



June 2018

The Lighthouse

Software

Online & Digital

Tech Enabled Business Services

Pharus Observations

Salesforce continues acquisition spree past CRM Software-as-a-Service



Since the beginning of 2016, Salesforce has completed 16 acquisitions, integrating a wide range of new companies and technology into the Salesforce ecosystem. Most recently, in July, Salesforce acquired **Datorama**, a New York City-based marketing analytics firm that specializes in data integration, visualization and modeling, for an estimated **\$800 million**. The acquisition of Datorama is intended to enhance the power of Salesforce’s Marketing Cloud with expanded data integration and intelligence. It reflects Salesforce’s overall strategy of expansion beyond customer relationship management SaaS, a space it essentially revolutionized.

Salesforce made its largest acquisition to date in March 2018, acquiring **MuleSoft** for **\$6.5 billion**. MuleSoft, which provides integration software for connecting applications, data and devices, will become part of Salesforce Integration Cloud, enabling all enterprises to surface their data to deliver connected customer experiences across all channels and touchpoints. The intent is for MuleSoft to help Salesforce find new hybrid cloud customers utilizing all of their services and opening numerous cross-selling opportunities for the CRM behemoth. Salesforce wants to eliminate all possible obstacles that could stand between enterprise-level organizations and becoming Salesforce customers.

Other notable acquisitions since 2016 include the acquisition of B2B online commerce transaction processing SaaS company, **CloudCraze**, in March 2018 for **\$182 million**; their acquisition of digital marketing services company **Sequence** for **\$26 million** in January 2017; and their acquisition of **Krux Digital** for **\$680 million**, which provides real-time audience data management and targeting SaaS for marketers, web publishers and ad agencies, in October 2016.

Salesforce is making moves to enhance and expand the customer experience, while remaining committed to top-line growth. CEO, founder and chairman Marc Benioff has said “[O]ur approach is really different because we really see every B2B company and every B2C company becoming a B2B2C company.” Aside from expanded offerings, another result of these completed transactions is increased revenue and that Salesforce will reach its goal of **\$20 billion in sales** “faster than imagined,” said Benioff. As Salesforce continues to grow while dominating the CRM market (according to IDC, they had **19.6% of the market** in 2017), it will be exciting to see their future M&A plays and in what direction Benioff plans to steer the Salesforce ship in next.



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I Capital market trends

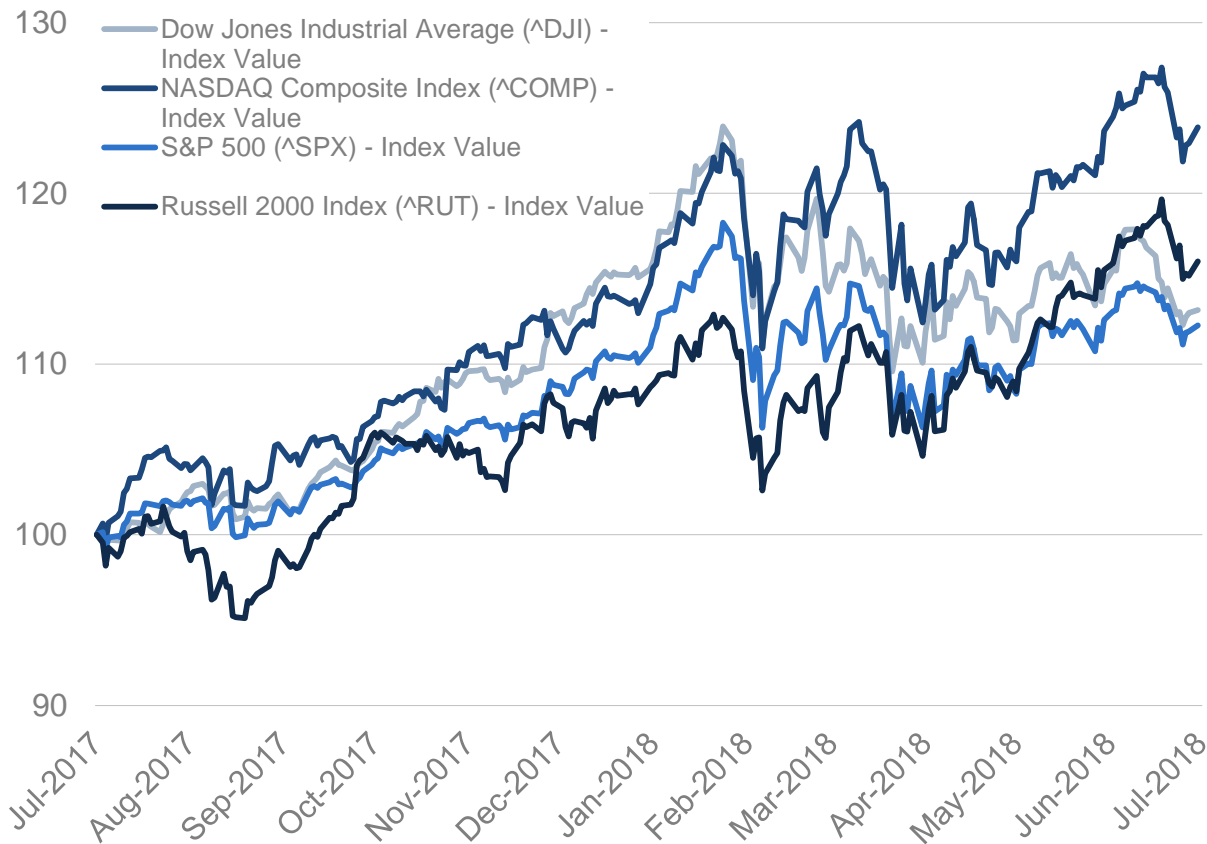


Capital market trends



Relative Performance of Major Indices

Through June 30, 2018 (Base = 100, 07/01/2018)



Index	As of 30-Jun-18	Change %		
		1 Year	3 Months	1 Month
Dow Jones	24,271.41	13.7%	0.01%	-.004%
Nasdaq	7,510.30	22.2%	6.3%	1.5%
S&P 500	2,718.37	12.3%	2.9%	1.1%
Russell 2000	1,643.07	16.0%	7.4%	1.2%



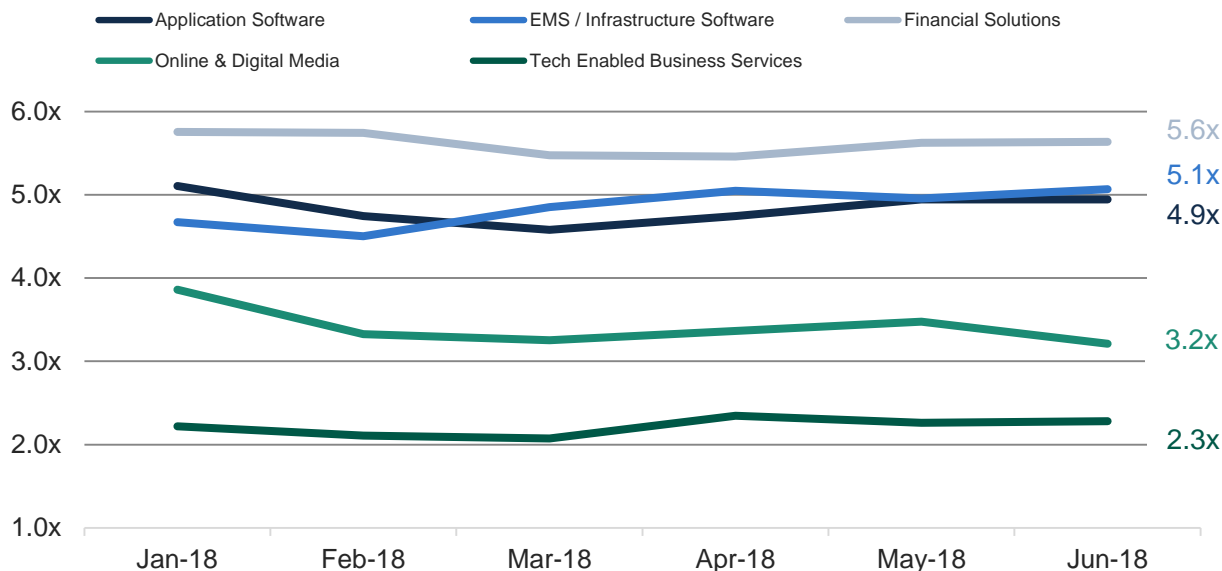
Public market valuations



Public market valuations



Historical Median TEV / Revenue Multiples



	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Application Software						
Customer Relationship Management (CRM) & Customer Engagement	7.6x	7.8x	7.9x	8.2x	8.4x	8.4x
Accounting & Enterprise Resource Planning (ERP)	5.2x	5.1x	4.5x	4.7x	4.9x	5.0x
Supply Chain Management (SCM) & Logistics	4.7x	4.3x	4.4x	4.6x	4.9x	5.0x
HR & Workforce Management	5.1x	4.8x	4.6x	6.3x	6.6x	6.4x
Education Technology	2.4x	2.6x	5.1x	5.0x	4.8x	4.8x
Industrial & Automation Software	2.8x	2.7x	2.8x	2.8x	2.9x	2.8x
Business Intelligence & Data	5.4x	4.7x	5.6x	4.8x	5.5x	4.7x
Design & Engineering Software	5.9x	5.7x	6.0x	6.3x	6.3x	6.5x
EMS / Infrastructure Software						
Security Software	4.7x	4.6x	5.1x	5.2x	5.8x	5.6x
System and Network Management Software	3.6x	3.5x	3.4x	3.7x	3.6x	3.5x
Platform / OS	5.1x	4.6x	4.6x	5.2x	5.2x	5.2x
Financial Solutions						
Banking Solutions	6.6x	6.2x	6.4x	6.3x	6.5x	6.7x
Capital Market & Investment Solutions	5.9x	5.2x	5.2x	5.3x	5.7x	5.8x
Consumer Data & Analytics	5.3x	5.0x	5.0x	5.3x	5.8x	5.9x
Payment Processing	4.7x	4.4x	4.5x	4.6x	4.3x	4.3x
Insurance Solutions	8.4x	8.6x	7.4x	7.7x	6.9x	7.0x
Online & Digital Media						
Digital Advertising & Marketing	4.7x	4.1x	3.2x	3.3x	2.9x	2.9x
Digital Media & Video	3.4x	3.0x	3.5x	3.7x	3.9x	3.9x
Digital Advertising Agencies & Service Providers	1.4x	1.4x	1.2x	1.4x	1.3x	1.3x
Online Retail & Marketplaces	3.1x	3.2x	3.2x	2.8x	3.4x	3.3x
Digital Gaming	3.3x	3.1x	3.0x	3.4x	3.6x	3.2x
Social Media	6.5x	6.6x	6.2x	6.2x	5.9x	5.9x
Digital Commerce Solutions	1.6x	1.7x	1.3x	1.4x	1.6x	1.5x
Other Digital Companies	4.7x	4.3x	4.7x	4.7x	5.0x	4.9x
Tech Enabled Business Services						
IT Services, Integration & Consulting	1.7x	1.6x	1.6x	1.7x	1.6x	1.6x
Business Process Management (BPM)	3.7x	3.7x	3.7x	4.5x	5.0x	5.0x
Data Center Hosting & Services	4.2x	4.5x	6.5x	6.7x	6.5x	6.6x
Call Center	0.8x	0.8x	0.8x	0.8x	0.8x	0.8x



