



Cassel Salpeter & Co.
INVESTMENT BANKING

**Technology Investment Banking
2017 Year in Review**

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2017 started out with a bang with the announcement of Cisco acquiring AppDynamics for a whopping 19x revenue, or \$3.9B in January. The year continued with solid public market performance (technology heavy NASDAQ Composite Index up 27% in 2017, see chart on page 15).

With a robust stock market, 23 technology companies had an initial public offering (IPO) in 2017, 11 of which went public in the fourth quarter. Compared to 16 technology companies going public in 2016, 2017 was a good year for technology IPOs. The acquisitions of public companies slowed in 2017, partly due to valuation and partly due to the shrinking number of public companies (less IPOs than public company acquisitions in the last decade).

While technology seemed like a bright spot, many of the technology headlines were ugly; marked by headlines of cyber security breaches and cyber security vulnerabilities. Notable cyber security stories included data breaches at Equifax and Uber and security vulnerabilities in microprocessors (Spectre). Apple products, which were thought to be safer because of its closed systems, seemed to have increasing security vulnerabilities with WiFi, login, and HomeKit vulnerabilities noted in 2017.

As we think about 2017, we are bullish on the services market. In a world focused on advances in artificial intelligence (AI) and smart devices, we think the demand for technology services will continue to be strong, especially in cyber security. When

software, AI, and smart devices fail, humans fix the problems.

In the lower middle market, we think there is a disconnect between investor interest in services and the number of services companies that would benefit from a private equity investor. We see many private equity firms chasing too few recurring revenue software companies. These private equity firms might look at technology services companies where there are clear operational and administrative efficiencies and consolidation synergies to be gained.

Our advice to companies looking towards a transaction remains the same. To maximize a successful exit, we recommend that companies form alliances with potential acquirers early and keep a list of joint customers to validate the value to the potential acquirer. We also recommend that CEOs take the time to speak with investors. CEOs should return inbound investor calls with a short update on the business. By speaking to investors, the CEO will have a sense of market interest in the company when the time is right for a capital raise or sale.

The remaining pages provide details of 2017 IPOs and notable acquisitions, along with our on-going comparable M&A transaction and comparable public company reviews.

Sources of information: S&P Capital IQ and Pitchbook.

Cassel Salpeter & Co. is a boutique investment banking firm focused on providing independent and objective advice to middle market and emerging growth companies. Finding the right financial partner in the fragmented technology market requires solid industry positioning and broad industry relationships. We can help.

Our experience and services include:

Mergers & Acquisitions

- Financial advisory
- Sales to strategic and private equity buyers
- Divestitures to strategic and private equity buyers
- Buy-side acquisition programs
- Leveraged & management buyouts
- Going private transactions

Capital Raising

- Financial advisory
- Equity and debt private placements
- Growth capital
- PIPEs
- Recapitalizations

Other Services

- Fairness opinions
- Solvency opinions
- Valuations
- Restructuring, refinancing, and distressed M&A transactions
 - Debtor and creditor representations
 - 363 sales & plans of reorganization



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I 2017 NOTABLE TECHNOLOGY DEALS

II M&A TRANSACTIONS

III PUBLIC MARKETS REVIEW

2017 INITIAL PUBLIC OFFERINGS (IPOS)

Selected Companies Review

(\$ in millions, except per security)

Company	Ticker	Market Statistics			Metrics			Valuation Benchmarks				
		Closing Price	% of 52-week	Enterprise	Revenue	Rev. Growth	LTM EBITDA	EV / Revenue		EV / EBITDA		
		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E	
2017 IPOS												
Altair Engineering Inc.	ALTR	\$ 23.92	93.5% - 144.5%	\$ 1,819.4	\$ 326.3	8.4%	-4.1%	5.58x	5.50x	na	nm	
Appian Corporation	APPN	\$ 31.48	91.2% - 215.6%	1,920.0	159.9	16.4%	-16.1%	12.01x	11.43x	na	na	
Aquantia Corp.	AQ	\$ 11.33	82.1% - 125.7%	606.8	98.3	24.2%	3.9%	6.17x	5.91x	nm	nm	
Bandwidth Inc.	BAND	\$ 23.12	92.5% - 128.1%	515.6	159.3	11.8%	12.4%	3.24x	3.18x	26.1x	24.4x	
Blue Apron Holdings, Inc.	APRN	\$ 4.03	36.6% - 137.1%	692.4	909.5	6.0%	-16.6%	0.76x	0.79x	na	na	
CarGurus, Inc.	CARG	\$ 29.98	84.6% - 116.0%	3,334.7	287.0	22.7%	8.1%	11.62x	10.67x	nm	nm	
Casa Systems, Inc.	CASA	\$ 17.76	99.9% - 123.3%	1,818.5	332.8	na	42.0%	5.46x	na	13.0x	na	
Cloudera, Inc.	CLDR	\$ 16.52	70.7% - 113.9%	2,194.6	336.8	26.8%	-110.4%	6.52x	6.05x	na	na	
ForeScout Technologies, Inc.	FSCT	\$ 31.89	97.9% - 147.9%	1,563.1	204.3	19.7%	-30.7%	7.65x	7.19x	na	na	
MongoDB, Inc.	MDB	\$ 29.68	87.3% - 120.6%	1,329.9	139.4	35.6%	-63.4%	9.54x	8.74x	na	na	
MuleSoft, Inc.	MULE	\$ 23.26	80.2% - 119.9%	3,015.5	263.1	35.9%	-24.2%	11.46x	10.36x	na	na	
Okta, Inc.	OKTA	\$ 25.61	76.1% - 119.0%	2,608.7	231.1	32.5%	-45.5%	11.29x	10.31x	na	na	
Presidio, Inc.	PSDO	\$ 19.17	98.4% - 150.4%	2,700.7	2,844.9	6.1%	7.8%	0.95x	0.94x	12.2x	11.3x	
SailPoint Technologies Holdings, Inc.	SAIL	\$ 14.50	88.6% - 113.1%	1,547.9	162.6	24.4%	11.0%	9.52x	8.90x	nm	nm	
SendGrid, Inc.	SEND	\$ 23.97	98.0% - 137.0%	1,068.9	103.2	24.5%	6.0%	10.35x	9.74x	nm	nm	
ShotSpotter, Inc.	SSTI	\$ 14.05	69.7% - 150.6%	129.6	21.8	35.6%	4.3%	5.95x	5.49x	nm	nm	
SMART Global Holdings, Inc.	SGH	\$ 33.70	78.1% - 293.0%	904.2	867.4	38.7%	13.1%	1.04x	1.05x	8.0x	7.7x	
Snap Inc.	SNAP	\$ 14.61	49.6% - 129.5%	15,517.1	704.9	65.2%	-459.8%	nm	19.59x	na	na	
Stitch Fix, Inc.	SFIX	\$ 25.83	85.9% - 178.4%	2,478.9	1,036.7	na	2.2%	2.39x	na	nm	na	
Switch, Inc.	SWCH	\$ 18.19	73.1% - 115.3%	1,494.4	360.8	14.4%	49.0%	4.14x	3.96x	8.5x	7.7x	
Tintri, Inc.	TNTR	\$ 5.10	68.5% - 178.9%	173.4	137.7	-8.3%	-94.5%	1.26x	1.41x	na	na	
Veritone, Inc.	VERI	\$ 23.20	31.0% - 299.0%	312.6	13.4	102.3%	-307.4%	nm	nm	na	na	
Yext, Inc.	YEXT	\$ 12.03	79.6% - 108.2%	1,108.0	157.9	32.4%	-37.3%	7.02x	6.51x	na	na	
		<i>Mean</i>	<i>78.8% - 150.7%</i>	<i>\$ 2,124.1</i>	<i>\$ 428.7</i>	<i>27.4%</i>	<i>-45.7%</i>	<i>6.38x</i>	<i>6.89x</i>	<i>13.5x</i>	<i>12.8x</i>	
		<i>Median</i>	<i>82.1% - 129.5%</i>	<i>\$ 1,547.9</i>	<i>\$ 231.1</i>	<i>24.4%</i>	<i>-4.1%</i>	<i>6.17x</i>	<i>6.28x</i>	<i>12.2x</i>	<i>9.5x</i>	

Market value equals price per share times number of diluted shares outstanding. Enterprise value equals market value plus debt, preferred stock, and non controlling interests, less cash.

Sources of information: S&P Capital IQ.

2017 NOTABLE MERGERS AND ACQUISITIONS

Technology Investment Banking

Selected Transactions Review

(\$ in millions)

Transaction				Metrics			Valuation Benchmarks			
Date		Target	Acquirer	Enterprise Value	Target TTM		Implied EV /		Stock Price Premiums	
Ann.	Closed				Revenue	EBITDA %	Revenue	EBITDA	1-Day	1-Month
27-Nov-17	na	Barracuda Networks, Inc.	Thoma Bravo	\$ 1,433.9	\$ 372.5	8.6%	3.85x	nm	16.3%	17.6%
27-Nov-17	na	Bazaarvoice, Inc.	Marlin Equity Partners	456.0	206.3	0.4%	2.21x	na	14.6%	13.4%
26-Oct-17	27-Dec-17	Gigamon Inc.	Elliott Mgt & Qatar Investment Auth.	1,329.1	302.9	1.4%	4.39x	na	6.2%	-7.3%
17-Oct-17	14-Nov-17	IntraLinks Holdings, Inc.	Siris Capital Group, LLC	1,020.8	295.5	7.5%	3.45x	nm	na	na
28-Sep-17	17-Nov-17	Exa Corporation	Dassault Systèmes Simulia Corp.	385.9	72.7	2.0%	5.31x	nm	43.0%	73.0%
27-Jul-17	25-Sep-17	ShoreTel, Inc.	Mitel U.S. Holdings, Inc.	420.7	357.8	2.5%	1.19x	nm	28.2%	27.1%
26-Jul-17	13-Sep-17	Guidance Software, Inc.	Open Text Corporation	245.2	108.6	-0.9%	2.26x	na	2.9%	5.5%
25-Jul-17	3-Aug-17	Intacct Corporation	The Sage Group plc	850.0	88.0	na	9.66x	na	na	na
24-Jul-17	14-Sep-17	WebMD Health Corp.	KKR	2,641.2	709.0	26.0%	3.73x	14.31x	20.5%	12.3%
3-Jul-17	8-Nov-17	Bankrate, Inc.	Red Ventures Holdco, LP	1,434.7	477.0	21.2%	3.01x	14.18x	8.9%	31.5%
6-Jun-17	1-Sep-17	Westcon Group, Inc.	SYNNEX Corporation	830.0	4,532.1	1.2%	0.18x	15.79x	na	na
30-May-17	31-Jul-17	Xactly Corporation	Vista Equity Partners	530.6	96.8	-12.6%	5.48x	na	16.8%	34.9%
1-May-17	29-Sep-17	Angie's List, Inc.	HomeAdvisor, Inc.	580.3	302.3	1.2%	1.92x	nm	44.6%	49.1%
1-May-17	9-Jun-17	Jive Software, Inc.	Wave Systems Corp.	343.5	203.5	2.4%	1.69x	nm	4.0%	22.1%
28-Apr-17	12-Sep-17	Guavus, Inc.	Thales S.A.	215.0	30.0	na	7.17x	na	na	na
10-Apr-17	22-May-17	RetailMeNot, Inc.	Harland Clarke Holdings Corp.	463.9	295.4	10.4%	1.57x	15.12x	49.7%	38.1%
7-Mar-17	13-Apr-17	Nimble Storage, Inc.	Hewlett Packard Enterprise Company	1,065.1	402.6	-33.3%	2.65x	na	45.3%	45.9%
6-Mar-17	3-Apr-17	Veracode, Inc.	CA, Inc.	614.0	na	na	na	na	na	na
31-Jan-17	31-Jan-17	Double-Take Software, Inc.	Carbonite, Inc.	67.3	84.0	16.5%	1.65x	nm	na	na
30-Jan-17	18-Apr-17	Ixia	Keysight Technologies, Inc.	1,603.0	484.8	15.7%	3.31x	21.01x	8.0%	22.0%
24-Jan-17	22-Mar-17	AppDynamics LLC	Cisco Systems, Inc.	3,902.9	206.2	-51.1%	18.93x	na	na	na
17-Jan-17	28-Feb-17	SimpliVity Corporation	Hewlett Packard Enterprise Company	650.0	na	na	na	na	na	na
9-Jan-17	24-Jan-17	Trello, Inc.	Atlassian, Inc.	425.0	na	na	na	na	na	na
<i>Mean</i>				\$ 935.1	\$ 481.4	1.1%	4.18x	16.08x	22.1%	27.5%
<i>Median</i>				\$ 614.0	\$ 295.5	2.2%	3.16x	15.12x	16.5%	24.6%

Sources of information: S&P Capital IQ.

