

# VISTA POINT

## ADVISORS

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Mergers & Acquisitions | Capital Raising | Strategic Advisory

Software Industry Update

Q3 2019

# Vista Point Advisors Overview

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Vista Point Advisors was founded on the principle that founder-led technology companies in the emerging and middle markets are unique and require specialized attention and advice when considering investment and exit opportunities. Our unique focus on sell-side processes provides our clients with unconflicted advice that assures our interests are completely aligned with the entrepreneur. VPA is focused exclusively on working with founder-owned and operated businesses to deliver the most favorable transactions at premium valuations.



## Unconflicted Advice

Vista Point exclusively provides sell-side M&A and Capital Raising advisory services to technology businesses removing the conflict of interest associated with working both sides of the table.



## Deep Technology Domain Expertise

Vista Point bankers are industry specialists that focus exclusively on core technology markets allowing us to provide relevant insights into our client's business and create the strategic framework to optimize valuation.



## Differentiated Negotiation Framework

The firm utilizes a unique negotiation framework to increase the competitiveness of the transaction process, and ultimately yield higher valuations at better terms for clients.

# Our Differentiated Model Yields Differentiated Results

 <i>acquired by</i>  August 2019	<b>Software Client (Undisclosed)</b> <i>investment from</i>  August 2019	 <i>acquired by</i>  July 2019	<b>Software Client (Undisclosed)</b> <i>acquired by</i>  a portfolio company of  PROVIDENCEEQUITY May 2019	 <b>Freckle</b> <i>acquired by</i>  a portfolio company of  FRANCISCO PARTNERS May 2019	 <i>acquired by</i>  May 2019	 <i>acquired by</i>  a portfolio company of  May 2019
 <i>acquired by</i>  a portfolio company of  GI PARTNERS January 2019	 <i>acquired by</i>  December 2018	 <i>acquired by</i>  November 2018	 <i>investment from</i>  November 2018	 <i>acquired by</i>  October 2018	 <i>acquired by</i>  July 2018	 <i>investment from</i>  July 2018
 <i>investment from</i>  June 2018	 <i>investment from</i>  May 2018	 <i>acquired by</i>  a portfolio company of  April 2018	 <i>acquired by</i>  March 2018	 <i>investment from</i>  January 2018	 <i>investment from</i>  December 2017	 <i>investment from</i>  November 2017
 <i>acquired by</i>  a portfolio company of  September 2017	 <i>acquired by</i>  September 2017	 <i>investment from</i>  September 2017	 <i>investment from</i>  August 2017	 <i>investment from</i>  August 2017	 <i>acquired by</i>  March 2017	 <i>acquired by</i>  a portfolio company of  February 2017

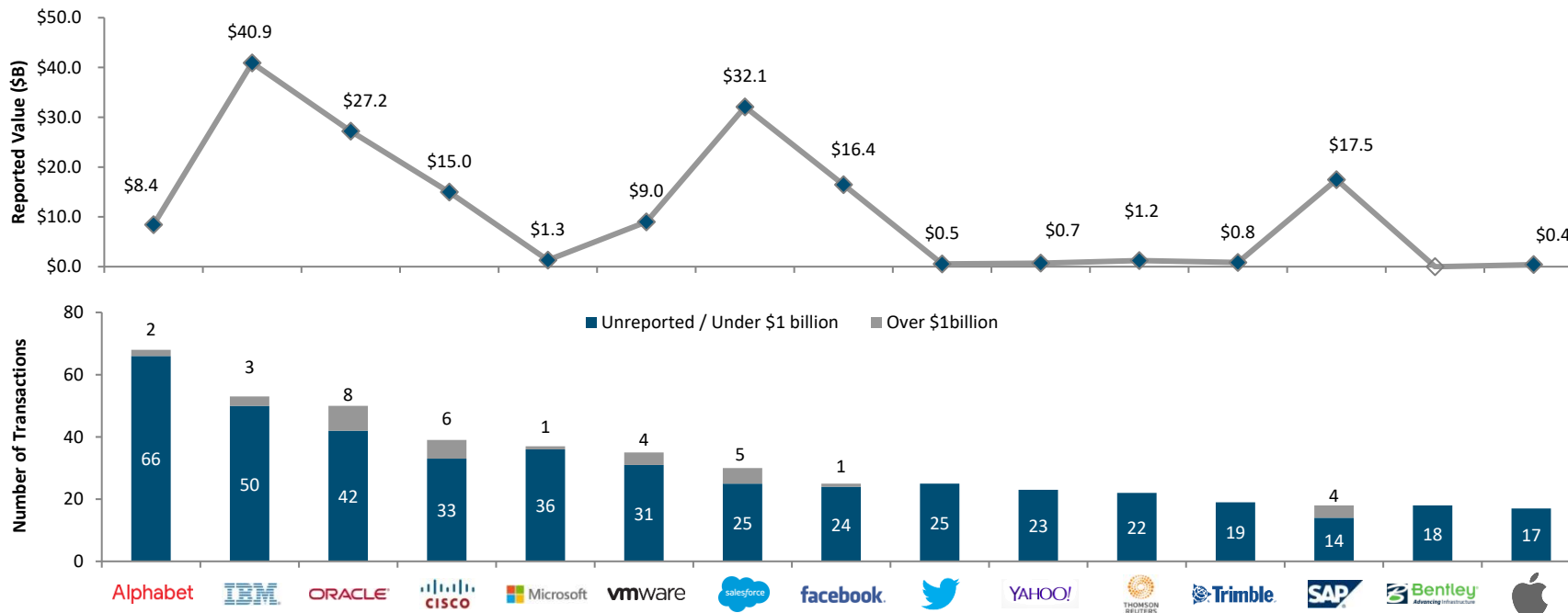
# Q3 2019 Software Industry Overview

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- There were 369 reported software M&A transactions in Q3 2019 totaling \$53.7B in reported transaction value
  - Software M&A deal volume in Q3 2019 was down 4.4% relative to Q3 2018, which saw 386 transactions
  - Notable deals include:
    - London Stock Exchange's \$27.0B acquisition of Refinitiv
    - BC Partners' \$5.2B acquisition of Advanced Computer Software Group; \$2.1B acquisition of Presidio, representing 0.7x LTM Revenue
    - VMware's \$2.1B acquisition of Carbon Black, representing 9.2x LTM Revenue; \$2.0B acquisition of Pivotal Software, representing 2.9x LTM Revenue
- The software IPO market saw six major IPO pricings in Q3 2019:
  - Datadog, developer of a monitoring platform designed to help in tracking dynamic infrastructure, raised \$648M on 9/19/19 and has traded up 26% through the end of the quarter
  - Cloudflare, developer of a web performance and security platform designed to stop large attacks on the DNS system, raised \$525M on 9/13/19 and has traded up 24% through the end of the quarter
  - Dynatrace, provider of application performance management software intended to offer deep insight into users and transactions across every application, raised \$570M on 8/1/19 and has traded up 17% through the end of the quarter
  - Medallia, developer of a cloud-based customer experience management software, raised \$326M on 7/19/19 and has traded up 31% through the end of the quarter
  - Afya Educational, operator of a medical education group based in Brazil, raised \$261M on 7/19/19 and has traded up 35% through the end of the quarter
  - Ping Identity, developer of federated identity management technologies designed to offer secure data management, raised \$188M on 9/19/19 and has traded up 15% through the end of the quarter

# Active Acquirers and Notable Transactions

## Most Active Acquirers (Since 2010)<sup>1</sup>



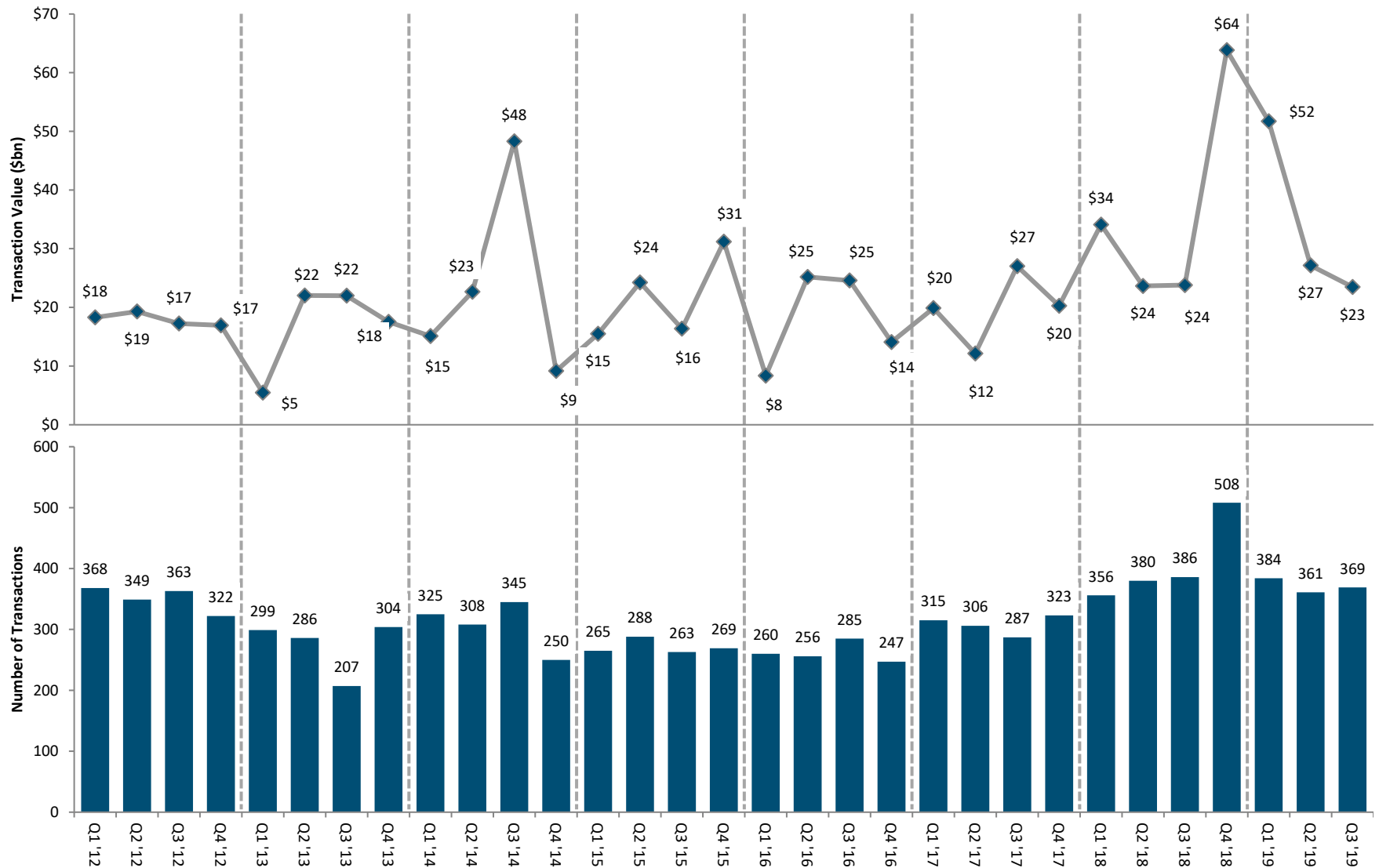
## Notable Recent Transactions

Acquirer	London Stock Exchange	BC PARTNERS	vmware®	vmware®
Target	REFINITIV	PRESIDIO	Pivotal	Carbon Black.
Date	8/1/19	8/14/19	8/22/19	8/22/19
EV	\$27.0B	\$2.1B	\$2.0B	\$2.1B
EV / LTM Rev	N/A	0.7x	2.9x	9.2x
Sector Categorization	FinTech	IT Infrastructure and Management	Development	Security/Storage

Source: Capital IQ and Pitchbook as of 9/30/19. <sup>1</sup>Does not include undisclosed transactions.

# Software M&A Market Overview

## Quarterly Software M&A Value and Deal Count (Since 2012)



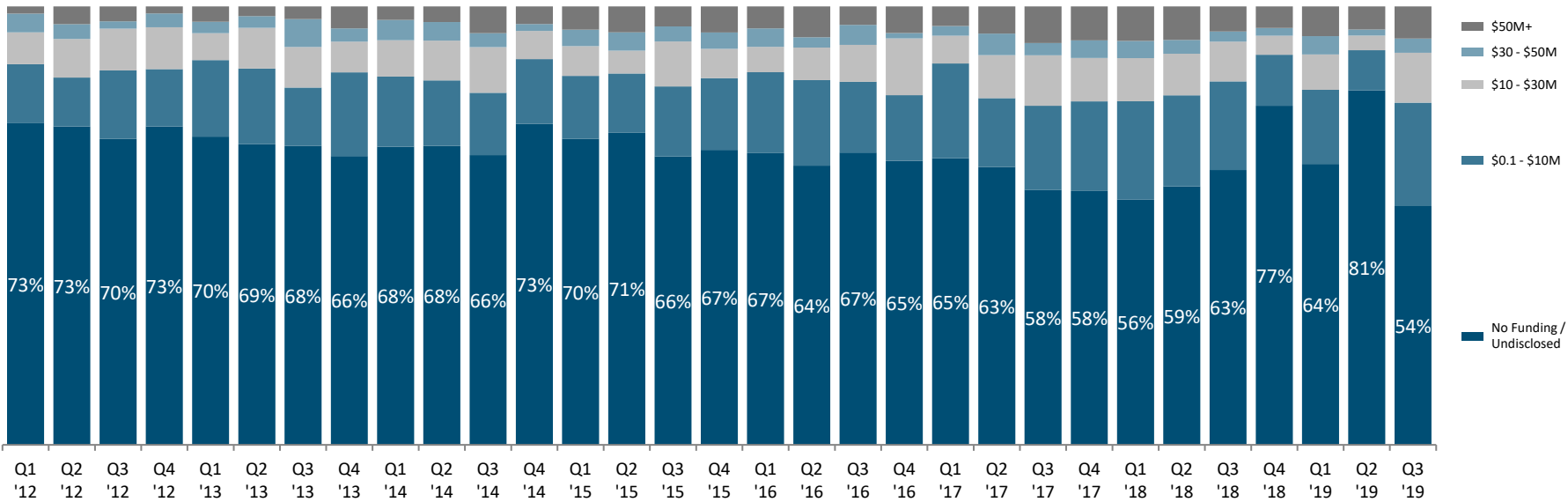
Source: Capital IQ and Pitchbook as of 9/30/19. WhatsApp/Facebook, Broadcom/Avago, EMC/Denali, CA Technologies/Broadcom, Red Hat/IBM, Refinitiv/Blackstone, BMC/KKR, First Data/Fiserv, Tableau/Salesforce, Refinitiv/LSE deals omitted from top graph

