



## November 2018 M&A and Investment Summary

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# M&A and Investment Summary for All Segments

## Transaction Distribution

- A total of 669 deals were announced in November 2018, of which 351 were worth \$34.4 billion in aggregate reported value
- Software accounted for 40 percent of transactions with 265 deals announced— 178 of which reported \$17.9 billion in value
- Software was also the most valuable segment, followed by Digital Media/Commerce, with 133 transactions announced – 88 of which valued at \$8.4 billion
- Strategic buyers announced 288 deals (45 reported \$11 billion in value)
- VC/Growth Capital investors announced 352 transactions (300 reported \$11.9 billion in value)
- Private Equity investors announced 29 deals during the month (6 reported \$11.5 billion in value)

### November 2018

#### BUYER/INVESTOR BREAKDOWN

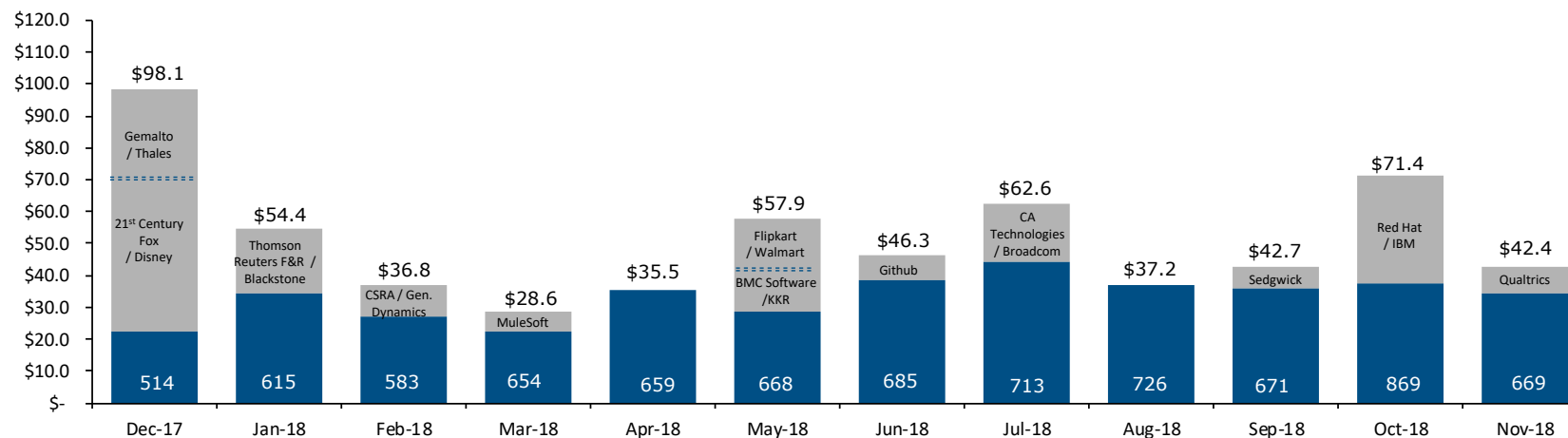
	Transactions		Reported Value		Strategic		Buyout		Venture/Growth Capital	
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Software	265	40%	\$17,872.7	52%	80	\$5,144.5	8	\$8,461.2	177	\$4,267.0
Digital Media/Commerce	133	20%	\$8,409.6	24%	44	\$1,284.9	3	\$1,300.0	86	\$5,824.7
Business Services	89	13%	\$4,486.4	13%	54	\$2,381.3	9	\$1,700.0	26	\$405.1
Marketing Technology	83	12%	\$1,281.0	4%	35	\$599.5	5	-	43	\$681.5
Agency & Marketing Services	42	6%	\$194.5	1%	41	\$199.5	0	-	1	-
Traditional Media	26	4%	\$1,475.4	4%	21	\$1,164.4	2	-	3	\$311.0
Digital Advertising	15	2%	\$321.5	1%	7	\$80.0	1	\$7.5	7	\$234.0
Information	15	2%	\$462.3	1%	5	\$245.0	1	-	9	\$217.3
<b>Total</b>	<b>668</b>	<b>100%</b>	<b>34,503.4</b>	<b>100%</b>	<b>287</b>	<b>11,099.1</b>	<b>29</b>	<b>11,468.7</b>	<b>352</b>	<b>11,940.6</b>

\*Note, transactions valued at \$6 billion or more have been excluded from totals to limit comparative distortions. The aggregate total for November does not include SAP's pending \$8 billion acquisition of Qualtrics.

# M&A and Investment Summary for All Segments

## Transaction Distribution

- Strategic activity was up nearly twenty percent compared with the November of last year with 287 transactions announced
- Significant transactions reported during the month included:
  - The \$5.6 billion acquisition of medical industry software company athenahealth from Veritas Capital and Elliot Management
  - The \$1.9 billion acquisition of business management solutions company Apttio by Vista Equity Partners
  - CVC Capital's \$1.7 billion acquisition of IT and managed service provider ConvergeOne
  - Blackberry's \$1.4 billion acquisition of cybersecurity provider Cylance
  - Newell Brands' sale of yearbook and class ring retailer Jostens to Platinum Equity for \$1.3 billion



\*Note, transactions valued at \$6 billion or more have been excluded from totals to limit comparative distortions. The aggregate total does not include Disney's pending \$69 billion acquisition of 21st Century Fox, Thales' \$6.6 billion acquisition of Gemalto, Blackstone's \$20 billion acquisition of Thomson Reuters' F&R business, General Dynamics' \$9.6 billion acquisition of CSRA, Salesforce's \$6.5 billion acquisition of MuleSoft, Walmart's \$16 billion majority investment in Flipkart, KKR's \$8.6 billion acquisition of BMC Software, Microsoft's \$7.5 billion TEV acquisition of GitHub, Broadcom's \$18.4 billion acquisition of CA Technologies, Carlyle Group's pending \$6.7 billion acquisition of Sedgwick Management Services, IBM's pending \$34 billion acquisition of Red Hat, and SAP's pending \$8 billion acquisition of Qualtrics

# Selected Transactions with Valuation Information Disclosed

(\$ in Millions)

Selected Transactions With Multiples Information								
Target	Subsegment	Buyer/Investor	Ent. Value	TTM Rev	TTM EBITDA	EV/REV	EV/EBITDA	
<b>Agency &amp; Marketing Services</b>								
Flywheel Digital	Digital Agency	Ascential plc	60.0	24.0	5.0	2.5x	12.0x	
<b>Business Services</b>								
ConvergeOne, Inc.	IT Consulting/Systems Integration	CVC Capital Partners Ltd.	1,700.0	1,400.0	111.8	1.2x	15.2x	
Investment Technology Group, Inc.	Financial Consulting	Virtu Financial, Inc.	1,100.0	505.5	-	2.2x	NA	
SharedLABS, Inc.	IT Consulting/Systems Integration	Glowpoint, Inc.	32.3	72.2	-	0.4x	NA	
<b>Digital Advertising</b>								
							NA	NA
							NA	NA
<b>Digital Media/Commerce</b>								
Jostens, Inc.	eCommerce	Platinum Equity, LLC	1,300.0	768.0	-	1.7x	NA	
Eclixp Group Limited	eCommerce	McMillan Shakespeare Limited	661.9	524.5	-	1.3x	NA	
<b>Marketing Technology</b>								
Callcap	Teleservices/eServices	Marchex, Inc.	35.0	9.0	-	3.9x	NA	
OrderDynamics	Product/Price Software	TECSYS, Inc.	13.4	7.0	-	1.9x	NA	
DealerMine, Inc.	CRM	Quorum Information Technologies, Inc.	11.0	9.6	0.6	1.1x	18.3x	
<b>Software</b>								
athenahealth, Inc.	Healthcare Software	Veritas Capital	5,644.0	1,311.0	265.0	4.3x	21.3x	
Apptio, Inc.	Financial Software	Vista Equity Partners	1,867.2	224.7	(14.0)	8.3x	NM	
Cylance, Inc.	Security Software	BlackBerry Ltd.	1,500.0	130.0	-	11.5x	NA	
MatrixCare	Healthcare Software	ResMed Corporation	750.0	122.0	30.0	6.1x	25.0x	
Farelogix, Inc.	ERP Software	Sabre Corporation	360.0	40.0	-	9.0x	NA	
Datawatch Corporation	Data Management Software	Altair Engineering, Inc.	178.5	40.3	-	4.4x	NA	
<b>Traditional Media</b>								
Editis S.A.	Consumer Book Publishing	Vivendi S.A.	1,000.0	900.5	-	1.1x	NA	

# Securities in Registration Filings in 2018

(\$ in Millions)

Date	Company Name	Country	Segment	Aggregate Offering Value	LTM	
					Rev	EBITDA
Nov-18	Mogu, Inc	China	Digital Media/Commerce	\$ 70.0	NA	NA
Oct-18	360 Finance Inc	China	Software	200.0	NA	NA
Oct-18	Caliburn International Corp	United States	Business Services	100.0	NA	NA
Oct-18	Tencent Music Entertainment Group	China	Traditional Media	1,000.0	2,167.0	441.7
Sep-18	Valtech SE	United Kingdom	Agency & Marketing Services	100.0	298.0	21.0
Jul-18	Pintec Technology Holdings Limited	China	Software	70.0	784.5	10.3
May-18	Advantage Solutions Inc.	United States	Agency & Marketing Services	100.0	2,150.4	405.1
Apr-18	HeadHunter Group PLC	Russia	Software	250.0	75.7	31.6

# LTM IPO Performance

Date	Ticker	PPLLC Segment	Company Name	Country	Initial Offering Price Range	Final Price Per Share	Stock Price at Close on 1st Trading Day	Stock Price on Nov 30, 2018	% Change from 1st Trading Day
Nov-18	WEI	Software	Weidai Ltd.	China	\$9.00-\$11.00	10.50	\$10.25, down 2.4%	10.00	(4.8%)
Oct-18	STNE	Software	StoneCo Ltd.	Brazil	21.00-23.00	24.00	\$31.35, up 30.6%	23.57	(24.8%)
Oct-18	SWI	Software	SolarWinds Corporation	United States	15.00-16.00	15.00	15.03, up 0.0%	15.91	5.9%
Oct-18	PLAN	Software	Anaplan, Inc.	United States	13.00-15.00	17.00	24.30, up 42.9%	28.00	15.2%
Oct-18	ESTC	Marketing Technology	Elastic N.V.	United States	33.00-35.00	36.00	70.00, up 94.4%	71.45	2.1%
Oct-18	UPWK	Digital Media/Commerce	Upwork Inc.	United States	12.00-14.00	15.00	21.18, up 41.2%	18.63	(12.0%)
Sep-18	CTK	Digital Media/Commerce	CooTek (Cayman) Inc.	China	12.00-14.00	12.00	9.44, down 21.3%	7.00	(25.8%)
Sep-18	EB	Marketing Technology	Eventbrite, Inc.	United States	19.00-21.00	23.00	36.5, up 58.7%	29.71	(18.6%)
Sep-18	FTCH	Digital Media/Commerce	Farfetch Limited	United Kingdom	17.00-19.00	20.00	28.45, up 42.3%	22.75	(20.0%)
Sep-18	NYSE: LAIX	Digital Media/Commerce	LAIX Inc.	China	11.50-13.50	12.50	12.65, up 1.2%	8.99	(28.9%)
Sep-18	Qtt	Digital Media/Commerce	Qutoutiao Inc.	China	7.00-9.00	7.00	15.97, up 128.1%	4.49	(71.9%)
Sep-18	SVMK	Marketing Technology	SVMK Inc.	United States	9.00-11.00	12.00	17.24, up 43.7%	14.28	(17.2%)
Jul-18	JG	Software	Aurora Mobile Limited	China	8.50-10.50	8.50	\$8.80, up 3.5%	6.15	(30.1%)
Jul-18	CANG	Digital Media/Commerce	Cango Inc.	China	10.00-12.00	11.00	12.52, up 13.8%	8.75	(30.1%)
Jul-18	DAVA	Business Services	Endava plc	United Kingdom	17.00-19.00	20.00	25.2, up 26.0%	24.70	(2.0%)
Jul-18	OPRA	Digital Media/Commerce	Opera Limited	Norway	10.00-12.00	12.00	13.11, up 9.3%	6.90	(47.4%)
Jul-18	PDD	Digital Media/Commerce	Pinduoduo Inc.	China	16.00-19.00	19.00	26.70, up 40.5%	22.96	(14.0%)
Jul-18	TENB	Software	Tenable Holdings, Inc.	United States	20.00-22.00	23.00	30.25, up 31.5%	28.48	(5.9%)
Jun-18	NYSE:AVLR	Software	Avalara, Inc.	United States	21.00-23.00	24.00	44.94, up 87.3%	31.99	(28.8%)
Jun-18	NasdaqGM:DOMO	Software	Domo, Inc.	United States	19.00-22.00	21.00	27.30, up 30.0%	15.96	(41.5%)
Jun-18	NasdaqGM:EVER	Digital Advertising	EverQuote, Inc.	United States	15.00-17.00	18.00	18.02, up 0.1%	6.17	(65.8%)
Jun-18	NasdaqGS:IIIV	Software	i3 Verticals, Inc.	United States	11.00-13.00	13.00	18.35, up 41.2%	22.53	22.8%
Jun-18	NasdaqGS:UXIN	Digital Media/Commerce	Uxin Limited	China	10.50-12.50	9.00	9.67, up 7.4%	3.29	(66.0%)
May-18	NasdaqGS:GSKY	Software	GreenSky, Inc.	United States	21.00-23.00	23.00	25.36, up 10.3%	9.31	(63.3%)
May-18	NasdaqGM:EVOP	Software	EVO Payments, Inc.	United States	14.00-16.00	16.00	19.02, up 18.9%	26.19	37.7%
May-18	NYSE:HUYA	Digital Media/Commerce	HUYA Inc.	China	10.00-12.00	12.00	16.06, up 33.8%	17.27	7.5%
May-18	NasdaqGS:PS	Software	Pluralsight, Inc.	United States	12.00-14.00	15.00	20.00, up 33.3%	24.09	20.5%
May-18	NasdaqGS:CBK	Software	Carbon Black, Inc.	United States	15.00-17.00	19.00	23.94, up 26.0%	16.29	(32.0%)
Apr-18	NYSE:CDAY	Software	Ceridian HCM Holding Inc.	United States	19.00-21.00	22.00	28.90, up 31.4%	40.12	38.8%
Apr-18	NasdaqGS:DOCU	Software	DocuSign, Inc.	United States	26.00-28.00	29.00	39.73, up 37.0%	41.76	5.1%
Apr-18	NYSE:PVT	Software	Pivotal Software, Inc.	United States	14.00-16.00	15.00	15.73, up 4.9%	17.91	13.9%
Apr-18	NYSE:SMAR	Software	Smartsheet Inc.	United States	12.00-14.00	15.00	19.55, up 30.3%	26.90	37.6%

# LTM IPO Performance

Date	Ticker	PPLLC Segment	Company Name	Country	Initial Offering Price Range	Final Price Per Share	Stock Price at Close on 1st Trading Day	Stock Price on Nov 30, 2018	% Change from 1st Trading Day
Apr-18	NYSE:ZUO	Marketing Technology	Zuora, Inc.	United States	11.00-13.00	14.00	20.00, up 42.8%	19.03	(4.9%)
Mar-18	NasdaqGS:BILI	Digital Media/Commerce	Bilibili Inc.	China	10.50-12.50	11.50	11.24, down 2.2%	15.61	38.9%
Mar-18	NasdaqGS:DBX	Software	Dropbox, Inc.	United States	18.00-20.00	21.00	28.48, up 35.6%	23.39	(17.9%)
Mar-18	NasdaqGS:IQ	Digital Media/Commerce	iQIYI, Inc.	China	17.00-19.00	18.00	15.55, down 13.6%	20.31	30.6%
Mar-18	NasdaqGS:ZS	Software	Zscaler, Inc.	United States	13.00-15.00	16.00	33.00, up 106.3%	39.26	19.0%
Feb-18	NasdaqGM:CDLX	Software	Cardlytics, Inc.	United States	13.00-15.00	13.00	13.37, up 2.8%	14.38	7.6%
Jan-18	NYSE:PAGS	Software	PagSeguro Digital Ltd.	Brazil	17.50-20.50	21.50	29.20, up 35.8%	24.00	(17.8%)
Dec-17	NasdaqGM:ICLK	Digital Advertising	iClick Interactive Asia Group Limited	Hong Kong	8.00-9.00	8.00	9.00, up 12.0%	3.68	(59.1%)



# Digital Media/Commerce

- Of the 133 transactions recorded in the Digital Media/Commerce segment in November 88 announced \$8.4 billion in reported value
- E-commerce was the most active subsegment across all subsegments with 67 transactions announced, of which 50 were reported for \$7.4 billion, including:
  - The \$600 million round of funding China-based NetEase Cloud music received from Baidu and General Atlantic
  - Koch Equity Development’s \$500 million investment in Getty Images
  - Instacart’s \$271 million round of funding from Tiger Global Management and Coatue Management
- Select Digital Media/Commerce transactions include:
  - The \$250 million round of funding Grab raised from Kia and Hyundai
  - The \$154.2 million round of funding real estate listing site Nested raised from Northzone, Balderton Capital, and private investors
  - Microsoft’s acquisition of videogame development studios inXile and Obsidian Entertainment
  - IAC Search & Media’s sale of Dictionary.com and Thesaurus.com to Rock Holdings

	DIGITAL MEDIA/COMMERCE TRANSACTIONS BY SEGMENT				BUYER/INVESTOR BREAKDOWN					
	Transactions		Reported Value		Strategic		Buyout		Venture/Growth Capital	
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
e-commerce	67	50%	\$7,411.8	88%	19	\$1,133.4	2	\$1,300.0	46	\$4,978.4
Digital Marketplace	17	13%	331.5	4%	6	103.4	0	-	11	228.1
Gaming	17	13%	54.2	1%	8	43.1	1	-	8	81.2
Mobile Content/Apps	15	11%	124.3	1%	2	-	0	-	13	478.6
Social Media/Apps	9	7%	9.2	0%	2	-	0	-	7	54.2
Niche Content	8	6%	478.6	6%	7	5.0	0	-	1	4.2
<b>Total</b>	<b>133</b>	<b>100%</b>	<b>8,409.6</b>	<b>100%</b>	<b>44</b>	<b>1,284.9</b>	<b>3</b>	<b>1,300.0</b>	<b>86</b>	<b>5,824.7</b>

# Digital Media

## Public Company Valuation (1/2)

(\$ in Millions, except stock price data)

US-Based Digital Media and Internet										
Company Name	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
					Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Alphabet Inc.	\$1,109.65	-14%	\$ 766,402.7	\$ 663,972.7	\$ 129,866.0	\$ 39,334.0	30.3%	24.2%	5.1x	16.9x
Apple Inc.	178.58	-24%	847,433.2	895,615.2	265,595.0	81,801.0	30.8%	15.9%	3.4x	10.9x
Facebook, Inc.	140.61	-36%	404,083.3	362,947.3	51,896.0	28,388.0	54.7%	42.2%	7.0x	12.8x
Fitbit, Inc.	5.51	-29%	1,369.4	746.1	1,511.5	(127.9)	NM	-6.6%	0.5x	NM
Glu Mobile Inc.	7.41	-12%	1,061.5	977.1	351.1	(27.8)	NM	38.8%	2.8x	NM
GoPro, Inc.	5.08	-42%	714.2	702.6	1,105.8	(115.4)	NM	-20.2%	0.6x	NM
IAC/InterActiveCorp	177.96	-20%	14,862.1	15,778.0	4,109.4	714.0	17.4%	29.7%	3.8x	22.1x
j2 Global, Inc.	73.81	-19%	3,638.0	4,345.0	1,177.6	426.8	36.2%	11.8%	3.7x	10.2x
Leaf Group Ltd.	8.15	-32%	191.6	158.8	149.3	(13.6)	NM	21.1%	1.1x	NM
The Meet Group, Inc.	4.03	-28%	298.0	316.5	166.3	22.3	13.4%	47.3%	1.9x	14.2x
Netflix, Inc.	286.13	-32%	124,777.0	130,046.1	14,893.3	1,713.8	11.5%	36.8%	8.7x	75.9x
Pandora Media, Inc.	8.69	-14%	2,344.3	2,725.2	1,517.0	(252.5)	NM	3.6%	1.8x	NM
RealNetworks, Inc.	2.58	-39%	97.2	58.0	71.8	(18.1)	NM	37.3%	0.8x	NM
Remark Holdings, Inc.	1.32	-91%	48.4	75.3	75.4	(30.4)	NM	12.6%	1.0x	NM
Roku, Inc.	40.75	-47%	4,448.5	4,268.7	655.0	(2.7)	NM	38.8%	6.5x	NM
Snap Inc.	6.51	-69%	8,429.9	7,015.5	1,076.3	(1,273.8)	NM	52.7%	6.5x	NM
TheStreet, Inc.	1.51	-40%	74.9	34.1	60.8	1.5	2.4%	7.3%	0.6x	22.9x
Twitter, Inc.	31.45	-34%	23,862.69	20,613.97	2,865.08	674.01	23.5%	18.0%	7.2x	30.6x
Upwork Inc.	18.63	-21%	1,980.4	2,168.7	240.8	(9.4)	NM	0.0%	9.0x	NM
XO Group Inc.	34.50	-4%	869.0	745.9	164.7	23.3	14.1%	2.1%	4.5x	32.1x
Zynga Inc.	3.62	-21%	3,120.0	2,699.7	891.8	69.2	7.8%	8.9%	3.0x	39.0x
<b>Average</b>									<b>3.7x</b>	<b>22.9x</b>

\*Note: Alphabet Inc. pricing represents (Nasdaq:GOOGL)

# Digital Media

## Public Company Valuation (2/2)

(\$ in Millions, except stock price data)