I 2017 NOTABLE TECHNOLOGY DEALS

II M&A TRANSACTIONS

III PUBLIC MARKETS REVIEW

Selected Transactions Review

(\$ in millions)

Transaction				Metrics			Valuation Benchmarks			
Date		Target	Acquirer	Enterprise Value	Target TTM		Implied EV /		Stock Price Premiums	
Annuc.	Closed				Revenue	EBITDA %	Revenue	EBITDA	1-Day	1-Month
Application Software										
25-Jul-17	3-Aug-17	Intacct Corporation	The Sage Group plc	\$ 850.0	\$ 88.0	na	9.66x	na	na	na
30-May-17	31-Jul-17	Xactly Corporation	Vista Equity Partners	530.6	96.8	-12.6%	5.48x	na	16.8%	34.9%
26-May-17	25-May-17	iSystems, LLC	Asure Software, Inc.	76.7	12.9	6.2%	5.96x	96.61x	na	na
1-May-17	9-Jun-17	Jive Software, Inc.	Wave Systems Corp.	343.5	203.5	2.4%	1.69x	69.06x	4.0%	22.1%
28-Apr-17	12-Sep-17	Guavus, Inc.	Thales S.A.	215.0	30.0	na	7.17x	na	na	na
31-Jan-17	27-Jan-17	IDV Solutions, LLC	Everbridge, Inc.	27.3	10.2	7.4%	2.67x	36.11x	na	na
14-Nov-16	30-Mar-17	Mentor Graphics Corporation	Siemens Industry, Inc.	4,389.9	1,282.5	20.7%	3.42x	16.54x	21.4%	35.4%
9-Nov-16	19-Dec-16	TubeMogul, Inc.	Adobe Systems Incorporated	544.6	212.0	-9.8%	2.57x	na	82.1%	56.3%
31-Aug-16	1-Dec-16	Interactive Intelligence Group, Inc.	Genesys Telecommunications	1,399.0	426.2	-0.3%	3.28x	na	6.8%	17.1%
28-Jul-16	4-Nov-16	NetSuite Inc.	Oracle Corporation	8,708.6	897.5	-5.4%	9.70x	na	19.0%	57.9%
2-Jun-16	22-Aug-16	Qlik Technologies, Inc.	Thoma Bravo, LLC	2,616.8	665.3	2.0%	3.93x	196.32x	5.3%	-1.6%
1-Jun-16	8-Jul-16	Demandware, Inc.	Salesforce.com, inc.	2,837.6	254.1	-13.3%	10.38x	na	56.3%	61.6%
31-May-16	16-Aug-16	Marketo, Inc.	Vista Equity Partners	1,706.5	241.4	-21.0%	7.07x	na	9.5%	60.3%
31-May-16	28-Jul-16	SciQuest, Inc. (nka:JAGGAER, Inc.)	Accel-KKR LLC	375.6	106.3	8.9%	3.53x	39.89x	33.8%	28.4%
23-May-16	19-Aug-16	Xura, Inc. (nka:Mavenir Systems)	Siris Capital; Cohesive Capital	671.9	292.7	0.1%	2.30x	na	19.2%	14.3%
18-May-16	14-Nov-16	inContact, Inc.	NICE Systems Ltd. (nka:NICE Ltd.)	918.0	254.7	3.1%	3.60x	117.77x	60.3%	55.5%
18-Apr-16	29-Nov-16	Cvent, Inc.	Vista Equity Partners	1,468.3	219.5	3.5%	6.69x	190.76x	69.0%	66.1%
31-Mar-16	1-Apr-16	Verian Technologies, Inc.	BasWare Oyj	36.0	10.6	na	3.41x	na	na	na
22-Mar-16	2-May-16	Serena Software, Inc.	Micro Focus International plc	540.0	162.0	49.4%	3.33x	6.75x	na	na
15-Feb-16	14-Apr-16	Diligent Corporation	Insight Venture Partners LLC	581.9	99.3	16.7%	5.86x	35.16x	30.7%	20.4%
11-Feb-16	9-Mar-16	Yodle, Inc.	Web.com Group, Inc.	417.6	172.4	-1.6%	2.01x	na	na	na
25-Jan-16	30-Apr-16	CD-adapco Group, Inc.	Siemens	970.0	200.0	na	4.85x	na	na	na
5-Nov-15	9-Dec-15	MarketShare Partners LLC	NeuStar, Inc.	450.0	51.2	na	8.79x	na	na	na
2-Nov-15	9-Feb-16	Constant Contact, Inc.	Endurance International	910.4	361.9	12.6%	2.48x	19.63x	27.6%	33.5%
15-Oct-15	18-Nov-15	Benaissance LLC	Evolution1, Inc. (nka:WEX Health, Inc.)	80.7	13.3	na	6.07x	na	na	na
3-Sep-15	22-Oct-15	Millennial Media Inc.	Oath Inc.	233.1	285.3	-14.5%	0.82x	na	37.4%	12.9%
11-Aug-15	18-Sep-15	GT Nexus, Inc.	Infor (US), Inc.	660.2	133.2	na	4.96x	na	na	na
<i>Mean</i>				\$ 1,205.9	\$ 251.2	2.7%	4.88x	74.96x	31.2%	35.9%
<i>Median</i>				\$ 581.9	\$ 200.0	2.2%	3.93x	39.89x	24.5%	34.2%

Sources of information: S&P Capital IQ.

SOFTWARE (CONTINUED)

Selected Transactions Review

(\$ in millions)

Transaction				Metrics			Valuation Benchmarks			
Date		Target	Acquirer	Enterprise Value	Target TTM		Implied EV /		Stock Price Premiums	
Annnc.	Closed				Revenue	EBITDA %	Revenue	EBITDA	1-Day	1-Month
Vertical Software										
27-Nov-17	na	Bazaarvoice, Inc.	Marlin Equity Partners	\$ 456.0	\$ 206.3	0.4%	2.21x	na	14.6%	13.4%
28-Sep-17	17-Nov-17	Exa Corporation	Dassault Systèmes Simulia Corp.	385.9	72.7	2.0%	5.31x	260.93x	43.0%	73.0%
15-Feb-17	7-Apr-17	StoneRiver, Inc.	Sapiens International	102.0	80.0	na	1.28x	na	na	na
27-Jul-16	30-Sep-16	Epiq Systems, Inc.	DTI	1,023.2	529.8	16.5%	1.93x	11.74x	14.4%	17.3%
2-May-16	14-Jun-16	OPOWER, Inc.	Oracle Corporation	563.4	152.0	-27.6%	3.71x	na	30.4%	53.3%
28-Apr-16	9-Jun-16	Textura Corporation	Oracle Corporation	616.0	92.2	-6.9%	6.68x	na	30.7%	37.8%
22-Dec-15	26-Jan-16	ShopperTrak RCT Corporation	Tyco International plc	175.0	75.0	na	2.33x	na	na	na
1-Oct-15	16-Nov-15	New World Systems Corporation	Tyler Technologies, Inc.	651.0	121.8	24.4%	5.34x	21.88x	na	na
14-Sep-15	16-Nov-15	Primatics Financial LLC	SS&C Technologies Holdings, Inc.	122.0	51.0	23.5%	2.39x	10.17x	na	na
13-Sep-15	3-Mar-16	Solera Holdings Inc.	Vista Equity Partners	6,558.6	1,199.4	35.7%	5.47x	15.33x	12.9%	25.4%
10-Aug-15	19-Nov-15	Yodlee, Inc.	Investnet, Inc.	533.4	104.0	-4.2%	5.13x	na	39.6%	19.7%
15-Jun-15	1-Oct-15	Dealertrack Technologies, Inc.	Cox Automotive, Inc.	4,447.3	993.1	13.0%	4.48x	34.54x	58.7%	49.1%
			<i>Mean</i>	\$ 1,302.8	\$ 306.4	7.7%	3.85x	59.10x	30.5%	36.1%
			<i>Median</i>	\$ 548.4	\$ 112.9	7.5%	4.09x	18.61x	30.5%	31.6%
Healthcare Software										
9-Aug-16	21-Oct-16	Press Ganey Holdings, Inc.	EQT Partners AB	\$ 2,392.6	\$ 344.3	30.5%	6.95x	22.80x	0.4%	1.1%
13-Jul-16	16-Sep-16	Imprivata, Inc.	Thoma Bravo	496.9	131.1	-14.1%	3.79x	na	32.8%	37.5%
30-Jun-16	1-Jul-16	Healthiest You Corporation	Teladoc, Inc.	156.4	10.0	na	15.64x	na	na	na
22-Feb-16	4-Apr-16	Brightree LLC	ResMed Corp.	800.0	113.2	37.3%	7.07x	18.93x	na	na
18-Feb-16	7-Apr-16	Truven Holding Corp.	IBM Watson Health	3,578.6	610.7	16.7%	5.86x	34.99x	na	na
25-Nov-15	8-Jan-16	Healthland, Inc.	Computer Programs and System	260.6	113.7	na	2.29x	na	na	na
30-Oct-15	4-Jan-16	HealthFusion Holdings, Inc.	Quality Systems, Inc.	196.9	25.0	17.7%	6.02x	77.22x	na	na
1-Oct-15	1-Oct-15	20/20 Healthcare LLC	Konica Minolta Medical Imaging	75.0	61.3	na	1.22x	na	na	na
11-Aug-15	6-Aug-15	Tea Leaves Health, LLC	Everyday Health, Inc.	50.1	4.9	na	10.18x	na	na	na
6-Aug-15	13-Oct-15	Merge Healthcare Incorporated	International Business Machines	977.3	227.6	17.3%	4.29x	24.76x	31.8%	57.0%
2-Jul-15	2-Jul-15	Referral Solutions Group, LLC	Sober Media Group, LLC	54.1	12.4	na	4.37x	na	na	na
			<i>Mean</i>	\$ 821.7	\$ 150.4	17.6%	6.15x	35.74x	21.7%	31.9%
			<i>Median</i>	\$ 260.6	\$ 113.2	17.5%	5.86x	24.76x	31.8%	37.5%

Sources of information: S&P Capital IQ.