# Software M&A Market Overview

## Transactions by Reported Value



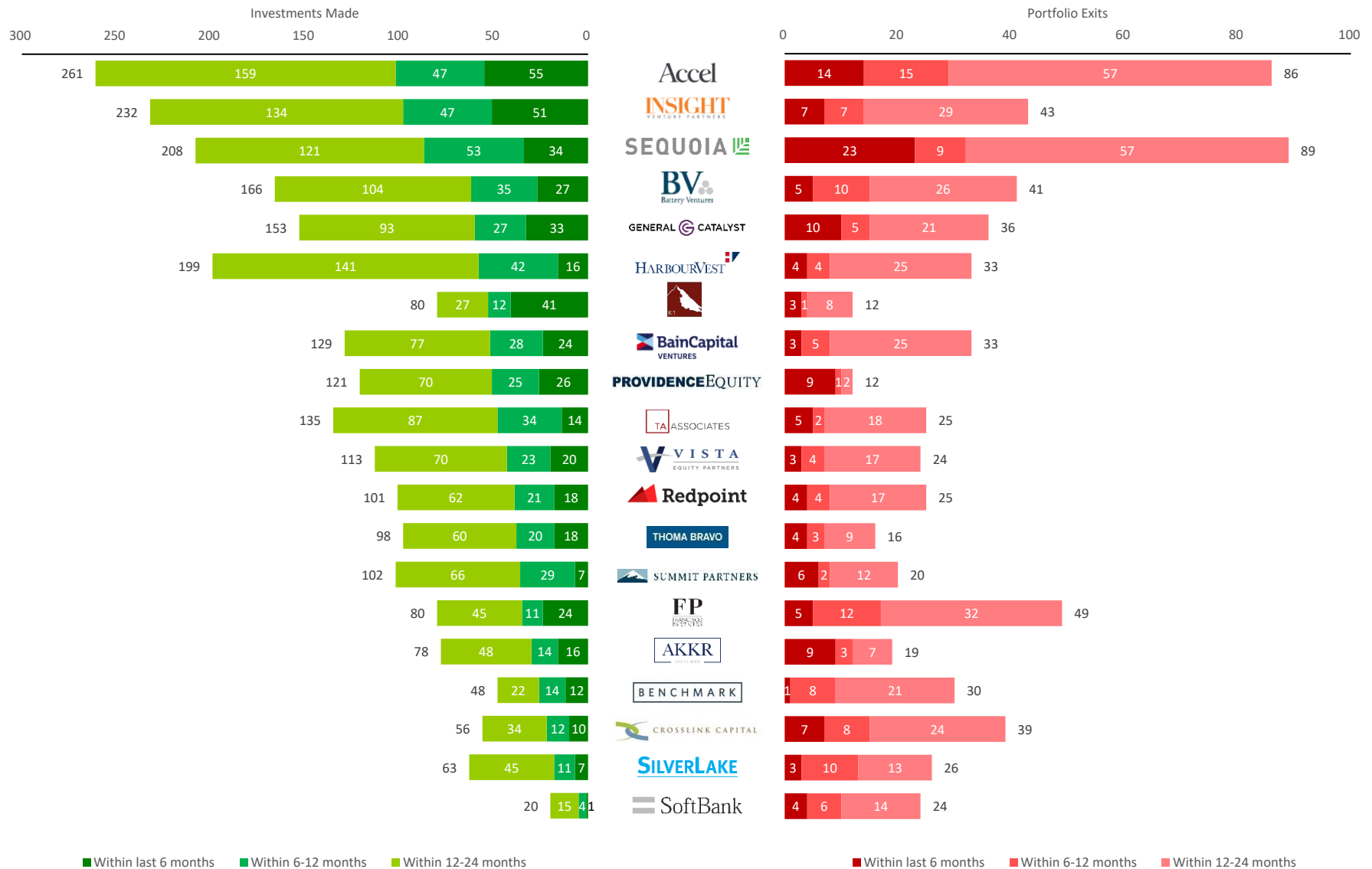
## Transactions by Target Funding



Source: Capital IQ and Pitchbook as of 9/30/19

# Despite High Valuations, Investments Lead Exits 3:1

## Top 20 Most Active Investors Across Software & Internet Over the Last 2 Years



Source: Capital IQ and Pitchbook as of 9/30/19, Investors ranked by investments made in the last 12 months

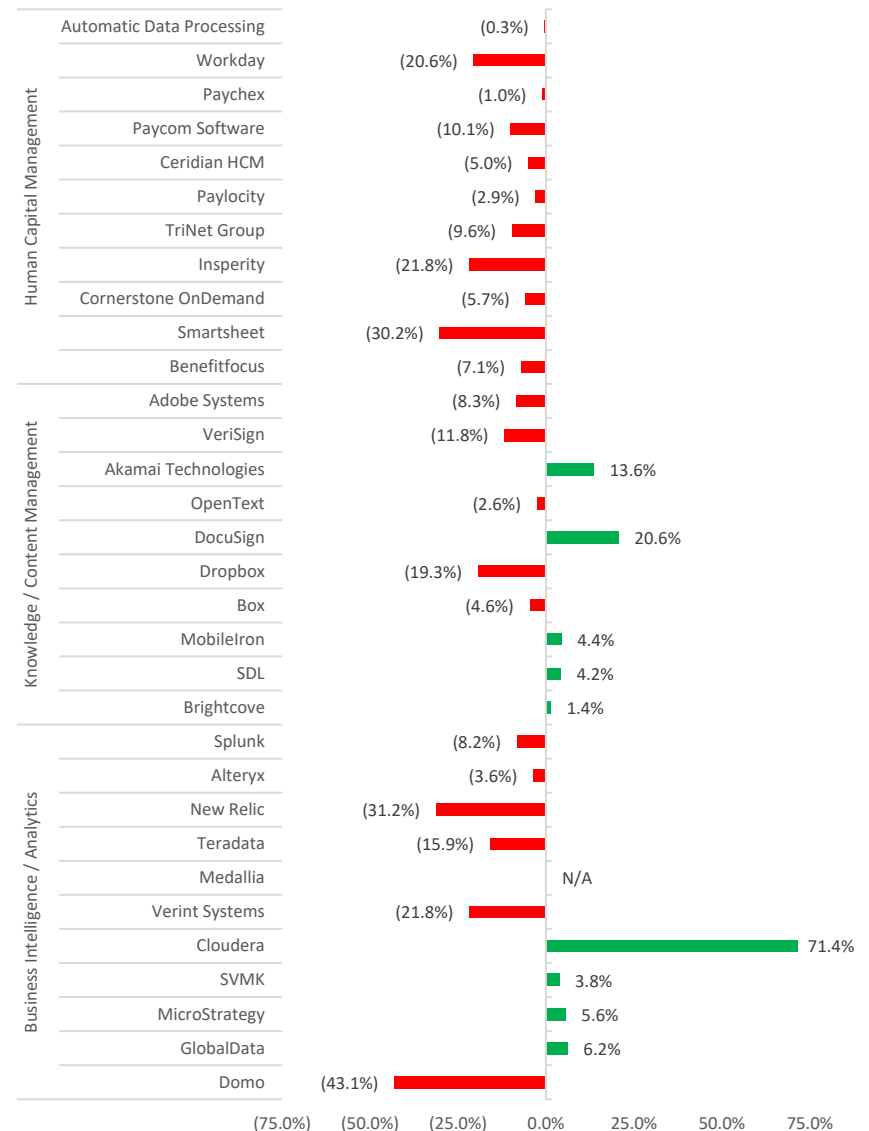
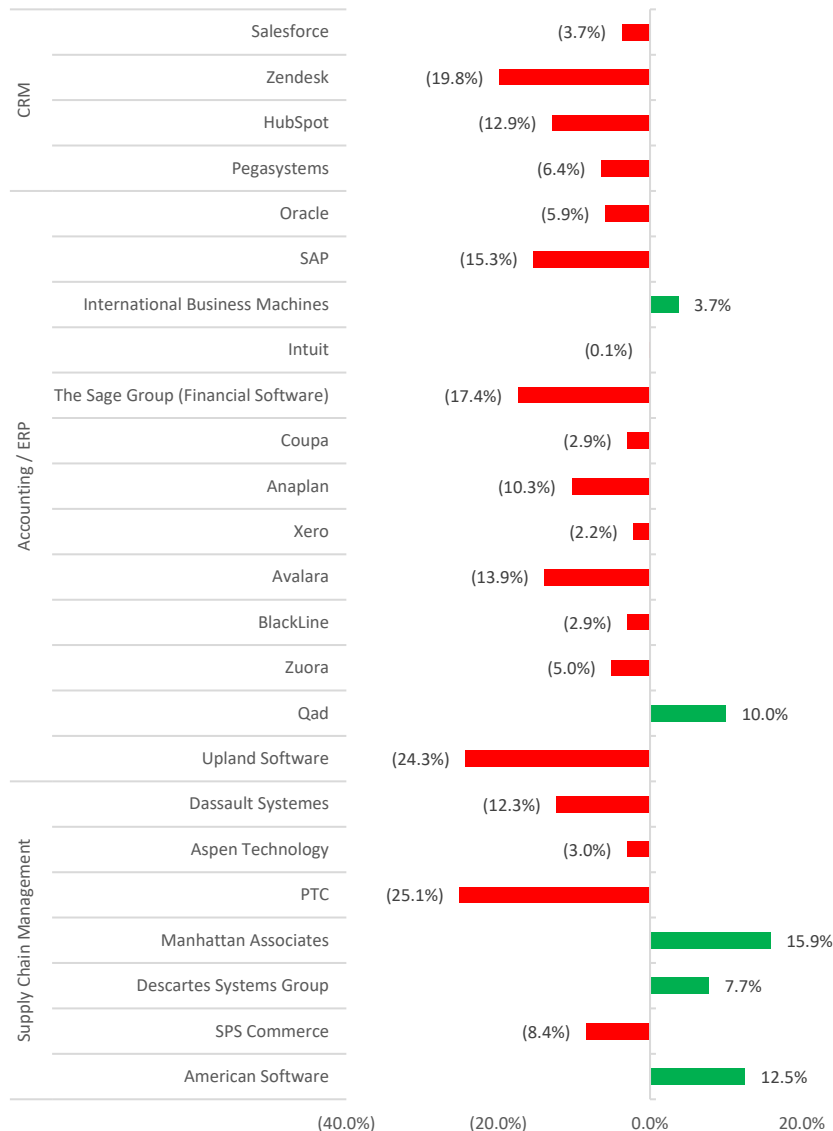
# IPO Summary

The IPO market continued to surge in Q3 2019, with 13 major technology pricings on U.S. stock exchanges

Year	IPOs		First Follow-On ("FO") Offering			
	# of IPOs / Capital Raised	File to Price Change	# of FOs	% of FOs	Avg. Days Post Lockup Expiration	IPO to FOs Price Change
2019	<p>■ Software ■ Internet ■ Hardware \$ in billions</p> <p>\$- \$25 \$50</p> <p>Capital Raised: \$10.7 \$17.1 \$29.0</p> <p># of IPOs: 19 12 33</p> <p>- 50 100</p>	<p>■ Increase ■ No Change ■ Decrease</p> <p>3% 42% 55%</p>	N/A	N/A	N/A	N/A
2018	<p>\$- \$25 \$50</p> <p>Capital Raised: \$16.7 \$22.9 \$40.2</p> <p># of IPOs: 30 14 6 50</p> <p>- 20 40 60</p>	<p>10% 36% 54%</p>	<p>\$- \$0.5 \$1.0</p> <p>Capital Raised: \$0.0 \$0.3</p> <p># of FOs: 1 1 2</p> <p>- 5 10</p>	2%	177	<p>50% 50%</p>
2017	<p>\$- \$5 \$10</p> <p>Capital Raised: \$1.9 \$3.4 \$5.6</p> <p># of IPOs: 14 12 17</p> <p>- 10 20 30</p>	<p>6% 41% 53%</p>	<p>\$- \$0.5 \$1.0</p> <p>Capital Raised: \$0.1</p> <p># of FOs: 1</p> <p>- 5 10</p>	6%	N/A	<p>100%</p>

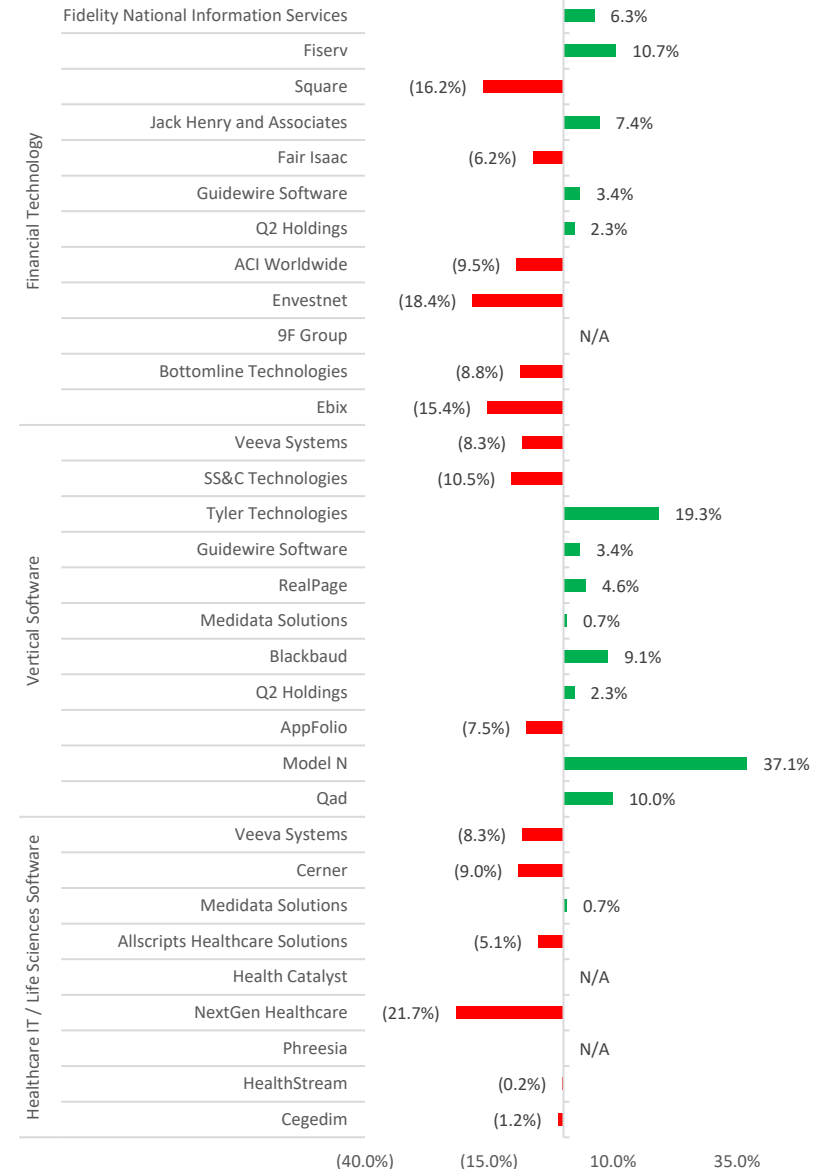
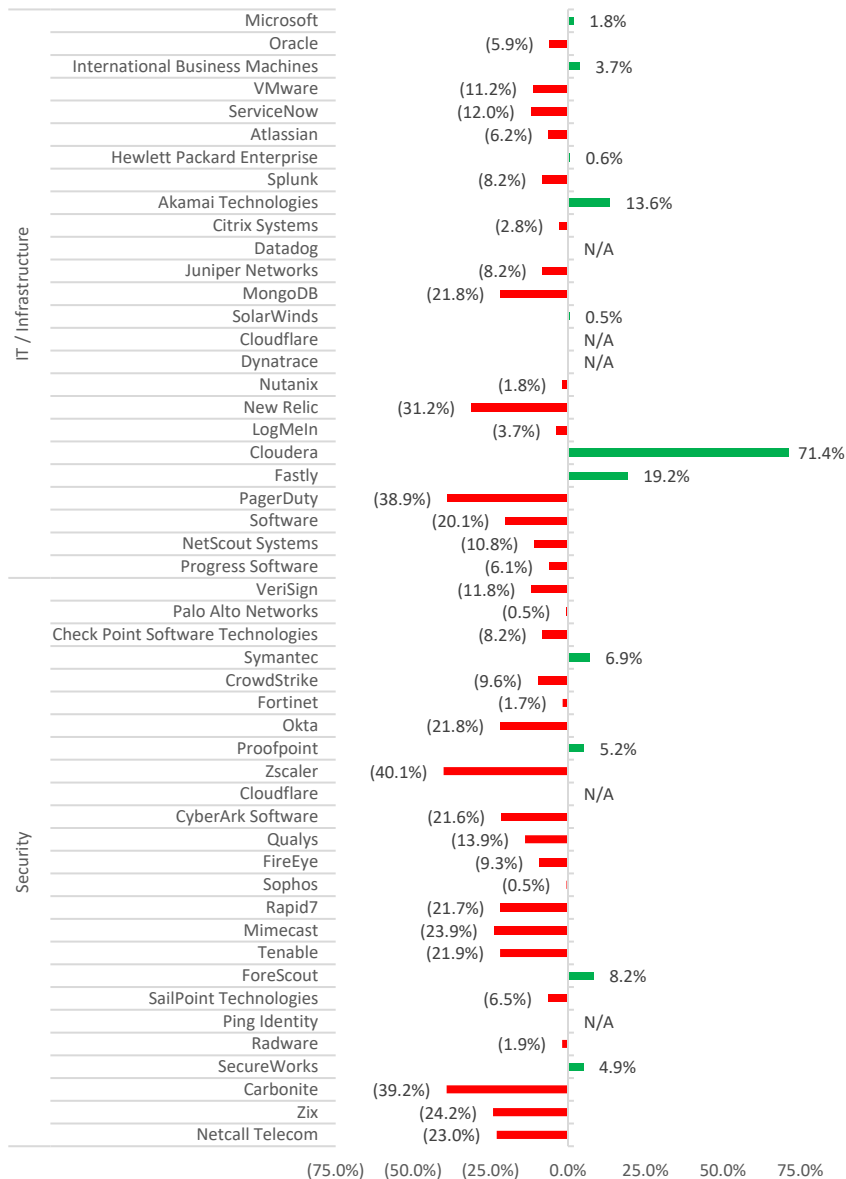
Source: Capital IQ and Pitchbook as of 9/30/19

