	2.8	6.9	9.2	23.7	
Roit India Limited	0.10	09.7	17	360	336	-	59	-	NA	17.8	18.3	1.07x	NA	6.1	NA	NA	NA	NA	
Median									19.0%	25.6%	18.0%	2.15x	1.86x	11.9x	10.0x	20.0x	16.6x	13.9%	
Mean									20.3%	25.2%	19.0%	2.36x	2.15x	12.0x	10.5x	22.7x	16.4x	15.0%	

Source: FactSet; based on consensus estimates.

IT Professional Services - China										'18 - '19E		Valuation Multiples						EPS	
As of March 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	\$3.21	74.4%	\$4,142	\$5,528	\$6,303	\$8,530	\$146	\$241	110.5%	10.7%	2.3%	0.88x	0.65x	37.8x	23.0x	50.8x	32.0x	25.8%	
Neusoft Corporation Class A	1.80	66.7	2,239	2,232	1,056	1,249	56	116	10.2	31.5	5.3	2.11x	1.79x	39.7	19.2	14.9	29.1	NA	
Chinasoft International Ltd.	0.63	64.3	1,559	1,935	1,519	1,810	249	169	23.1	30.6	10.8	1.27x	1.07x	7.8	11.5	14.6	14.0	25.5	
Beijing Teamsun Technology Co., Ltd.	1.04	49.7	1,151	1,494	776	-	31	-	NA	16.8	0.8	1.93x	NA	48.3	NA	82.2	NA	NA	
Beyondsoft Corporation Class A	1.32	65.5	692	600	389	-	39	-	NA	24.8	10.5	1.54x	NA	15.6	NA	18.2	NA	NA	
Median									23.1%	24.8%	5.3%	1.54x	1.07x	37.8x	19.2x	18.2x	29.1x	25.7%	
Mean									47.9%	22.9%	6.0%	1.55x	1.17x	29.8x	17.9x	36.1x	25.0x	25.7%	

Source: FactSet; based on consensus estimates.

Gvt. IT Professional Services - North America

As of March 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
									LTM	2019E	LTM	2019E	Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	P/E
Booz Allen Hamilton Holding Corporati	\$53.52	97.8%	\$7,497	\$9,218	\$6,560	\$7,013	\$670	\$713	15.3%	22.9%	10.2%	1.41x	1.31x	13.8x	12.9x	18.7x	18.4x	14.6%				
CACI International Inc Class A	184.31	91.8	4,582	5,654	4,642	5,155	461	500	16.8	31.9	9.9	1.22x	1.10x	12.3	11.3	17.7	17.3	10.0				
Kratos Defense & Security Solutions, I	16.71	93.5	1,734	1,884	656	731	53	74	-2.7	25.3	8.1	2.87x	2.58x	35.4	25.6	NA	80.7	NA				
ManTech International Corporation Clz	54.98	80.7	1,462	2,194	1,959	2,119	165	178	23.4	14.3	8.4	1.12x	1.04x	13.3	12.3	26.7	24.5	8.0				
ICF International, Inc.	76.25	92.7	1,435	1,663	1,338	1,449	119	137	17.9	34.3	8.6	1.24x	1.15x	13.9	12.2	24.0	18.2	12.2				
KEYW Holding Corporation	7.49	74.5	373	638	507	520	44	49	17.7	22.7	8.3	1.26x	1.23x	14.5	13.0	NA	NA	NA				
Median									17.3%	24.1%	8.5%	1.25x	1.19x	13.8x	12.6x	21.4x	18.4x	11.1%				
Mean									14.7%	25.2%	8.9%	1.52x	1.40x	17.2x	14.6x	21.8x	31.8x	11.2%				

Source: FactSet; based on consensus estimates.

