

December 2018 M&A and Investment Summary

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### M&A and Investment Summary for All Segments

#### **Transaction Distribution**

- A total of 546 deals were announced in December 2018, of which 265 were worth \$29.3 billion in aggregate reported value
- Software accounted for 35 percent of transactions with 191 deals announced 114 of which reported \$13.9 billion in value
- Software was also the most valuable segment, followed by Digital Media/Commerce, with 99 transactions announced 67 of which valued at \$9.7 billion
- Strategic buyers announced 279 deals (43 reported \$15.1 billion in value)
- VC/Growth Capital investors announced 244 transactions (219 reported \$10.5 billion in value)
- Private Equity buyers announced 23 deals during the month (3 reported \$3.8 billion in value)

				Decembe	r 2018					
						В	UYER/INVES	TOR BREAKDOWN		
	Trans	sactions	Reported \	Value	Stra	ategic		Buyout	Venture/Growth Capital	
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Software	191	35%	\$13,947.2	48%	73	\$8,541.0	8	\$1,800.0	110	\$3,606.2
Digital Media/Commerce	99	18%	\$9,730.2	33%	35	\$3,368.8	2	\$1,800.0	62	\$4,561.4
Business Services	89	16%	\$2,482.1	8%	66	\$1,477.8	7	-	16	\$1,004.3
Marketing Technology	86	16%	\$1,670.8	6%	41	\$780.8	1	-	44	\$890.0
Agency & Marketing Services	44	8%	\$355.4	1%	38	\$191.6	5	\$160.0	1	\$3.8
Traditional Media	16	3%	\$568.0	2%	14	\$423.0	0	-	2	\$145.0
Digital Advertising	14	3%	\$262.8	1%	8	\$34.1	0	-	6	\$228.7
Information	7	1%	\$291.0	1%	4	\$263.0	0	-	3	\$28.0
Total	546	100%	29,307.5	100%	279	15,080.1	23	3,760.0	244	10,467.4

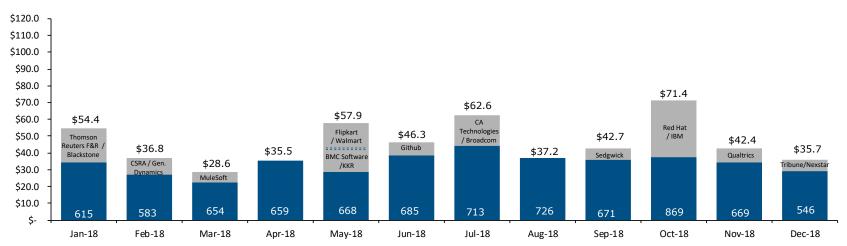
<sup>\*</sup>Note, transactions valued at \$6 billion or more have been excluded from totals to limit comparative distortions. The aggregate total for December does not include Nexstar's pending \$6.4 billion acquisition of Tribune



### **M&A** and Investment Summary for All Segments

#### **Transaction Distribution**

- M&A total deal value was up more than 30 percent compared with December of last year
- Significant transactions reported during the month included:
  - The \$4.4 billion acquisition of Travelport Worldwide by Elliot Management and Siris Capital
  - The pending sale of fitness and wellness company management software MINDBODY to Vista Equity Partners for \$1.8 billion
  - Apax Partners' acquisition of auction and classified advertising site Trade Me Group for \$1.8 billion
  - The acquisition of health products and services provider NutriSystem by Tivity Health for \$1.4 billion
  - NEC's \$1.2 billion acquisition of Denmark-based IT company KMD



\*Note, transactions valued at \$6 billion or more have been excluded from totals to limit comparative distortions. The aggregate total does not include 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 \$6.7 billion acquisition of Sedgwick Management Services, IBM's pending \$34 billion acquisition of Red Hat, SAP's pending \$8 billion acquisition of Qualtrics, and Nexstar's pending \$6.4 billion acquisition of Tribune Media.



### **Selected Transactions with Valuation Information Disclosed**

(\$ in Millions)

	Selected Tra	ansactions With Multiples Information					
Target	Subsegment	Buyer/Investor	Ent. Value	TTM Rev	TTM EBITDA	EV/REV	EV/EBITDA
Agency & Marketing Services							
CaseStack, Inc.	Marketing Services	Hub Group, Inc.	255.0	242.0	22.0	1.1x	11.
495 Communications LLC	Agency/Consulting	Good Life Networks, Inc.	15.0	14.4	1.9	1.0x	7.
Business Services							
KMD A/S	IT Consulting/Systems Integration	NEC Corporation	1,200.0	903.0	-	1.3x	1
<u> </u>	<u> </u>	·				NA	
Digital Media/Commerce							
Trade Me Limited	Classifieds/Auctions/P-to-P	Apax Partners L.P.	1,800.0	169.7	96.3	10.6x	18
NutriSystem, Inc.	eCommerce	Tivity Health	1,400.0	692.7	88.4	2.0x	15
Small Giant Games Oy	Gaming	Zynga, Inc.	700.0	130.0	-	5.4x	1
JACK WOLFSKIN - Ausrüstung für Draussen GmbH & Co. KGaA	eCommerce	Callaway Golf Company	476.0	387.7	40.8	1.2x	11
Information							
Compuscan Informaton Technologies Pty Ltd.	Credit/Risk Management Information	Experian plc	263.0	37.1	-	7.1x	
Cortex Business Solutions, Inc.	Financial Software	Drillinginfo, Inc.	31.2	9.6	1.4	3.3x	22.
Marketing Technology							
Danal, Inc.	Mobile Technology	BOKU, Inc.	101.4	5.1	-	19.9x	N
Adestra Ltd.	Email/Messaging Software	Upland Software, Inc.	56.0	18.0	8.0	3.1x	7.
Software							
Travelport Worldwide Limited	Financial Software	Elliott Management Corporation	4,400.0	2,500.0	415.4	1.8x	10.
MINDBODY, Inc.	ERP Software	Vista Equity Partners	1,800.0	228.9	(19.0)	7.9x	N
Earthport PLC	Financial Software	Visa, Inc.	244.8	42.0	-	5.8x	
Verimatrix, Inc.	Security Software	INSIDE Secure SA	143.0	78.7	14.5	1.8x	9.

### **Securities in Registration Filings in 2018**

(\$ in Millions)

				Aggregate	LTM	
Date	Company Name	Country	Segment	Offering Value	Rev	EBITDA
Dec-18	Futu Holdings LTD	China	Software	300.0	NA	NA
Oct-18	Caliburn International Corp	United States	Business Services	100.0	NA	NA
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**

					Initial Offering	Final Price	Stock Price at Close	Stock Price on	% Change from
Date	Ticker	PPLLC Segment	Company Name	Country	Price Range	Per Share	on 1st Trading Day	Dec 31, 2018	1st Trading Day
Dec-18	QFIN	Software	360 Finance, Inc.	China	\$16.50-\$18.50	16.50	\$16.49, down 0.1%	15.51	(6.0%)
Dec-18	TME	Digital Media/Commerce	Tencent Music Entertainment Group	China	13.00-15.00	13.00	\$14.19, up 9.2%	13.22	(6.8%)
Dec-18	MOGU	Digital Media/Commerce	MOGU Inc.	China	14.00-16.00	12.00	\$14.00, up 16.7%	20.49	46.4%
Nov-18	WEI	Software	Weidai Ltd.	China	9.00-\$11.00	10.50	\$10.25, down 2.4%	9.26	(9.7%)
Oct-18	STNE	Software	Stone Co Ltd.	Brazil	21.00-23.00	24.00	\$31.35, up 30.6%	18.44	(41.2%)
Oct-18	SWI	Software	SolarWinds Corporation	United States	15.00-16.00	15.00	15.03, up 0.0%	13.83	(8.0%)
Oct-18	PLAN	Software	Anaplan, Inc.	United States	13.00-15.00	17.00	24.30, up 42.9%	26.54	9.2%
Oct-18	ESTC	Marketing Technology	Elastic N.V.	United States	33.00-35.00	36.00	70.00, up 94.4%	71.48	2.1%
Oct-18	UPWK	Digital Media/Commerce	Upwork Inc.	United States	12.00-14.00	15.00	21.18, up 41.2%	18.11	(14.5%)
Sep-18	СТК	Digital Media/Commerce	CooTek (Cayman) Inc.	China	12.00-14.00	12.00	9.44, down 21.3%	8.32	(11.9%)
Sep-18	EB	Marketing Technology	Eventbrite, Inc.	United States	19.00-21.00	23.00	36.5, up 58.7%	27.81	(23.8%)
Sep-18	FTCH	Digital Media/Commerce	Farfetch Limited	United Kingdom	17.00-19.00	20.00	28.45, up 42.3%	17.71	(37.8%)
Sep-18	NYSE: LAIX	Digital Media/Commerce	LAIX Inc.	China	11.50-13.50	12.50	12.65, up 1.2%	7.58	(40.1%)
Sep-18	Qtt	Digital Media/Commerce	Qutoutiao Inc.	China	7.00-9.00	7.00	15.97, up 128.1%	6.35	(60.2%)
Sep-18	SVMK	Marketing Technology	SVMK Inc.	United States	9.00-11.00	12.00	17.24, up 43.7%	12.27	(28.8%)
Jul-18	JG	Software	Aurora Mobile Limited	China	8.50-10.50	8.50	\$8.80, up 3.5%	7.02	(20.2%)
Jul-18	CANG	Digital Media/Commerce	Cango Inc.	China	10.00-12.00	11.00	12.52, up 13.8%	7.94	(36.6%)
Jul-18	DAVA	Business Services	Endava plc	United Kingdom	17.00-19.00	20.00	25.2, up 26.0%	24.15	(4.2%)
Jul-18	OPRA	Digital Media/Commerce	Opera Limited	Norway	10.00-12.00	12.00	13.11, up 9.3%	5.56	(57.6%)
Jul-18	PDD	Digital Media/Commerce	Pinduoduo Inc.	China	16.00-19.00	19.00	26.70, up 40.5%	22.44	(16.0%)
Jul-18	TENB	Software	Tenable Holdings, Inc.	United States	20.00-22.00	23.00	30.25, up 31.5%	22.19	(26.6%)
Jun-18	NYSE:AVLR	Software	Avalara, Inc.	United States	21.00-23.00	24.00	44.94, up 87.3%	31.15	(30.7%)
Jun-18	NasdagGM:DOMO	Software	Domo, Inc.	United States	19.00-22.00	21.00	27.30, up 30.0%	19.63	(28.1%)
Jun-18	NasdagGM:EVER	Digital Advertising	EverQuote, Inc.	United States	15.00-17.00	18.00	18.02, up 0.1%	4.18	(76.8%)
Jun-18	NasdagGS:IIIV	Software	i3 Verticals, Inc.	United States	11.00-13.00	13.00	18.35, up 41.2%	24.10	31.3%
lun-18	NasdaqGS:UXIN	Digital Media/Commerce	Uxin Limited	China	10.50-12.50	9.00	9.67, up 7.4%	4.86	(49.7%)
May-18	NasdaqGS:GSKY	Software	GreenSky, Inc.	United States	21.00-23.00	23.00	25.36, up 10.3%	9.57	(62.3%)
May-18	NasdaqGM:EVOP	Software	EVO Payments, Inc.	United States	14.00-16.00	16.00	19.02, up 18.9%	24.67	29.7%
May-18	NYSE:HUYA	Digital Media/Commerce	HUYA Inc.	China	10.00-12.00	12.00	16.06, up 33.8%	15.48	(3.6%)
May-18	NasdaqGS:PS	Software	Pluralsight, Inc.	United States	12.00-14.00	15.00	20.00, up 33.3%	23.55	17.8%
May-18	NasdaqGS:CBLK	Software	Carbon Black, Inc.	United States	15.00-17.00	19.00	23.94, up 26.0%	13.42	(43.9%)
Apr-18	NYSE:CDAY	Software	Ceridian HCM Holding Inc.	United States	19.00-21.00	22.00	28.90, up 31.4%	34.49	19.3%

### **LTM IPO Performance**

					Initial Offering	Final Price	Stock Price at Close	Stock Price on	% Change from
Date	Ticker	PPLLC Segment	Company Name	Country	Price Range	Per Share	on 1st Trading Day	Dec 31, 2018	1st Trading Day
Apr-18	NYSE:PVTL	Software	Pivotal Software, Inc.	United States	14.00-16.00	15.00	15.73, up 4.9%	16.35	3.9%
Apr-18	NYSE:SMAR	Software	Smartsheet Inc.	United States	12.00-14.00	15.00	19.55, up 30.3%	24.86	27.2%
Apr-18	NYSE:ZUO	Marketing Technology	Zuora, Inc.	United States	11.00-13.00	14.00	20.00, up 42.8%	18.14	(9.3%)
Mar-18	NasdaqGS:BILI	Digital Media/Commerce	Bilibili Inc.	China	10.50-12.50	11.50	11.24, down 2.2%	14.59	29.8%
Mar-18	NasdaqGS:DBX	Software	Dropbox, Inc.	United States	18.00-20.00	21.00	28.48, up 35.6%	20.43	(28.3%)
Mar-18	NasdaqGS:IQ	Digital Media/Commerce	iQIYI, Inc.	China	17.00-19.00	18.00	15.55, down 13.6%	14.87	(4.4%)
Mar-18	NasdaqGS:ZS	Software	Zscaler, Inc.	United States	13.00-15.00	16.00	33.00, up 106.3%	39.21	18.8%
Feb-18	NasdaqGM:CDLX	Software	Cardlytics, Inc.	United States	13.00-15.00	13.00	13.37, up 2.8%	10.83	(19.0%)
Jan-18	NYSE:PAGS	Software	PagSeguro Digital Ltd.	Brazil	17.50-20.50	21.50	29.20, up 35.8%	18.73	(35.9%)

### **Digital Media/Commerce**

- Of the 99 transactions recorded in the Digital Media/Commerce segment in December 67 announced \$9.7 billion in reported value
- E-commerce was the most active subsegment across all subsegments with 57 transactions announced, of which 42 were reported for \$5.9 billion, including:
  - The \$1 billion investment food delivery company Swiggy received from Naspers, Tencent, Hillhouse Capital, Wellington Management Company, DST Global, Meituan Dianping, and Coatue Management
  - Callaway Golf's acquisition of outdoor clothing brand Jack Wolfskin for \$476 million
  - Farfetch's \$250 million acquisition of Stadium Goods, a sneaker and streetwear marketplace
- Select Digital Media/Commerce transactions include:
  - Zynga's \$700 million acquisition of mobile gaming company Small Giant Games
  - The \$385 million Series B funding digital car marketplace Fair raised from SoftBank, Exponential Ventures, Munich Re Ventures, and CreditEase
  - Niantic's \$200 million round of funding, valuing the company at \$3.9 billion from IVP, Samsung, and aXiomatic Gaming

DIGITAL MEDIA/COMMERCE TRAI	NSACTIONS BY SEGM	BUYER/INVESTOR BREAKDOWN							
Transactio	ons	Reported	Value	S	trategic		Buyout	Venture/	Growth Capital
#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
57	58%	\$5,942.4	61%	17	\$2,520.8	0	-	40	\$3,421.6
12	12%	1,131.7	12%	6	800.0	0	-	6	331.7
11	11%	155.5	2%	4	48.0	0	-	7	107.5
6	6%	2,278.0	23%	3	-	1	1,800.0	2	478.0
6	6%	44.2	0%	3	-	0	-	3	44.2
4	4%	178.4	2%	0	-	0	-	4	178.4
99	100%	9,730.2	100%	35	3,368.8	2	1,800.0	62	4,561.4
	# 57 12 11 6 6 4	# % 57 58% 12 12% 11 11% 6 6% 6 6% 4 4%	# % \$MM  57 58% \$5,942.4  12 12% 1,131.7  11 11% 155.5  6 6% 2,278.0  6 6% 44.2  4 4% 178.4	Transactions         Reported Value           #         %         \$MM         %           57         58%         \$5,942.4         61%           12         12%         1,131.7         12%           11         11%         155.5         2%           6         6%         2,278.0         23%           6         6%         44.2         0%           4         4%         178.4         2%	Transactions         Reported Value         S           #         %         \$MM         %         #           57         58%         \$5,942.4         61%         17           12         12%         1,131.7         12%         6           11         11%         155.5         2%         4           6         6%         2,278.0         23%         3           6         6%         44.2         0%         3           4         4%         178.4         2%         0	Transactions         Reported Value         Strategic           #         %         \$MM         %         #         \$MM           57         58%         \$5,942.4         61%         17         \$2,520.8           12         12%         1,131.7         12%         6         800.0           11         11%         155.5         2%         4         48.0           6         6%         2,278.0         23%         3         -           6         6%         44.2         0%         3         -           4         4%         178.4         2%         0         -	Transactions         Reported Value         Strategic           #         %         \$MM         %         #         \$MM         #           57         58%         \$5,942.4         61%         17         \$2,520.8         0           12         12%         1,131.7         12%         6         800.0         0           11         11%         155.5         2%         4         48.0         0           6         6%         2,278.0         23%         3         -         1           6         6%         44.2         0%         3         -         0           4         4%         178.4         2%         0         -         0	Transactions         Reported Value         Strategic         Buyout           #         %         \$MM         #         \$MM         #         \$MM         #         \$MM           57         58%         \$5,942.4         61%         17         \$2,520.8         0         -           12         12%         1,131.7         12%         6         800.0         0         -           11         11%         155.5         2%         4         48.0         0         -           6         6%         2,278.0         23%         3         -         1         1,800.0           6         6%         44.2         0%         3         -         0         -           4         4%         178.4         2%         0         -         0         -	Transactions         Reported Value         Strategic         Buyout         Venture/OF           #         %         \$MM         %         #         \$MM         #         \$MM



# Digital Media Public Company Valuation (1/2)

<b>US-Based Digital Media and Inter</b>	rnet									
	Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM Multiples	
Company Name	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Alphabet Inc.	\$1,044.96	-19%	\$ 723,465.2	\$ 621,035.2	\$ 129,866.0	\$ 39,334.0	30.3%	24.2%	4.8x	15.8x
Apple Inc.	157.74	-32%	748,539.1	796,721.1	265,595.0	81,801.0	30.8%	15.9%	3.0x	9.7x
Facebook, Inc.	131.09	-40%	376,724.8	335,588.8	51,896.0	28,388.0	54.7%	42.2%	6.5x	11.8x
Fitbit, Inc.	4.97	-36%	1,235.2	611.9	1,511.5	(127.9)	NM	-6.6%	0.4x	NM
Glu Mobile Inc.	8.07	-4%	1,156.0	1,071.7	351.1	(27.8)	NM	38.8%	3.1x	NM
GoPro, Inc.	4.24	-46%	596.1	584.5	1,105.8	(115.4)	NM	-20.2%	0.5x	NM
IAC/InterActiveCorp	183.04	-18%	15,286.4	16,202.2	4,109.4	714.0	17.4%	29.7%	3.9x	22.7x
j2 Global, Inc.	69.38	-24%	3,419.6	4,126.7	1,177.6	426.8	36.2%	11.8%	3.5x	9.7x
Leaf Group Ltd.	6.85	-43%	161.0	128.2	149.3	(13.6)	NM	21.1%	0.9x	NM
The Meet Group, Inc.	4.63	-18%	342.3	360.9	166.3	22.3	13.4%	47.3%	2.2x	16.2x
Netflix, Inc.	267.66	-37%	116,722.5	121,991.6	14,893.3	1,713.8	11.5%	36.8%	8.2x	71.2x
Pandora Media, Inc.	8.09	-20%	2,195.6	2,576.5	1,517.0	(252.5)	NM	3.6%	1.7x	NM
RealNetworks, Inc.	2.31	-41%	87.0	47.8	71.8	(18.1)	NM	37.3%	0.7x	NM
Remark Holdings, Inc.	1.21	-92%	47.3	74.2	75.4	(30.4)	NM	12.6%	1.0x	NM
Roku, Inc.	30.64	-60%	3,344.8	3,165.1	655.0	(2.7)	NM	38.8%	4.8x	NM
Snap Inc.	5.51	-74%	7,135.0	5,720.6	1,076.3	(1,273.8)	NM	52.7%	5.3x	NM
TheStreet, Inc.	2.03	-19%	100.7	59.9	60.8	1.5	2.4%	7.3%	1.0x	40.3x
Twitter, Inc.	28.74	-40%	21,806.48	18,557.76	2,865.08	674.01	23.5%	18.0%	6.5x	27.5x
Upwork Inc.	18.11	-23%	1,925.1	2,113.4	240.8	(9.4)	NM	0.0%	8.8x	NM
Zynga Inc.	3.93	-14%	3,387.2	2,966.9	891.8	69.2	7.8%	8.9%	3.3x	42.9x
Average									3.5x	21.4x