### Internationally-based Digital Media and Internet

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Baidu, Inc.	China	\$188.28	-34%	\$ 65,627.0	\$ 59,499.8	\$ 14,418.2	\$ 4,949.1	34.3%	22.8%	4.1x	12.0x
Bilibili Inc.	* China	15.61	-31%	4,347.1	3,860.1	539.7	(23.9)	NM	89.9%	7.2x	NM
CyberAgent, Inc.	Japan	45.28	-26%	5,697.5	5,355.2	3,696.6	343.1	9.3%	13.0%	1.4x	15.6x
DeNA Co., Ltd.	Japan	18.55	-18%	2,696.4	1,828.6	1,183.3	332.8	28.1%	-4.5%	1.5x	5.5x
G5 Entertainment AB (publ)	Sweden	17.38	-73%	156.2	145.5	164.9	16.9	10.2%	52.2%	0.9x	8.6x
Gree, Inc.	Japan	4.37	-36%	1,029.9	285.2	656.2	84.2	12.8%	3.3%	0.4x	3.4x
HolidayCheck Group AG	* Germany	3.30	-26%	187.9	154.7	163.1	7.4	4.5%	17.7%	0.9x	21.0x
HUYA Inc.	* China	17.27	-66%	3,519.6	2,664.5	567.7	3.7	0.7%	118.7%	4.7x	NM
International Game Technology PLC	United Kingdom	17.21	-44%	3,514.3	11,084.3	4,910.8	1,496.9	30.5%	-0.1%	2.3x	7.4x
iQWI, Inc.	China	20.31	-56%	14,697.7	13,512.9	3,316.3	1,111.2	33.5%	44.9%	4.1x	12.2x
mixi, Inc.	Japan	23.57	-52%	1,844.0	541.1	1,470.5	573.7	39.0%	-21.9%	0.4x	0.9x
Meitu, Inc.	* China	0.42	-75%	1,734.0	1,167.5	664.7	(59.0)	NM	38.7%	1.8x	NM
Ncsoft Corporation	South Korea	456.97	0%	9,710.8	8,551.3	1,665.5	587.9	35.3%	22.4%	5.1x	14.5x
NAVER Corporation	South Korea	112.90	-35%	16,504.7	14,699.8	4,807.4	1,111.6	23.1%	18.6%	3.1x	13.2x
NetEase, Inc.	* China	227.07	-40%	29,820.8	26,046.2	9,014.5	1,274.8	14.1%	20.0%	2.9x	20.4x
NEXON Co., Ltd.	Japan	11.82	-33%	10,568.7	6,632.1	2,293.8	1,099.2	47.9%	15.4%	2.9x	6.0x
Opera Limited	Norway	6.90	-56%	759.4	546.8	162.8	43.6	26.8%	0.0%	3.4x	12.5x
Pacific Online Limited	China	0.13	-27%	146.0	95.0	147.6	19.3	13.1%	3.0%	0.6x	4.9x
Phoenix New Media Limited	* China	3.55	-52%	258.1	135.3	209.3	(8.7)	NM	-5.8%	0.6x	NM
Renren Inc.	* China	1.60	-91%	110.4	218.3	436.7	(111.4)	NM	435.9%	0.5x	NM
Sea Limited	* Singapore	13.34	-22%	4,469.3	4,379.5	668.3	(809.1)	NM	76.8%	6.6x	NM
Sogou Inc.	China	6.21	-60%	2,402.3	1,325.8	1,104.2	103.9	9.4%	37.6%	1.2x	12.8x
Spotify Technology S.A.	* Luxembourg	136.38	-31%	24,704.5	22,757.2	5,708.1	(227.7)	NM	0.0%	4.0x	NM
Weibo Corporation	* China	63.68	-55%	14,181.9	13,468.4	1,614.1	598.4	37.1%	63.8%	8.3x	22.5x
Wemade Entertainment Co.,Ltd.	South Korea	23.16	-58%	384.5	257.3	104.6	17.7	16.9%	9.7%	2.5x	14.5x
Yandex N.V.	* Netherlands	29.50	-34%	9,569.7	8,904.5	1,781.9	434.3	24.4%	32.1%	5.0x	20.5x
YY Inc.	China	68.07	-52%	4,321.0	2,624.7	2,147.2	430.6	20.1%	41.1%	1.2x	6.1x
Average										2.7x	12.3x

# E-commerce

## Public Company Valuation (1/2)

(\$ in Millions, except stock price data)

US-based eCommerce											
Company Name	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM Rev Growth	LTM Multiples	
					Revenue	EBITDA	EBITDA	EV/Rev		EV/EBITDA	
1-800-FLOWERS.COM, Inc.	\$12.51	-17%	\$ 802.9	\$ 876.3	\$ 1,164.1	\$ 71.1	6.1%	-1.8%	0.8x	12.3x	
Alphabet Inc.	1,109.65	-14%	766,402.7	663,972.7	129,866.0	39,334.0	30.3%	24.2%	5.1x	16.9x	
Amazon.com, Inc.	1,690.17	-18%	826,440.1	843,894.1	220,957.0	24,905.0	11.3%	37.1%	3.8x	33.9x	
Apple Inc.	178.58	-24%	847,433.2	895,615.2	265,595.0	81,801.0	30.8%	15.9%	3.4x	10.9x	
Blucora, Inc.	30.96	-25%	1,485.2	1,679.3	557.0	105.4	18.9%	11.7%	3.0x	15.9x	
Blue Apron Holdings, Inc.	1.17	-74%	226.7	259.6	714.5	(89.5)	NM	-21.4%	0.4x	NM	
Booking Holdings Inc.	1,891.88	-15%	87,650.0	89,228.1	14,117.5	5,627.5	39.9%	15.5%	6.3x	15.9x	
CarGurus, Inc.	38.91	-32%	4,283.1	4,135.5	418.7	13.9	3.3%	45.9%	9.9x	NM	
Carvana Co.	43.29	-40%	1,681.8	2,260.2	1,635.7	(172.1)	NM	133.5%	1.4x	NM	
CDW Corporation	92.68	-1%	13,900.6	17,272.5	16,276.4	1,229.3	7.6%	11.7%	1.1x	14.1x	
Chegg, Inc.	27.95	-15%	3,211.4	3,031.6	298.9	13.2	4.4%	22.2%	10.1x	NM	
Copart, Inc.	51.18	-24%	11,976.9	12,056.2	1,847.9	724.6	39.2%	21.5%	6.5x	16.6x	
GrubHub Inc.	78.29	-48%	7,101.0	7,086.1	924.6	187.4	20.3%	50.2%	7.7x	37.8x	
eBay Inc.	29.85	-36%	28,740.4	33,150.4	10,216.0	2,985.0	29.2%	6.3%	3.2x	11.1x	
Etsy, Inc.	54.04	-3%	6,509.7	6,205.4	539.9	85.9	15.9%	30.1%	11.5x	72.3x	
EVINE Live Inc.	0.60	-66%	39.8	85.4	631.7	5.8	0.9%	-2.2%	0.1x	14.7x	
Expedia Group, Inc.	120.79	-14%	17,994.6	19,903.6	10,982.8	1,282.8	11.7%	11.7%	1.8x	15.5x	
FTD Companies, Inc.	2.12	-76%	59.8	292.6	1,044.8	26.5	2.5%	-3.8%	0.3x	11.1x	
GrubHub Inc.	78.29	-48%	7,101.0	7,086.1	924.6	187.4	20.3%	50.2%	7.7x	37.8x	
IAC/InterActiveCorp	177.96	-20%	14,862.1	15,778.0	4,109.4	714.0	17.4%	29.7%	3.8x	22.1x	
Liberty TripAdvisor Holdings, Inc.	19.03	-8%	1,427.4	4,609.4	1,590.0	273.0	17.2%	0.2%	2.9x	16.9x	
Liquidity Services, Inc.	6.48	-19%	208.2	114.7	233.2	(19.5)	NM	-18.8%	0.5x	NM	
Match Group, Inc.	40.27	-34%	11,198.5	12,061.5	1,651.4	564.2	34.2%	32.5%	7.3x	21.4x	
Overstock.com, Inc.	19.56	-78%	628.8	538.1	1,825.3	(171.1)	NM	0.6%	0.3x	NM	
PetMed Express, Inc.	24.09	-58%	493.3	406.2	286.2	56.6	19.8%	9.1%	1.4x	7.2x	
Qurate Retail, Inc.	\$22.22	-11%	10,005.7	16,951.7	13,038.0	1,844.0	14.1%	27.5%	1.3x	9.2x	
Shutterfly, Inc.	49.99	-50%	1,679.9	2,692.2	1,605.6	174.6	10.9%	38.7%	1.7x	15.4x	
Shutterstock, Inc.	38.21	-31%	1,338.8	1,132.4	613.0	47.7	7.8%	14.5%	1.8x	23.7x	
Spark Networks SE	9.86	-36%	128.1	132.6	112.6	(3.1)	NM	20.7%	1.2x	NM	
Stamps.com Inc.	171.46	-40%	3,103.77	3,106.54	549.17	218.52	39.8%	24.2%	5.7x	14.2x	
Stitch Fix, Inc.	27.33	-48%	2,716.8	2,419.3	1,226.5	53.6	4.4%	25.5%	2.0x	45.2x	
U.S. Auto Parts Network, Inc.	1.23	-55%	43.0	44.0	293.3	8.2	2.8%	-4.1%	0.2x	5.4x	
Wayfair Inc.	106.20	-30%	9,594.5	9,606.5	6,204.2	(334.1)	NM	45.4%	1.5x	NM	
<b>Average</b>									<b>3.4x</b>	<b>16.0x</b>	

# E-commerce

## Public Company Valuation (2/2)

(\$ in Millions, except stock price data)

Internationally-based eCommerce											
Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
58.com Inc.	China	\$59.59	-34%	\$ 8,827.6	\$ 8,337.0	\$ 1,789.7	\$ 400.5	22.4%	30.8%	4.7x	20.8x
Alibaba Group Holding Limited	* China	160.86	-24%	413,720.7	418,156.0	45,280.6	12,184.2	26.9%	57.8%	9.2x	34.3x
Cango Inc.	China	8.75	-37%	1,322.6	873.8	157.5	38.8	24.6%	11.5%	5.5x	22.5x
Cnova N.V.	* France	4.85	-4%	1,672.9	1,976.8	2,619.8	11.2	0.4%	21.8%	0.8x	NM
Despegar.com, Corp.	Argentina	14.94	-59%	1,033.3	707.1	542.1	70.8	13.1%	10.4%	1.3x	10.0x
Farfetch Limited	* United Kingdom	22.75	-30%	6,662.5	5,619.0	526.2	(170.6)	NM	0.0%	10.7x	NM
JD.com, Inc.	* China	21.23	-58%	30,715.2	30,201.4	63,671.4	140.2	0.2%	31.9%	0.5x	NM
Jumei International Holding Limited	* China	2.10	-48%	315.2	(94.5)	769.8	(10.7)	NM	-14.4%	NM	8.9x
LightInTheBox Holding Co., Ltd.	* China	0.76	-78%	51.5	10.7	294.2	(22.7)	NM	-5.3%	0.0x	NM
MercadoLibre, Inc.	* Argentina	351.97	-16%	15,910.1	15,510.8	1,551.3	(2.7)	NM	39.2%	10.0x	NM
Netshoes (Cayman) Limited	* Brazil	1.29	-87%	40.1	104.0	466.7	(46.2)	NM	1.6%	0.2x	NM
PChome Online Inc.	* Taiwan	4.78	-23%	559.9	390.2	1,068.6	(66.7)	NM	17.6%	0.4x	NM
Pinduoduo Inc.	* China	22.96	-25%	25,434.8	22,163.3	1,258.6	(1,189.1)	NM	0.0%	17.6x	NM
Rakuten, Inc.	Japan	8.05	-21%	10,877.2	13,591.1	9,325.7	1,658.6	17.8%	17.7%	1.5x	8.2x
Secoo Holding Limited	China	10.00	-35%	505.6	509.7	667.2	20.6	3.1%	51.9%	0.8x	24.7x
Travelport Worldwide Limited	United Kingdom	15.28	-25%	1,931.9	4,000.9	2,536.0	415.4	16.4%	4.8%	1.6x	9.6x
trivago N.V.	* Germany	6.17	-39%	2,164.7	1,996.5	1,080.0	(50.6)	NM	-9.1%	1.8x	NM
Uxin Limited	* China	3.29	-69%	962.0	1,131.1	414.8	(395.4)	NM	78.2%	2.7x	NM
Vipshop Holdings Limited	China	5.77	-70%	3,825.3	3,731.7	12,020.9	494.0	4.1%	21.9%	0.3x	7.6x
X Financial	China	7.00	-66%	1,057.3	844.6	496.0	226.9	45.8%	0.0%	1.7x	3.7x
<b>Average</b>										<b>3.3x</b>	<b>14.3x</b>

# Digital Advertising

- A total of 15 transactions were announced in the Digital Advertising segment, of which eight were valued at \$322 million
- The Mobile Marketing and Comparison Shopping segments accounted for nearly 60 percent of reported segment transactions during the month
- Select transactions:
  - ConversationPoint’s \$80 million acquisition of publishing and ad serving marketplace Inuvo
  - The acquisition of device graph company Qualia by IDify
  - Criteo’s acquisition of app install advertising solution Manage
  - The acquisition of security industry-focused mobile marketing company JUICE Mobile by Curate Mobile
  - Wesfarmers Limited’s acquisition of Australia-based mobile advertising solution Unlockd

	DIGITAL ADVERTISING TRANSACTIONS BY SEGMENT				BUYER/INVESTOR BREAKDOWN					
	Transactions		Reported Value		Strategic		Buyout		Venture/Growth Capital	
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Mobile Marketing	4	27%	-	0%	4	-	0	-	0	-
Comparison Shopping	4	27%	36.7	11%	2	-	0	-	2	36.7
Vertical Search	3	20%	195.3	61%	0	-	0	-	3	195.3
Ad Networks/Exchanges	2	13%	87.5	27%	1	80.0	1	7.5	0	-
Affiliate/CPA Network	1	7%	-	0%	0	-	0	-	1	-
Local Search	1	7%	2.0	1%	0	-	0	-	1	2.0
<b>Total</b>	<b>15</b>	<b>100%</b>	<b>321.5</b>	<b>100%</b>	<b>7</b>	<b>80.0</b>	<b>1</b>	<b>7.5</b>	<b>7</b>	<b>234.0</b>

# Digital Advertising

## Public Company Valuation (1/2)

(\$ in Millions, except stock price data)

US-based Digital Advertising											
Company Name	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM	LTM Multiples	
					Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA	
Alliance Data Systems Corporation	\$200.36	-28%	\$ 10,914.3	\$ 31,941.0	\$ 7,841.5	\$ 1,785.8	22.8%	5.4%	4.1x	17.9x	
Alphabet Inc.	1,109.65	-14%	766,402.7	663,972.7	129,866.0	39,334.0	30.3%	24.2%	5.1x	16.9x	
ANGI Homeservices Inc.	*	17.53	-27%	8,692.3	8,672.2	1,076.5	72.1	6.7%	69.0%	8.1x	120.2x
AutoWeb, Inc.	2.00	-80%	25.9	10.8	126.7	(10.2)	NM	-15.1%	0.1x	NM	
Care.com, Inc.	17.92	-22%	569.8	502.4	186.7	13.2	7.1%	7.7%	2.7x	38.1x	
DHI Group, Inc.	1.77	-46%	93.6	105.6	174.5	23.6	13.6%	-17.7%	0.6x	4.5x	
EverQuote, Inc.	6.17	-72%	154.4	115.7	155.9	(6.6)	NM	0.0%	0.7x	NM	
Facebook, Inc.	140.61	-36%	404,083.3	362,947.3	51,896.0	28,388.0	54.7%	42.2%	7.0x	12.8x	
Fluent, Inc.	3.54	-49%	266.5	308.9	244.6	20.3	8.3%	16.8%	1.3x	15.2x	
Groupon, Inc.	3.07	-48%	1,752.3	1,412.8	2,710.0	141.2	5.2%	-5.8%	0.5x	10.0x	
Inuvo, Inc.	1.13	-27%	36.7	37.6	80.1	(1.9)	NM	6.1%	0.5x	NM	
LendingTree, Inc.	260.34	-36%	3,339.6	3,322.7	723.1	91.8	12.7%	29.7%	4.6x	36.2x	
QuinStreet, Inc.	16.14	-9%	795.5	725.0	429.8	24.5	5.7%	37.0%	1.7x	29.6x	
Quotient Technology Inc.	12.29	-23%	1,169.9	994.4	373.0	18.9	5.1%	22.5%	2.7x	52.5x	
Redfin Corporation	16.96	-46%	1,518.4	1,187.2	458.5	(25.8)	NM	34.4%	2.6x	NM	
RhythmOne plc	2.30	-40%	180.7	192.5	255.1	5.8	2.3%	71.2%	0.8x	33.0x	
Snap Inc.	6.51	-69%	8,429.9	7,015.5	1,076.3	(1,273.8)	NM	52.7%	6.5x	NM	
Telaria, Inc.	3.00	-43%	142.7	72.1	50.5	(12.3)	NM	29.0%	1.4x	NM	
The Rubicon Project, Inc.	4.45	-9%	224.8	128.0	114.7	(53.2)	NM	-41.7%	1.1x	NM	
The Trade Desk, Inc.	*	142.45	-12%	6,159.8	5,993.5	419.5	95.5	22.8%	50.9%	14.3x	62.7x
TiVo Corporation	9.90	-45%	1,226.36	1,904.58	741.64	170.76	23.0%	-14.2%	2.6x	11.2x	
Travelzoo	9.02	-57%	109.2	93.3	111.3	8.1	7.3%	4.6%	0.8x	11.6x	
TripAdvisor, Inc.	64.06	-7%	8,818.9	8,155.9	1,590.0	216.0	13.6%	2.5%	5.1x	37.8x	
TrueCar, Inc.	10.41	-28%	1,082.7	887.9	345.6	(19.6)	NM	10.0%	2.6x	NM	
Twitter, Inc.	31.45	-34%	23,862.7	20,614.0	2,865.1	674.0	23.5%	18.0%	7.2x	30.6x	
Yelp Inc.	33.67	-36%	2,797.4	1,959.9	914.4	42.8	4.7%	10.7%	2.1x	45.8x	
Yext, Inc.	14.52	NA	1,463.2	1,356.2	213.0	(75.1)	NM	34.9%	6.4x	NM	
Zillow Group, Inc.	*	36.23	-45%	7,408.1	6,480.1	1,250.5	64.0	5.1%	22.4%	5.2x	101.2x
Average										3.0x	21.9x

# Digital Advertising Public Company Valuation (2/2)

(\$ in Millions, except stock price data)

## Internationally-based Digital Advertising

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Clq Digital AG	Germany	\$2.82	-75%	\$ 17.4	\$ 27.1	\$ 77.2	\$ 5.3	6.9%	-4.1%	0.4x	5.1x
Criteo S.A.	France	23.30	-36%	1,569.5	1,135.5	2,304.2	250.4	10.9%	5.2%	0.5x	4.5x
iClick Interactive Asia Group Limited	Hong Kong	3.68	-68%	198.0	188.7	160.3	(21.4)	NM	44.5%	1.2x	NM
MakeMyTrip Limited	India	24.99	-40%	2,548.5	2,217.2	571.3	(156.8)	NM	-2.9%	3.9x	NM
Matomy Media Group Ltd.	Israel	0.08	-93%	7.4	32.5	177.3	10.2	5.8%	-39.5%	0.2x	3.2x
Metaps Inc.	* Japan	18.92	-41%	255.4	223.3	190.7	2.5	1.3%	55.8%	1.2x	91.0x
Pacific Online Limited	China	0.13	-27%	146.0	95.0	147.6	19.3	13.1%	3.0%	0.6x	4.9x
Perion Network Ltd.	Israel	2.67	-34%	69.0	67.8	258.2	20.7	8.0%	-8.2%	0.3x	3.3x
Rightmove plc	* United Kingdom	5.59	-19%	4,982.2	4,963.7	336.3	251.4	74.7%	10.0%	14.8x	19.7x
Septeni Holdings Co., Ltd.	Japan	1.90	-54%	240.5	109.5	134.6	10.9	8.1%	3.9%	0.8x	10.1x
Taptica International Ltd	Israel	3.89	-41%	265.0	224.2	289.3	38.2	13.2%	107.0%	0.8x	5.9x
Tencent Holdings Limited	China	39.88	-35%	377,040.46	385,445.77	42,829.27	16,048.42	37.5%	36.7%	9.0x	24.0x
TradeDoubler AB (publ)	Sweden	0.35	-42%	15.67	23.04	130.28	1.65	1.3%	-5.4%	0.2x	14.0x
XLMedia PLC	Jersey	1.04	-64%	229.5	189.5	128.8	39.4	30.6%	7.0%	1.5x	4.8x
Yandex N.V.	Netherlands	29.50	-34%	9,569.7	8,904.5	1,781.9	434.3	24.4%	32.1%	5.0x	20.5x
<b>Average</b>										<b>2.3x</b>	<b>10.6x</b>



# Marketing Technology

- The Marketing Technology segment announced 83 transactions in November, of which 39 reported more than \$1.3 billion in value
- The 10 transactions in the CRM subsegment is up more than 20 percent from the average monthly activity levels of the past 12 months
- Select transactions:
  - The acquisition of the imaging unit of Nuance Communications for \$400 million by Kofax
  - The \$120 million round of funding received by hospitality and travel-focused digital marketing data solution Sojern from Technology Crossover Ventures
  - The acquisition of audio advertising market platform Jelli from iHeartMedia
  - The acquisition of retail-focused chat technology Welcome Commerce from Salsify

	MARKETING TECHNOLOGY TRANSACTIONS BY SEGMENT				BUYER/INVESTOR BREAKDOWN					
	Transactions		Reported Value		Strategic		Buyout		Venture/Growth Capital	
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
CRM	10	12%	20.5	2%	7	11.0	0	-	3	9.5
Analytics & Targeting	9	11%	142.6	11%	5	-	0	-	4	142.6
MRM/Workflow Management	9	11%	37.0	3%	1	-	1	-	7	37.0
Commerce Management	7	8%	222.1	17%	2	-	0	-	5	222.1
Email/Messaging Software	7	8%	80.3	6%	3	-	0	-	4	\$80.3
Product/Price Software	6	7%	20.9	2%	4	13.4	0	-	2	7.5
Content Management	5	6%	33.0	3%	0	-	2	-	3	33.0
Other	30	36%	724.6	57%	13	575.1	2	-	15	147.4
<b>Total</b>	<b>83</b>	<b>100%</b>	<b>1,281.0</b>	<b>100%</b>	<b>35</b>	<b>599.5</b>	<b>5</b>	<b>0.0</b>	<b>43</b>	<b>681.5</b>

# Marketing Technology

## Public Company Valuation (1/2)

(\$ in Millions, except stock price data)