IT Staff Augmentation										'18 - '19E		Valuation Multiples						EPS		
As of March 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
Robert Half International Inc.	\$68.20	85.3%	\$8,121	\$8,017	\$5,800	\$6,187	\$653	\$694	17.5%	40.4%	11.3%	1.38x	1.30x	12.3x	11.6x	19.1x	17.0x	8.4%		
Insperty, Inc.	127.79	96.4	5,231	5,019	3,829	4,357	202	278	32.0	8.8	5.3	1.31x	1.15x	24.9	18.0	39.7	27.8	16.5		
ManpowerGroup Inc.	84.51	68.6	5,103	6,059	21,991	21,111	922	855	0.4	16.3	4.2	0.28x	0.29x	6.6	7.1	9.9	10.9	3.1		
ASGN Inc	64.92	68.9	3,407	4,545	3,400	3,857	349	452	46.9	30.1	NA	1.34x	1.18x	13.0	10.1	21.8	13.9	8.0		
Kforce Inc.	36.94	84.9	955	1,007	1,418	1,449	90	98	6.7	29.0	6.3	0.71x	0.69x	11.2	10.2	16.1	14.8	NA		
Kelly Services, Inc. Class A	24.20	74.9	942	913	5,514	5,728	113	124	6.6	17.6	2.1	0.17x	0.16x	8.1	7.4	41.7	10.3	NA		
Heidrick & Struggles International, Inc.	43.27	95.6	821	565	736	739	83	86	15.4	28.5	11.1	0.77x	0.77x	6.8	6.6	17.1	17.6	NA		
Mastech Digital, Inc.	6.79	59.1	74	113	177	-	14	-	NA	25.5	NA	0.64x	NA	8.3	NA	11.3	NA	NA		
Hudson Global, Inc.	1.55	72.4	49	13	172	-	NA	-	NA	46.4	-1.8	0.07x	NA	NA	NA	NA	NA	NA		
Median									15.4%	28.5%	5.3%	0.71x	0.77x	9.8x	10.1x	18.1x	14.8x	8.2%		
Mean									17.9%	27.0%	5.5%	0.74x	0.79x	11.4x	10.1x	22.1x	16.0x	9.0%		

Source: FactSet; based on consensus estimates.

IT Solution Provider - North America										'18 - '19E		Valuation Multiples						EPS	
As of March 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.	\$94.83	97.7%	\$13,946	\$17,998	\$16,241	\$17,241	\$1,253	\$1,386	13.5%	16.7%	7.7%	1.11x	1.04x	14.4x	13.0x	22.7x	16.7x	14.5%	
Insight Enterprises, Inc.	56.45	97.4	2,004	2,391	7,080	7,357	275	305	9.7	14.0	3.9	0.34x	0.33x	8.7	7.9	12.4	11.8	NA	
Presidio, Inc.	16.81	94.4	1,387	2,408	2,949	3,001	214	240	5.7	17.6	7.2	0.82x	0.80x	11.2	10.0	44.2	10.5	83.0	
ePlus inc.	89.92	83.8	1,224	1,200	1,371	1,488	91	112	7.0	22.8	6.2	0.88x	0.81x	13.2	10.7	21.4	16.7	12.4	
PC Connection, Inc.	41.41	96.2	1,093	1,020	2,699	2,809	101	104	-3.5	14.7	3.7	0.38x	0.36x	10.1	9.8	17.2	16.9	8.0	
PCM, Inc.	34.07	98.5	415	539	2,164	2,210	54	65	0.8	15.9	2.5	0.25x	0.24x	9.9	8.3	18.6	13.3	20.0	
Pivot Technology Solutions, Inc.	1.05	57.8	42	155	1,429	1,319	21	17	-12.7	10.8	1.5	0.11x	0.12x	7.3	9.2	NA	NA	NA	
Median									5.7%	15.9%	3.9%	0.38x	0.36x	10.1x	9.8x	20.0x	15.0x	14.5%	
Mean									2.9%	16.1%	4.7%	0.55x	0.53x	10.7x	9.8x	22.8x	14.3x	27.6%	

Source: FactSet; based on consensus estimates.

IT Solution Provider - Europe										'18 - '19E		Valuation Multiples						EPS	
As of March 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	
Bechtle AG	\$89.22	84.3%	\$3,747	\$3,989	\$4,585	\$5,572	\$243	\$310	27.2%	14.6%	5.3%	0.87x	0.72x	16.4x	12.9x	26.4x	20.4x	16.2%	
Softcat Plc	10.30	89.2	2,043	1,955	1,408	1,732	91	108	40.6	16.2	6.5	1.39x	1.13x	21.4	18.2	28.4	24.2	2.0	
Computacenter Plc	14.83	68.6	1,693	1,653	5,339	6,457	187	212	21.7	12.7	3.5	0.31x	0.26x	8.9	7.8	16.1	13.9	NA	
Atea ASA	14.36	83.4	1,567	1,563	4,041	4,343	242	162	5.3	4.9	6.0	0.39x	0.36x	6.5	9.6	28.5	18.3	NA	
CANCOM SE	41.68	66.5	1,461	1,436	1,493	1,677	114	136	16.8	8.1	7.7	0.96x	0.86x	12.6	10.5	29.9	21.9	9.0	
Datatec Limited	2.21	94.0	499	669	3,826	-	78	-	NA	15.0	2.2	0.17x	NA	8.6	NA	NA	NA	NA	
Plaisio Computers SA	4.79	83.7	106	79	335	-	13	-	NA	21.3	3.9	0.24x	NA	6.1	NA	18.1	NA	NA	
Median									21.7%	14.6%	5.3%	0.39x	0.72x	8.9x	10.5x	27.4x	20.4x	9.0%	
Mean									22.3%	13.3%	5.0%	0.62x	0.66x	11.5x	11.8x	24.5x	19.8x	9.1%	