# Software Public Market Performance Last 3 Months

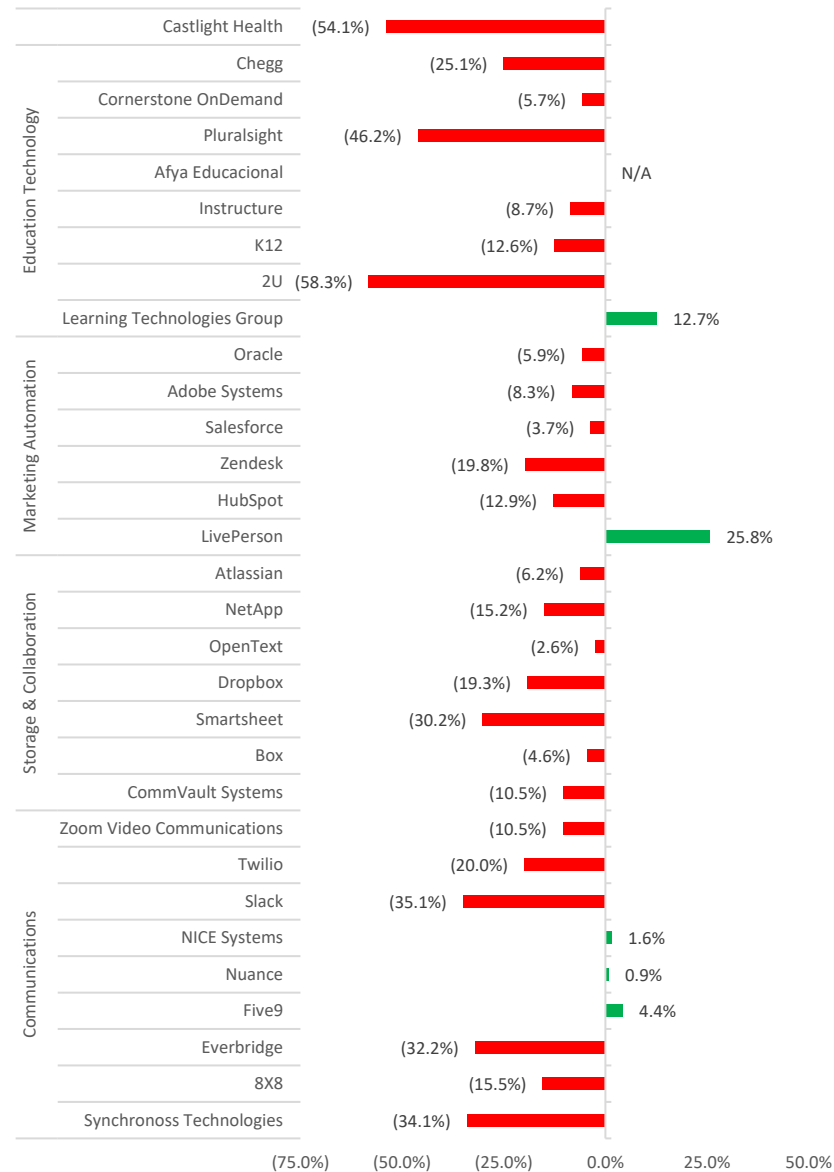


Source: Capital IQ and Pitchbook as of 9/30/19

# Software Public Market Performance Last 3 Months (cont.)



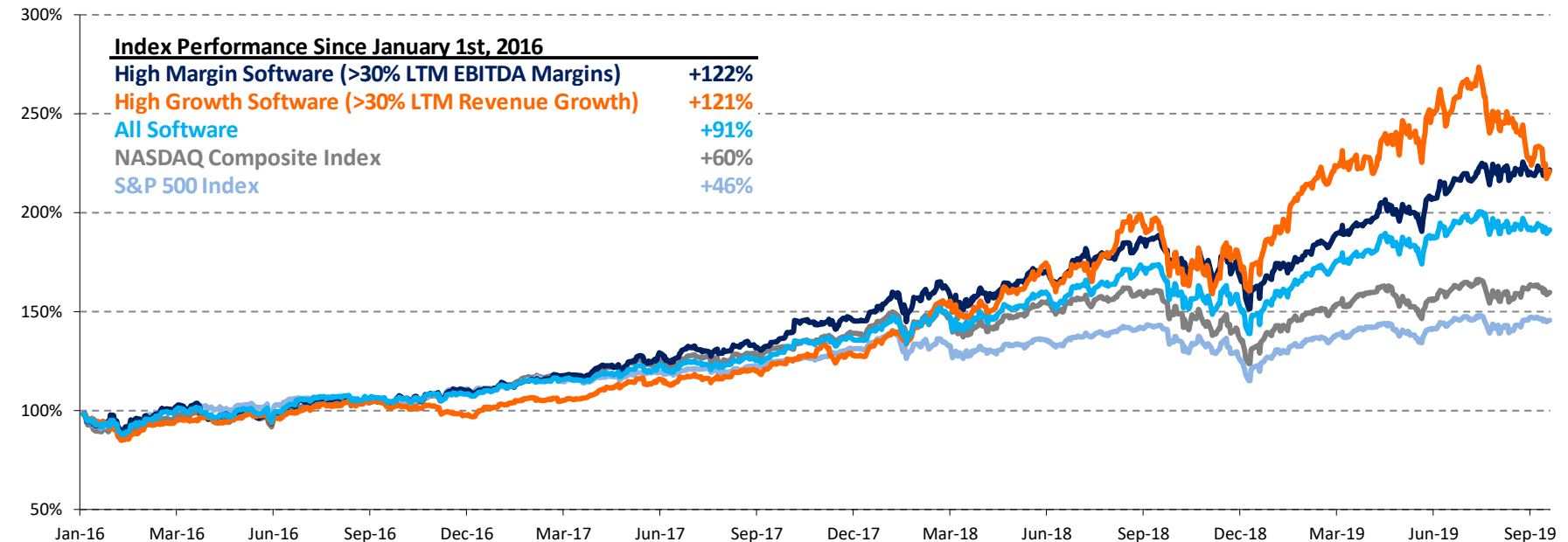
# Software Public Market Performance Last 3 Months (cont.)



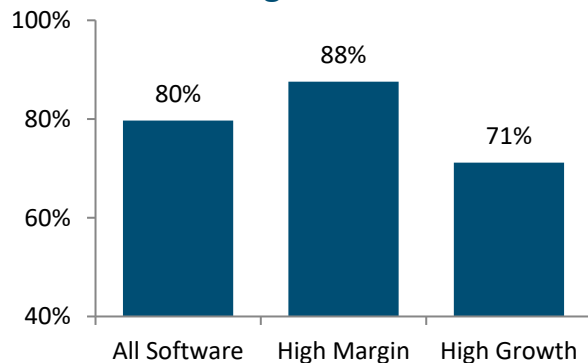
Source: Capital IQ and Pitchbook as of 9/30/19

# Software Public Market Performance

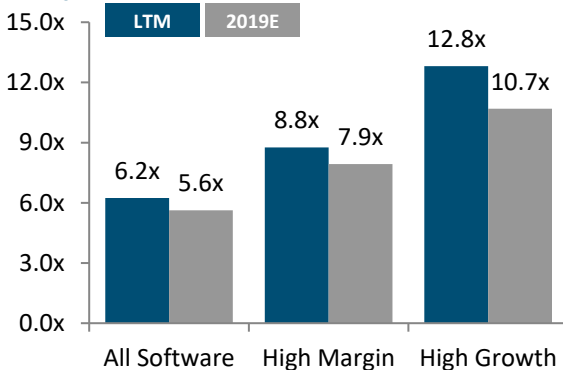
## Public Market Performance Since January 1<sup>st</sup>, 2016



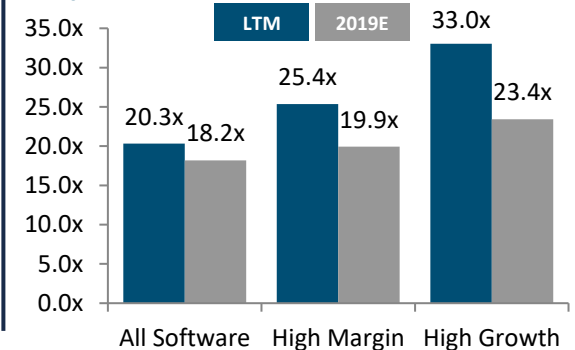
### % of 52 Week High



### EV / Revenue



### EV / EBITDA



High Growth Software: ZM, CRWD, DDOG, WORK, SSNC, AFYA, AYX, LON:LTG, TWLO, NET, MDB, ZIXI, ZS, SMAR, CLDR, UPLD, OKTA, SQ, PLAN, COUP, PS, EVBG, ZEN, TWOU, PHR, TENB, DOCU, TEAM, MDLA, SPLK, AVL, CARB, HUBS, APPF, NEWR, WDAY, NOW, CYBR, PAYC, ASX:XRO

All Software: See all bucketed companies

High Margin Software: VRSN, AZPN, MSFT, CHKP, SWI, PAYX, ORCL, OTEX, SSNC, AFYA, PAYC, FISV, AKAM, ADBE, TSE:DSG, JKHYS, FIS, EBIX, VEEV, INTU, QLYS, PAR:DSY

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Summary

	Software															Median	Mean
	CRM	Accounting / ERP	Supply Chain Management	Human Capital Management	Knowledge / Content Management	Business Intelligence / Analytics	IT / Infrastructure	Security	Financial Technology	Vertical Software	Healthcare IT / Life Sciences Software	Education Technology	Marketing Automation	Storage & Collaboration	Communications		
52-Wk High	81%	83%	87%	81%	85%	67%	80%	69%	83%	88%	83%	67%	88%	66%	73%	81%	79%
Aggregate Mkt Cap (\$ in m)	\$150,099	\$564,392	\$64,188	\$178,680	\$205,420	\$46,222	\$1,641,644	\$157,021	\$222,487	\$79,351	\$56,329	\$15,967	\$461,417	\$69,920	\$70,061	\$150,099	\$265,546
Aggregate EV (\$ in m)	\$149,765	\$624,920	\$62,083	\$171,806	\$208,297	\$44,743	\$1,647,501	\$153,983	\$237,403	\$85,986	\$56,445	\$15,947	\$480,961	\$68,088	\$68,600	\$149,765	\$271,768
Quarterly Mkt Cap % Change	6.9%	(3.8%)	(8.4%)	(7.4%)	(4.6%)	(18.4%)	(1.0%)	4.9%	50.0%	0.7%	(3.4%)	(12.3%)	(1.8%)	(10.5%)	11.0%	(3.4%)	0.1%
Quarterly EV % Change	7.2%	(3.7%)	(9.3%)	(7.3%)	(4.6%)	(17.3%)	(1.3%)	5.5%	45.1%	(0.3%)	(1.4%)	(7.7%)	(1.6%)	(10.8%)	8.3%	(1.6%)	0.1%
LTM EV / Revenue	9.6x	5.9x	8.1x	6.0x	4.9x	6.0x	6.5x	6.2x	6.9x	8.3x	3.4x	6.1x	9.6x	4.4x	10.9x	6.2x	6.8x
FY+1 EV / Revenue	8.4x	5.5x	8.1x	5.8x	4.6x	4.3x	5.3x	5.4x	7.1x	7.7x	2.4x	5.8x	8.5x	4.3x	7.8x	5.8x	6.1x
FY+2 EV / Revenue	6.8x	4.9x	7.4x	5.1x	4.3x	3.7x	4.9x	4.4x	6.3x	6.7x	2.3x	5.1x	7.0x	4.2x	6.5x	5.1x	5.3x
LTM P / E	NM	14.4x	30.7x	20.3x	16.1x	28.4x	15.6x	26.7x	26.9x	36.4x	14.9x	21.2x	24.9x	10.2x	21.5x	21.4x	22.0x
FY+1 P / E	28.5x	14.5x	25.7x	18.7x	23.6x	29.2x	12.7x	21.1x	18.5x	27.1x	12.1x	22.4x	26.6x	16.9x	16.0x	21.1x	20.9x
FY+2 P / E	24.4x	14.4x	20.2x	17.2x	19.8x	22.4x	12.4x	18.5x	14.8x	27.6x	11.5x	18.9x	22.1x	16.3x	16.9x	18.5x	18.5x
LTM P / E	NM	26.6x	53.3x	29.8x	34.9x	52.5x	20.3x	43.7x	42.6x	92.4x	52.1x	48.3x	33.4x	24.3x	44.0x	43.2x	42.7x
FY+1 P / E	80.3x	18.0x	40.2x	52.5x	35.3x	46.1x	19.5x	35.2x	27.7x	49.5x	25.5x	33.6x	43.8x	34.5x	27.7x	35.2x	37.9x
FY+2 P / E	88.9x	19.9x	36.2x	36.5x	34.3x	47.9x	17.7x	32.6x	23.7x	43.8x	21.4x	28.9x	47.9x	31.1x	25.3x	32.6x	35.7x
LTM Revenue Growth	29%	26%	10%	12%	14%	27%	10%	25%	9%	17%	8%	32%	24%	18%	28%	18%	19%
FY+1 Revenue Growth	28%	18%	7%	13%	10%	19%	12%	18%	20%	16%	5%	25%	25%	14%	23%	18%	17%
FY+2 Revenue Growth	24%	12%	9%	14%	11%	12%	11%	16%	15%	11%	4%	21%	22%	12%	19%	12%	14%
LTM EBITDA Margin	(5%)	6%	23%	8%	9%	3%	12%	8%	23%	14%	13%	9%	7%	2%	(15%)	8%	8%
FY+1 EBITDA Margin	10%	22%	28%	23%	17%	12%	22%	17%	28%	21%	17%	13%	20%	23%	10%	20%	19%
FY+2 EBITDA Margin	11%	23%	34%	24%	25%	14%	23%	18%	28%	21%	18%	14%	19%	25%	10%	21%	21%