<sup>\*</sup>Note: Alphabet Inc. pricing represents (Nasdaq:GOOGL)



# Digital Media Public Company Valuation (2/2)

Internationally-based Digital Media an	d Internet											
		Stock Price	Chg % From	Equit	ty	Ent.	LTM	 	LTM Margin	LTM	LTM	Multiples
Company Name	Headquarters	12/31/18	52WK High	Valu	ie	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Baidu, Inc.	China	\$158.60	-44%	\$ 55,	,281.7	\$ 49,154.5	\$ 14,418.2	\$ 4,949.1	34.3%	22.8%	3.4x	9.9x
Bilibili Inc.	* China	14.59	-36%	4,	,063.1	3,576.1	539.7	(23.9)	NM	89.9%	6.6x	NM
CyberAgent, Inc.	Japan	38.69	-40%	4,	,868.9	4,514.6	3,696.6	343.1	9.3%	13.0%	1.2x	13.2x
DeNA Co., Ltd.	Japan	16.72	-27%	2,	,429.7	1,531.7	1,183.3	332.8	28.1%	-4.5%	1.3x	4.6x
G5 Entertainment AB (publ)	Sweden	14.12	-79%		126.9	115.9	164.9	16.9	10.2%	52.2%	0.7x	6.9x
Gree, Inc.	Japan	3.96	-44%		934.6	164.0	656.2	84.2	12.8%	3.3%	0.2x	1.9x
HolidayCheck Group AG	Germany	2.90	-36%		165.0	131.3	163.1	7.4	4.5%	17.7%	0.8x	17.8x
HUYA Inc.	* China	15.48	-70%	3,	,154.8	2,299.7	567.7	3.7	0.7%	118.7%	4.1x	NM
International Game Technology PLC	United Kingdom	14.63	-53%	2,	,987.5	10,557.5	4,910.8	1,496.9	30.5%	-0.1%	2.1x	7.1x
iQIYI, Inc.	China	14.87	-68%	10,	,760.9	9,576.1	3,316.3	1,111.2	33.5%	44.9%	2.9x	8.6x
mixi, Inc.	Japan	20.98	-56%	1,	,641.4	293.2	1,470.5	573.7	39.0%	-21.9%	0.2x	0.5x
Meitu, Inc.	* China	0.28	-83%	1,	,173.6	607.6	664.7	(59.0)	NM	38.7%	0.9x	NM
Ncsoft Corporation	South Korea	419.04	-9%	8,	,904.9	7,737.8	1,665.5	587.9	35.3%	22.4%	4.6x	13.2x
NAVER Corporation	South Korea	109.59	-37%	16,	,020.1	14,203.6	4,807.4	1,111.6	23.1%	18.6%	3.0x	12.8x
NetEase, Inc.	* China	235.37	-33%	30,	,910.8	27,136.2	9,014.5	1,274.8	14.1%	20.0%	3.0x	21.3x
NEXON Co., Ltd.	Japan	12.88	-31%	11,	,516.6	7,443.3	2,293.8	1,099.2	47.9%	15.4%	3.2x	6.8x
Opera Limited	Norway	5.56	-64%		611.9	399.3	162.8	43.6	26.8%	0.0%	2.5x	9.1x
Pacific Online Limited	China	0.13	-27%		143.0	92.1	147.6	19.3	13.1%	3.0%	0.6x	4.8x
Phoenix New Media Limited	* China	3.20	-57%		232.7	109.8	209.3	(8.7)	NM	-5.8%	0.5x	NM
Renren Inc.	* China	1.54	-91%		106.3	214.2	436.7	(111.4)	NM	435.9%	0.5x	NM
Sea Limited	* Singapore	11.32	-34%	3,	,792.5	3,702.8	668.3	(809.1)	NM	76.8%	5.5x	NM
Sogou Inc.	China	5.25	-66%	2,	,030.9	954.5	1,104.2	103.9	9.4%	37.6%	0.9x	9.2x
Spotify Technology S.A.	* Luxembourg	113.50	-43%	20,	,559.9	18,612.6	5,708.1	(227.7)	NM	0.0%	3.3x	NM
Tencent Music Entertainment Group	* China	13.22	-10%	21,	,620.7	19,948.6	2,500.3	530.8	21.2%	99.4%	8.0x	37.6x
Weibo Corporation	* China	58.43	-59%	13,	,012.7	12,299.2	1,614.1	598.4	37.1%	63.8%	7.6x	20.6x
Wemade Entertainment Co.,Ltd.	* South Korea	23.31	-58%		387.0	293.2	111.5	12.5	11.2%	20.5%	2.6x	23.5x
Yandex N.V.	Netherlands	27.35	-39%	8,	,872.3	8,207.1	1,781.9	434.3	24.4%	32.1%	4.6x	18.9x
YY Inc.	China	59.86	-58%	3,	,799.8	2,103.6	2,147.2	430.6	20.1%	41.1%	1.0x	4.9x
Average												

## E-commerce Public Company Valuation (1/2)

US-based e-commerce	Stock Price	Ch = 0/ F====	Facility.	Ent	LTDA		LTD4 B4evein	LTDA	LTDA	N. de de la c
Company Name	12/31/18	Chg % From 52WK High	Equity Value	Ent. Value	LTM Revenue	EBITDA	LTM Margin EBITDA	LTM Rev Growth	EV/Rev	Multiples EV/EBITDA
1-800-FLOWERS.COM, Inc.	\$12.23	-18%	\$ 784.9	\$ 858.3	\$ 1,164.1	\$ 71.1	6.1%	-1.8%	0.7x	12.1x
Alphabet Inc.	1,044.96	-19%	723,465.2	621,035.2	129,866.0	39,334.0	30.3%	24.2%	4.8x	15.8x
Amazon.com, Inc.	1,501.97	-27%	734,416.2	751,870.2	220,957.0	24,905.0	11.3%	37.1%	3.4x	30.2x
Apple Inc.	157.74	-32%	748,539.1	796,721.1	265,595.0	81,801.0	30.8%	15.9%	3.4x 3.0x	9.7x
Blucora, Inc.	26.64	-36%	1,277.9	1,472.1	557.0	105.4	18.9%			
Blue Apron Holdings, Inc.	1.02	-36% -76%	1,277.9	230.6	714.5	(89.5)	18.9% NM	-21.4%	2.6x	14.0x NM
Booking Holdings Inc.	1,722.42	-23%	79,799.0	81,377.1	14,117.5	5,627.5			0.3x	
	· · · · · · · · · · · · · · · · · · ·	-41%	· · · · · · · · · · · · · · · · · · ·	3,565.3	418.7	13.9	39.9%	15.5%	5.8x	14.5x
CarGurus, Inc.	33.73	-41% -55%	3,712.9	1,882.8	1,635.7		3.3%	45.9%	8.5x	NM
			1,304.4			(172.1)	NM	133.5%	1.2x	NM
CDW Corporation	81.05 28.42	-16% -13%	12,156.3	15,528.2 3,085.6	16,276.4 298.9	1,229.3	7.6%	11.7%	1.0x	12.6x
Chegg, Inc.			3,265.4			13.2	4.4%	22.2%	10.3x	NM
Copart, Inc.	47.78	-29%	11,181.3	11,260.6	1,847.9	724.6	39.2%	21.5%	6.1x	15.5x
GrubHub Inc.	76.81	-49%	6,966.8	6,951.9	924.6	187.4	20.3%	50.2%	7.5x	37.1x
eBay Inc.	28.07	-40%	27,026.6	31,436.6	10,216.0	2,985.0	29.2%	6.3%	3.1x	10.5x
Etsy, Inc.	47.57	-18%	5,730.3	5,426.0	539.9	85.9	15.9%	30.1%	10.0x	63.2x
EVINE Live Inc.	0.40	-77%	27.1	72.6	631.7	6.9	1.1%	-2.2%	0.1x	10.5x
Expedia Group, Inc.	112.65	-19%	16,782.0	18,691.0	10,982.8	1,282.8	11.7%	11.7%	1.7x	14.6x
FTD Companies, Inc.	1.48	-83%	41.8	274.6	1,044.8	26.5	2.5%	-3.8%	0.3x	10.4x
GrubHub Inc.	76.81	-49%	6,966.8	6,951.9	924.6	187.4	20.3%	50.2%	7.5x	37.1x
IAC/InterActiveCorp	183.04	-18%	15,286.4	16,202.2	4,109.4	714.0	17.4%	29.7%	3.9x	22.7x
Liberty TripAdvisor Holdings, Inc.	15.89	-23%	1,201.6	4,383.6	1,590.0	273.0	17.2%	0.2%	2.8x	16.1x
Liquidity Services, Inc.	6.17	-23%	204.1	125.6	224.5	(15.8)	NM	-16.9%	0.6x	NM
Match Group, Inc.	42.77	-30%	11,893.7	12,756.7	1,651.4	564.2	34.2%	32.5%	7.7x	22.6x
Overstock.com, Inc.	13.58	-85%	436.5	345.9	1,825.3	(171.1)	NM	0.6%	0.2x	NM
PetMed Express, Inc.	23.26	-60%	476.3	389.2	286.2	56.6	19.8%	9.1%	1.4x	6.9x
Qurate Retail, Inc.	\$19.52	-22%	8,741.7	15,687.7	13,038.0	1,844.0	14.1%	27.5%	1.2x	8.5x
Shutterfly, Inc.	40.26	-60%	1,352.9	2,365.2	1,605.6	174.6	10.9%	38.7%	1.5x	13.5x
Shutterstock, Inc.	36.01	-35%	1,261.7	1,055.3	613.0	47.7	7.8%	14.5%	1.7x	22.1x
Spark Networks SE	7.88	-49%	102.3	106.9	112.6	(3.1)	NM	20.7%	0.9x	NM
Stamps.com Inc.	155.64	-46%	2,817.40	2,820.16	549.17	218.52	39.8%	24.2%	5.1x	12.9x
Stitch Fix, Inc.	17.09	-67%	1,701.1	1,442.8	1,297.2	55.8	4.3%	25.1%	1.1x	25.8x
U.S. Auto Parts Network, Inc.	0.91	-66%	31.8	32.8	293.3	8.2	2.8%	-4.1%	0.1x	4.0x
Wayfair Inc.	90.08	-40%	8,138.1	8,150.1	6,204.2	(334.1)	NM	45.4%	1.3x	NM
Average									3.1x	14.8x
ive i age									2.1X	14.8



## E-commerce Public Company Valuation (2/2)

Internationally-based e-commerce											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM Multiples	
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
58.com Inc.	China	\$54.21	-40%	\$ 8,030.6	\$ 7,540.1	\$ 1,789.7	\$ 400.5	22.4%	30.8%	4.2x	18.8x
Alibaba Group Holding Limited	* China	137.07	-35%	352,534.4	356,969.8	45,280.6	12,184.2	26.9%	57.8%	7.9x	29.3x
Cango Inc.	China	7.94	-43%	1,199.8	751.0	157.5	38.8	24.6%	11.5%	4.8x	19.3x
Cnova N.V.	* France	4.12	-19%	1,422.9	1,730.3	2,619.8	11.2	0.4%	21.8%	0.7x	NM
Despegar.com, Corp.	Argentina	12.41	-66%	858.3	532.2	542.1	70.8	13.1%	10.4%	1.0x	7.5x
Farfetch Limited	* United Kingdom	17.71	-45%	5,186.5	4,143.0	526.2	(170.6)	NM	0.0%	7.9x	NM
JD.com, Inc.	* China	20.93	-59%	30,281.2	29,767.4	63,671.4	140.2	0.2%	31.9%	0.5x	NM
Jumei International Holding Limited	* China	1.83	-55%	274.6	(135.1)	769.8	(10.7)	NM	-14.4%	NM	12.6x
LightInTheBox Holding Co., Ltd.	* China	1.22	-65%	81.3	43.8	261.6	(38.8)	NM	-19.1%	0.2x	NM
MercadoLibre, Inc.	* Argentina	292.85	-30%	13,237.7	12,838.4	1,551.3	(2.7)	NM	39.2%	8.3x	NM
MOGU Inc.	* China	20.49	-20%	2,190.3	3,278.1	143.0	(55.3)	NM	0.0%	22.9x	NM
Netshoes (Cayman) Limited	* Brazil	1.49	-85%	46.3	110.2	466.7	(46.2)	NM	1.6%	0.2x	NM
PChome Online Inc.	* Taiwan	4.13	-33%	484.2	313.1	1,068.6	(66.7)	NM	17.6%	0.3x	NM
Pinduoduo Inc.	* China	22.44	-26%	24,858.7	21,587.3	1,258.6	(1,189.1)	NM	0.0%	17.2x	NM
Rakuten, Inc.	Japan	6.71	-31%	9,063.1	11,871.2	9,325.7	1,658.6	17.8%	17.7%	1.3x	7.2x
Secoo Holding Limited	China	9.07	-41%	455.7	463.1	728.9	25.5	3.5%	56.1%	0.6x	18.2x
Travelport Worldwide Limited	United Kingdom	15.62	-23%	2,049.6	4,118.6	2,536.0	415.4	16.4%	4.8%	1.6x	9.9x
trivago N.V.	* Germany	5.63	-44%	1,975.3	1,807.1	1,080.0	(50.6)	NM	-9.1%	1.7x	NM
Uxin Limited	* China	4.86	-54%	1,421.0	1,590.2	414.8	(395.4)	NM	78.2%	3.8x	NM
Vipshop Holdings Limited	China	5.46	-71%	3,619.8	3,526.1	12,020.9	494.0	4.1%	21.9%	0.3x	7.1x
X Financial	China	4.27	-79%	645.0	432.2	496.0	226.9	45.8%	0.0%	0.9x	1.9x



### **Marketing Technology**

- The Marketing Technology segment announced 86 transactions in December, of which 49 reported more than \$1.7 billion in value
- Transactions in the MRM/Workflow Management segment accounted for 22 percent of segment value up six times the 12 month average
- Select transactions:
  - Autodesk's \$275 million purchase of project bid management platform BuildingConnected
  - The sale of digital customer acquisition software Avoka Technologies to Temenos for \$245 million
  - Business intelligence platform Looker's \$103 million round of funding from Cross Creek Advisors, CapitalG, Kleiner Perkins, Caufield & Byers, Meritech Capital Partners, Redpoint Ventures, and Goldman Sachs
  - The acquisition of mobile identity platform Danal by Boku for \$101 million
  - The \$100 million investment sales enablement and content management platform Seismic received from Lightspeed Venture Partners, T. Rowe Price Associates, General Atlantic, JMI Equity, and Jackson Square Ventures

MARKI	TING TECHNOLO	GY TRANSACTIONS BY	SEGMENT		BUYER/INVESTOR BREAKDOWN							
	Tran	sactions	Reported	Value	St	rategic	E	Buyout	Venture/G	rowth Capital		
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM		
Analytics & Targeting	12	14%	160.1	10%	4	-	0	-	8	160.1		
MRM/Workflow Management	11	13%	375.9	22%	4	275.0	1	-	6	100.9		
Email/Messaging Software	9	10%	111.0	7%	6	\$56.0	0	-	3	\$55.0		
CRM	8	9%	64.2	4%	3	-	0	-	5	64.2		
Content Management	5	6%	133.5	8%	3	-	0	-	2	133.5		
Market Research	5	6%	68.5	4%	4	65.0	0	-	1	3.5		
Search & Discovery	5	6%	42.0	3%	1	-	0	-	4	42.0		
Other	31	36%	715.6	43%	16	384.8	0	-	15	305.8		
Total	86	100%	1,670.8	100%	41	780.8	1	0.0	44	890.0		

## Marketing Technology Public Company Valuation (1/2)

(\$ in Millions, except stock price data)

US-based Marketing Technology										
	Stock Price	Chg % From	Equity	Ent.	LTM	_	LTM Margin	LTM	LTM I	Viultiples
Company Name	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Adobe Inc.	\$226.24	-19%	\$ 110,435.33	\$ 111,331.17	\$ 9,030.01	\$ 3,160.06	35.0%	23.7%	12.3x	35.2x
Alteryx, Inc.	59.47	-12%	3,650.5	3,493.3	182.4	(12.4)	NM	54.6%	19.2x	NM
AppFolio, Inc.	59.22	-35%	2,028.3	1,982.7	177.6	24.3	13.7%	32.6%	11.2x	81.6x
Blackbaud, Inc.	62.90	-48%	2,976.6	3,376.5	844.6	137.0	16.2%	9.8%	4.0x	24.6x
Brightcove Inc.	7.04	-35%	256.8	230.1	164.1	(7.0)	NM	6.2%	1.4x	NM
Cardlytics, Inc.	10.83	-62%	231.9	230.9	142.1	(29.1)	NM	11.5%	1.6x	NM
ChannelAdvisor Corporation	11.35	-27%	310.0	262.5	130.5	(2.2)	NM	8.6%	2.0x	NM
Cision Ltd.	11.70	-36%	1,552.7	2,688.1	713.0	223.1	31.3%	16.7%	3.8x	12.0x
Eventbrite, Inc.	27.81	-31%	2,168.8	1,761.9	278.4	(12.6)	NM	0.0%	6.3x	NM
eBay Inc.	28.07	-40%	27,026.6	31,436.6	10,216.0	2,985.0	29.2%	6.3%	3.1x	10.5x
Elastic N.V.	71.48	-15%	5,073.2	4,751.7	211.5	(70.3)	NM	0.0%	22.5x	NM
Endurance International Group	6.65	-39%	956.6	2,700.6	1,157.1	319.9	27.6%	-1.5%	2.3x	8.4x
Five9, Inc.	43.72	-12%	2,569.5	2,496.7	240.7	10.8	4.5%	27.4%	10.4x	230.6x
GoDaddy Inc.	65.62	-23%	10,973.1	12,714.1	2,566.5	384.2	15.0%	21.3%	5.0x	33.1x
HubSpot, Inc.	125.73	-22%	4,932.7	4,684.9	475.5	(37.2)	NM	37.6%	9.9x	NM
IBM Corporation	113.67	-34%	103,302.6	136,018.6	80,373.0	16,954.0	21.1%	2.6%	1.7x	8.0x
LivePerson, Inc.	18.86	-31%	1,196.0	1,129.7	241.5	4.6	1.9%	11.0%	4.7x	247.8x
Marin Software Incorporated	5.31	-56%	30.8	19.5	60.5	(25.1)	NM	-24.6%	0.3x	NM
MicroStrategy Incorporated	127.75	-16%	1,465.0	765.8	502.8	24.5	4.9%	-0.9%	1.5x	31.3x
MINDBODY, Inc.	36.40	-20%	1,745.3	1,669.7	228.9	(19.0)	NM	33.8%	7.3x	NM
Nuance Communications, Inc.	13.23	-29%	3,804.7	5,538.5	2,051.7	362.9	17.7%	5.8%	2.7x	15.3x
Oracle Corporation	45.15	-16%	162,039.7	171,424.7	39,893.0	15,899.0	39.9%	2.8%	4.3x	10.8x
PayPal Holdings, Inc.	84.09	-10%	99,088.2	91,501.2	14,969.0	2,699.0	18.0%	21.4%	6.1x	33.9x
PROS Holdings, Inc.	31.40	-24%	1,166.5	1,106.7	190.8	(39.8)	NM	17.5%	5.8x	NM
PTC Inc.	82.90	-23%	9,838.2	10,195.7	1,241.8	134.8	10.9%	6.7%	8.2x	75.6x
salesforce.com, inc.	136.97	-15%	104,782.1	105,723.1	12,484.0	1,175.7	9.4%	25.2%	8.5x	89.9x
SendGrid, Inc.	43.17	-11%	2,044.4	1,880.4	137.2	6.6	4.8%	32.9%	13.7x	283.1x
SharpSpring, Inc.	12.63	-15%	108.5	105.6	17.3	(7.7)	NM	37.8%	6.1x	NM
SVMK Inc.	12.27	-39%	1,534.7	1,686.7	243.4	(86.1)	NM	0.0%	6.9x	NM
Square, Inc.	56.09	-45%	23,193.1	23,046.3	2,981.7	(0.5)	NM	45.4%	7.7x	NM
Tableau Software, Inc.	120.00	-9%	10,028.1	9,071.4	1,068.4	(91.7)	NM	21.6%	8.5x	NM
Teradata Corporation	38.36	-13%	4,534.2	4,263.2	2,202.0	154.0	7.0%	2.1%	1.9x	27.7x
Verint Systems Inc.	42.31	-19%	2,761.6	3,149.6	1,218.2	164.6	13.5%	9.5%	2.6x	19.1x
Veritone, Inc.	3.80	-85%	73.4	8.8	19.6	(54.3)	NM	46.1%	0.4x	NM
Webis Holdings plc	0.02	-78%	9.3	(3.1)	54.5	0.2	0.3%	-5.2%	NM	NM
Zendesk, Inc.	58.37	-20%	6,248.0	6,249.3	548.7	(106.4)	NM	38.3%	11.4x	NM