### US-based Marketing Technology

Company Name	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
					Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Adobe Inc.	\$250.89	-10%	\$ 122,467.82	\$ 119,408.32	\$ 8,571.98	\$ 3,090.17	36.0%	24.2%	13.9x	38.6x
Alteryx, Inc.	60.18	-11%	3,694.0	3,536.9	182.4	(12.4)	NM	54.6%	19.4x	NM
AppFolio, Inc.	61.29	-33%	2,099.2	2,053.6	177.6	24.3	13.7%	32.6%	11.6x	84.5x
Blackbaud, Inc.	73.25	-39%	3,466.4	3,866.3	844.6	137.0	16.2%	9.8%	4.6x	28.2x
Brightcove Inc.	7.18	-33%	262.0	235.3	164.1	(7.0)	NM	6.2%	1.4x	NM
Cardlytics, Inc.	14.38	-49%	307.9	306.9	142.1	(29.1)	NM	11.5%	2.2x	NM
ChannelAdvisor Corporation	10.75	-31%	293.6	246.1	130.5	(2.2)	NM	8.6%	1.9x	NM
Cision Ltd.	12.52	-32%	1,661.6	2,796.9	713.0	223.1	31.3%	16.7%	3.9x	12.5x
Eventbrite, Inc.	29.71	-26%	2,317.0	1,910.1	278.4	(12.6)	NM	0.0%	6.9x	NM
eBay Inc.	29.85	-36%	28,740.4	33,150.4	10,216.0	2,985.0	29.2%	6.3%	3.2x	11.1x
Elastic N.V.	71.45	-7%	5,040.3	5,188.7	184.9	(50.5)	NM	0.0%	28.1x	NM
Endurance International Group	8.30	-24%	1,194.0	2,937.9	1,157.1	319.9	27.6%	-1.5%	2.5x	9.2x
Five9, Inc.	42.88	-13%	2,520.1	2,447.3	240.7	10.8	4.5%	27.4%	10.2x	226.0x
GoDaddy Inc.	65.26	-23%	10,912.9	12,653.9	2,566.5	384.2	15.0%	21.3%	4.9x	32.9x
HubSpot, Inc.	139.03	-14%	5,454.5	5,206.7	475.5	(37.2)	NM	37.6%	11.0x	NM
IBM Corporation	124.27	-27%	112,935.8	145,651.8	80,373.0	16,954.0	21.1%	2.6%	1.8x	8.6x
LivePerson, Inc.	18.87	-31%	1,196.7	1,130.3	241.5	4.6	1.9%	11.0%	4.7x	248.0x
Marin Software Incorporated	2.83	-76%	16.4	5.1	60.5	(25.1)	NM	-24.6%	0.1x	NM
MicroStrategy Incorporated	129.64	-14%	1,486.6	787.5	502.8	24.5	4.9%	-0.9%	1.6x	32.2x
MINDBODY, Inc.	27.76	-39%	1,330.2	1,254.6	228.9	(19.0)	NM	33.8%	5.5x	NM
Nuance Communications, Inc.	15.99	-15%	4,598.4	6,332.2	2,051.7	362.9	17.7%	5.8%	3.1x	17.4x
Oracle Corporation	48.76	-9%	184,734.0	183,436.0	39,920.0	16,155.0	40.5%	4.4%	4.6x	11.4x
PayPal Holdings, Inc.	85.81	-8%	101,115.0	93,528.0	14,969.0	2,699.0	18.0%	21.4%	6.2x	34.7x
PROS Holdings, Inc.	32.17	-22%	1,195.1	1,135.3	190.8	(39.8)	NM	17.5%	6.0x	NM
PTC Inc.	86.49	-19%	10,264.2	10,621.7	1,241.8	134.8	10.9%	6.7%	8.6x	78.8x
salesforce.com, inc.	142.76	-11%	109,211.4	110,152.4	12,484.0	1,175.7	9.4%	25.2%	8.8x	93.7x
SendGrid, Inc.	45.61	-4%	2,160.0	1,995.9	137.2	6.6	4.8%	32.9%	14.6x	NM
SharpSpring, Inc.	12.56	-16%	107.9	105.0	17.3	(7.7)	NM	37.8%	6.1x	NM
SVMK Inc.	14.28	-29%	1,786.1	1,938.2	243.4	(86.1)	NM	0.0%	8.0x	NM
Square, Inc.	69.84	-31%	28,878.7	28,731.9	2,981.7	(0.5)	NM	45.4%	9.6x	NM
Tableau Software, Inc.	124.64	-1%	10,415.9	9,459.1	1,068.4	(91.7)	NM	21.6%	8.9x	NM
Teradata Corporation	37.63	-15%	4,447.9	4,176.9	2,202.0	154.0	7.0%	2.1%	1.9x	27.1x
Verint Systems Inc.	45.43	-13%	2,948.7	3,353.1	1,195.0	142.6	11.9%	9.6%	2.8x	23.5x
Veritone, Inc.	5.91	-79%	114.2	49.5	19.6	(54.3)	NM	46.1%	2.5x	NM
Webis Holdings plc	0.03	-72%	11.8	(0.6)	54.5	0.2	0.3%	-5.2%	NM	NM
Zendesk, Inc.	59.43	-18%	6,361.5	6,362.8	548.7	(106.4)	NM	38.3%	11.6x	NM
Adjusted Weighted Average									6.5x	22.5x

# Marketing Technology

## Public Company Valuation (2/2)

(\$ in Millions, except stock price data)

### Internationally-based Marketing Technology

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Baozun Inc.	China	35.27	-48%	\$ 2,013.16	\$ 1,995.72	\$ 692.46	\$ 52.89	7.6%	23.4%	2.9x	37.7x
Bitauto Holdings Limited	China	18.46	-53%	1,318.5	5,272.3	1,477.7	30.9	2.1%	29.6%	3.6x	170.6x
ChinaCache International Holdings Ltd.	China	1.48	-69%	39.43	89.83	130.12	(31.96)	NM	-7.8%	0.7x	NM
MercadoLibre, Inc.	Argentina	351.97	-16%	15,910.1	15,510.8	1,551.3	(2.7)	NM	39.2%	10.0x	NM
Open Text Corporation	Canada	34.31	-15%	9,212.7	11,045.1	2,841.7	829.6	29.2%	16.5%	3.9x	13.3x
SharpSpring, Inc.	United States	12.56	-16%	107.9	105.0	17.3	(7.7)	NM	37.8%	6.1x	NM
Shopify Inc.	Canada	152.66	-14%	16,345.4	14,767.2	952.2	(66.4)	NM	63.9%	15.5x	NM
The Sage Group plc	United Kingdom	7.42	-30%	8,053.0	8,881.4	2,408.2	645.8	26.8%	7.6%	3.7x	13.8x
United Internet AG	Germany	44.98	-34%	9,010.2	11,376.8	5,825.4	962.9	16.5%	25.7%	2.0x	11.8x
Weborama SA	France	8.49	-50%	28.9	32.4	43.8	2.5	5.7%	13.3%	0.7x	12.9x
Wix.com Ltd.	Israel	94.18	-22%	4,553.6	4,171.9	558.1	(25.7)	NM	42.6%	7.5x	NM
<b>Adjusted Weighted Average</b>										<b>3.7x</b>	<b>17.9x</b>

# Agency & Marketing Services

- With 42 transactions, activity in the Agency & Marketing Services segment in November was flat compared with the average monthly activity levels of the past twelve months. Seven of these transactions reported value of \$195 million
- Digital Agency was the most active subsegment and accounted for over half of segment activity with 24 deals announced
- Select transactions:
  - Quad/Graphics' pending \$132.5 million acquisition of independent creative agency Periscope (*a Petsky Prunier-led transaction*)
  - The acquisition of industrial printing and software company ColorGATE Digital Output solutions by Ricoh
  - PDI's acquisition of retail loyalty company Outsite
  - BlueFocus' acquisition of creative agency Eleven
  - The acquisition of Germany-based creative marketing company Kolle Rebbe by Accenture

	AGENCY & MARKETING SERVICES TRANSACTIONS BY SEGMENT				BUYER/INVESTOR BREAKDOWN					
	Transactions		Reported Value		Strategic		Buyout		Venture/Growth Capital	
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Digital Agency	24	57%	\$60.0	31%	23	\$60.0	0	-	1	-
Experiential Marketing	4	10%	-	0%	4	-	0	-	0	-
Public Relations	3	7%	-	0%	3	-	0	-	0	-
Design Agency	2	5%	2.0	1%	2	2.0	0	-	0	-
General Agency	2	5%	132.5	68%	2	137.5	0	-	0	-
Marketing Consulting	2	5%	-	0%	2	-	0	-	0	-
Promotion Agency	2	5%	-	0%	2	-	0	-	0	-
Ad Specialty/Premiums	1	2%	-	0%	1	-	0	-	0	-
Other	2	5%	0	0%	2	0.0	0	0.0	0	0.0
<b>Total</b>	<b>42</b>	<b>100%</b>	<b>194.5</b>	<b>100%</b>	<b>41</b>	<b>199.5</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.0</b>

# Agency Public Company Valuation

(\$ in Millions, except stock price data)

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Cello Health plc	United Kingdom	\$1.26	-30%	\$ 131.6	\$ 138.6	\$ 223.2	\$ 16.5	7.4%	3.7%	0.6x	8.4x
Dentsu Inc.	Japan	44.57	-11%	12,564.7	10,870.5	8,784.1	1,562.8	17.8%	NM	1.2x	7.0x
Enero Group Limited	Australia	0.88	-7%	73.9	50.8	148.1	10.9	7.4%	10.7%	0.3x	4.6x
Hakuhodo DY Holdings Inc	Japan	15.31	-15%	5,711.2	5,506.9	12,225.9	665.1	5.4%	7.3%	0.5x	8.3x
Huntsworth plc	United Kingdom	1.35	-26%	467.2	517.7	270.4	38.0	14.0%	9.1%	1.9x	13.6x
M&C Saatchi plc	United Kingdom	4.02	-27%	349.4	351.6	456.3	30.1	6.6%	40.5%	0.8x	11.7x
MDC Partners Inc.	United States	2.64	-78%	151.8	1,328.3	1,485.3	172.6	11.6%	-1.1%	0.9x	7.7x
Next Fifteen Communications Group plc	United Kingdom	6.51	-17%	542.1	572.7	283.6	47.2	16.7%	8.7%	2.0x	12.1x
Omnicom Group Inc.	United States	76.97	-8%	17,249.4	20,888.1	15,380.0	2,352.0	15.3%	0.3%	1.4x	8.9x
OPT Holding, Inc.	Japan	18.65	-40%	427.0	385.5	761.3	23.8	3.1%	11.2%	0.5x	16.2x
Publicis Groupe S.A.	France	59.28	-17%	13,673.1	17,170.6	10,843.5	1,996.3	18.4%	-8.0%	1.6x	8.6x
The Interpublic Group of Companies, Inc.	United States	23.50	-10%	9,032.3	10,708.2	8,157.9	1,190.7	14.6%	7.2%	1.3x	9.0x
UDG Healthcare plc	* Ireland	8.54	-30%	2,125.2	2,185.2	1,315.2	80.6	6.1%	7.8%	1.7x	27.1x
WPP plc	United Kingdom	11.05	-41%	13,786.0	20,227.4	19,934.7	3,035.7	15.2%	-2.5%	1.0x	6.7x
Adjusted Weighted Average										1.2x	8.2x

# Marketing Services

## Public Company Valuation

(\$ in Millions, except stock price data)

Company Name	Headquarters	Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM Multiples	
		11/30/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Affinion Group Holdings, Inc.	United States	14.00	-4%	128.2	2,016.4	949.4	220.3	23.2%	21.5%	2.1x	9.2x
Aimia Inc.	Canada	2.65	-23%	402.9	358.2	1,287.5	150.7	11.7%	30.6%	0.3x	2.4x
Alliance Data Systems Corporation	United States	200.36	-28%	10,914.3	27,811.0	7,841.5	1,785.8	22.8%	5.4%	3.5x	15.6x
Fluent, Inc.	United States	3.54	-49%	266.5	308.9	244.6	20.3	8.3%	16.8%	1.3x	15.2x
CSG Systems International, Inc.	United States	35.07	-28%	1,168.9	1,330.2	833.0	154.8	18.6%	6.9%	1.6x	8.6x
Deluxe Corporation	United States	50.35	-36%	2,331.5	3,164.6	1,968.2	471.5	24.0%	0.9%	1.6x	6.7x
Fair Isaac Corporation	* United States	198.63	-18%	5,751.3	6,425.3	1,032.5	234.2	22.7%	10.8%	6.2x	27.4x
Harte Hanks, Inc.	United States	3.25	-73%	20.3	19.7	314.3	(8.8)	NM	-20.3%	0.1x	NM
High Co. SA	France	4.81	-29%	99.9	44.4	190.0	18.6	9.8%	8.0%	0.2x	2.4x
Multiplus S.A.	Brazil	6.44	-32%	1,043.3	691.1	535.2	94.4	17.6%	88.8%	1.3x	7.3x
Pitney Bowes Inc.	United States	8.44	-43%	1,583.5	4,038.4	3,918.3	652.8	16.7%	26.6%	1.0x	6.2x
Points International Ltd.	Canada	10.73	-41%	152.2	98.2	368.1	12.5	3.4%	7.5%	0.3x	7.8x
Viad Corp	United States	50.35	-19%	1,024.1	1,189.7	1,276.6	124.4	9.7%	-0.7%	0.9x	9.6x
Adjusted Weighted Average										2.6x	12.1x

# Traditional Media

- Of the 26 transactions recorded in the Traditional Media segment in November, six announced \$1.5 billion in reported value
- Entertainment Media continues to drive overall segment activity with 11 deals announced throughout the month
- Select transactions from the segment included:
  - Vivendi’s pending \$1 billion purchase of France-based publishing company Editis from Planeta
  - The \$150 million acquisition of Fortune Magazine by private investor Chatchaval Jiaravanon from Meredith
  - The acquisition of furniture industry print publication Progressive Business Media from BridgeTower Media
  - Stirling Corp’s acquisition of digital book publisher Paradise Publishers
  - The acquisition of SnowGlobe Music Festival by MTV

	TRADITIONAL MEDIA TRANSACTIONS BY SEGMENT				BUYER/INVESTOR BREAKDOWN					
	Transactions		Reported Value		Strategic		Buyout		Venture/Growth Capital	
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Entertainment Media	11	42%	\$3.3	0%	9	-	1	-	1	\$3.3
B-to-B Media	4	15%	-	0%	3	-	1	-	0	-
Consumer Book Publishing	4	15%	1,000.0	68%	4	1,000.0	0	-	0	-
Consumer Magazine Publishing	3	12%	150.0	10%	3	150.0	0	-	0	-
Digital Place-Based Media	2	8%	307.7	21%	0	-	0	-	2	307.7
Newspaper Publishing	1	4%	-	0%	1	-	0	-	0	-
Other	1	4%	14.4	1%	1	14.4	0	0.0	0	0.0
<b>Total</b>	<b>26</b>	<b>100%</b>	<b>1,475.4</b>	<b>100%</b>	<b>21</b>	<b>1,164.4</b>	<b>2</b>	<b>0.0</b>	<b>3</b>	<b>311.0</b>

# Traditional Media

## Public Company Valuation (1/3)

(\$ in Millions, except stock price data)

### Large Cap Diversified Media

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
CBS Corporation	United States	\$54.18	-12%	\$ 20,270.9	\$ 29,941.9	\$ 14,411.0	\$ 3,138.0	21.8%	8.4%	2.1x	9.5x
Discovery, Inc.	United States	30.72	-12%	20,828.1	39,856.1	9,608.0	3,216.6	33.5%	43.8%	4.1x	12.4x
Twenty-First Century Fox, Inc.	* United States	49.47	-1%	91,439.9	105,384.9	30,575.0	6,995.0	22.9%	5.4%	3.4x	15.1x
Viacom Inc.	United States	30.86	-13%	12,590.7	21,419.7	12,943.0	3,008.0	23.2%	-2.4%	1.7x	7.1x
The Walt Disney Company	United States	115.49	-4%	171,926.6	193,832.6	59,434.0	17,848.0	30.0%	7.8%	3.3x	10.9x
<b>Adjusted Weighted Average</b>										<b>3.2x</b>	<b>10.7x</b>

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (5.0x) and EBITDA multiples that are 1.0 standard deviations above the mean (14.0x)

(\$ in Millions, except stock price data)

### B-to-B Media

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Ascential plc	United Kingdom	\$4.84	-19%	\$ 1,936.2	\$ 2,300.1	\$ 527.3	\$ 138.9	26.4%	38.5%	4.4x	16.6x
Centaur Media Plc	United Kingdom	\$0.57	-20%	82.7	80.4	92.8	6.9	7.4%	16.2%	0.9x	11.7x
Emerald Expositions Events, Inc.	United States	\$11.70	-49%	856.5	1,373.9	355.2	162.1	45.6%	4.3%	3.9x	8.5x
Euromoney Institutional Investor PLC	United Kingdom	\$16.31	-13%	1,751.9	1,652.0	509.1	142.5	28.0%	0.9%	3.2x	11.6x
Informa plc	United Kingdom	8.82	-21%	11,036.5	14,559.1	2,374.3	749.2	31.6%	11.6%	6.1x	19.4x
MCH Group AG	Switzerland	25.22	-63%	151.5	312.5	540.6	58.0	10.7%	34.4%	0.6x	5.4x
ITE Group plc	* United Kingdom	0.81	-66%	596.0	692.2	222.3	29.5	13.3%	12.8%	3.1x	23.5x
Tarsus Group plc	Ireland	3.42	-20%	418.0	545.5	149.8	50.2	33.5%	39.8%	3.6x	10.9x
TechTarget, Inc.	United States	14.39	-58%	402.9	395.3	119.8	22.3	18.6%	14.2%	3.2x	17.8x
<b>Adjusted Weighted Average</b>										<b>5.2x</b>	<b>17.3x</b>

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (6.6x) and EBITDA multiples that are 1.0 standard deviations above the mean (19.7x)

(\$ in Millions, except stock price data)

### Radio Broadcasting

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Beasley Broadcast Group, Inc.	United States	\$5.14	-64%	\$ 141.3	\$ 375.2	\$ 240.4	\$ 40.6	16.9%	5.8%	1.6x	9.2x
Emmis Communications Corporation	United States	3.78	-35%	48.8	158.0	125.5	11.7	9.3%	-31.3%	1.3x	13.5x
Entercom Communications Corp.	United States	6.53	-46%	930.7	2,656.0	1,297.8	226.9	17.5%	175.6%	2.0x	11.7x
Pandora Media, Inc.	United States	8.69	-14%	2,344.3	2,725.2	1,517.0	(252.5)	NM	3.6%	1.8x	NM
Salem Media Group, Inc.	United States	2.83	-55%	74.1	324.5	262.8	41.3	15.7%	-1.7%	1.2x	7.8x
Sirius XM Holdings Inc.	* United States	6.23	-19%	27,671.5	34,192.0	5,678.7	2,070.5	36.5%	6.7%	6.0x	16.5x
Spanish Broadcasting System, Inc.	United States	0.00	NA	2.1	403.8	139.1	45.3	32.6%	-0.9%	2.9x	8.9x
Townsquare Media, Inc.	United States	6.20	-37%	117.5	625.6	514.9	100.5	19.5%	19.0%	1.2x	6.2x
Urban One, Inc.	United States	2.17	-10%	97.8	1,003.8	434.6	126.9	29.2%	-2.2%	2.3x	7.9x
<b>Adjusted Weighted Average</b>										<b>1.8x</b>	<b>10.6x</b>

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (5.3x) and EBITDA multiples that are 1.0 standard deviations above the mean (13.7x)



# Traditional Media

## Public Company Valuation (2/3)

(\$ in Millions, except stock price data)

### Broadcast, Cable, and Satellite Television

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Altice Europe N.V.	Netherlands	\$2.42	-80%	\$ 2,880.2	\$ 43,952.0	\$ 26,480.8	\$ 10,008.9	37.8%	30.8%	1.7x	4.4x
AMC Networks Inc.	United States	\$59.86	-13%	3,383.9	6,232.3	2,926.0	916.4	31.3%	4.2%	2.1x	6.8x
CVC Limited	Australia	1.93	-9%	231.3	204.5	48.1	25.7	53.5%	38.3%	4.3x	7.9x
CBS Corporation	United States	54.18	-12%	20,270.9	29,941.9	14,411.0	3,138.0	21.8%	8.4%	2.1x	9.5x
Charter Communications, Inc.	United States	329.20	-17%	75,359.7	155,344.7	43,005.0	15,963.0	37.1%	4.2%	3.6x	9.7x
Comcast Corporation	United States	39.01	-11%	177,476.2	241,883.2	88,233.0	28,847.0	32.7%	5.1%	2.7x	8.4x
Discovery, Inc.	United States	30.72	-12%	20,828.1	39,856.1	9,608.0	3,216.6	33.5%	43.8%	4.1x	12.4x
DISH Network Corporation	United States	32.76	-38%	15,321.0	29,051.4	13,798.4	2,811.0	20.4%	-5.9%	2.1x	10.3x
Entravision Communications Corporation	United States	3.23	-59%	287.0	346.4	289.2	50.2	17.4%	-45.7%	1.2x	6.9x
GCI Liberty, Inc.	* United States	NA	NA	5,155.5	7,829.0	512.2	93.5	18.2%	873.0%	15.3x	83.8x
Gray Television, Inc.	United States	18.49	-9%	1,606.6	2,855.9	989.5	372.6	37.7%	11.6%	2.9x	7.7x
Grupo Televisa, S.A.B.	Mexico	2.73	-32%	7,957.7	12,874.9	5,415.0	2,016.5	37.2%	6.7%	2.4x	6.4x
Liberty Global plc	United Kingdom	24.83	-38%	18,437.7	47,695.6	15,772.9	7,137.7	45.3%	46.2%	3.0x	6.7x
Nexstar Media Group, Inc.	United States	82.64	-8%	3,769.4	7,822.9	2,622.3	960.8	36.6%	25.6%	3.0x	8.1x
Stolt-Nielsen Limited	United Kingdom	12.05	-29%	733.1	3,133.0	2,106.2	453.7	21.5%	7.8%	1.5x	6.9x
Sinclair Broadcast Group, Inc.	United States	31.45	-22%	3,059.2	5,900.5	2,972.2	813.5	27.4%	9.2%	2.0x	7.3x
TEGNA Inc.	United States	13.29	-15%	2,861.4	5,827.2	2,055.5	680.5	33.1%	4.9%	2.8x	8.6x
The E.W. Scripps Company	United States	17.63	-4%	1,422.3	1,981.7	1,089.9	140.9	12.9%	33.9%	1.8x	14.1x
<b>Adjusted Weighted Average</b>										<b>2.9x</b>	<b>8.9x</b>

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (9.5x) and EBITDA multiples that are 1.0 standard deviations above the mean (30.5x)

(\$ in Millions, except stock price data)

### Entertainment Media

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Cineplex Inc.	Canada	\$19.42	-36%	\$ 1,230.2	\$ 1,671.8	\$ 1,247.8	\$ 195.0	15.6%	6.5%	1.3x	8.6x
Eros International Plc	United States	9.13	-39%	645.4	990.5	260.8	56.7	21.7%	11.4%	3.8x	17.5x
Lions Gate Entertainment Corp.	United States	19.41	-47%	3,979.2	6,385.1	4,016.6	475.6	11.8%	1.6%	1.6x	13.4x
Live Nation Entertainment, Inc.	United States	55.68	-4%	11,667.5	13,123.0	11,156.6	697.4	6.3%	21.7%	1.2x	18.8x
Twenty-First Century Fox, Inc.	United States	49.47	-1%	91,439.9	105,384.9	30,575.0	6,995.0	22.9%	5.4%	3.4x	15.1x
Liberty Global plc	United Kingdom	24.83	-38%	18,437.7	47,695.6	15,772.9	7,137.7	45.3%	46.2%	3.0x	6.7x
Village Roadshow Limited	Australia	1.79	-41%	345.3	675.6	711.2	40.3	5.7%	-5.0%	0.9x	16.8x
World Wrestling Entertainment, Inc.	* United States	73.96	-24%	5,770.7	5,669.0	869.3	120.6	13.9%	10.9%	6.5x	47.0x
<b>Adjusted Weighted Average</b>										<b>3.3x</b>	<b>14.2x</b>