Source: FactSet; based on consensus estimates.

IT Distributor - North America										'18 - '19E		Valuation Multiples						EPS	
As of March 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.	\$80.28	96.7%	\$6,817	\$10,128	\$29,677	\$29,974	\$1,391	\$1,424	11.8%	11.8%	4.7%	0.34x	0.34x	7.3x	7.1x	9.9x	8.8x	8.6%	
SYNNEX Corporation	98.94	77.1	5,067	7,093	20,054	22,188	812	1,091	28.2	9.4	4.1	0.35x	0.32x	8.7	6.5	13.8	8.3	13.0	
Tech Data Corporation	102.83	94.7	3,837	4,727	37,867	38,147	715	812	6.3	5.9	1.9	0.12x	0.12x	6.6	5.8	17.6	9.1	12.2	
Anixter International Inc.	59.34	73.7	1,987	3,194	8,400	8,716	392	437	10.0	19.3	4.7	0.38x	0.37x	8.1	7.3	12.9	9.4	8.0	
ScanSource, Inc.	38.08	86.0	979	1,330	3,908	4,051	144	156	9.3	10.7	3.7	0.34x	0.33x	9.3	8.5	17.7	10.2	NA	
Wayside Technology Group, Inc.	11.76	77.4	53	36	181	-	5	-	NA	14.8	NA	0.20x	NA	7.3	NA	14.5	NA	NA	
Median									10.0%	11.2%	4.1%	0.34x	0.33x	7.7x	7.1x	14.1x	9.1x	10.4%	
Mean									13.1%	12.0%	3.8%	0.29x	0.30x	7.9x	7.1x	14.4x	9.2x	10.5%	

Source: FactSet; based on consensus estimates.

Business Process Outsourcing - North America

As of March 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	Growth Rate	Gross Margin LTM	EBITDA Margin LTM	EV/Rev		EV/EBITDA		P/E		Growth Rate
														LTM	2019E	LTM	2019E	LTM	2019E	
Automatic Data Processing, Inc.	\$153.90	99.6%	\$67,043	\$67,828	\$13,841	\$14,717	\$3,237	\$3,544	14.5%	46.1%	23.4%	4.90x	4.61x	21.0x	19.1x	37.4x	27.0x	15.5%		
Fidelity National Information Services,	108.39	97.8	35,001	44,274	8,423	8,402	3,129	3,279	-8.0	33.9	37.1	5.26x	5.27x	14.1	13.5	42.5	15.2	11.4		
Paychex, Inc.	77.43	99.8	27,804	27,289	3,459	3,897	1,415	1,585	18.6	69.1	40.9	7.89x	7.00x	19.3	17.2	29.0	25.9	8.7		
Iron Mountain, Inc.	35.78	95.9	10,246	18,306	4,226	4,335	1,436	1,494	12.7	42.4	34.0	4.33x	4.22x	12.7	12.3	33.3	31.9	5.6		
LiveRamp Holdings, Inc.	54.62	99.1	3,727	2,681	617	343	NA	NA	-62.2	55.0	-12.9	4.35x	7.81x	NA	NA	3.9	NA	25.0		
TTEC Holdings, Inc.	34.75	88.1	1,605	1,796	1,536	1,563	194	212	5.8	20.2	12.7	1.17x	1.15x	9.2	8.5	NA	18.5	14.0		
CSG Systems International, Inc.	41.82	87.2	1,380	1,571	875	932	174	207	18.0	42.7	19.9	1.80x	1.69x	9.0	7.6	20.8	13.0	NA		
Sykes Enterprises, Incorporated	30.03	95.2	1,285	1,229	1,626	1,664	158	190	4.9	29.5	9.0	0.76x	0.74x	7.8	6.5	25.9	13.6	10.0		
CBIZ, Inc.	20.91	85.8	1,152	1,289	922	967	116	121	13.0	14.3	12.6	1.40x	1.33x	11.1	10.7	19.2	17.5	12.0		
Median									12.7%	42.4%	19.9%	4.33x	4.22x	11.9x	11.5x	27.5x	18.0x	11.7%		
Mean									1.9%	39.2%	19.6%	3.54x	3.76x	13.0x	11.9x	26.5x	20.3x	12.8%		