15 | M&A and Investment Summary December 2018

Adjusted Weighted Average

PetskyPrunie INVESTMENT BANKER

# Marketing Technology Public Company Valuation (2/2)

Internationally-based Marketing Techno	logy												
		Stock Price	Chg % From	Equity		Ent.		LTM		LTM Margin	LTM	LTM	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value		Value	R	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Baozun Inc.	China	29.21	-57%	\$ 1,66	.27	\$ 1,649.83	\$	692.46	\$ 52.89	7.6%	23.4%	2.4x	31.2x
Bitauto Holdings Limited	China	24.77	-37%	1,7	9.1	5,723.0		1,477.7	30.9	2.1%	29.6%	3.9x	185.2x
ChinaCache International Holdings Ltd.	China	1.13	-76%	31	.03	80.43		130.12	(31.96)	NM	-7.8%	0.6x	NM
MercadoLibre, Inc.	Argentina	292.85	-30%	13,2	7.7	12,838.4		1,551.3	(2.7)	NM	39.2%	8.3x	NM
Open Text Corporation	Canada	32.60	-19%	8,7	1.3	10,553.6		2,841.7	829.6	29.2%	16.5%	3.7x	12.7x
SharpSpring, Inc.	United States	12.63	-15%	1	8.5	105.6		17.3	(7.7)	NM	37.8%	6.1x	NM
Shopify Inc.	Canada	138.45	-22%	15,2	5.7	13,697.4		952.2	(66.4)	NM	63.9%	14.4x	NM
The Sage Group plc	United Kingdom	7.66	-26%	8,3	1.2	9,148.3		2,408.2	639.2	26.5%	7.6%	3.8x	14.3x
United Internet AG	Germany	43.76	-36%	8,7	5.0	11,257.9		5,825.4	962.9	16.5%	25.7%	1.9x	11.7x
Weborama SA	France	7.90	-54%		2.2	35.7		43.8	2.5	5.7%	13.3%	0.8x	14.2x
Wix.com Ltd.	Israel	90.34	-26%	4,3	7.9	3,986.2		558.1	(25.7)	NM	42.6%	7.1x	NM

### **Digital Advertising**

- A total of 14 transactions were announced in the Digital Advertising segment, of which seven were valued at \$262 million
- The Vertical search segment accounted for over one-third of deal activity and 62 percent of segment value
- Select transactions:
  - The round of funding vacation rental search engine HomeToGo raised from Insight Venture Partners, Action Capital Partners, DN Capital, Global Founders Capital, Lakestar, and Princeville Global to purchase Tripping.com
  - The \$63 million investment salon booking and review platform Vagaro received from FTV Capital
  - Better Collective's \$34.1 million acquisition of sports betting and casino game marketing company Ribacka Group
  - The acquisition of Playwire.com, an online video hosting platform, by FreakOut Holdings

	DIGITAL ADVERTISING T	RANSACTIONS BY SEGI	MENT				BUYER/INVE	STOR BREAKDOWN		
	Tran	sactions	Reported	Value	Si	trategic		Buyout	Venture/G	rowth Capital
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Vertical Search	5	36%	\$163.1	62%	1	-	0	-	4	163.1
Affiliate/CPA Network	2	14%	34.1 13%		2	34.1	0	-	0	-
Digital Promotion/Coupon	2	14%	- 0%		2	-	0	-	0	-
Digital Video	1	7%	- 0%		1 -		0	-	0	-
Game Advertising	1	7%	2.6	1%	0	-	0	-	1	2.6
Local Search	1	7%	63.0	24%	0	-	0	-	1	63.0
Other*	2	14%	0.0 0%		2	0.0	0	0.0	0	0.0
Total	14	100%	262.8	100%	8	34.1	0	0.0	6	228.7

# Digital Advertising Public Company Valuation (1/2)

(\$ in Millions, except stock price da
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US-based Digital Advertising										
	Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM	Multiples
Company Name	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Alliance Data Systems Corporation	\$150.08	-46%	\$ 8,175.4	\$ 29,202.1	\$ 7,841.5	\$ 1,785.8	22.8%	5.4%	3.7x	16.4x
Alphabet Inc.	1,044.96	-19%	723,465.2	621,035.2	129,866.0	39,334.0	30.3%	24.2%	4.8x	15.8x
ANGI Homeservices Inc.	* 16.07	-33%	8,053.9	8,033.8	1,076.5	72.1	6.7%	69.0%	7.5x	111.4x
AutoWeb, Inc.	3.05	-69%	39.5	24.4	126.7	(10.2)	NM	-15.1%	0.2x	NM
Care.com, Inc.	19.31	-16%	614.0	546.6	186.7	13.2	7.1%	7.7%	2.9x	41.4x
DHI Group, Inc.	1.52	-53%	80.4	92.3	174.5	23.6	13.6%	-17.7%	0.5x	3.9x
EverQuote, Inc.	4.18	-81%	104.6	65.9	155.9	(6.6)	NM	0.0%	0.4x	NM
Facebook, Inc.	131.09	-40%	376,724.8	335,588.8	51,896.0	28,388.0	54.7%	42.2%	6.5x	11.8x
Fluent, Inc.	3.60	-48%	271.0	313.4	244.6	20.3	8.3%	16.8%	1.3x	15.4x
Groupon, Inc.	3.20	-43%	1,826.5	1,487.0	2,710.0	141.2	5.2%	-5.8%	0.5x	10.5x
Inuvo, Inc.	1.07	-31%	34.7	35.7	80.1	(1.9)	NM	6.1%	0.4x	NM
LendingTree, Inc.	219.57	-46%	2,816.6	2,799.7	723.1	91.8	12.7%	29.7%	3.9x	30.5x
QuinStreet, Inc.	16.23	-9%	800.0	729.5	429.8	24.5	5.7%	37.0%	1.7x	29.8x
Quotient Technology Inc.	10.68	-33%	1,016.6	841.2	373.0	18.9	5.1%	22.5%	2.3x	44.4x
Redfin Corporation	14.40	-50%	1,289.2	958.0	458.5	(25.8)	NM	34.4%	2.1x	NM
RhythmOne plc	2.42	-35%	190.4	178.2	316.0	15.2	4.8%	60.6%	0.6x	11.7x
Snap Inc.	5.51	-74%	7,135.0	5,720.6	1,076.3	(1,273.8)	NM	52.7%	5.3x	NM
Telaria, Inc.	2.73	-48%	116.1	45.5	50.5	(12.3)	NM	29.0%	0.9x	NM
The Rubicon Project, Inc.	3.73	-24%	188.5	91.6	114.7	(53.2)	NM	-41.7%	0.8x	NM
The Trade Desk, Inc.	* 116.06	-28%	5,018.7	4,852.3	419.5	95.5	22.8%	50.9%	11.6x	50.8x
TiVo Corporation	9.41	-41%	1,165.66	1,843.88	741.64	170.76	23.0%	-14.2%	2.5x	10.8x
Travelzoo	9.83	-54%	119.0	103.1	111.3	8.1	7.3%	4.6%	0.9x	12.8x
TripAdvisor, Inc.	53.94	-22%	7,425.7	6,762.7	1,590.0	216.0	13.6%	2.5%	4.3x	31.3x
TrueCar, Inc.	9.06	-38%	942.3	747.5	345.6	(19.6)	NM	10.0%	2.2x	NM
Twitter, Inc.	28.74	-40%	21,806.5	18,557.8	2,865.1	674.0	23.5%	18.0%	6.5x	27.5x
Yelp Inc.	34.99	-33%	2,907.1	2,069.6	914.4	42.8	4.7%	10.7%	2.3x	48.4x
Yext, Inc.	14.85	NA	1,497.8	1,390.8	213.0	(75.1)	NM	34.9%	6.5x	NM
Zillow Group, Inc.	* 31.43	-52%	6,408.9	5,480.9	1,250.5	64.0	5.1%	22.4%	4.4x	85.6x
Average									2.7x	18.7x



# Digital Advertising Public Company Valuation (2/2)

Internationally-based Digital Advertising											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM Multiples	
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Cliq Digital AG	Germany	\$1.95	-83%	\$ 12.1	\$ 21.8	\$ 77.2	\$ 5.3	6.9%	-4.1%	0.3x	4.1x
Criteo S.A.	France	22.72	-38%	1,530.5	1,096.4	2,304.2	250.4	10.9%	5.2%	0.5x	4.4x
iClick Interactive Asia Group Limited	Hong Kong	3.37	-67%	181.3	172.1	160.3	(21.4)	NM	44.5%	1.1x	NM
MakeMyTrip Limited	India	24.33	-42%	2,481.2	2,149.9	571.3	(156.8)	NM	-2.9%	3.8x	NM
Matomy Media Group Ltd.	Israel	0.07	-93%	6.9	32.0	153.0	7.0	4.6%	-43.1%	0.2x	4.6x
Metaps Inc.	* Japan	13.02	-62%	176.2	142.9	190.7	0.6	0.3%	55.8%	0.7x	240.0x
Pacific Online Limited	China	0.13	-27%	143.0	92.1	147.6	19.3	13.1%	3.0%	0.6x	4.8x
Perion Network Ltd.	Israel	2.60	-36%	67.2	66.0	258.2	20.7	8.0%	-8.2%	0.3x	3.2x
Rightmove plc	* United Kingdom	5.51	-19%	4,900.7	4,882.2	336.3	251.4	74.7%	10.0%	14.5x	19.4x
Septeni Holdings Co., Ltd.	Japan	1.53	-65%	193.5	58.1	134.6	10.9	8.1%	3.9%	0.4x	5.3x
Taptica International Ltd	Israel	2.04	-69%	139.6	98.9	289.3	38.2	13.2%	107.0%	0.3x	2.6x
Tencent Holdings Limited	China	40.10	-34%	379,116.06	387,513.78	42,829.27	16,048.42	37.5%	36.7%	9.0x	24.1x
TradeDoubler AB (publ)	Sweden	0.36	-41%	16.05	23.61	130.28	1.65	1.3%	-5.4%	0.2x	14.3x
XLMedia PLC	Jersey	0.95	-66%	208.8	168.9	128.8	39.4	30.6%	7.0%	1.3x	4.3x
Yandex N.V.	Netherlands	27.35	-39%	8,872.3	8,207.1	1,781.9	434.3	24.4%	32.1%	4.6x	18.9x

### **Agency & Marketing Services**

- With 44 transactions, activity in the Agency & Marketing Services segment in December was up eight percent compared with the average monthly activity levels of the past twelve months. Six of these transactions reported value of \$355.4 million
- Digital Agency was the most active subsegment and accounted for more than one-third segment activity with 16 deals announced
- Select transactions:
  - Dentsu's acquisition of data-driven marketing, commerce and collaboration solution company DEG (A Petsky Prunier-led transaction)
  - S4 Capital's \$150 million acquisition of market-leading programmatic solutions provider MightyHive (*A Petsky Prunier-led transaction*)
  - The majority stake Dentsu took in digital content agency Videobeat
  - The sale of media planning and measuring service Adaptly to Accenture

AGENCY	& MARKETING SE	RVICES TRANSACTIONS	BY SEGMENT				BUYER/INVE	STOR BREAKDOWN		
	Tran	sactions	Reported	l Value	St	rategic	1	Buyout	Venture/G	rowth Capital
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Digital Agency	16	36%	\$351.1	99%	14	\$187.3	1	\$160.0	1	\$3.8
DM Agency	4	9%	-	0%	3	-	1	-	0	-
Healthcare Agency	3	7%	-	0%	1	-	2	-	0	-
Product/Price Consulting	3	7%	-	0%	3	-	0	-	0	-
<b>Branded Communications</b>	2	5%	-	0%	2	-	0	-	0	-
B-to-B Agency	2	5%	-	0%	1	-	1	-	0	-
Design Agency	2	5%	\$4.3	1%	2	4.3	0	-	0	-
Experiential Marketing	2	5%	-	0%	2	-	0	-	0	-
Other	10	23%	0	0%	10	0.0	0	0.0	0	0.0
Total	44	100%	355.4	100%	38	191.6	5	160.0	1	3.8

## Agency Public Company Valuation

		Stock Price	Chg % From	Equity	Ent.		LTM	LTM Margin	LTM	LTM	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Cello Health plc	United Kingdom	\$1.41	-20%	\$ 148.1	\$ 155.0	\$ 223.2	\$ 16.5	7.4%	3.7%	0.7x	9.4)
Dentsu Inc.	Japan	44.71	-16%	12,602.7	10,849.8	8,784.1	1,562.8	17.8%	NM	1.2x	6.9
Enero Group Limited	Australia	0.80	-11%	67.7	45.4	148.1	10.9	7.4%	10.7%	0.3x	4.2x
Hakuhodo DY Holdings Inc	Japan	14.36	-25%	5,355.3	5,143.9	12,225.9	665.1	5.4%	7.3%	0.4x	7.7>
Huntsworth plc	* United Kingdom	1.38	-24%	475.5	525.9	270.4	38.0	14.0%	9.1%	1.9x	13.8x
M&C Saatchi plc	United Kingdom	3.68	-32%	320.1	323.1	456.3	30.1	6.6%	40.5%	0.7x	10.7x
MDC Partners Inc.	United States	2.61	-74%	150.1	1,326.6	1,485.3	172.6	11.6%	-1.1%	0.9x	7.7x
Next Fifteen Communications Group plc	* United Kingdom	6.23	-19%	519.3	549.9	283.6	47.2	16.7%	8.7%	1.9x	11.6x
Omnicom Group Inc.	United States	73.24	-12%	16,413.5	20,052.2	15,380.0	2,352.0	15.3%	0.3%	1.3x	8.5x
OPT Holding, Inc.	Japan	13.15	-60%	301.2	258.2	761.3	23.8	3.1%	11.2%	0.3x	10.8x
Publicis Groupe S.A.	France	57.34	-20%	13,224.4	16,761.2	10,843.5	1,996.3	18.4%	-8.0%	1.5x	8.4x
The Interpublic Group of Companies, Inc.	United States	20.63	-21%	7,929.2	9,605.1	8,157.9	1,190.7	14.6%	7.2%	1.2x	8.1x
UDG Healthcare plc	Ireland	7.61	-37%	1,892.4	1,952.3	1,315.2	171.3	13.0%	7.8%	1.5x	11.4)
WPP plc	United Kingdom	10.79	-42%	13,615.1	20,047.5	19,934.7	3,035.7	15.2%	-2.5%	1.0x	6.6)

## Marketing Services Public Company Valuation

		Stock Price	Chg % From	Equity	Ent.	Į.	LTM	LTM Margin	LTM	LTM	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Affinion Group Holdings, Inc.	United States	9.00	-38%	82.4	1,515.0	949.4	220.3	23.2%	21.5%	1.6x	6.9x
Aimia Inc.	Canada	2.70	-21%	411.9	368.3	1,287.5	150.7	11.7%	30.6%	0.3x	2.4x
Alliance Data Systems Corporation	United States	150.08	-46%	8,175.4	25,072.1	7,841.5	1,785.8	22.8%	5.4%	3.2x	14.0x
Fluent, Inc.	United States	3.60	-48%	271.0	313.4	244.6	20.3	8.3%	16.8%	1.3x	15.4x
CSG Systems International, Inc.	United States	31.77	-35%	1,058.9	1,220.2	833.0	154.8	18.6%	6.9%	1.5x	7.9x
Deluxe Corporation	United States	38.44	-51%	1,780.0	2,613.1	1,968.2	471.5	24.0%	0.9%	1.3x	5.5x
Fair Isaac Corporation	* United States	187.00	-22%	5,414.6	6,088.5	1,032.5	234.2	22.7%	10.8%	5.9x	26.0x
Harte Hanks, Inc.	United States	2.42	-80%	15.1	14.5	314.3	(8.8)	NM	-20.3%	0.0x	NM
High Co. SA	France	5.05	-26%	105.0	48.8	190.0	18.6	9.8%	8.0%	0.3x	2.6x
Multiplus S.A.	Brazil	6.50	-33%	1,052.6	700.8	535.2	94.4	17.6%	88.8%	1.3x	7.4x
Pitney Bowes Inc.	United States	5.91	-60%	1,108.8	3,563.7	3,918.3	652.8	16.7%	26.6%	0.9x	5.5x
Points International Ltd.	Canada	9.98	-45%	141.6	88.9	368.1	12.5	3.4%	7.5%	0.2x	7.1x
Viad Corp	United States	50.09	-20%	1,018.9	1,184.4	1,276.6	124.4	9.7%	-0.7%	0.9x	9.5x
Adjusted Weighted Average										2.2x	10.8x

### **Traditional Media**

- Of the 16 transactions recorded in the Traditional Media segment in December, three announced \$568 million in reported value
- Entertainment Media continues to drive overall segment activity, accounting for 44 percent of segment deals announced
- Select transactions from the segment included:
  - Lamar Advertising's purchase of outdoor advertising company Fairway Billboard for \$418.5 million
  - The \$145 million round of funding child entertainment company Moonbug raised from The Raine Group, Felix Capital, and Fertitta Capital
  - The sale of Esports company Simplicity Esports to SMAAASH Entertainment
  - Apple's acquisition of music and writing production company Plantoon
  - The acquisition of trade show and event agency CloserStill Media by Providence Equity Partners

TRAI	DTIONAL MEDIA	TRANSACTIONS BY SEC	GMENT				BUYER/INVE	STOR BREAKDOWN		
	Tran	sactions	Reported	Value	St	rategic	E	Buyout	Venture/G	irowth Capital
•	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Entertainment Media	7	44%	\$145.0	26%	6	-	0	-	1	\$145.0
B-to-B Media	2	13%	-	0%	1	-	0	-	1	-
Digital Place-Based Media	2	13%	4.5	4.5 1%		4.5	0	-	0	-
Traditional Outdoor	2	13%	418.5	74%	2	418.5	0	-	0	-
Consumer Book Publishing	1	6%	-	0%	1	-	0	-	0	-
Consumer Magazine Publishing	1	6%	-	0%	1	-	0	-	0	-
Other	1	6%	0.0 0%		1 0.0		0	0.0	0	0.0
Total	16	100%	568.0	100%	14	423.0	0	0.0	2	145.0

## Traditional Media Public Company Valuation (1/3)

#### (\$ in Millions, except stock price data)

Large Cap Diversified Media													
		Stock Price	Chg % From	Equity		E	nt.	LTM		LTM Margin	LTM	LTM Multiples	
Company Name	Headquarters	12/31/18	52WK High	Value		Va	alue	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
CBS Corporation	United States	\$43.72	-29%	\$ 16,36	55.3	\$ 2	6,036.3	\$ 14,411.0	\$ 3,138.0	21.8%	8.4%	1.8x	8.3x
Discovery, Inc.	United States	24.74	-29%	17,04	1.7	3	6,069.7	9,608.0	3,216.6	33.5%	43.8%	3.8x	11.2x
Twenty-First Century Fox, Inc.	* United States	48.12	-4%	89,01	4.8	10	2,959.8	30,575.0	6,995.0	22.9%	5.4%	3.4x	14.7x
Viacom Inc.	United States	25.70	-28%	10,45	8.0	1	9,287.0	12,943.0	3,008.0	23.2%	-2.4%	1.5x	6.4x
The Walt Disney Company	United States	109.65	-9%	163,23	32.8	18	35,138.8	59,434.0	17,848.0	30.0%	7.8%	3.1x	10.4x
Adjusted Weighted Average												3.1x	10.1x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (4.7x) and EBITDA multiples that are 1.0 standard deviations above the mean (13.3x)