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (6.8x) and EBITDA multiples that are 1.0 standard deviations above the mean (32.2x)

# Traditional Media

## Public Company Valuation (3/3)

(\$ in Millions, except stock price data)

### Out-of-Home Media

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM		LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA		
APG SGA SA	Switzerland	331.26	-29%	991.9	971.4	303.4	70.8	23.3%	-3.6%	3.2x	13.7x		
Clear Channel Outdoor Holdings, Inc.	United States	5.11	-20%	1,848.7	7,085.6	2,705.1	587.1	21.7%	4.7%	2.6x	12.1x		
Clear Media Limited	Hong Kong	0.74	-32%	402.9	332.0	272.1	112.7	41.4%	11.1%	1.2x	2.9x		
JCDecaux SA	France	33.97	-19%	7,226.8	7,859.6	3,543.1	576.1	16.3%	0.9%	2.2x	13.6x		
Lamar Advertising Company (REIT)	United States	75.84	-6%	7,546.5	10,081.8	1,597.8	680.3	42.6%	4.5%	6.3x	14.8x		
National CineMedia, Inc.	United States	6.91	-37%	531.6	1,674.4	444.7	195.4	43.9%	3.9%	3.8x	8.6x		
NTN Buzztime, Inc.	United States	2.28	-73%	6.5	7.7	22.7	2.0	8.7%	3.4%	0.3x	3.9x		
Outfront Media Inc.	United States	20.78	-14%	2,897.8	5,216.9	1,555.1	398.6	25.6%	2.5%	3.4x	13.1x		
Stingray Digital Group Inc.	Canada	5.74	-31%	437.9	479.4	104.6	28.8	27.6%	19.3%	4.6x	16.6x		
TOM Group Limited	* Hong Kong	0.25	-20%	970.6	1,333.2	121.8	14.4	11.8%	-2.5%	10.9x	92.5x		
<b>Adjusted Weighted Average</b>										<b>3.9x</b>	<b>13.6x</b>		

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (8.8x) and EBITDA multiples that are 1.0 standard deviations above the mean (36.1x)

(\$ in Millions, except stock price data)

### Publishing

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM		LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA		
A.H. Belo Corporation	United States	\$4.52	-22%	\$ 97.8	\$ 39.4	\$ 213.8	\$ 7.5	3.5%	-14.7%	0.2x	5.3x		
Daily Mail and General Trust plc	United Kingdom	7.91	-21%	2,803.5	2,808.2	1,860.8	227.1	12.2%	-8.8%	1.5x	12.4x		
Emmis Communications Corporation	United States	3.78	-35%	48.8	158.0	125.5	11.7	9.3%	-31.3%	1.3x	13.5x		
Gannett Co., Inc.	United States	10.37	-16%	1,172.9	1,402.4	3,019.7	301.3	10.0%	-4.4%	0.5x	4.7x		
Glacier Media Inc.	Canada	0.47	-32%	51.2	95.4	145.8	6.5	4.5%	-1.5%	0.7x	14.7x		
John Wiley & Sons, Inc.	United States	55.29	-23%	3,175.2	3,565.3	1,795.6	327.1	18.2%	4.0%	2.0x	10.9x		
Meredith Corporation	United States	57.26	-21%	2,592.4	5,912.7	2,611.3	490.6	18.8%	53.0%	2.3x	12.1x		
News Corporation	United States	12.98	-25%	7,678.0	8,797.0	9,490.0	1,017.0	10.7%	2.4%	0.9x	8.6x		
Pearson plc	United Kingdom	12.27	-4%	9,530.1	10,622.7	5,714.8	749.5	13.1%	-8.5%	1.9x	14.2x		
Scholastic Corporation	United States	46.21	-4%	1,621.5	1,367.4	1,657.6	118.8	7.2%	0.6%	0.8x	11.5x		
The E.W. Scripps Company	United States	17.63	-4%	1,422.3	1,981.7	1,089.9	140.9	12.9%	33.9%	1.8x	14.1x		
The McClatchy Company	United States	6.39	-40%	49.9	790.2	838.9	89.2	10.6%	-8.9%	0.9x	8.9x		
The New York Times Company	* United States	26.83	-7%	4,425.6	4,124.1	1,709.3	248.7	14.6%	6.8%	2.4x	16.6x		
<b>Adjusted Weighted Average</b>										<b>1.6x</b>	<b>11.5x</b>		

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (2.7x) and EBITDA multiples that are 1.0 standard deviations above the mean (14.9x)

# Software

- Within the Software segment, Venture/Growth Capital transactions accounted for two-thirds of monthly activity in November with 177 deals announced, 157 of which worth \$4.3 billion in value
- Healthcare Software was the segment with the highest value, with 28 deals announced, 18 of which reporting \$6.6 billion
- Select transactions:
  - Thoma Bravo's pending \$950 million acquisition of application security testing platform Veracode
  - The pending acquisition of construction productivity platform PlanGrid by Autodesk for \$875
  - ResMed's \$750 acquisition of post-acute care software platform MatrixCare from OMERS Private Equity
  - Microsoft's acquisitions of AI and bot development software XOXO and desktop virtualization solution FSLogix
  - The acquisition of robotic process automation solution Contextor by SAP
  - Vidder's sale of security solution PrecisionAccess to Verizon

	SOFTWARE TRANSACTIONS BY SEGMENT				BUYER/INVESTOR BREAKDOWN					
	Transactions		Reported Value		Strategic		Buyout		Venture/Growth Capital	
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Financial	57	22%	\$3,421.9	19%	15	\$620.0	3	\$1,867.2	39	\$934.7
Security	42	16%	557.0	3%	11	1,641.2	1	950.0	30	529.2
Healthcare	28	11%	6,604.4	37%	8	804.8	2	5,644.0	18	155.6
Infrastructure	25	9%	650.3	4%	7	-	1	-	17	557.0
ERP	18	7%	3,120.4	17%	7	360.0	1	-	10	290.3
HR	13	5%	765.9	4%	3	-	0	-	10	247.0
Data Management	13	5%	260.8	1%	4	488.5	0	-	9	277.4
Other	69	26%	2,492.0	14%	25	1,230	0	0	44	1,275.8
<b>Total</b>	<b>265</b>	<b>100%</b>	<b>17,872.7</b>	<b>100%</b>	<b>80</b>	<b>5,144.5</b>	<b>8</b>	<b>8,461.2</b>	<b>177</b>	<b>4,267.0</b>

# Software

## Public Company Valuation (1/3)

(\$ in Millions, except stock price data)

### Financial & Credit/Risk Management Software

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Alfa Financial Software Holdings PLC	United Kingdom	1.69	-76%	\$ 507.7	\$ 461.3	\$ 99.7	\$ 34.3	34.4%	-15.8%	4.6x	13.4x
Anaplan, Inc.	United States	28.00	-1%	3,471.1	3,096.9	217.7	(92.4)	NM	0.0%	14.2x	NM
Apptio, Inc.	United States	38.16	-8%	1,731.5	1,586.3	224.7	(14.0)	NM	24.5%	7.1x	NM
Avalara, Inc.	United States	31.99	-46%	2,127.5	1,989.3	252.6	(49.4)	NM	0.0%	7.9x	NM
BlackLine, Inc.	United States	42.87	-26%	2,342.6	2,217.5	216.9	(10.4)	NM	34.8%	10.2x	NM
Coupa Software Incorporated	United States	64.43	-24%	3,741.0	3,466.2	219.1	(37.5)	NM	37.7%	15.8x	NM
Donnelley Financial Solutions, Inc.	United States	16.66	-25%	568.1	909.1	987.5	132.0	13.4%	-1.4%	0.9x	6.9x
Ebix, Inc.	United States	47.22	-47%	1,476.6	2,018.9	466.2	154.5	33.2%	37.4%	4.3x	13.1x
First Data Corporation	United States	19.08	-28%	17,868.7	37,908.7	8,617.0	3,017.0	35.0%	7.8%	4.4x	12.6x
GreenSky, Inc.	United States	9.31	-66%	534.6	586.1	394.8	175.7	44.5%	28.3%	1.5x	3.3x
Guidewire Software, Inc.	United States	92.96	-14%	7,530.5	6,768.4	661.1	33.1	5.0%	28.5%	10.2x	NM
i3 Verticals, Inc.	United States	22.53	-12%	205.3	314.4	323.5	28.1	8.7%	23.2%	1.0x	11.2x
Intuit Inc.	United States	214.53	-7%	55,678.1	54,771.1	6,070.0	1,749.0	28.8%	14.3%	9.0x	31.3x
Model N, Inc.	United States	13.73	-32%	431.8	428.8	154.6	(12.5)	NM	17.9%	2.8x	NM
Performant Financial Corporation	United States	1.72	-51%	91.1	125.9	149.2	13.0	8.7%	12.6%	0.8x	9.7x
Q2 Holdings, Inc.	United States	54.29	-19%	2,354.8	2,236.9	225.6	(12.0)	NM	22.3%	9.9x	NM
RealPage, Inc.	* United States	51.58	-22%	4,668.3	4,986.0	830.2	141.4	17.0%	31.3%	6.0x	35.3x
SS&C Technologies Holdings, Inc.	United States	48.15	-21%	11,980.0	17,933.9	2,748.5	883.0	32.1%	67.8%	6.5x	20.3x
StoneCo Ltd.	* Brazil	23.57	-27%	6,663.8	7,118.7	149.2	(26.9)	NM	0.0%	47.7x	NM
Tyler Technologies, Inc.	* United States	192.76	-24%	7,483.6	7,211.8	910.8	194.1	21.3%	11.5%	7.9x	37.2x
Zuora, Inc.	United States	19.03	-50%	2,049.9	1,890.6	221.0	(62.3)	NM	0.0%	8.6x	NM
<b>Adjusted Weighted Average</b>										<b>7.8x</b>	<b>25.5x</b>

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (32.1x) and EBITDA multiples that are 1.0 standard deviations above the mean (35.1x)

(\$ in Millions, except stock price data)

### Healthcare Software

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Allscripts Healthcare Solutions, Inc.	United States	10.21	-37%	\$ 1,783.8	\$ 3,997.3	\$ 2,079.1	\$ 90.5	4.4%	21.3%	1.9x	44.2x
athenahealth, Inc.	United States	133.10	-19%	5,405.0	5,359.7	1,311.4	264.8	20.2%	11.2%	4.1x	20.2x
Cegehim SA	France	26.83	-47%	373.7	555.8	537.9	61.9	11.5%	5.3%	1.0x	9.0x
Cerner Corporation	United States	57.91	-21%	19,080.7	18,708.2	5,213.0	1,256.5	24.1%	3.0%	3.6x	14.9x
Civitas Solutions, Inc.	United States	13.88	-30%	502.9	1,218.2	1,573.1	157.6	10.0%	8.0%	0.8x	7.7x
Computer Programs and Systems, Inc.	United States	26.68	-23%	363.0	495.3	286.1	34.5	12.1%	8.6%	1.7x	14.3x
Craneware plc	United Kingdom	37.40	-20%	998.4	947.3	67.1	19.5	29.1%	16.0%	14.1x	48.6x
HealthEquity, Inc.	* United States	88.69	-13%	5,521.9	5,219.0	258.2	81.8	31.7%	27.5%	20.2x	63.8x
McKesson Corporation	United States	124.50	-30%	24,324.3	33,044.3	210,927.0	4,053.0	1.9%	4.4%	0.2x	8.2x
Medidata Solutions, Inc.	United States	77.21	-13%	4,724.8	4,620.6	611.4	89.4	14.6%	16.0%	7.6x	51.7x
NantHealth, Inc.	United States	0.89	-78%	97.5	273.9	88.9	(49.0)	NM	8.1%	3.1x	NM
NextGen Healthcare, Inc.	United States	17.55	-26%	1,134.9	1,145.8	531.0	37.5	7.1%	1.4%	2.2x	30.6x
Streamline Health Solutions, Inc.	United States	0.83	-62%	16.0	25.6	24.0	0.9	3.8%	-3.3%	1.1x	28.3x
Veeva Systems Inc.	* United States	96.16	-12%	13,896.0	12,844.1	810.9	205.4	25.3%	24.0%	15.8x	62.5x
<b>Adjusted Weighted Average</b>										<b>5.1x</b>	<b>17.2x</b>

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (18.4x) and EBITDA multiples that are 1.0 standard deviations above the mean (51.9x)

# Software

## Public Company Valuation (2/3)

(\$ in Millions, except stock price data)

HR Software														
Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM		LTM Multiples		
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA			
51job, Inc.	China	\$68.08	-41%	\$ 4,206.0	\$ 3,291.2	\$ 508.7	\$ 161.1	31.7%	30.7%	6.5x	20.4x			
Benefitfocus, Inc.	United States	50.10	-2%	1,601.2	1,680.2	271.7	3.0	1.1%	17.3%	6.2x	NM			
Castlight Health, Inc.	United States	2.61	-56%	364.7	301.9	150.9	(34.0)	NM	21.0%	2.0x	NM			
Ceridian HCM Holding Inc.	United States	40.12	-11%	5,538.7	6,022.5	808.4	111.0	13.7%	19.3%	7.4x	54.3x			
Cornerstone OnDemand, Inc.	United States	54.62	-8%	3,201.4	3,098.4	531.6	0.6	0.1%	15.8%	5.8x	NM			
DHI Group, Inc.	United States	1.77	-46%	93.6	105.6	174.5	23.6	13.6%	-17.7%	0.6x	4.5x			
Domo, Inc.	United States	15.96	-45%	420.3	278.6	124.6	(165.4)	NM	0.0%	2.2x	NM			
Paycom Software, Inc.	United States	132.77	-19%	7,782.1	7,731.8	530.0	135.0	25.5%	30.3%	14.6x	57.3x			
Paylocity Holding Corporation	* United States	67.08	-24%	3,541.7	3,456.8	396.5	36.0	9.1%	25.3%	8.7x	96.0x			
Pluralsight, Inc.	United States	24.09	-37%	1,501.1	1,418.9	212.2	(85.0)	NM	38.0%	6.7x	NM			
The Ultimate Software Group, Inc.	United States	263.92	-21%	8,252.6	8,128.1	1,087.2	116.3	10.7%	20.8%	7.5x	69.9x			
Workday, Inc.	United States	164.00	-1%	35,588.0	35,196.7	2,616.0	(248.9)	NM	31.1%	13.5x	NM			
<b>Adjusted Weighted Average</b>											<b>11.0x</b>	<b>54.5x</b>		

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (15.2x) and EBITDA multiples that are 1.0 standard deviations above the mean (83.6x)

(\$ in Millions, except stock price data)

Security Software														
Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM		LTM Multiples		
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA			
Absolute Software Corporation	Canada	\$6.17	-5%	\$ 249.2	\$ 215.6	\$ 94.9	\$ 8.3	8.8%	3.5%	2.3x	25.9x			
Check Point Software Technologies Ltd.	Israel	111.81	-7%	17,466.3	15,696.1	1,896.9	947.5	49.9%	3.4%	8.3x	16.6x			
Cisco Systems, Inc.	United States	47.87	-3%	215,221.7	198,273.7	50,266.0	15,090.0	30.0%	5.2%	3.9x	13.1x			
Cheetah Mobile Inc.	China	6.35	-65%	890.3	488.6	726.2	112.7	15.5%	2.6%	0.7x	4.3x			
CyberArk Software Ltd.	Israel	74.14	-12%	2,673.6	2,287.1	314.5	41.5	13.2%	28.0%	7.3x	55.1x			
FireEye, Inc.	United States	20.01	-3%	3,874.0	3,736.6	790.7	(127.7)	NM	4.2%	4.7x	NM			
Fortinet, Inc.	United States	73.84	-22%	12,580.1	10,945.9	1,710.8	245.2	14.3%	18.7%	6.4x	44.6x			
Gemalto N.V.	Netherlands	57.25	0%	5,193.2	5,913.0	3,460.0	421.7	12.2%	-1.9%	1.7x	14.0x			
Imperva, Inc.	United States	55.51	-4%	1,953.8	1,649.4	351.8	5.0	1.4%	13.8%	4.7x	NM			
Juniper Networks, Inc.	United States	28.71	-7%	9,909.4	8,658.7	4,706.0	841.5	17.9%	-9.0%	1.8x	10.3x			
Mimecast Limited	* United Kingdom	37.23	-21%	2,236.2	2,269.1	301.2	19.5	6.5%	35.7%	7.5x	116.1x			
Palo Alto Networks, Inc.	United States	172.95	-28%	16,311.7	14,732.3	2,427.3	30.7	1.3%	29.9%	6.1x	NM			
Proofpoint, Inc.	United States	97.01	-26%	5,301.4	5,111.1	661.0	(38.9)	NM	37.8%	7.7x	NM			
SecureWorks Corp.	United States	18.01	NA	1,473.2	1,370.9	492.9	(37.9)	NM	8.1%	2.8x	NM			
Symantec Corporation	United States	22.11	-26%	14,125.8	16,728.8	4,750.0	966.0	20.3%	3.9%	3.5x	17.3x			
Tenable Holdings, Inc.	United States	28.48	-28%	2,650.5	2,386.4	246.3	(59.3)	NM	0.0%	9.7x	NM			
Trend Micro Incorporated	Japan	57.34	-14%	7,998.7	6,601.4	1,401.1	455.3	32.5%	7.8%	4.7x	14.5x			
VeriSign, Inc.	United States	156.06	-12%	18,865.8	19,471.3	1,203.0	798.5	66.4%	4.1%	16.2x	24.4x			
Zscaler, Inc.	* United States	39.26	-19%	4,702.3	4,403.8	190.2	(19.5)	NM	51.3%	23.2x	NM			
<b>Adjusted Weighted Average</b>											<b>5.1x</b>	<b>15.8x</b>		

# Software

## Public Company Valuation (3/3)

(\$ in Millions, except stock price data)

### Engineering Software

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
ANSYS, Inc.	United States	\$162.02	-15%	\$ 13,538.4	\$ 12,809.0	\$ 1,180.5	\$ 454.5	38.5%	11.0%	10.9x	28.2x
Dassault Systèmes SE	France	120.02	-25%	30,604.6	28,693.4	3,885.0	1,072.7	27.6%	4.7%	7.4x	26.7x
PTC Inc.	* United States	86.49	-19%	10,264.2	10,621.7	1,241.8	134.8	10.9%	6.7%	8.6x	78.8x
Synopsys, Inc.	United States	91.94	-11%	13,661.2	13,547.4	3,022.6	514.0	17.0%	13.5%	4.5x	26.4x
Trimble Inc.	United States	38.03	-17%	9,551.1	11,358.6	3,030.4	523.0	17.3%	19.7%	3.7x	21.7x
<b>Adjusted Weighted Average</b>										<b>7.2x</b>	<b>26.2x</b>

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (12.9x) and EBITDA multiples that are 1.0 standard deviations above the mean (60.2x)

(\$ in Millions, except stock price data)

### Infrastructure Software

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Adobe Inc.	United States	\$250.89	-10%	\$ 122,467.8	\$ 119,408.3	\$ 8,572.0	\$ 3,090.2	36.0%	24.2%	13.9x	38.6x
Atlassian Corporation Plc	* United Kingdom	85.94	-12%	20,466.3	19,499.3	945.8	21.4	2.3%	39.4%	20.6x	NM
Bandwidth Inc.	United States	46.66	-19%	903.1	839.6	194.2	16.1	8.3%	22.0%	4.3x	52.2x
Cloudera, Inc.	United States	12.34	-45%	1,890.6	1,512.2	411.1	(176.4)	NM	32.8%	3.7x	NM
Commvault Systems, Inc.	United States	58.94	-19%	2,728.2	2,244.1	710.5	30.2	4.2%	6.4%	3.2x	74.4x
DocuSign, Inc.	United States	41.76	-39%	6,548.3	5,729.5	602.3	(291.9)	NM	0.0%	9.5x	NM
Dropbox, Inc.	United States	23.39	-46%	9,508.6	8,635.7	1,321.3	(354.8)	NM	27.1%	6.5x	NM
Endurance International Group Holdings, Inc.	United States	8.30	-24%	1,194.0	2,937.9	1,157.1	319.9	27.6%	-1.5%	2.5x	9.2x
First Data Corporation	United States	19.08	-28%	17,868.7	37,908.7	8,617.0	3,017.0	35.0%	7.8%	4.4x	12.6x
Hortonworks Inc.	United States	16.10	-39%	1,356.2	1,254.9	327.6	(151.7)	NM	37.2%	3.8x	NM
IBM Corporation	United States	124.27	-27%	112,935.8	145,651.8	80,373.0	16,954.0	21.1%	2.6%	1.8x	8.6x
Nutanix, Inc.	United States	44.71	-31%	7,991.5	7,463.2	1,193.2	(271.3)	NM	39.7%	6.3x	NM
Okta, Inc.	* United States	63.65	-16%	6,949.5	6,677.0	325.6	(120.5)	NM	59.9%	20.5x	NM
Rapid7, Inc.	United States	31.80	-19%	1,503.7	1,404.1	233.1	(44.8)	NM	23.8%	6.0x	NM
Pivotal Software, Inc.	United States	17.91	-43%	4,609.8	3,938.7	582.4	(128.6)	NM	0.0%	6.8x	NM
salesforce.com, inc.	* United States	142.76	-11%	109,211.4	110,152.4	12,484.0	1,175.7	9.4%	25.2%	8.8x	93.7x
ServiceNow, Inc.	United States	185.27	-10%	33,219.9	32,408.5	2,457.0	59.8	2.4%	40.0%	13.2x	NM
Smartsheet Inc.	United States	26.90	-21%	2,764.1	2,560.6	141.1	(39.2)	NM	0.0%	18.2x	NM
Synchronoss Technologies, Inc.	United States	6.20	-49%	264.5	462.5	350.0	(55.3)	NM	-13.2%	1.3x	NM
Talend S.A.	France	34.74	-53%	1,044.8	956.0	190.2	(35.5)	NM	38.3%	5.0x	NM
Twilio Inc.	United States	94.49	-4%	9,341.0	9,024.4	561.0	(75.8)	NM	53.4%	16.1x	NM
Varonis Systems, Inc.	United States	57.91	-30%	1,706.3	1,548.2	257.7	(22.2)	NM	31.0%	6.0x	NM
<b>Adjusted Weighted Average</b>										<b>8.6x</b>	<b>24.0x</b>