Source: FactSet; based on consensus estimates.

Business Process Outsourcing - India

As of March 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
									LTM	2019E	LTM	2019E	Rate	LTM	LTM	LTM	2019E	LTM	2019E	LTM	2019E	LTM
Genpact Limited	\$33.54	98.7%	\$6,353	\$7,442	\$3,001	\$3,364	\$450	\$570	22.9%	34.7%	15.0%	2.48x	2.21x	16.5x	13.1x	23.1x	16.9x	8.3%				
WNS (Holdings) Limited Sponsored AI	53.49	98.2	2,673	2,688	801	849	142	162	21.1	33.7	18.3	3.36x	3.17x	19.0	16.6	26.7	19.6	11.9				
ExlService Holdings, Inc.	61.17	91.2	2,096	2,142	883	993	118	155	30.2	28.1	13.4	2.43x	2.16x	18.1	13.8	37.8	20.5	10.4				
eClerx Services Limited	14.86	68.7	575	565	200	216	43	48	7.2	35.4	22.0	2.82x	2.62x	13.1	11.7	17.4	16.0	NA				
Firstsource Solutions Limited	0.63	50.9	436	520	527	567	74	77	7.2	21.7	12.1	0.99x	0.92x	7.0	6.8	8.3	7.6	10.0				
Hinduja Global Solutions Limited	8.86	58.9	185	197	637	692	55	69	21.1	6.9	8.9	0.31x	0.28x	3.6	2.9	7.7	6.3	NA				
R Systems International Limited	0.67	83.5	103	59	93	-	6	-	NA	21.2	5.2	0.63x	NA	9.4	NA	17.5	NA	NA				
Datamatics Global Services Limited	1.45	69.4	86	84	149	-	17	-	NA	22.0	11.2	0.57x	NA	5.1	NA	10.2	NA	NA				
HOV Services Limited	1.95	43.4	25	25	2	-	0	-	NA	NA	NA	12.83x	NA	NA	NA	73.1	NA	NA				
Median									21.1%	25.0%	12.7%	2.43x	2.19x	11.2x	12.4x	17.5x	16.4x	10.2%				
Mean									18.3%	25.4%	13.3%	2.93x	1.89x	11.5x	10.8x	24.6x	14.5x	10.1%				

Source: FactSet; based on consensus estimates.

SaaS										'18 - '19E		Valuation Multiples						EPS		
As of March 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
salesforce.com, inc.	\$164.53	99.0%	\$125,865	\$130,097	\$12,530	\$15,740	\$1,379	\$3,637	21.1%	72.6%	11.0%	10.38x	8.27x	NA	35.8x	NA	60.1x	27.5%		
ServiceNow, Inc.	243.52	99.7	43,955	42,471	2,609	3,428	107	925	31.4	76.1	4.1	16.28x	12.39x	NA	45.9	NA	78.6	26.9		
Workday, Inc. Class A	189.14	94.6	28,560	40,430	2,822	3,470	NA	564	25.5	70.5	-8.3	14.33x	11.65x	NA	NA	NA	NA	32.5		
Splunk Inc.	134.65	93.7	19,899	18,497	1,803	2,164	NA	309	23.1	79.7	-15.0	10.26x	8.55x	NA	NA	NA	82.7	36.0		
Twilio, Inc. Class A	123.53	99.7	12,820	11,685	650	1,075	NA	44	65.4	53.7	-13.7	17.97x	10.87x	NA	NA	NA	NA	29.8		
Ultimate Software Group, Inc.	331.45	90.6	10,364	10,317	1,141	1,366	133	331	19.8	61.3	11.7	9.05x	7.55x	NA	31.2	NA	53.6	22.9		
Tableau Software, Inc. Class A	132.47	98.1	10,014	9,924	1,155	1,366	NA	214	18.2	87.7	-3.7	8.59x	7.27x	NA	46.3	NA	77.3	20.0		
Zendesk, Inc.	80.27	99.6	8,698	8,504	599	803	NA	56	34.0	69.7	-16.6	14.20x	10.60x	NA	NA	NA	NA	50.0		
HubSpot, Inc.	171.92	95.5	7,078	6,345	513	651	NA	79	27.0	80.4	-4.8	12.37x	9.74x	NA	NA	NA	NA	68.0		
New Relic, Inc.	108.06	94.1	6,197	5,852	446	569	6	87	27.7	83.8	0.1	13.13x	10.28x	NA	NA	NA	NA	14.0		
LogMeIn, Inc.	81.49	63.2	4,143	4,329	1,204	1,255	376	409	3.9	62.3	31.2	3.60x	3.45x	11.5	10.6	57.5	16.5	15.0		
Cornerstone OnDemand, Inc.	57.32	95.2	3,388	3,280	538	564	38	128	4.8	73.2	6.8	6.10x	5.82x	NA	25.6	NA	58.8	11.0		
Median									24.3%	72.9%	-1.8%	11.38x	9.14x	11.5x	33.5x	57.5x	60.1x	27.2%		
Mean									25.2%	72.6%	0.2%	11.35x	8.87x	11.5x	32.5x	57.5x	61.1x	29.5%		