Public market valuations



Current & Forward Market Multiples

	Median TEV/Revenue		Median TEV/EBITDA	
	LTM	NTM	LTM	NTM
Application Software				
Customer Relationship Management (CRM) & Customer Engagement	8.4x	6.1x	40.2x	30.9x
Accounting & Enterprise Resource Planning (ERP)	5.0x	4.8x	28.2x	19.0x
Supply Chain Management (SCM) & Logistics	5.0x	5.0x	32.1x	25.0x
HR & Workforce Management	6.4x	5.9x	50.7x	27.1x
Education Technology	4.8x	3.1x	18.9x	11.7x
Industrial & Automation Software	2.3x	2.1x	14.7x	12.6x
Business Intelligence & Data	5.7x	4.9x	14.8x	16.2x
Design & Engineering Software	6.5x	5.8x	23.9x	18.1x
EMS / Infrastructure Software				
Security Software	5.6x	5.0x	14.9x	19.5x
System and Network Management Software	3.5x	3.3x	13.7x	12.1x
Platform / OS	5.2x	5.1x	17.4x	14.5x
Financial Solutions				
Banking Solutions	6.7x	6.3x	23.2x	18.4x
Capital Market & Investment Solutions	5.8x	5.7x	21.9x	17.9x
Consumer Data & Analytics	5.9x	5.2x	19.0x	15.2x
Payment Processing	4.3x	4.5x	11.6x	12.7x
Insurance Solutions	7.0x	7.2x	18.6x	16.7x
Online & Digital Media				
Digital Advertising & Marketing	2.9x	2.3x	17.4x	17.6x
Digital Media & Video	5.7x	5.7x	27.5x	22.6x
Digital Advertising Agencies & Service Providers	1.3x	1.3x	8.7x	8.2x
Online Retail & Marketplaces	3.6x	2.5x	41.3x	17.3x
Digital Gaming	3.2x	2.6x	17.1x	11.1x
Social Media	5.9x	4.9x	28.5x	15.0x
Digital Commerce Solutions	1.5x	1.4x	11.4x	10.5x
Other Digital Companies	4.9x	4.6x	19.8x	15.1x
Tech Enabled Business Services				
IT Services, Integration & Consulting	1.6x	1.5x	12.6x	11.5x
Business Process Management (BPM)	5.0x	4.2x	16.9x	12.4x
Data Center Hosting & Services	6.6x	5.8x	20.6x	17.6x
Call Center	0.8x	0.9x	7.0x	6.9x

Medians				
Application Software	4.9x	4.6x	18.8x	16.8x
EMS / Infrastructure Software	4.9x	4.3x	15.6x	14.5x
Financial Solutions	5.6x	5.4x	19.0x	16.9x
Online & Digital Media	3.3x	2.8x	20.6x	14.8x
Tech Enabled Business Services	2.3x	2.1x	13.2x	11.7x



Public market valuations

Application Software



(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Customer Relationship Management (CRM) & Customer Engagement							
Five9	NasdaqGM:FIVN	\$1,961	\$1,994	9.2x	7.9x	NM	64.1x
LivePerson	NasdaqGS:LPSN	\$1,224	\$1,281	5.4x	5.0x	NM	51.5x
MINDBODY	NasdaqGM:MB	\$1,629	\$1,832	8.4x	6.1x	NM	NM
NICE Systems	TASE:NICE	\$6,310	\$6,328	4.9x	4.3x	21.2x	14.8x
Pegasystems	NasdaqGS:PEGA	\$4,051	\$4,306	4.9x	4.1x	NM	24.7x
Salesforce.com	NYSE:CRM	\$98,162	\$101,333	8.9x	7.1x	94.0x	30.9x
SDL	LSE:SDL	\$440	\$470	1.2x	1.1x	13.1x	10.6x
Veeva	NYSE:VEEV	\$10,106	\$11,025	14.0x	11.7x	59.3x	35.3x
Zendesk	NYSE:ZEN	\$5,399	\$5,697	11.6x	8.9x	NM	NM
Median				8.4x	6.1x	40.2x	30.9x
Accounting & Enterprise Resource Planning (ERP)							
Avalara, Inc.	NYSE:AVLR						
BasWare	HLSE:BAS1V	\$597	\$604	3.4x	3.5x	39.7x	NM
Blackline	NasdaqGS:BL	\$2,207	\$2,321	11.6x	9.3x	NM	NM
Coupa Software	NasdaqGS:COUP	\$3,283	\$3,548	16.3x	13.3x	NM	NM
Intuit	NasdaqGS:INTU	\$50,936	\$52,422	8.8x	7.9x	28.2x	21.2x
Kingdee International	SEHK:268	\$3,188	\$3,364	9.0x	7.5x	69.3x	25.4x
Model N	NYSE:MODN	\$570	\$568	3.8x	3.8x	NM	63.5x
Oracle	NYSE:ORCL	\$169,424	\$175,410	4.3x	4.2x	10.4x	8.7x
QAD	NasdaqGS:QADA	\$811	\$941	2.5x	2.4x	NM	45.8x
Sage	LSE:SGE	\$9,853	\$8,987	4.2x	3.9x	16.0x	13.5x
SAP	DB:SAP	\$137,405	\$137,817	5.0x	4.8x	18.7x	13.9x
Upland Software	NasdaqGM:UPLD	\$867	\$740	8.0x	6.1x	42.9x	16.9x
Median				5.0x	4.8x	28.2x	19.0x
Supply Chain Management (SCM) & Logistics							
Amber Road	NYSE:AMBR	\$270	\$257	3.4x	3.1x	NM	90.8x
Descartes Systems Group	TSX:DSG	\$2,516	\$2,501	10.3x	9.0x	32.1x	26.0x
Manhattan Associates	NasdaqGS:MANH	\$3,022	\$3,141	5.2x	5.5x	16.5x	22.6x
SPS Commerce	NasdaqGS:SPSC	\$1,110	\$1,276	4.9x	4.5x	51.8x	24.1x
Median				5.0x	5.0x	32.1x	25.0x



Public market valuations



Application Software (continued)

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
HR & Workforce Management							
Atlassian Corporation	NasdaqGS:TEAM	\$13,867	\$14,631	17.2x	13.3x	NM	49.1x
Benefit Focus	NasdaqGM:BNFT	\$1,135	\$1,067	4.3x	4.3x	NM	81.8x
CastLight Health	NYSE:CSLT	\$509	\$578	3.6x	3.2x	NM	NM
Ceridian HCM	NYSE:CDAY	\$5,823	\$4,537	7.5x	7.9x	50.7x	39.5x
Cornerstone OnDemand	NasdaqGS:CSOD	\$2,656	\$2,736	5.3x	5.2x	NM	25.9x
Dice Holdings	NYSE:DHX	\$143	\$122	0.7x	0.9x	4.7x	4.4x
Paycom	NYSE:PAYC	\$5,804	\$5,837	12.4x	10.0x	63.6x	24.5x
Paylocity	NasdaqGS:PCTY	\$2,970	\$3,099	8.3x	6.8x	95.6x	30.6x
TriNet Group	NYSE:TNET	\$4,015	\$3,932	1.2x	4.6x	15.6x	12.5x
Ultimate Software	NasdaqGS:ULTI	\$7,739	\$7,877	7.8x	6.7x	82.7x	27.1x
Verint Systems	NasdaqGS:VRNT	\$3,233	\$2,839	2.8x	2.6x	26.5x	10.5x
Workday	NasdaqGS:WDAY	\$24,306	\$26,162	10.7x	8.5x	NM	44.6x
Median				6.4x	5.9x	50.7x	27.1x
Industrial & Automation Software							
3M	NYSE:MMM	\$128,438	\$116,791	4.0x	3.8x	15.9x	13.3x
ABB	SWX:ABBN	\$49,798	\$46,516	1.5x	1.3x	11.5x	9.0x
American Software	NasdaqGS:AMSW.A	\$364	\$443	3.2x	2.9x	18.6x	15.9x
Aspen Technology	NasdaqGS:AZPN	\$6,723	\$6,624	13.5x	13.0x	31.1x	26.9x
Dassault	ENXTPA:DSY	\$33,620	\$35,771	8.9x	8.2x	32.0x	23.9x
Emerson	NYSE:EMR	\$46,355	\$43,564	2.8x	2.6x	13.3x	11.8x
Fanuc Corporation	TSE:6954	\$31,794	\$38,482	4.9x	4.9x	12.6x	14.1x
General Electric	NYSE:GE	\$252,151	\$118,207	2.0x	2.1x	45.6x	14.6x
HollySys Automation Tech	NasdaqGS:HOLI	\$981	\$1,336	1.8x	1.7x	7.5x	6.7x
Honeywell	NYSE:HON	\$115,786	\$107,595	2.8x	2.7x	13.6x	12.3x
Johnson Controls	NYSE:JCI	\$43,932	\$30,861	1.4x	1.4x	8.9x	8.6x
KUKA	DB:KU2	\$4,465	\$4,237	1.1x	1.1x	25.9x	12.6x
Materialise	NasdaqGS:MTLS	\$677	\$616	3.6x	3.1x	36.2x	22.3x
Metso	HLSE:METSO	\$5,051	\$5,023	1.6x	1.4x	14.8x	10.6x
OMRON Corp	TSE:6645	\$8,776	\$9,779	1.1x	1.1x	8.3x	7.9x
Parametric Technology	NasdaqGS:PTC	\$11,173	\$10,852	9.2x	8.5x	85.1x	32.5x
Rockwell Automation	NYSE:ROK	\$20,366	\$20,875	3.1x	3.0x	15.6x	12.9x
Schneider Electric	ENXTPA:SU	\$51,608	\$46,464	1.8x	1.7x	11.0x	9.9x
Siemens	DB:SIE	\$136,368	\$110,005	1.4x	1.4x	12.2x	10.3x
YASKAWA Electric Corp	TSE:6506	\$9,276	\$9,348	2.3x	2.0x	14.7x	12.8x
Yokogawa Electric Corp.	TSE:6841	\$4,385	\$4,754	1.2x	1.2x	9.4x	8.9x
Median				2.3x	2.1x	14.7x	12.6x



Public market valuations



Application Software (continued)

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Education Technology							
Blackbaud	NasdaqGS:BLKB	\$5,285	\$4,843	6.5x	5.9x	37.7x	24.6x
Cambium Learning Group	NasdaqCM:ABCD	\$574	\$525	3.6x	3.5x	18.9x	11.7x
Instructure	NYSE:INST	\$1,324	\$1,461	7.7x	6.0x	NM	NM
K12	NYSE:LRN	\$444	\$644	0.5x	0.5x	11.1x	4.1x
Rosetta Stone	NYSE:RST	\$326	\$362	1.8x	1.8x	NM	NM
Sunlands Online Education Group	NYSE:STG	\$1,175	\$1,539	6.0x	2.7x	NM	NM
Median				4.8x	3.1x	18.9x	11.7x
Business Intelligence & Data							
Alteryx	NYSE:AYX	\$2,134	\$2,313	14.6x	10.7x	NM	NM
AppFolio	NasdaqGM:APPF	\$2,044	\$2,090	13.3x	10.6x	NM	44.1x
Apptio	NasdaqGM:APTI	\$1,442	\$1,581	7.3x	6.1x	NM	NM
Cardylitics	NasdaqGM:CDLX	\$410	\$441	3.0x	2.5x	NM	NM
Cloudera	NYSE:CLDR	\$1,592	\$2,021	4.1x	3.4x	NM	NM
Corelogic	NYSE:CLGX	\$5,823	\$4,237	3.1x	3.1x	14.6x	11.7x
CoStar Group	NasdaqGS:CSGP	\$14,085	\$15,016	13.9x	11.4x	53.0x	33.8x
Domo, Inc.	NasdaqGM:DOMO	\$1,399	\$681	12.0x	NM	NM	NM
Gridsum Holding	NasdaqGS:GSUM	\$216	\$215	2.7x	1.6x	NM	16.8x
Hortonworks	NasdaqGS:HDP	\$1,351	\$1,440	4.7x	3.9x	NM	NM
Inovalon Holdings	NASDAQ:INOV	\$1,303	\$1,511	3.0x	2.1x	23.4x	6.9x
MicroStrategy	NasdaqGS:MSTR	\$767	\$1,462	1.5x	1.5x	12.9x	15.6x
MongoDB	NasdaqGM:MDB	\$2,242	\$2,513	13.2x	9.4x	NM	NM
NantHealth	NasdaqGS:NH	\$510	\$359	5.7x	4.9x	NM	NM
New Relic	NYSE:NEWR	\$5,383	\$5,631	15.2x	11.8x	NM	NM
Open Text	NasdaqGS:OTEX	\$11,476	\$9,412	4.2x	4.0x	15.0x	10.9x
PROS Holdings	NYSE:PRO	\$1,260	\$1,192	7.1x	6.4x	NM	NM
Sabre	NasdaqGS:SABR	\$9,862	\$6,770	2.7x	2.6x	13.7x	8.9x
Splunk	NasdaqGS:SPLK	\$13,493	\$14,371	10.0x	7.8x	NM	49.5x
Tableau	NYSE:DATA	\$7,105	\$7,971	7.7x	7.0x	NM	NM
TrueCar	NasdaqGS:TRUE	\$852	\$1,018	2.6x	2.3x	NM	20.8x
Varonis Systems	NasdaqGS:VRNS	\$1,988	\$2,142	8.6x	7.2x	NM	NM
Workiva	NYSE:WK	\$981	\$1,043	4.5x	4.0x	NM	NM
Yext	NYSE:YEXT	\$1,749	\$1,873	9.5x	7.2x	NM	NM
Median				6.4x	4.9x	14.8x	16.2x