SOFTWARE (CONTINUED)

Selected Transactions Review

(\$ in millions)

Transaction				Metrics			Valuation Benchmarks			
Date		Target	Acquirer	Enterprise Value	Target TTM		Implied EV /		Stock Price Premiums	
Annnc.	Closed				Revenue	EBITDA %	Revenue	EBITDA	1-Day	1-Month
Infrastructure Software										
2-Nov-17	11-Dec-17	Black Duck Software, Inc.	Synopsys, Inc.	\$ 548.0	na	na	na	na	na	na
17-Oct-17	14-Nov-17	IntraLinks Holdings, Inc.	Siris Capital Group, LLC	1,020.8	295.5	7.5%	3.45x	46.06x	na	na
5-Jun-17	26-Jul-17	Covisint Corporation	Open Text Corporation	69.2	70.2	-14.0%	0.99x	na	22.5%	28.9%
31-Jan-17	31-Jan-17	Double-Take Software, Inc.	Carbonite, Inc.	67.3	84.0	16.5%	1.65x	43.39x	na	na
24-Jan-17	22-Mar-17	AppDynamics LLC	Cisco Systems, Inc.	3,902.9	206.2	-51.1%	18.93x	na	na	na
9-Jan-17	24-Jan-17	Trello, Inc.	Atlassian, Inc.	425.0	na	na	na	na	na	na
6-Dec-16	19-Jan-17	IntraLinks Holdings, Inc.	Synchronoss Technologies, Inc.	831.5	290.4	6.9%	2.81x	37.52x	15.4%	33.5%
12-Sep-16	23-Jan-17	EMC Enterprise Content Division	Open Text Corporation	1,620.0	599.0	na	na	na	na	na
8-Sep-16	10-Nov-16	Apigee Corporation	Google Inc.	561.8	92.0	-42.9%	6.10x	na	6.5%	20.3%
7-Sep-16	1-Sep-17	HPE, Software	Micro Focus International plc	9,049.3	3,172.0	20.7%	na	11.40x	na	na
26-Jul-16	31-Jan-17	Citrix GoTo Family Of Products	LogMeIn, Inc.	2,896.8	600.0	na	4.83x	na	na	na
20-Jun-16	31-Oct-16	Dell SW, Quest and SonicWALL	Francisco Partners; Elliott Mgt	2,400.0	na	na	na	na	na	na
15-Jan-16	5-Jan-16	Jungle Disk, LLC	Porthcawl Holdings, LLC	27.0	12.0	na	2.25x	na	na	na
21-Oct-15	5-Feb-16	SolarWinds, Inc.	Silver Lake; Thoma Bravo, LLC	4,446.3	485.9	30.9%	9.15x	29.64x	19.7%	44.1%
9-Oct-15	15-Oct-15	Marvasol, Inc.	LogMeIn, Inc.	115.7	11.2	-23.7%	10.30x	na	na	na
5-Oct-15	6-Nov-15	Cleversafe, Inc.	International Business Machines	1,309.0	na	na	na	na	na	na
10-Sep-15	8-Dec-15	Premiere Global Services, Inc.	Siris Capital Group	975.1	566.8	13.0%	1.72x	13.23x	25.9%	27.5%
11-Aug-15	29-Jan-16	Veritas Technologies LLC	The Carlyle Group; GIC Pte. Ltd.	7,000.0	2,600.0	na	2.69x	na	na	na
27-May-15	8-Jul-15	Rally Software Development Corp.	CA, Inc.	471.2	92.5	-30.6%	5.09x	na	42.9%	27.5%
26-May-15	9-Jul-15	Virtustream Inc.	EMC Corporation (nka:Dell EMC)	1,219.0	na	na	na	na	na	na
4-May-15	3-Aug-15	Cyan, Inc.	Ciena Corporation	521.5	117.5	-35.8%	4.44x	na	44.4%	24.0%
7-Apr-15	6-Aug-15	Informatica Corporation	Microsoft, Permira, and others	5,290.9	1,066.5	18.2%	4.96x	27.31x	6.4%	14.0%
<i>Mean</i>				\$ 2,034.9	\$ 609.5	-6.5%	5.29x	29.79x	22.9%	27.5%
<i>Median</i>				\$ 998.0	\$ 290.4	6.9%	4.44x	29.64x	21.1%	27.5%

Sources of information: S&P Capital IQ.

Selected Transactions Review

(\$ in millions)

Transaction				Metrics			Valuation Benchmarks			
Date		Target	Acquirer	Enterprise Value	Target TTM		Implied EV /		Stock Price Premiums	
Annuc.	Closed				Revenue	EBITDA %	Revenue	EBITDA	1-Day	1-Month
Security										
27-Nov-17	na	Barracuda Networks, Inc.	Thoma Bravo	\$ 1,434.1	\$ 372.5	8.6%	3.85x	nm	16.3%	17.6%
7-Nov-17	21-Nov-17	Cloudmark Inc.	Proofpoint, Inc.	110.0	na	na	na	na	na	na
6-Mar-17	3-Apr-17	Veracode, Inc.	CA, Inc.	614.0	na	na	na	na	na	na
8-Feb-17	22-Mar-17	Invincea, Inc.	Sophos Group plc	120.0	9.8	na	12.24x	na	na	na
20-Nov-16	9-Feb-17	LifeLock, Inc.	Symantec Corporation	2,362.1	650.2	7.3%	3.63x	nm	15.7%	38.7%
19-Sep-16	4-Nov-16	Infoblox Inc.	Vista Equity Partners	1,250.0	358.3	0.5%	3.49x	na	16.1%	31.6%
13-Jul-16	16-Sep-16	Imprivata, Inc.	Thoma Bravo	496.9	131.1	-14.1%	3.79x	na	32.8%	37.5%
12-Jun-16	1-Aug-16	Blue Coat, Inc.	Symantec Corporation	4,726.7	598.3	1.5%	7.24x	nm	na	na
1-Jun-16	30-Jun-16	Ping Identity Corporation	Vista Equity Partners	600.0	na	na	na	na	na	na
18-Apr-16	15-Aug-16	CSIdentity Corporation	Experian Information Solutions, Inc.	360.0	103.0	20.4%	3.50x	17.14x	na	na
20-Jan-16	14-Jan-16	iSight Security, Inc.	FireEye, Inc.	271.1	40.0	na	6.78x	na	na	na
11-Dec-15	11-Dec-15	Cyveillance, Inc.	LookingGlass Cyber Solutions Inc.	35.0	18.0	na	1.94x	na	na	na
9-Nov-15	closed	Elastica, Inc.	Blue Coat Systems Inc.	280.0	na	na	na	na	na	na
27-Oct-15	21-Dec-15	Lancope, Inc.	Cisco Systems, Inc.	452.5	na	na	na	na	na	na
21-Oct-15	9-Mar-16	TippingPoint Technologies, Inc.	Trend Micro Incorporated	300.0	169.0	na	1.78x	na	na	na
19-Oct-15	17-Mar-16	Vormetric, Inc.	Thales e-Security, Inc.	421.0	53.5	na	7.87x	na	na	na
8-Sep-15	8-Sep-15	Adallom, Inc.	Microsoft Corporation	320.0	na	na	na	na	na	na
7-Apr-15	1-Sep-15	TrustWave Holdings, Inc.	Singapore Telecommunications	785.7	216.0	na	3.64x	na	na	na
10-Mar-15	26-May-15	Blue Coat Systems Inc.	Bain Capital Private Equity, LP	2,400.0	na	na	na	na	na	na
9-Jul-15	9-Jul-15	Caspida, Inc.	Splunk Inc.	190.0	na	na	na	na	na	na
2-Mar-15	6-Mar-15	Emerging Threats Pro, Inc.	Proofpoint, Inc.	32.3	na	na	na	na	na	na
9-Dec-14	2-Jan-15	Tripwire, Inc.	Belden Inc.	710.0	118.5	na	5.99x	na	na	na
8-Aug-14	7-Jan-15	SafeNet, Inc.	Gemalto N.V.	957.0	na	na	na	na	na	na
2-Jan-14	30-Dec-13	Mandiant, LLC	FireEye, Inc.	1,016.8	102.0	-5.1%	9.97x	na	na	na
<i>Mean</i>				\$ 843.6	\$ 210.0	2.7%	5.41x	17.14x	20.2%	31.4%
<i>Median</i>				\$ 474.7	\$ 124.8	1.5%	3.82x	17.14x	16.2%	34.6%

Sources of information: S&P Capital IQ.

Selected Transactions Review

(\$ in millions)

Transaction				Metrics			Valuation Benchmarks			
Date		Target	Acquirer	Enterprise Value	Target TTM		Implied EV /		Stock Price Premiums	
Annnc.	Closed				Revenue	EBITDA %	Revenue	EBITDA	1-Day	1-Month
Enterprise Systems										
26-Oct-17	27-Dec-17	Gigamon Inc.	Elliott, Qatar Investment Authority	\$ 1,329.1	\$ 302.9	1.4%	4.39x	na	6.2%	-7.3%
18-Sep-17	5-Jan-18	Silver Spring Networks, Inc.	Itron, Inc.	830.4	425.7	-8.2%	1.95x	na	25.0%	28.2%
7-Mar-17	13-Apr-17	Nimble Storage, Inc.	Hewlett Packard Enterprise Company	1,065.1	402.6	-33.3%	2.65x	na	45.3%	45.9%
17-Jan-17	28-Feb-17	SimpliVity Corporation	Hewlett Packard Enterprise Company	650.0	na	na	na	na	na	na
13-Oct-16	13-Oct-16	VXi Corporation	GN Netcom A/S	35.0	32.0	12.5%	1.09x	8.75x	na	na
19-Sep-16	4-Nov-16	Infoblox Inc.	Vista Equity Partners	1,250.0	358.3	0.5%	3.49x	na	16.1%	31.6%
11-Aug-16	1-Nov-16	Silicon Graphics International Corp.	Hewlett Packard Enterprise Company	268.4	532.9	1.0%	0.50x	48.58x	40.9%	47.3%
13-May-16	27-Sep-16	Polycom, Inc.	Siris Capital Group, LLC	1,231.7	1,197.8	11.2%	1.03x	9.19x	11.0%	5.8%
19-Apr-16	29-Nov-16	Lexmark International, Inc.	Legend Capital; PAG Asia; Apex Tech.	3,645.2	3,481.5	9.1%	1.05x	11.46x	18.0%	29.6%
7-Apr-16	3-Jun-16	Alliance Fiber Optic Products Inc.	Corning Incorporated	265.9	72.0	22.3%	3.69x	16.58x	24.0%	45.1%
4-Apr-16	27-May-16	Ruckus Wireless, Inc.	Brocade Communications	1,114.4	391.9	4.5%	2.84x	63.51x	44.3%	47.4%
4-Feb-16	29-Jan-16	Pakedge Device & Software, Inc.	Control4 Corporation	31.8	18.6	3.9%	1.71x	43.95x	na	na
21-Dec-15	2-Feb-16	SolidFire	NetApp, Inc.	870.0	na	na	na	na	na	na
2-Nov-15	5-Oct-16	Hutchinson Technology Inc.	Headway Technologies, Inc.	233.4	234.6	8.1%	0.99x	12.28x	128.6%	135.3%
21-Oct-15	12-May-16	SanDisk LLC	Western Digital Technologies, Inc.	13,510.4	5,598.4	24.4%	2.41x	9.90x	13.5%	61.4%
12-Oct-15	7-Sep-16	EMC Corporation (nka:Dell EMC)	Dell, Inc.	63,296.5	24,586.0	20.4%	2.57x	12.61x	19.0%	34.8%
2-Sep-15	1-Oct-15	iBiquity Digital Corporation	DTS, Inc.	612.4	48.3	17.3%	12.68x	73.08x	na	na
18-Aug-15	6-Oct-15	Dot Hill Systems Corp.	Seagate Technology plc	645.4	243.9	7.7%	2.65x	34.31x	79.2%	51.9%
27-May-15	7-Jul-15	Meru Networks, Inc.	Fortinet, Inc.	34.6	87.7	-16.9%	0.39x	na	18.1%	31.5%
22-Apr-15	4-Jun-15	Procera Networks, Inc.	Francisco Partners Management LLC	133.2	81.4	-6.4%	1.64x	na	21.7%	19.1%
16-Apr-15	17-Apr-15	Motion Computing, Inc.	Xplore Technologies	130.1	78.8	-5.7%	1.65x	na	na	na
24-Mar-15	18-Nov-15	PSI Systems, Inc.	Stamps.com Inc.	215.0	58.5	na	3.67x	na	na	na
2-Mar-15	18-May-15	Aruba	Hewlett-Packard	2,689.8	812.4	9.9%	3.31x	33.29x	-0.6%	48.8%
25-Feb-15	5-May-15	Emulex Corporation	Avago Technologies	553.5	411.0	8.1%	1.35x	16.56x	26.4%	16.1%
<i>Mean</i>				\$ 3,943.4	\$ 1,793.5	4.4%	2.62x	28.15x	31.6%	39.5%
<i>Median</i>				\$ 647.7	\$ 330.6	7.7%	2.18x	16.57x	21.7%	34.8%