Source: FactSet; based on consensus estimates.

Enterprise Applications										'18 - '19E		Valuation Multiples						EPS	
As of March 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	
Microsoft Corporation	\$112.53	96.9%	\$863,354	\$824,850	\$118,224	\$130,576	\$49,707	\$56,305	26.1%	64.8%	41.8%	6.98x	6.32x	16.6x	14.6x	26.1x	24.0x	12.9%	
Oracle Corporation	52.51	98.2	188,454	209,561	39,777	40,062	17,005	18,603	2.6	75.4	42.7	5.27x	5.23x	12.3	11.3	51.5	14.8	8.6	
SAP SE	108.06	84.8	132,747	133,039	28,034	30,899	7,499	9,538	6.1	NA	NA	4.75x	4.31x	17.7	13.9	27.8	19.8	10.9	
Adobe Inc.	264.01	95.1	128,765	132,331	8,981	11,321	3,138	4,934	52.0	85.7	34.9	14.73x	11.69x	42.2	26.8	50.8	33.3	16.6	
Intuit Inc.	250.41	99.4	64,874	65,188	6,431	6,930	1,995	2,562	25.3	83.3	31.0	10.14x	9.41x	32.7	25.4	44.6	36.4	15.9	
Red Hat, Inc.	182.59	99.5	32,275	32,562	3,255	3,774	622	1,003	33.0	84.8	19.1	10.00x	8.63x	NA	32.5	NA	46.6	15.9	
VMware, Inc. Class A	178.20	97.2	19,583	75,215	8,974	9,893	2,689	3,815	35.5	86.0	29.9	8.38x	7.60x	28.0	19.7	30.5	27.1	13.9	
Symantec Corporation	22.53	77.2	14,402	17,223	4,764	4,911	1,203	2,020	2.9	73.8	25.2	3.62x	3.51x	14.3	8.5	NA	13.1	6.0	
Citrix Systems, Inc.	106.04	90.8	13,968	16,178	2,974	3,085	837	1,098	9.2	84.9	28.2	5.44x	5.24x	19.3	14.7	26.9	17.6	8.9	
Aspen Technology, Inc.	101.99	85.8	7,103	7,422	506	560	210	282	14.1	89.4	41.4	14.66x	13.25x	35.4	26.3	42.4	29.4	3.5	
Manhattan Associates, Inc.	54.90	88.0	3,569	3,547	559	571	143	130	-4.0	55.4	25.5	6.34x	6.22x	24.9	27.3	34.8	38.2	NA	
Tenable Holdings, Inc.	32.10	81.5	2,989	1,440	267	342	NA	NA	NA	83.9	-24.8	5.38x	4.21x	NA	NA	NA	NA	0.7	
Median									14.1%	83.9%	29.9%	6.66x	6.27x	22.1x	19.7x	34.8x	27.1x	10.9%	
Mean									18.4%	78.8%	26.8%	7.97x	7.13x	24.3x	20.1x	37.3x	27.3x	10.3%	

Source: FactSet; based on consensus estimates.