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (20.4x) and EBITDA multiples that are 1.0 standard deviations above the mean (75.2x)

# Information

- Information transaction activity in November was up more than ten percent over average monthly activity levels of the past twelve months. Value remained modest with five deals worth \$462 million in aggregate value
- The Financial Information subsegment accounted for 40 percent of activity throughout the month with six transactions announced
- Select transactions from the segment included:
  - Forrester’s \$245 million acquisition of sales and marketing research company SiriusDecisions
  - AllianceBernstein’s acquisition of financial research company Autonomous Research
  - Alternative investment platform iCapital Network’s round of funding from Carlyle Group and JP Morgan
  - BlackNight’s acquisition of real estate closing cost data platform Ernst Publishing
  - The undisclosed investment property data company Betterview received from Plug and Play Ventures

	INFORMATION TRANSACTIONS BY SEGMENT				BUYER/INVESTOR BREAKDOWN					
	Transactions		Reported Value		Strategic		Buyout		Venture/Growth Capital	
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Financial Information	6	38%	\$1.7	0%	1	-	1	-	4	\$1.7
Product/Price Information	3	19%	4.0	1%	1	-	0	-	2	4.0
Geo-Demo Information	2	13%	7.5	2%	1	-	0	-	1	7.5
Healthcare Information	2	13%	200.0	43%	1	-	0	-	1	200.0
Other*	3	19%	249.1	54%	2	245.0	0	0.0	1	4.1
<b>Total</b>	<b>16</b>	<b>100%</b>	<b>462.3</b>	<b>100%</b>	<b>6</b>	<b>245.0</b>	<b>1</b>	<b>0.0</b>	<b>9</b>	<b>217.3</b>

# Information

## Public Company Valuation (1/2)

(\$ in Millions, except stock price data)

### Financial & Credit/Risk Management Information

Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA	
Broadridge Financial Solutions, Inc.	United States	\$105.87	-23%	\$ 12,360.4	\$ 13,299.3	\$ 4,377.9	\$ 836.5	19.1%	4.9%	3.0x	15.9x	
Computershare Limited	Australia	13.25	-13%	7,195.3	8,178.1	2,297.6	575.8	25.1%	8.9%	3.6x	14.2x	
CoreLogic, Inc.	United States	40.46	-27%	3,259.5	4,926.0	1,839.2	416.2	22.6%	-1.7%	2.7x	11.8x	
CoStar Group, Inc.	* United States	369.39	-18%	13,453.1	12,381.3	1,130.3	305.0	27.0%	21.6%	11.0x	40.6x	
The Dun & Bradstreet Corporation	United States	143.54	-1%	5,329.8	6,447.8	1,792.1	505.1	28.2%	3.4%	3.6x	12.8x	
Investnet, Inc.	* United States	54.64	-16%	2,498.3	2,800.7	785.1	85.5	10.9%	19.6%	3.6x	32.7x	
Equifax Inc.	United States	102.67	-26%	12,379.4	14,815.5	3,415.2	850.7	24.9%	2.7%	4.3x	17.4x	
Experian plc	Ireland	24.33	-4%	21,854.9	25,220.4	4,819.0	1,469.0	30.5%	8.1%	5.2x	17.2x	
FactSet Research Systems Inc.	United States	234.49	-1%	8,919.4	9,256.3	1,350.1	445.8	33.0%	10.6%	6.9x	20.8x	
Fair Isaac Corporation	* United States	198.63	-18%	5,751.3	6,425.3	1,032.5	234.2	22.7%	10.8%	6.2x	27.4x	
Fidelity National Information Services, Inc.	United States	107.95	-3%	35,352.4	43,843.4	8,877.0	2,616.0	29.5%	-0.8%	4.9x	16.8x	
IHS Markit Ltd.	United Kingdom	53.37	-5%	21,036.6	26,949.8	3,886.1	1,279.3	32.9%	10.1%	6.9x	21.1x	
Moody's Corporation	United States	159.07	-15%	30,479.2	34,508.2	4,548.1	2,151.1	47.3%	14.3%	7.6x	16.0x	
Morningstar, Inc.	United States	118.14	-18%	5,039.9	4,763.2	1,000.3	280.2	28.0%	13.6%	4.8x	17.0x	
MSCI Inc.	United States	157.09	-15%	13,829.1	15,005.3	1,407.1	751.2	53.4%	14.2%	10.7x	20.0x	
S&P Global Inc.	United States	182.86	-16%	45,879.6	48,920.6	6,309.0	3,147.0	49.9%	7.4%	7.8x	15.5x	
SEI Investments Co.	United States	53.70	-31%	8,352.5	7,610.5	1,627.3	481.8	29.6%	9.4%	4.7x	15.8x	
SS&C Technologies Holdings, Inc.	United States	48.15	-21%	11,980.0	17,933.9	2,748.5	883.0	32.1%	67.8%	6.5x	20.3x	
Thomson Reuters Corporation	Canada	50.44	-6%	25,470.3	32,604.9	11,432.0	2,391.0	20.9%	69.5%	2.9x	13.6x	
TransUnion	United States	64.57	-19%	11,964.8	15,932.0	2,210.2	783.4	35.4%	18.6%	7.2x	20.3x	
Verisk Analytics, Inc.	United States	123.32	-1%	20,301.0	22,736.6	2,351.5	1,056.5	44.9%	13.0%	9.7x	21.5x	
Workiva Inc.	United States	37.41	-8%	1,640.4	1,562.1	234.4	(41.5)	NM	17.4%	6.7x	NM	
<b>Adjusted Weighted Average</b>										<b>6.2x</b>	<b>17.2x</b>	

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (10.8x) and EBITDA multiples that are 1.0 standard deviations above the mean (26.3x)



# Information

## Public Company Valuation (2/2)

(\$ in Millions, except stock price data)

Marketing Information											
Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Alliance Data Systems Corporation	United States	200.36	-28%	10,914.3	31,941.0	7,841.5	1,785.8	22.8%	5.4%	4.1x	17.9x
Cello Health plc	United Kingdom	1.26	-30%	131.6	138.6	223.2	16.5	7.4%	3.7%	0.6x	8.4x
Ebiquity plc	United Kingdom	0.78	-46%	58.2	92.7	116.4	12.9	11.1%	2.6%	0.8x	7.2x
Harte Hanks, Inc.	United States	3.25	-73%	20.3	19.7	314.3	(8.8)	NM	-20.3%	0.1x	NM
InnerWorkings, Inc.	United States	4.22	-61%	218.1	384.8	1,132.7	21.8	1.9%	2.3%	0.3x	17.6x
INTAGE HOLDINGS Inc.	Japan	8.98	-32%	369.4	312.5	446.2	46.8	10.5%	2.3%	0.7x	6.7x
Ipsos SA	France	25.41	-35%	1,106.5	1,652.6	2,021.5	232.2	11.5%	-2.8%	0.8x	7.1x
LiveRamp Holdings, Inc.	* United States	47.30	-8%	3,738.7	3,877.9	943.9	90.0	9.5%	72.0%	4.1x	43.1x
Nielsen Holdings plc	United Kingdom	27.17	-31%	9,644.9	18,002.9	6,618.0	1,610.0	24.3%	2.3%	2.7x	11.2x
SVMK Inc.	* United States	14.28	-29%	1,786.1	1,938.2	243.4	(86.1)	NM	0.0%	8.0x	NM
System1 Group PLC	United Kingdom	2.96	-42%	37.2	32.8	34.3	2.6	7.7%	-11.6%	1.0x	12.5x
YouGov plc	United Kingdom	5.49	-16%	579.0	539.9	152.8	22.2	14.5%	8.9%	3.5x	24.4x
<b>Adjusted Weighted Average</b>										<b>3.3x</b>	<b>14.5x</b>

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (6.8x) and EBITDA multiples that are 1.0 standard deviations above the mean (26.9x)

(\$ in Millions, except stock price data)

Other Information											
Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin	LTM	LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Fluent, Inc.	United States	\$ 3.54	-49%	\$ 266.5	\$ 308.9	\$ 244.6	\$ 20.3	8.3%	16.8%	1.3x	15.2x
Forrester Research, Inc.	United States	46.74	-7%	853.7	709.2	349.4	31.3	9.0%	5.6%	2.0x	22.6x
Gartner, Inc.	* United States	153.19	-5%	13,923.9	15,883.7	3,901.1	570.4	14.6%	30.0%	4.1x	27.8x
HealthStream, Inc.	United States	24.64	-23%	796.5	622.2	259.8	31.0	11.9%	19.0%	2.4x	20.1x
IQVIA Holdings Inc.	United States	125.07	-8%	25,019.8	35,010.8	8,603.0	1,817.0	21.1%	-5.8%	4.1x	19.3x
Informa plc	United Kingdom	8.82	-20%	11,036.5	14,559.1	2,374.3	749.2	31.6%	11.6%	6.1x	19.4x
National Research Corporation	* United States	39.87	-7%	987.3	1,018.9	118.9	39.7	33.4%	2.5%	8.6x	25.6x
NIC Inc.	United States	13.00	-31%	865.4	684.4	349.7	87.5	25.0%	5.5%	2.0x	7.8x
Premier, Inc.	United States	39.66	-16%	2,527.7	2,492.5	1,672.2	721.8	43.2%	9.2%	1.5x	3.5x
Proofpoint, Inc.	United States	97.01	-26%	5,301.4	5,111.1	661.0	(38.9)	NM	37.8%	7.7x	NM
Reed Elsevier plc <sup>(1)</sup>	United Kingdom	20.84	-7%	40,954.8	48,985.3	9,637.7	2,930.6	30.4%	-0.5%	5.1x	16.7x
Wolters Kluwer N.V.	Netherlands	60.37	-5%	16,344.5	18,576.2	4,984.2	1,402.4	28.1%	-3.2%	3.7x	13.2x
<b>Adjusted Weighted Average</b>										<b>4.7x</b>	<b>16.7x</b>

(1) All financials are representative of the Reed Elsevier combined businesses, except per stock data, which represents Reed Elsevier (LSE:REL)

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (8.9x) and EBITDA multiples that are 1.0 standard deviations above the mean (24.7x)

# Business & IT Services

- November was an active month for the Business & IT Services segment with 90 transactions announced, 24 of which were valued at nearly \$4.5 billion
- IT Consulting transactions accounted for more than 40 percent of all transactions throughout the month with 38 deals announced
- Strategic buyers announced 55 deals throughout the month, five of which were valued at a reported \$2.4 billion
- Select transaction from the segment include:
  - The \$150 million round of funding received by China-based education platform Peilian from BHG Long Hills Capital, Tiger Global Management, Orchid Asia Group Management, Long Capital, Lanchi Venture Capital, GSR Ventures, and Tencent Holdings
  - Accenture’s acquisition of advisory systems integration company Intigro Systems
  - Deloitte’s acquisition of New Zealand-based Salesforce implementation company CloudinIT
  - Providence Equity Partners’ sale of e-learning performance support platform Vector Solutions to Golden Gate Capital

	BUSINESS SERVICES TRANSACTIONS BY SEGMENT				BUYER/INVESTOR BREAKDOWN					
	Transactions		Reported Value		Strategic		Buyout		Venture/Growth Capital	
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
IT Consulting	38	42%	\$1,811.9	40%	29	\$32.3	3	\$1,700.0	6	\$79.6
Corporate Training	21	23%	294.7	7%	7	24.0	1	-	13	270.7
Financial Consulting	6	7%	1.8	0%	4	1,100.0	2	-	0	-
HR Consulting	4	4%	32.0	1%	4	1,200.0	0	-	0	-
Logistics	3	3%	21.0	0%	0	-	0	-	3	1.8
Printing Services	3	3%	-	0%	2	-	0	-	1	32.0
Staffing	3	3%	-	0%	1	25.0	2	-	0	-
Other	12	13%	2,325.0	52%	7	0.0	2	0.0	3	21.0
<b>Total</b>	<b>90</b>	<b>100%</b>	<b>4,486.4</b>	<b>100%</b>	<b>54</b>	<b>2,381.3</b>	<b>10</b>	<b>1,700.0</b>	<b>26</b>	<b>405.1</b>

# Business & IT Services

## Public Company Valuation (1/3)

(\$ in Millions, except stock price data)

Consulting													
Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM		LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA		
Accenture plc	Ireland	164.52	-6%	\$ 105,019.7	\$ 100,340.0	\$ 39,573.5	\$ 6,434.7	16.3%	13.6%	2.5x	15.6x		
CRA International, Inc.	United States	48.75	-17%	394.9	388.3	405.9	30.6	7.5%	15.1%	1.0x	12.7x		
FTI Consulting, Inc.	United States	70.25	-14%	2,604.7	2,659.0	1,990.6	262.0	13.2%	11.7%	1.3x	10.2x		
Information Services Group, Inc.	United States	4.15	-24%	187.5	273.4	274.5	24.4	8.9%	6.7%	1.0x	11.2x		
Navigant Consulting, Inc.	United States	25.62	-2%	1,091.1	817.4	957.4	123.1	12.9%	33.0%	0.9x	6.6x		
ICF International, Inc.	United States	70.03	-15%	1,319.9	1,546.6	1,281.2	111.4	8.7%	7.0%	1.2x	13.9x		
Huron Consulting Group Inc.	* United States	55.67	-2%	1,203.8	1,510.6	775.6	92.7	12.0%	7.0%	1.9x	16.3x		
The Hackett Group, Inc.	United States	17.65	-23%	521.0	519.3	269.8	42.1	15.6%	3.1%	1.9x	12.3x		
<b>Adjusted Weighted Average</b>										<b>1.4x</b>	<b>10.6x</b>		

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (2.3x) and EBITDA multiples that are 1.0 standard deviations above the mean (14.8x)

(\$ in Millions, except stock price data)

HR Services													
Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM		LTM Multiples	
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA		
Automatic Data Processing, Inc.	* United States	147.42	-4%	\$ 64,530.5	\$ 65,368.5	\$ 13,571.8	\$ 3,052.0	22.5%	8.2%	4.8x	21.4x		
Barrett Business Services, Inc.	United States	70.35	-29%	519.3	488.1	947.6	37.1	3.9%	5.7%	0.5x	13.1x		
Capita plc	United Kingdom	1.32	-79%	2,183.8	3,356.7	5,436.2	535.5	9.8%	-5.1%	0.6x	6.3x		
DHI Group, Inc.	United States	1.77	-46%	93.6	105.6	174.5	23.6	13.6%	-17.7%	0.6x	4.5x		
Edenred SA	France	38.13	-6%	9,046.3	10,546.5	1,512.1	536.7	35.5%	8.5%	7.0x	19.7x		
Insperty, Inc.	* United States	100.04	-17%	4,182.7	3,921.2	3,688.3	196.5	5.3%	15.2%	1.1x	20.0x		
Marsh & McLennan Companies, Inc.	United States	88.70	-1%	44,678.9	49,962.9	14,923.0	3,516.0	23.6%	8.9%	3.3x	14.2x		
Paychex, Inc.	United States	70.76	-7%	25,408.6	24,942.3	3,450.8	1,432.4	41.5%	9.2%	7.2x	17.4x		
TriNet Group, Inc.	United States	45.91	-24%	3,234.1	3,377.1	3,434.0	285.0	8.3%	6.1%	1.0x	11.8x		
WageWorks, Inc.	United States	33.33	-49%	1,321.1	673.5	461.7	91.7	19.9%	33.1%	1.5x	7.3x		
<b>Adjusted Weighted Average</b>										<b>4.6x</b>	<b>15.3x</b>		

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (8.1x) and EBITDA multiples that are 1.0 standard deviations above the mean (19.7x)

# Business & IT Services

## Public Company Valuation (2/3)

(\$ in Millions, except stock price data)

IT Consulting														
Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM		LTM Multiples		
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA			
Accenture plc	Ireland	164.52	-6%	\$ 105,019.7	\$ 100,340.0	\$ 39,573.5	\$ 6,434.7	16.3%	13.6%	2.5x	15.6x			
Amdocs Limited	United States	64.91	-9%	9,181.1	8,705.1	3,974.8	738.5	18.6%	2.8%	2.2x	11.8x			
Bechtle AG	Germany	79.99	-22%	3,359.7	3,595.5	4,694.8	243.8	5.2%	17.7%	0.8x	14.7x			
Booz Allen Hamilton Holding Corporation	United States	51.31	-3%	7,303.6	8,745.0	6,366.9	631.7	9.9%	5.2%	1.4x	13.8x			
Business & Decision SA	* France	8.88	-7%	70.3	109.1	249.3	2.7	NA	-3.7%	0.4x	40.9x			
Capgemini SE	France	116.68	-14%	19,119.4	21,854.9	15,142.9	1,883.1	12.4%	3.3%	1.4x	11.6x			
Cerner Corporation	United States	57.91	-21%	19,080.7	18,708.2	5,213.0	1,256.5	24.1%	3.0%	3.6x	14.9x			
CGI Group Inc.	Canada	63.87	-3%	17,741.7	19,011.5	8,901.7	1,493.3	16.8%	6.1%	2.1x	12.7x			
Cognizant Technology Solutions Corporation	United States	71.23	-16%	41,244.2	37,205.2	15,824.0	3,305.0	20.9%	9.6%	2.4x	11.3x			
ConvergeOne Holdings, Inc.	United States	12.52	-2%	962.0	1,659.3	1,401.3	111.8	8.0%	68.8%	1.2x	14.8x			
Digi International Inc.	United States	11.84	-19%	325.2	262.5	228.4	18.9	8.3%	25.7%	1.1x	13.9x			
DXC Technology Company	United States	63.04	-42%	17,658.4	22,242.4	24,162.0	5,453.0	22.6%	66.7%	0.9x	4.1x			
Endava plc	* United Kingdom	24.70	-22%	1,309.9	1,255.5	308.5	44.3	14.3%	0.0%	4.1x	28.4x			
EPAM Systems, Inc.	* United States	130.25	-10%	7,034.7	6,374.6	1,737.3	261.8	15.1%	27.3%	3.7x	24.3x			
Globant S.A.	* Luxembourg	58.65	-12%	2,105.5	2,025.6	497.6	81.1	16.3%	29.2%	4.1x	25.0x			
Hexaware Technologies Limited	India	4.65	-42%	1,382.4	1,280.4	606.5	94.8	15.6%	13.5%	2.1x	13.5x			
International Business Machines Corporation	United States	124.27	-27%	112,935.8	145,651.8	80,373.0	16,954.0	21.1%	2.6%	1.8x	8.6x			
Infosys Limited	India	9.58	-12%	41,642.5	37,990.5	11,313.0	3,002.0	26.5%	7.8%	3.4x	12.7x			
ITS Group	France	5.36	-39%	41.7	57.3	208.7	9.3	4.4%	-2.2%	0.3x	6.2x			
Larsen & Toubro Limited	India	20.52	-3%	28,767.8	43,281.9	18,062.3	2,211.0	12.2%	14.5%	2.4x	19.6x			
Navigant Consulting, Inc.	United States	25.62	-2%	1,091.1	817.4	957.4	123.1	12.9%	33.0%	0.9x	6.6x			
NTT DATA Corporation	Japan	11.63	-18%	16,307.4	19,974.9	18,671.2	2,780.9	14.9%	7.4%	1.1x	7.2x			
Perficient, Inc.	United States	25.31	-19%	839.8	913.9	487.8	56.9	11.7%	4.3%	1.9x	16.1x			
Presidio, Inc.	United States	14.08	-29%	1,159.1	2,159.7	2,876.7	208.3	7.2%	2.3%	0.8x	10.4x			
Reply S.p.A.	Italy	55.80	-20%	2,087.2	2,030.3	1,119.7	141.9	12.7%	12.2%	1.8x	14.3x			
SQLI SA	France	20.95	-53%	91.5	119.7	262.9	19.3	7.3%	13.9%	0.5x	6.2x			
Synthomer plc	United Kingdom	5.18	-30%	1,762.0	2,040.0	2,036.9	230.9	11.3%	12.7%	1.0x	8.8x			
Tata Consultancy Services Limited	* India	28.24	-14%	105,986.0	101,267.6	18,484.3	5,003.4	27.1%	12.2%	5.5x	20.2x			
Wipro Limited	India	4.66	-4%	20,986.3	17,923.2	7,713.3	1,340.9	17.4%	2.3%	2.3x	13.4x			
Adjusted Weighted Average											2.2x	13.7x		

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (4.5x) and EBITDA multiples that are 1.0 standard deviations above the mean (22.2x)

# Business & IT Services

## Public Company Valuation (3/3)

(\$ in Millions, except stock price data)