#### (\$ in Millions, except stock price data)

B-to-B Media													
		Stock Price	Chg % From	E	quity	Ent.		LTM		LTM Margin	LTM	LTM Multiples	
Company Name	Headquarters	12/31/18	52WK High	١	Value	Value	F	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Ascential plc	United Kingdom	\$4.80	-19%	\$	1,923.3	\$ 2,286.7	\$	527.3	\$ 138.9	26.4%	38.5%	4.3x	16.5x
Centaur Media Plc	United Kingdom	\$0.57	-19%		83.0	80.7		92.8	6.9	7.4%	16.2%	0.9x	11.8x
Emerald Expositions Events, Inc.	United States	\$12.34	-46%		903.3	1,420.7		355.2	162.1	45.6%	4.3%	4.0x	8.8x
Euromoney Institutional Investor PLC	United Kingdom	\$14.71	-20%		1,579.8	1,480.0		509.1	255.7	50.2%	0.9%	2.9x	5.8x
Informa plc	* United Kingdom	8.03	-27%		10,048.6	13,566.2		2,374.3	749.2	31.6%	11.6%	5.7x	18.1x
MCH Group AG	Switzerland	20.28	-71%		121.8	285.3		540.6	58.0	10.7%	34.4%	0.5x	4.9x
ITE Group plc	* United Kingdom	0.81	-65%		598.2	734.0		229.2	40.9	17.9%	15.1%	3.2x	17.9x
Tarsus Group plc	Ireland	3.43	-19%		419.7	547.0		149.8	50.2	33.5%	39.8%	3.7x	10.9x
TechTarget, Inc.	United States	12.21	-65%		341.9	334.2		119.8	22.3	18.6%	14.2%	2.8x	15.0x
Adjusted Weighted Average												4.9x	11.2x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (6.4x) and EBITDA multiples that are 1.0 standard deviations above the mean (17.2x)

		Stock Price	Chg % From	Equity	Ent	nt.	LTM		LTM Margin	LTM	LTM I	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Valu	lue	Revenue	 EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Beasley Broadcast Group, Inc.	United States	\$3.75	-73%	\$ 103.1	\$	337.0	\$ 240.4	\$ 40.6	16.9%	5.8%	1.4x	8.3x
<b>Emmis Communications Corporation</b>	United States	3.19	-45%	41.2		150.4	125.5	11.7	9.3%	-31.3%	1.2x	12.9x
Entercom Communications Corp.	United States	5.71	-51%	813.8	2	2,539.1	1,297.8	226.9	17.5%	175.6%	2.0x	11.2x
Pandora Media, Inc.	United States	8.09	-20%	2,195.6	2	2,576.5	1,517.0	(252.5)	NM	3.6%	1.7x	NM
Salem Media Group, Inc.	United States	2.09	-67%	54.7		305.1	262.8	41.3	15.7%	-1.7%	1.2x	7.4x
Sirius XM Holdings Inc.	* United States	5.71	-26%	24,991.8	31	1,512.3	5,678.7	2,070.5	36.5%	6.7%	5.5x	15.2x
Townsquare Media, Inc.	United States	4.08	-58%	77.3		585.4	514.9	100.5	19.5%	19.0%	1.1x	5.8x
Urban One, Inc.	United States	1.61	-33%	73.2		979.2	434.6	126.9	29.2%	-2.2%	2.3x	7.7x
Adjusted Weighted Average											1.7x	10.2x

<sup>\*</sup>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 (13.2x)



## Traditional Media Public Company Valuation (2/3)

(\$ in Millions, except stock price data)

		Stock Price	Chg % From	Eq	quity	Ent.		LTM		LTM Margin	LTM	LTM	Multiples
Company Name	Headquarters	12/31/18	52WK High	V	'alue	Value		Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Altice Europe N.V.	Netherlands	\$1.95	-84%	\$	2,315.0	\$ 43,847	6	\$ 26,480.8	\$ 10,008.9	37.8%	30.8%	1.7x	4.4x
AMC Networks Inc.	United States	\$54.88	-20%		3,102.3	5,950	8	2,926.0	916.4	31.3%	4.2%	2.0x	6.5x
CVC Limited	Australia	1.81	-11%		216.5	190	7	48.1	25.7	53.5%	38.3%	4.0x	7.4x
CBS Corporation	United States	43.72	-29%	1	16,365.3	26,036	3	14,411.0	3,138.0	21.8%	8.4%	1.8x	8.3x
Charter Communications, Inc.	United States	284.97	-28%	(	65,234.7	145,219	7	43,005.0	15,963.0	37.1%	4.2%	3.4x	9.1x
Comcast Corporation	United States	34.05	-23%	15	54,910.6	219,317	6	88,233.0	28,847.0	32.7%	5.1%	2.5x	7.6x
Discovery, Inc.	* United States	24.74	-29%	1	17,041.7	36,069	7	9,608.0	3,216.6	33.5%	43.8%	3.8x	11.2x
DISH Network Corporation	United States	24.97	-50%	1	11,677.9	25,408	4	13,798.4	2,811.0	20.4%	-5.9%	1.8x	9.0x
Entravision Communications Corporation	United States	2.91	-61%		258.6	318	0	289.2	50.2	17.4%	-45.7%	1.1x	6.3x
Gray Television, Inc.	United States	14.74	-27%		1,284.2	2,533	5	989.5	372.6	37.7%	11.6%	2.6x	6.8x
Grupo Televisa, S.A.B.	Mexico	2.51	-39%		7,305.6	12,397	2	5,415.0	2,016.5	37.2%	6.7%	2.3x	6.1x
Liberty Global plc	United Kingdom	21.34	-46%	1	15,705.9	44,963	8	15,772.9	7,137.7	45.3%	46.2%	2.9x	6.3x
Nexstar Media Group, Inc.	United States	78.64	-12%		3,633.2	7,686	7	2,622.3	960.8	36.6%	25.6%	2.9x	8.0x
Stolt-Nielsen Limited	United Kingdom	11.77	-30%		715.4	3,097	1	2,106.2	453.7	21.5%	7.8%	1.5x	6.8x
Sinclair Broadcast Group, Inc.	United States	26.34	-34%		2,562.1	5,403	4	2,972.2	813.5	27.4%	9.2%	1.8x	6.6x
TEGNA Inc.	United States	10.87	-30%		2,340.3	5,306	2	2,055.5	680.5	33.1%	4.9%	2.6x	7.8x
The E.W. Scripps Company	* United States	15.73	-15%		1,269.0	1,828	4	1,089.9	140.9	12.9%	33.9%	1.7x	13.0x
Adjusted Weighted Average												2.7x	7.9x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (4.0x) and EBITDA multiples that are 1.0 standard deviations above the mean (9.8x)

		Stock Price	Chg % From	Equity	Ent.		LTM		LTM Margin	LTM	LTM I	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	F	Revenue	 EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Cineplex Inc.	Canada	\$18.64	-35%	\$ 1,180.8	\$ 1,611.4	\$	1,247.8	\$ 195.0	15.6%	6.5%	1.3x	8.3x
Eros International Plc	United States	8.29	-45%	586.1	931.1		260.8	56.7	21.7%	11.4%	3.6x	16.4x
Lions Gate Entertainment Corp.	United States	16.10	-56%	3,297.7	5,703.6		4,016.6	475.6	11.8%	1.6%	1.4x	12.0x
Live Nation Entertainment, Inc.	United States	49.25	-15%	10,320.1	11,775.6		11,156.6	697.4	6.3%	21.7%	1.1x	16.9x
Twenty-First Century Fox, Inc.	United States	48.12	-4%	89,014.8	102,959.8		30,575.0	6,995.0	22.9%	5.4%	3.4x	14.7x
Liberty Global plc	United Kingdom	21.34	-46%	15,705.9	44,963.8		15,772.9	7,137.7	45.3%	46.2%	2.9x	6.3x
Village Roadshow Limited	Australia	1.91	-34%	371.1	690.0		711.2	40.3	5.7%	-5.0%	1.0x	17.1x
World Wrestling Entertainment, Inc.	* United States	74.72	-24%	5,830.0	5,728.3		869.3	120.6	13.9%	10.9%	6.6x	47.5x
Adjusted Weighted Average											3.2x	13.7x

<sup>\*</sup>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 (32.0x)



## Traditional Media Public Company Valuation (3/3)

#### (\$ in Millions, except stock price data)

Out-of-Home Media											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
APG SGA SA	Switzerland	335.38	-29%	1,004.3	983.4	303.4	70.8	23.3%	-3.6%	3.2x	13.9x
Clear Channel Outdoor Holdings, Inc.	United States	5.19	-19%	1,877.7	7,114.6	2,705.1	587.1	21.7%	4.7%	2.6x	12.1x
Clear Media Limited	Hong Kong	0.78	-28%	422.6	351.8	272.1	112.7	41.4%	11.1%	1.3x	3.1x
JCDecaux SA	France	28.07	-33%	5,973.0	6,612.9	3,543.1	576.1	16.3%	0.9%	1.9x	11.5x
Lamar Advertising Company (REIT)	United States	69.18	-14%	6,883.8	9,419.1	1,597.8	680.3	42.6%	4.5%	5.9x	13.8x
National CineMedia, Inc.	United States	6.48	-41%	498.5	1,641.3	444.7	195.4	43.9%	3.9%	3.7x	8.4x
NTN Buzztime, Inc.	United States	1.95	-77%	5.6	6.8	22.7	2.0	8.7%	3.4%	0.3x	3.4x
Outfront Media Inc.	United States	18.12	-22%	2,526.9	4,846.0	1,555.1	398.6	25.6%	2.5%	3.1x	12.2x
Stingray Group Inc.	Canada	4.95	-40%	364.4	404.8	104.6	28.8	27.6%	19.3%	3.9x	14.0x
TOM Group Limited	* Hong Kong	0.24	-20%	964.7	1,326.9	121.8	14.4	11.8%	-2.5%	10.9x	92.0x
Adjusted Weighted Average										3.7x	12.4x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (8.6x) and EBITDA multiples that are 1.0 standard deviations above the mean (35.6x)

Publishing											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM I	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
A.H. Belo Corporation	United States	\$3.37	-42%	\$ 72.9	\$ 14.5	\$ 213.8	\$ 7.5	3.5%	-14.7%	0.1x	1.9x
Daily Mail and General Trust plc	United Kingdom	7.33	-26%	2,596.5	2,297.9	1,860.8	198.7	10.7%	-8.8%	1.2x	11.6x
Emmis Communications Corporation	United States	3.19	-45%	41.2	150.4	125.5	11.7	9.3%	-31.3%	1.2x	12.9x
Gannett Co., Inc.	United States	8.53	-30%	964.8	1,194.3	3,019.7	301.3	10.0%	-4.4%	0.4x	4.0x
Glacier Media Inc.	* Canada	0.44	-34%	48.4	91.4	145.8	6.5	4.5%	-1.5%	0.6x	14.1x
John Wiley & Sons, Inc.	United States	46.97	-35%	2,688.3	3,106.7	1,792.5	317.9	17.7%	2.3%	1.7x	9.8x
Meredith Corporation	United States	51.94	-25%	2,380.2	5,700.5	2,611.3	490.6	18.8%	53.0%	2.2x	11.6x
News Corporation	United States	11.35	-34%	6,680.5	7,799.5	9,490.0	1,017.0	10.7%	2.4%	0.8x	7.7x
Pearson plc	United Kingdom	11.94	-6%	9,270.1	10,361.1	5,714.8	749.5	13.1%	-8.5%	1.8x	13.8x
Scholastic Corporation	United States	40.26	-16%	1,418.5	1,073.9	1,664.0	114.2	6.9%	2.5%	0.6x	9.4x
The E.W. Scripps Company	United States	15.73	-15%	1,269.0	1,828.4	1,089.9	140.9	12.9%	33.9%	1.7x	13.0x
The McClatchy Company	United States	7.65	-29%	59.7	800.1	838.9	89.2	10.6%	-8.9%	1.0x	9.0x
The New York Times Company	United States	22.29	-22%	3,676.7	3,375.2	1,709.3	248.7	14.6%	6.8%	2.0x	13.6x
Adjusted Weighted Average										1.5x	11.2x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (2.5x) and EBITDA multiples that are 1.0 standard deviations above the mean (14.0x)



### **Software**

- Within the Software segment, Venture/Growth Capital transactions accounted for nearly two-thirds of monthly activity in December with 73 deals announced, 15 of which worth \$8.5 billion in value
- Financial Software was the segment with the highest value, with 44 deals announced, 28 of which reporting \$5.6 billion
- Select transactions:
  - IBM's sale of eight of its software products to HCL for \$1.8 billion
  - 3M's purchase of clinical documentation technology M\*Modal for \$1 billion
  - The \$425 million sale of manufacturing ERP software solution IQMS to Dassault Systems
  - ResMed's acquisition of digital therapeutics company Propeller Health for \$255 million

	SOFTWARE TR	ANSACTIONS BY SEG	MENT				BUYER/INVI	ESTOR BREAKDOWN		
	Tran	sactions	Reported	Value	S	trategic		Buyout	Venture/G	rowth Capital
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
Financial	44	23%	\$5,609.8	40%	18	\$4,704.0	2	-	24	\$905.8
ERP	30	16%	2,322.1	17%	13	1,945.8	0	-	17	376.3
Security	15	8%	2,773.6	20%	6	437.0	1	1,800.0	8	536.6
HR	22	12%	1,576.2	11%	9	1,426.2	0	-	13	150.0
Healthcare	4	2%	77.0	1%	1	-	0	-	3	77.0
Engineering	11	6%	105.7	1%	6	5.0	1	-	4	100.7
Collaboration	17	9%	719.4	5%	2	-	2	-	13	719.4
Other	48	25%	763.4	5%	18	23	2	0	28	740.4
Total	191	100%	13,947.2	100%	73	8,541.0	8	1,800.0	110	3,606.2

## Software Public Company Valuation (1/3)

(\$	in	Mill	ions,	except	stock	pri	ce d	ata)	
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Financial & Credit/Risk Management Software											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM I	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Alfa Financial Software Holdings PLC	United Kingdom	1.47	-79%	\$ 442.0	\$ 395.7	\$ 99.7	\$ 34.3	34.4%	-15.8%	4.0x	11.5x
Anaplan, Inc.	United States	26.54	-11%	3,316.5	2,946.3	217.7	(92.4)	NM	0.0%	13.5x	NM
Apptio, Inc.	United States	37.96	-8%	1,729.7	1,584.4	224.7	(14.0)	NM	24.5%	7.1x	NM
Avalara, Inc.	United States	31.15	-48%	2,071.6	1,933.4	252.6	(49.4)	NM	0.0%	7.7x	NM
BlackLine, Inc.	United States	40.95	-30%	2,237.7	2,112.6	216.9	(10.4)	NM	34.8%	9.7x	NM
Coupa Software Incorporated	United States	62.86	-26%	3,736.7	3,502.0	239.2	(34.5)	NM	39.9%	14.6x	NM
Donnelley Financial Solutions, Inc.	United States	14.03	-37%	478.4	819.4	987.5	132.0	13.4%	-1.4%	0.8x	6.2x
Ebix, Inc.	United States	42.56	-52%	1,330.9	1,873.2	466.2	154.5	33.2%	37.4%	4.0x	12.1x
First Data Corporation	United States	16.91	-36%	15,836.5	35,876.5	8,617.0	3,017.0	35.0%	7.8%	4.2x	11.9x
GreenSky, Inc.	United States	9.57	-65%	549.5	601.0	394.8	175.7	44.5%	28.3%	1.5x	3.4x
Guidewire Software, Inc.	* United States	80.23	-26%	6,501.2	5,718.4	732.6	69.7	9.5%	38.7%	7.8x	82.1x
i3 Verticals, Inc.	United States	24.10	-5%	219.5	328.6	323.5	27.6	8.5%	23.2%	1.0x	11.9x
Intuit Inc.	United States	196.85	-15%	51,089.5	50,182.5	6,070.0	1,749.0	28.8%	14.3%	8.3x	28.7x
Model N, Inc.	United States	13.23	-35%	416.1	413.1	154.6	(12.5)	NM	17.9%	2.7x	NM
Performant Financial Corporation	United States	2.25	-36%	119.2	154.0	149.2	13.0	8.7%	12.6%	1.0x	11.9x
Q2 Holdings, Inc.	United States	49.55	-26%	2,149.2	2,031.3	225.6	(12.0)	NM	22.3%	9.0x	NM
RealPage, Inc.	United States	48.19	-27%	4,361.5	4,679.1	830.2	141.4	17.0%	31.3%	5.6x	33.1x
SS&C Technologies Holdings, Inc.	United States	45.11	-26%	11,237.4	17,191.3	2,748.5	883.0	32.1%	67.8%	6.3x	19.5x
StoneCo Ltd.	* Brazil	18.44	-43%	5,213.4	5,668.3	149.2	(26.9)	NM	0.0%	38.0x	NM
Tyler Technologies, Inc.	United States	185.82	-26%	7,214.1	6,942.3	910.8	194.1	21.3%	11.5%	7.6x	35.8x
Zuora, Inc.	United States	18.14	-52%	1,968.2	1,808.7	221.0	(62.4)	NM	0.0%	8.2x	NM
Adjusted Weighted Average										7.1x	25.0x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (26.0x) and EBITDA multiples that are 1.0 standard deviations above the mean (44.5x) (\$\frac{5}{in Millions, except stock price data)}\$

#### althcare Software

		Stock Price	Chg % From	Eq	uity	E	nt.	L	.TM		LTM Margin	LTM	LTM I	Multiples
Company Name	Headquarters	12/31/18	52WK High	Va	alue	V	alue	Rev	venue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Allscripts Healthcare Solutions, Inc.	United States	9.64	-40%	\$	1,684.2	\$	3,897.7	\$	2,079.1	\$ 90.5	4.4%	21.3%	1.9x	43.1x
athenahealth, Inc.	United States	131.93	-20%		5,432.6		5,387.3		1,311.4	264.8	20.2%	11.2%	4.1x	20.3x
Cegedim SA	France	22.61	-55%		314.9		499.1		537.9	61.9	11.5%	5.3%	0.9x	8.1x
Cerner Corporation	United States	52.44	-29%	1	17,278.4	1	16,905.9		5,213.0	1,256.5	24.1%	3.0%	3.2x	13.5x
Civitas Solutions, Inc.	United States	17.51	-5%		635.3		1,330.8		1,602.2	163.9	10.2%	8.7%	0.8x	8.1x
Computer Programs and Systems, Inc.	United States	25.10	-28%		341.5		473.8		286.1	34.5	12.1%	8.6%	1.7x	13.7x
Craneware plc	United Kingdom	31.23	-32%		833.7		782.7		67.1	19.5	29.1%	16.0%	11.7x	40.1x
HealthEquity, Inc.	United States	59.65	-41%		3,721.5		3,391.2		271.9	87.8	32.3%	25.9%	12.5x	38.6x
McKesson Corporation	United States	110.47	-38%	2	21,583.2	3	30,303.2	21	0,927.0	4,053.0	1.9%	4.4%	0.1x	7.5x
Medidata Solutions, Inc.	United States	67.42	-24%		4,125.7		4,021.5		611.4	89.4	14.6%	16.0%	6.6x	45.0x
NantHealth, Inc.	United States	0.54	-87%		59.6		235.9		88.9	(49.0)	NM	8.1%	2.7x	NM
NextGen Healthcare, Inc.	United States	15.15	-36%		979.7		990.6		531.0	37.5	7.1%	1.4%	1.9x	26.4x
Streamline Health Solutions, Inc.	* United States	0.81	-63%		15.6		27.3		23.0	0.5	2.2%	-6.6%	1.2x	54.7x
Veeva Systems Inc.	* United States	89.32	-18%	1	12,978.3	1	11,926.4		810.9	205.4	25.3%	23.9%	14.7x	58.1x
Adjusted Weighted Average													3.0x	17.2x

\*Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (14.3x) and EBITDA multiples that are 1.0 standard deviations above the mean (47.4x)



## Software Public Company Valuation (2/3)

ſŚ	in	Millions	. excep	t stock	price o	data)