Public market valuations

Application Software (continued)



(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Design & Engineering Software							
Ansys	NasdaqGS:ANSS	\$13,744	\$14,634	12.2x	10.9x	30.0x	24.3x
Altair Engineering	NasdaqGS:ALTR	\$2,268	\$2,330	6.5x	6.0x	NM	63.7x
Autodesk	NasdaqGS:ADSK	\$29,021	\$28,728	13.6x	11.0x	NM	60.0x
Aveva Group	LSE:AVV	\$5,587	\$5,713	8.5x	5.8x	46.2x	23.5x
Cadence Design Systems	NasdaqGS:CDNS	\$12,147	\$12,209	6.1x	5.8x	26.7x	18.1x
Hexagon	OM:HEXA B	\$22,302	\$20,092	5.5x	5.1x	18.5x	15.4x
Pivotal Software	NYSE:PVTL	\$5,597	\$6,242	10.3x	8.2x	NM	NM
Progress Software	NasdaqGS:PRGS	\$1,740	\$1,765	4.3x	4.3x	11.8x	9.1x
RIB Software AG	DB:RIB	\$730	\$1,048	5.5x	5.0x	20.1x	15.3x
Synopsys	NasdaqGS:SNPS	\$12,709	\$12,751	4.3x	4.0x	23.9x	16.7x
Twilio	NYSE:TWLO	\$5,057	\$5,365	11.5x	8.9x	NM	NM
Median				6.5x	5.8x	23.9x	18.1x



Public market valuations



EMS / Infrastructure Software

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Security Software							
Carbon Black	NasdaqGS:CBLK	\$2,099	\$1,756	12.0x	9.9x	NM	NM
Check Point Software	NasdaqGS:CHKP	\$14,024	\$15,535	7.5x	7.4x	14.9x	13.9x
Cheetah Mobile	NYSE:CMCM	\$946	\$1,340	1.2x	1.2x	8.2x	10.1x
Cyber-Ark Software	NasdaqGS:CYBR	\$1,945	\$2,270	7.1x	5.9x	71.0x	28.0x
Everbridge	NasdaqGM:EVBG	\$1,302	\$1,363	11.6x	8.8x	NM	NM
FireEye	NasdaqGS:FEYE	\$2,805	\$2,902	3.7x	3.3x	NM	23.3x
ForeScout	NasdaqGM:FSCT	\$1,175	\$1,377	4.9x	4.1x	NM	NM
Fortinet	NasdaqGS:FTNT	\$9,190	\$10,494	5.9x	5.2x	47.4x	21.4x
Gemalto	ENXTAM:GTO	\$6,059	\$5,257	1.7x	1.7x	14.6x	10.4x
Imperva	NasdaqGS:IMPV	\$1,295	\$1,674	3.9x	3.4x	NM	17.6x
Link Motion	NYSE:LKM	\$14	\$123	0.2x	NA	NM	NA
Mimecast	NasdaqGS:MIME	\$2,366	\$2,430	9.0x	7.1x	NM	46.4x
MobileIron	NasdaqGS:MOBL	\$349	\$448	2.0x	1.8x	NM	NM
Okta	NasdaqGS:OKTA	\$5,083	\$5,370	17.4x	13.3x	NM	NM
Palo Alto Networks	NYSE:PANW	\$18,007	\$19,084	8.5x	7.0x	NM	26.8x
Proofpoint	NasdaqGM:PFPT	\$5,947	\$5,863	10.6x	8.0x	NM	62.2x
Qualys	NasdaqGS:QLYS	\$2,957	\$3,286	12.2x	10.2x	48.6x	28.2x
Rapid7	NasdaqGM:RPD	\$1,175	\$1,305	5.6x	4.8x	NM	NM
SecureWorks	NasdaqGS:SCWX	\$941	\$1,017	2.0x	1.8x	NM	NM
Symantec	NasdaqGS:SYMC	\$15,699	\$12,835	3.2x	3.2x	13.1x	7.5x
Trend Micro	TSE:4704	\$6,554	\$7,848	4.8x	4.4x	13.8x	13.5x
Zix	NasdaqGS:ZIXI	\$263	\$292	4.0x	3.7x	18.9x	12.4x
Zscaler	NasdaqGS:ZS	\$3,988	\$4,276	23.4x	17.5x	NM	NM
Median				5.6x	5.0x	14.9x	19.5x
System and Network Management Software							
A10 Networks	NYSE:ATEN	\$317	\$441	1.3x	1.3x	NM	30.2x
CA	NasdaqGS:CA	\$14,367	\$14,852	3.4x	3.4x	10.9x	8.8x
CommVault Systems	NasdaqGS:CVLT	\$2,533	\$2,995	3.6x	3.3x	NM	23.1x
Micro Focus	LSE:MCRO	\$11,749	\$7,620	6.1x	3.0x	16.4x	8.2x
Netscout Systems	NasdaqGS:NTCT	\$2,536	\$2,384	2.6x	2.6x	16.5x	12.1x
Nutanix	NasdaqGS:NTNX	\$8,301	\$8,802	8.1x	6.5x	NM	NM
One Stop Systems	NasdaqCM:OSS	\$45	\$53	1.6x	1.1x	NM	NM
Presidio	NasdaqGS:PSDO	\$2,074	\$1,214	0.7x	0.7x	9.6x	9.2x
SailPoint	NYSE:SAIL	\$2,077	\$2,140	10.4x	8.9x	NM	NM
ServiceNow	NYSE:NOW	\$29,740	\$30,471	14.2x	10.7x	NM	41.1x
Software	XTRA:SOW	\$3,303	\$3,445	3.3x	3.2x	11.0x	10.3x
Vmware	NYSE:VMW	\$51,402	\$59,796	6.3x	5.7x	23.4x	14.6x
Median				3.5x	3.3x	13.7x	12.1x



Public market valuations

EMS / Infrastructure Software (continued)



(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Platform / OS							
Citrix Systems	NasdaqGS:CTXS	\$14,881	\$14,208	5.2x	5.1x	17.4x	15.1x
Hewlett-Packard	NYSE:HPQ	\$37,347	\$36,543	0.7x	0.6x	8.0x	7.8x
IBM	NYSE:IBM	\$161,987	\$128,240	2.0x	2.0x	9.7x	8.4x
Microsoft Corp.	NasdaqGS:MSFT	\$713,988	\$757,640	7.2x	6.1x	20.4x	14.5x
Red Hat	NYSE:RHT	\$22,484	\$23,833	7.4x	6.4x	37.5x	23.1x
Median				5.2x	5.1x	17.4x	14.5x



Public market valuations



Financial Solutions

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Banking Solutions							
Black Knight	NYSE:BKI	\$9,494	\$8,001	8.9x	8.3x	24.9x	17.2x
Bottomline Technologies	NasdaqGS:EPAY	\$2,082	\$2,034	5.5x	5.0x	45.7x	21.3x
Fidelity National	NYSE:FIS	\$43,564	\$35,097	4.8x	5.1x	17.1x	13.7x
Fiserv	NasdaqGS:FISV	\$34,557	\$30,335	6.0x	5.9x	18.9x	15.9x
GreenSky	NasdaqGS:GSKY	\$1,759	\$1,217	5.1x	3.8x	11.6x	8.5x
Jack Henry & Associates	NasdaqGS:JKHY	\$10,124	\$10,076	6.7x	6.3x	21.5x	18.4x
Q2 Holdings	NYSE:QTWO	\$2,304	\$2,423	11.3x	9.2x	NM	92.2x
Senmiao Technology Limited	NasdaqCM:AIHS	\$135	\$145	272.5x	NA	NM	NA
Temenos Group	SWX:TEMN	\$10,703	\$10,458	14.6x	12.3x	52.5x	33.8x
Median				6.7x	6.1x	21.5x	17.8x
Capital Market & Investment Solutions							
Envestnet	NYSE:ENV	\$2,864	\$2,485	4.0x	3.4x	34.2x	17.9x
FactSet Research Systems	NYSE:FDS	\$8,032	\$7,701	6.0x	5.7x	18.4x	16.5x
Fidessa Group	LSE:FDSEA	\$1,844	\$1,966	3.9x	4.0x	21.1x	18.3x
IRESS	ASX:IRE	\$1,646	\$1,524	5.2x	4.8x	22.7x	17.4x
Moody's	NYSE:MCO	\$37,081	\$32,730	8.5x	7.8x	18.0x	16.1x
Morningstar	NasdaqGS:MORN	\$5,247	\$5,453	5.5x	NA	20.7x	NA
MSCI	NYSE:MSCI	\$15,956	\$14,727	12.0x	10.9x	23.0x	19.6x
SimCorp	CPSE:SIM	\$3,192	\$3,189	7.6x	7.0x	26.1x	24.5x
SS&C Technologies Holdings	NasdaqGS:SSNC	\$14,269	\$12,357	8.4x	3.6x	22.7x	11.7x
Thomson Reuters	TSX:TRI	\$35,617	\$28,419	3.2x	6.3x	14.4x	29.7x
Median				5.8x	5.7x	21.9x	17.9x
Consumer Data & Analytics							
Equifax	NYSE:EFX	\$17,490	\$15,049	5.2x	4.9x	16.7x	14.5x
Experian	LSE:EXPN	\$25,670	\$22,397	5.9x	5.2x	19.0x	15.2x
Fair Isaac	NYSE:FICO	\$6,365	\$5,769	6.5x	6.0x	28.5x	23.5x
Median				5.9x	5.2x	19.0x	15.2x



Public market valuations



Financial Solutions (continued)

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Payment Processing							
ACI Worldwide	NasdaqGS:ACIW	\$3,480	\$2,872	3.5x	3.3x	22.1x	12.7x
Cielo	BOVESPA:CIEL3	\$13,377	\$11,638	4.4x	4.3x	10.2x	9.6x
Euronet Worldwide	NasdaqGS:EEFT	\$4,047	\$4,296	1.7x	1.6x	10.0x	8.3x
EVO Payments	NasdaqGM:EVOP	\$1,152	\$312	2.2x	2.0x	9.4x	7.7x
First Data Corporation	NYSE:FDC	\$40,795	\$19,444	4.9x	4.6x	13.0x	12.1x
Global Payments	NYSE:GPN	\$21,699	\$17,788	5.6x	5.4x	18.7x	15.1x
i3 Verticals, Inc.	NasdaqGS:IIIV	\$512	\$400	1.8x	NA	25.4x	NA
Net 1 Ueps Technologies	NasdaqGS:UEPS	\$512	\$516	0.8x	0.8x	3.7x	NA
PagSeguro Digital	NYSE:PAGS	\$8,302	\$9,065	14.3x	7.4x	NM	18.9x
Square	NYSE:SQ	\$24,123	\$24,699	10.0x	15.0x	NM	81.8x
Total System Services	NYSE:TSS	\$19,183	\$15,409	4.1x	5.0x	18.2x	13.9x
Median				4.1x	4.5x	13.0x	12.7x
Insurance Solutions							
CorVel	NasdaqGS:CRVL	\$967	\$1,023	1.7x	NA	13.9x	NA
Ebix	NasdaqGS:EBIX	\$2,745	\$2,399	7.0x	6.0x	20.7x	15.8x
Guidewire Software	NYSE:GWRE	\$6,434	\$7,126	10.8x	8.7x	NM	44.2x
Sapiens International	NasdaqCM:SPNS	\$504	\$486	1.8x	1.7x	17.0x	11.9x
Verisk	NasdaqGS:VRSK	\$20,417	\$17,789	9.2x	8.4x	20.2x	17.6x
Median				7.0x	7.2x	18.6x	16.7x