Outsourced Services														
Company Name	Headquarters	Stock Price 11/30/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM		LTM Margin		LTM		LTM Multiples		
						Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA			
AMREP Corporation	United States	\$6.86	-31%	\$ 55.8	\$ 42.7	\$ 40.1	\$ 2.0	5.1%	-0.2%	1.1x	21.1x			
Cimpress N.V.	Netherlands	120.66	-30%	3,729.5	4,785.6	2,618.2	258.4	9.9%	16.1%	1.8x	18.5x			
Communis plc	United Kingdom	0.90	-3%	189.1	219.4	516.0	33.5	6.5%	8.5%	0.4x	6.6x			
Clairvest Group Inc.	Canada	34.57	-11%	526.6	240.6	204.3	141.4	69.2%	81.6%	1.2x	1.7x			
CSG Systems International, Inc.	United States	35.07	-28%	1,168.9	1,330.2	833.0	154.8	18.6%	6.9%	1.6x	8.6x			
Donnelley Financial Solutions, Inc.	United States	16.66	-25%	568.1	909.1	987.5	132.0	13.4%	-1.4%	0.9x	6.9x			
Elanders AB (publ)	Sweden	10.16	-5%	359.1	677.3	1,174.0	72.8	6.2%	14.8%	0.6x	9.3x			
Eniro AB (publ)	Sweden	0.15	-86%	10.1	114.2	157.8	17.3	11.0%	-19.6%	0.7x	6.6x			
ExlService Holdings, Inc.	United States	57.96	-14%	1,985.5	2,044.4	846.1	117.2	13.9%	14.1%	2.4x	17.4x			
Firstsource Solutions Limited	India	0.75	-38%	517.3	574.8	504.3	65.9	13.1%	3.7%	1.1x	8.7x			
Genpact Limited	Bermuda	30.38	-13%	5,774.9	6,717.4	2,899.9	407.7	14.1%	8.0%	2.3x	16.5x			
InnerWorkings, Inc.	United States	4.22	-61%	218.1	384.8	1,132.7	21.8	1.9%	2.3%	0.3x	17.6x			
j2 Global, Inc.	United States	73.81	-19%	3,638.0	4,345.0	1,177.6	426.8	36.2%	11.8%	3.7x	10.2x			
Liq Participações S.A.	Brazil	0.27	-79%	3.0	9.9	361.5	1.1	0.3%	-21.3%	0.0x	9.2x			
Luxoft Holding, Inc.	Switzerland	33.02	-44%	1,109.6	1,020.9	910.7	98.2	10.8%	7.4%	1.1x	10.4x			
LSC Communications, Inc.	United States	10.02	-46%	333.9	1,259.9	3,886.0	291.0	7.5%	10.3%	0.3x	4.3x			
MAXIMUS, Inc.	United States	71.12	-2%	4,561.2	4,194.2	2,392.2	350.8	14.7%	-2.4%	1.8x	12.0x			
Quad/Graphics, Inc.	United States	16.38	-48%	846.4	1,923.9	4,176.3	421.0	10.1%	0.3%	0.5x	4.6x			
IQVIA Holdings Inc.	United States	125.07	-8%	25,019.8	35,010.8	8,603.0	1,817.0	21.1%	-5.8%	4.1x	19.3x			
R.R. Donnelley & Sons Company	United States	6.33	-35%	445.6	2,390.3	6,962.6	428.8	6.2%	1.3%	0.3x	5.6x			
Serco Group plc	United Kingdom	1.14	-18%	1,249.0	1,569.5	3,711.1	83.9	2.3%	-7.0%	0.4x	18.7x			
StarTek, Inc.	United States	6.76	-18%	250.5	462.2	269.8	4.8	1.8%	-12.1%	1.7x	97.3x			
Steel Connect, Inc.	United States	1.67	-42%	100.0	496.5	645.3	17.8	2.8%	47.8%	0.8x	28.0x			
SYNEX Corporation	United States	80.74	-43%	4,130.7	5,745.4	19,743.4	737.0	3.7%	26.4%	0.3x	7.8x			
Sykes Enterprises, Incorporated	United States	27.62	-14%	1,165.6	1,090.3	1,629.7	155.3	9.5%	4.7%	0.7x	7.0x			
Teleperformance SE	France	165.53	-15%	9,561.2	11,014.0	4,864.1	737.4	15.2%	3.2%	2.3x	14.9x			
TTEC Holdings, Inc.	United States	29.25	-31%	1,351.1	1,538.0	1,516.7	174.9	11.5%	8.7%	1.0x	8.8x			
transcosmos inc.	Japan	23.11	-21%	958.7	790.6	2,447.0	84.7	3.5%	10.2%	0.3x	9.3x			
Transcontinental Inc.	Canada	15.07	-39%	1,318.7	2,429.6	1,777.8	383.3	21.6%	14.0%	1.4x	6.3x			
Adjusted Weighted Average											1.2x	11.1x		

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (1.5x) and EBITDA multiples that are 1.0 standard deviations above the mean (12.1x)

# PPLLC Indices

## Valuation Summary

### Current Summary Trading Valuation Information

Public Company Index	Revenue Multiples (TTM)			
	MEAN	MEDIAN	W. AVG	ADJ. W. AVG*
US-based Digital Media and Internet	3.8x	3.4x	5.0x	3.7x
Internationally-based Digital Media and Internet	2.9x	2.5x	4.0x	2.7x
US-based eCommerce	3.5x	2.0x	4.2x	3.4x
Internationally-based eCommerce	3.8x	1.6x	8.7x	3.3x
US-based Digital Advertising	3.5x	2.6x	5.8x	3.0x
Internationally-based Digital Advertising	2.7x	0.8x	8.9x	2.3x
US-based Marketing Technology	6.9x	5.5x	7.1x	6.5x
Internationally-based Marketing Technology	6.3x	3.7x	8.1x	5.7x
Agency	1.1x	1.1x	1.2x	1.2x
Marketing Services	1.6x	1.3x	3.4x	2.6x
Traditional Media	2.9x	2.3x	3.6x	3.2x
Software	6.8x	6.0x	7.3x	7.1x
Information	4.6x	4.1x	6.7x	6.6x
Business Services	1.3x	1.0x	2.8x	2.2x

As of close of business on 11/30/18

\*Calculation is market cap weighted and excludes revenue multiples that are 3 standard deviations above the mean and EBITDA multiples that are 2 standard deviations above the mean

# PPLLC Indices

## Valuation Summary

### Current Summary Trading Valuation Information

Public Company Index	EBITDA Multiples (TTM)			
	MEAN	MEDIAN	W. AVG	ADJ. W. AVG*
US-based Digital Media and Internet	26.1x	22.1x	17.2x	22.9x
Internationally-based Digital Media and Internet	11.7x	12.3x	11.7x	12.3x
US-based e-commerce	20.7x	15.9x	20.3x	16.0x
Internationally-based e-commerce	15.0x	9.8x	27.6x	14.3x
US-based Digital Advertising	36.2x	30.6x	17.4x	21.9x
Internationally-based Digital Advertising	16.2x	5.9x	23.8x	10.6x
US-based Marketing Technology	42.8x	30.2x	31.6x	22.5x
Internationally-based Marketing Technology	43.3x	13.5x	9.6x	14.7x
Agency	10.7x	8.7x	8.7x	8.2x
Marketing Services	9.9x	8.2x	15.6x	12.1x
Traditional Media	14.2x	10.9x	12.7x	11.9x
Software	30.0x	22.4x	23.3x	18.1x
Information	19.2x	17.2x	24.1x	17.6x
Business Services	11.2x	10.5x	14.2x	12.6x

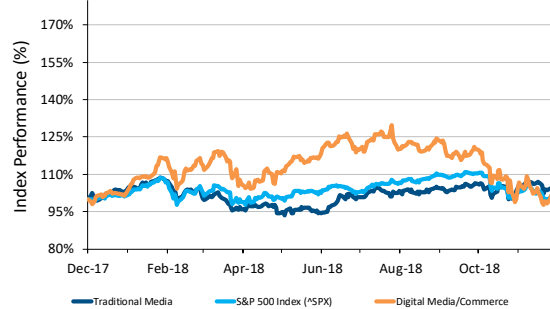
As of close of business on 11/30/18

\*Calculation is market cap weighted and excludes revenue multiples that are 3 standard deviations above the mean and EBITDA multiples that are 2 standard deviations above the mean

# PPLLC Indices

## LTM Share Pricing Trends

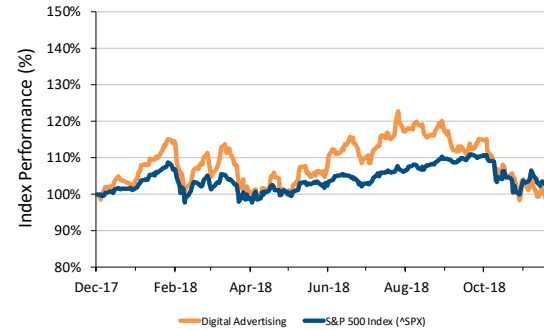
Digital Media/Commerce and Traditional Media



LTM Index Performance

- S&P 500 – ▲ 4.5 %
- Digital Media/Commerce – ▲ 6.6%
- Traditional Media – ▲ 6.9%

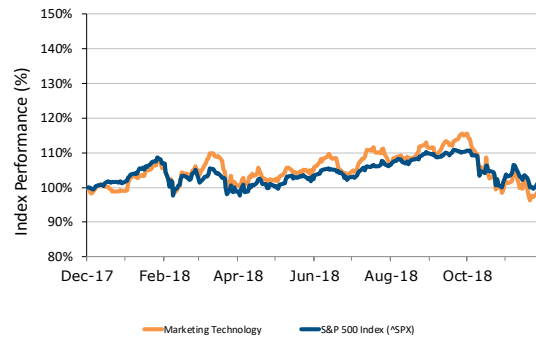
Digital Advertising



LTM Index Performance

- S&P 500 – ▲ 4.5 %
- Digital Advertising – ▲ 5.3%

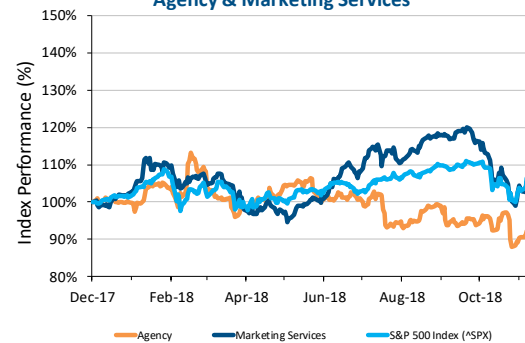
Marketing Technology



LTM Index Performance

- S&P 500 – ▲ 4.5 %
- Marketing Technology – ▲ (3.1)%

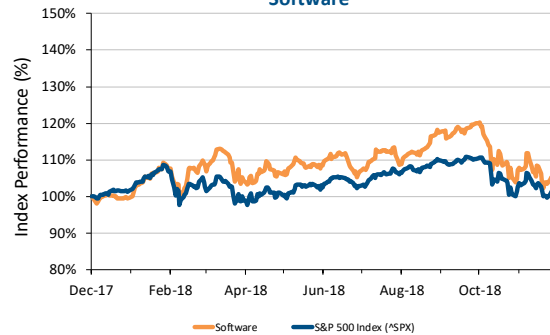
Agency & Marketing Services



LTM Index Performance

- S&P 500 – ▲ 4.5 %
- Agency – ▼ (10.7) %
- Marketing Services – ▲ 51.8%

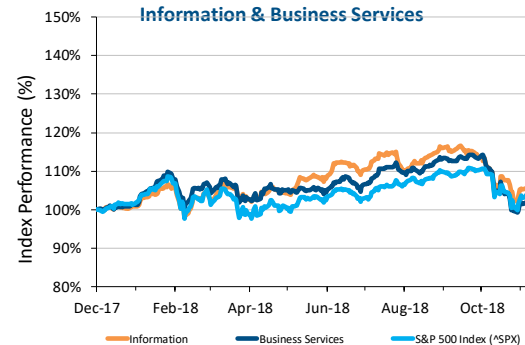
Software



LTM Index Performance

- S&P 500 – ▲ 4.5%
- Software – ▲ 10.5%

Information & Business Services



LTM Index Performance

- S&P 500 – ▲ 4.5%
- Information – ▲ 7.7 %
- Business Services – ▲ 4.6%

Note: LTM as of 11/30/2018



# All Segments

(\$ in Millions)

## Strategic Transactions

Strategic Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Cylance, Inc.	Software	BlackBerry Ltd.	\$ 1,500.0
	Oasis Outsourcing, Inc.	Business Services	Paychex, Inc.	1,200.0
	Investment Technology Group, Inc.	Business Services	Virtu Financial, Inc.	1,100.0
	Editis S.A.	Traditional Media	Vivendi S.A.	1,000.0
	PlanGrid, Inc.	Software	Autodesk, Inc.	875.0
	MatrixCare	Software	ResMed Corporation	750.0
	Eclixp Group Limited	Digital Media/Commerce	McMillan Shakespeare Limited	661.9
	Corporate Spending Innovations	Software	Edenred S.A.	600.0
	Nuance Document Imaging Solutions	Marketing Technology	Kofax Limited	400.0
	Farelogix, Inc.	Software	Sabre Corporation	360.0
	Liaison Technologies	Software	OpenText Corporation	310.0
	SiriusDecisions, Inc.	Marketing Technology	Forrester Research, Inc.	245.0
	Sapho, Inc.	Software	Citrix Systems, Inc.	200.0
	Datawatch Corporation	Software	Altair Engineering, Inc.	178.5
	Destinations of the World	Digital Media/Commerce	Webjet Limited	173.0
	Fortune Magazine	Traditional Media	(Private Investors)	150.0
	Periscope, Inc.	Agency & Marketing Services	Quad/Graphics, Inc.	137.5
	Massive Interactive	Marketing Technology	deltatre s.p.a.	127.0
	SecurityMatters B.V.	Software	ForeScout Technologies, Inc.	113.0
	CarsOnTheWeb Belgium NV	Digital Media/Commerce	KAR Auction Services, Inc.	103.4
	Spin.app	Digital Media/Commerce	Ford Motor Company	100.0
	City Gear	Digital Media/Commerce	Hibbett Sports, Inc.	88.0
	ezbuy Holdings Limited	Digital Media/Commerce	LightInTheBox	85.6
	Inuvo, Inc.	Digital Advertising	ConversionPoint Technologies, Inc.	80.0
	Frustum, Inc.	Software	PTC, Inc.	70.0
	Stitch, Inc.	Software	Talend S.A.	60.0
	Stanson Health, Inc.	Software	Premier, Inc.	51.5
	Coffee Stain Studios AB	Digital Media/Commerce	THQ Nordic AB	43.1
	Callcap	Marketing Technology	Marchex, Inc.	35.0
	SharedLABS, Inc.	Business Services	Glowpoint, Inc.	32.3
	Martin Healthcare Group	Business Services	HNI Healthcare	25.0
	Stelligent Systems LLC	Software	Mphasis Ltd.	25.0
	Javelin Networks, Inc.	Software	Symantec Corporation	25.0
	Baffin, Inc.	Digital Media/Commerce	Canada Goose, Inc.	24.9
	Grovo Learning, Inc.	Business Services	Cornerstone OnDemand, Inc.	24.0
	10 Regional Radio Stations of RNC Media, Inc.	Traditional Media	Cogeco, Inc.	14.4
	OrderDynamics	Marketing Technology	TECSYS, Inc.	13.4
	Exaxe.com	Software	Majesco.com	13.2
	Telemetrics, Inc.	Marketing Technology	Marchex, Inc.	13.1
	DealerMine, Inc.	Marketing Technology	Quorum Information Technologies, Inc.	11.0
	Instafile Ltd.	Software	Xero Ltd.	6.8
	Mic Network, Inc.	Digital Media/Commerce	Bustle.com	5.0

# All Segments

(\$ in Millions)

## Strategic Transactions

Strategic Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Dovetail Digital Limited	Software	EMIS Group Plc	\$ 3.3
	N8 Identity	Software	Data443 Risk Mitigation, Inc.	3.2
	Viewpoint Creative	Agency & Marketing Services	Dolphin Entertainment, Inc.	2.0

# All Segments

(\$ in Millions)

## Strategic Transactions

Strategic	Target	Target Segment	Buyer/Investor	Reported TV
Undisclosed				
	360 Live Media	Agency & Marketing Services	SmithBucklin Corporation	\$ -
	Albion Media	Agency & Marketing Services	Premier PR	-
	Bengar Films	Agency & Marketing Services	Bastion Collective Pty. Ltd.	-
	BevBiz Marketing	Agency & Marketing Services	HCA Marketing	-
	Bonita Print Shop	Agency & Marketing Services	iPartnerMedia, Inc.	-
	CrowdfundX	Agency & Marketing Services	Issuance, Inc.	-
	Demac Media Inc.	Agency & Marketing Services	Bounteous	-
	Effilab Australia	Agency & Marketing Services	The One Centre	-
	Eleven, Inc.	Agency & Marketing Services	BlueFocus International	-
	Endpoint Direct	Agency & Marketing Services	BR Printers, Inc.	-
	Essential Design	Agency & Marketing Services	PA Consulting Group Limited	-
	Fil Rouge	Agency & Marketing Services	Altavia Group	-
	FISH Technologies LLC	Agency & Marketing Services	Patron Technology	-
	Flow Digital Limited	Agency & Marketing Services	Venture Stream Ltd.	-
	Fosina Marketing Group	Agency & Marketing Services	Digital Media Solutions, LLC	-
	Fourteen Digital	Agency & Marketing Services	Tug Agency	-
	Happy Cog Studios LLC	Agency & Marketing Services	Vector Media Group	-
	HAT Media	Agency & Marketing Services	Gozoop Online Pvt. Ltd.	-
	Hurrah Productions	Agency & Marketing Services	Golin	-
	Kolle Rebbe GmbH	Agency & Marketing Services	Accenture plc	-
	Logo Sportswear	Agency & Marketing Services	Digital Room, Inc.	-
	Markkinointi Akatemia	Agency & Marketing Services	Sogemiedier A/S	-
	Meridium AB	Agency & Marketing Services	Tieto Oy	-
	Meyvyn LLC	Agency & Marketing Services	A.P. Keaton	-
	MK2 Audiovisual B.V.	Agency & Marketing Services	Kinly B.V.	-
	One Smooth Stone	Agency & Marketing Services	PRA, Inc.	-
	Outsite Networks, Inc.	Agency & Marketing Services	Professional Datasolutions, Inc.	-
	Peppy Marketing	Agency & Marketing Services	Force24 Ltd.	-
	Persuasive Communications	Agency & Marketing Services	Mason Marketing	-
	Playbook, Inc.	Agency & Marketing Services	VaynerMedia LLC	-
	Reading Room	Agency & Marketing Services	Fat Media Ltd.	-
	Sys-Teams Ltd.	Agency & Marketing Services	Stratacache, Inc.	-
	TEAMCHOMP	Agency & Marketing Services	Dished	-
	TH_NK	Agency & Marketing Services	EPAM Systems, Inc.	-
	Upfront Business Development	Agency & Marketing Services	Propeller Group	-
	Virtual Marketing LLC	Agency & Marketing Services	Sage Communications	-
	W12 Studios Limited	Agency & Marketing Services	Tata Consultancy Services Limited	-
	Way to Blue Ltd.	Agency & Marketing Services	Miroma Group Ltd.	-
	25sevenIT Ltd.	Business Services	Timico Limited	-
	Activate	Business Services	Viithiisys Technologies Pvt. Ltd.	-
	AdvantEdge Accounting Solutions	Business Services	Basis 365 Accounting	-
	Assurance Systems, Inc.	Business Services	Insurance Technologies Corporation	-

# All Segments

(\$ in Millions)

## Strategic Transactions

Strategic	Target	Target Segment	Buyer/Investor	Reported TV
Undisclosed				
	Athena Advanced Networks, Inc.	Business Services	Mission Critical Partners, Inc.	\$ -
	bd4travel GmbH	Business Services	Dnata	-
	Berico Technologies LLC	Business Services	Novetta Solutions, LLC	-
	BlueLine Associates, Inc.	Business Services	ThreeBridge Solutions	-
	Bridgepoint Group	Business Services	Tata Consultancy Services Limited	-
	Buckman-Mitchell, Inc.	Business Services	Arthur J. Gallagher & Co.	-
	BusinessNow and TESM	Business Services	DXC Technology Company	-
	Cambridge Consulting Group LLC	Business Services	NFP Corporation	-
	CloudinIT Ltd.	Business Services	Deloitte LLP	-
	Cloudstrong Limited	Business Services	Arkphire Ireland Limited	-
	ColorGATE Digital Output Solutions GmbH	Business Services	Ricoh Co., Ltd.	-
	Crestle.ai	Business Services	Doc.ai, Inc.	-
	Critical Metrics	Business Services	Talmetrix	-
	Custodella	Business Services	Checkmarx, Inc.	-
	Dev6	Business Services	Aquent	-
	Dynamic Engineering Solutions, Inc.	Business Services	EverWatch Solutions Corporation	-
	Eview Technology, Inc.	Business Services	Syncsort, Inc.	-
	Executive Alliance	Business Services	Sikich, LLP.	-
	Flywheel Digital	Business Services	Ascential plc	-
	Harvard Card Systems, Inc.	Business Services	PLI Card Marketing Solutions	-
	Hedgepoint Solutions	Business Services	Abacus Group LLC	-
	HiTechnique	Business Services	Executec.com	-
	iCompass	Business Services	Braintri	-
	Impuls	Business Services	BearingPoint, Inc.	-
	InfoGeographics, Inc.	Business Services	Avineon, Inc.	-
	Intrigo Systems, Inc.	Business Services	Accenture plc	-
	IT Nexus, Inc.	Business Services	Scantron Corporation	-
	Keytech Managed Services Ltd.	Business Services	Pure Technology Group Ltd.	-
	LegalComet	Business Services	Rajah & Tann Asia	-
	LexPredict LLC	Business Services	Elevate Services, Inc.	-
	Noah Data	Business Services	Indium Software, Inc.	-
	Pall Mall Risk Reduction	Business Services	Delta Capita Ltd.	-
	Proteus Performance Management, Inc.	Business Services	HUB International Limited	-
	Q-Centrix LLC	Business Services	TPG Growth	-
	Qsource Networks	Business Services	Integritek, Inc.	-
	SI Technologies, Inc.	Business Services	Convergent Technologies LLC	-
	SPEAR Incorporated	Business Services	CALIBRE Systems, Inc.	-
	Survivex Limited	Business Services	3T Energy Group Ltd.	-
	TopDown Consulting	Business Services	Archtype Consulting	-
	Ultra Airport Systems	Business Services	ABD SAFEGATE BVBA	-
	Value Prime Solutions, Inc.	Business Services	ValueSelling Associates, Inc.	-
	Veriphy Ltd.	Business Services	Davies Group Limited	-

# All Segments

(\$ in Millions)

## Strategic Transactions

Strategic	Target	Target Segment	Buyer/Investor	Reported TV
Undisclosed				
	Viverae	Business Services	Virgin Pulse	\$ -
	Wambiz Ltd.	Business Services	Allocate Software Limited	-
	Watershed Systems, Inc.	Business Services	Learning Technologies Group plc	-
	Workbench	Business Services	Google	-
	Independer.nl N.V.	Digital Advertising	De Persgroep N.V.	-
	JUICE Mobile	Digital Advertising	Curate Mobile Ltd.	-
	Manage.com	Digital Advertising	Criteo SA	-
	Qualia, Inc.	Digital Advertising	IDiFY	-
	UnLockd Media Pty. Ltd.	Digital Advertising	Wesfarmers Limited	-
	Wikibuy	Digital Advertising	Capital One Financial Corporation	-
	Adrenaline.com.au	Digital Media/Commerce	Big Red Group	-
	Bitches Who Brunch	Digital Media/Commerce	Volvo City	-
	Bugbear Entertainment Ltd.	Digital Media/Commerce	THQ Nordic AB	-
	Carizy	Digital Media/Commerce	Groupe Renault	-
	Channel40.com.au	Digital Media/Commerce	Freelancer Technology Pty Limited	-
	Chirpi, Inc.	Digital Media/Commerce	HUBConnect, Inc.	-
	Chronofy, Inc.	Digital Media/Commerce	WatchBox Global	-
	ComicBlitz	Digital Media/Commerce	Cinedigm Corporation	-
	Dictionary.com & Thesaurus.com	Digital Media/Commerce	Rock Holdings, Inc.	-
	DogBuddy	Digital Media/Commerce	A Place for Rover	-
	Edge Case Games Ltd.	Digital Media/Commerce	Wargaming.net. LLP	-
	Frederick's of Hollywood Group, Inc.	Digital Media/Commerce	Naked Brand Group Limited	-
	InCourt News Pvt Ltd.	Digital Media/Commerce	Lawyered.in	-
	inXile Entertainment, Inc.	Digital Media/Commerce	Microsoft Corporation	-
	Ketchupp.in	Digital Media/Commerce	Cartoq.com	-
	Local Solo	Digital Media/Commerce	Communo Corporation	-
	MoneySense.ca	Digital Media/Commerce	Ratehub, Inc.	-
	Neds International	Digital Media/Commerce	GVC Holdings PLC	-
	ofo	Digital Media/Commerce	Bounce (fka Metro Bikes)	-
	Operation Sports LLC	Digital Media/Commerce	Enthusiast Gaming, Inc.	-
	Play Raven	Digital Media/Commerce	Rovio Entertainment Ltd.	-
	PostBuzz NV	Digital Media/Commerce	Roularta Media Group NV	-
	Reserve Media, Inc.	Digital Media/Commerce	Resy Network, Inc.	-
	Seraniti	Digital Media/Commerce	Cure Fit Healthcare Pvt. Ltd.	-
	Telexis B.V.	Digital Media/Commerce	Enghouse Systems Limited	-
	TicketWorld, Inc.	Digital Media/Commerce	TEG Pty. Ltd.	-
	Tictail AB	Digital Media/Commerce	Shopify Inc.	-
	TidyMe.com.au	Digital Media/Commerce	Oneflare Pty Ltd.	-
	TravelBird	Digital Media/Commerce	Secret Escapes Ltd.	-
	Trion Worlds, Inc.	Digital Media/Commerce	gamigo ag	-
	Vicinity Enterprises LLC	Digital Media/Commerce	Surf Media, Inc.	-
	Waitr, Inc.	Digital Media/Commerce	Landcadia Holdings, Inc.	-