HR Software											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
51job, Inc.	China	\$62.44	-46%	\$ 3,857.6	\$ 2,942.7	\$ 508.7	\$ 161.1	31.7%	30.7%	5.8x	18.3x
Benefitfocus, Inc.	United States	45.72	-18%	1,461.2	1,540.2	271.7	3.0	1.1%	17.3%	5.7x	NM
Castlight Health, Inc.	United States	2.17	-64%	303.2	240.4	150.9	(34.0)	NM	21.0%	1.6x	NM
Ceridian HCM Holding Inc.	United States	34.49	-23%	4,761.5	5,245.3	808.4	111.0	13.7%	19.3%	6.5x	47.3x
Cornerstone OnDemand, Inc.	United States	50.43	-15%	2,955.8	2,852.8	531.6	0.6	0.1%	15.8%	5.4x	NM
DHI Group, Inc.	United States	1.52	-53%	80.4	92.3	174.5	23.6	13.6%	-17.7%	0.5x	3.9x
Domo, Inc.	United States	19.63	-32%	517.0	409.1	133.1	(151.6)	NM	0.0%	3.1x	NM
Paycom Software, Inc.	United States	122.45	-25%	7,177.2	7,126.9	530.0	135.0	25.5%	30.3%	13.4x	52.8x
Paylocity Holding Corporation	* United States	60.21	-32%	3,179.0	3,094.1	396.5	36.0	9.1%	25.3%	7.8x	85.9x
Pluralsight, Inc.	United States	23.55	-39%	1,467.4	1,385.3	212.2	(85.0)	NM	38.0%	6.5x	NM
The Ultimate Software Group, Inc.	United States	244.87	-26%	7,656.9	7,532.4	1,087.2	116.3	10.7%	20.8%	6.9x	64.8x
Workday, Inc.	United States	159.68	-8%	35,129.6	34,738.3	2,616.0	(223.9)	NM	30.8%	13.3x	NM
Adjusted Weighted Average										10.6x	49.7x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (14.2x) and EBITDA multiples that are 1.0 standard deviations above the mean (75.6x)

Security Software											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM I	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Absolute Software Corporation	Canada	\$5.67	-12%	\$ 230.1	\$ 197.3	\$ 94.9	\$ 8.3	8.8%	3.5%	2.1x	23.7x
Check Point Software Technologies Ltd.	Israel	102.65	-15%	16,035.3	14,265.2	1,896.9	947.5	49.9%	3.4%	7.5x	15.1x
Cisco Systems, Inc.	United States	43.33	-12%	194,810.0	177,862.0	50,266.0	15,090.0	30.0%	5.2%	3.5x	11.8x
Cheetah Mobile Inc.	China	6.11	-66%	856.7	454.9	726.2	112.7	15.5%	2.6%	0.6x	4.0x
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	16.21	-21%	3,138.3	3,000.9	790.7	(127.7)	NM	4.2%	3.8x	NM
Fortinet, Inc.	United States	70.43	-25%	11,999.2	10,365.0	1,710.8	245.2	14.3%	18.7%	6.1x	42.3x
Gemalto N.V.	Netherlands	58.00	0%	5,261.8	5,989.7	3,460.0	421.7	12.2%	-1.9%	1.7x	14.2x
Imperva, Inc.	United States	55.69	-3%	1,973.5	1,669.1	351.8	5.0	1.4%	13.8%	4.7x	NM
Juniper Networks, Inc.	United States	26.91	-13%	9,288.1	8,037.4	4,706.0	841.5	17.9%	-9.0%	1.7x	9.6x
Mimecast Limited	* United Kingdom	33.63	-28%	2,019.9	2,052.9	301.2	19.5	6.5%	35.7%	6.8x	105.1x
Palo Alto Networks, Inc.	United States	188.35	-21%	17,870.8	16,291.4	2,427.3	23.7	1.0%	30.1%	6.7x	NM
Proofpoint, Inc.	United States	83.81	-36%	4,580.0	4,389.7	661.0	(38.9)	NM	37.8%	6.6x	NM
SecureWorks Corp.	United States	16.89	NA	1,380.0	1,265.3	508.9	(30.0)	NM	9.2%	2.5x	NM
Symantec Corporation	United States	18.90	-36%	12,071.8	14,674.8	4,750.0	966.0	20.3%	3.9%	3.1x	15.2x
Tenable Holdings, Inc.	United States	22.19	-44%	2,065.1	1,801.1	246.3	(59.3)	NM	0.0%	7.3x	NM
Trend Micro Incorporated	Japan	54.41	-23%	7,591.5	6,145.7	1,401.1	455.3	32.5%	7.8%	4.4x	13.5x
VeriSign, Inc.	United States	148.29	-16%	17,926.5	18,532.0	1,203.0	798.5	66.4%	4.1%	15.4x	23.2x
Zscaler, Inc.	* United States	39.21	-19%	4,793.4	4,479.4	213.6	(16.6)	NM	53.9%	21.0x	NM
Adjusted Weighted Average										4.7x	14.6x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (15.8x) and EBITDA multiples that are 1.0 standard deviations above the mean (56.0x)



## Software Public Company Valuation (3/3)

Engineering Software											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
ANSYS, Inc.	United States	\$142.94	-25%	\$ 11,944.1	\$ 11,214.7	\$ 1,180.5	\$ 454.5	38.5%	11.0%	9.5x	24.7x
Dassault Systèmes SE	France	118.73	-26%	30,279.4	28,346.9	3,885.0	1,072.7	27.6%	4.7%	7.3x	26.4x
PTC Inc.	* United States	82.90	-23%	9,838.2	10,195.7	1,241.8	134.8	10.9%	6.7%	8.2x	75.6x
Synopsys, Inc.	United States	84.24	-19%	12,595.1	12,347.2	3,121.1	526.0	16.9%	14.5%	4.0x	23.5x
Trimble Inc.	United States	32.91	-28%	8,265.2	10,072.7	3,030.4	523.0	17.3%	19.7%	3.3x	19.3x
Adjusted Weighted Average										6.8x	24.6x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (11.9x) and EBITDA multiples that are 1.0 standard deviations above the mean (57.4x)

Infrastructure Software											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM I	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Adobe Inc.	United States	\$226.24	-19%	\$ 110,435.3	\$ 111,331.2	\$ 9,030.0	\$ 3,160.1	35.0%	23.7%	12.3x	35.2x
Atlassian Corporation Plc	* United Kingdom	88.98	-9%	21,190.3	20,223.2	945.8	21.4	2.3%	39.4%	21.4x	NM
Bandwidth Inc.	United States	40.75	-29%	791.4	727.9	194.2	16.1	8.3%	22.0%	3.7x	45.3x
Cloudera, Inc.	United States	11.06	-51%	1,697.9	1,308.2	434.7	(140.5)	NM	29.1%	3.0x	NM
Commvault Systems, Inc.	* United States	59.09	-19%	2,735.2	2,251.1	710.5	30.2	4.2%	6.4%	3.2x	74.6x
DocuSign, Inc.	United States	40.08	-41%	6,623.2	5,961.7	650.1	(335.8)	NM	0.0%	9.2x	NM
Dropbox, Inc.	United States	20.43	-53%	8,305.3	7,432.4	1,321.3	(354.8)	NM	27.1%	5.6x	NM
Endurance International Group Holdings, Inc.	United States	6.65	-39%	956.6	2,700.6	1,157.1	319.9	27.6%	-1.5%	2.3x	8.4x
First Data Corporation	United States	16.91	-36%	15,836.5	35,876.5	8,617.0	3,017.0	35.0%	7.8%	4.2x	11.9x
Hortonworks Inc.	United States	14.42	-45%	1,214.7	1,113.4	327.6	(151.7)	NM	37.2%	3.4x	NM
IBM Corporation	United States	113.67	-34%	103,302.6	136,018.6	80,373.0	16,954.0	21.1%	2.6%	1.7x	8.0x
Nutanix, Inc.	United States	41.59	-36%	7,450.3	6,922.1	1,193.2	(271.3)	NM	27.9%	5.8x	NM
Okta, Inc.	United States	63.80	-15%	7,046.0	6,767.6	364.3	(115.1)	NM	59.6%	18.6x	NM
Rapid7, Inc.	United States	31.16	-21%	1,473.5	1,373.8	233.1	(44.8)	NM	23.8%	5.9x	NM
Pivotal Software, Inc.	United States	16.35	-48%	4,290.7	3,626.7	621.5	(129.2)	NM	0.0%	5.8x	NM
salesforce.com, inc.	* United States	136.97	-15%	104,782.1	105,723.1	12,484.0	1,175.7	9.4%	25.2%	8.5x	89.9x
ServiceNow, Inc.	United States	178.05	-14%	31,925.3	31,113.9	2,457.0	59.8	2.4%	40.0%	12.7x	NM
Smartsheet Inc.	United States	24.86	-27%	2,578.5	2,373.1	158.5	(44.2)	NM	61.8%	15.0x	NM
Synchronoss Technologies, Inc.	United States	6.14	-49%	261.9	459.9	350.0	(55.3)	NM	-13.2%	1.3x	NM
Talend S.A.	France	37.08	-50%	1,115.2	1,026.4	190.2	(35.5)	NM	38.3%	5.4x	NM
Twilio Inc.	United States	89.30	-11%	8,827.9	8,511.4	561.0	(75.8)	NM	53.4%	15.2x	NM
Varonis Systems, Inc.	United States	52.90	-36%	1,558.7	1,400.6	257.7	(22.2)	NM	31.0%	5.4x	NM
Adjusted Weighted Average										8.1x	21.4x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (19.1x) and EBITDA multiples that are 1.0 standard deviations above the mean (72.1x)



### **Information**

- The Information Segment had seven transactions, three of which reported \$291 million in value
- The Healthcare Information subsegment accounted ninety percent of segment value throughout the month
- Select transactions from the segment included:
  - Experian's acquisition of credit information company Compuscan from Actis for \$263 million
  - The acquisition of alternative data company Quandl to Nasdaq
  - Equifax's purchase of property data platform JLR
  - The round of funding product information management planform Akeneo received from private backers

INFORM	IATION TRANSACT	TONS BY SEGMENT			BUYER/INVESTOR BREAKDOWN							
	Tran	sactions	Reported	Value	St	trategic	1	Buyout	Venture/Growth Capita			
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM		
Financial Information	2	29%	\$3.0	1%	1	=	0	-	1	\$3.0		
Healthcare Information	2	29%	263.0	90%	1	-	0	-	1	25.0		
Product/Price Information	2	29%	25.0	9%	1	-	0	-	1	-		
Credit/Risk Management Information	1	14%	-	0%	1	263.0	0	-	0	-		
Other*	0	0%	0.0	0%	0	0.0	0	0.0	0	0.0		
Total	7	100%	291.0	100%	4	263.0	0	0.0	3	28.0		

## Information Public Company Valuation (1/2)

(Ś in	Millions	. except	stock	price data	)
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		Stock Price	Chg % From	Equity	Ent.		LTM		LTM Margin	LTM	LTM M	1ultiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	R	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Broadridge Financial Solutions, Inc.	United States	\$96.25	-30%	\$ 11,237.2	\$ 12,176.1	\$	4,377.9	\$ 836.5	19.1%	4.9%	2.8x	14.6x
Computershare Limited	Australia	12.12	-17%	6,578.4	7,527.2		2,297.6	575.8	25.1%	8.9%	3.3x	13.1x
CoreLogic, Inc.	United States	33.42	-40%	2,692.4	4,358.8		1,839.2	416.2	22.6%	-1.7%	2.4x	10.5x
CoStar Group, Inc.	* United States	337.34	-25%	12,285.9	11,214.1		1,130.3	305.0	27.0%	21.6%	9.9x	36.8x
The Dun & Bradstreet Corporation	United States	142.74	-2%	5,300.1	6,418.1		1,792.1	505.1	28.2%	3.4%	3.6x	12.7x
Envestnet, Inc.	* United States	49.19	-24%	2,249.1	2,551.5		785.1	85.5	10.9%	19.6%	3.2x	29.8x
Equifax Inc.	United States	93.13	-33%	11,229.2	13,665.3		3,415.2	850.7	24.9%	2.7%	4.0x	16.1x
Experian plc	Ireland	24.28	-3%	21,803.9	25,164.7		4,819.0	1,469.0	30.5%	8.1%	5.2x	17.1x
FactSet Research Systems Inc.	United States	200.13	-16%	7,612.4	7,989.4		1,372.6	457.2	33.3%	8.7%	5.8x	17.5x
Fair Isaac Corporation	* United States	187.00	-22%	5,414.6	6,088.5		1,032.5	234.2	22.7%	10.8%	5.9x	26.0x
Fidelity National Information Services, Inc.	United States	102.55	-7%	33,583.9	42,074.9		8,877.0	2,616.0	29.5%	-0.8%	4.7x	16.1x
IHS Markit Ltd.	United Kingdom	47.97	-14%	18,908.1	24,821.3		3,886.1	1,279.3	32.9%	10.1%	6.4x	19.4x
Moody's Corporation	United States	140.04	-26%	26,832.9	30,861.9		4,548.1	2,151.1	47.3%	14.3%	6.8x	14.3x
Morningstar, Inc.	United States	109.84	-24%	4,685.8	4,409.1		1,000.3	280.2	28.0%	13.6%	4.4x	15.7x
MSCI Inc.	* United States	147.43	-20%	12,978.7	14,154.9		1,407.1	751.2	53.4%	14.2%	10.1x	18.8x
S&P Global Inc.	United States	169.94	-22%	42,637.9	45,678.9		6,309.0	3,147.0	49.9%	7.4%	7.2x	14.5x
SEI Investments Co.	United States	46.20	-41%	7,186.0	6,444.0		1,627.3	481.8	29.6%	9.4%	4.0x	13.4x
SS&C Technologies Holdings, Inc.	United States	45.11	-26%	11,237.4	17,191.3		2,748.5	883.0	32.1%	67.8%	6.3x	19.5x
Thomson Reuters Corporation	Canada	48.32	-9%	24,397.8	31,355.9		11,432.0	2,391.0	20.9%	69.5%	2.7x	13.1x
TransUnion	United States	56.80	-29%	10,525.0	14,492.2		2,210.2	783.4	35.4%	18.6%	6.6x	18.5x
Verisk Analytics, Inc.	United States	109.04	-13%	17,950.2	20,385.8		2,351.5	1,056.5	44.9%	13.0%	8.7x	19.3x
Workiva Inc.	United States	35.89	-12%	1,573.7	1,495.5		234.4	(41.5)	NM	17.4%	6.4x	NM
Adjusted Weighted Average											5.5x	16.0x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (9.9x) and EBITDA multiples that are 1.0 standard deviations above the mean (24.1x)



## Information Public Company Valuation (2/2)

(\$ in Millions, except stock price data)

Marketing Information											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM N	Multiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Alliance Data Systems Corporation	United States	150.08	-46%	8,175.4	29,202.1	7,841.5	1,785.8	22.8%	5.4%	3.7x	16.4x
Cello Health plc	United Kingdom	1.41	-20%	148.1	155.0	223.2	16.5	7.4%	3.7%	0.7x	9.4x
Ebiquity plc	United Kingdom	0.83	-42%	62.1	96.4	116.4	12.9	11.1%	2.6%	0.8x	7.4x
Harte Hanks, Inc.	United States	2.42	-80%	15.1	14.5	314.3	(8.8)	NM	-20.3%	0.0x	NM
InnerWorkings, Inc.	United States	3.74	-64%	193.3	360.0	1,132.7	21.8	1.9%	2.3%	0.3x	16.5x
INTAGE HOLDINGS Inc.	Japan	8.13	-41%	334.6	275.7	446.2	46.8	10.5%	2.3%	0.6x	5.9x
Ipsos SA	France	23.52	-40%	1,024.2	1,576.4	2,021.5	232.2	11.5%	-2.8%	0.8x	6.8x
LiveRamp Holdings, Inc.	* United States	38.63	-25%	2,627.4	2,766.7	943.9	90.0	9.5%	72.0%	2.9x	30.7x
Nielsen Holdings plc	United States	23.33	-41%	8,281.8	16,639.8	6,618.0	1,610.0	24.3%	2.3%	2.5x	10.3x
SVMK Inc.	* United States	12.27	-39%	1,534.7	1,686.7	243.4	(86.1)	NM	0.0%	6.9x	NM
System1 Group PLC	United Kingdom	2.74	-46%	34.5	30.0	34.3	2.6	7.7%	-11.6%	0.9x	11.4x
YouGov plc	* United Kingdom	5.03	-22%	531.6	492.5	152.8	22.2	14.5%	8.9%	3.2x	22.2x
Adjusted Weighted Average										2.9x	12.8x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (5.8x) and EBITDA multiples that are 1.0 standard deviations above the mean (21.6x)

		Stock Price	Chg % From	Equity	En	nt.		LTM		LTM Margin	LTM	LTM M	lultiples
Company Name	Headquarters	12/31/18	52WK High	Value	Val	alue	R	levenue	 EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Fluent, Inc.	United States	\$ 3.60	-48%	\$ 271.0	\$	313.4	\$	244.6	\$ 20.3	8.3%	16.8%	1.3x	15.4x
Forrester Research, Inc.	United States	44.70	-11%	816.4		671.9		349.4	31.3	9.0%	5.6%	1.9x	21.4x
Gartner, Inc.	* United States	127.84	-21%	11,619.8	13	3,579.6		3,901.1	570.4	14.6%	30.0%	3.5x	23.8x
HealthStream, Inc.	United States	24.15	-24%	780.7	•	606.4		259.8	31.0	11.9%	19.0%	2.3x	19.6x
IQVIA Holdings Inc.	United States	116.17	-14%	23,007.0	32	2,998.0		8,603.0	1,817.0	21.1%	-5.8%	3.8x	18.2x
Informa plc	United Kingdom	8.03	-27%	10,048.6	13	3,566.2		2,374.3	749.2	31.6%	11.6%	5.7x	18.1x
National Research Corporation	* United States	38.14	-11%	944.4		976.1		118.9	39.7	33.4%	2.5%	8.2x	24.6x
NIC Inc.	United States	12.48	-29%	830.8		649.8		349.7	87.5	25.0%	5.5%	1.9x	7.4x
Premier, Inc.	United States	37.35	-21%	2,380.5		2,345.3		1,672.2	721.8	43.2%	9.2%	1.4x	3.2x
Proofpoint, Inc.	United States	83.81	-36%	4,580.0	) 4	4,389.7		661.0	(38.9)	NM	37.8%	6.6x	NM
Reed Elsevier plc <sup>(1)</sup>	United Kingdom	20.60	-7%	40,491.7	48	8,510.9		9,637.7	2,930.6	30.4%	-0.5%	5.0x	16.6x
Wolters Kluwer N.V.	Netherlands	59.15	-7%	16,035.0	18	8,291.7		4,984.2	1,402.4	28.1%	-3.2%	3.7x	13.0x
Adjusted Weighted Average												4.4x	16.2x

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



<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (8.2x) and EBITDA multiples that are 1.0 standard deviations above the mean (23.0x)

### **Business & IT Services**

- December was an active month for the Business & IT Services segment with 89 transactions announced, 16 of which were valued at nearly \$2.5 billion
- IT Consulting transactions accounted for 37 percent of all transactions throughout the month with 33 deals announced
- Strategic buyers announced 66 deals throughout the month, five of which were valued at a reported \$1.5 billion
- Select transaction from the segment include:
  - The \$540 million round of funding India-based education platform BYJU raised at a valuation of \$3.6 billion from Napsters, General Atlantic, and Canada Pension Plan Investment Board
  - Hub Group's purchase of retail supply chain management provider CaseStack for \$255 million
  - Deloitte's acquisition of New Zealand-based Salesforce implementation company CloudinIT
  - Accenture's acquisitions of oil and gas-focused management consulting firm Enaxis, data intelligence consulting company Knowledgent, and Oracle Cloud applications consulting practice Prime Q

	BUSINESS SERVICES TRAN	ISACTIONS BY SEG	MENT				BUYER/INVE	STOR BREAKDOWN		
	Trans	sactions	Reported	Value	S	trategic	I	Buyout	Venture/G	rowth Capital
	#	%	\$MM	%	#	\$MM	#	\$MM	#	\$MM
IT Consulting	33	37%	\$1,222.8	49%	32	\$1,222.8	1	-	0	-
Corporate Training	19	21%	994.0	40%	5	-	2	-	12	994.0
Staffing	9	10%	1.3	0%	7	-	1	-	1	1.3
ВРО	5	6%	-	0%	4	-	1	-	0	-
Management Consulting	4	4%	-	0%	4	-	0	-	0	-
Credit/Risk Consulting	3	3%	-	0%	3	-	0	-	0	-
Financial Consulting	3	3%	4.0	0%	2	-	0	-	1	4.0
Other	13	15%	260.0	10%	9	255.0	2	0.0	2	5.0
Total	89	100%	2,482.1	100%	66	1,477.8	7	0.0	16	1,004.3