Sources of information: S&P Capital IQ.

Selected Transactions Review

(\$ in millions)

Transaction				Metrics			Valuation Benchmarks			
Date		Target	Acquirer	Enterprise Value	Target TTM		Implied EV /		Stock Price Premiums	
Ann.	Closed				Revenue	EBITDA %	Revenue	EBITDA	1-Day	1-Month
Internet Content and Search										
24-Jul-17	14-Sep-17	WebMD Health Corp.	KKR	\$ 2,641.2	\$ 709.0	26.0%	3.73x	14.31x	20.5%	12.3%
3-Jul-17	8-Nov-17	Bankrate, Inc.	Red Ventures Holdco, LP	1,434.7	477.0	21.2%	3.01x	14.18x	8.9%	31.5%
1-May-17	29-Sep-17	Angie's List, Inc.	HomeAdvisor, Inc.	580.3	302.3	1.2%	1.92x	161.23x	44.6%	49.1%
10-Apr-17	22-May-17	RetailMeNot, Inc.	Harland Clarke Holdings Corp.	463.9	295.4	10.4%	1.57x	15.12x	49.7%	38.1%
21-Oct-16	2-Dec-16	Everyday Health, Inc.	Ziff Davis, LLC	465.3	253.9	12.2%	1.83x	15.03x	11.7%	30.9%
9-Aug-16	28-Oct-16	Monster Worldwide, Inc.	Randstad North America, LP	371.1	635.0	11.9%	0.61x	6.80x	22.7%	30.3%
27-Jun-16	8-Aug-16	ReachLocal, Inc.	Gannett Co., Inc.	155.6	361.7	-2.5%	0.45x	na	187.5%	184.0%
13-Jun-16	8-Dec-16	LinkedIn Corporation	Microsoft Corporation	25,984.4	3,615.0	13.2%	7.19x	54.43x	49.5%	54.3%
5-May-16	17-Jun-16	NextAdvisor, Inc.	Bankrate, Inc.	106.7	70.3	na	1.52x	7.25x	na	na
12-Apr-16	12-Apr-16	Cracked Entertainment, Inc.	Scripps Media, Inc.	39.0	10.9	na	3.58x	na	na	na
2-Nov-15	31-Dec-15	Vetstreet Inc.	Butler Schein Animal Health	48.0	43.0	na	1.12x	na	na	na
28-Oct-15	29-Jan-16	The Weather Company	International Business Machines	2,284.0	na	na	na	na	na	na
<i>Mean</i>				\$ 2,881.2	\$ 615.8	11.7%	2.41x	36.04x	49.4%	53.8%
<i>Median</i>				\$ 464.6	\$ 302.3	12.1%	1.83x	14.67x	33.7%	34.8%
Internet Retail										
7-Apr-17	5-May-17	eBags, Inc.	Samsonite LLC	\$ 105.0	\$ 158.5	na	0.66x	na	na	na
5-Jan-17	30-Dec-16	Shoebuy.com, Inc.	Jet.com, Inc.	70.0	na	na	na	na	na	na
7-Nov-16	17-Feb-17	Blue Nile, Inc.	Bain Capital Private Equity	456.2	471.9	3.5%	0.97x	27.82x	33.9%	15.1%
8-Aug-16	19-Sep-16	Jet.com, Inc.	Wal-Mart Stores, Inc.	3,300.0	na	na	na	na	na	na
17-Feb-16	4-Mar-16	Ebuys, Inc.	DSW Shoe Warehouse, Inc.	117.5	na	na	na	na	na	na
7-Jan-16	1-Feb-16	Gilt Groupe, Inc.	Hudson's Bay Company	250.0	na	na	na	na	na	na
4-Nov-15	14-Dec-15	HomeAway, Inc.	Expedia, Inc.	3,057.6	485.3	12.6%	6.30x	49.81x	24.3%	41.8%
7-Oct-15	31-Oct-15	Ticketfly, Inc.	Pandora Media, Inc.	321.9	65.9	-17.0%	4.88x	na	na	na
17-Aug-15	30-Sep-15	zulily, Inc.	QVC, Inc.	2,180.0	1,281.4	2.2%	1.70x	77.32x	49.2%	34.6%
29-May-15	17-Jul-15	Geeknet, Inc.	GameStop Corp.	102.7	137.1	-6.0%	0.75x	na	5.5%	125.5%
27-May-15	13-Jul-15	Orchard Brands Corporation	Bluestem Brands, Inc.	410.0	1,020.0	6.9%	0.40x	5.80x	na	na
12-Feb-15	17-Sep-15	Orbitz Worldwide, Inc.	Expedia, Inc.	1,595.1	933.5	11.5%	1.71x	14.81x	24.7%	30.7%
<i>Mean</i>				\$ 997.2	\$ 569.2	2.0%	2.17x	35.11x	27.5%	49.5%
<i>Median</i>				\$ 366.0	\$ 478.6	3.5%	1.33x	27.82x	24.7%	34.6%

Sources of information: S&P Capital IQ.

PROFESSIONAL SERVICES AND DISTRIBUTION

Technology Investment Banking

Selected Transactions Review

(\$ in millions)

Transaction				Metrics			Valuation Benchmarks			
Date		Target	Acquirer	Enterprise Value	Target TTM		Implied EV /		Stock Price Premiums	
Annnc.	Closed				Revenue	EBITDA %	Revenue	EBITDA	1-Day	1-Month
Consulting										
3-Jul-17	15-Aug-17	NCL, Inc.	H.I.G. Capital	\$ 285.1	\$ 325.4	9.1%	0.88x	9.61x	-5.2%	2.6%
27-Jan-17	28-Apr-17	Harris Corpo, Gov (nka:Peraton)	Veritas Capital	690.0	1,000.0	na	0.69x	na	na	na
19-Dec-16	7-Apr-17	Grid Dynamics International, Inc.	Automated Systems Holdings Limited	118.0	39.7	na	na	na	na	na
29-Nov-16	24-Jan-17	eGov Holdings, Inc.	Booz Allen Hamilton Inc.	250.0	na	na	na	na	na	na
20-Oct-16	23-Nov-16	Appirio Inc.	Wipro Limited	500.0	196.0	na	2.55x	na	na	na
24-May-16	31-Mar-17	Everett Spinco, Inc.	Computer Sciences Corp (nka:DXC)	6,927.0	17,787.0	13.6%	0.39x	2.86x	na	na
28-Mar-16	2-Nov-16	Dell Services	NTT DATA Italia S.p.A.	3,055.0	2,826.0	na	1.08x	na	na	na
18-Jan-16	25-Feb-16	Magnet 360, LLC	Mindtree Limited	50.0	25.0	na	2.00x	na	na	na
27-Apr-15	1-Jul-15	iGATE Corporation	Capgemini North America, Inc.	4,453.6	1,288.1	19.3%	3.46x	17.90x	4.7%	13.5%
9-Mar-15	1-Apr-15	Acentia, LLC	MAXIMUS Federal Services, Inc.	300.7	193.2	11.4%	1.56x	13.67x	na	na
			<i>Mean</i>	\$ 1,662.9	\$ 2,631.2	13.4%	1.58x	11.01x	-0.3%	8.0%
			<i>Median</i>	\$ 400.4	\$ 325.4	12.5%	1.32x	11.64x	-0.3%	8.0%
Infrastructure Outsourcing										
7-Nov-16	27-Feb-17	EarthLink Holdings Corp.	Windstream Holdings, Inc.	\$ 1,070.3	\$ 959.9	20.6%	1.12x	5.40x	-4.8%	-5.7%
7-Nov-16	6-Jan-17	Datalink Corporation	Insight Enterprises, Inc.	223.1	756.5	2.5%	0.29x	11.72x	19.3%	5.9%
26-Aug-16	3-Nov-16	Rackspace Hosting, Inc.	Inception Parent, Inc.	4,314.1	2,073.4	28.4%	2.07x	7.25x	6.0%	37.8%
4-May-16	1-Jul-16	United Online, Inc.	B. Riley Financial, Inc.	43.8	145.3	10.4%	0.31x	3.71x	1.9%	-2.7%
19-Feb-15	1-Apr-15	MegaPath Managed Services	Global Telecom & Tech Americas	152.4	124.0	16.1%	1.23x	7.62x	na	na
			<i>Mean</i>	\$ 1,160.7	\$ 811.8	15.6%	1.00x	7.14x	5.6%	8.8%
			<i>Median</i>	\$ 223.1	\$ 756.5	16.1%	1.12x	7.25x	3.9%	1.6%
Distribution										
6-Jun-17	1-Sep-17	Westcon Group, Inc.	SYNNEX Corporation	\$ 830.0	\$ 4,532.1	1.2%	0.18x	15.79x	na	na
19-Sep-16	27-Feb-17	Avnet Technology Solutions	Tech Data Corporation	2,645.0	9,652.5	na	0.27x	na	na	na
17-Feb-16	5-Dec-16	Ingram Micro Inc.	Tianjin Tianhai Investment Co., Ltd.	6,597.2	40,998.3	1.9%	0.16x	8.49x	32.2%	43.3%
18-Aug-15	4-Sep-15	KBZ Communications, Inc.	ScanSource, Inc.	61.5	225.0	na	0.27x	na	na	na
			<i>Mean</i>	\$ 2,533.4	\$ 13,852.0	1.5%	0.22x	12.14x	32.2%	43.3%
			<i>Median</i>	\$ 1,737.5	\$ 7,092.3	1.5%	0.23x	12.14x	32.2%	43.3%

Sources of information: S&P Capital IQ.