Source: Capital IQ and Pitchbook as of 9/30/19

# Select Q3 2019 M&A Transactions

Date	Target	Acquirer	Delivery	Sector	Enterprise Value	Target LTM		Enterprise Value /	
						Revenue	EBITDA	LTM Revenue	LTM EBITDA
09/30/19	Jaunt	Verizon Communications	On Premise	Augmented & Virtual Reality					
09/30/19	Tracerisk	Continuity	On Premise	Governance, Risk, & Compliance					
09/30/19	Xinnovation	BigTinCan	SaaS	Business Software					
09/27/19	PowerLine Technology	ikeGPS	On Premise	Vertical Software	\$3				
09/26/19	Cole Engineering Services	By Light Professional IT Services, Sagewind Capital	On Premise	CAD / CAM					
09/26/19	Crossix Solutions	Veeva Systems	SaaS	Vertical Software	\$550				
09/26/19	Streamlabs	Logitech	SaaS	Vertical Software	\$118				
09/26/19	Vanguard Systems	MHC Software, Strattam Capital	SaaS	Content / Document Management					
09/25/19	Atavus	Phoenix Sports Partners	SaaS	Vertical Software					
09/25/19	INLT	Amazon.com	SaaS	Fintech					
09/25/19	Mainstreet Computers	Convenient Payments, The Beekman Group	SaaS	Vertical Software					
09/25/19	Mommy Nearest	KidPass	SaaS	Knowledge / Content (Social)					
09/25/19	National Tax Search	CoreLogic	On Premise	Vertical Software					
09/25/19	Salus Systems	Everest Re Group	SaaS	Governance, Risk, & Compliance					
09/25/19	Selerity	Dealogic	On Premise	Fintech					
09/24/19	Acquia	Vista Equity Partners	SaaS	Content / Document Management	\$1,000				
09/24/19	Gravy AI	Hopper	SaaS	Vertical Software					
09/24/19	MHC Software	Strattam Capital	SaaS	Business Software					
09/24/19	SeyVu	Bridger Capital, Huron Capital, InterVision Systems, RLG	SaaS	Business Software					
09/24/19	SimpleTax Canada	Wealthsimple	SaaS	Fintech					
09/24/19	Zingle	Medallia	SaaS	Business Software	\$42				
09/23/19	Avianis	Wheels Up	SaaS	Vertical Software					
09/23/19	Hangar	AirMap	SaaS	Vertical Software					
09/23/19	Rivews	EMPATHIQ	SaaS	Vertical Software					
09/23/19	Tracware	1848 Capital Partners, Jet Support Services	SaaS	Vertical Software					
09/19/19	Axiom Cyber Solutions	Entourage Investment Group	On Premise	Security / Storage					
09/19/19	BMT SMART	GreenSteam	SaaS	Vertical Software					
09/19/19	Bromium	Hewlett-Packard	SaaS	Security / Storage					
09/19/19	FieldVision	BallerTV	SaaS	Video Management					
09/19/19	KryptCo	Akamai Technologies	SaaS	Security / Storage					
09/19/19	Wellkeeper	Noralta Technologies	SaaS	Vertical Software					
09/18/19	B.heard	Sweetbridge	SaaS	Knowledge / Content (Social)					
09/18/19	Exaserv	Andera Partners, Ardian, HR Path, Societe Generale	SaaS	Human Capital					
09/18/19	Kynectiv	US HealthConnect Inc.	SaaS	Vertical Software					
09/18/19	OfferLogic	Rokt	SaaS	Advertising and Marketing					
09/18/19	Qualifacts Systems	Warburg Pincus	SaaS	Vertical Software	\$300				
09/18/19	Semmler	GitHub	SaaS	Development	\$410				
09/18/19	Clark	Noodle	SaaS	Vertical Software					
09/18/19	Herolens	Innovid	SaaS	Advertising and Marketing					
09/18/19	Lyrebird	Descript	SaaS	Speech Recognition					
09/18/19	The Games Company	Skyrocket Entertainment	SaaS	Vertical Software					
09/17/19	Process Systems Enterprise	Siemens	SaaS	Business Software					
09/17/19	Real Factors	7Park Data, Vista Equity Partners	SaaS	Real Estate					
09/17/19	Spatial Cinematics	Accomplice Austin	SaaS	Augmented & Virtual Reality					
09/13/19	RITEQ	Ceridian HCM	SaaS	Human Capital					

Note: \$ in millions. EV/EBITDA multiples in excess of 50x or less than 0x are considered not meaningful.

Source: Capital IQ and Pitchbook as of 9/30/19

# Select Q3 2019 M&A Transactions (cont.)

Date	Target	Acquirer	Delivery	Sector	Enterprise Value	Target LTM		Enterprise Value /	
						Revenue	EBITDA	LTM Revenue	LTM EBITDA
09/12/19	HydrantID	HID Global	SaaS	Security / Storage					
09/12/19	Transcendent	Alpine Investors, Alpine SG	SaaS	Business Software					
09/11/19	BP Logix	Finrock Growth Partners	SaaS	Business Software					
09/11/19	Burning Glass Technologies	Kohlberg Kravis Roberts	SaaS	Human Capital					
09/11/19	Communications Software	Valsoft	On Premise	Vertical Software					
09/11/19	Livermore Software Technology	Ansys	SaaS	CAD / CAM	\$775				
09/11/19	Mango Health	Audax Group, Odyssey Investment Partners, TrialCard	SaaS	Vertical Software					
09/11/19	SlipSure	Snag-A-Slip	SaaS	Content and Services					
09/11/19	Think Business Finance	ECI Partners, Make It Cheaper	SaaS	Fintech					
09/10/19	Apprente	McDonald's	SaaS	Speech Recognition					
09/10/19	Binded	Pixsy	SaaS	Blockchain					
09/10/19	Delego	EVO Payments International	SaaS	Fintech					
09/10/19	Hatchbuck	Benchmark Internet Group	SaaS	Advertising and Marketing					
09/10/19	HEPdata	SSB Info, Strattam Capital	SaaS	Vertical Software					
09/10/19	Living Actor	Visiativ	SaaS	Speech Recognition					
09/10/19	PLUS Location Systems	BlueCats	SaaS	Mapping / Tracking					
09/10/19	Token Mobile Solutions	Showpass	SaaS	Vertical Software					
09/09/19	6 River Systems	Shopify	On Premise	Vertical Software	\$450				
09/09/19	Ecomdash	Endurance International Group	SaaS	Business Software	\$10				
09/09/19	Make.TV	LTN Global Communications	SaaS	Video Management					
09/09/19	Talech	U.S. Bancorp	SaaS	Fintech					
09/09/19	TuneRegistry	Jammmber	SaaS	Content and Services					
09/09/19	Vantrix	Like Minded Entertainment Ventures	SaaS	Video Management	\$70				
09/09/19	Ventiv Technology	Tailwind Capital	SaaS	Governance, Risk, & Compliance					
09/09/19	Xtract Technologies	Patriot One Technologies	On Premise	Business Software					
09/06/19	Pro-vision	JMC Capital Partners	On Premise	Video Management					
09/06/19	Streamroot	CenturyLink	SaaS	Video Management					
09/06/19	Voicea	Cisco Systems	SaaS	Speech Recognition					
09/05/19	Accurrence	Next Gear Solutions, Serent Capital	SaaS	Fintech					
09/05/19	AsdeqLabs	BigTinCan	SaaS	Content / Document Management					
09/05/19	Innvision	Intermediate Capital Group, IRIS Software Group	SaaS	Vertical Software					
09/05/19	iPresent	Boathouse Capital, Mediafly	SaaS	Advertising and Marketing					
09/05/19	RMDY Health	OptimizeRx	SaaS	Vertical Software	\$16				
09/05/19	ViewPoint Cloud	OpenGov	SaaS	Governance, Risk, & Compliance					
09/04/19	3LOG Systems	Trimble	SaaS	Vertical Software					
09/04/19	Arcadia Data	Cloudera	SaaS	Business Intelligence					
09/04/19	Belvedere Advisors	Northern Trust	SaaS	Fintech					
09/04/19	Cohesion Web Technologies	Acquia	SaaS	Development					
09/04/19	CollabNet	TPG Capital	SaaS	Development					
09/04/19	Hedvig	CommVault Systems	SaaS	Security / Storage	\$225				
09/04/19	Inteli Clear	Prometheus	On Premise	Fintech					
09/04/19	New Century Software	MISTRAS Group	SaaS	Vertical Software					
09/04/19	Sunrise	Ageras, Investcorp Bank	SaaS	Accounting / ERP					
09/04/19	Thinkful	Chegg	SaaS	Vertical Software	\$100				
09/04/19	TimeClock Plus	Providence Equity Partners	SaaS	Human Capital					

Note: \$ in millions. EV/EBITDA multiples in excess of 50x or less than 0x are considered not meaningful.  
Source: Capital IQ and Pitchbook as of 9/30/19

# Select Q3 2019 M&A Transactions (cont.)

Date	Target	Acquirer	Delivery	Sector	Enterprise Value	Target LTM		Enterprise Value /	
						Revenue	EBITDA	LTM Revenue	LTM EBITDA
09/04/19	Volo Commerce	FOG Software Group	SaaS	Business Software					
09/04/19	ZingBox	Palo Alto Networks	SaaS	Security / Storage	\$75				
09/03/19	Enthusiast Gaming Properties	J55 Capital Corp	SaaS	Vertical Software		\$9	(\$14)		
09/03/19	Financial Database Services	Broadridge Financial Solutions	SaaS	Fintech					
09/03/19	Finery	Stitch Fix	SaaS	Ecommerce					
09/03/19	HipPocket	HT Mobile Apps	SaaS	Real Estate					
09/03/19	HireVue	The Carlyle Group	SaaS	Human Capital					
09/03/19	JumpRamp	MobilityWare	On Premise	Vertical Software					
09/03/19	NetEDI	Cegedim eBusiness	SaaS	Fintech					
09/03/19	Online School Management Systems	Bratenahl Capital Partners, Edlio, L Squared, LLR Partners	SaaS	Vertical Software					
09/03/19	PowerHub	BayWa r.e.	SaaS	Vertical Software					
09/03/19	Radius Intelligence	Kabbage	SaaS	Advertising and Marketing					
09/03/19	Service Autopilot	Clearent, Advent International, FTV Capital	SaaS	Vertical Software	\$90	\$10	\$2	8.7x	60.0x
09/03/19	TOK.tv	Minerva Networks	On Premise	Knowledge / Content (Social)					
09/03/19	U.S. CAD	RIB Software	SaaS	CAD / CAM					
09/03/19	Valiant Solutions	K1 Investment Management, Trackforce	SaaS	Human Capital					
09/02/19	B1 Systems	Vision33	SaaS	Accounting / ERP					
09/02/19	Kallik	FPE Capital	SaaS	Vertical Software					
09/02/19	MummyLinks	Happity	On Premise	Knowledge / Content (Social)					
09/01/19	Bottom-Line Performance	Evermore Investments, TIER1 Performance Solutions	On Premise	Vertical Software					
08/30/19	Ipagoo	Chairmans Financial	SaaS	Fintech					
08/29/19	BrightOffice	Aquiline Capital Partners, ClearCourse Partnership	SaaS	CRM					
08/29/19	The Ticket Group	Dynasty Sports & Entertainment, Zelnick Media Capital	SaaS	Vertical Software					
08/28/19	Influenster	BazaarVoice, Marlin Equity Partners	SaaS	Knowledge / Content (Social)					
08/28/19	Kony	Temenos	SaaS	Development	\$580				
08/28/19	Mintigo	Anaplan	SaaS	Advertising and Marketing					
08/28/19	Red Dog Systems	Enverus, Genstar Capital, Insight Partners	SaaS	Vertical Software					
08/28/19	Rhyme Softworks	Coursera	SaaS	Vertical Software					
08/27/19	Apptimize	Airship	SaaS	Testing					
08/27/19	Event Genius	Festicket	SaaS	Fintech					
08/27/19	Hip Money	HT Mobile Apps	SaaS	Fintech					
08/27/19	MAPADOC	SPS Commerce	SaaS	Integration / Middleware	\$12				
08/27/19	NextPlane Solutions	ADIA, Ares, BCIM, GIC, Leonard Green, Press Ganey	SaaS	Vertical Software					
08/27/19	Ontario Systems	New Mountain Capital	SaaS	Accounting / ERP					
08/27/19	PacketFabric	Digital Alpha Advisors	SaaS	Hosting / Data Center	\$75				
08/27/19	Pulse Systems	CareTracker	SaaS	Vertical Software					
08/27/19	VS Networks	Bertram Capital Management, Spectrio	SaaS	Advertising and Marketing					
08/26/19	CloudCherry	Cisco Systems	SaaS	Content and Services					
08/26/19	ConveyIQ	Entelo	SaaS	Human Capital					
08/26/19	Genscape	Wood Mackenzie	On Premise	Vertical Software	\$364				
08/25/19	Grove	Wealthfront	SaaS	Fintech					
08/22/19	Affinity Sports	32 Equity, Bain, Genstar, Jerry Jones, Providence	SaaS	Vertical Software					
08/22/19	Carbon Black	VMware	SaaS	Security / Storage	\$2,122	\$230	(\$66)	9.2x	N/M
08/22/19	Cimpl	Upland Software	SaaS	Business Software	\$26				
08/22/19	NGA Human Resources	ADIA, Alight, GIC, New Mountain Capital, Blackstone	SaaS	Human Capital					

Note: \$ in millions. EV/EBITDA multiples in excess of 50x or less than 0x are considered not meaningful.  
Source: Capital IQ and Pitchbook as of 9/30/19

# Select Q3 2019 M&A Transactions (cont.)

Date	Target	Acquirer	Delivery	Sector	Enterprise Value	Target LTM		Enterprise Value /	
						Revenue	EBITDA	LTM Revenue	LTM EBITDA
08/22/19	Ohana Companies	360insights, InterCap, Sageview Capital	SaaS	Advertising and Marketing					
08/22/19	Pivotal Software	VMware	SaaS	IT Infrastructure & Management	\$1,998	\$687	(\$114)	2.9x	N/M
08/21/19	Intrinsic	VMware	SaaS	Security / Storage					
08/21/19	Look Who's Charging	Experian	SaaS	Fintech					
08/21/19	OGsys	Quorum Software, Thoma Bravo	SaaS	Vertical Software					
08/21/19	Predictive Solutions	Interactive Insights	SaaS	Business Software					
08/21/19	Semeon	DataMetrex	On Premise	Speech Recognition					
08/21/19	SignalFx	Splunk	On Premise	Business Software	\$1,050				
08/21/19	SQData	Centerbridge Partners, Clearlake Capital Group, Syncsort	On Premise	Integration / Middleware					
08/20/19	Amplifinity	Emergence Capital Partners, Impartner, Kennet Partners	SaaS	Business Software					
08/20/19	Bot School	Phoenix Labs	On Premise	Vertical Software					
08/20/19	e-Flow Procure	E-Foods Limited	On Premise	Vertical Software					
08/20/19	Inside Real Estate	Lovell Minnick Partners	On Premise	Real Estate					
08/20/19	Remedy Partners	New Mountain Capital, Signify Health	On Premise	Vertical Software					
08/20/19	Warwick International Computing	Civica-UK, Partners Group	On Premise	Vertical Software					
08/19/19	Cybersecurity Collaborative	Cyber Risk Alliance, Growth Catalyst Partners	On Premise	Security / Storage					
08/19/19	InRule Technology	OpenGate Capital	On Premise	Business Software					
08/19/19	Insomniac Games	Sony Interactive Entertainment	On Premise	Augmented & Virtual Reality					
08/19/19	JClarity	Microsoft	On Premise	Business Software					
08/19/19	Jibestream	Impixon Global Holdings	SaaS	Mapping / Tracking					
08/19/19	Spiceworks	j2 Global	SaaS	Marketplace					
08/19/19	Transcend Spatial Solutions	Cerberus Capital Mgmt, LLR Partners, One Equity, Rizing	SaaS	Mapping / Tracking					
08/19/19	Xapo	Coinbase	SaaS	Blockchain					
08/18/19	Depot Systems	WiseTech Global	On Premise	Vertical Software					
08/16/19	TOP Analysis	BV Investment Partners, geoLOGIC systems	SaaS	Vertical Software					
08/16/19	United Income	Capital One Growth Ventures	SaaS	Fintech					
08/16/19	Veriflow Systems	VMware	SaaS	Systems / Network					
08/16/19	ZBS CRM	Automatic	SaaS	CRM					
08/16/19	zTrip	WHC Worldwide	SaaS	Vertical Software					
08/15/19	Doxly	Hg, Litra Microsystems	SaaS	Vertical Software					
08/15/19	Jaggaer	Cinven	SaaS	Business Software	\$1,600				
08/15/19	SeccI	Octopus Renewables	SaaS	Fintech	\$17				
08/14/19	Entuity	Charlesbank, GTCR, Park Place Technologies	SaaS	Systems / Network					
08/14/19	Metrickly	Virtual Instruments	SaaS	IT Infrastructure & Management					
08/14/19	Presidio	BC Partners	SaaS	IT Infrastructure & Management	\$2,071	\$3,047	\$192	0.7x	10.8x
08/14/19	TriSource Solutions	Corsair Capital, Realtime Electronic Payments	SaaS	Fintech	\$65				
08/13/19	Comprehend	Saama	SaaS	Vertical Software					
08/13/19	Fisher International	Battery Ventures	SaaS	Business Intelligence					
08/13/19	Formation	Formant	On Premise	Vertical Software					
08/13/19	LiquidityEdge	MarketAxess Holdings	SaaS	Fintech	\$150				
08/13/19	Qcentive	Apervita	SaaS	Vertical Software					
08/13/19	RegTek Solutions	Bloomberg	On Premise	Governance, Risk, & Compliance					
08/13/19	SnapGene	GraphPad Software, Insight Partners	On Premise	Vertical Software					
08/12/19	Advanced Computer Software Group	BC Partners	SaaS	Business Software	\$5,215				
08/12/19	Alchemy IoT	Fiix	SaaS	Business Software					

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# Select Q3 2019 M&A Transactions (cont.)