### Business & IT Services Public Company Valuation (1/3)

#### (\$ in Millions, except stock price data)

Consulting												
		Stock Price	Chg % From		Equity	Ent.	LTM		LTM Margin	LTM	LTM IV	lultiples
Company Name	Headquarters	12/31/18	52WK High	,	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Accenture plc	Ireland	141.01	-20%	\$	89,886.6	\$ 85,921.1	\$ 40,294.7	\$ 6,569.6	16.3%	11.3%	2.1x	13.1x
CRA International, Inc.	United States	42.55	-28%		344.7	338.1	405.9	30.6	7.5%	15.1%	0.8x	11.1x
FTI Consulting, Inc.	United States	66.64	-19%		2,470.8	2,525.1	1,990.6	262.0	13.2%	11.7%	1.3x	9.6x
Information Services Group, Inc.	United States	4.24	-22%		191.6	277.4	274.5	24.4	8.9%	6.7%	1.0x	11.4x
Navigant Consulting, Inc.	United States	24.05	-8%		1,024.3	750.5	957.4	123.1	12.9%	33.0%	0.8x	6.1x
ICF International, Inc.	United States	64.78	-21%		1,220.9	1,447.6	1,281.2	111.4	8.7%	7.0%	1.1x	13.0x
Huron Consulting Group Inc.	* United States	51.31	-10%		1,109.5	1,416.3	775.6	92.7	12.0%	7.0%	1.8x	15.3x
The Hackett Group, Inc.	United States	16.01	-30%		472.6	470.9	269.8	42.1	15.6%	3.1%	1.7x	11.2x
Adjusted Weighted Average											1.3x	9.9x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (2.1x) and EBITDA multiples that are 1.0 standard deviations above the mean (13.9x)

HR Services												
		Stock Price	Chg % From	E	quity	Ent.	LTM		LTM Margin	LTM	LTM N	Multiples
Company Name	Headquarters	12/31/18	52WK High	,	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Automatic Data Processing, Inc.	* United States	131.12	-15%	\$	57,395.5	\$ 58,233.5	\$ 13,571.8	\$ 3,052.0	22.5%	8.2%	4.3x	19.1x
Barrett Business Services, Inc.	United States	57.25	-42%		422.6	391.4	947.6	38.6	4.1%	5.7%	0.4x	10.1x
Capita plc	United Kingdom	1.43	-74%		2,369.7	3,541.0	5,436.2	535.5	9.8%	-5.1%	0.7x	6.6x
DHI Group, Inc.	United States	1.52	-53%		80.4	92.3	174.5	23.6	13.6%	-17.7%	0.5x	3.9x
Edenred SA	* France	36.76	-10%		8,721.4	10,238.4	1,512.1	536.7	35.5%	8.5%	6.8x	19.1x
Insperity, Inc.	* United States	93.36	-23%		3,903.4	3,641.9	3,688.3	196.5	5.3%	15.2%	1.0x	18.5x
Marsh & McLennan Companies, Inc.	United States	79.75	-11%		40,170.7	45,454.7	14,923.0	3,516.0	23.6%	8.9%	3.0x	12.9x
Paychex, Inc.	United States	65.15	-14%		23,394.8	22,693.1	3,506.7	1,439.6	41.1%	9.9%	6.5x	15.8x
TriNet Group, Inc.	United States	41.95	-30%		2,955.1	3,098.1	3,434.0	285.0	8.3%	6.1%	0.9x	10.9x
WageWorks, Inc.	United States	27.16	-57%		1,076.5	429.0	461.7	91.7	19.9%	33.1%	0.9x	4.7x
Adjusted Weighted Average											4.2x	13.4x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (7.5x) and EBITDA multiples that are 1.0 standard deviations above the mean (18.0x)



## Business & IT Services Public Company Valuation (2/3)

T Consulting											
		Stock Price	Chg % From	Equity	Ent.	LTM		LTM Margin	LTM	LTM M	ultiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
Accenture plc	Ireland	141.01	-20%	\$ 89,886.6	\$ 85,921.1	\$ 40,294.7	\$ 6,569.6	16.3%	11.3%	2.1x	13.1x
Amdocs Limited	United States	58.58	-18%	8,176.3	7,700.3	3,974.8	724.6	18.2%	2.8%	1.9x	10.6x
Bechtle AG	Germany	77.68	-25%	3,262.8	3,501.2	4,694.8	243.8	5.2%	17.7%	0.7x	14.4x
Booz Allen Hamilton Holding Corporation	United States	45.07	-15%	6,415.4	7,856.8	6,366.9	631.7	9.9%	5.2%	1.2x	12.4x
Business & Decision SA	* France	8.43	-13%	66.4	105.4	249.3	2.7	NA	-3.7%	0.4x	39.5x
Capgemini SE	France	99.38	-27%	16,133.8	18,900.0	15,142.9	1,883.1	12.4%	3.3%	1.2x	10.0x
Cerner Corporation	United States	52.44	-29%	17,278.4	16,905.9	5,213.0	1,256.5	24.1%	3.0%	3.2x	13.5x
CGI Group Inc.	Canada	61.19	-5%	16,915.3	18,153.6	8,901.7	1,493.3	16.8%	6.1%	2.0x	12.2x
Cognizant Technology Solutions Corporation	United States	63.48	-25%	36,756.7	32,717.7	15,824.0	3,305.0	20.9%	9.6%	2.1x	9.9x
ConvergeOne Holdings, Inc.	United States	12.38	-3%	951.3	1,648.5	1,401.3	111.8	8.0%	68.8%	1.2x	14.7x
Digi International Inc.	United States	10.09	-31%	277.2	214.4	228.4	18.9	8.3%	25.7%	0.9x	11.3x
OXC Technology Company	United States	53.17	-51%	14,893.6	19,477.6	24,162.0	5,453.0	22.6%	66.7%	0.8x	3.6x
ndava plc	* United Kingdom	24.15	-23%	1,280.8	1,226.3	308.5	44.3	14.3%	0.0%	4.0x	27.7x
PAM Systems, Inc.	* United States	116.01	-20%	6,265.6	5,605.5	1,737.3	261.8	15.1%	27.3%	3.2x	21.4x
Globant S.A.	* Luxembourg	56.32	-15%	2,025.6	1,945.7	497.6	81.1	16.3%	29.2%	3.9x	24.0x
lexaware Technologies Limited	India	4.78	-40%	1,422.3	1,320.2	606.5	94.8	15.6%	13.5%	2.2x	13.9x
nternational Business Machines Corporation	United States	113.67	-34%	103,302.6	136,018.6	80,373.0	16,954.0	21.1%	2.6%	1.7x	8.0x
nfosys Limited	India	9.47	-12%	41,162.8	37,506.3	11,313.0	3,002.0	26.5%	7.8%	3.3x	12.5x
TS Group	France	5.18	-41%	40.3	56.1	208.7	9.3	4.4%	-2.2%	0.3x	6.0x
arsen & Toubro Limited	India	20.67	-1%	28,981.2	43,513.1	18,062.3	2,211.0	12.2%	14.5%	2.4x	19.7x
Navigant Consulting, Inc.	United States	24.05	-8%	1,024.3	750.5	957.4	123.1	12.9%	33.0%	0.8x	6.1x
NTT DATA Corporation	Japan	10.98	-26%	15,403.6	19,198.5	18,671.2	2,780.9	14.9%	7.4%	1.0x	6.9x
Perficient, Inc.	United States	22.26	-28%	738.6	812.7	487.8	56.9	11.7%	4.3%	1.7x	14.3x
Presidio, Inc.	United States	13.05	-34%	1,074.3	2,074.9	2,876.7	208.3	7.2%	2.3%	0.7x	10.0x
Reply S.p.A.	Italy	50.47	-28%	1,887.9	1,830.3	1,119.7	141.9	12.7%	12.2%	1.6x	12.9x
QLI SA	France	18.87	-58%	82.4	111.0	262.9	19.3	7.3%	13.9%	0.4x	5.8x
ynthomer plc	United Kingdom	4.56	-38%	1,548.2	1,825.8	2,036.9	230.9	11.3%	12.7%	0.9x	7.9x
ata Consultancy Services Limited	* India	27.20	-16%	102,061.1	97,337.0	18,484.3	5,003.4	27.1%	12.2%	5.3x	19.5x
Vipro Limited	India	4.74	-3%	21,352.6	18,285.8	7,713.3	1,340.9	17.4%	2.3%	2.4x	13.6x

<sup>\*</sup>Calculation is market cap weighted and excludes revenue multiples that are 2.0 standard deviations above the mean (4.3x) and EBITDA multiples that are 1.0 standard deviations above the mean (21.1x)



# Business & IT Services Public Company Valuation (3/3)

Outsourced Services												
		Stock Price	Chg % From	Equity	Ent.		LTM		LTM Margin	LTM	LTM M	lultiples
Company Name	Headquarters	12/31/18	52WK High	Value	Value	_	Revenue	EBITDA	EBITDA	Rev Growth	EV/Rev	EV/EBITDA
AMREP Corporation	United States	\$5.95	-40%	\$ 48.	1 \$ 3	6.3	\$ 40.5	\$ 1.6	4.0%	6.9%	0.9x	22.3x
Cimpress N.V.	Netherlands	103.42	-40%	3,196.	4,2	2.8	2,618.2	258.4	9.9%	16.1%	1.6x	16.5x
Clairvest Group Inc.	Canada	32.98	-14%	502.	1 22	3.5	204.3	141.4	69.2%	81.6%	1.1x	1.6x
CSG Systems International, Inc.	United States	31.77	-35%	1,058.	1,2	0.2	833.0	154.8	18.6%	6.9%	1.5x	7.9x
Donnelley Financial Solutions, Inc.	United States	14.03	-37%	478.	1 8:	9.4	987.5	132.0	13.4%	-1.4%	0.8x	6.2x
Elanders AB (publ)	Sweden	9.81	-9%	346.	6	3.0	1,174.0	72.8	6.2%	14.8%	0.6x	9.2x
Eniro AB (publ)	Sweden	0.12	-83%	8.	2 1:	4.8	157.8	17.3	11.0%	-19.6%	0.7x	6.6x
ExlService Holdings, Inc.	United States	52.62	-22%	1,802.	1,80	1.4	846.1	117.2	13.9%	14.1%	2.2x	15.9x
Firstsource Solutions Limited	India	0.67	-44%	464.	5 52	2.1	504.3	65.9	13.1%	3.7%	1.0x	7.9x
Genpact Limited	Bermuda	26.99	-22%	5,130.	6,0	3.0	2,899.9	407.7	14.1%	8.0%	2.1x	14.9x
InnerWorkings, Inc.	United States	3.74	-64%	193.	3 30	0.0	1,132.7	21.8	1.9%	2.3%	0.3x	16.5x
j2 Global, Inc.	United States	69.38	-24%	3,419.	4,1	6.7	1,177.6	426.8	36.2%	11.8%	3.5x	9.7x
Liq Participações S.A.	Brazil	0.22	-84%	2.	1 :	.0.3	361.5	(1.1)	NM	-21.3%	0.0x	NM
Luxoft Holding, Inc.	Switzerland	30.42	-48%	1,022.	2 93	3.5	910.7	98.2	10.8%	7.4%	1.0x	9.5x
LSC Communications, Inc.	United States	7.00	-62%	233.	2 1,1!	9.2	3,886.0	291.0	7.5%	10.3%	0.3x	4.0x
MAXIMUS, Inc.	United States	65.09	-10%	4,174.	3,80	7.5	2,392.2	350.8	14.7%	-2.4%	1.6x	10.9x
Quad/Graphics, Inc.	United States	12.32	-61%	636.	1,7	4.1	4,176.3	421.0	10.1%	0.3%	0.4x	4.1x
IQVIA Holdings Inc.	United States	116.17	-14%	23,007.	32,99	8.0	8,603.0	1,817.0	21.1%	-5.8%	3.8x	18.2x
R.R. Donnelley & Sons Company	United States	3.96	-60%	278.	3 2,2	3.5	6,962.6	428.8	6.2%	1.3%	0.3x	5.2x
Serco Group plc	United Kingdom	1.22	-10%	1,329.	3 1,64	9.3	3,711.1	83.9	2.3%	-7.0%	0.4x	19.7x
StarTek, Inc.	United States	6.65	-19%	248.	9 40	0.5	269.8	4.8	1.8%	-12.1%	1.7x	97.0x
Steel Connect, Inc.	United States	1.73	-31%	103.	L 50	14.4	757.9	44.2	5.8%	81.4%	0.7x	11.4x
SYNNEX Corporation	United States	80.84	-43%	4,135.	5,75	0.5	19,743.4	737.0	3.7%	26.4%	0.3x	7.8x
Sykes Enterprises, Incorporated	United States	24.73	-23%	1,054.	9	9.6	1,629.7	155.3	9.5%	4.7%	0.6x	6.3x
Teleperformance SE	France	159.84	-18%	9,232.	10,70	1.1	4,864.1	737.4	15.2%	3.2%	2.2x	14.5x
TTEC Holdings, Inc.	United States	28.57	-32%	1,319.	7 1,50	6.6	1,516.7	174.9	11.5%	8.7%	1.0x	8.6x
transcosmos inc.	Japan	21.03	-32%	872.	L 69	8.2	2,447.0	84.7	3.5%	10.2%	0.3x	8.2x
Transcontinental Inc.	Canada	14.14	-42%	1,235.	2,2	6.1	2,001.5	429.9	21.5%	30.7%	1.1x	5.3x



## PPLLC Indices Valuation Summary

#### **Current Summary Trading Valuation Information**

	Revenue Multiples (TTM)					
Public Company Index	MEAN	MEDIAN	W. AVG	ADJ. W. AVG*		
US-based Digital Media and Internet	3.5x	3.2x	4.6x	3.5x		
Internationally-based Digital Media and Internet	2.7x	2.5x	3.9x	2.3x		
US-based eCommerce	3.3x	1.7x	3.8x	3.1x		
Internationally-based eCommerce	4.3x	1.4x	7.6x	4.0x		
US-based Digital Advertising	3.1x	2.3x	5.4x	2.7x		
Internationally-based Digital Advertising	2.5x	0.6x	8.9x	2.1x		
US-based Marketing Technology	6.4x	5.8x	6.6x	6.1x		
Internationally-based Marketing Technology	5.8x	3.8x	7.3x	5.0x		
Agency	1.1x	1.1x	1.2x	1.2x		
Marketing Services	1.4x	1.3x	3.2x	2.2x		
Traditional Media	2.7x	2.2x	3.4x	3.0x		
Software	6.3x	5.6x	6.8x	6.7x		
Information	4.2x	3.6x	6.4x	5.0x		
Business Services	1.2x	0.9x	2.5x	2.0x		

As of close of business on 12/31/18



<sup>\*</sup>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**

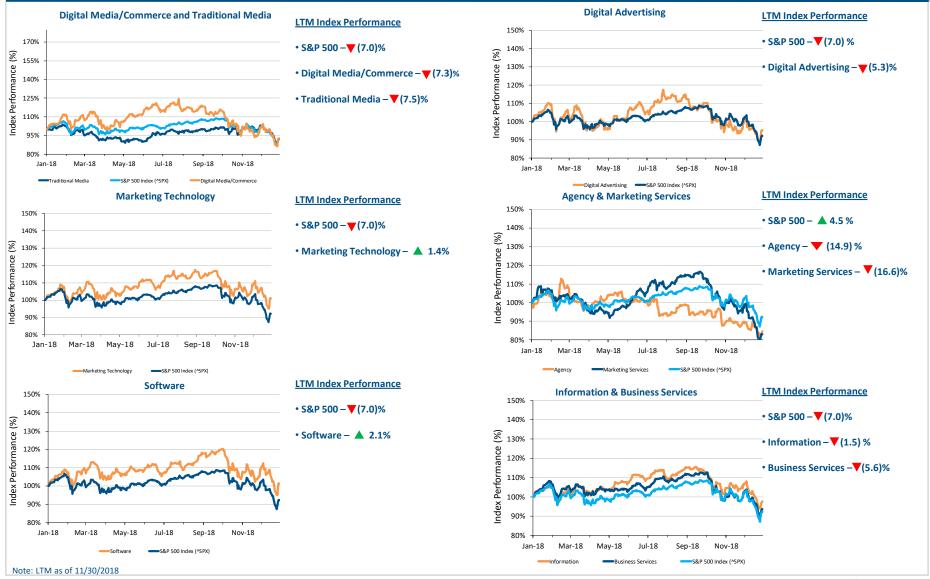
		EBITDA Multi	oles (TTM)	
Public Company Index	MEAN	MEDIAN	W. AVG	ADJ. W. AVG*
US-based Digital Media and Internet	26.8x	19.5x	16.1x	21.4x
Internationally-based Digital Media and Internet	12.0x	9.2x	13.5x	11.5x
US-based e-commerce	18.5x	14.5x	18.3x	14.8x
Internationally-based e-commerce	13.2x	11.3x	23.1x	12.5x
US-based Digital Advertising	32.1x	27.5x	16.0x	18.7x
Internationally-based Digital Advertising	26.9x	4.8x	23.9x	9.7x
US-based Marketing Technology	41.6x	31.3x	31.7x	21.3x
Internationally-based Marketing Technology	44.9x	14.3x	11.4x	14.0x
Agency	9.0x	8.5x	7.9x	7.8x
Marketing Services	9.2x	7.3x	14.7x	10.8x
Traditional Media	13.2x	9.3x	12.1x	11.3x
Software	29.8x	23.2x	22.6x	17.1x
Information	17.6x	16.1x	23.2x	16.2x
Business Services	10.4x	9.9x	12.9x	11.7x

As of close of business on 12/31/18



<sup>\*</sup>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



(\$ in Millions)

trategic /alues Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
raides Disclosed	Taiget	raiget Jeginent	Day Ci / Hivestor	Reported IV
	Travelport Worldwide Limited	Software	Elliott Management Corporation	\$ 4,400.0
	IBM Software Portfolio	Software	HCL Technologies Ltd	1,800.0
	Nutri System, Inc.	Digital Media/Commerce	Tivity Health	1,400.0
	KMD A/S	Business Services	NEC Corporation	1,200.0
	M*Modal	Software	3M Company	1,000.0
	Small Giant Games Oy	Digital Media/Commerce	Zynga, Inc.	700.0
	JACK WOLFSKIN - Ausrüstung für Draussen GmbH & Co. KGaA	Digital Media/Commerce	Callaway Golf Company	476.0
	IQMS	Software	Dassault Systemes	425.0
	Fairway Outdoor Advertising's Billboard Operations	Traditional Media	Lamar Advertising Company	418.5
	BiteSquad.com LLC	Digital Media/Commerce	Waitr Holdings, Inc.	321.0
	BuildingConnected, Inc.	Marketing Technology	Autodesk, Inc.	275.0
	Compuscan Informaton Technologies Pty Ltd.	Information	Experian plc	263.0
	Propeller Health	Software	Res Med Corporation	255.0
	CaseStack, Inc.	Business Services	Hub Group, Inc.	255.0
	Stadium Goods	Digital Media/Commerce	Farfetch UK Limited	250.0
	Avoka Technologies Pty, Ltd	Marketing Technology	Temenos Group AG	245.0
	Earthport PLC	Software	Visa, Inc.	244.
	Digital Evolution Group LLC	Agency & Marketing Services	Dentsu Aegis Network, Inc.	167.
	Verimatrix, Inc.	Software	INSIDE Secure SA	143.0
	GeBBS Healthcare Solutions, Inc.	Software	Chrys Ca pital	140.0
	Danal, Inc.	Marketing Technology	BOKU, Inc.	101.4
	wooga GmbH	Digital Media/Commerce	Playtika Ltd.	100.0
	Pegipegi, Mytour, and Travelbook	Digital Media/Commerce	Traveloka Holding Limited	66.8
	ForeSee Results, Inc.	Marketing Technology	Verint Systems, Inc.	65.
	Adestra Ltd.	Marketing Technology	Upland Software, Inc.	56.0
	Sigmoid	Digital Media/Commerce	Alphabet Inc.	40.0
	Ribacka Group AB	Digital Advertising	Better Collective A/S	34.:
	DealerScience LLC	Marketing Technology	TrueCar, Inc.	32.0
	Cortex Business Solutions, Inc.	Software	Drillinginfo, Inc.	31.2
	Dose Me Pty. Ltd.	Software	Tabula Rasa Healthcare, Inc.	31.3
	AdvisoryWorld, Inc.	Software	LPL Financial Holdings, Inc.	28.0
	CovalentWorks Corporation	Software	SPS Commerce, Inc.	23.0
	Prime Q Pty. Ltd.	Business Services	Accenture plc	22.8
	495 Communications LLC	Agency & Marketing Services	Good Life Networks, Inc.	15.0
	ThreadSol Private Limited	Software	Coats Group plc	12.0
	Teleport Future Technologies, Inc.	Digital Media/Commerce	Snap, Inc.	8.0
	Campus Vacations	Digital Media/Commerce	Verve.co	7.0
	Sense BI Solutions	Marketing Technology	One1 Technologies	6.4
	HROnboard Pty. Ltd.	Software	ELMO Talent Management Software Pty Ltd.	5.0
	Medical Media	Traditional Media	Swift Networks Group Ltd.	4.5
	Deeson Group Holdings Limited	Agency & Marketing Services	Manifesto Digital Limited	4.5
	Sunny Side Up Creative, Inc.	Agency & Marketing Services	Keywords Studios plc	4.3