# All Segments

(\$ in Millions)

## Strategic Transactions

Strategic	Target	Target Segment	Buyer/Investor	Reported TV
Undisclosed				
	Wellio, Inc.	Digital Media/Commerce	The Kraft Heinz Company	\$ -
	White Hinge Ltd.	Digital Media/Commerce	Dee Set Logistics Limited	-
	Zombie Catchers	Digital Media/Commerce	Deca Games	-
	Crowdtiz LLC	Information	Kingscrowd LLC	-
	Ernst Publishing Co., LLC	Information	Black Knight, Inc.	-
	Noddle	Information	Credit Karma, Inc.	-
	Nutrino Health Ltd.	Information	Medtronic, Inc.	-
	Tabulaex	Information	Burning Glass Technologies, Inc.	-
	a2Z, Inc.	Marketing Technology	Personify Corporation	-
	Active Online GmbH	Marketing Technology	Elecosoft plc	-
	Adgyde Solutions Pvt Ltd.	Marketing Technology	MoMagic Technologies Pty Ltd.	-
	Barometric	Marketing Technology	Claritas, LLC	-
	Bizense Pte. Ltd.	Marketing Technology	Terragon Group	-
	Businessworx	Marketing Technology	BLOK Technologies, Inc.	-
	Canopy Labs Software, Inc.	Marketing Technology	Drop Technologies, Inc.	-
	CenterStone Technologies, Inc.	Marketing Technology	PlumRiver LLC	-
	Delmondo.co	Marketing Technology	Conviva, Inc.	-
	DocbookMD	Marketing Technology	Medici.md	-
	Growlabs.com, Inc.	Marketing Technology	AdRoll, Inc.	-
	ImageQuix	Marketing Technology	Alpine SG LLC	-
	IntroNet	Marketing Technology	SAM.AI	-
	Jelli, Inc.	Marketing Technology	iHeartMedia, Inc.	-
	Kaplan.se	Marketing Technology	Accenture plc	-
	Magnetic Software	Marketing Technology	Silversoft.co.za	-
	Mexia Interactive, Inc.	Marketing Technology	SITA.aero	-
	MightySignal.com	Marketing Technology	Instacart, Inc.	-
	MillerTech	Marketing Technology	ClearCourse Partnership LLP	-
	Multiwizz SAS	Marketing Technology	LINK Mobility Group ASA	-
	Newzmate sp.z.o.o.	Marketing Technology	Piano Software, Inc.	-
	PageFair Limited	Marketing Technology	Blockthrough, Inc.	-
	Pixel Power Ltd.	Marketing Technology	Rohde & Schwarz	-
	Real Contact LLC	Marketing Technology	BoomTown	-
	Rightprice.ai	Marketing Technology	PriceEdge	-
	Tixsee LLC	Marketing Technology	PumpJack Dataworks	-
	Torqus Systems Pvt. Ltd.	Marketing Technology	Dineout.co.in	-
	Vistadash	Marketing Technology	Car Wars	-
	Welcome Commerce, Inc.	Marketing Technology	Salsify, Inc.	-
	8MAN	Software	SolarWinds, Inc.	-
	ACE Enterprise	Software	Bentley Systems, Inc.	-
	Appthority, Inc.	Software	Symantec Corporation	-
	Assembla, LLC	Software	Idera, Inc.	-
	BasWare Corporation	Software	Tradeshift, Inc.	-

# All Segments

(\$ in Millions)

## Strategic Transactions

Strategic	Target	Target Segment	Buyer/Investor	Reported TV
Undisclosed				
	Beam Portal	Software	Majid Al Futtaim	\$ -
	BlueData Software, Inc.	Software	HP, Inc.	-
	Bluefyre	Software	Threat Stack, Inc.	-
	Buildpulse	Software	CopperTree Analytics	-
	Capana Sweden AB	Software	Enghouse Systems Limited	-
	Cherry Advertising Limited	Software	AVENIR GLOBAL	-
	Chi Engineering Services, Inc.	Software	NV5 Global, Inc.	-
	Clearplan, Inc.	Software	KAR Auction Services, Inc.	-
	Cognify, Inc.	Software	Tabula Rasa Healthcare, Inc.	-
	Contextor SAS	Software	SAP AG	-
	CoVi Analytics	Software	Charles Taylor Insuretech Limited	-
	Cozy Services Ltd.	Software	CoStar Group, Inc.	-
	CXO Software	Software	InsightSoftware.com, Inc.	-
	Digital H2O	Software	Sourcewater, Inc.	-
	Dipper Technologies Private Limited	Software	FarEye	-
	EClinic24/7	Software	Medlife International Private Limited	-
	e-Courier, Inc.	Software	Alpine SG LLC	-
	Ensoft Limited	Software	Cisco Systems, Inc.	-
	Evidox Corporation	Software	Qdiscovery LLC	-
	FASTPace Software	Software	Soft-Pak Software Solutions	-
	Finanz AG	Software	MoneyFarm	-
	Firmify AB	Software	Cool Company Skandinavien AB	-
	FSLogix, Inc.	Software	Microsoft Corporation	-
	Geosoft, Inc.	Software	Seequent Limited	-
	Goji	Software	Seeman Holtz Property & Casualty LLC	-
	Gowento	Software	Splio SAS	-
	HealthLoop, Inc.	Software	GetWellNetwork, Inc.	-
	Heptio, Inc.	Software	VMware, Inc.	-
	HTBase Corp.	Software	Juniper Networks, Inc.	-
	Inobas GmbH	Software	STP Informationstechnologie AG	-
	Insyston.com.au	Software	White Clarke Group Limited	-
	Interactive Solutions, Inc.	Software	AVI-SPL, Inc.	-
	Medical Networking, Inc.	Software	MJH Associates	-
	MVP Systems Software, Inc.	Software	HelpSystems, LLC	-
	National Crime Check Pty Ltd.	Software	Sterling Talent Solutions	-
	NetMinder	Software	Zelis Healthcare Corporation	-
	Nidasu Pty. Ltd.	Software	Infomedia Ltd.	-
	NooBaa, Inc.	Software	Red Hat, Inc.	-
	octimine technologies GmbH	Software	The Dennemeyer Group	-
	OvalEdge	Software	FutureTech Holding Company	-
	Parallels IP Holdings GmbH	Software	Corel Corporation	-
	Plotwatt, Inc.	Software	American Efficient, Inc.	-

# All Segments

(\$ in Millions)

## Strategic Transactions

Strategic Undisclosed	Target	Target Segment	Buyer/Investor	Reported TV
	PrecisionAccess	Software	Verizon Communications, Inc.	\$ -
	Safelayer Secure Communications S.A.	Software	Entrust Datacard Corporation	-
	Silk Labs, Inc.	Software	Apple Inc.	-
	Stewardship Technology, Inc.	Software	Paya, Inc.	-
	StopLift Checkout Vision Systems	Software	NCR Corporation	-
	Stratagem Technologies	Software	Blockchain.com	-
	Talari Networks	Software	Oracle Corporation	-
	TalentShare	Software	The Muse	-
	Technology Resource Associates	Software	KEV Group	-
	Telairity, Inc.	Software	VITEC Multimedia	-
	Three Sigma Software, Inc.	Software	GCOM Software, Inc.	-
	TRUSTID, Inc.	Software	NeuStar, Inc.	-
	Voicefox Ltd.	Software	Showpad, Inc.	-
	XOXCO, Inc.	Software	Microsoft Corporation	-
	Yellow Brand Protection AB	Software	Corsearch, Inc.	-
	Art Media Holdings LLC	Traditional Media	Penske Media Corporation	-
	Bay Fest	Traditional Media	Hub Music Factory Srl	-
	Esprit Magazine	Traditional Media	The Intermedia Group Pty. Ltd.	-
	FishFlix.com	Traditional Media	Generos Media Group	-
	Healthcare Informatics Group	Traditional Media	Endeavor Business Media LLC	-
	Inkjet Summit and Digital Packaging Summit	Traditional Media	NAPCO Media	-
	Matador Content LLC	Traditional Media	Boat Rocker Media, Inc.	-
	Medical Pay Review, Inc.	Traditional Media	Protolytic LLC	-
	Metafora Publishing House	Traditional Media	GRADA Publishing a.s.	-
	MP3 Disques	Traditional Media	Quebecor, Inc.	-
	Paradise Publishers	Traditional Media	Stirling Corp.	-
	Progressive Business Media	Traditional Media	New Media Investment Group, Inc.	-
	Snap Global LLC	Traditional Media	Hemisphere Media Group, Inc.	-
	SnowGlobe Music Festival	Traditional Media	MTV Networks	-
	SSE Audio Group Limited	Traditional Media	Solotech, Inc.	-
	Synchron GmbH	Traditional Media	BTI Studios AB	-
	The Goldsboro News-Argus	Traditional Media	Paxton Media Group LLC	-
	Zest Books LLC	Traditional Media	Lerner Publishing Group	-



# All Segments

(\$ in Millions)

## Buyout Transactions

### Buyout Deals

Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	athenahealth, Inc.	Software	Veritas Capital	\$ 5,644.0
	Apptio, Inc.	Software	Vista Equity Partners	1,867.2
	ConvergeOne, Inc.	Business Services	CVC Capital Partners Ltd.	1,700.0
	Jostens, Inc.	Digital Media/Commerce	Platinum Equity, LLC	1,300.0
	Veracode, Inc.	Software	Thoma Bravo, Inc.	950.0
	MobFox Mobile Advertising GmbH	Digital Advertising	Tightline Holdings Limited	7.5

### Buyout Deals

Undisclosed	Target	Target Segment	Buyer/Investor	Reported TV
	ACES INCORPORATED	Business Services	Enlightenment Capital	\$ -
	Eliassen Group, LLC	Business Services	Stone Point Capital, LLC	-
	Interfolio, Inc.	Business Services	Insight Venture Partners	-
	Jane Lewis	Business Services	Montreaux Healthcare Fund	-
	Rocaton Investment Advisors	Business Services	Goldman Sachs Asset Management, L.P.	-
	SRS Acquiom, Inc.	Business Services	LoveII Minnick Partners LLC	-
	The Kleinfelder Group, Inc.	Business Services	Wind Point Partners	-
	TrustTeam NV	Business Services	Ardian SA	-
	Constructive Media, LLC	Digital Media/Commerce	Sandbox & Co.	-
	Sundance Catalog Company, Inc.	Digital Media/Commerce	Webster Capital	-
	Autonomous Research LLP	Information	AllianceBernstein L.P.	-
	LiveEdit	Marketing Technology	Nuel Capital	-
	Miles 33 Ltd	Marketing Technology	Ethos Capital Partners	-
	SCHEMA Group	Marketing Technology	IK Investment Partners	-
	SHIFT.io	Marketing Technology	Marlin Equity Partners	-
	Tempo Software ehf	Marketing Technology	Diversis Capital	-
	Adhoc-Infos.de	Software	Capital Lounge	-
	ClearFactr.com	Software	Goldman Sachs Merchant Banking	-
	Fleet Complete	Software	Ontario Teachers' Pension Plan	-
	InSight Telepsychiatry	Software	Harbourpoint Capital	-
	Netatmo SAS	Software	Iris Capital	-
	BigCityBeats GmbH	Traditional Media	Beyond Capital Partners	-
	Bobit Business Media	Traditional Media	Gemspring Capital LLC	-

# All Segments

(\$ in Millions)

## Venture/Growth Capital Transactions

VC/Growth Capital Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Coupang.com	Digital Media/Commerce	SoftBank Corporation	\$ 2,000.0
	NetEase Cloud Music	Digital Media/Commerce	General Atlantic, LLC	600.0
	Getty Images, Inc.	Digital Media/Commerce	Koch Equity Development	500.0
	iFood	Digital Media/Commerce	Innova Capital	500.0
	DeepMap, Inc.	Software	Generation Investment Management LLP	450.0
	Zume Pizza, Inc.	Digital Media/Commerce	SoftBank Capital	375.0
	Xinchao Media	Traditional Media	Baidu, Inc.	300.0
	Automation Anywhere, Inc.	Software	SoftBank Corporation	300.0
	Instacart, Inc.	Digital Media/Commerce	Tiger Global Management, LLC	271.0
	GrabTaxi Pte. Ltd.	Digital Media/Commerce	Hyundai Motor Company	250.0
	Plusgrade LLP	Marketing Technology	CDPQ	200.0
	WuXi NextCODE	Information	Sequoia Capital	200.0
	Netskope, Inc.	Software	Lightspeed Venture Partners	168.7
	ServiceTitan, Inc.	Software	Index Ventures	165.0
	Nested	Digital Media/Commerce	Northzone	154.2
	TripActions, Inc.	Software	Andreessen Horowitz	154.0
	Airtable	Software	Thrive Capital	152.0
	Peilian.com	Business Services	Tencent Holdings Ltd.	150.0
	Propertyfinder.ae	Digital Advertising	General Atlantic, LLC	120.0
	Sojern, Inc.	Marketing Technology	Technology Crossover Ventures	120.0
	BlablaCar.com	Digital Media/Commerce	SNCF Mobilities Group	114.5
	Oriente.com	Software	JG Summit Holdings	105.0
	Venafi, Inc.	Software	QuestMark Partners	100.0
	Sezzle, Inc.	Software	Bastion Capital	100.0
	Poynt Co.	Software	National Australia Bank, Ltd.	100.0
	HashiCorp	Software	GGV Capital	100.0
	Wave Computing	Software	Oakmont Corporation	86.0
	Deputy.com	Software	OpenView Venture Partners	81.0
	Bitfury Holding B.V.	Software	Dentsu Aegis Network, Inc.	80.0
	Neo4j, Inc.	Software	One Peak Partners	80.0
	Zopa Ltd.	Digital Media/Commerce	Undisclosed	78.7
	Baifendian Corporation	Software	National Fund	72.0
	Aras Corporation	Software	Goldman Sachs Merchant Banking	70.0
	Agora.io	Marketing Technology	Coatue Management, LLC	70.0
	Dia & Co.	Digital Media/Commerce	Union Square Ventures	70.0
	Hippo Insurance Services	Digital Media/Commerce	Felicis Ventures	70.0
	Clearbanc Finance Technology Corp.	Software	Emergence Capital Partners	70.0
	QuintoAndar Ltd.	Digital Advertising	General Atlantic, LLC	64.0
	Deskera	Software	Jungle Ventures	60.0
	Lightricks Ltd.	Marketing Technology	Insight Venture Partners	60.0
	Turvo, Inc.	Software	Felicis Ventures	60.0
	Social Solutions, Inc.	Software	Ballmer Group	59.0

# All Segments

(\$ in Millions)

## Venture/Growth Capital Transactions

VC/Growth Capital Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Asana	Software	8VC	\$ 50.0
	Topica Edtech Group	Business Services	The NorthStar Group	50.0
	Workable Software Limited	Software	Endeavor Catalyst	50.0
	VOI Technology AB	Digital Media/Commerce	LocalGlobe	50.0
	Mojo Vision, Inc.	Software	New Enterprise Associates	50.0
	GrabTaxi Pte. Ltd.	Digital Media/Commerce	Kasikornbank	50.0
	Meesho.com	Digital Media/Commerce	Y Combinator	50.0
	FinLeap GmbH	Business Services	Ping An Ventures	47.0
	InstaReM Pty Ltd.	Software	Vertex Venture Capital	45.0
	MapAnything	Software	Salesforce Ventures	42.5
	quip	Digital Media/Commerce	Sherpa Capital	40.0
	Primer Technologies, Inc.	Software	Lux Capital Management	40.0
	Standard Cognition Corporation	Software	CRV	40.0
	Dragos, Inc.	Software	Canaan Partners	37.0
	Axoni	Software	HSBC Holdings	36.0
	Compare.com Insurance Agency, LLC	Digital Advertising	(Private Investors)	35.0
	Wine.com, Inc.	Digital Media/Commerce	Goldman Sachs Merchant Banking	32.5
	Jump Technologies, Inc.	Software	Black Granite Capital	32.0
	Wonolo, Inc.	Digital Media/Commerce	Bain Capital Ventures	32.0
	Velox Ltd.	Business Services	JAL Ventures	32.0
	PlayVS, Inc.	Digital Media/Commerce	New Enterprise Associates	30.5
	CyberGRX	Software	Scale Venture Partners	30.0
	OpenLegacy, Inc.	Business Services	Silverhorn Investment Advisors	30.0
	Samanage Ltd.	Software	Expansion Capital Partners, LLC.	30.0
	RapidSOS, Inc.	Software	Highland Capital Partners	30.0
	StarMaker Interactive	Digital Media/Commerce	Opera Limited	30.0
	Airobotics, Ltd.	Software	BlueRun Ventures	30.0
	RingDNA, Inc.	Marketing Technology	Goldman Sachs Merchant Banking	30.0
	Engineer.ai	Software	Jungle Ventures	29.5
	Vicis, Inc.	Digital Media/Commerce	Rx3 Ventures	28.5
	UNICAF	Business Services	Goldman Sachs Merchant Banking	28.0
	RideCell, Inc.	Digital Media/Commerce	Undisclosed	28.0
	Plastiq, Inc.	Software	Kleiner Perkins Caufield & Byers	27.0
	ClearDATA Networks, Inc.	Software	Humana, Inc.	26.0
	Shape Security, Inc.	Software	Norwest Venture Partners	26.0
	RealtimeBoard Inc.	Software	Altair Capital	25.0
	ScienceLogic, Inc.	Software	Square 1 Bank	25.0
	Framer.com	Software	Accel Partners	24.0
	You.i TV	Software	Causeway Media Partners	23.0
	Tiqets	Digital Media/Commerce	HPE Growth Capital	23.0
	Mayvonn, Inc.	Digital Media/Commerce	Essence Ventures	23.0
	Wind Mobility GmbH	Digital Media/Commerce	HV Holtzbrinck Ventures	22.0

# All Segments

(\$ in Millions)

## Venture/Growth Capital Transactions

VC/Growth Capital Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	XM Cyber Ltd.	Software	Macquarie Capital Limited	\$ 22.0
	Rockset, Inc.	Software	Greylock Partners	21.5
	Force Therapeutics LLC	Software	Insight Venture Partners	21.0
	Oncology Analytics, Inc.	Software	McKesson Ventures	21.0
	BioInformatics, Inc.	Business Services	BroadOak Capital Partners	21.0
	Drivezy.com	Digital Media/Commerce	DAS Capital	20.0
	eko Communications, Inc.	Software	Gobi Partners	20.0
	EmergeTMS	Software	Greycroft Partners LLC	20.0
	Airspace Technologies, Inc.	Software	Scale Venture Partners	20.0
	KuCoin.com	Software	IDG Capital Partners	20.0
	ClearSky Data	Software	General Catalyst Partners LLC	20.0
	Taranis	Software	Viola Ventures	20.0
	botkeeper, Inc.	Software	Greycroft Partners LLC	18.0
	Prose, Inc.	Digital Media/Commerce	Insight Venture Partners	18.0
	PropelPLM, Inc.	Marketing Technology	Norwest Venture Partners	18.0
	4iQ	Software	C5 Capital	18.0
	Rael, Inc.	Digital Media/Commerce	BAM Ventures	17.5
	Transit App, Inc.	Digital Media/Commerce	Accel Partners	17.5
	Zenjob GmbH	Digital Media/Commerce	Redalpine Venture Partners AG	17.1
	Bidroom	Digital Media/Commerce	Undisclosed	17.0
	HolidayMe	Digital Media/Commerce	Accel Partners	16.0
	Zero Financial, Inc.	Software	New Enterprise Associates	16.0
	Overwolf Ltd.	Digital Media/Commerce	Intel Capital	16.0
	Apex.AI	Software	Lightspeed Venture Partners	15.5
	LeanTaaS	Software	Insight Venture Partners	15.0
	Templafy ApS	Marketing Technology	Insight Venture Partners	15.0
	Dapper Labs, Inc.	Digital Media/Commerce	Andreessen Horowitz	15.0
	KaDa Story	Business Services	Trustbridge Partners	14.4
	DBSec	Software	Delian Capital	14.3
	Huddle Insurance Pty Ltd.	Software	AirTree Ventures	14.1
	Liangzibao.cn	Digital Media/Commerce	Titan Ventures	14.0
	Fraugster Ltd.	Software	CommerzVentures	14.0
	Vizolution	Marketing Technology	HSBC Holdings	13.4
	MondoBrain	Software	Japia Finamar	13.3
	ModoPayments	Software	Deutsche Bank Group	13.0
	Form3 Financial Cloud	Software	Draper Espirit	13.0
	Italic, Inc.	Digital Media/Commerce	Comcast Ventures	13.0
	Securitize, Inc.	Software	Blockchain Capital	12.8
	PlayerLync, LLC	Software	Anschutz Investments	12.5
	Cameo.com	Digital Media/Commerce	Lightspeed Venture Partners	12.0
	DWNLD	Marketing Technology	Greylock Partners	12.0
	Sam Seamless Network Ltd.	Software	Intel Capital	12.0

# All Segments

(\$ in Millions)