Date	Target	Acquirer	Delivery	Sector	Enterprise Value	Target LTM		Enterprise Value /	
						Revenue	EBITDA	LTM Revenue	LTM EBITDA
08/12/19	Computerease Software	Deltek	SaaS	Vertical Software					
08/12/19	MyFutureNow	Legal & General Group UK Pension and Assurance Fund	SaaS	Fintech					
08/12/19	QxMD	WebMD Health	SaaS	Vertical Software					
08/12/19	SellPoints	Syndigo, The Jordan Company	SaaS	Business Software					
08/12/19	Telax	Intermedia.net, Madison Dearborn Partners	SaaS	Business Software					
08/09/19	Aerohive Networks	Extreme Networks	SaaS	Systems / Network	\$210	\$150	(\$21)	1.4x	N/M
08/09/19	Clinigence	iGambit	SaaS	Vertical Software					
08/09/19	HermesFX	FairFX Group	SaaS	Fintech	\$3				
08/09/19	NanoSec	Fisher Lynch Capital, McAfee, Thoma Bravo, TPG Capital	SaaS	Security / Storage					
08/09/19	Vemba	Frankly Media	SaaS	Video Management					
08/08/19	Cloudpipes	Quickbase, Vista Equity Partners	SaaS	Integration / Middleware					
08/08/19	Cognitran	Snap-On	SaaS	Vertical Software	\$31				
08/08/19	Internet Pipeline	Roper Technologies	SaaS	Vertical Software	\$1,625				
08/08/19	Presence AI	Groupon	SaaS	Telecommunications					
08/08/19	ThinkNear	inMarket Media	SaaS	Advertising and Marketing					
08/08/19	VuduMobile	Komutel	SaaS	Telecommunications	\$1				
08/08/19	Wired Plus	Frontier Development Capital, WMG	SaaS	Advertising and Marketing					
08/07/19	ClickSoftware Technologies	Salesforce	SaaS	Vertical Software	\$1,350				
08/07/19	Iphelion	BigHand, Bridgepoint Advisers	On Premise	Content / Document Management					
08/07/19	Open Networks	Great Hill Partners, Paytronix Systems	SaaS	Vertical Software					
08/07/19	Practice Engine	Intermediate Capital Group, IRIS Software Group	SaaS	Business Software					
08/07/19	Preschool2me	Charter Oak Equity, Dakota Cap., Lyrical Ptns, SmartCare	SaaS	Vertical Software					
08/07/19	Sourcery	Lavu	SaaS	Accounting / ERP					
08/06/19	Celect	Nike	SaaS	Supply Chain					
08/06/19	Clara	TopFunnel	SaaS	Business Software					
08/06/19	Ecotagious	Morgan Stanley, RUBICON Tech., Uplight Energy, Zoma Cap.	SaaS	Vertical Software					
08/06/19	Endavo	Ozzie Areu	SaaS	Video Management					
08/06/19	FilmTrack	City National Bank	SaaS	Vertical Software					
08/06/19	Good Uncle	Aramark	SaaS	Marketplace					
08/06/19	Lockpath	BC Partners, NAVEX Global, Noble Rock Advisors	SaaS	Governance, Risk, & Compliance					
08/05/19	GetFeedback	SVMK	SaaS	CRM					
08/05/19	MapR	Hewlett Packard Enterprise	SaaS	Business Software					
08/05/19	PromotelQ	Microsoft	SaaS	Advertising and Marketing					
08/05/19	TimelinePI	ABBY, Mint Capital	SaaS	Business Software					
08/03/19	Score-Up	MLI Marble Lending	On Premise	Fintech					
08/02/19	eCompliance Management Solutions	Alcumus, Inflexion Private Equity	SaaS	Governance, Risk, & Compliance	\$30				
08/02/19	Elemica	Eurazeo	SaaS	Supply Chain					
08/02/19	Global Aware International	Mitie Group	On Premise	Security / Storage					
08/01/19	Caviar	DoorDash	SaaS	Marketplace	\$410				
08/01/19	Control4	Hellman & Friedman, SnapAV	On Premise	Vertical Software	\$611	\$274	\$26	2.2x	23.8x
08/01/19	EdgeWave	GoSecure	SaaS	Security / Storage					
08/01/19	Flype	Atheer	SaaS	CRM					
08/01/19	Oeconnection	Genstar Capital	SaaS	Vertical Software					
08/01/19	OpenConnect	ActiveOps, Calculus Capital	On Premise	Business Software					
08/01/19	P2Sample	Cint, Nordic Capital	On Premise	Advertising and Marketing					

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# Select Q3 2019 M&A Transactions (cont.)

Date	Target	Acquirer	Delivery	Sector	Enterprise Value	Target LTM		Enterprise Value /	
						Revenue	EBITDA	LTM Revenue	LTM EBITDA
08/01/19	Protech Computer System	Aquiline Capital Partners, ClearCourse Partnership	SaaS	CRM					
08/01/19	Pubguard	BidStack	SaaS	Security / Storage					
08/01/19	Rainmaker Group	Accel-KKR, Cendyn	SaaS	Business Software					
08/01/19	Refinitiv	London Stock Exchange Group	On Premise	Fintech	\$27,000				
08/01/19	Sanderson Group	Aptean, TA Associates Management, Vista Equity Partners	On Premise	IT Infrastructure & Management	\$104	\$45	\$8	2.3x	12.3x
08/01/19	SpacelQ	The We Company	SaaS	Business Software					
07/31/19	Akira Health	Telus Health	SaaS	Vertical Software					
07/31/19	Aspire Financial Services	LLR Partners, PCS Retirement	SaaS	Fintech					
07/31/19	AutoClerk	Best Western International, Bird Dog Equity Partners	SaaS	Vertical Software					
07/31/19	CUC Software	ServiceTitan	On Premise	Vertical Software					
07/31/19	Decision Dynamics	KAR Auction Services	SaaS	Vertical Software	\$21				
07/31/19	Digita Security	Jamf, Vista Equity Partners	SaaS	Security / Storage					
07/31/19	Leverton	GI Partners, MRI Software, TA Associates Management	SaaS	Content / Document Management					
07/31/19	Mr. Delivery	Delivery.com	SaaS	Marketplace					
07/31/19	ProLease Software	GI Partners, MRI Software, TA Associates Management	SaaS	Real Estate					
07/30/19	Calvert Education	Edmentum, Thoma Bravo	SaaS	Vertical Software					
07/30/19	Downticket	Politiscope	SaaS	Knowledge / Content (Social)					
07/30/19	FSB Technology	Clairvest Group	SaaS	Vertical Software	\$29				
07/30/19	Journey Holding	Ford Smart Mobility	On Premise	Mapping / Tracking					
07/30/19	Lifeshare Technologies	Bertram Capital Management, Spectrio	SaaS	Telecommunications					
07/30/19	Metacog	CompTIA	SaaS	Business Intelligence					
07/30/19	MetaMetrics	Apax Partners	SaaS	Vertical Software					
07/30/19	ORIS Intelligence	Frontier Capital, PriceSpider	SaaS	Business Software					
07/30/19	Quantum Signal	Ford	On Premise	Augmented & Virtual Reality					
07/30/19	Songspace	Independent IP	On Premise	Vertical Software					
07/29/19	BlueTalon	Microsoft	SaaS	Security / Storage					
07/29/19	Compiled	ACE & Co., KLDDiscovery, Revolution, Carlyle, WestView Cap.	On Premise	Governance, Risk, & Compliance					
07/29/19	Emburse	Abacus	SaaS	Fintech					
07/29/19	GBST Holdings	Caisse de dépôt et placement, FNZ, Generation Inv. Mgmt	On Premise	Fintech	\$188	\$67	\$13	2.8x	14.1x
07/29/19	Transversal	Verint Systems	SaaS	Knowledge / Content (Social)					
07/28/19	Appcast	StepStone	SaaS	Human Capital	\$92				
07/26/19	Provectus Robotics Solutions	Rheinmetall Canada	On Premise	Vertical Software					
07/26/19	Uhana	VMware	SaaS	Systems / Network					
07/25/19	Computex Technology Solutions	Pensare Acquisition	On Premise	IT Infrastructure & Management					
07/25/19	Cryptobontix	Dignity Holdings	SaaS	Fintech					
07/25/19	Riskfirst	Moody's	SaaS	Fintech					
07/25/19	Shotfarm	Syndigo, The Jordan Company	SaaS	Business Software					
07/25/19	Sococo	ESW Capital	SaaS	Business Software					
07/25/19	Veelo	BigTinCan	SaaS	Human Capital					
07/25/19	Wameja	Seamless Distribution Systems	On Premise	Fintech	\$2				
07/24/19	3Cinteractive	IMImobile	SaaS	Advertising and Marketing	\$43				
07/24/19	Arts People	FTV Capital, Neon One	SaaS	Business Software					
07/24/19	Convrg	Haptik	On Premise	Speech Recognition					
07/24/19	Field Intelligence	Network Innovations	SaaS	Vertical Software					
07/24/19	Four Twenty Seven	Moody's	SaaS	Business Intelligence					

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# Select Q3 2019 M&A Transactions (cont.)

Date	Target	Acquirer	Delivery	Sector	Enterprise Value	Target LTM		Enterprise Value /	
						Revenue	EBITDA	LTM Revenue	LTM EBITDA
07/24/19	StratEx Partners	Toast POS	SaaS	Human Capital					
07/24/19	Top Echelon Software	SageLink Capital	SaaS	Human Capital					
07/24/19	TranSolutions	MercuryGate International, Summit Partners	On Premise	Vertical Software					
07/24/19	WebOPUS Federal	Managed Care Advisors	SaaS	Human Capital					
07/23/19	Bixby	Hello Alfred	SaaS	Real Estate					
07/23/19	Connexa	Arlington Capital Partners, Octo Consulting Group	On Premise	Integration / Middleware					
07/23/19	FSC (4Site)	Black Lab Labs	On Premise	Business Software					
07/23/19	Jukedeck	Bytedance	SaaS	Diversified Media					
07/23/19	Mapper	Velodyne LiDAR	On Premise	Mapping / Tracking					
07/23/19	OneEvent Technologies	National Presto Industries	SaaS	Knowledge / Content (Social)					
07/23/19	Sunrise	Lendio	SaaS	Accounting / ERP					
07/22/19	Bulldog Solutions	CI Capital Partners, Hero Digital	On Premise	Advertising and Marketing					
07/19/19	Infinite Integral Solutions	Transcat	On Premise	Business Software	\$1				
07/19/19	Signal Sciences	Cisco Systems	SaaS	Security / Storage					
07/18/19	AutoLoop	Affinitiv, CIP Capital	SaaS	Vertical Software					
07/18/19	Bitfusion	Vmware	SaaS	IT Infrastructure & Management					
07/18/19	Escape Technology	Ares Capital, Frontline Education, Thoma Bravo	SaaS	Vertical Software					
07/18/19	HighQ Solutions	Thomson Reuters	SaaS	Business Software					
07/18/19	Intelledox	Accel-KKR, Smart Communications	SaaS	Business Software					
07/18/19	JHC Systems	CDPO, FNZ, Generation Investment Management	SaaS	Fintech					
07/18/19	Trusted Key Solutions	Workday	SaaS	Blockchain					
07/18/19	X-Link	ELLKAY	On Premise	Vertical Software					
07/17/19	Cabeus	One Equity Partners, Orion Systems Integrators	SaaS	Governance, Risk, & Compliance					
07/17/19	Crystal	LTN Global Communications	SaaS	IT Infrastructure & Management					
07/17/19	Flio	SosTravel.com	SaaS	Vertical Software					
07/17/19	Logical Glue	Temenos	SaaS	Business Intelligence	\$15				
07/16/19	CloudLanes	Druva	SaaS	Security / Storage					
07/16/19	Honest Buildings	Procore	SaaS	Real Estate					
07/16/19	Perengo	Gemspring Cap., TMP Worldwide Advertising & Comm.	SaaS	Human Capital					
07/16/19	Verisk Analytics	Appriss Retail	SaaS	Vertical Software					
07/16/19	Visible Equity	nCino	SaaS	Fintech					
07/16/19	Vostok	GHP Group	SaaS	Blockchain					
07/16/19	Windward Software	Volaris Group	SaaS	Business Software					
07/16/19	Xtreme Blockchain Labs	Kognitiv	On Premise	Blockchain					
07/15/19	Ooyala	Dalet	SaaS	Diversified Media					
07/15/19	Simple Energy	Morgan Stanley, RUBICON Tech., Uplight Energy, Zoma Cap.	SaaS	Vertical Software					
07/15/19	Vungle	The Blackstone Group	SaaS	Advertising and Marketing	\$750				
07/14/19	RareLogic	Coherent Path	SaaS	Business Software					
07/12/19	ClickIQ	Indeed	SaaS	Human Capital					
07/12/19	Event Farm	MemberSuite	SaaS	Advertising and Marketing					
07/12/19	Mnubo	Aspen Technology	SaaS	Business Intelligence	\$77				
07/12/19	Stealth HD	Amazon.com	On Premise	Video Management					
07/11/19	Advizr	Northstar Financial Group, Orion Advisor Services	SaaS	Fintech					
07/11/19	Arraiy	Matterport	On Premise	Diversified Media					
07/11/19	Tier1Net	M/C Partners, Thrive Networks	SaaS	Hosting / Data Center					

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# Select Q3 2019 M&A Transactions (cont.)