(\$ in Millions)

Strategic				
Undisclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Alexalista Mala Daviena	A service O AAs destine Coming	Wellender Coords HC	*
	Absolute Web Designs	Agency & Marketing Services	Wellspring Search LLC	\$ -
	Adaptly, Inc.	Agency & Marketing Services	Accenture plc	
	AdVenture Magazine	Agency & Marketing Services	Mspark	-
	Allcard Limited	Agency & Marketing Services	CPI Card Group, Inc.	-
	Badgers & Winters	Agency & Marketing Services	Plan A	-
	Blue Latitude Health	Agency & Marketing Services	Fishawack Group of Companies	-
	Cibo Global, LLC	Agency & Marketing Services	projekt202, LLC	-
	Clock Four, Inc.	Agency & Marketing Services	Hero Digital LLC	-
	Colicchio Consulting	Agency & Marketing Services	Cushman & Wakefield, Inc.	-
	DARKHORSE NZ	Agency & Marketing Services	Project: Worldwide	-
	Devise Interactive LLC	Agency & Marketing Services	Vincit Oyj	-
	Drexel Media	Agency & Marketing Services	Mind64, Inc.	-
	Eccho Rights AB	Agency & Marketing Services	CJ ENM Corporation	-
	Economics Partners	Agency & Marketing Services	Ryan, LLC	-
	flow:fwd GmbH	Agency & Marketing Services	Webedia SAS	-
	KMK Industries	Agency & Marketing Services	Exhibit Systems, Inc.	-
	La Bibi.It Srl	Agency & Marketing Services	BTI Studios AB	-
	Lynx Conseil	Agency & Marketing Services	Keyrus SA	-
	, Maverick.ai	Agency & Marketing Services	OutboundWorks, Inc.	-
	MDG (Marketing Design Group)	Agency & Marketing Services	Freeman Company	-
	Media Creatures	Agency & Marketing Services	B.B.E.	-
	Method Communications, Inc.	Agency & Marketing Services	Chime Communications Limited	_
	Mustache LLC	Agency & Marketing Services	Cognizant Technology Solutions Corporation	_
	Prime Yield	Agency & Marketing Services	Gloval	
	ReUP	Agency & Marketing Services	Lightspeed POS, Inc.	
	Revolution Strategy, Inc.	Agency & Marketing Services	Civilized Worldwide, Inc.	_
	RSVP Publications, Inc.	Agency & Marketing Services	Allegra Holdings LLC	
	Ruf Strategic Solutions	Agency & Marketing Services	Infutor Data Solutions Corporation	
	ScentTech Aromatics	Agency & Marketing Services	Scentpression LLC	
	SpinWeb Internet Media, Inc.	Agency & Marketing Services	Mojo Media Labs, Inc.	_
	Syfte Pty Limited	Agency & Marketing Services  Agency & Marketing Services	Wipro Limited	
	The One to One Group LLC	Agency & Marketing Services  Agency & Marketing Services	Allegiance Fundraising Group	
	Videobeat Networks GmbH	Agency & Marketing Services  Agency & Marketing Services	Dentsu, Inc.	
	Waddell Pointer	Agency & Marketing Services Agency & Marketing Services	Candor Public Relations	
		Business Services		-
	Accompass, Inc.		Arthur J. Gallagher & Co.	
	Alfa-Beta Solutions	Business Services	Infor Global Solutions, Inc.	-
	Ambonare, Inc.	Business Services	Red River Computer Company, Inc.	-
	AP Staffing	Business Services	Cross Country Healthcare, Inc.	-
	Aptimen Managers	Business Services	Taplow Group S.A.	-
	Ariscu	Business Services	ComplyWorks Ltd.	-
	Black Pixel	Business Services	Hypergiant Space Age Solutions	-
	Bloovo	Business Services	Maharah Human Resources Company	-

(\$ in Millions)

Strategic Tr	ansactions
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isclosed	Target	Target Segment	Buyer/Investor	Reporte
	Broadcast Sports International LLC	Business Services	NEP Group, Inc.	\$
	BSD Consulting	Business Services	ELEVATE Global Limited	
	Cape Fear Staffing	Business Services	BelFlex Staffing Network	
	Cast & Crew Entertainment Services, LLC	Business Services	EQT Partners	
	CMG-Nicsa	Business Services	Park Place Technologies, Inc.	
	CMIT Solutions, Inc.	Business Services	Craftsman Capital Advisors	
	ConnecticsSearch Associates	Business Services	WorkForceConnexion LLC	
	Dictate IT Ltd.	Business Services	Clanwilliam Group Ltd.	
	Digital Hub LLC	Business Services	FUSE LLC (Fuse Team Chicago)	
	Driwen, Inc.	Business Services	Levi, Ray & Shoup, Inc.	
	Electronic Data, Inc.	Business Services	Arora Engineers, Inc.	
	Enaxis Consulting LP	Business Services	Accenture plc	
	Enroute Networks	Business Services	Dynamic Quest, Inc.	
	Esquify, Inc.	Business Services	Xact Data Discovery	
	Firstline Security Systems, Inc.	Business Services	Convergint Technologies LLC	
	GoOn - Evolucao em Gestao de Riscos Ltda	Business Services	FICO	
	Health4Tech	Business Services	molfar.io	
	Helis LT	Business Services	Tesonet	
	Huckaby & Associates, Inc.	Business Services	The Hilb Group LLC	
	InfoSec Skills Ltd.	Business Services	QA Limited	
	Integro Holdings	Business Services	EPIC Holdings, Inc.	
	intive.com	Business Services	Mid Europa Partners	
	iSolutions, Inc.	Business Services	Emerson Electric Co.	
	IT Lynk	Business Services	Involta	
	JDC Group, Inc.	Business Services	Consulting Solutions International, Inc.	
	Knovation	Business Services	ACT, Inc.	
	Knowledgent Group Inc.	Business Services	Accenture plc	
	Lifecycle Technology Ltd.	Business Services	Enstoa, Inc.	
	Linn Thurber LLP	Business Services	Ernst & Young LLP	
	Maximum Computer Systems, Inc.	Business Services	Aktion Associates, Inc.	
	Mondo	Business Services	Addison Group	
	MSP & Hosting Business, Lore Systems, Inc.	Business Services	Ntiva, Inc.	
	Net Transcripts, Inc.	Business Services	VIQ Solutions, Inc.	
	Objective International	Business Services	Germanedge	
	Oxala Consulting	Business Services	Deloitte LLP	
	PACKETOP	Business Services	Mtechnologies	
	Print Audit, Inc.	Business Services	ECI Software Solutions, Inc.	
	Prinzio	Business Services	Gogoprint (Thailand) Co., Ltd.	
	SARS Software Products, Inc.	Business Services	Valsoft Corporation	
	Saxa Solutions LLC	Business Services	J2 Interactive LLC	
	SEC Servizi SPA	Business Services	Accenture plc	
	Sienna Group LLC	Business Services	ConnectWise, Inc.	

(\$ in Millions)

closed	Target	Target Segment	Buyer/Investor	Reported TV
	SmartSource Management	Business Services	SolderWorks LLC	\$
	The Godfrey Group	Business Services	Winning By Design, Inc.	<del>Y</del>
	Turing Group	Business Services	ServerCentral, Inc.	
	United Group Printing	Business Services	SGM Technologies, Inc.	
	Validant	Business Services	GHO Capital Partners	
	VAT Systems	Business Services	Ryan, LLC	
	Venture Technologies, Inc.	Business Services	Converge One, Inc.	
	VirBELA	Business Services	eXp World Holdings, Inc.	
	We Are Friday Ltd	Business Services	PA Consulting Group Limited	
	Workstar Technologies	Business Services	Aniva Holdings	
	Xplenty Ltd.	Business Services	Xenon Ventures	
	YPI Cre w	Business Services	The Schulte Group	
	Z7 Networks	Business Services	Executech.com	
	Gamned!	Digital Advertising	TF1 Group	
	HomeVisit	Digital Advertising	CoreLogic, Inc.	
	Playwire.com	Digital Advertising	FreakOut Holdings, Inc.	
	Tripping International, Inc.	Digital Advertising	HomeToGo GmbH	
	VigLink	Digital Advertising	sovrn Holdings, Inc.	
	woOw!	Digital Advertising	Ta-Ta S.A.	
	YOU Technology, Inc.	Digital Advertising	Inmar, Inc.	
	AHA Taxis	Digital Media/Commerce	Ebix, Inc.	
	Applanga	Digital Media/Commerce	Trans Perfect Translations	
	Art.com, Inc.	Digital Media/Commerce	WalMart Stores, Inc.	
	Atomic Bazaar	Digital Media/Commerce	OpenSea, Inc	
	Banana & Co. Game Portfolio	Digital Media/Commerce	Maple Media LLC	
	Curse Media	Digital Media/Commerce	FANDOM	
	Dakine	Digital Media/Commerce	Marquee Brands LLC	
	Delivery Hero Holding GmbH	Digital Media/Commerce	Ta ke a wa y.com	
	eBilet Polska Sp. Z o.o.	Digital Media/Commerce	Allegro Group Sp. Z oo	
	Feastly, Inc.	Digital Media/Commerce	ChefsFeed	
	FoodyDirect	Digital Media/Commerce	Goldbelly, Inc.	
	FreshPlanet, Inc.	Digital Media/Commerce	Gameloft	
	India Property Online Pvt. Ltd.	Digital Media/Commerce	Quikr India Private Limited	
	La Senza Corporation	Digital Media/Commerce	Regent L.P.	
	Lingo Ventura GmbH	Digital Media/Commerce	Babbel	
	NameJet	Digital Media/Commerce	Web.com Group, Inc.	
	OnePlace	Digital Media/Commerce	Masii.com	
	PistonHeads.com	Digital Media/Commerce	CarGurus, Inc.	
	Playa Games GmbH	Digital Media/Commerce	Stillfront Group	
	QuikOrder, Inc.	Digital Media/Commerce	Pizza Hut	
	Switchplus AG	Digital Media/Commerce	Combell Goup NV	
	Tablet Inc. stment Summary December 2018	Digital Media/Commerce	Michelin North America, Inc.	

(\$ in Millions)

Strategic '	Transactions
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closed	Target	Target Segment	Buyer/Investor	Reported
	The Drive	Digital Media/Commerce	Flash Equity	\$
	The Games Company	Digital Media/Commerce	Blockchain Innovations Corp.	
	ValuePenguin, Inc.	Digital Media/Commerce	LendingTree LLC	
	Consolo Services Group LLC	Information	WellSky, Inc.	
	JLR, Inc.	Information	Equifax, Inc.	
	Quandl, Inc.	Information	NASDAQ	
	Acquired IO, Inc.	Marketing Technology	adjust GmbH	
	CloudMagic	Marketing Technology	Essential Products, Inc.	
	DocuLynx, Inc.	Marketing Technology	DRS Imaging Services	
	DORA	Marketing Technology	Google Cloud Platform	
	eBrevia, Inc.	Marketing Technology	Donnelley Financial Solutions, Inc.	
	EllisLab, Inc.	Marketing Technology	Digital Locations, Inc.	
	flexAnswer Solutions Pte. Ltd.	Marketing Technology	Sabio Limited	
	Gro Solutions, Inc.	Marketing Technology	Q2 Holdings, Inc.	
	Influans, Inc.	Marketing Technology	Ogury Limited	
	InnoStreams	Marketing Technology	Braidio	
	KaleidaCare Management Solutions	Marketing Technology	Alpine SG LLC	
	Kuvana, Inc.	Marketing Technology	Swiftpage	
	Lasso Data Systems	Marketing Technology	ECI Software Solutions, Inc.	
	Luckey SAS	Marketing Technology	Airbnb, Inc.	
	Lumio Analytics SL	Marketing Technology	InfluencerDB Tech GmbH & Co. KG	
	Marketing G2	Marketing Technology	NEWSCYCLE Solutions, Inc.	
	Netsize SA	Marketing Technology	LINK Mobility Group ASA	
	NextGenVest, Inc.	Marketing Technology	CommonBond, Inc.	
	Perfect Dashboard	Marketing Technology	Undisclosed	
	Portent.IO	Marketing Technology	YouGovplc	
	Prefer Ltd.	Marketing Technology	Ackama Group Limited	
	QuickTapSurvey	Marketing Technology	Formstack, LLC	
	RGB Notes LLC	Marketing Technology	Nimble Collective	
	School Loop, Inc.	Marketing Technology	Think3	
	Screen6	Marketing Technology	Samba TV	
	SEEK Company	Marketing Technology	Directions Research, Inc.	
	SellSuki	Marketing Technology	LINE Corporation	
	Siftery, Inc.	Marketing Technology	G2 Crowd, Inc.	
	Spigit	Marketing Technology	Planview, Inc.	
	The Athene Group, LLC	Marketing Technology	Sagewind Capital LLC	
	The Big Willow, Inc.	Marketing Technology	The Aberdeen Group	
	Thesaurus Technology	Marketing Technology	MRI Software LLC	
	Unscriptd.com	Marketing Technology	The Players' Tribune, Inc.	
	Whip, Inc.	Marketing Technology  Marketing Technology	DriveItAway, Inc.	
	2g Transit Solutions	Software	Routematch Software, Inc.	
	AbarCloud	Software	Snapp.ir	

(\$ in Millions)

Strategic Undisclosed	Target	Target Segment	Buyer/Investor	Reported TV
			1,11	Reported 1 V
	Allower ft Dougle was a Consumation of the Consumat	Caffringer	Liberty Hell Control	<b>A</b>
	Aircraft Performance Group, Inc. Albert - Your Pocket Bookkeeper	Software	Liberty Hall Capital Banco Santander, S.A.	\$ -
		Software Software	· · · · · · · · · · · · · · · · · · ·	
	Apacheta Corporation		Brightree LLC	
	Babelway SA	Software	Tradeshift, Inc.	
	Badr	Software	Incorta, Inc.	-
	Bex LLC	Software	Northern Trust Corporation	-
	Boundless Spatial, Inc.	Software	Planet Labs, Inc.	
	BrandNewHealth	Software	Sentiance NV/SA	<u> </u>
	Butler (butlerfortrello.com)	Software	Trello, Inc.	-
	Cincinnati Time Systems	Software	Ascentis Corporation	-
	CMS Hospitality	Software	Valsoft Corporation	-
	Commcise Software Limited	Software	Euronext N.V	
	Compello AS	Software	Di Central, Inc.	-
	COMSA Computer and Software GmbH	Software	Siemens AG	-
	Concept Searching, Inc.	Software	Netwrix Corporation	-
	Contemi Group	Software	Triple P Capital	-
	DAVID Corporation	Software	Ventiv Technology, Inc.	-
	Dealer Information Systems Limited	Software	PBS Systems Group	-
	eRoom Securities LLC	Software	Dash Financial Technologies	-
	FileHound Document Management Limited	Software	Systems Technology (S.E.) Ltd.	-
	Finantix S.p.A	Software	Motive Capital Management	-
	finAPI GmbH	Software	SCHUFA Holding AG	-
	G2, Inc.	Software	Huntington Ingalls Industries, Inc.	-
	GrayHash	Software	LINE Plus Corporation	_
	Haiku Deck	Software	BookRags, Inc.	_
	Hiperos, LLC	Software	Coupa Software, Inc.	-
	IBC Hospitality Technologies	Software	OBASA Hospitality, Inc.	-
	Initial State Technologies	Software	Tektronix, Inc.	-
	Interplx, Inc.	Software	Serko Limited	-
	IT Glue	Software	Kaseya Limited	-
	Jackrabbit Systems, Inc.	Software	Simpleview Inc.	-
	Koru Careers, Inc.	Software	Capp & Co Limited	-
	LANSA, Inc.	Software	Idera, Inc.	-
	Lendstar GmbH	Software	epay	
	Microwize Technology, Inc.	Software	Encoda LLC	
	Mirador Financial, Inc.	Software	CUNA Mutual Group	-
	MOBI Wireless Management LLC	Software	Tangoe, Inc.	
	Neverfail.com	Software	Online Tech LLC	
	NewNet Communications Technologies LLC	Software	ZephyrTel	
	Onssi	Software	Qognify	
	Orchestra S.A.	Software	TIBCO Software, Inc.	
	OwnAmerica LLC	Software	Renters Warehouse	

(\$ in Millions)

Strategic				
Undisclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Parata Systems LLC	Software	TCGRx	\$ -
	Perigon Solutions Limited	Software	Ikon Science Limited	-
	PokitDok, Inc.	Software	Change Healthcare, Inc.	
	Professional Receivables Network	Software	Kemberton Healthcare Services LLC	
	Propelware.com	Software	Right Networks LLC	-
	RentalTrax LLC	Software	Point of Rental Software, Inc.	-
	RootSecure Corporation	Software	Arctic Wolf Networks, Inc.	-
	SceneDoc, Inc.	Software	Tyler Technologies	-
	Security Information & Management Systems, Inc.	Software	Bold Perennial	-
	SeeTec GmbH	Software	Qognify	-
	SwiftReach Networks, Inc.	Software	Rave Mobile Safety	-
	Trac Systems Ltd.	Software	Civica Group Ltd.	-
	TripleCare, Inc.	Software	Curavi Health, Inc.	-
	Zafin	Software	Accenture plc	-
	Aurora Media Worldwide UK Limited	Traditional Media	All3Media Limited	-
	AVENUE Magazine	Traditional Media	Cohen Media Group	-
	Codigo LLC	Traditional Media	Spectrio LLC	-
	Mainland Music SA	Traditional Media	Live Nation Entertainment, Inc.	-
	Midwest Banner	Traditional Media	Allegra Marketing Print Mail	-
	Palisades News	Traditional Media	Mirror Media Group, Inc.	-
	Paradox Rettigheter AS	Traditional Media	SF Studios	-
	Plantoon	Traditional Media	Apple Inc.	-
	Poisoned Pen Press	Traditional Media	Sourcebooks, Inc.	-
	Sandpiper Media	Traditional Media	GMSTEK LLC	-
	Simplicity Esports LLC	Traditional Media	Smaaash Entertainment, Inc.	-
	Virtually Entertained Limited	Traditional Media	Motors port Network LLC	-
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#### (\$ in Millions)

Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	MINDBODY, Inc.	Software	Vista Equity Partners	\$ 1,800.0
	Trade Me Limited	Digital Media/Commerce	Apax Partners L.P.	1,800.0
	MightyHive	Agency & Marketing Services	S4 Capital	160.0
Buyout Deals				
Undisclosed	Target	Target Segment	Buyer/Investor	Reported TV
	MERGE	Agency & Marketing Services	Keystone Capital, Inc.	\$ -
	Meyers Research LLC	Agency & Marketing Services	MidOcean Partners	-
	OPEN Health	Agency & Marketing Services	Amulet Capital Partners, LP	-
	Vision Integrated Graphics Group	Agency & Marketing Services	H.I.G. Capital LLC	-
	Accelerate Learning, Inc.	Business Services	The Carlyle Group	-
	Bell and Howell, LLC	Business Services	WestView Capital Partners	-
	Cielo Talent	Business Services	Permira Advisers	-
	Magna Legal Services	Business Services	CIVC Partners	-
	PEC Safety Operations LLC	Business Services	Thoma Bravo, Inc.	-
	Pickupp	Business Services	SPARK Ventures	-
	Rock Solid Technologies, Inc.	Business Services	Strattam Capital	-
	One.com	Digital Media/Commerce	Cinven	-
	Serraview	Marketing Technology	JMI Equity	-
	7Park Data	Software	Vista Equity Partners	-
	Host Analytics, Inc.	Software	Vector Capital Corporation	-
	MYCOM OSI	Software	Inflexion Private Equity LLP	-
	Orion Talent	Software	L2 Capital	-
	RegEd, Inc.	Software	Gryphon Investors, Inc.	-
	Service Max, Inc.	Software	Silver Lake Partners	-
	Tendril Networks, Inc.	Software	Rubicon Technology Partners	-



(\$ in Millions)

alues Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Tokopedia	Digital Media/Commerce	Alibaba Group Holding Ltd.	\$ 1,100
	Swiggy	Digital Media/Commerce	Tencent Holdings Ltd.	1,000
	BYJU	Business Services	General Atlantic, LLC	540
	Cambridge Mobile Telematics	Software	SoftBank Corporation	500
	Fair.com	Digital Media/Commerce	SoftBank Corporation	385
	G7 Networks	Software	Tencent Holdings Ltd.	320
	Yuanfudao.com	Business Services	IDG Capital Partners	300
	Plaid Technologies, Inc.	Software	Andreessen Horowitz	250
	Minted, LLC	Digital Media/Commerce	Permira Advisers	208
	Niantic, Inc.	Digital Media/Commerce	Institutional Venture Partners	200
	Corcentric LLC	Software	JP Morgan Chase & Co.	200
	Discord	Digital Media/Commerce	Greenoaks Capital Management, L.P.	150
	GrabTaxi Pte. Ltd.	Digital Media/Commerce	Yamaha Motor	150
	HomeToGo GmbH	Digital Advertising	Insight Venture Partners	150
	Vroom, Inc.	Digital Media/Commerce	AutoNation, Inc.	146
	Moonbug Entertainment Ltd.	Traditional Media	Felix Capital	145
	Keking	Software	Ant Financial Services Group	144
	Earnin	Software	Andreessen Horowitz	125
	Zwift, Inc.	Digital Media/Commerce	Highland Europe (UK) LLP	120
	Waves Platform AG	Software	Dolfin	120
	InVision App, Inc.	Software	Spark Capital	115
	Looker Data Sciences, Inc.	Marketing Technology	Kleiner Perkins Caufield & Byers	103
	Dataiku SAS	Software	Iconig Capital	103
	Samsara Networks, Inc.	Software	Andreessen Horowitz	100
	Cloud Constellation Corporation	Software	HCH Group Company	100
	Vogo Rentals	Digital Media/Commerce	Ola	100
	Seismic Software, Inc.	Marketing Technology	Lightspeed Venture Partners	10
	Fresh Buddy	Digital Media/Commerce	Genesis Capital	10
	Faire Wholesale. Inc.	Digital Media/Commerce	Lightspeed Venture Partners	10
	ACV Auctions LLC	Digital Media/Commerce	Bessemer Venture Partners	9:
	Pindrop Security	Software	Goldman Sachs Merchant Banking	9
	Nexthink S.A.	Software	Index Ventures	8.
	Carta, Inc.	Software	Meritech Capital Partners	8
	Toss.im	Software	Kleiner Perkins Caufield & Byers	8
	Amplitude, Inc.	Marketing Technology	Sequoia Capital	8
	Procore Technologies, Inc.	Software Digital Media/Commerce	Tiger Global Management, LLC Tencent Holdings Ltd.	7.
	Mogu, Inc. ShopKeep.com, Inc.	Software	Tribeca Venture Partners	6
		Digital Advertising	FTV Capital	6
	Vagaro, Inc.			
	AtScale, Inc.	Marketing Technology	Storm Ventures LLC	5
	Project Verte Alto Pharmacy	Digital Media/Commerce Digital Media/Commerce	(Private Investors)  Greenoaks Capital Management, L.P.	50 50

(\$ in Millions)

VC/Growth Capital	Tarrest	Townst Commont	Process (Increase or	Domanta d 771
Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	UrbanClap Technologies India Pvt. Ltd.	Digital Media/Commerce	Steadview Capital	\$ 50.0
	Aceable, Inc.	Business Services	Sageview Capital	47.0
	Freeletics GmbH	Digital Media/Commerce	Jazz Venture Partners	45.0
	LightStep, Inc.	Software	Sequoia Capital	41.0
	Sprout Social, Inc.	Marketing Technology	New Enterprise Associates	40.5
	Egress Software Technologies Ltd.	Software	Albion Ventures LLP	40.0
	FinalCAD	Marketing Technology	Draper Espirit	40.0
	Optibus Ltd.	Software	Insight Venture Partners	40.0
	Weave Technologies, Inc.	Marketing Technology	Bessemer Venture Partners	37.5
	TotallyMoney Ltd.	Software	Scottish Equity Partners	36.7
	NavVis GmbH	Software	Digital + Partners	35.5
	Crew	Marketing Technology	Tenaya Capital	35.0
	Toppr.com	Business Services	Eight Roads Ventures	35.0
	Rothy's	Digital Media/Commerce	Goldman Sachs Merchant Banking	35.0
	ninjacart.in	Digital Media/Commerce	Accel Partners	35.0
	Same Day Security, Inc.	Software	(Private Investors)	35.0
	EdCast, Inc.	Business Services	SoftBank Capital	34.0
	Contentful	Marketing Technology	Sapphire Ventures, LLC	33.5
	Chorus.ai	Marketing Technology	Redpoint Ventures	33.0
	Acast AB	Digital Media/Commerce	Swedbank Robur AB	33.0
	ABC Technologies, Inc.	Software	Susquehanna International Group, LLP	30.0
	Bowtie Life Insurance Company Limited	Software	Hong Kong X Technolgy Fund	30.0
	Tigera, Inc.	Software	Insight Venture Partners	30.0
	Good Money, Inc.	Software	Breyer Capital	30.0
	LeanIX GmbH	Software	Insight Venture Partners	30.0
	Price f(x) AG	Marketing Technology	Digital + Partners	28.4
	Camunda Services GmbH	Marketing Technology	Highland Europe (UK) LLP	28.4
	Lumeon Inc.	Software	Amadeus Capital Partners Limited	28.0
	Sansan, Inc.	Marketing Technology	T. Rowe Price Group, Inc.	27.0
	Synthace Limited	Software	Luminous Ventures	25.6
	DataCamp	Business Services	Accomplice VC	25.0
	Avanan, Inc.	Software	Stage 1 Ventures, LLC	25.0
	K Health, Inc.	Information	Comcast Ventures	25.0
	Guru Technologies, Inc.	Marketing Technology	Thrive Capital	25.0
	Juniper Square, Inc.	Software	Felicis Ventures	25.0
	LogDNA	Software	Emergence Capital Partners	25.0
	Licious	Digital Media/Commerce	Nichirei Corporation	25.0
	M17 Entertainment Limited	Digital Media/Commerce	Pavilion Capital	25.0
	Workato, Inc.	Marketing Technology	Battery Ventures	25.0
	Tourlane	Digital Media/Commerce	Sequoia Capital	24.0
	Moglix	Digital Media/Commerce	Accel Partners	23.0
	Happiest Baby, Inc.	Digital Media/Commerce	Greycroft Partners LLC	23.0

(\$ in Millions)

/C/Growth Capital	Toward	Toward Community	Daniel II.	Daniel Inc
/alues Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	dott	Digital Media/Commerce	EQT Ventures	\$ 22
	QualiSystems Ltd.	Software	Dell Ventures	22
	Lianshang Literature	Digital Media/Commerce	Hopu Investments	20
	GitLab B.V.	Software	Goldman Sachs Merchant Banking	20
	Ada Support, Inc.	Marketing Technology	FirstMark Capital	19
	4iQ	Software	C5 Capital	18
	BacklotCars, Inc.	Digital Media/Commerce	Origin Ventures	18
	Spring Discovery, Inc.	Software	General Catalyst Partners LLC	18
	TransferGo Ltd.	Software	Revo Capital	17
	Data Republic Pty. Ltd.	Software	Singtel Innov8 Ventures Pte. Ltd.	16
	Tagomi Systems, Inc.	Software	Collaborative Fund	16
	Securly, Inc.	Software	Owl Ventures	16
	TechSee Augmented Vision Ltd.	Marketing Technology	Salesforce Ventures	16
	Import.io Ltd	Software	Talis Capital	15
	Gorilla Technology Group	Software	SBI Investment	15
	Celect. Inc.	Software	August Capital Management	15
	AppOnboard, Inc.	Software	Breakaway Growth Fund	15
	The Riveter	Digital Media/Commerce	Alpha Edison	15
	Jaanuu, Inc.	Digital Media/Commerce	JMK Consumer Growth Partners	15
	NuORDER, Inc.	Digital Media/Commerce	NewSpring Growth	15
	Fivetran, Inc.	Software	Matrix Partners	15
	Pypestream, Inc.	Marketing Technology	W.R. Berkley Corporation	15
	Tenfold	Marketing Technology  Marketing Technology	Andreessen Horowitz	14
	Meta CX, Inc.	Marketing Technology  Marketing Technology	Upfront Ventures	14
	Zstack	Software	Shenzhen Capital Group	14
	SnapTravel, Inc.	Digital Media/Commerce	Telstra Ventures Group	13
	Zesty.ai	Software	Plug & Play Tech Ventures	13
	PropelPLM, Inc.	Software	Andreessen Horowitz	12
	Blend Network Ltd.	Software	(Private Investors)	12
	FortressIQ, Inc.	Software	Lightspeed Venture Partners	12
	Machine Metrics, Inc.	Software	Tola Capital	11
	Sentryo SAS	Software	Sopra Steria Group	11
	Wisdo Ltd.	Digital Media/Commerce	Google Ventures	11
	Solo.io, Inc.	Software	Redpoint Ventures	
	Forge.Al	Software	Accomplice VC	
	Dolls Kill	Digital Media/Commerce	Undisclosed	10
	Edison Interactive, Inc.	Marketing Technology	(Private Investors)	10
	drchrono, Inc.	Software	SQN Venture Partners	10
	Student.com Limited		•	10
	SonarMD LLC	Digital Advertising Software	CITIC Capital Partners	
	Omnivore Technologies, Inc.	Marketing Technology	Arboretum Ventures The Coca-Cola Company	
	Roposo.com	Digital Media/Commerce	Tiger Global Management, LLC	10

(\$ in Millions)

VC/Growth Capital	Tourse	Toward Commont	Proceedings and the second	processed med
Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	AVOXI, Inc.	Marketing Technology	Ballast Point Ventures	\$ 10.0
	Luminoso Technologies, Inc.	Marketing Technology	Liberty Global Ventures	10.0
	Jirnexu Sdn. Bhd.	Software	Experian plc	10.0
	Tridiuum, Inc.	Software	Sopris Capital Associates	9.5
	Popdog, Inc.	Digital Media/Commerce	Makers Fund	9.0
	Kindur Services, Inc.	Software	Point72 Ventures	9.0
	Aspen RxHealth	Software	Flare Capital Partners	9.0
	Forethought, Inc.	Marketing Technology	New Enterprise Associates	9.0
	Imperative Execution, Inc.	Software	Undisclosed	9.0
	MoEngage, Inc.	Marketing Technology	Matrix Partners	9.0
	Buzzoole S.r.l.	Marketing Technology	Impulse VC	8.9
	Eclypsium, Inc.	Software	Madrona Venture Group	8.8
	FabAlley	Digital Media/Commerce	SAIF Partners	8.5
	YayPay, Inc.	Software	Information Venture Partners	8.4
	15Five, Inc.	Software	Origin Ventures	8.2
	TicketGuardian	Software	American Family Ventures	8.0
	Trustology Ltd.	Software	Two Sigma Ventures	8.0
	Cogito Corporation	Marketing Technology	Hearst Ventures	8.0
	Flux Systems Limited	Software	e.Ventures	7.5
	Akumina, Inc.	Software	Stage 1 Ventures, LLC	7.5
	Cloudify Ltd.	Software	KPN Ventures	7.0
	Wise Systems, Inc.	Software	Gradient Ventures	7.0
	Wandelbots GmbH	Software	Paua Ventures GmbH	6.8
	Source Day LLC	Marketing Technology	Silverton Partners	6.5
	Tonsser ApS	Digital Media/Commerce	Alven Capital Partners	6.4
	Facilio, Inc.	Software	Accel Partners	6.4
	Formant.io	Software	Signalfire Fund	6.0
	Oura Health Oy	Digital Media/Commerce	MSD Capital, L.P.	5.7
	Props	Marketing Technology	Undisclosed	5.5
	Flipdish	Digital Media/Commerce	Global Founders Capital	5.5
	ExecVision, Inc.	Marketing Technology	Edison Partners	5.4
	Gamelearn	Business Services	Kibo Ventures	5.0
	AvantStay, Inc.	Digital Media/Commerce	Bullpen Capital	5.0
	Haltian Oy	Business Services	Inventure Oy	5.0
	Avochato, Inc.	Marketing Technology	Amity Ventures	5.0
	springbig	Marketing Technology	Altitude Investment Partners	5.0
	Morressier GmbH	Software	Cherry Ventures	4.5
	DEVCON	Software	(Private Investors)	4.5
	Block Renovation	Digital Media/Commerce	New Enterprise Associates	4.5
	enosiX, Inc.	Software	Capital Midwest Fund	4.2
	Ascent360, Inc.	Marketing Technology	Access Venture Partners	4.1
	GoReact	Business Services	Five Elms Capital	4.0

(\$ in Millions)

VC/Growth Capital					
Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV	
	Harness Wealth Advisers LLC	Business Services	Bain Capital Ventures	\$ 4.	
	Jungle Creations Limited	Agency & Marketing Services	Edge Investments	3.	
	Location Sciences Group PLC	Software	(Private Investors)	3.	
	Minit s.a.	Software	Earlybird Venture Capital GmgH & Co. KG	3.	
	Allbound	Marketing Technology	Canal Partners	3.	
	Aiera, Inc.	Marketing Technology  Marketing Technology	Flybridge Capital Partners	3	
	Pimcore	Marketing Technology  Marketing Technology	Auctus Capital Partners	3	
	Glose SAS	Digital Media/Commerce	Bpi France	3	
	Mediktor Corporation	Software	Castel Capital		
	Student Pop SAS	Digital Media/Commerce	Impact Partenaires		
	NoTraffic Ltd.	Software	Next Gear Ventures	3	
	Housejoy.in	Digital Media/Commerce	Matrix Partners India		
	Ottopia Ltd.	Software	Plug & Play Tech Ventures	3	
	Winestyr	Digital Media/Commerce	Undisclosed		
	PlanetScale, Inc.	Software	Signalfire Fund		
	Nomics LLC	Information	Arthur Ventures		
	Cybeats Technologies, Inc.	Software	iNovia Capital		
	Vyng, Inc.	Digital Media/Commerce	Omidyar Network		
	Inscribe.ai	Software	Crosslink Capital		
	Snapt, Inc.	Software	Convergence Partners		
	Os prey Informatics	Software	Evok Innovations		
	Matcherino, Inc.	Digital Media/Commerce	Madrona Venture Group		
	Soomla, Inc.	Digital Media/Commerce  Digital Advertising	JAL Ventures		
	Evensi	Marketing Technology	(Private Investors)		
		Software	Tamedia		
	Monito.com Osmosis.org	Business Services	Greycroft Partners LLC		
	NuID, Inc.	Software	8VC		
	Floom Limited		First Minute Capital		
	LemonBox	Digital Media/Commerce	Y Combinator		
		Digital Media/Commerce			
	Mental Canvas LLC	Marketing Technology	M12 M12		
	Acerta Analytics Solutions, Inc.	Software Software			
	Osome Pte. Ltd.		Target Global		
	OnSiteIQ, Inc.	Software Similar Markin (Grander and Similar Markin (Grand	Anthemis Group		
	SalonHQ	Digital Media/Commerce	Panache Ventures		
	ObjectBox Limited	Software	Vito Ventures		
	Accountable S.A.	Software	Connect Ventures		
	Enzyme Health, Inc.	Digital Advertising	Silverton Partners		
	BrainCheck, Inc.	Software	XFactor Ventures		
	Ambi, Inc.	Business Services	NXT Ventures		
	Spocket, Inc.	Digital Media/Commerce	7 Gate Ventures		
	techspert.io Ltd.	Digital Advertising	Angel CoFund		
	Qwick LLC	Business Services	XG Ventures		

(\$ in Millions)

VC/Growth Capital				
Values Disclosed	Target	Target Segment	Buyer/Investor	Reported TV
	App Radar Software GmbH	Marketing Technology	eQventures	\$ 1.3
	Bounce, Inc.	Digital Media/Commerce	Seabed VC	1.2
	Fashwire, Inc.	Digital Media/Commerce	(Private Investors)	1.2
	WhizAl, Inc.	Marketing Technology	Trigyn Technologies	1.1
	NinjaCat, Inc.	Marketing Technology	Lighter Capital	1.1
	Ledgy AG	Software	btov Partners	1.1
	Atmos Home, Inc.	Software	Luminance Brands	1.0
	LambdaTest	Software	Leo Capital Holdings, LLC	1.0
	Farmstead	Digital Media/Commerce	Y Combinator	0.2

(\$ in Millions)

VC/Growth Capital				
Undisclosed	Target	Target Segment	Buyer/Investor	Reported TV
	Agenda Edu	Business Services	Bossa Nova Investments	\$ -
	Biorasi LLC	Business Services	Riordan, Lewis & Haden	-
	BizLibrary	Business Services	Primus Capital Funds	-
	Alphaslot.io	Digital Media/Commerce	The Spartan Group LLC	-
	Blade Group	Digital Media/Commerce	Charter Communications, Inc.	-
	Ilia Beauty, Inc.	Digital Media/Commerce	Silas Capital	-
	Jolyn Clothing Company	Digital Media/Commerce	Norwest Venture Partners	-
	ParkJockey, Inc.	Digital Media/Commerce	SoftBank Corporation	-
	Persona, Inc.	Digital Media/Commerce	Emil Capital	-
	Akeneo SAS	Information	(Private Investors)	-
	AutoQuotes, Inc.	Marketing Technology	Luminate Capital Partners	-
	Indio Technologies, Inc.	Marketing Technology	NFP Ventures	-
	Acendre Pty. Ltd.	Software	Strattam Capital	-
	Clevers oft GmbH	Software	Main Capital Partners B.V.	-
	Immersive Wisdom, Inc.	Software	In-Q-Tel	-
	MultiScale Health Networks	Software	Johnson & Johnson Innovation, LLC	-
	Netsmart Technologies, Inc.	Software	TA Associates	-
	Opus One Soutions, Inc.	Software	Renewal Funds	-
	Privitar Ltd.	Software	Citigroup, Inc.	-
	sensemetrics, Inc.	Software	Mooring Ventures	-
	SmartHop, Inc.	Software	Las Olas Venture Capital	-
	Tractive GmbH	Software	Monkfish Equity	-
	Vivante Health, Inc.	Software	NFP Ventures	-
	Xage Security Inc.	Software	Saudi Aramco	-
	CloserStill Media	Traditional Media	Providence Equity 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



TOP AD	PitchBook M&A League Tables TOP ADVISORS SERVING THE MEDIA & INFORMATION SERVICES SECTORS				
	2018				
Rank	Advisor	Deal Count			
1	Petsky Prunier	23			
2	Jordan Edmiston	12			
2	Houlihan Lokey	12			
4	GP Bullhound	9			
4	Morgan Stanley	9			
6	Moelis & Company	8			
7	RBC	7			
7	JP Morgan	7			
9	Oaklins DeSilva & Phillips	6			
9	Evercore	6			

■ With more than 80 transactions closed in the last 36 months, and more than 175 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 and advertising, e-commerce, and media industries



### **Representative Recent Transactions**





