Public market valuations



Online & Digital

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Digital Advertising & Marketing							
Baidu	NasdaqGS: BIDU	\$77,454	\$84,741	5.5x	4.6x	16.1x	17.6x
Criteo	NasdaqGS: CROTO	\$1,718	\$2,179	0.7x	1.6x	7.0x	5.6x
Google	NasdaqGS: GOOGL	\$681,970	\$779,553	5.8x	4.8x	18.6x	12.9x
Hubspot	NYSE: HUBS	\$4,590	\$4,817	11.3x	8.8x	NM	92.3x
iClick Interactive	NasdaqGM: ICLK	\$277	\$305	2.1x	1.4x	NM	32.8x
Perion Network	NasdaqGS: PERI	\$99	\$91	0.4x	NA	4.8x	NA
QuinStreet	NasdaqGS: QNST	\$552	\$599	1.5x	1.3x	33.1x	14.0x
SendGrid	NYSE: SEND	\$1,022	\$1,174	8.5x	6.8x	NM	60.3x
SINA Corp	NasdaqGS: SINA	\$4,570	\$6,053	2.6x	1.9x	10.6x	6.0x
Sogou	NYSE: SOGO	\$3,345	\$4,422	3.4x	2.4x	22.4x	16.3x
Telaria	NYSE: TLRA	\$138	\$211	2.9x	2.3x	NM	18.7x
The Rubicon Project	NYSE: RUBI	\$22	\$142	0.2x	0.2x	NM	NM
Yandex	NasdaqGS: YNDX	\$11,009	\$11,786	6.3x	5.3x	27.3x	17.9x
Median				2.9x	2.3x	17.4x	17.6x
Digital Media & Video							
Adobe Systems	NasdaqGS: ADBE	\$114,935	\$119,385	14.2x	11.8x	39.5x	25.8x
Bilibili	NasdaqGS: BILI	\$4,342	\$3,896	9.4x	5.8x	NM	40.0x
Blucora	NasdaqGS: BCOR	\$1,978	\$1,738	3.7x	3.5x	20.6x	17.0x
Brightcove	NasdaqGS: BCOV	\$315	\$341	2.0x	1.8x	NM	80.3x
Digimarc	NasdaqGS: DMRC	\$239	\$303	9.7x	9.4x	NM	NM
Dropbox, Inc.	NasdaqGS: DBX	\$12,305	\$12,981	10.5x	8.7x	NM	40.5x
HUYA Inc.	NYSE: HUYA	\$6,463	\$6,629	15.4x	8.3x	NM	95.4x
IAC/Interactive	NasdaqGS: IAC	\$13,728	\$12,761	3.9x	3.3x	33.9x	NA
iQIYI	NasdaqGS: IQ	\$26,645	\$23,029	8.8x	6.8x	27.5x	18.9x
Leaf Group	NYSE: LFGR	\$208	\$255	1.5x	1.4x	NM	NM
Netflix	NasdaqGS: NFLX	\$174,100	\$170,152	13.6x	10.2x	NM	75.7x
Pandora Media	NYSE: P	\$2,331	\$2,099	1.6x	1.5x	NM	NM
Pluralsight	NasdaqGS: PS	\$2,074	\$1,538	11.6x	9.0x	NM	NM
RhythmOne	AIM: RTHM	\$187	\$174	0.8x	0.4x	34.0x	3.2x
Roku	NasdaqGS: ROKU	\$4,169	\$4,330	7.6x	5.6x	NM	NM
Sonic Foundry	NasdaqCM: SOFO	\$15	\$11	0.4x	NA	NM	NA
TiVo	NasdaqGS: TIVO	\$2,354	\$1,653	2.9x	3.3x	11.3x	10.5x
VeriSign	NasdaqGS: VRSN	\$16,972	\$16,914	14.4x	13.8x	22.1x	19.4x
Xunlei	NasdaqGS: XNET	\$358	\$716	1.5x	NA	NM	NA
Median				7.6x	5.8x	27.5x	25.8x



Public market valuations



Online & Digital (continued)

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Digital Advertising Agencies & Service Providers							
Dentsu	TSE:4324	\$15,889	\$13,352	1.9x	1.7x	9.9x	9.7x
IPG	NYSE:IPG	\$10,808	\$9,037	1.4x	1.4x	9.5x	8.2x
M&C Saatchi	AIM:SAA	\$401	\$403	1.2x	1.1x	16.1x	9.0x
MDC Partners	NasdaqGS:MDCA	\$1,384	\$275	0.9x	0.9x	8.7x	6.3x
Omnicom	NYSE:OMC	\$20,488	\$17,335	1.3x	1.3x	8.7x	8.1x
Publicis	ENXTPA:PUB	\$16,438	\$15,559	1.5x	1.5x	8.0x	8.2x
WPP	LSE:WPP	\$26,396	\$19,862	1.3x	1.3x	8.1x	7.9x
Median				1.3x	1.3x	8.7x	8.2x
Online Retail & Marketplaces							
1-800-Flowers.com	NasdaqGS:FLWS	\$742	\$811	0.6x	0.6x	10.0x	8.4x
Alibaba	NYSE:BABA	\$474,477	\$476,715	11.9x	7.8x	45.8x	22.3x
Amazon	NasdaqGS:AMZN	\$844,313	\$824,789	4.4x	3.4x	49.0x	26.0x
ASOS	AIM:ASC	\$6,657	\$6,706	2.3x	1.8x	50.8x	26.8x
Blue Apron	NYSE:APRN	\$633	\$642	0.8x	0.8x	NM	NM
boohoo.com	AIM:BOO	\$2,786	\$2,950	3.6x	2.5x	41.3x	27.4x
Booking Holdings	NasdaqGS:BKNG	\$99,777	\$97,655	7.6x	6.6x	19.5x	17.3x
CarGurus	NasdaqGS:CARG	\$3,608	\$3,750	10.4x	8.3x	NM	NM
Carvana	NYSE:CVNA	\$1,829	\$1,324	1.7x	0.9x	NM	NM
Ebay	NasdaqGS:EBAY	\$40,492	\$36,042	4.1x	3.6x	13.5x	10.9x
Expedia	NasdaqGS:EXPE	\$19,498	\$18,046	1.9x	1.7x	18.1x	10.3x
Groupon	NasdaqGS:GRPN	\$1,934	\$2,428	0.7x	0.7x	16.1x	6.6x
Grubhub	NYSE:GRUB	\$9,325	\$9,466	12.3x	9.1x	59.8x	34.0x
EverQuote, Inc.	NasdaqGM:EVER	\$515	\$449	3.8x	NA	NM	NA
Ocado Group	LSE:OCDO	\$9,413	\$9,112	4.9x	4.4x	98.5x	79.4x
Overstock	NasdaqGM:OSTK	\$829	\$972	0.5x	0.4x	NM	NM
Quotient Technology	NYSE:QUOT	\$1,003	\$1,236	3.0x	2.5x	65.2x	13.3x
Rakuten	TSE:4755	\$13,068	\$9,110	1.5x	1.3x	10.0x	8.0x
RumbleON	NasdaqCM:RMBL	\$73	\$77	4.8x	0.7x	NM	NM
Shutterstock	NYSE:SSTK	\$1,370	\$1,655	2.4x	2.1x	30.6x	13.0x
Stamps.com	NasdaqGS:STMP	\$4,423	\$4,536	8.9x	7.7x	22.2x	16.4x
The Trade Desk	NasdaqGM:TTD	\$3,812	\$3,951	11.2x	8.3x	46.0x	27.0x
TripAdvisor	NasdaqGS:TRIP	\$7,012	\$7,655	4.5x	4.2x	42.0x	19.3x
Wayfair	NYSE:W	\$10,415	\$10,577	2.0x	1.5x	NM	NM
Wowo	NASDAQ:JMU	\$50	\$35	0.5x	NA	NM	NA
Median				3.6x	2.5x	41.3x	17.3x



Public market valuations



Online & Digital (continued)

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Digital Gaming							
Activision	NasdaqGS:ATVI	\$57,195	\$58,095	7.9x	7.5x	25.3x	18.7x
Capcom	TSE:9697	\$2,372	\$2,697	2.8x	2.8x	12.7x	10.8x
Changyou.com	NasdaqGS:CYOU	-\$194	\$856	NM	-0.4x	NM	NM
Electronic Arts	NasdaqGS:EA	\$38,829	\$43,168	7.5x	6.9x	24.8x	19.2x
Gree	TSE:3632	\$480	\$1,254	0.7x	0.7x	4.1x	4.4x
Konami	TSE:9766	\$5,869	\$6,881	2.7x	2.5x	10.6x	9.8x
NetDragon WebSoft	SEHK:777	\$985	\$1,179	1.7x	1.4x	36.1x	18.0x
Net Entertainment	OM:NET B	\$1,221	\$1,284	6.6x	5.7x	16.3x	12.2x
Nintendo	TSE:7974	\$30,360	\$39,233	3.2x	2.5x	17.1x	11.1x
Playtech	LSE:PTEC	\$3,018	\$3,127	3.2x	2.2x	10.0x	7.6x
Square Enix	TSE:9684	\$4,692	\$5,845	2.1x	1.9x	11.8x	10.5x
Take-Two Interactive	NasdaqGS:TTWO	\$12,122	\$13,538	6.8x	4.4x	54.3x	16.8x
Ubisoft	ENXTPA:UBI	\$12,957	\$12,317	6.4x	5.3x	37.7x	10.9x
Zynga	NasdaqGS:ZNGA	\$2,856	\$3,491	3.3x	2.9x	34.2x	14.4x
Median				3.2x	2.6x	17.1x	11.1x
Social Media							
Facebook	NasdaqGS:FB	\$518,528	\$562,484	11.6x	8.6x	20.2x	14.2x
LINE	TSE:3938	\$9,029	\$9,912	5.7x	4.8x	87.5x	36.3x
Mail.ru Group	LSE:MAIL	\$5,978	\$6,202	6.2x	5.0x	39.3x	15.3x
Match Group	NasdaqGS: MTCH	\$11,725	\$10,753	8.1x	6.7x	26.5x	17.6x
MeetMe	NasdaqCM:MEET	\$349	\$325	2.5x	2.2x	15.5x	14.8x
Mixi	TSE:2121	\$570	\$1,979	0.3x	0.4x	0.8x	1.3x
Momo	NasdaqGS:MOMO	\$7,965	\$8,862	5.4x	3.8x	18.2x	14.3x
Renren	NYSE:RENN	\$280	\$170	0.9x	0.6x	NM	NM
Snap	NYSE:SNAP	\$14,664	\$16,469	16.2x	11.7x	NM	NM
Twitter	NYSE:TWTR	\$30,028	\$32,748	11.7x	10.0x	64.7x	25.9x
XING	XTRA:O1BC	\$1,766	\$1,813	7.7x	6.3x	30.5x	19.9x
Yelp	NYSE:YELP	\$2,463	\$3,278	2.8x	2.5x	62.7x	12.3x
Median				5.9x	4.9x	28.5x	15.0x



Public market valuations



Online & Digital (continued)