Date	Target	Acquirer	Delivery	Sector	Enterprise Value	Target LTM		Enterprise Value /	
						Revenue	EBITDA	LTM Revenue	LTM EBITDA
07/10/19	1WorldSync	Battery Ventures	SaaS	Business Software					
07/10/19	Cloud Academy	CVC Capital Partners, QA	SaaS	Human Capital					
07/10/19	Eave	HomeLight	SaaS	Fintech					
07/10/19	Fourth	Marlin Equity Partners	SaaS	Business Software					
07/10/19	Guardian Global Systems	Insight Partners, LeaseAccelerator	SaaS	Real Estate					
07/10/19	HotSchedules	Fourth, Insight Partners, Marlin Equity Partners	SaaS	Vertical Software					
07/10/19	InsureSign	Formstack, Greater Sum Ventures, Providence Equity	SaaS	Content / Document Management					
07/10/19	iSpionage	Boathouse Capital, TapClicks	On Premise	Security / Storage					
07/10/19	NOVEDA Technologies	ID Global Corporation	SaaS	Business Software					
07/10/19	OneFlow Systems	Hewlett-Packard	SaaS	Business Software					
07/10/19	Qualitest	Bridgepoint Advisers	SaaS	Testing	\$420				
07/10/19	Rhimat Software	Tidal Software	On Premise	Business Software					
07/10/19	Siege Technologies	Braes Capital	On Premise	Security / Storage					
07/10/19	Wayin	Cheetah Digital	SaaS	Advertising and Marketing					
07/10/19	WayPay	Royal Bank of Canada	SaaS	Fintech					
07/09/19	DigiCert	Clearlake Capital Group, TA Associates Management	SaaS	Security / Storage					
07/09/19	Droplr	Triangle Digital Ventures	SaaS	Content / Document Management					
07/09/19	Elastifile	Google Cloud Platform	SaaS	Security / Storage					
07/09/19	Flexy	Impellam Group	SaaS	Human Capital	\$4				
07/09/19	Jack'd	Perry Street Software	SaaS	Knowledge / Content (Social)					
07/09/19	OnLink	Deere & Company	SaaS	Vertical Software					
07/09/19	PCS Software	The CapStreet Group	SaaS	Mapping / Tracking					
07/09/19	Personal Computer Data Services	Asolvi	SaaS	Security / Storage					
07/09/19	Proximity Learning	Education Solutions Services	SaaS	Vertical Software					
07/09/19	Tooso	Coveo, Evergreen Coast Capital	SaaS	Business Software					
07/09/19	Workshare	Hg, Litera Microsystems	SaaS	Content / Document Management					
07/08/19	AgilityFOUR	Mbanq	SaaS	Fintech					
07/08/19	Prevalent	iMedX, RFE Investment Partners	SaaS	Vertical Software					
07/08/19	Strand Clinical Technologies	OmniSYS	SaaS	Vertical Software					
07/08/19	Zedi	Emerson	SaaS	Business Software					
07/06/19	SmartClix	ZipLine	On Premise	Fintech					
07/05/19	SAFER Systems	Industrial Scientific	SaaS	Vertical Software					
07/04/19	Power Broker	Acturis Group, Summit Partners	SaaS	Vertical Software					
07/03/19	Just Cash	Canaccord Genuity, Coinsquare, Cormark Securities	SaaS	Fintech					
07/03/19	Trillium System	Aquiline Capital Partners, ClearCourse Partnership	SaaS	CRM					
07/02/19	Corel	Crescent Capital, Kohlberg Kravis Roberts	SaaS	Business Software	\$1,000				
07/02/19	D3 Banking	NCR	SaaS	Fintech					
07/02/19	IPS Worldwide	EM6 Logistics	SaaS	Vertical Software	\$2	\$9		0.3x	
07/02/19	ModSys International	Advanced Computer Software Group, Vista Equity Partners	SaaS	IT Infrastructure & Management	\$29				
07/02/19	Open Storage Solutions	Ivedha	SaaS	IT Infrastructure & Management					
07/02/19	QDiscovery	JLL Partners, Xact Data Discovery	SaaS	Business Software					
07/02/19	Sunray Technology Ventures	GI Partners, Single Digits	SaaS	Vertical Software					
07/02/19	Synergy Business Solutions	Harren Equity Partners, Velosio	SaaS	Accounting / ERP					
07/02/19	Vexata	StorCentric	SaaS	IT Infrastructure & Management					
07/01/19	Cryptofinance.ai	Kraken	SaaS	Blockchain					

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# Select Q3 2019 M&A Transactions (cont.)

Date	Target	Acquirer	Delivery	Sector	Enterprise Value	Target LTM		Enterprise Value /	
						Revenue	EBITDA	LTM Revenue	LTM EBITDA
07/01/19	Geezeo	Jack Henry and Associates	SaaS	Fintech					
07/01/19	Kare	FrontPorch	SaaS	Vertical Software					
07/01/19	MITs	Tour de Force CRM	SaaS	Business Intelligence					
07/01/19	Monetary	Datacap Systems	SaaS	Fintech					
07/01/19	NGCodec	Xilinx	SaaS	Video Management					
07/01/19	Pacsoft	Altamir, Apax Partners, ECI Software Solutions, Carlyle	SaaS	Business Software					
07/01/19	PushSpring	T-Mobile	SaaS	Advertising and Marketing					
07/01/19	Swizznet	Bluff Point Associates	SaaS	Accounting / ERP					
07/01/19	zyBooks	John Wiley & Sons	SaaS	Vertical Software	\$58	\$10		5.6x	
Software Median					\$102	\$109	\$2	2.3x	14.1x
Software Mean					\$958	\$453	\$3	3.4x	24.2x

Note: \$ in millions. EV/EBITDA multiples in excess of 50x or less than 0x are considered not meaningful.  
Source: Capital IQ and Pitchbook as of 9/30/19

# Software IPOs

IPO Date	Days on File	Company	EV	IPO Amount Raised	Market Cap	LTM Multiples		Metrics and Financings			Share Information				Follow On Information					LTM Rev Growth	LTM EBITDA Margin	
						EV / Rev	EV / EBITDA	Rev Growth at IPO	NTM Rev Growth	Net Cash at IPO	IPO Offer Price	File to Price Chg	Current Price	Chg Since IPO	Days Post Lock-Up	Amount Raised	Relative to IPO Raise	Follow On Price	IPO to Price Chg			Primary Shares
Software																						
09/19/19	27	Datadog	\$8,508	\$648	\$8,596	NM	NM	164%	NM	(\$88)	\$27	4%	\$34	26%	NA	NA	NA	NA	NA	NA	164%	(6%)
09/19/19	27	Ping Identity	\$1,039	\$188	\$1,199	4.8x	26.4x	25%	NM	(\$160)	\$15	--	\$17	15%	NA	NA	NA	NA	NA	NA	25%	18%
09/13/19	29	Cloudflare	\$4,412	\$525	\$4,703	18.8x	NM	74%	NM	(\$291)	\$15	7%	\$19	24%	NA	NA	NA	NA	NA	NA	74%	(29%)
08/01/19	27	Dynatrace	\$3,430	\$570	\$4,400	8.0x	NM	8%	NM	(\$970)	\$16	7%	\$19	17%	NA	NA	NA	NA	NA	NA	8%	(2%)
07/25/19	28	Health Catalyst	\$1,027	\$182	\$1,042	8.1x	NM	74%	NM	(\$15)	\$26	4%	\$32	22%	NA	NA	NA	NA	NA	NA	74%	(30%)
07/19/19	25	Afy Educacional	\$1,708	\$261	\$1,666	15.5x	35.6x	63%	NM	\$42	\$19	6%	\$26	35%	NA	NA	NA	NA	NA	NA	63%	36%
07/19/19	28	Medallia	\$3,439	\$326	\$3,374	10.2x	NM	29%	NM	\$64	\$21	17%	\$27	31%	NA	NA	NA	NA	NA	NA	29%	(15%)
07/18/19	27	Phreesia	\$681	\$167	\$709	6.5x	NM	31%	NM	(\$28)	\$18	6%	\$24	35%	NA	NA	NA	NA	NA	NA	31%	(6%)
06/20/19	55	Slack	\$6,043	\$4,560	\$5,250	13.3x	NM	106%	NM	\$793	\$39	--	\$24	(38%)	NA	NA	NA	NA	NA	NA	106%	(92%)
06/12/19	29	CrowdStrike	\$7,575	\$612	\$7,487	NM	NM	110%	NM	\$88	\$34	13%	\$58	72%	NA	NA	NA	NA	NA	NA	110%	(37%)
06/12/19	33	Mohawk	\$177	\$36	\$176	2.3x	NM	111%	NM	\$0	\$10	(29%)	\$8	(22%)	NA	NA	NA	NA	NA	NA	111%	(28%)
05/17/19	28	Fastly	\$22,934	\$180	\$1,619	NM	NM	50%	38%	\$21,316	\$16	--	\$24	50%	NA	NA	NA	NA	NA	NA	50%	(13%)
04/18/19	27	Zoom Video Communications	\$10,415	\$751	\$10,352	NM	NM	118%	91%	\$64	\$36	3%	\$76	112%	NA	NA	NA	NA	NA	NA	118%	5%
04/17/19	19	ReadyTech	\$46	\$36	\$62	2.0x	8.8x	NM	10%	(\$16)	\$1	7%	\$1	12%	NA	NA	NA	NA	NA	NA	NM	23%
04/11/19	36	Tufin	\$565	\$108	\$536	6.6x	NM	32%	28%	\$29	\$14	--	\$16	18%	NA	NA	NA	NA	NA	NA	32%	(11%)
04/11/19	27	PagerDuty	\$2,217	\$218	\$2,090	18.8x	NM	48%	47%	\$128	\$24	4%	\$28	18%	NA	NA	NA	NA	NA	NA	48%	(33%)
03/20/19	26	UP Fintech Holding	\$1,087	\$104	\$1,055	NM	NM	98%	151%	\$32	\$8	14%	\$4	(47%)	NA	NA	NA	NA	NA	NA	98%	(24%)
11/20/18	28	TuanChe.com	\$3,484	\$20	\$3,489	NM	NM	NM	NM	(\$5)	\$8	--	\$2	(72%)	NA	NA	NA	NA	NA	NA	NM	(28%)
11/15/18	97	Weidai	\$975	\$45	\$700	1.6x	11.9x	124%	NM	\$276	\$10	--	\$6	(39%)	NA	NA	NA	NA	NA	NA	124%	14%
10/25/18	24	Stone Pagamentos	\$7,306	\$1,217	\$7,749	NM	NM	293%	192%	(\$443)	\$24	4%	\$35	45%	NA	NA	NA	NA	NA	NA	293%	18%
10/25/18	101	Pintec	\$333	\$44	\$445	2.2x	39.3x	1,715%	NM	(\$112)	\$12	--	\$1	(90%)	NA	NA	NA	NA	NA	NA	1715%	6%
10/19/18	28	SolarWinds	\$2,731	\$375	\$4,692	3.8x	7.4x	NM	24%	(\$1,961)	\$15	(12%)	\$18	23%	NA	NA	NA	NA	NA	NA	NM	42%
10/12/18	28	Anaplan	\$2,324	\$264	\$2,237	11.6x	NM	19%	50%	\$87	\$17	--	\$47	176%	NA	NA	NA	NA	NA	NA	19%	(48%)
10/05/18	30	Elastic	\$3,209	\$252	\$3,158	17.4x	NM	110%	74%	\$51	\$36	3%	\$82	129%	NA	NA	NA	NA	NA	NA	110%	(38%)
09/28/18	43	CooTek (Cayman)	\$793	\$52	\$767	10.1x	NM	612%	108%	\$26	\$12	--	\$5	(59%)	NA	NA	NA	NA	NA	NA	612%	(5%)
09/27/18	27	LAX	\$657	\$72	\$599	6.8x	NM	293%	49%	\$57	\$13	--	\$4	(66%)	NA	NA	NA	NA	NA	NA	293%	(48%)
09/26/18	28	SurveyMonkey	\$1,153	\$180	\$1,427	4.9x	NM	13%	22%	(\$274)	\$12	9%	\$17	43%	NA	NA	NA	NA	NA	NA	13%	(37%)
09/26/18	33	Arco Platform Limited	\$372	\$194	\$366	4.4x	NM	86%	19%	\$6	\$18	--	\$51	190%	NA	NA	NA	NA	NA	NA	86%	(17%)
09/19/18	22	X Financial	\$3,028	\$105	\$2,927	6.7x	NM	1,259%	12%	\$101	\$10	--	\$2	(76%)	NA	NA	NA	NA	NA	NA	1259%	NM
07/27/18	28	Endava	\$1,055	\$127	\$1,073	4.0x	21.5x	NM	27%	(\$19)	\$20	5%	\$38	89%	NA	NA	NA	NA	NA	NA	NM	13%
07/27/18	28	Opera Software	\$4,951	\$115	\$4,915	NM	NM	32%	56%	\$36	\$12	--	\$10	(16%)	NA	NA	NA	NA	NA	NA	32%	20%
07/26/18	27	Jiguang	\$708	\$77	\$703	12.4x	NM	442%	139%	\$5	\$9	--	\$4	(53%)	NA	NA	NA	NA	NA	NA	442%	(7%)
07/26/18	34	Shanghai Cango	\$6,527	\$44	\$6,517	NM	NM	(75%)	1473%	\$11	\$11	--	\$5	(51%)	NA	NA	NA	NA	NA	NA	(75%)	28%
07/26/18	27	Tenable	\$2,491	\$288	\$2,464	12.1x	NM	66%	45%	\$26	\$23	21%	\$22	(3%)	NA	NA	NA	NA	NA	NA	66%	(24%)
06/29/18	28	Domo	\$729	\$193	\$753	6.3x	NM	56%	35%	(\$24)	\$21	--	\$16	(24%)	NA	NA	NA	NA	NA	NA	56%	(76%)
06/15/18	35	Avalara	\$1,681	\$180	\$1,705	7.5x	NM	35%	33%	(\$25)	\$24	4%	\$67	180%	177	\$249	139%	\$69	39%	100%	35%	(16%)
05/17/18	31	Pluralsight	\$1,891	\$311	\$1,982	10.6x	NM	36%	48%	(\$91)	\$15	7%	\$17	12%	NA	NA	NA	NA	NA	NA	36%	(44%)
05/04/18	25	Carbon Black (US)	\$1,521	\$152	\$1,485	8.7x	NM	55%	23%	\$36	\$19	--	\$26	37%	NA	NA	NA	NA	NA	NA	55%	(29%)
04/27/18	32	Smartsheet	\$1,692	\$175	\$1,640	15.2x	NM	66%	69%	\$52	\$15	7%	\$36	140%	NA	NA	NA	NA	NA	NA	66%	(26%)
04/27/18	30	DocuSign	\$4,854	\$629	\$4,597	9.4x	NM	36%	41%	\$257	\$29	4%	\$62	114%	NA	NA	NA	NA	NA	NA	36%	(22%)
04/26/18	99	Ceridian HCM	\$1,973	\$531	\$2,998	2.9x	14.4x	8%	12%	(\$1,026)	\$22	5%	\$49	124%	NA	NA	NA	NA	NA	NA	8%	18%
04/20/18	28	Pivotal Software	\$3,554	\$555	\$3,501	7.0x	NM	22%	33%	\$53	\$15	--	\$15	(1%)	NA	NA	NA	NA	NA	NA	22%	(14%)
04/12/18	27	Zuora	\$1,663	\$154	\$1,631	9.9x	NM	49%	43%	\$32	\$14	8%	\$15	8%	NA	NA	NA	NA	NA	NA	49%	(28%)
04/03/18	34	Spotify	\$28,989	\$9,246	\$29,549	6.3x	NM	41%	38%	(\$560)	\$166	--	\$114	(31%)	NA	NA	NA	NA	NA	NA	41%	(4%)
03/23/18	28	Dropbox	\$11,305	\$756	\$11,049	10.2x	NM	31%	30%	\$256	\$21	5%	\$20	(4%)	NA	NA	NA	NA	NA	NA	31%	8%
03/16/18	28	Zscaler	\$2,330	\$192	\$2,259	15.1x	NM	92%	62%	\$72	\$16	7%	\$47	195%	NA	NA	NA	NA	NA	NA	92%	(8%)
02/09/18	28	Cardlytics	\$238	\$70	\$266	1.9x	NM	13%	18%	(\$27)	\$13	--	\$34	158%	NA	NA	NA	NA	NA	NA	13%	(17%)
11/17/17	28	SailPoint Technologies	\$767	\$240	\$904	4.7x	NM	71%	48%	(\$137)	\$12	9%	\$19	56%	NA	NA	NA	NA	NA	NA	71%	4%
11/15/17	28	SendGrid	\$960	\$131	\$785	9.3x	NM	77%	NM	\$175	\$16	3%	\$54	238%	NA	NA	NA	NA	NA	NA	77%	3%
11/01/17	33	Altair Engineering	\$362	\$156	\$415	1.1x	6.9x	9%	13%	(\$54)	\$13	--	\$35	166%	NA	NA	NA	NA	NA	NA	9%	12%
10/27/17	25	ForeScout	\$860	\$116	\$814	4.5x	NM	52%	37%	\$46	\$22	--	\$38	72%	(35)	\$128	110%	\$29	10%	11%	52%	(24%)
10/19/17	28	MongoDB	\$1,427	\$192	\$1,386	10.4x	NM	111%	47%	\$41	\$24	9%	\$120	402%	NA	NA	NA	NA	NA	NA	111%	(27%)
06/30/17	29	Tintri	\$197	\$60	\$216	2.0x	NM	13%	9%	(\$20)	\$7	--	\$0	(100%)	NA	NA	NA	NA	NA	NA	13%	NM
06/07/17	69	ShotSpotter	\$107	\$31	\$118	6.3x	33.7x	44%	53%	(\$11)	\$11	--	\$23	109%	NA	NA	NA	NA	NA	NA	44%	8%
05/25/17	97	Appian	\$735	\$75	\$755	5.4x	NM	22%	32%	(\$20)	\$12	--	\$48	296%	NA	NA	NA	NA	NA	NA	22%	(22%)
05/12/17	58	Veritone	\$212	\$38	\$213	23.8x	NM	(36%)	89%	(\$1)	\$15	--	\$4	(76%)	NA	NA	NA	NA	NA	NA	(36%)	(144%)
04/28/17	28	Cloudera	\$1,325	\$225	\$2,161	4.9x	NM	64%	38%	(\$836)	\$15	7%	\$9	(41%)	NA	NA	NA	NA	NA	NA	64%	(34%)
04/13/17	31	Xelt	\$1,149	\$116	\$1,129	9.2x	NM	38%	46%	\$19	\$11	10%	\$16	44%	NA	NA	NA	NA	NA	NA	38%	(28%)
04/07/17	25	Okt	\$1,756	\$187	\$1,733	10.9x	NM	87%	67%	\$23	\$17	--	\$98	479%	NA	NA	NA	NA	NA	NA	87%	(25%)
03/24/17	28	Alteryx	\$976	\$126	\$94																	