## Venture/Growth Capital Transactions

VC/Growth Capital Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Edo.com	Marketing Technology	Breyer Capital	\$ 12.0
	Wizbii SAS	Digital Advertising	CapHorn Invest	11.3
	Credimi S.p.A.	Software	United Ventures	11.3
	Crowdcube Limited	Software	Draper Espirit	11.2
	Vedantu Innovations Pvt. Ltd.	Business Services	Omidyar Network	11.0
	Trifo, Inc.	Software	Undisclosed	11.0
	Click & Grow LLC	Digital Media/Commerce	SEB Alliance	11.0
	IntelyCare, Inc.	Software	Longmeadow Capital Partners	10.8
	Festicket Ltd.	Digital Media/Commerce	Beringea LLC	10.5
	Corvus Insurance Agency LLC	Software	.406 Ventures, LLC	10.0
	Aquant, Inc.	Software	Lightspeed Venture Partners	10.0
	Mech Mocha Game Studios	Digital Media/Commerce	Accel Partners	10.0
	Isara Corporation	Software	Shasta Ventures	10.0
	Kaloom, Inc.	Software	FTQ	10.0
	Pachyderm, Inc.	Software	Benchmark Capital	10.0
	Self Lender, Inc.	Software	Altos Ventures	10.0
	WalkMe, Inc.	Software	EDB Investments Pte. Ltd.	10.0
	Simple Habit, Inc.	Digital Media/Commerce	Foundation Capital	10.0
	Datacoral, Inc.	Software	Madrona Venture Group	10.0
	Quantela, Inc.	Software	Digital Alpha	10.0
	UNIKEN, Inc.	Software	(Private Investors)	10.0
	PressLogic Limited	Marketing Technology	Meituan-Dianping	10.0
	PredictHQ Ltd.	Software	Lightspeed Venture Partners	10.0
	Inpher, Inc.	Software	JP Morgan Chase & Co.	10.0
	Setter Home Services	Digital Media/Commerce	Sequoia Capital	10.0
	ShipMonk, Inc.	Software	Grotech Ventures	10.0
	Tock LLC	Marketing Technology	Valor Equity Partners	9.5
	GlobalTix Pte. Ltd.	Marketing Technology	Tin Men Capital Private Limited	9.0
	Charlie Finance Co.	Marketing Technology	Propel Venture Partners	9.0
	Visor	Software	Universal Ventures	9.0
	CHAOSSEARCH, Inc.	Marketing Technology	.406 Ventures, LLC	9.0
	Opternative, Inc.	Software	Pritzker Group	9.0
	Partnerize	Marketing Technology	GP Bullhound	9.0
	Cognigo Research Ltd.	Software	OurCrowd	8.5
	Birdie Care Services	Software	AXA SA	8.5
	Plus One Robotics, Inc.	Software	Pritzker Group	8.3
	TeleClinic GmbH	Software	Idinvest Partners	8.0
	Numerated Growth Technologies	Software	Venrock Associates	8.0
	Tripledote Studios Ltd.	Digital Media/Commerce	VeLo Partners	8.0
	Heyday, Inc.	Digital Media/Commerce	Fifth Wall Ventures	8.0
	Votiro, Inc.	Software	Senetas	8.0
	quantilope GmbH	Software	Dawn Capital	8.0

# All Segments

(\$ in Millions)

## Venture/Growth Capital Transactions

VC/Growth Capital Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Paddle.com Market Limited	Marketing Technology	BGF	\$ 8.0
	YotaScale, Inc.	Software	Crosslink Capital	8.0
	Evoke Creative Ltd.	Traditional Media	BGF	7.7
	Understory, Inc.	Information	4490 Ventures	7.5
	Savi Technology	Software	Eastward Capital Partners, LLC	7.5
	Zizoo	Digital Media/Commerce	Revo Capital	7.4
	Blue J Legal, Inc.	Software	Relay Ventures	7.0
	Banuba Limited	Software	Larnabel Ventures	7.0
	Alcide.io	Software	Intel Capital	7.0
	iBanFirst.com	Software	Serena Capital	7.0
	Currant, Inc.	Digital Media/Commerce	Uncork Capital	7.0
	Myia Labs	Digital Media/Commerce	Zetta Venture Partners	6.8
	d1g1t, Inc.	Software	Portag3 Ventures	6.8
	Fleetondemand Limited	Marketing Technology	BGF	6.6
	RF Code, Inc.	Marketing Technology	Undisclosed	6.6
	LoanStreet, Inc.	Software	Valar Ventures LP	6.5
	Jiobit	Software	NETGEAR, Inc.	6.5
	Shyft Technologies, Inc.	Digital Media/Commerce	Madrona Venture Group	6.5
	Anorak Technologies Limited	Software	Kamet	6.5
	Fluidly Ltd.	Software	Nyca Partners	6.5
	PebblePost	Digital Media/Commerce	Capital One Growth Ventures	6.0
	Universal Avenue AB	Marketing Technology	MOOR	6.0
	Dispatch Labs LLC	Software	Fenbushi Digital	6.0
	HealthifyMe Wellness Products and Services Pvt. Ltd.	Digital Media/Commerce	Innoven Capital	6.0
	Logojoy, Inc.	Marketing Technology	Flybridge Capital Partners	6.0
	Photomath, Inc.	Business Services	Goodwater Capital	6.0
	Jane Technologies, Inc.	Digital Media/Commerce	Undisclosed	6.0
	Mavrck	Marketing Technology	Kepha Partners	5.8
	Everywear Games Oy	Digital Media/Commerce	Supercell Oy	5.7
	Mintos.com	Digital Media/Commerce	Grumpy Investment	5.7
	Iconium	Software	(Private Investors)	5.7
	Quantum Machines Ltd.	Software	Battery Ventures	5.5
	Open Mineral AG	Software	Emerald Technology Ventures	5.4
	Canotic, Inc.	Software	Mosaic Venture Partners	5.3
	Syndio Solutions, Inc.	Software	Contour Venture Partners	5.2
	Scoro Software Ltd.	Marketing Technology	Tera Ventures	5.2
	Wellth	Software	AXA Strategic Ventures	5.1
	Lentesplus.com	Digital Media/Commerce	Palm Drive Ventures	5.0
	PICKUP LLC	Software	TDF Ventures	5.0
	Knowtions Research, Inc.	Software	Information Venture Partners	5.0
	SmartRent, Inc.	Software	Real Estate Technology Ventures	5.0
	ParkWhiz, Inc.	Digital Media/Commerce	Amazon.com, Inc.	5.0

# All Segments

(\$ in Millions)

## Venture/Growth Capital Transactions

VC/Growth Capital Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	BigBox VR, Inc.	Digital Media/Commerce	Shasta Ventures	\$ 5.0
	Sharegain Ltd.	Software	Blumberg Capital	5.0
	Grid4C, Inc.	Software	iAngels	5.0
	Zeguro, Inc.	Software	Mosaik Partners	5.0
	Cubcoats, Inc.	Digital Media/Commerce	(Private Investors)	4.9
	SummitSync, Inc.	Marketing Technology	Loeb Enterprises LLC	4.8
	Woven.com	Digital Media/Commerce	Battery Ventures	4.8
	Fred de la compta	Software	Go Capital LLC	4.6
	Democracy Live, Inc.	Software	(Private Investors)	4.5
	Mercaux LCI	Marketing Technology	Nauta Capital	4.5
	Pryon, Inc.	Marketing Technology	Greycroft Partners LLC	4.5
	Bonobo.AI	Marketing Technology	G20 Ventures	4.5
	Coder.com	Software	Redpoint Ventures	4.5
	AwanTunai	Digital Media/Commerce	Insignia Ventures Partners	4.3
	Pass Technology Group Limited	Software	Undisclosed	4.2
	Portal.xyz	Digital Media/Commerce	Day One Ventures	4.2
	Lightfoot Ltd.	Software	BGF	4.1
	Building Intelligence, Inc.	Software	Founders Equity, Inc.	4.1
	CognitionX Ltd.	Information	Unilever Ventures	4.1
	Argent Labs Limited	Software	Index Ventures	4.0
	Enboarder.Me Pty Ltd.	Software	Greycroft Partners LLC	4.0
	BOU Brands LLC	Digital Media/Commerce	(Private Investors)	4.0
	Bunch.live	Digital Media/Commerce	Founders Fund	4.0
	Analytical Flavor Systems, Inc.	Information	Leawood Venture Capital	4.0
	Drivetime, Inc.	Digital Media/Commerce	Felicitas Ventures	4.0
	RoadBotics, Inc.	Software	Hyperplane Venture Capital	3.9
	yu life Ltd.	Digital Media/Commerce	LocalGlobe	3.9
	Hotelmize Ltd.	Digital Media/Commerce	Investible	3.8
	Point Inside, Inc.	Software	Vestech Partners	3.5
	OzCode Ltd.	Software	TPY Capital	3.5
	Dormify, Inc.	Digital Media/Commerce	American Eagle Outfitters	3.5
	Crisp BV	Digital Media/Commerce	Undisclosed	3.4
	OneDome Ltd.	Traditional Media	Evolve Foundation	3.3
	Jourmy, Inc.	Digital Media/Commerce	Menlo Ventures	3.2
	Clyde	Software	Red Sea Ventures	3.0
	Phiar, Inc.	Software	Norwest Venture Partners	3.0
	Nifty Games	Digital Media/Commerce	March Capital	3.0
	Genesis Global Technology Limited	Software	Illuminate Financial Management	3.0
	PharmaCCX	Marketing Technology	Accel Partners	3.0
	ItsACheckmate.com, Inc.	Marketing Technology	Tiger Global Management, LLC	3.0
	Health iPASS, Inc.	Software	QED Investors LLC	3.0
	Birdylabs SAS	Digital Media/Commerce	Rising Sun Ventures	3.0

# All Segments

(\$ in Millions)

## Venture/Growth Capital Transactions

VC/Growth Capital Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	AND Global LLC	Software	Rhinos Asset Management	\$ 2.8
	Censys, Inc.	Software	Google Ventures	2.6
	Nova Leah Ltd.	Software	Bank of Ireland - Media Finance	2.6
	HeleCloud Ltd.	Business Services	BGF	2.6
	Keyto, Inc.	Digital Media/Commerce	Craft Ventures	2.5
	Guardian Optical Technologies Ltd.	Software	Union Ventures	2.5
	Kukua.me	Business Services	EchoVC	2.5
	EquiFi	Software	Intero Real Estate	2.5
	Lone Rooftop Bv	Software	Nimbus Ventures	2.5
	JOOX Music	Digital Media/Commerce	Rokk3r, Inc.	2.3
	Exein SpA	Software	United Ventures	2.3
	Educative, Inc.	Business Services	Trilogy Equity Partners, LLC	2.3
	Precision OS Technology, Inc.	Software	AO Invest	2.3
	DUST Identity, Inc.	Software	Kleiner Perkins Caufield & Byers	2.3
	Shogun Labs, Inc.	Marketing Technology	Y Combinator	2.1
	Admix	Marketing Technology	Suir Valley Ventures	2.1
	Rehersal	Business Services	Cypress Growth Capital	2.0
	NeuroFlow, Inc.	Software	Independence Blue Cross	2.0
	HYAS Infosec, Inc.	Software	Silicon Valley Bank	2.0
	Vitcord	Digital Media/Commerce	Banc Sabadell	2.0
	Feedr Ltd.	Digital Media/Commerce	Episode 1 Ventures	2.0
	WeRecover LLC	Digital Advertising	Crosslink Capital	2.0
	IDELIC Tech & SafetyBox	Software	Bain Capital Ventures	2.0
	Clik Payment (Cambodia) Co. Ltd.	Software	OpenWay Europe	2.0
	King Children	Digital Media/Commerce	Great Oaks Venture Capital	2.0
	Banked	Software	Backed VC	1.9
	EduMe Ltd.	Business Services	Connect Ventures	1.8
	MedPilot, Inc.	Software	Valley Growth Ventures	1.7
	MioAssicuratore Srl	Digital Advertising	Innogest SGR	1.7
	Banked.com	Information	Backed VC	1.7
	Attribytes, Inc.	Software	Tailwave Capital	1.7
	Oji Life Lab, Inc.	Business Services	Evolve Venture	1.7
	Portify Ltd.	Software	Kindred Capital	1.7
	Shopfront Limited	Software	Omidyar Network	1.6
	Aiden.ai	Marketing Technology	Partech Ventures	1.6
	Sweet Tailor, Inc.	Digital Media/Commerce	Burch Creative Capital	1.5
	Knack Technologies, Inc.	Business Services	(Private Investors)	1.5
	Sastaticket.pk	Digital Media/Commerce	Gobi Partners	1.5
	Scala Computing, Inc.	Software	Undisclosed	1.5
	Kinvolved, Inc.	Software	Draper Richards Kaplan Foundation	1.5
	Around Media	Software	Green Park Investment Partners (Wim Vermaeve)	1.4
	Logical Clocks AB	Software	Frontline Ventures	1.4



# All Segments

(\$ in Millions)

## Venture/Growth Capital Transactions

VC/Growth Capital Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	VenueScanner Ltd.	Digital Media/Commerce	(Private Investors)	\$ 1.3
	Wluper Ltd.	Marketing Technology	IQ Capital Partners LLP	1.3
	Neotas Ltd.	Software	Force Over Mass Capital	1.3
	Living Security, Inc.	Business Services	Active Capital	1.3
	ShoppingGives	Software	Asset Blue	1.2
	Sift Healthcare, Inc.	Software	Winnebago Capital Partners	1.0

# All Segments

(\$ in Millions)

## Venture/Growth Capital Transactions

VC/Growth Capital Undisclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Target Media Nusantara	Agency & Marketing Services	Alpha JWC Ventures	\$ -
	AdSwerve, Inc.	Business Services	Arby Partners	-
	CET Structures Ltd.	Business Services	Palantine Private Equity	-
	LEGACY Supply Chain Services	Business Services	Eos Partners LP	-
	Electric Power Systems, Inc.	Business Services	IGP Industries LLC	-
	DataArt, Inc.	Business Services	Da Vinci Capital Management	-
	Visionary Integration Professionals	Business Services	Morgan Stanley Credit Partners	-
	Cando Rail Services Ltd.	Business Services	TorQuest Partners	-
	Vector-Solutions.com, Inc.	Business Services	Golden Gate Capital	-
	Seven Star Digital Ltd.	Digital Advertising	Ki Capital	-
	Moteefe	Digital Media/Commerce	Ascension Ventures Limited	-
	WeTrip Ltd.	Digital Media/Commerce	InMotion Ventures	-
	Lamudi GmbH	Digital Media/Commerce	Ringier AG	-
	Chushou TV	Digital Media/Commerce	iQiyi.com	-
	Visible Body	Digital Media/Commerce	Capitala Investment Advisors	-
	Calabrio, Inc.	Digital Media/Commerce	Kohlberg Kravis Roberts & Company L.P.	-
	OWNDAYS Singapore Pte Ltd.	Digital Media/Commerce	L Catterton	-
	Kkday.com	Digital Media/Commerce	Alibaba Capital Partners	-
	Betterview Marketplace, Inc.	Information	Plug & Play Tech Ventures	-
	Bonify	Information	Mosaic Venture Partners	-
	iCapital Network	Information	The Carlyle Group	-
	iCapital Network	Information	BlackRock, Inc.	-
	Loyalty Prime Germany GmbH	Marketing Technology	Bayerische Beteiligungsgesellschaft	-
	Fuigo, Inc.	Marketing Technology	(Private Investors)	-
	Stable Research	Marketing Technology	Bastion Collective Pty. Ltd.	-
	SAM.AI	Marketing Technology	UpVentures Capital	-
	IRI	Marketing Technology	Vester Capital	-
	Decisions AS	Marketing Technology	Holta Invest AS	-
	TRG Screen	Marketing Technology	Pamlico Capital	-
	Messagepoint, Inc.	Marketing Technology	NewSpring Capital	-
	Skelter Labs, Inc.	Marketing Technology	Golden Gate Ventures	-
	PatientPop, Inc.	Marketing Technology	Leerink Transformation Partners, LLC	-
	Wrike, Inc.	Software	Vista Equity Partners	-
	Bindable.com	Software	Motive Capital Management	-
	Health Data Vision, Inc.	Software	Upfront Ventures	-
	Hart, Inc.	Software	Palisades Growth Capital	-
	Zdaly, Inc.	Software	S3 Ventures	-
	SupplyShift, Inc.	Software	Blackhorn Ventures	-
	Axio Global, Inc.	Software	NFP Ventures	-
	Dathena Science Pte. Ltd.	Software	Cerra Capital Ventures	-
	SouthTech Systems, Inc.	Software	Undisclosed	-
	Riversand Technologies	Software	Crestline Investors, Inc.	-

# All Segments

(\$ in Millions)

## Venture/Growth Capital Transactions

VC/Growth Capital Undisclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Arkose Labs	Software	PayPal, Inc.	\$ -
	Automox, Inc.	Software	TechOperators LLC	-
	Sonect GmbH	Software	SixThirty Ventures	-
	RADAR, Inc.	Software	Vista Equity Partners	-
	NueHealth, Inc.	Software	Ares Management LLC	-
	Astarte Medical Partners, Inc.	Software	Next Act Fund	-
	Allegro.AI	Software	Hyundai Motor Company	-
	AirGateway GmbH	Software	High Tech Grunderfonds	-
	1touch.io	Software	Jerusalem Venture Partners	-
	Edmunds & Associates	Software	LLR Partners, Inc.	-

# Petsky Prunier: Maximizing Shareholder Value

- Top-ranked, global investment bank dedicated to digital advertising and marketing, e-commerce, digital media, technology, information, business services, and healthcare services industries
  - Extensive sell-side M&A and capital raise expertise, with a transaction closing rate unmatched at our level of deal volume
- Founded in 1999
- More than 50 focused professionals; growth of 40% since 2011
  - New York, Las Vegas, Chicago, Charlotte
- Deep relationships across a broad spectrum of strategic buyers, as well as private equity, growth equity, and VC groups and lenders
- Strategic consulting firm Winterberry Group – one of the largest industry-specific advisors providing strategic and transactional services
- Global reach enhanced through our partnerships in China and India
- Securities transactions are processed through Petsky Prunier Securities LLC, a member of FINRA and an affiliated entity



- M&A Advisory and Sell-Side Representation
  - Privately-Owned Companies
  - Entrepreneur-Led Businesses
  - Private Equity Portfolio Companies
  - VC-Backed Companies
  - Corporate Divestitures
  - Selected Buy-Side Engagements
- Capital Raising and Private Placements
- Advertising & Marketing
  - E-commerce
  - Digital Media
  - Technology
  - Information
  - Business Services
  - Healthcare Services
- Business Current Situation Assessment and Profit Improvement Planning
- Opportunity Mapping: Strategic Planning & Development
- Competitive Landscape Analysis
- M&A Transaction Due Diligence Support
- Buy-Side Targeting Criteria & Integration Strategy
- Custom Market Research
- Publishing, Speaking, and Thought Leadership

## Ranked #1 by Bloomberg For Mid-Market Internet & Advertising Transactions

Bloomberg M&A League Tables		
TOP ADVISORS SERVING THE MIDDLE MARKET INTERNET & ADVERTISING SECTORS		
2011-2017		
Rank	Advisor	Deal Count
1	<b>Petsky Prunier</b>	<b>114</b>
2	Goldman Sachs	104
3	KPMG Corporate Finance	78
4	Morgan Stanley	77
5	PwC	76
6	Jordan Edmiston	74
7	JP Morgan	64
7	GCA Savvian	64
9	Ernst & Young	63
10	Rothschild	60

Based on number of deals announced in 2011-2017 valued at \$500 million or less. Internet and Advertising is defined by Bloomberg.

- **With more than 75 transactions closed in the last 36 months, and more than 140 transactions closed since 2011 (across all industries in addition to Internet and Advertising), Petsky Prunier is one of the most active M&A practices within the marketing, advertising, e-commerce, and media industries**

# Representative Recent Transactions

\$150,000,000

**IGHTYHIVE**

has agreed to be sold to

**S4**  
CAPITAL  
(LSE: SFOR)  
**PetskyPrunier**  
INVESTMENT BANKERS

**AMULET CAPITAL**  
PARTNERS LP

has acquired

**OPEN**  
PARTNERS

and subsequently merged with

**peloton advantage**  
medicine in motion

**PetskyPrunier**  
INVESTMENT BANKERS

**GLYNNDEVINS** GD

a portfolio company of

**FALFURRIAS CAPITAL**

has been sold to

**CIP CAPITAL**

**PetskyPrunier**  
INVESTMENT BANKERS

**PERISCOPE**

has agreed to be sold to

**Quad** Graphics  
(NYSE:QUAD)

**PetskyPrunier**  
INVESTMENT BANKERS

**WILLOWTREE**<sup>®</sup>

has received a significant investment from

**INSIGNIA**  
CAPITAL GROUP

**PetskyPrunier**  
INVESTMENT BANKERS

**THP**

has been sold to

**williamsleatag**

a portfolio company of

**Advent International**  
GLOBAL PRIVATE EQUITY

**PetskyPrunier**  
INVESTMENT BANKERS

**cluep**

has been sold to

**IMPACTGROUP**

a portfolio company of

**CI CAPITAL PARTNERS**

**PetskyPrunier**  
INVESTMENT BANKERS

**Applied Info Group**  
Email & Database Marketing that Delivers

has been sold to

**OSG**

a portfolio company of

**AQUILINE**  
CAPITAL PARTNERS LLC

**PetskyPrunier**  
INVESTMENT BANKERS

**jun group.**

a portfolio company of

**HALYARD**  
CAPITAL

has been sold to

**ADVANTAGE**  
SOLUTIONS

**PetskyPrunier**  
INVESTMENT BANKERS

**BVACCEL**

has sold a majority stake to

**AUGUSTSPARK**

**PetskyPrunier**  
INVESTMENT BANKERS

**Giant**  
CREATIVE STRATEGY

a portfolio company of

**SHAMROCK**  
CAPITAL ADVISORS

has been sold to

**HUNTSWORTH**  
(LON:HNT)

**PetskyPrunier**  
INVESTMENT BANKERS

**matchmg**

a portfolio company of

**BERINGER**  
CAPITAL

has been sold to

**SOUTHFIELD**

**PetskyPrunier**  
INVESTMENT BANKERS

**SWC** TECHNOLOGY PARTNERS

a portfolio company of

**SVOBODA**  
CAPITAL PARTNERS

has been sold to

**BDO**

**PetskyPrunier**  
INVESTMENT BANKERS

**ENGAGED**  
MEDIA

has been sold to

**APTUS**  
HEALTH

an indirect subsidiary of

**MERCK**  
(NYSE: MRK)

**PetskyPrunier**  
INVESTMENT BANKERS

**mTAB**<sup>®</sup>  
Take your research further.

has been sold to

**MILESTONE**  
PARTNERS

**PetskyPrunier**  
INVESTMENT BANKERS

**MILLENNIUM 1**  
SOLUTIONS

a portfolio company of

**THE GORES GROUP**

has been sold to

**dimension data**

**PetskyPrunier**  
INVESTMENT BANKERS

**AHM**

a portfolio company of

**ACP**  
ARLINGTON  
CAPITAL PARTNERS

has been sold to

**IQVIA**<sup>™</sup>

**PetskyPrunier**  
INVESTMENT BANKERS

**Caring.com**

a division of

**RED VENTURES**

has been sold to

a consortium of family office  
and private equity investors

**PetskyPrunier**  
INVESTMENT BANKERS