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Digital Commerce Solutions							
Gk Software AG	DB:GKS	\$250	\$251	2.3x	2.0x	36.3x	11.8x
Intershop	XTRA:ISH2	\$61	\$67	1.5x	1.4x	NM	31.4x
NCR	NYSE:NCR	\$7,112	\$3,547	1.1x	1.1x	7.7x	6.3x
PFS Web	NasdaqCM:PFSW	\$212	\$186	0.8x	0.6x	11.4x	8.0x
Shopify	NYSE:SHOP	\$13,906	\$15,486	18.3x	12.7x	NM	NM
Wincor Nixdorf	XTRA:WIN	\$2,156	\$1,990	0.8x	0.8x	7.4x	9.2x
Worldline S.A	ENXTPA:WLN	\$7,383	\$7,539	4.0x	3.6x	21.1x	15.8x
Median				1.5x	1.4x	11.4x	10.5x
Other Digital Companies							
Akamai	NasdaqGS:AKAM	\$12,352	\$12,495	4.8x	4.5x	19.1x	11.5x
Box	NYSE:BOX	\$3,382	\$3,509	6.4x	5.3x	NM	NM
Endurance International	NasdaqGS:EIGI	\$3,215	\$1,420	2.7x	2.8x	10.9x	10.2x
GoDaddy	NYSE:GDDY	\$13,059	\$11,072	5.5x	4.8x	38.6x	17.1x
Just Eat	LSE:JE.	\$6,623	\$6,961	9.2x	7.0x	32.5x	27.5x
Limelight Networks	NasdaqGS:LLNW	\$451	\$495	2.4x	2.2x	20.6x	12.3x
Moneysupermarket.com	LSE:MONY	\$2,182	\$2,228	5.0x	4.7x	14.4x	12.8x
NetEase	NasdaqGS:NTES	\$27,949	\$33,183	3.2x	2.6x	18.2x	15.1x
Otello Corporation	OB:OTELLO	\$294	\$371	0.8x	0.8x	NM	11.1x
Phoenix New Media	NYSE:FENG	\$217	\$307	0.9x	0.9x	38.1x	16.6x
Redfin Corporation	NasdaqGS:RDFN	\$1,725	\$1,915	4.4x	3.4x	NM	NM
Sea	NYSE:SE	\$4,604	\$5,025	9.7x	5.0x	NM	NM
Tencent Holdings	SEHK:700	\$479,576	\$473,486	11.5x	8.6x	28.1x	23.1x
United Internet	DB:UTDI	\$13,729	\$11,380	2.6x	2.2x	11.8x	9.5x
Web.com	NasdaqGS:WEB	\$1,927	\$1,287	2.6x	2.6x	13.2x	10.3x
Wix	NasdaqGS:WIX	\$4,439	\$4,703	9.4x	7.0x	NM	35.5x
Zillow	NasdaqGS:ZG	\$11,366	\$11,800	10.1x	6.8x	NM	38.6x
Zoopla Property Group	LSE:ZPG	\$3,218	\$2,800	8.6x	7.6x	24.8x	19.1x
Median				4.9x	4.6x	19.8x	15.1x



Public market valuations



Tech Enabled Business Services

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
IT Services, Integration & Consulting							
Accenture	NYSE:ACN	\$101,272	\$104,820	2.6x	2.5x	16.1x	14.3x
Atos Origin	ENXTPA:ATO	\$14,642	\$14,342	1.0x	1.0x	7.9x	6.9x
Bechtle	XTRA:BC8	\$3,202	\$3,239	0.7x	0.7x	14.1x	11.9x
CACI International	NYSE:CACI	\$5,190	\$4,163	1.2x	1.1x	12.7x	12.9x
Cancom	XTRA:COK	\$1,686	\$1,789	1.2x	1.1x	17.3x	13.4x
Cap Gemini	ENXTPA:CAP	\$24,051	\$22,424	1.6x	1.6x	12.7x	11.0x
CGI Group	TSX:GIB.A	\$18,842	\$17,652	2.2x	2.1x	13.4x	11.5x
CLPS Incorporation	NasdaqCM:CLPS	\$177	\$176	4.0x	NA	78.2x	NA
Cognizant Technology	NasdaqGS:CTSH	\$42,223	\$46,280	2.8x	2.5x	13.4x	11.9x
ComputaCenter	LSE:CCC	\$1,898	\$2,150	0.4x	0.4x	11.8x	10.4x
DXC Technology	NYSE:DXC	\$28,970	\$22,889	1.2x	1.3x	5.8x	6.2x
ePlus	NasdaqGS:PLUS	\$1,335	\$1,289	0.9x	0.9x	13.1x	12.1x
FDM Group	LSE:FDM	\$1,349	\$1,397	4.4x	4.2x	22.7x	19.7x
Fujitsu	TSE:6702	\$12,988	\$12,388	0.4x	0.4x	4.0x	4.4x
HCL Technologies	NSEI:HCLTECH	\$17,472	\$18,833	2.3x	2.1x	10.4x	9.1x
Infosys	NSEI:INFY	\$37,663	\$41,486	3.6x	3.3x	13.5x	12.5x
Luxoft Holdings	NYSE:LXFT	\$1,150	\$1,253	1.3x	1.2x	11.8x	9.5x
ManTech International	NasdaqGS:MANT	\$2,176	\$2,121	1.2x	1.1x	15.5x	12.9x
MAXIMUS	NYSE:MMS	\$3,803	\$4,052	1.5x	1.6x	10.4x	10.1x
NCC Group	LSE:NCC	\$809	\$750	2.4x	2.4x	19.7x	13.9x
Nomura Research Institute	TSE:4307	\$10,925	\$11,538	2.6x	2.4x	12.5x	11.7x
NSD	TSE:9759	\$767	\$962	1.5x	1.4x	10.0x	9.4x
OBIC	TSE:4684	\$6,372	\$7,359	10.6x	9.9x	19.3x	19.6x
Perficient	NasdaqGS:PRFT	\$975	\$924	2.0x	1.9x	17.4x	14.0x
SCSK Corporation	TSE:9719	\$4,424	\$4,824	1.5x	1.4x	10.8x	10.1x
Sopra Group	ENXTPA:SOP	\$4,817	\$4,185	1.1x	1.0x	12.2x	10.1x
Syntel	NasdaqGS:SYNT	\$2,862	\$2,662	3.0x	3.0x	11.0x	12.2x
Talend	NasdaqGM:TLND	\$1,751	\$1,845	10.8x	8.1x	NM	NM
Tata Consultancy Services	NSEI:TCS	\$97,244	\$103,304	5.4x	4.8x	20.5x	17.7x
The Hackett Group	NasdaqGS:HCKT	\$468	\$473	1.8x	1.6x	11.3x	9.1x
Tieto	HLSE:TIENTO	\$2,512	\$2,391	1.4x	1.3x	9.7x	9.7x
Unisys	NYSE:UIS	\$678	\$657	0.2x	0.2x	2.8x	1.7x
Virtusa	NasdaqGS:VRTU	\$1,628	\$1,445	1.6x	1.3x	22.0x	14.6x
Wipro	BSE:507685	\$14,948	\$17,181	1.9x	1.8x	9.8x	8.9x
Xerox	NYSE:XRX	\$10,685	\$6,122	1.0x	1.1x	7.4x	5.8x
Median				1.6x	1.5x	12.6x	11.5x



Public market valuations



Tech Enabled Business Services (continued)

(\$ in millions)		TEV	Market Cap	TEV/Revenue		TEV/EBITDA	
				LTM	NTM	LTM	NTM
Business Process Management (BPM)							
Appian	APPN	\$2,154	\$2,215	11.3x	10.3x	NM	NM
Broadridge Financial Solutions	NYSE:BR	\$14,423	\$13,573	3.3x	3.3x	17.6x	17.4x
Cardtronics	NasdaqGS:CATM	\$1,976	\$1,110	1.3x	1.5x	6.0x	7.6x
Cass Information Systems	NasdaqGS:CASS	\$646	\$846	4.6x	NA	12.7x	NA
Computershare	ASX:CPU	\$8,473	\$7,401	4.0x	3.6x	16.3x	13.0x
CSG Systems International	NasdaqGS:CSGS	\$1,515	\$1,375	1.9x	1.7x	10.8x	7.7x
DocuSign	NasdaqGS:DOCU	\$8,570	\$8,291	15.3x	12.5x	NM	NM
EVERTEC	NYSE:EVTC	\$2,077	\$1,527	5.0x	4.7x	14.5x	10.7x
Exlservice Holdings	NasdaqGS:EXLS	\$1,776	\$1,947	2.3x	2.0x	15.7x	11.4x
Genpact	NYSE:G	\$6,392	\$5,508	2.3x	2.1x	15.3x	11.8x
Smartsheet	NYSE:SMAR	\$2,685	\$2,614	21.4x	15.6x	NM	NM
SS&C Technologies	NasdaqGS:SSNC	\$14,269	\$12,357	8.4x	3.6x	22.7x	11.7x
Tabula Rasa Healthcare	NasdaqGM:TRHC	\$1,275	\$1,277	8.5x	6.3x	NM	38.6x
Trans Cosmos	TSE:9715	\$873	\$994	0.4x	0.3x	18.5x	8.8x
WEX	NYSE:WEX	\$10,276	\$8,206	7.8x	6.8x	22.4x	16.1x
Wirecard	XTRA:WDI	\$18,719	\$19,888	9.5x	7.5x	37.8x	26.1x
WNS	NYSE:WNS	\$2,500	\$2,632	3.3x	3.0x	22.8x	15.5x
Worldpay	NYSE:WP	\$32,743	\$24,323	8.3x	8.2x	32.7x	17.1x
Zuora	NYSE:ZUO	\$2,736	\$2,923	14.6x	11.7x	NM	NM
Median				5.0x	4.2x	16.9x	12.4x
Data Center Hosting & Services							
Dropbox	NasdaqGS:DBX	\$12,305	\$12,981	10.5x	8.7x	NM	40.5x
Equinix	NasdaqGS:EQIX	\$43,238	\$34,158	9.3x	8.2x	21.1x	17.4x
Interxion Holding	NYSE:INXN	\$5,514	\$4,459	8.8x	8.0x	20.6x	17.6x
Pure Storage	NYSE:PSTG	\$4,846	\$5,514	4.4x	3.4x	NM	38.5x
Switch	NYSE:SWCH	\$1,620	\$602	4.2x	3.6x	9.7x	7.2x
Tintri	NasdaqGM:TNTR	\$45	\$8	0.4x	0.4x	NM	NM
Median				6.6x	5.8x	20.6x	17.6x
Call Center							
Convergys	NYSE:CVG	\$2,307	\$2,226	0.8x	0.9x	6.7x	6.9x
Sykes Enterprises	NasdaqGS:SYKE	\$1,135	\$1,208	0.7x	0.7x	7.0x	6.2x
TeleTech Holdings	NasdaqGS:TTEC	\$1,818	\$1,590	1.2x	1.2x	9.6x	8.4x
Median				0.8x	0.9x	7.0x	6.9x





 M&A
transactions



M&A transactions



Application Software

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Jun-18	Q2'2018	RO Innovation, Inc.	RO Innovation, Inc.	\$14.3	2.4x
Jun-18	Q2'2018	Convergys Corporation (NYSE:CVG)	Concentrix Corporation	\$2,534.0	0.9x
Jun-18	Q2'2018	Cheleo SRL	TXT e-solutions S.p.A. (BIT:TXT)	\$8.8	2.7x
Jun-18	Q2'2018	Pierbridge, Inc.	Wisetech Global Limited (ASX:WTC)	\$59.4	6.4x
Jun-18	Q2'2018	Constructionline	Warburg Pincus LLC	\$210.9	11.4x
Jun-18	Q2'2018	Artium plc (AIM:ARTA)	Pareteum Corporation (AMEX:TEUM)	\$100.6	7.9x
May-18	Q2'2018	A2iA S.A.	Mitek Systems, Inc. (NasdaqCM:MITK)	\$49.7	3.3x
May-18	Q2'2018	Ulukom Bilgisayar Yazilim Donanim Danismanlik ve Ticaret AS	Wisetech Global Limited (ASX:WTC)	\$5.6	4.0x
May-18	Q2'2018	True North Consulting, LLC	GSE Systems, Inc. (NasdaqCM:GVP)	\$9.8	0.9x
May-18	Q2'2018	Unicommerce eSolutions Private Limited	Infibeam Incorporation Limited (BSE:539807)	\$17.9	5.9x
Apr-18	Q2'2018	Metrologic Group	Sandvik Machining Solutions AB	\$435.8	8.3x
Apr-18	Q2'2018	Beijing Unibeacon Testing Technology Co., Ltd.	Beijing Watertek Information Technology Co., Ltd. (SZSE:300324)	\$8.7	6.6x
Apr-18	Q2'2018	PeopleFluent, Inc.	Learning Technologies Group plc (AIM:LTG)	\$150.0	1.4x
Apr-18	Q2'2018	Desarrollo de Productos Informáticos S.A.	CAD IT S.p.A. (BIT:CAD)	\$5.9	1.4x
Apr-18	Q2'2018	PB & Asoc. S.A. and Softcargo and EasyLog S.A.	Wisetech Global Limited (ASX:WTC)	\$19.0	3.7x
Apr-18	Q2'2018	Viewpoint, Inc.	Trimble Inc. (NasdaqGS:TRMB)	\$1,200.0	0.5x
Apr-18	Q2'2018	Fidessa group plc (LSE:FDSA)	Ion Investment Group Limited	\$2,021.8	4.1x
Apr-18	Q2'2018	Socrata, Inc.	Tyler Technologies, Inc. (NYSE:TYL)	\$150.0	6.0x
Apr-18	Q2'2018	Action Corporation	HCL Technologies Limited (NSEI:HCLTECH); Sumeru Equity Partners, Inc.	\$330.0	3.1x
Apr-18	Q2'2018	Priori Data GmbH	appScatter Group plc (AIM:APPS)	\$19.9	15.4x
Mar-18	Q1'2018	FreeAgent Holdings plc (AIM:FREE)	National Westminster Bank Plc	\$66.1	5.2x
Mar-18	Q1'2018	Shanghai Chengqi Information Technology Co., Ltd.	Shanghai Yaoji Playing Card Co., Ltd. (SZSE:002605)	\$198.1	9.2x