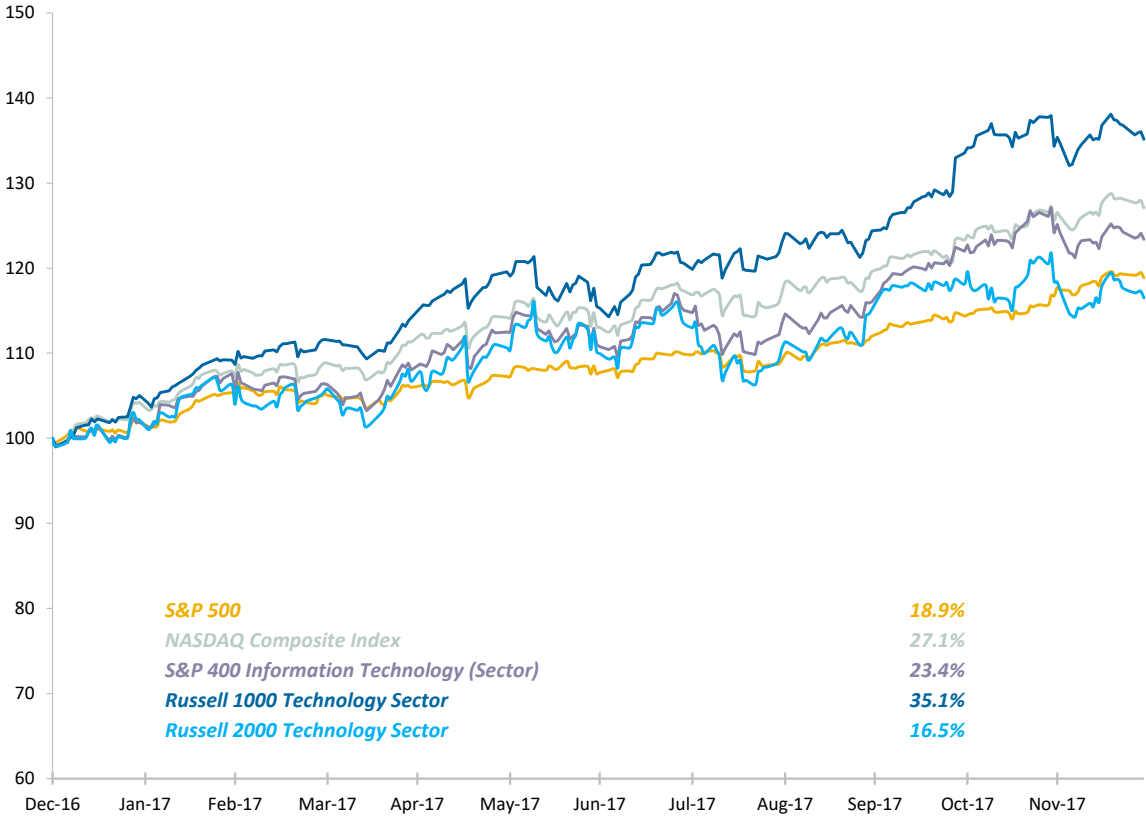
I 2017 NOTABLE TECHNOLOGY DEALS

II M&A TRANSACTIONS

III PUBLIC MARKETS REVIEW

January 1, 2017 to December 29, 2017

Relative Performance



Sources of information: S&P Capital IQ.

Selected Companies Review

(\$ in millions, except per security)

Company	Ticker	Market Statistics			Metrics			Valuation Benchmarks			
		Closing Price	% of 52-week	Enterprise	Revenue	Rev. Growth	LTM EBITDA	EV / Revenue		EV / EBITDA	
		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E
Large Diversified											
Adobe Systems Incorporated	ADBE	\$ 175.24	94.1% - 171.0%	\$ 82,445.0	\$ 7,301.5	20.8%	34.2%	11.29x	11.37x	33.1x	27.1x
Hewlett Packard Enterprise Company	HPE	\$ 14.36	57.7% - 112.1%	27,509.7	28,871.0	-11.0%	15.3%	0.95x	0.84x	6.2x	4.8x
International Business Machines Corporation	IBM	\$ 153.42	83.9% - 110.3%	176,291.9	78,366.0	-0.1%	21.5%	2.25x	2.24x	10.5x	9.2x
Oracle Corporation	ORCL	\$ 47.10	88.6% - 123.0%	189,594.3	38,907.0	3.9%	38.9%	4.87x	4.86x	12.5x	10.6x
		<i>Mean</i>	<i>81.1% - 129.1%</i>	<i>\$ 118,960.2</i>	<i>\$ 38,361.4</i>	<i>3.4%</i>	<i>27.5%</i>	<i>4.84x</i>	<i>4.83x</i>	<i>15.6x</i>	<i>12.9x</i>
		<i>Median</i>	<i>86.3% - 117.5%</i>	<i>\$ 129,368.4</i>	<i>\$ 33,889.0</i>	<i>1.9%</i>	<i>27.8%</i>	<i>3.56x</i>	<i>3.55x</i>	<i>11.5x</i>	<i>9.9x</i>
Application Software											
Intuit Inc.	INTU	\$ 157.41	97.5% - 140.7%	\$ 40,689.9	\$ 5,285.0	9.2%	30.9%	7.70x	7.49x	24.9x	20.3x
Manhattan Associates, Inc.	MANH	\$ 49.54	88.9% - 121.6%	3,285.2	598.1	-6.0%	33.4%	5.49x	5.52x	16.5x	15.4x
SPS Commerce, Inc.	SPSC	\$ 48.59	66.9% - 107.9%	676.4	213.4	11.0%	10.9%	3.17x	3.08x	29.1x	21.2x
Upland Software, Inc.	UPLD	\$ 21.66	84.7% - 244.7%	496.6	89.5	25.5%	13.6%	5.55x	5.11x	40.7x	16.6x
Workiva Inc.	WK	\$ 21.40	90.3% - 176.1%	887.1	199.7	13.9%	-16.8%	4.44x	4.29x	na	na
		<i>Mean</i>	<i>85.7% - 158.2%</i>	<i>\$ 9,207.1</i>	<i>\$ 1,277.1</i>	<i>10.7%</i>	<i>14.4%</i>	<i>5.27x</i>	<i>5.10x</i>	<i>27.8x</i>	<i>18.4x</i>
		<i>Median</i>	<i>88.9% - 140.7%</i>	<i>\$ 887.1</i>	<i>\$ 213.4</i>	<i>11.0%</i>	<i>13.6%</i>	<i>5.49x</i>	<i>5.11x</i>	<i>27.0x</i>	<i>18.4x</i>
Human Capital Management											
Benefitfocus, Inc.	BNFT	\$ 27.00	72.8% - 121.1%	\$ 923.2	\$ 252.6	9.8%	-1.1%	3.65x	3.60x	na	48.8x
Cornerstone OnDemand, Inc.	CSOD	\$ 35.33	79.8% - 106.3%	1,998.9	459.1	4.4%	-10.4%	4.35x	4.14x	na	32.4x
Paycom Software, Inc.	PAYC	\$ 80.33	93.3% - 188.9%	4,648.1	406.8	25.6%	21.2%	11.43x	10.76x	nm	35.0x
Paylocity Holding Corporation	PCTY	\$ 47.16	87.4% - 158.8%	2,471.4	316.5	22.2%	7.1%	7.81x	7.42x	nm	37.4x
The Ultimate Software Group, Inc.	ULTI	\$ 218.23	93.5% - 120.6%	6,422.6	899.8	19.1%	7.7%	7.14x	6.88x	nm	29.9x
Workday, Inc.	WDAY	\$ 101.74	87.0% - 154.6%	20,316.8	1,995.1	24.7%	-10.3%	10.18x	9.52x	na	nm
		<i>Mean</i>	<i>85.6% - 141.7%</i>	<i>\$ 6,130.2</i>	<i>\$ 721.7</i>	<i>17.6%</i>	<i>2.4%</i>	<i>7.43x</i>	<i>7.05x</i>	<i>na</i>	<i>36.7x</i>
		<i>Median</i>	<i>87.2% - 137.9%</i>	<i>\$ 3,559.8</i>	<i>\$ 432.9</i>	<i>20.6%</i>	<i>3.0%</i>	<i>7.47x</i>	<i>7.15x</i>	<i>na</i>	<i>35.0x</i>

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Selected Companies Review

(\$ in millions, except per security)