Source: Capital IQ

# Public Company Valuation

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	EV / Revenue			EV / EBITDA			P / E			
					LTM	FY+1	FY+2	LTM	FY+1	FY+2	LTM	FY+1	FY+2	
CRM														
Salesforce	\$148.44	89%	\$130,182	\$130,160	8.8x	7.7x	6.2x	NM	28.5x	24.4x	NM	52.3x	48.0x	
Zendesk	72.88	77%	8,088	8,253	11.7	10.2	7.8	NM	NM	NM	NM	NM	126.7	
HubSpot	151.61	73%	6,443	6,068	10.3	9.1	7.3	NM	NM	NM	NM	108.3	88.9	
Pegasystems	68.05	85%	5,385	5,284	6.0	5.7	5.1	NM	NM	NM	NM	NM	NM	
Median		81%	\$7,266	\$7,160	9.6x	8.4x	6.8x	NM	28.5x	24.4x	NM	80.3x	88.9x	
Mean		81%	\$37,525	\$37,441	9.2x	8.2x	6.6x	NM	28.5x	24.4x	NM	80.3x	87.9x	
Accounting / ERP														
Oracle	\$55.03	91%	\$180,637	\$199,959	5.1x	5.0x	4.9x	12.3x	10.5x	10.3x	16.9x	14.2x	13.1x	
SAP	118.03	84%	145,002	157,214	5.3	5.2	4.9	23.2	15.7	14.3	31.6	22.1	19.8	
International Business Machines	145.42	94%	128,824	160,985	2.1	2.1	2.0	9.1	9.2	8.4	15.8	11.4	10.9	
Intuit	265.94	90%	69,164	66,424	9.8	8.9	8.0	32.0	23.9	21.5	44.5	35.2	31.4	
The Sage Group (Financial Software)	8.50	81%	9,256	9,840	3.9	3.9	3.7	14.4	15.3	14.5	21.7	21.8	19.9	
Coupa	129.57	83%	8,143	8,089	25.4	21.8	17.1	NM	NM	NM	NM	NM	NM	
Anaplan	47.00	78%	6,196	5,886	20.2	17.2	13.1	NM	NM	NM	NM	NM	NM	
Xero	42.09	89%	5,972	5,960	15.4	13.0	10.3	NM	NM	44.4	NM	NM	149.0	
Avalara	67.29	71%	5,080	4,638	14.3	12.7	10.2	NM	NM	NM	NM	NM	NM	
BlackLine	47.81	84%	2,645	2,521	9.9	8.9	7.4	NM	NM	NM	NM	NM	144.9	
Zuora	15.05	61%	1,692	1,530	5.9	5.5	4.8	NM	NM	NM	NM	NM	NM	
Qad	46.18	80%	902	791	2.5	2.5	2.3	NM	NM	36.1	NM	NM	62.4	
Upland Software	34.86	64%	880	1,084	5.9	5.0	4.4	NM	13.6	11.7	117.6	13.9	13.4	
Median		83%	\$6,196	\$5,960	5.9x	5.5x	4.9x	14.4x	14.4x	14.4x	26.6x	18.0x	19.9x	
Mean		81%	\$43,415	\$48,071	9.7x	8.6x	7.1x	18.2x	14.7x	20.1x	41.3x	19.8x	51.6x	
Supply Chain Management														
Dassault Systemes	\$143.05	86%	\$37,157	\$34,843	8.1x	8.1x	7.4x	26.7x	22.5x	20.1x	48.3x	36.8x	33.3x	
Aspen Technology	123.08	87%	8,415	8,563	14.3	14.3	13.0	29.4	28.5	25.0	32.9	33.0	29.8	
PTC	68.18	63%	7,853	8,251	6.7	5.6	5.0	NM	19.9	14.9	NM	28.6	20.4	
Manhattan Associates	80.67	90%	5,189	5,106	8.7	8.5	8.1	38.3	38.0	35.6	53.7	54.5	53.4	
Descartes Systems Group	40.40	97%	3,399	3,408	11.4	10.4	9.4	34.5	28.1	24.9	88.6	91.8	66.2	
SPS Commerce	47.07	80%	1,704	1,526	5.8	5.5	5.0	32.1	22.5	19.5	52.9	40.2	36.2	
American Software	15.02	94%	471	388	3.6	3.4	3.2	28.3	25.7	20.2	72.0	50.9	38.0	
Median		87%	\$5,189	\$5,106	8.1x	8.1x	7.4x	30.7x	25.7x	20.2x	53.3x	40.2x	36.2x	
Mean		85%	\$9,170	\$8,869	8.3x	8.0x	7.3x	31.5x	26.4x	22.9x	58.1x	48.0x	39.6x	

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Valuation (cont.)

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	EV / Revenue			EV / EBITDA			P / E		
					LTM	FY+1	FY+2	LTM	FY+1	FY+2	LTM	FY+1	FY+2
Human Capital Management													
Automatic Data Processing	\$161.42	93%	\$70,008	\$70,061	4.9x	4.6x	4.4x	20.3x	18.2x	16.3x	30.9x	26.2x	23.2x
Workday	169.96	75%	38,751	38,367	11.8	10.7	8.7	NM	NM	43.0	NM	100.6	78.3
Paychex	82.77	94%	29,643	29,727	7.9	7.1	6.8	19.1	17.3	16.3	28.7	26.7	24.7
Paycom Software	209.49	81%	12,239	11,050	16.9	15.2	12.3	47.7	36.0	29.1	76.6	62.0	48.9
Ceridian HCM	49.37	84%	7,067	3,559	4.6	4.4	3.9	25.9	19.2	16.1	NM	100.8	76.0
Paylocity	97.58	87%	5,180	3,623	7.7	6.4	5.3	39.1	22.2	18.1	94.9	59.1	46.4
TriNet Group	62.19	81%	4,349	4,528	1.2	4.8	4.4	15.6	11.6	10.8	23.1	18.2	16.4
Inspireity	98.62	68%	4,062	3,900	1.0	0.9	0.8	16.9	13.9	11.7	24.6	21.3	18.1
Cornerstone OnDemand	54.82	87%	3,327	3,301	6.0	5.8	5.1	NM	26.8	21.5	NM	52.5	36.5
Smartsheet	36.03	65%	3,276	2,773	12.6	10.4	7.5	NM	NM	NM	NM	NM	NM
Benefitfocus	23.81	39%	779	917	3.4	3.1	2.7	NM	NM	37.0	NM	NM	NM
Median		81%	\$5,180	\$3,900	6.0x	5.8x	5.1x	20.3x	18.7x	17.2x	29.8x	52.5x	36.5x
Mean		77%	\$16,244	\$15,619	7.1x	6.7x	5.6x	26.4x	20.6x	22.0x	46.5x	51.9x	40.9x
Knowledge / Content Management													
Adobe Systems	\$276.25	88%	\$133,727	\$134,213	12.6x	12.0x	10.2x	37.6x	26.6x	22.1x	49.9x	35.3x	28.5x
VeriSign	188.63	85%	22,328	22,899	18.7	18.6	17.6	25.4	25.6	24.1	38.5	35.9	34.3
Akamai Technologies	91.38	98%	14,974	15,220	5.4	5.3	5.0	16.1	12.8	11.7	34.0	21.4	19.4
OpenText	40.81	92%	10,990	12,665	4.4	4.3	4.2	12.1	11.1	10.6	34.9	14.2	13.5
DocuSign	61.92	95%	10,898	10,767	13.0	11.3	9.1	NM	NM	NM	NM	NM	NM
Dropbox	20.17	74%	8,338	8,233	5.4	5.0	4.3	NM	21.7	17.5	NM	45.3	34.8
Box	16.56	66%	2,447	2,644	4.0	3.8	3.4	NM	48.4	30.3	NM	NM	73.6
MobileIron	6.55	84%	719	635	3.1	3.0	2.7	NM	NM	NM	NM	NM	100.7
SDL	6.59	83%	598	623	1.3	1.4	1.3	13.1	11.3	9.9	20.0	18.9	16.4
Brightcove	10.48	81%	401	398	2.3	2.2	1.9	NM	41.2	22.8	NM	116.4	41.9
Median		85%	\$9,618	\$9,500	4.9x	4.6x	4.3x	16.1x	23.6x	19.8x	34.9x	35.3x	34.3x
Mean		85%	\$20,542	\$20,830	7.0x	6.7x	6.0x	20.8x	24.9x	18.6x	35.5x	41.1x	40.3x
Business Intelligence / Analytics													
Splunk	\$117.86	82%	\$17,838	\$17,127	8.4x	7.4x	6.1x	NM	48.8x	35.2x	NM	62.5x	50.6x
Alteryx	107.43	73%	6,983	6,858	21.3	18.4	13.7	NM	NM	NM	NM	NM	147.2
New Relic	61.45	56%	3,589	3,305	6.5	5.6	4.7	NM	47.9	33.1	NM	109.7	71.5
Teradata	31.00	63%	3,537	3,543	1.7	1.8	1.7	20.0	8.6	7.3	NM	20.8	15.3
Medallia	27.43	61%	3,500	3,082	8.6	NM	NM	NM	NM	NM	NM	NM	NM
Verint Systems	42.78	67%	2,856	3,333	2.6	2.4	2.2	17.2	9.9	8.6	48.5	11.7	10.6
Cloudera	8.86	44%	2,478	2,285	3.5	3.0	2.7	NM	NM	28.3	NM	NM	NM
SVMK	17.10	86%	2,276	2,427	8.8	7.9	6.5	NM	NM	NM	NM	NM	NM
MicroStrategy	148.37	97%	1,519	1,053	2.2	2.1	2.0	37.6	33.3	17.8	56.6	57.1	47.9
GlobalData	10.20	94%	1,207	1,326	6.0	6.0	5.7	36.8	25.0	22.4	NM	35.0	30.8
Domo	15.98	34%	440	405	2.6	2.4	2.1	NM	NM	NM	NM	NM	NM
Median		67%	\$2,856	\$3,082	6.0x	4.3x	3.7x	28.4x	29.2x	22.4x	52.5x	46.1x	47.9x
Mean		69%	\$4,202	\$4,068	6.6x	5.7x	4.8x	27.9x	28.9x	21.8x	52.5x	49.5x	53.4x

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Valuation (cont.)

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	EV / Revenue			EV / EBITDA			P / E		
					LTM	FY+1	FY+2	LTM	FY+1	FY+2	LTM	FY+1	FY+2
IT / Infrastructure													
Microsoft	\$139.03	98%	\$1,061,551	\$1,006,098	8.0x	7.2x	6.5x	17.3x	16.5x	14.7x	27.7x	26.6x	23.6x
Oracle	55.03	91%	180,637	199,959	5.1	5.0	4.9	12.3	10.5	10.3	16.9	14.2	13.1
International Business Machines	145.42	94%	128,824	160,985	2.1	2.1	2.0	9.1	9.2	8.4	15.8	11.4	10.9
VMware	150.06	73%	61,319	63,205	6.7	6.3	5.7	27.7	16.4	15.0	9.2	22.9	20.6
ServiceNow	253.85	84%	47,597	47,051	15.6	13.6	10.6	NM	49.6	38.6	NM	78.8	59.3
Atlassian	125.44	84%	30,356	29,498	24.4	19.0	15.1	NM	NM	NM	NM	125.4	95.8
Hewlett Packard Enterprise	15.17	89%	19,806	28,820	1.0	1.0	1.0	6.8	5.4	5.5	24.3	8.7	8.4
Splunk	117.86	82%	17,838	17,127	8.4	7.4	6.1	NM	48.8	35.2	NM	62.5	50.6
Akamai Technologies	91.38	98%	14,974	15,220	5.4	5.3	5.0	16.1	12.8	11.7	34.0	21.4	19.4
Citrix Systems	96.52	86%	12,635	13,014	4.3	4.4	4.2	17.1	12.5	12.4	23.8	17.6	16.0
Datadog	33.91	82%	9,950	9,946	37.4	NM	NM	NM	NM	NM	NM	NM	NM
Juniper Networks	24.75	80%	8,559	7,716	1.7	1.7	1.7	11.4	8.2	7.5	16.3	14.6	12.9
MongoDB	120.48	65%	6,785	6,585	18.8	16.7	12.9	NM	NM	NM	NM	NM	NM
SolarWinds	18.45	87%	5,722	7,485	8.5	7.9	7.1	20.2	16.6	14.7	7.8	22.8	19.8
Cloudflare	18.57	84%	5,447	5,333	22.7	NM	NM	NM	NM	NM	NM	NM	NM
Dynatrace	18.67	68%	5,236	6,181	13.6	NM	NM	NM	NM	NM	NM	NM	NM
Nutanix	26.25	48%	4,957	4,508	3.6	3.3	2.6	NM	NM	NM	NM	NM	NM
New Relic	61.45	56%	3,589	3,305	6.5	5.6	4.7	NM	47.9	33.1	NM	109.7	71.5
LogMeIn	70.96	73%	3,505	3,705	3.0	2.9	2.8	11.2	9.0	9.3	123.3	14.0	14.5
Cloudera	8.86	44%	2,478	2,285	3.5	3.0	2.7	NM	NM	28.3	NM	NM	NM
Fastly	24.00	68%	2,243	2,048	12.1	10.6	8.2	NM	NM	NM	NM	NM	NM
PagerDuty	28.25	47%	2,155	1,814	12.7	11.1	8.6	NM	NM	NM	NM	NM	NM
Software	27.42	59%	2,028	1,865	1.8	NM	NM	6.4	NM	NM	11.0	NM	NM
NetScout Systems	23.06	76%	1,749	1,893	2.1	2.1	2.1	17.6	9.8	8.8	NM	16.2	14.3
Progress Software	38.06	80%	1,702	1,853	4.7	4.3	4.3	15.6	NM	NM	28.6	14.4	13.4
Median		80%	\$6,785	\$7,485	6.5x	5.3x	4.9x	15.6x	12.7x	12.4x	20.3x	19.5x	17.7x
Mean		76%	\$65,666	\$65,900	9.3x	6.7x	5.6x	14.5x	19.5x	16.9x	28.2x	36.3x	29.0x

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Valuation (cont.)