M&A transactions



Application Software (continued)

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Mar-18	Q1'2018	Itecgyn Informática Ltda.	Linx Sistemas E Consultoria Ltda.	\$7.8	2.4x
Mar-18	Q1'2018	MuleSoft, Inc.	salesforce.com, inc. (NYSE:CRM)	\$6,607.4	22.3x
Mar-18	Q1'2018	LSP Solutions B.V.	Wisetech Global Limited (ASX:WTC)	\$6.2	2.5x
Mar-18	Q1'2018	Booker Software, Inc.	MINDBODY, Inc. (NasdaqGM:MB)	\$150.0	6.0x
Mar-18	Q1'2018	Tecnotree Oyj (HLSE:TEM1V)	-	\$41.8	0.6x
Mar-18	Q1'2018	United Luck Group Holdings Limited	Zhejiang Jinke Culture Industry Co., Ltd. (SZSE:300459)	\$156.5	2.0x
Feb-18	Q1'2018	Pivot Software Limited	Elmo Software Limited (ASX:ELO)	\$8.8	2.5x
Feb-18	Q1'2018	Openwave Mobility Inc.	Enea AB (publ) (OM:ENEA)	\$90.0	3.3x
Feb-18	Q1'2018	RealDolmen NV (ENXTBR:REA)	GFI Informatique SA (ENXTPA:GFI)	\$203.1	0.7x
Feb-18	Q1'2018	CAD IT S.p.A. (BIT:CAD)	Quarantacinqe Srl	\$41.6	0.5x
Feb-18	Q1'2018	WebDAM, Inc.	Bynder LLC	\$49.1	3.0x
Feb-18	Q1'2018	Xively, Ltd.	Google LLC	\$50.0	16.7x
Feb-18	Q1'2018	Unified Messaging Systems ASA	Everbridge Holdings Limited	\$33.3	2.5x
Feb-18	Q1'2018	Fraedom Holdings Limited	Visa Inc. (NYSE:V)	\$195.7	4.3x
Feb-18	Q1'2018	Tryumph21 Co.,Ltd.	As One Corp. (TSE:7476)	\$26.4	0.2x
Feb-18	Q1'2018	Escher Group Holdings plc	Hanover Investors Management LLP	\$49.1	2.7x
Feb-18	Q1'2018	LiquidHub, Inc.	Capgemini SE (ENXTPA:CAP)	\$500.0	2.0x
Feb-18	Q1'2018	e-Builder, Inc.	Trimble Inc. (NasdaqGS:TRMB)	\$500.0	9.4x
Feb-18	Q1'2018	Financial Performance Solutions and Banking Businesses of BasWare	Verdane Capital	\$43.5	2.3x
Feb-18	Q1'2018	Travel Compensation Services Ltd and Delay Repay Sniper Limited	Tracsis plc (AIM:TRCS)	\$9.8	9.8x
Jan-18	Q1'2018	Angoss Software Corp.	Datawatch Corporation (NasdaqCM:DWCH)	\$28.9	2.8x
Jan-18	Q1'2018	Shenzhen Yilian Technology Co., Ltd.	Shenzhen MUP Industrial Co., Ltd.	\$22.6	4.0x
Jan-18	Q1'2018	Lombard Risk Management plc	Vermeg N.V.	\$70.5	1.6x



M&A transactions



Application Software (continued)

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Jan-18	Q1'2018	Northgate Public Services Limited	NEC Corporation (TSE:6701)	\$642.0	2.9x
Dec-17	Q4'2017	Clavis Technology	Ascentia	\$219.0	16.9x
Dec-17	Q4'2017	Aconex (ASX:ACX)	Vantive Australia	\$1,234.8	10.0x
Dec-17	Q4'2017	Gemalto (ENXTAM:GTO)	Thales	\$6,521.4	1.8x
Dec-17	Q4'2017	Microlistics	Wisetech Global	\$30.4	5.9x
Dec-17	Q4'2017	Gemalto (ENXTAM:GTO)	Atos	\$5,994.9	1.7x
Dec-17	Q4'2017	Healthcare Communications UK	IMmobile	\$20.1	4.2x
Nov-17	Q4'2017	Bazaarvoice (NasdaqGS:BV)	Marlin Equity Partners	\$456.0	2.2x
Nov-17	Q4'2017	Anisa Group	Sanderson Group	\$15.9	1.2x
Nov-17	Q4'2017	Reckon, Reckon Accountants Practice Management Business	MYOB Group	\$136.6	5.6x
Nov-17	Q4'2017	IGE+XAO Group (ENXTPA:IGE)	Schneider Electric Industries	\$172.2	5.1x
Nov-17	Q4'2017	Klavis	Money Forward	\$7.0	8.0x
Oct-17	Q4'2017	Trayport	TMX Group (TSX:X)	\$721.3	9.5x
Oct-17	Q4'2017	Netmessage	Link Mobility Group (OB:LINK)	\$11.6	1.0x
Oct-17	Q4'2017	BroadSoft (NasdaqGS:BSFT)	Cisco Systems (NasdaqGS:CSCO)	\$1,917.0	5.3x
Oct-17	Q4'2017	Silverlake Digitale Sdn Bhd	Silverlake Axis (SGX:5CP)	\$11.0	2.4x
Oct-17	Q4'2017	Sback Tecnologia Da Informacao	Linx Sistemas E Consultoria	\$17.8	3.8x
Oct-17	Q4'2017	Resource Connect	SmartTrans Holdings (ASX:SMA)	\$13.1	2.2x
Oct-17	Q4'2017	Onvia	Project Diamond Intermediate Holdings Corporation	\$65.6	2.7x
Oct-17	Q4'2017	Vendman Systems	Vianet Group (AIM:VNET)	\$5.6	2.4x
Sep-17	Q3'2017	Intermarketing	Loomis (OM:LOOMB)	\$22.4	2.0x
Sep-17	Q3'2017	Exa Corporation (NasdaqGM:EXA)	Dassault Systèmes Simulia	\$385.9	5.3x
Sep-17	Q3'2017	Chengdu E-store Technology	Besttone Holding (SHSE:600640)	\$37.5	2.1x
Sep-17	Q3'2017	Silver Spring Networks (NYSE:SSNI)	Itron (NasdaqGS:ITRI)	\$840.4	1.9x



M&A transactions



Application Software (continued)

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Sep-17	Q3'2017	Planet Traders	Wisetech Global (ASX:WTC)	\$9.2	2.9x
Sep-17	Q3'2017	Cargoguide International	Wisetech Global (ASX:WTC)	\$5.5	3.5x
Sep-17	Q3'2017	Integrity Group Consulting / Asset Controls	Updater (ASX:UPD)	\$27.0	3.8x
Sep-17	Q3'2017	eg solutions (AIM:EGS)	Verint Ws Holdings	\$30.3	2.2x
Sep-17	Q3'2017	NemusTech	Naver (KOSE:A035420)	\$8.0	1.6x
Aug-17	Q3'2017	RevStream	Aptitude Software	\$15.7	4.5x
Aug-17	Q3'2017	rakumo (51.01% Stake)	Mobile Internet Capital; HDE; i Mercury Capital; OptVentures; Spiral Ventures	\$6.0	1.9x
Aug-17	Q3'2017	Affecto (HLSE:AFE1V)	CGI Nordic Investments	\$118.6	0.8x
Aug-17	Q3'2017	Halarose	IDOX (AIM:IDOX)	\$6.5	1.5x
Aug-17	Q3'2017	MacroPoint	The Descartes Systems Group (TSX:DSG)	\$107.0	8.6x
Aug-17	Q3'2017	AdGeek Marketing Consulting (66.7% Stake)	FreakOut Holdings (TSE:6094)	\$12.4	8.9x
Aug-17	Q3'2017	CMS Transport Systems	Wisetech Global (ASX:WTC)	\$7.1	2.3x
Aug-17	Q3'2017	MatsSoft	Netcall (AIM:NET)	\$28.8	4.0x
Aug-17	Q3'2017	ScanScout, Buyer Platform	Taptica	\$27.5	0.2x
Aug-17	Q3'2017	Numerex (NasdaqGS:NMRX)	Sierra Wireless (TSX:SW)	\$130.3	2.0x
Aug-17	Q3'2017	Impero Solutions	Investcorp Bank (BAX:INVCORP)	\$36.3	3.6x
Jul-17	Q3'2017	Linkury	Algomizer (TASE:ALMO)	\$11.0	0.6x
Jul-17	Q3'2017	Explicitly Grand Investments	Digital Zone Global	\$8.1	45.2x
Jul-17	Q3'2017	SM Mobile Communications	iRiver (KOSDAQ:A060570)	\$20.0	39.0x
Jul-17	Q3'2017	iBabs (60% Stake)	Euronext (ENXTPA:ENX)	\$57.1	8.6x
Jul-17	Q3'2017	TechJini Solutions (71.1% Stake)	Datamatics Global Services (BSE:532528)	\$8.5	1.6x



M&A transactions

EMS / Infrastructure Software



Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Jun-18		MWR InfoSecurity Limited	F-Secure Oyj (HLSE:FSC1V)	\$139.2	4.9x
Apr-18	Q2'2018	Advantio Limited	Cognosec AB (publ) (OM:COGS)	\$14.8	4.3x
Mar-18	Q1'2018	Secure Thingz, Inc.	IAR Systems Group AB (publ) (OM:IAR B)	\$31.0	62.1x
Feb-18	Q1'2018	CSRA Inc.	General Dynamics Corporation (NYSE:GD)	\$9,871.1	2.0x
Nov-17	Q4'2017	Barracuda Networks	Thoma Bravo	\$1,405.6	3.8x
Nov-17	Q4'2017	CYREN (54.31% Stake)	Warburg Pincus	\$72.9	2.3x
Oct-17	Q4'2017	Gigamon (93% Stake)	Elliott Management	\$1,329.1	4.4x
Oct-17	Q4'2017	IntraLinks Holdings	Siris Capital Group	\$1,020.8	3.5x
Oct-17	Q4'2017	Quantum Storage (Hong Kong)	Kronologi Asia Berhad	\$10.6	1.1x
Sep-17	Q3'2017	Deltagon (77.35% Stake)	UTIB INVL Technology	\$7.5	2.4x
Jul-17	Q3'2017	Guidance Software	Open Text	\$223.9	2.1x