Company	Ticker	Market Statistics			Metrics			Valuation Benchmarks			
		Closing Price	% of 52-week	Enterprise	Revenue	Rev. Growth	LTM EBITDA	EV / Revenue		EV / EBITDA	
		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E
Sales, Marketing, and Customer Service											
Callidus Software Inc.	CALD	\$ 28.65	93.6% - 178.0%	\$ 1,782.8	\$ 239.7	20.1%	-2.7%	7.44x	7.15x	na	nm
HubSpot, Inc.	HUBS	\$ 88.40	94.5% - 191.1%	3,269.2	345.5	27.5%	-10.4%	9.46x	8.81x	na	nm
LivePerson, Inc.	LPSN	\$ 11.50	76.2% - 212.0%	638.8	217.6	7.2%	5.3%	2.94x	2.93x	nm	35.2x
Salesforce.com, inc.	CRM	\$ 102.23	93.6% - 149.8%	73,250.4	9,923.0	20.0%	5.6%	7.38x	7.01x	nm	32.9x
ServiceSource International, Inc.	SREV	\$ 3.09	51.1% - 118.4%	240.5	241.8	3.2%	-1.9%	0.99x	1.02x	na	15.4x
Shopify Inc.	SHOP	\$ 101.00	81.5% - 239.7%	9,579.0	580.9	44.6%	-6.1%	16.49x	14.51x	na	nm
Yext, Inc.	YEXT	\$ 12.03	79.6% - 108.2%	1,108.0	157.9	32.4%	-37.3%	7.02x	6.51x	na	na
Zendesk, Inc.	ZEN	\$ 33.84	94.3% - 161.5%	3,291.2	395.7	29.7%	-22.2%	8.32x	7.71x	na	nm
		<i>Mean</i>	<i>83.1% - 169.8%</i>	<i>\$ 11,645.0</i>	<i>\$ 1,512.7</i>	<i>23.1%</i>	<i>-8.7%</i>	<i>7.51x</i>	<i>6.96x</i>	<i>na</i>	<i>27.9x</i>
		<i>Median</i>	<i>87.6% - 169.7%</i>	<i>\$ 2,526.0</i>	<i>\$ 293.6</i>	<i>23.8%</i>	<i>-4.4%</i>	<i>7.41x</i>	<i>7.08x</i>	<i>na</i>	<i>32.9x</i>
Business Analytics											
Alteryx, Inc.	AYX	\$ 25.27	86.7% - 173.0%	\$ 1,424.6	\$ 118.0	36.3%	-14.9%	12.07x	11.05x	na	na
Cloudera, Inc.	CLDR	\$ 16.52	70.7% - 113.9%	2,194.6	336.8	26.8%	-110.4%	6.52x	6.05x	na	na
MicroStrategy Incorporated	MSTR	\$ 131.30	63.8% - 106.8%	856.9	506.5	0.1%	19.1%	1.69x	1.71x	8.8x	8.3x
Tableau Software, Inc.	DATA	\$ 69.20	84.1% - 166.3%	4,763.7	878.4	8.7%	-12.8%	5.42x	5.48x	na	nm
Teradata Corporation	TDC	\$ 38.46	97.8% - 142.2%	4,356.0	2,156.0	0.8%	7.9%	2.02x	2.04x	25.6x	11.9x
		<i>Mean</i>	<i>80.6% - 140.4%</i>	<i>\$ 2,719.1</i>	<i>\$ 799.1</i>	<i>14.5%</i>	<i>-22.2%</i>	<i>5.55x</i>	<i>5.27x</i>	<i>17.2x</i>	<i>10.1x</i>
		<i>Median</i>	<i>84.1% - 142.2%</i>	<i>\$ 2,194.6</i>	<i>\$ 506.5</i>	<i>8.7%</i>	<i>-12.8%</i>	<i>5.42x</i>	<i>5.48x</i>	<i>17.2x</i>	<i>10.1x</i>
Design and Engineering											
Ansys, Inc.	ANSS	\$ 147.59	95.1% - 160.6%	\$ 11,862.5	\$ 1,063.5	8.1%	43.9%	11.15x	10.94x	25.4x	22.3x
Autodesk, Inc.	ADSK	\$ 104.83	80.0% - 142.4%	23,261.5	1,981.6	24.5%	-16.6%	11.74x	11.36x	na	na
Cadence Design Systems, Inc.	CDNS	\$ 41.82	91.6% - 166.1%	11,921.6	1,910.3	5.4%	22.8%	6.24x	6.15x	27.4x	19.0x
PTC Inc.	PTC	\$ 60.77	90.5% - 132.5%	7,470.9	1,164.0	6.8%	9.5%	6.42x	6.34x	nm	30.0x
Synopsys, Inc.	SNPS	\$ 85.24	89.9% - 145.1%	11,924.1	2,724.9	2.6%	18.8%	4.38x	4.22x	23.3x	16.4x
		<i>Mean</i>	<i>89.4% - 149.4%</i>	<i>\$ 13,288.1</i>	<i>\$ 1,768.9</i>	<i>9.5%</i>	<i>15.7%</i>	<i>7.99x</i>	<i>7.80x</i>	<i>25.3x</i>	<i>21.9x</i>
		<i>Median</i>	<i>90.5% - 145.1%</i>	<i>\$ 11,921.6</i>	<i>\$ 1,910.3</i>	<i>6.8%</i>	<i>18.8%</i>	<i>6.42x</i>	<i>6.34x</i>	<i>25.4x</i>	<i>20.7x</i>

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		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E	
Infrastructure												
Appian Corporation	APPN	\$ 31.48	91.2% - 215.6%	\$ 1,920.0	\$ 159.9	16.4%	-16.1%	12.01x	11.43x	na	na	
CA, Inc.	CA	\$ 33.28	91.1% - 109.3%	14,042.3	4,078.0	3.6%	29.4%	3.44x	3.39x	11.7x	9.1x	
Carbonite, Inc.	CARB	\$ 25.10	93.0% - 164.1%	702.9	231.3	9.0%	3.5%	3.04x	2.86x	nm	14.9x	
Citrix Systems, Inc.	CTXS	\$ 88.00	91.8% - 125.3%	13,480.4	3,463.6	2.0%	28.5%	3.89x	4.77x	13.6x	13.8x	
Commvault Systems, Inc.	CVLT	\$ 52.50	81.3% - 110.3%	1,961.4	673.4	10.3%	0.7%	2.91x	2.85x	nm	22.5x	
MongoDB, Inc.	MDB	\$ 29.68	87.3% - 120.6%	1,329.9	139.4	35.6%	-63.4%	9.54x	8.74x	na	na	
MuleSoft, Inc.	MULE	\$ 23.26	80.2% - 119.9%	3,015.5	263.1	35.9%	-24.2%	11.46x	10.36x	na	na	
Progress Software Corporation	PRGS	\$ 42.57	98.7% - 156.7%	1,974.5	399.2	1.1%	33.4%	4.95x	4.98x	14.8x	10.8x	
Red Hat, Inc.	RHT	\$ 120.10	91.7% - 174.2%	20,820.4	2,777.0	17.3%	19.1%	7.50x	7.53x	39.3x	27.8x	
Splunk Inc.	SPLK	\$ 82.84	97.6% - 163.6%	10,822.8	1,157.5	25.4%	-22.1%	9.35x	8.72x	na	nm	
Twilio Inc.	TWLO	\$ 23.60	67.5% - 103.5%	2,006.1	365.7	24.1%	-12.4%	5.49x	5.18x	na	na	
Varonis Systems, Inc.	VRNS	\$ 48.55	90.6% - 192.7%	1,272.8	198.6	19.0%	-6.3%	6.41x	6.05x	na	nm	
VMware, Inc.	VMW	\$ 125.32	96.8% - 160.8%	43,225.6	7,093.0	9.8%	26.1%	6.09x	5.49x	23.4x	14.9x	
			<i>Mean</i>	89.1% - 147.4%	\$ 8,967.3	\$ 1,615.4	16.1%	-0.3%	6.62x	6.33x	20.6x	16.3x
			<i>Median</i>	91.2% - 156.7%	\$ 2,006.1	\$ 399.2	16.4%	0.7%	6.09x	5.49x	14.8x	14.9x
Collaboration												
Box, Inc.	BOX	\$ 21.12	87.6% - 154.0%	\$ 2,919.1	\$ 479.4	23.4%	-25.2%	6.09x	5.77x	na	na	
LogMeIn, Inc.	LOGM	\$ 114.50	88.4% - 126.7%	5,763.3	801.7	12.4%	24.6%	7.19x	5.66x	29.3x	15.6x	
RingCentral, Inc.	RNG	\$ 48.40	96.9% - 235.5%	3,571.5	465.5	23.3%	-2.5%	7.67x	7.17x	na	nm	
Workiva Inc.	WK	\$ 21.40	90.3% - 176.1%	887.1	199.7	13.9%	-16.8%	4.44x	4.29x	na	na	
			<i>Mean</i>	90.8% - 173.1%	\$ 3,285.3	\$ 486.6	18.2%	-5.0%	6.35x	5.72x	29.3x	15.6x
			<i>Median</i>	89.4% - 165.1%	\$ 3,245.3	\$ 472.4	18.6%	-9.7%	6.64x	5.71x	29.3x	15.6x

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		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E
Healthcare											
athenahealth, Inc.	ATHN	\$ 133.04	83.9% - 140.0%	\$ 5,477.7	\$ 1,179.3	10.9%	11.0%	4.64x	4.52x	42.1x	20.6x
Cerner Corporation	CERN	\$ 67.39	91.2% - 143.1%	22,526.2	4,987.9	8.2%	27.8%	4.52x	4.37x	16.2x	13.5x
Computer Programs and Systems, Inc.	CPSI	\$ 30.05	83.1% - 139.1%	547.7	263.4	6.0%	10.5%	2.08x	2.04x	19.9x	11.3x
HealthStream, Inc.	HSTM	\$ 23.16	73.5% - 112.4%	623.1	243.6	7.5%	11.1%	2.56x	2.52x	23.0x	16.7x
Inovalon Holdings, Inc.	INOV	\$ 15.00	84.3% - 148.5%	1,914.3	430.8	7.9%	17.0%	4.44x	4.23x	26.1x	17.2x
Medidata Solutions, Inc.	MDSO	\$ 63.37	73.8% - 132.7%	3,642.4	528.8	17.6%	15.5%	6.89x	6.68x	44.3x	27.2x
NantHealth, Inc.	NH	\$ 3.05	28.1% - 117.3%	447.0	102.2	41.6%	-94.3%	4.37x	4.73x	na	na
Quality Systems, Inc.	QSII	\$ 13.58	76.6% - 107.7%	893.1	523.8	1.7%	11.3%	1.71x	1.70x	15.1x	10.9x
Veeva Systems Inc.	VEEV	\$ 55.28	81.2% - 136.5%	7,358.0	650.8	18.5%	25.0%	11.31x	10.81x	45.3x	32.4x
	<i>Mean</i>		75.1% - 130.8%	\$ 4,825.5	\$ 990.1	13.3%	3.9%	4.72x	4.62x	29.0x	18.7x
	<i>Median</i>		81.2% - 136.5%	\$ 1,914.3	\$ 523.8	8.2%	11.3%	4.44x	4.37x	24.6x	17.0x
Other Vertical											
AppFolio, Inc.	APPF	\$ 41.50	79.4% - 191.8%	\$ 1,385.8	\$ 133.9	27.6%	7.0%	10.35x	9.78x	nm	nm
Blackbaud, Inc.	BLKB	\$ 94.49	90.4% - 152.5%	4,794.4	769.6	10.7%	18.0%	6.23x	6.07x	34.7x	24.5x
CDK Global, Inc.	CDK	\$ 71.28	98.7% - 121.8%	11,222.3	2,235.2	4.2%	27.2%	5.02x	4.98x	18.4x	14.9x
Ebix, Inc.	EBIX	\$ 79.25	96.8% - 151.2%	2,777.2	339.3	20.0%	35.1%	8.18x	7.82x	23.3x	22.7x
Guidewire Software, Inc.	GWRE	\$ 74.26	88.9% - 151.0%	5,169.6	528.3	19.1%	6.9%	9.78x	9.11x	nm	43.7x
Instructure, Inc.	INST	\$ 33.10	90.4% - 171.9%	978.4	146.5	28.3%	-32.3%	6.68x	6.26x	na	na
Q2 Holdings, Inc.	QTWO	\$ 36.85	83.1% - 130.2%	1,511.4	184.4	24.0%	-8.1%	8.19x	7.79x	na	nm
Square, Inc.	SQ	\$ 34.67	70.0% - 256.2%	14,268.6	2,050.1	31.7%	-1.2%	6.96x	14.74x	na	nm
SS&C Technologies Holdings, Inc.	SSNC	\$ 40.48	95.2% - 142.4%	10,747.4	1,637.9	5.6%	37.2%	6.56x	6.41x	17.6x	15.5x
Tyler Technologies, Inc.	TYL	\$ 177.05	94.1% - 124.3%	6,761.9	816.1	10.5%	22.4%	8.29x	8.02x	36.9x	26.8x
	<i>Mean</i>		88.7% - 159.3%	\$ 5,961.7	\$ 884.1	18.2%	11.2%	7.62x	8.10x	26.2x	24.7x
	<i>Median</i>		90.4% - 151.1%	\$ 4,982.0	\$ 649.0	19.5%	12.5%	7.57x	7.80x	23.3x	23.6x

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		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E
Security											
Check Point Software Technologies Ltd.	CHKP	\$ 103.62	86.9% - 123.4%	\$ 15,743.5	\$ 1,835.4	6.3%	49.7%	8.58x	8.48x	17.3x	15.1x
FireEye, Inc.	FEYE	\$ 14.20	78.9% - 137.2%	2,522.1	733.5	7.7%	-19.0%	3.44x	3.40x	na	28.8x
ForeScout Technologies, Inc.	FSCT	\$ 31.89	97.9% - 147.9%	1,563.1	204.3	19.7%	-30.7%	7.65x	7.19x	na	na
Fortinet, Inc.	FTNT	\$ 43.69	95.7% - 146.1%	6,386.7	1,441.1	14.0%	11.8%	4.43x	4.29x	37.6x	20.8x
Imperva, Inc.	IMPV	\$ 39.70	75.8% - 107.2%	1,007.1	309.0	17.3%	-2.1%	3.26x	3.13x	na	23.2x
MobileIron, Inc.	MOBL	\$ 3.90	57.6% - 121.9%	292.4	173.1	7.0%	-30.6%	1.69x	1.68x	na	na
Okta, Inc.	OKTA	\$ 25.61	76.1% - 119.0%	2,608.7	231.1	32.5%	-45.5%	11.29x	10.31x	na	na
Palo Alto Networks, Inc.	PANW	\$ 144.94	91.9% - 135.1%	12,543.6	1,869.0	20.3%	-4.3%	6.71x	6.36x	na	26.6x
Proofpoint, Inc.	PFPT	\$ 88.81	90.7% - 126.3%	4,100.6	476.7	30.5%	-7.1%	8.60x	8.05x	na	nm
Qualys, Inc.	QLYS	\$ 59.35	95.2% - 188.7%	2,084.1	220.1	16.4%	25.8%	9.47x	9.07x	36.7x	24.6x
Rapid7, Inc.	RPD	\$ 18.66	92.1% - 154.2%	766.9	188.2	20.5%	-21.1%	4.07x	3.88x	na	na
SailPoint Technologies Holdings, Inc.	SAIL	\$ 14.50	88.6% - 113.1%	1,547.9	162.6	24.4%	11.0%	9.52x	8.90x	nm	nm
SecureWorks Corp.	SCWX	\$ 8.87	68.3% - 109.5%	619.5	466.2	8.3%	-5.9%	1.33x	1.33x	na	na
Symantec Corporation	SYMC	\$ 28.06	82.0% - 118.0%	22,384.8	4,571.0	3.7%	13.0%	4.90x	4.53x	37.6x	9.8x
VASCO Data Security International, Inc.	VDSI	\$ 13.90	88.1% - 125.8%	395.7	186.4	9.0%	5.6%	2.12x	2.09x	38.0x	20.7x
		<i>Mean</i>	<i>84.4% - 131.6%</i>	<i>\$ 4,971.1</i>	<i>\$ 871.2</i>	<i>15.8%</i>	<i>-3.3%</i>	<i>5.80x</i>	<i>5.51x</i>	<i>33.4x</i>	<i>21.2x</i>
		<i>Median</i>	<i>88.1% - 125.8%</i>	<i>\$ 2,084.1</i>	<i>\$ 309.0</i>	<i>16.4%</i>	<i>-4.3%</i>	<i>4.90x</i>	<i>4.53x</i>	<i>37.6x</i>	<i>22.0x</i>

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		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E
Large Diversified											
Apple Inc.	AAPL	\$ 169.23	95.5% - 147.5%	\$ 902,163.5	\$ 229,234.0	16.7%	31.2%	3.94x	3.80x	12.6x	12.2x
Hewlett Packard Enterprise Company	HPE	\$ 14.36	57.7% - 112.1%	27,509.7	28,871.0	-11.0%	15.3%	0.95x	0.84x	6.2x	4.8x
HP Inc.	HPQ	\$ 21.01	92.6% - 145.9%	34,344.2	52,056.0	2.7%	8.4%	0.66x	0.65x	7.9x	8.0x
International Business Machines Corporation	IBM	\$ 153.42	83.9% - 110.3%	176,291.9	78,366.0	-0.1%	21.5%	2.25x	2.24x	10.5x	9.2x
Oracle Corporation	ORCL	\$ 47.10	88.6% - 123.0%	189,594.3	38,907.0	3.9%	38.9%	4.87x	4.86x	12.5x	10.6x
		<i>Mean</i>	83.7% - 127.7%	\$ 265,980.7	\$ 85,486.8	2.4%	23.0%	2.53x	2.48x	9.9x	9.0x
		<i>Median</i>	88.6% - 123.0%	\$ 176,291.9	\$ 52,056.0	2.7%	21.5%	2.25x	2.24x	10.5x	9.2x
Networking											
A10 Networks, Inc.	ATEN	\$ 7.72	77.7% - 128.2%	\$ 436.3	\$ 239.4	7.6%	-2.4%	1.82x	1.81x	na	36.1x
Arista Networks, Inc.	ANET	\$ 235.58	95.9% - 269.8%	16,570.7	1,506.3	27.3%	28.5%	11.00x	10.09x	38.7x	28.0x
Cisco Systems, Inc.	CSCO	\$ 38.02	97.5% - 127.6%	153,677.7	47,789.0	2.0%	30.2%	3.22x	3.20x	10.6x	9.0x
Extreme Networks, Inc.	EXTR	\$ 12.52	87.3% - 251.9%	1,451.0	687.2	39.1%	7.8%	2.11x	1.86x	26.9x	16.4x
F5 Networks, Inc.	FFIV	\$ 131.22	87.8% - 114.5%	7,196.7	2,090.0	3.2%	30.1%	3.44x	3.43x	11.4x	8.7x
Juniper Networks, Inc.	JNPR	\$ 28.50	92.1% - 119.4%	9,535.5	5,173.3	0.4%	23.1%	1.84x	1.90x	8.0x	7.0x
NETGEAR, Inc.	NTGR	\$ 58.75	95.8% - 141.6%	1,513.2	1,377.8	11.3%	9.3%	1.10x	1.08x	11.8x	11.0x
NetScout Systems, Inc.	NTCT	\$ 30.45	79.1% - 110.1%	2,646.4	1,103.7	8.9%	17.7%	2.40x	2.34x	13.5x	9.9x
		<i>Mean</i>	89.1% - 157.9%	\$ 24,128.4	\$ 7,495.8	12.5%	18.0%	3.37x	3.22x	17.3x	15.8x
		<i>Median</i>	89.9% - 127.9%	\$ 4,921.5	\$ 1,442.0	8.2%	20.4%	2.25x	2.12x	11.8x	10.4x
Storage											
NetApp, Inc.	NTAP	\$ 55.13	93.4% - 157.1%	\$ 11,968.0	\$ 5,632.0	4.3%	18.1%	2.12x	2.09x	11.8x	9.3x
Pure Storage, Inc.	PSTG	\$ 15.86	82.3% - 173.9%	2,886.8	912.6	31.3%	-16.8%	3.16x	2.84x	na	nm
Quantum Corporation	QTM	\$ 5.63	61.2% - 137.0%	313.4	478.2	1.0%	1.8%	0.66x	0.67x	35.9x	na
Tintri, Inc.	TNTR	\$ 5.10	68.5% - 197.5%	173.4	137.7	-8.3%	-94.5%	1.26x	1.41x	na	na
		<i>Mean</i>	76.3% - 166.4%	\$ 3,835.4	\$ 1,790.2	7.1%	-22.9%	1.80x	1.75x	23.9x	9.3x
		<i>Median</i>	75.4% - 165.5%	\$ 1,600.1	\$ 695.4	2.6%	-7.5%	1.69x	1.75x	23.9x	9.3x

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Sources of information: S&P Capital IQ.

Selected Companies Review

(\$ in millions, except per security)

Company	Ticker	Market Statistics			Metrics			Valuation Benchmarks			
		Closing Price	% of 52-week	Enterprise	Revenue	Rev. Growth	LTM EBITDA	EV / Revenue		EV / EBITDA	
		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E
Internet Retail											
Amazon.com, Inc.	AMZN	\$ 1,169.47	96.4% - 156.4%	\$ 582,411.1	\$ 161,154.0	28.9%	8.0%	3.61x	3.29x	45.0x	30.7x
Blue Apron Holdings, Inc.	APRN	\$ 4.03	36.6% - 137.1%	692.4	909.5	6.0%	-16.6%	0.76x	0.79x	na	na
CarGurus, Inc.	CARG	\$ 29.98	84.6% - 116.0%	3,334.7	287.0	22.7%	8.1%	11.62x	10.67x	nm	nm
eBay Inc.	EBAY	\$ 37.74	96.1% - 127.9%	43,446.2	9,349.0	7.2%	31.2%	4.65x	4.54x	14.9x	12.5x
Etsy, Inc.	ETSY	\$ 20.45	93.5% - 217.3%	2,223.0	415.2	18.5%	8.1%	5.35x	5.08x	nm	29.8x
Expedia, Inc.	EXPE	\$ 119.77	74.4% - 107.1%	20,708.8	9,833.5	12.5%	13.1%	2.11x	2.05x	16.0x	11.9x
Groupon, Inc.	GRPN	\$ 5.10	85.1% - 175.9%	2,443.7	3,005.3	3.0%	2.8%	0.81x	0.87x	29.5x	10.3x
GrubHub Inc.	GRUB	\$ 71.80	96.0% - 221.4%	5,960.6	615.4	35.4%	20.3%	9.69x	8.77x	47.6x	33.1x
Match Group, Inc.	MTCH	\$ 31.31	95.3% - 203.0%	9,897.5	1,351.0	17.4%	27.4%	7.33x	7.53x	26.7x	21.2x
Netflix, Inc.	NFLX	\$ 191.96	93.9% - 155.3%	89,150.0	10,884.5	28.0%	7.5%	8.19x	7.63x	nm	nm
Overstock.com, Inc.	OSTK	\$ 63.90	77.3% - 464.7%	1,566.7	1,814.6	2.0%	-0.4%	0.86x	0.86x	na	nm
Shutterstock, Inc.	SFLY	\$ 49.75	92.1% - 125.1%	1,946.5	1,157.7	5.2%	12.6%	1.68x	1.69x	13.3x	8.8x
Stitch Fix, Inc.	SFIX	\$ 25.83	85.9% - 178.4%	2,478.9	1,036.7	na	2.2%	2.39x	na	nm	na
The Priceline Group Inc.	PCLN	\$ 1,737.74	84.0% - 119.1%	87,178.1	12,226.4	14.3%	38.3%	7.13x	6.94x	18.6x	18.5x
TripAdvisor, Inc.	TRIP	\$ 34.46	64.3% - 116.8%	4,294.8	1,551.0	3.6%	11.3%	2.77x	2.78x	24.5x	13.4x
Wayfair Inc.	W	\$ 80.27	95.3% - 234.0%	6,861.1	4,266.4	28.7%	-3.4%	1.61x	1.48x	na	na
		<i>Mean</i>	<i>84.4% - 178.5%</i>	<i>\$ 54,037.1</i>	<i>\$ 13,741.1</i>	<i>15.6%</i>	<i>10.7%</i>	<i>4.41x</i>	<i>4.33x</i>	<i>26.3x</i>	<i>19.0x</i>
		<i>Median</i>	<i>89.0% - 155.9%</i>	<i>\$ 5,127.7</i>	<i>\$ 1,682.8</i>	<i>14.3%</i>	<i>8.1%</i>	<i>3.19x</i>	<i>3.29x</i>	<i>24.5x</i>	<i>15.9x</i>