M&A transactions



Tech Enabled Services

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Jun-18	Q2'2018	Hönigsberg & Düvel Datentechnik GmbH	HCL Technologies Limited (NSEI:HCLTECH)	\$34.8	0.4x
Jun-18	Q2'2018	Web.com Group, Inc. (NasdaqGS:WEB)	Siris Capital Group, LLC	\$1,864.3	2.5x
Jun-18	Q2'2018	Time Channel Information Technology Co.,Ltd.	Zhong Fu Tong Group Co., Ltd. (SZSE:300560)	\$57.0	5.0x
Jun-18	Q2'2018	Guangzhou Ruiling Network Technology Co., Ltd	Honz Pharmaceutical Co., Ltd. (SZSE:300086)	\$50.0	1.6x
May-18	Q2'2018	IESA Limited	Electrocomponents plc (LSE:ECM)	\$117.7	0.4x
May-18	Q2'2018	Card Processing Businesses in Seven Countries of First Data Corporation	SIA S.p.A.	\$439.7	3.8x
May-18	Q2'2018	Coasin Chile S.A.	Logicalis Latin America	\$20.2	0.2x
Apr-18	Q2'2018	Digitas Limited	Madison Future Games Limited	\$117.6	76.2x
Apr-18	Q2'2018	Mattersight Corporation (NasdaqGM:MATR)	NICE Systems Inc.	\$112.9	2.3x
Apr-18	Q2'2018	Seisma Pty Ltd	PS&C Limited (ASX:PSZ)	\$9.7	0.6x
Apr-18	Q2'2018	RMG Networks Holding Corporation (NasdaqCM:RMGN)	SCG Digital, LLC	\$15.4	0.4x
Apr-18	Q2'2018	Jiangsu Lanchuang Intelligent Technology Co., Ltd.	Ningbo BaoSi Energy Equipment Co., Ltd. (SZSE:300441)	\$74.8	6.1x
Apr-18	Q2'2018	Southport Services Group, LLC	Perficient, Inc. (NasdaqGS:PRFT)	\$21.4	1.3x
Mar-18	Q1'2018	Element Solutions LLC	Hinduja Global Solutions UK limited	\$8.8	1.0x
Mar-18	Q1'2018	TNT Business Solutions Division of TNT UK Limited	Restore plc (AIM:RST)	\$125.3	3.8x
Mar-18	Q1'2018	Xiangjiang Technology Co., Ltd.	Shanghai Chengdi Construction Corporation Ltd (SHSE:603887)	\$369.7	2.6x
Mar-18	Q1'2018	Cartesian, Inc. (OTCPK:CRTN)	Blackstreet Capital Management, LLC	\$10.6	0.2x
Mar-18	Q1'2018	Vipera Plc (AIM:VIP)	Sella Open Fintech Platform S.P.A.	\$33.2	2.7x
Mar-18	Q1'2018	Cynosure, Inc	Zensar Technologies, Inc.	\$33.0	1.7x
Mar-18	Q1'2018	Helius Technologies Pte Ltd.	TechnoPro Holdings, Inc. (TSE:6028)	\$47.6	1.0x
Mar-18	Q1'2018	FIS System	DB Inc. (KOSE:A012030)	\$88.8	2.0x
Mar-18	Q1'2018	Wipro Data Centre and Cloud Services, Inc.	Ensono, LP	\$405.0	1.7x



M&A transactions



Tech Enabled Services (continued)

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Feb-18	Q1'2018	Financière Soft SAS	Computer Task Group IT Solutions S.A.	\$16.9	0.5x
Feb-18	Q1'2018	Asian Link Co., Ltd.	LAC Co., Ltd. (JASDAQ:3857)	\$6.9	0.6x
Jan-18	Q1'2018	SingleHop, LLC	Internap Corporation (NasdaqGS:INAP)	\$132.0	2.8x
Jan-18	Q1'2018	Bulletproof Group Limited (ASX:BPF)	Australian Centre For Advanced Computing And Communication	\$21.7	0.6x
Jan-18	Q1'2018	Blaynmail Co., Ltd.	Rakus Co., Ltd. (TSE:3923)	\$14.0	2.4x
Jan-18	Q1'2018	Blackhawk Network Holdings, Inc. (NasdaqGS:HAWK)	Silver Lake; P2 Capital Partners, LLC	\$3,019.2	1.4x
Jan-18	Q1'2018	Probizmo CO.,LTD	TechnoPro, Inc.	\$15.8	1.4x
Jan-18	Q1'2018	DST Systems, Inc.	SS&C Technologies Holdings, Inc. (NasdaqGS:SSNC)	\$5,671.1	2.6x
Jan-18	Q1'2018	Eagle International Institute, Inc.	NIIT (USA), Inc.	\$8.1	0.8x
Jan-18	Q1'2018	Lotte Data Communication Company	LOTTE Corporation (KOSE:A004990)	\$683.4	0.9x
Dec-17	Q4'2017	Metronode	Equinix (REIT) (NasdaqGS:EQIX)	\$791.4	17.3x
Dec-17	Q4'2017	SQS Software Quality Systems (AIM:SQS)	Assystem Technologies	\$418.0	1.1x
Dec-17	Q4'2017	IO Data Centers	Iron Mountain (NYSE:IRM)	\$1,375.0	9.6x
Nov-17	Q4'2017	Aricent	Altran US	\$2,000.0	2.9x
Nov-17	Q4'2017	iStone (51% Stake)	Columbus (CPSE:COLUM)	\$27.6	0.3x
Nov-17	Q4'2017	Fess	Information Development (TSE:4709)	\$17.9	0.6x
Nov-17	Q4'2017	Leapforce	Appen (ASX:APX)	\$80.0	1.7x
Nov-17	Q4'2017	Shenzhen Topevery Technology (51% Stake)	Shenzhen Ta'aiwei Information Technology	\$12.3	1.9x
Nov-17	Q4'2017	Bulletproof Group (ASX:BPF) (83.8% Stake)	Macquarie Cloud Services	\$15.7	0.4x
Nov-17	Q4'2017	Nsecure	Unica Groep	\$29.4	1.0x
Nov-17	Q4'2017	Rockford IT	SysGroup (AIM:SYS)	\$5.2	0.9x
Oct-17	Q4'2017	Shanghai Yungoal Info Tech (70% Stake)	Digital China Group (SZSE:000034)	\$54.2	8.9x
Oct-17	Q4'2017	Vedang Cellular Services (70% Stake)	Quess Corp (BSE:539978)	\$8.8	0.7x



M&A transactions



Tech Enabled Services (continued)

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Oct-17	Q4'2017	Dada (BIT:DA) (69.43 % Stake)	HgCapital Mercury 2 Nominees	\$107.3	1.4x
Oct-17	Q4'2017	Avega Group (OM:AVEG B)	Tieto Sweden	\$57.0	1.0x
Oct-17	Q4'2017	Evolve Technologies and Services	TeamLease Staffing Services	\$5.7	0.3x
Oct-17	Q4'2017	Equinix IS2	Equinix (REIT) (NasdaqGS:EQIX)	\$93.0	37.2x
Oct-17	Q4'2017	QSight IT Holding	Koninklijke KPN (ENXTAM:KPN)	\$100.2	1.7x
Sep-17	Q3'2017	RecoBell	Futurestream Networks (KOSDAQ:A214270)	\$12.8	8.9x
Sep-17	Q3'2017	Shenzhen Juqent Information Technology (80% Stake)	Guangdong Zhengye Technology (SZSE:300410)	\$18.0	9.3x
Sep-17	Q3'2017	Beyondwinet Information Technology	Beijing Holystone Technology	\$17.5	0.3x
Sep-17	Q3'2017	Crimson	Harvey Nash Group (AIM:HVN)	\$19.9	0.6x
Sep-17	Q3'2017	ETL Factory	HCL Technologies (NSEI:HCLTECH)	\$9.1	1.1x
Aug-17	Q3'2017	Kabuku (90% Stake)	Futaba Corporation (TSE:6986)	\$13.8	13.9x
Aug-17	Q3'2017	NCXX Solutions (51% Stake)	CAICA (JASDAQ:2315)	\$5.1	0.2x
Aug-17	Q3'2017	Beyondsoft Japan	Beijing Beifang Xinyu Information Technology	\$13.2	0.4x
Aug-17	Q3'2017	Beyondsoft Information Technology (Shanghai)	Beijing Beifang Xinyu Information Technology	\$8.4	2.9x
Jul-17	Q3'2017	Somoto (TASE:SMTO)	-	\$74.6	1.3x
Jul-17	Q3'2017	PARX Werk	Persistent Systems	\$9.0	1.1x
Jul-17	Q3'2017	PlusServer	BC Partners	\$459.5	4.0x
Jul-17	Q3'2017	OnX Enterprise Solutions	Cincinnati Bell (NYSE:CBB)	\$199.0	0.3x
Jul-17	Q3'2017	Yg Zhihe Zhuoyuan (Beijing) Technology	Yg Gongchuang Intelligent Technology	\$6.5	0.4x
Jul-17	Q3'2017	Getronics International	Bottega	\$250.9	0.5x
Jul-17	Q3'2017	MDCL-Frontline Solutions	Tianjin Lanmo Innovative Cloud Network Technology	\$10.3	0.7x
Jul-17	Q3'2017	NCI (NasdaqGS:NCIT)	H.I.G. Capital	\$289.4	0.9x



M&A transactions



Online & Digital

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Jun-18	Q2'2018	Hainan Hong Kong and Macao Information Industry Co., Ltd.	Shenzhen Quanxinhao Co., Ltd. (SZSE:000007)	\$179.7	2.7x
Jun-18	Q2'2018	GET Holdings Limited (SEHK:8100)	-	\$14.4	0.7x
May-18	Q2'2018	Webpro AS	ZetaDisplay AB (OM:ZETA)	\$6.1	2.1x
May-18	Q2'2018	Cybird Co., Ltd.	Aeria Inc. (JASDAQ:3758)	\$64.0	0.7x
May-18	Q2'2018	Magento, Inc.	Adobe Systems Incorporated (NasdaqGS:ADBE)	\$1,680.0	11.2x
May-18	Q2'2018	iZettle AB	PayPal (NasdaqGS:PYPL)	\$2,200.0	19.8x
May-18	Q2'2018	Linkable Inc.	AJ Rent A Car Co., Ltd. (KOSE:A068400)	\$16.2	20.1x
May-18	Q2'2018	Cyanide SA	BigBen Interactive (ENXTPA:BIG)	\$25.3	3.5x
May-18	Q2'2018	ZPG Plc (LSE:ZPG)	Silver Lake	\$3,377.4	8.8x
May-18	Q2'2018	Mitula Group Limited (ASX:MUA)	Lifull Co., Ltd. (TSE:2120)	\$128.3	5.1x
May-18	Q2'2018	Shenzhen Whale Banner World Network Technology Co., Ltd.	Keda Group Co., Ltd. (SHSE:600986)	\$142.8	5.4x
May-18	Q2'2018	ICM Registry, LLC	Minds + Machines Group Limited (AIM:MMX)	\$40.7	5.6x
May-18	Q2'2018	Findify AB	Namaste Technologies Inc. (TSXV:N)	\$10.8	21.4x
Apr-18	Q2'2018	Beijing Icoou Technology Co., Ltd	Shenzhen Hifuture Electric Co., Ltd (SZSE:002168)	\$301.1	15.0x
Apr-18	Q2'2018	FIO SYSTEMS AG	Hypoport AG (DB:HYQ)	\$84.7	9.9x
Apr-18	Q2'2018	Tata Interactive Systems	MPS Limited (BSE:532440)	\$12.0	0.6x
Apr-18	Q2'2018	Sanzhi Xiaoxiong Technology Limited	Madison Future Games Limited	\$140.1	8.1x
Apr-18	Q2'2018	Edmodo, Inc.	Best Assistant Education Online Limited	\$137.5	136.3x
Apr-18	Q2'2018	CM2.Com, Inc.	Zix Corporation (NasdaqGS:ZIXI)	\$16.1	5.4x
Apr-18	Q2'2018	Shenzhen Maiyou Interactive Technology Co., Ltd.	China Media Group (SZSE:000793)	\$58.0	11.1x
Mar-18	Q1,2018	eTouch Systems Corp.	Virtusa Corporation (NasdaqGS:VRTU)	\$115.4	1.3x
Mar-18	Q1,2018	NameSilo, LLC	Brisio Innovations Inc. (OTCPK:NTCE.F)	\$9.5	0.9x
Mar-18	Q1,2018	CommerceHub, Inc.	GTCR, LLC; Sycamore Partners	\$1,055.9	9.5x
Feb-18	Q1,2018	Pipeworks Inc	St. Cloud Capital, LLC; DGB Investments; Northern Pacific Group	\$18.2	1.4x



M&A transactions



Online & Digital (continued)