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Selected Companies Review

(\$ in millions, except per security)

Company	Ticker	Market Statistics			Metrics			Valuation Benchmarks			
		Closing Price	% of 52-week	Enterprise	Revenue	Rev. Growth	LTM EBITDA	EV / Revenue		EV / EBITDA	
		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E
Internet Content and Search											
Alphabet Inc.	GOOGL	\$ 1,053.40	97.0% - 133.4%	\$ 633,279.2	\$ 104,596.0	19.0%	32.9%	6.05x	5.78x	18.4x	14.4x
AutoWeb, Inc.	AUTO	\$ 9.01	60.9% - 135.8%	92.6	149.2	4.1%	7.3%	0.62x	0.64x	8.5x	9.3x
Care.com, Inc.	CRCM	\$ 18.04	86.4% - 224.1%	527.4	173.4	9.5%	6.4%	3.04x	3.03x	47.4x	24.1x
CoStar Group, Inc.	CSGP	\$ 296.95	94.4% - 160.6%	10,471.7	929.6	15.0%	25.3%	11.27x	10.85x	44.5x	36.3x
Facebook, Inc.	FB	\$ 176.46	95.8% - 153.7%	474,928.1	36,490.0	33.1%	55.5%	13.02x	11.81x	23.4x	18.4x
Snap Inc.	SNAP	\$ 14.61	49.6% - 129.5%	15,517.1	704.9	65.2%	-459.8%	nm	19.59x	na	na
TechTarget, Inc.	TTGT	\$ 13.92	97.1% - 169.5%	393.8	104.9	13.4%	10.9%	3.75x	3.64x	34.4x	18.2x
TripAdvisor, Inc.	TRIP	\$ 34.46	64.3% - 116.8%	4,294.8	1,551.0	3.6%	11.3%	2.77x	2.78x	24.5x	13.4x
Twitter, Inc.	TWTR	\$ 24.01	93.9% - 170.0%	15,331.7	2,428.9	6.4%	9.3%	6.31x	6.40x	nm	19.3x
Yelp Inc.	YELP	\$ 41.96	86.7% - 155.8%	3,047.7	823.4	12.9%	6.0%	3.70x	3.61x	nm	19.4x
Yext, Inc.	YEXT	\$ 12.03	79.6% - 108.2%	1,108.0	157.9	32.4%	-37.3%	7.02x	6.51x	na	na
Zillow Group, Inc.	ZG	\$ 40.74	80.0% - 124.9%	7,436.3	1,022.1	20.5%	4.4%	7.28x	6.94x	nm	31.5x
		<i>Mean</i>	<i>82.1% - 148.5%</i>	<i>\$ 97,202.4</i>	<i>\$ 12,427.6</i>	<i>19.6%</i>	<i>-27.3%</i>	<i>5.89x</i>	<i>6.80x</i>	<i>28.7x</i>	<i>20.4x</i>
		<i>Median</i>	<i>86.5% - 144.8%</i>	<i>\$ 5,865.5</i>	<i>\$ 876.5</i>	<i>14.2%</i>	<i>8.3%</i>	<i>6.05x</i>	<i>6.09x</i>	<i>24.5x</i>	<i>18.9x</i>

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Sources of information: S&P Capital IQ.

PROFESSIONAL SERVICES AND DISTRIBUTION

Technology Investment Banking

Selected Companies Review

(\$ in millions, except per security)

Company	Ticker	Market Statistics			Metrics			Valuation Benchmarks			
		Closing Price	% of 52-week	Enterprise	Revenue	Rev. Growth	LTM EBITDA	EV / Revenue		EV / EBITDA	
		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E
Large Diversified											
Hewlett Packard Enterprise Company	HPE	\$ 14.36	57.7% - 112.1%	\$ 27,509.7	\$ 28,871.0	-11.0%	15.3%	0.95x	0.84x	6.2x	4.8x
International Business Machines Corporation	IBM	\$ 153.42	83.9% - 110.3%	176,291.9	78,366.0	-0.1%	21.5%	2.25x	2.24x	10.5x	9.2x
		<i>Mean</i>	70.8% - 111.2%	\$ 101,900.8	\$ 53,618.5	-5.5%	18.4%	1.60x	1.54x	8.4x	7.0x
		<i>Median</i>	70.8% - 111.2%	\$ 101,900.8	\$ 53,618.5	-5.5%	18.4%	1.60x	1.54x	8.4x	7.0x
Consulting											
CACI International Inc	CACI	\$ 132.35	89.8% - 118.1%	\$ 4,363.1	\$ 4,367.2	2.6%	8.3%	1.00x	0.99x	12.0x	12.0x
Cognizant Technology Solutions Corporation	CTSH	\$ 71.02	92.8% - 137.8%	38,105.5	14,444.0	9.4%	19.9%	2.64x	2.57x	13.2x	12.5x
DXC Technology Company	DXC	\$ 94.90	95.4% - 140.1%	33,517.4	15,882.0	19.0%	13.8%	2.11x	1.66x	15.3x	8.5x
EPAM Systems, Inc.	EPAM	\$ 107.43	98.5% - 169.7%	5,436.9	1,364.7	21.8%	14.4%	3.98x	3.76x	27.7x	21.1x
ManTech International Corporation	MANT	\$ 50.19	94.2% - 149.8%	1,820.5	1,648.9	10.3%	7.7%	1.10x	1.06x	14.4x	13.9x
Perficient, Inc.	PRFT	\$ 19.07	94.3% - 117.7%	728.2	458.5	6.2%	11.1%	1.59x	1.50x	14.3x	10.4x
Presidio, Inc.	PSDO	\$ 19.17	98.4% - 150.4%	2,700.7	2,844.9	6.1%	7.8%	0.95x	0.94x	12.2x	11.3x
Science Applications International Corporation	SAIC	\$ 76.27	84.9% - 126.7%	4,223.0	4,352.0	2.8%	7.0%	0.97x	0.96x	13.9x	13.9x
Unisys Corporation	UIS	\$ 8.15	53.4% - 118.1%	433.8	2,718.7	0.8%	4.9%	0.16x	0.16x	3.2x	1.2x
Virtusa Corporation	VRTU	\$ 44.08	90.5% - 178.3%	1,376.4	918.7	14.1%	6.5%	1.50x	1.43x	23.1x	20.3x
		<i>Mean</i>	89.2% - 140.7%	\$ 9,270.5	\$ 4,899.9	9.3%	10.1%	1.60x	1.50x	14.9x	12.5x
		<i>Median</i>	93.5% - 139.0%	\$ 3,461.9	\$ 2,781.8	7.8%	8.0%	1.30x	1.25x	14.1x	12.3x
Infrastructure Outsourcing											
Akamai Technologies, Inc.	AKAM	\$ 65.04	90.8% - 145.7%	\$ 10,931.2	\$ 2,455.7	8.2%	26.8%	4.45x	4.39x	16.6x	11.9x
Limelight Networks, Inc.	LLNW	\$ 4.41	72.9% - 218.3%	442.7	180.0	6.4%	5.1%	2.46x	2.41x	48.3x	15.5x
		<i>Mean</i>	81.8% - 182.0%	\$ 5,687.0	\$ 1,317.8	7.3%	16.0%	3.46x	3.40x	32.4x	13.7x
		<i>Median</i>	81.8% - 182.0%	\$ 5,687.0	\$ 1,317.8	7.3%	16.0%	3.46x	3.40x	32.4x	13.7x

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Sources of information: S&P Capital IQ.

PROFESSIONAL SERVICES AND DISTRIBUTION (CONTINUED) Technology Investment Banking

Selected Companies Review

(\$ in millions, except per security)

Company	Ticker	Market Statistics			Metrics			Valuation Benchmarks			
		Closing Price	% of 52-week	Enterprise	Revenue	Rev. Growth	LTM EBITDA	EV / Revenue		EV / EBITDA	
		29-Dec-17	High-Low	Value	LTM	2018 E	Margin	LTM	2017 E	LTM	2017 E
Solution Providers											
CDW Corporation	CDW	\$ 69.49	97.1% - 137.6%	\$ 14,590.3	\$ 14,845.4	5.5%	7.4%	0.98x	0.96x	13.3x	12.4x
ePlus inc.	PLUS	\$ 75.20	76.9% - 138.6%	1,162.8	1,397.4	5.5%	7.3%	0.83x	0.82x	11.4x	12.0x
Insight Enterprises, Inc.	NSIT	\$ 38.29	72.0% - 108.6%	1,907.9	6,387.1	2.8%	3.6%	0.30x	0.29x	8.3x	7.8x
PC Connection, Inc.	CNXN	\$ 26.21	86.0% - 111.4%	642.9	2,885.2	3.8%	3.1%	0.22x	0.22x	7.2x	7.0x
PCM, Inc.	PCMI	\$ 9.90	31.7% - 105.3%	316.8	2,216.6	4.6%	1.7%	0.14x	0.14x	8.3x	6.3x
		<i>Mean</i>	<i>72.8% - 120.3%</i>	<i>\$ 3,724.1</i>	<i>\$ 5,546.3</i>	<i>4.5%</i>	<i>4.6%</i>	<i>0.50x</i>	<i>0.49x</i>	<i>9.7x</i>	<i>9.1x</i>
		<i>Median</i>	<i>76.9% - 111.4%</i>	<i>\$ 1,162.8</i>	<i>\$ 2,885.2</i>	<i>4.6%</i>	<i>3.6%</i>	<i>0.30x</i>	<i>0.29x</i>	<i>8.3x</i>	<i>7.8x</i>
Distribution											
Anixter International Inc.	AXE	\$ 76.00	85.8% - 121.8%	\$ 3,735.0	\$ 7,808.2	3.6%	4.8%	0.48x	0.47x	10.0x	9.5x
Arrow Electronics, Inc.	ARW	\$ 80.41	95.1% - 117.3%	9,747.5	25,621.5	6.0%	4.4%	0.38x	0.37x	8.7x	8.2x
Avnet, Inc.	AVT	\$ 39.62	82.2% - 111.1%	5,750.6	17,982.8	2.4%	4.0%	0.32x	0.32x	8.0x	7.8x
ScanSource, Inc.	SCSC	\$ 35.80	78.9% - 106.7%	1,175.4	3,560.2	4.1%	3.5%	0.33x	0.32x	9.5x	8.9x
SYNNEX Corporation	SNX	\$ 135.95	98.5% - 134.0%	6,276.2	15,620.7	12.0%	4.1%	0.40x	0.38x	9.9x	9.5x
Tech Data Corporation	TECD	\$ 97.97	88.2% - 120.3%	5,095.1	33,110.0	3.0%	1.7%	0.15x	0.14x	9.1x	7.0x
		<i>Mean</i>	<i>88.1% - 118.5%</i>	<i>\$ 5,296.6</i>	<i>\$ 17,283.9</i>	<i>5.2%</i>	<i>3.7%</i>	<i>0.34x</i>	<i>0.33x</i>	<i>9.2x</i>	<i>8.5x</i>
		<i>Median</i>	<i>87.0% - 118.8%</i>	<i>\$ 5,422.9</i>	<i>\$ 16,801.8</i>	<i>3.9%</i>	<i>4.0%</i>	<i>0.36x</i>	<i>0.35x</i>	<i>9.3x</i>	<i>8.5x</i>

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