Date Announced	Period	Target	Buyer	Enterprise Value	Revenue Multiple
Feb-18	Q1,2018	Dealer Inspire, Inc. and Launch Digital Marketing, LLC	Cars.com Inc. (NYSE:CARS)	\$205.0	5.0x
Jan-18	Q1,2018	Callidus Software Inc.	SAP America, Inc.	\$2,425.9	9.6x
Jan-18	Q1,2018	auFeminin.com (ENXTPA:FEM)	Télévision Française 1 SA (ENXTPA:TFI)	\$378.9	2.7x
Jan-18	Q1,2018	Paymark Limited	Ingenico Group - GCS (ENXTPA:ING)	\$120.4	2.2x
Jan-18	Q1,2018	Gambling related informational websites of Good Game Ltd	XLMedia PLC (AIM:XML)	\$18.4	9.0x
Jan-18	Q1,2018	HubPages Inc.	theMaven, Inc. (OTCPK:MVEN)	\$10.0	2.0x
Jan-18	Q1,2018	Real Estate 114 Inc.	Hyundai Development Co.- Engineering & Construction (KOSE:A012630)	\$64.1	4.5x
Sep-17	Q3'2017	YuMe	RhythmOne (AIM:RTHM)	\$111.0	0.7x
Aug-17	Q3'2017	MaxPoint Interactive (NasdaqGM:MXPT)	Harland Clarke	\$108.2	0.7x
Aug-17	Q3'2017	CannaRegs	MassRoots (OTCPK:MSRT)	\$11.7	26.0x
Jul-17	Q3'2017	St. Hero' Network Technology	Kingnet Network (SZSE:002517)	\$466.4	26.0x
Jul-17	Q3'2017	WebMD Health (NasdaqGS:WBMD)	Internet Brands	\$3,740.4	5.3x
Jul-17	Q3'2017	Bankrate (NYSE:RATE)	Red Ventures	\$1,438.5	3.1x
Jul-17	Q3'2017	Accelyst Solutions and Freecharge Payment Technologies	Axis Bank (BSE:532215)	\$60.0	93.9x
Jul-17	Q3'2017	Rocket Fuel Inc. (NasdaqGS:FUEL)	Sizmek	\$149.9	0.3x
Jul-17	Q3'2017	Hainan Qiyao Interactive Entertainment Co., Ltd.	Shenzhen Taole Network Technology	\$31.3	16.6x



IV Selected transactions



Selected transactions



Idean Enterprises OY Acquired By Capgemini

Transaction Summary

- Pharus served as the exclusive financial advisor to Idean Enterprises Oy in its sale to Capgemini. Transaction terms were not disclosed.
- This transaction will reinforce Capgemini's user-centered and digital-first experience design and strategy services, particularly in North America, and extend its network of Digital studios. This transaction is geared to meet growing customer demand for the Group's end to end digital services.
- The shareholders of Idean retained Pharus due to our knowledge of the design and strategy services sector, as well as our M&A advisory experience with digital, innovation and cloud services businesses. We executed a comprehensive M&A process that involved identifying and approaching a broad set of strategic buyers, spearheading marketing activities, leading due-diligence, and negotiating transaction terms.

Key Profiles

- Idean Enterprises, a fast-growing digital strategy and experience design consultancy focuses, primarily on digital user experience (UX), customer experience (CX), and digital strategy. Their client list extends from disruptive Bay Area start-ups, global tech leaders to prominent brands in automotive and consumer electronics, looking to reinvent themselves for the digital era. Clients include LG, Mercedes-Benz, Sony, Volkswagen, 23andMe, Airbus, Cole Haan, Ericsson, IBM, Intel, and Kesko.
- Capgemini provides consulting, technology, and outsourcing services. Its consulting services include strategy and transformation, finance and technology transformation, human resources consulting, supply chain management, solutions environment, and innovation. It serves manufacturing, retail, consumer products, distribution and transportation, aerospace and defense, and financial services industries across the world.



The undersigned acted as the exclusive financial advisor to Idean Enterprises Oy in connection with the transaction

PHARUS

Risto Lähdesmäki, Chief Executive Officer of Idean, said about Pharus:

"These guys just rock! I could not be happier with having chosen Pharus as our investment banking advisor. Since I knew this would be once-in-a-lifetime deal for me and whole team, I wanted to set multiple records and Pharus accepted the challenge - and boy we set many. At every step Pharus added immense value and astutely guided us to the most optimal outcome for the shareholders and for everyone in Idean.

I'm very pleased with their experience, dedication, and diligence - working hard 24/7 as one team, we were able to get a complicated deal closed in a compressed time frame. Pharus was with us right from beginning to end to ensure a successful process. The way they guided me and the team with a human touch was just amazing - I truly felt they had our back all the time. **We could not have achieved these results without Pharus - a deal that worked like a dream for all the stakeholders."**

Selected transactions

Capgemini US Acquires Fahrenheit 212, a Leading Innovation and Design Consultancy

Transaction Summary

- Pharus served as the exclusive financial advisor to Fahrenheit 212 LLC in its sale to Capgemini. Transaction terms were not disclosed.
- This transaction will augment the capabilities of Capgemini’s global strategy and transformation consulting organization, Capgemini Consulting, to provide new innovation, business transformation and digital customer experiences solutions. This bolt on acquisition fits into Capgemini’s digital innovation growth strategy.
- The shareholders of Fahrenheit 212 retained Pharus due to our knowledge of the innovation services sector, as well as our M&A advisory experience with digital and cloud services businesses. We executed a comprehensive M&A process that involved identifying and approaching a broad set of strategic and private equity buyers, spearheading marketing activities, leading due-diligence, and negotiating transaction terms.

Key Profiles

- Fahrenheit 212, an innovation and design consultancy, focuses on defining innovation strategies and develops new products, services, and experiences that create sustainable, profitable growth for global clients such as The Coca-Cola Company, Marriott, and Citi.
- Capgemini provides consulting, technology, and outsourcing services. Its consulting services include strategy and transformation, finance and technology transformation, human resources consulting, supply chain management, solutions environment, and innovation. It serves manufacturing, retail, consumer products, distribution and transportation, aerospace and defense, and financial services industries across the world.

Fahrenheit**212**

has been acquired by



The undersigned acted as the exclusive financial advisor to Fahrenheit 212 LLC in connection with the transaction

P H A R U S



Selected transactions

SPS Commerce (NasdaqGS:SPSC) Acquires Toolbox Solutions, a Leading Provider of Retail Solutions in North America

Transaction Summary

- Pharus served as the exclusive financial advisor to Toolbox Solutions, Inc. in their sale to SPS Commerce, Inc. (NasdaqGS:SPSC)
- The acquisition serves to strengthen SPS Commerce’s retail analytics portfolio, and further broadens their network of more than 60,000 organizations in 60 countries to include leading retailers and CPG suppliers in the North American convenience, grocery, and drug store segments.
- Pharus was mandated by Toolbox Solutions’ shareholders to execute a comprehensive process, that involved identifying and approaching a targeted set of strategic and financial buyers, spearheading marketing and due-diligence, and negotiating the terms of the transaction.
- SPS Commerce acquired all of the shares of ToolBox Solutions for approximately \$18.4 million in cash and \$4.5 million in stock which represents approximately 65,000 shares.

Key Profiles

- ToolBox Solutions is a leading provider of point-of-sale analytics, retail and loyalty software solutions, and category management services to retailers and consumer packaged goods suppliers across the US and Canada. The company has established relationships with many leading retailers and CPG suppliers in the convenience, grocery and drug store segments. The employees will continue to be based in Toronto.
- SPS Commerce provides cloud-based supply chain management solutions worldwide through their platform which improves the way suppliers, retailers, distributors, and other customers manage and fulfill orders. The company is headquartered in Minneapolis.



has been acquired by



The undersigned acted as the exclusive financial advisor to Toolbox Solutions, Inc. in connection with the transaction

PHARUS

Selected transactions



Ziff Davis Acquires Offers.com, a Leader in the Digital Coupon and Deal Space

Transaction Summary

- Pharus served as the exclusive financial advisor to Offers.com, LLC in their sale to Ziff Davis, LLC, a subsidiary of J2 Global (NasdaqGS:JCOM).
- The acquisition further expands Ziff Davis' portfolio of market leading digital properties, and strengthens their position in the growing online deals and offers segment.
- Pharus was mandated by Offers.com's shareholders to execute a comprehensive process, that involved identifying and approaching a targeted set of strategic and financial buyers, spearheading marketing and due-diligence, and negotiating the terms of the transaction.
- Transaction terms were not disclosed.
- Pharus had also served as the exclusive financial advisor to Offers.com in 2010, when it received \$7M in a round of funding from Susquehanna Growth Equity.

Key Profiles

- Offers.com operates a leading online marketplace that connects millions of consumers with coupons, promo codes, deals, and discounts from thousands of leading merchants. Offers.com is headquartered in Austin, TX.
- Ziff Davis is a digital media company that engages in the digital publishing of content in gaming, technology, and men's lifestyle categories. It operates PCMag.com, IGN.com, and AskMen.com. Ziff Davis is headquartered in New York, NY.
- Ziff Davis is owned by J2 Global. J2 Global operates through two segments:
 - Business Cloud Services – Offers cloud services to sole proprietors, small to medium-sized businesses and enterprises, and government organizations; provides eFax, KeepItSafe, LiveDrive, eVoice and Onebox.
 - Digital Media – Operates a portfolio of Web properties, including PCMag.com, IGN.com, Speedtest.net, AskMen.com, and TechBargains.com.



Offers.com[™]

has been acquired by



The undersigned acted as the exclusive financial advisor to Offers.com, LLC in connection with the transaction

P H A R U S

Selected transactions



has been acquired by

The undersigned acted as the exclusive financial advisor to Fahrenheit 212 LLC in connection with the transaction.

PHARUS
February 2016

Innovation Services

has been acquired by

The undersigned acted as the financial advisor to Toolbox Solutions, Inc. in connection with the transaction.

PHARUS

Retail Solutions

has been acquired by

The undersigned acted as the exclusive financial advisor to Offers.com, LLC in connection with the transaction.

PHARUS
December 2015

Online Marketing

CG CONTROL GROUP
has merged with

to form

The undersigned acted as the exclusive financial advisor to Control Group, Inc. and its affiliates, in connection with the transactions.

Pharus Securities, LLC

Digital Agency

has been acquired by

The undersigned acted as the exclusive financial advisor to RoyaltyShare, Inc. in its sale to The Orchard Enterprises, Inc.

Pharus Securities
November 2014

Digital Revenue Management

Received Series A financing of \$8 million from

The undersigned acted as the exclusive financial advisor to P97 Networks, Inc. in connection with the transaction.

Pharus Securities

Fuel Payment & Coupon

Completed a growth financing with

The undersigned acted as the exclusive financial advisor to Teachers Pay Teachers, Inc. in connection with the transaction.

Pharus Securities
May 2014

Education Technology

has been acquired by

The undersigned acted as the exclusive financial advisor to AmberFin Ltd. in its sale to Dalet S.A. (ENWTPA.DLT)

Pharus Securities
April 2014

Broadcast Technology

Remote DBA Business

has been acquired by

The undersigned acted as financial advisor to Bluewolf Inc. in the sale of its Remote DBA Business to General Corporation, Inc.

Pharus Advisors, LLC
December 2012

IT Services

has been acquired by

Principals of the undersigned acted as financial advisors to SocialGuide, Inc. in its sale to Nielsen Holdings N.V. and M&M Incite, LLC a joint venture between Nielsen and McKinsey & Company, Inc.

Pharus Advisors, LLC
November 2012

Social TV Software

has been acquired by

The undersigned acted as financial advisor to ExpertTune Inc. in its sale to Metso Corporation

Pharus Advisors, LLC
November 2012

Industrial Software

has acquired

The undersigned acted as financial advisor to NetKey, Inc. in connection with this acquisition.

Pharus Advisors, LLC
AUGUST 2007

Retail Software



Pharus overview



Pharus overview

Introduction to Pharus

We are committed to providing clients a high level of attention, independent and objective advice, and creative solutions in challenging environments



**Founded
in 2001**

Global Reach / Cross-border Expertise

New York headquarters,
with offices and affiliates
in major technology
hubs across the globe

Extensive Advisory & Capital Market Capabilities

Mergers & Acquisitions
Valuation &
Fairness Opinions
Corporate Advisory
Private Placements
Principal Investments
Recapitalizations

Industry Specialization & Experience

Digital Media &
Advertising
Software / SaaS
Education Technology
Digital & Creative
Services
Performance Marketing
Data & Analytics
Industrial Technology
Consumer

Strong Network of Key Relationships

110+
Successful
Transactions
Completed

900+
Strategic Buyer
Relationships

1,500+
Venture Capital
& Private Equity
Relationships

Contact Information

Michael E. Goodman

Co-Founder & Sr. Managing Director
212.904.0102
mgoodman@pharus.com

Kenneth M. Harrell

Co-Founder & Sr. Managing Director
212.904.0101
kharrell@pharus.com

New York Headquarters

551 Fifth Avenue 11th Floor | New York, NY 10176 | 212.904.0100



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