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	EV / Revenue			EV / EBITDA			P / E			
					LTM	FY+1	FY+2	LTM	FY+1	FY+2	LTM	FY+1	FY+2	
Security														
VeriSign	\$188.63	85%	\$22,328	\$22,899	18.7x	18.6x	17.6x	25.4x	25.6x	24.1x	38.5x	35.9x	34.3x	
Palo Alto Networks	203.83	78%	19,770	18,396	6.3	5.3	4.4	NM	23.7	19.0	NM	40.3	32.6	
Check Point Software Technologies	109.50	82%	17,014	15,399	7.9	7.7	7.4	17.2	15.2	14.2	21.0	18.1	17.0	
Symantec	23.63	91%	14,604	17,576	3.6	3.6	3.6	16.5	9.2	9.1	62.7	13.5	12.8	
CrowdStrike	58.31	57%	13,175	12,348	35.2	NM	NM	NM	NM	NM	NM	NM	NM	
Fortinet	76.76	79%	13,125	11,295	5.8	5.3	4.7	34.1	20.8	17.3	35.1	34.1	31.0	
Okta	98.46	69%	11,790	11,656	23.9	20.7	15.8	NM	NM	NM	NM	NM	NM	
Proofpoint	129.05	97%	7,236	7,110	8.9	8.1	6.7	NM	49.2	38.3	NM	79.2	62.2	
Zscaler	47.26	53%	6,024	5,659	18.7	14.1	11.0	NM	NM	NM	NM	NM	NM	
Cloudflare	18.57	84%	5,447	5,333	22.7	NM	NM	NM	NM	NM	NM	NM	NM	
CyberArk Software	99.82	67%	3,754	3,256	8.4	7.7	6.5	44.8	28.8	24.1	62.0	43.8	38.1	
Qualys	75.57	78%	2,965	2,705	9.0	8.4	7.3	29.7	21.4	18.5	43.7	36.9	33.0	
FireEye	13.34	65%	2,865	2,957	3.4	3.4	3.1	NM	40.3	23.8	NM	NM	88.9	
Sophos	4.92	74%	2,399	2,526	3.6	3.3	3.1	26.7	16.9	14.4	149.0	34.0	27.3	
Rapid7	45.39	69%	2,217	2,229	7.9	7.0	5.6	NM	NM	NM	NM	NM	121.0	
Mimecast	35.67	65%	2,203	2,254	6.2	5.4	4.4	NM	31.1	24.2	NM	80.2	55.7	
Tenable	22.38	57%	2,168	1,882	6.1	5.4	4.3	NM	NM	NM	NM	NM	NM	
ForeScout	37.92	82%	1,752	1,689	5.2	4.6	3.8	NM	NM	NM	NM	NM	NM	
SailPoint Technologies	18.69	54%	1,666	1,611	6.0	5.8	4.9	NM	NM	44.5	NM	143.8	79.5	
PingIdentity	17.25	82%	1,339	1,499	7.0	NM	NM	38.0	NM	NM	NM	NM	NM	
Radware	24.26	90%	1,139	906	3.7	3.6	3.3	32.6	NM	NM	57.8	32.3	27.1	
SecureWorks	12.93	52%	1,050	960	1.8	1.8	1.7	NM	NM	NM	NM	NM	NM	
Carbonite	15.49	43%	537	1,107	3.1	2.3	2.0	17.9	8.3	7.1	NM	8.1	7.4	
Zix	7.24	65%	403	683	6.1	4.0	3.3	NM	17.0	13.4	NM	15.9	12.0	
Median		72%	\$2,915	\$2,831	6.3x	5.4x	4.4x	28.2x	21.4x	18.7x	50.7x	35.0x	32.8x	
Mean		72%	\$6,540	\$6,414	9.5x	7.0x	5.9x	28.3x	23.7x	20.9x	58.7x	44.0x	42.5x	
Financial Technology														
Fidelity National Information Services	\$132.76	94%	\$81,441	\$89,934	10.7x	8.7x	6.7x	32.8x	21.5x	14.6x	49.5x	24.5x	21.2x	
Fiserv	103.59	94%	70,409	75,798	12.7	7.1	4.7	37.3	18.8	12.2	42.6	27.0	21.2	
Square	61.95	61%	26,461	25,838	6.5	11.3	8.5	NM	NM	41.4	NM	80.5	55.6	
Jack Henry and Associates	145.97	90%	11,240	11,146	7.2	6.7	6.3	21.9	21.1	19.2	41.4	40.2	35.3	
Fair Isaac	303.52	81%	8,771	9,514	8.3	7.6	7.0	31.1	23.9	21.5	47.4	35.3	31.9	
Guidewire Software	105.38	93%	8,622	7,815	10.9	10.2	9.0	NM	NM	NM	NM	90.8	71.4	
Q2 Holdings	78.87	84%	3,757	3,586	13.0	11.4	9.3	NM	NM	NM	NM	NM	NM	
ACI Worldwide	31.33	87%	3,656	4,969	4.6	3.8	3.3	22.8	13.6	11.6	44.1	19.1	15.5	
Envestnet	56.70	77%	2,959	3,507	4.2	3.9	3.4	NM	18.3	14.8	NM	26.9	22.2	
9F Group	11.16	75%	2,163	1,531	2.5	NM	NM	9.8	NM	NM	13.4	NM	NM	
Bottomline Technologies	39.35	53%	1,726	1,736	4.1	3.9	3.5	32.0	16.7	15.0	NM	28.5	25.2	
Ebiz	42.10	53%	1,284	2,029	3.7	3.4	2.8	11.6	9.9	8.6	12.0	10.0	8.4	
Median		83%	\$6,189	\$6,392	6.9x	7.1x	6.3x	26.9x	18.5x	14.8x	42.6x	27.7x	23.7x	
Mean		79%	\$18,541	\$19,784	7.4x	7.1x	5.9x	24.9x	18.0x	17.7x	35.8x	38.3x	30.8x	

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Valuation (cont.)

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	EV / Revenue			EV / EBITDA			P / E		
					LTM	FY+1	FY+2	LTM	FY+1	FY+2	LTM	FY+1	FY+2
Vertical Software													
Veeva Systems	\$152.69	86%	\$22,596	\$21,186	21.9x	19.9x	16.7x	NM	NM	42.7x	77.6x	72.0x	62.7x
SS&C Technologies	51.57	76%	13,086	21,141	4.8	4.6	4.5	13.4	11.7	11.0	39.3	14.1	12.9
Tyler Technologies	262.50	99%	10,128	10,125	10.1	9.3	8.3	46.2	32.8	28.8	77.9	49.5	43.8
Guidewire Software	105.38	93%	8,622	7,815	10.9	10.2	9.0	NM	NM	NM	NM	90.8	71.4
RealPage	62.86	95%	5,957	6,403	6.9	6.5	5.8	33.6	22.8	19.5	122.5	35.7	30.4
Medidata Solutions	91.50	93%	5,715	5,702	8.3	7.7	6.7	NM	32.1	26.4	121.9	48.2	43.8
Blackbaud	90.34	88%	4,442	5,071	5.8	5.7	5.4	39.2	27.1	26.0	145.3	40.7	36.9
Q2 Holdings	78.87	84%	3,757	3,586	13.0	11.4	9.3	NM	NM	NM	NM	NM	NM
AppFolio	95.14	87%	3,239	3,267	14.8	12.9	10.1	NM	NM	NM	92.4	108.1	NM
Model N	27.76	95%	908	899	6.4	5.9	5.3	NM	NM	41.3	NM	99.1	81.6
Qad	46.18	80%	902	791	2.5	2.5	2.3	NM	NM	36.1	NM	NM	62.4
Median		88%	\$5,715	\$5,702	8.3x	7.7x	6.7x	36.4x	27.1x	27.6x	92.4x	49.5x	43.8x
Mean		89%	\$7,214	\$7,817	9.6x	8.8x	7.6x	33.1x	25.3x	29.0x	96.7x	62.0x	49.5x
Healthcare IT / Life Sciences Software													
Veeva Systems	\$152.69	86%	\$22,596	\$21,186	21.9x	19.9x	16.7x	NM	NM	42.7x	77.6x	72.0x	62.7x
Cerner	68.17	89%	21,705	21,790	3.9	3.8	3.6	15.4	13.1	11.5	37.5	25.5	21.4
Medidata Solutions	91.50	93%	5,715	5,702	8.3	7.7	6.7	NM	32.1	26.4	121.9	48.2	43.8
Allscripts Healthcare Solutions	10.98	77%	1,830	2,653	1.7	1.5	1.4	NM	8.8	8.0	NM	16.1	14.3
Health Catalyst	31.64	63%	1,155	1,739	12.3	NM	NM	NM	NM	NM	NM	NM	NM
NextGen Healthcare	15.67	74%	1,025	1,056	2.0	1.9	1.9	14.3	11.1	10.1	40.3	18.4	16.0
Phreesia	24.24	83%	867	791	7.2	NM	NM	NM	NM	NM	NM	NM	NM
HealthStream	25.89	83%	838	709	2.8	2.8	2.8	16.6	16.5	17.7	64.0	71.9	80.9
Cegedim	28.45	85%	394	659	1.2	1.2	1.1	7.1	7.0	6.4	20.7	21.9	14.7
Castlight Health	1.41	34%	205	161	1.0	1.1	1.1	NM	NM	NM	NM	NM	NM
Median		83%	\$1,090	\$1,397	3.4x	2.4x	2.3x	14.9x	12.1x	11.5x	52.1x	25.5x	21.4x
Mean		77%	\$5,633	\$5,644	6.2x	5.0x	4.4x	13.4x	14.8x	17.5x	60.3x	39.2x	36.2x
Education Technology													
Chegg	\$29.95	62%	\$3,584	\$3,662	10.1x	9.1x	7.5x	NM	30.3x	23.3x	NM	39.3x	32.9x
Cornerstone OnDemand	54.82	87%	3,327	3,301	6.0	5.8	5.1	NM	26.8	21.5	NM	52.5	36.5
Pluralsight	16.80	47%	2,352	2,408	8.8	7.6	5.9	NM	NM	NM	NM	NM	NM
Afyra Educacional	25.64	79%	2,248	2,248	16.7	NM	NM	46.8	NM	NM	82.3	NM	NM
Instructure	38.74	77%	1,437	1,440	6.2	5.6	4.6	NM	NM	NM	NM	NM	NM
K12	26.40	71%	1,062	804	0.8	0.8	0.7	6.9	5.8	5.4	27.5	27.8	24.9
2U	16.28	20%	1,031	1,123	2.3	2.0	1.5	NM	NM	NM	NM	NM	NM
Learning Technologies Group	1.39	64%	926	961	6.0	5.9	5.5	21.2	18.0	16.2	48.3	25.2	22.8
Median		67%	\$1,843	\$1,844	6.1x	5.8x	5.1x	21.2x	22.4x	18.9x	48.3x	33.6x	28.9x
Mean		63%	\$1,996	\$1,993	7.1x	5.3x	4.4x	25.0x	20.2x	16.6x	52.7x	36.2x	29.3x

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Valuation (cont.)

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	EV / Revenue			EV / EBITDA			P / E		
					LTM	FY+1	FY+2	LTM	FY+1	FY+2	LTM	FY+1	FY+2
Marketing Automation													
Oracle	\$55.03	91%	\$180,637	\$199,959	5.1x	5.0x	4.9x	12.3x	10.5x	10.3x	16.9x	14.2x	13.1x
Adobe Systems	276.25	88%	133,727	134,213	12.6	12.0	10.2	37.6	26.6	22.1	49.9	35.3	28.5
Salesforce	148.44	89%	130,182	130,160	8.8	7.7	6.2	NM	28.5	24.4	NM	52.3	48.0
Zendesk	72.88	77%	8,088	8,253	11.7	10.2	7.8	NM	NM	NM	NM	NM	126.7
HubSpot	151.61	73%	6,443	6,068	10.3	9.1	7.3	NM	NM	NM	NM	108.3	88.9
LivePerson	35.70	87%	2,339	2,308	8.6	7.9	6.6	NM	NM	NM	NM	NM	NM
Median		88%	\$69,135	\$69,206	9.6x	8.5x	7.0x	24.9x	26.6x	22.1x	33.4x	43.8x	48.0x
Mean		84%	\$76,903	\$80,160	9.5x	8.7x	7.2x	24.9x	21.9x	18.9x	33.4x	52.5x	61.0x
Storage & Collaboration													
Atlassian	\$125.44	84%	\$30,356	\$29,498	24.4x	19.0x	15.1x	NM	NM	NM	NM	125.4x	95.8x
NetApp	52.51	60%	12,493	10,687	1.8	1.9	1.8	8.3	8.0	7.2	13.7	12.7	11.4
OpenText	40.81	92%	10,990	12,665	4.4	4.3	4.2	12.1	11.1	10.6	34.9	14.2	13.5
Dropbox	20.17	74%	8,338	8,233	5.4	5.0	4.3	NM	21.7	17.5	NM	45.3	34.8
Smartsheet	36.03	65%	3,276	2,773	12.6	10.4	7.5	NM	NM	NM	NM	NM	NM
Box	16.56	66%	2,447	2,644	4.0	3.8	3.4	NM	48.4	30.3	NM	NM	73.6
CommVault Systems	44.71	64%	2,020	1,588	2.3	2.4	2.2	NM	16.9	16.3	NM	34.5	27.4
Median		66%	\$8,338	\$8,233	4.4x	4.3x	4.2x	10.2x	16.9x	16.3x	24.3x	34.5x	31.1x
Mean		72%	\$9,989	\$9,727	7.8x	6.7x	5.5x	10.2x	21.2x	16.4x	24.3x	46.4x	42.8x
Communications													
Zoom Video Communications	\$76.20	71%	\$20,845	\$20,143	43.4x	34.2x	24.6x	NM	NM	NM	NM	NM	NM
Twilio	109.96	73%	14,942	13,685	15.5	12.2	9.2	NM	NM	NM	NM	NM	NM
Slack	23.73	57%	12,911	12,137	23.9	NM	NM	NM	NM	NM	NM	NM	NM
NICE Systems	143.80	92%	9,076	9,161	6.0	5.9	5.4	23.8	18.3	16.9	48.9	27.7	25.3
Nuance	14.11	90%	4,659	5,909	2.9	3.1	3.2	19.2	NM	NM	39.2	13.6	13.8
Five9	53.74	82%	3,259	3,166	10.9	10.1	8.6	NM	NM	45.9	NM	75.7	63.2
Everbridge	61.71	59%	2,071	1,929	11.2	9.7	7.7	NM	NM	NM	NM	NM	NM
8X8	20.72	78%	2,057	1,999	5.5	4.6	3.8	NM	NM	NM	NM	NM	NM
Synchronoss Technologies	5.40	60%	240	471	1.4	1.4	1.3	NM	13.7	11.4	NM	NM	NM
Median		73%	\$4,659	\$5,909	10.9x	7.8x	6.5x	21.5x	16.0x	16.9x	44.0x	27.7x	25.3x
Mean		73%	\$7,785	\$7,622	13.4x	10.1x	8.0x	21.5x	16.0x	24.7x	44.0x	39.0x	34.1x

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Operating Metrics

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	Revenue Growth			EBITDA Margin		
					LTM	FY+1	FY+2	LTM	FY+1	FY+2
CRM										
Salesforce	\$148.44	89%	\$130,182	\$130,160	24%	27%	24%	17%	27%	25%
Zendesk	72.88	77%	8,088	8,253	39%	35%	30%	(19%)	7%	9%
HubSpot	151.61	73%	6,443	6,068	34%	30%	24%	(4%)	13%	13%
Pegasystems	68.05	85%	5,385	5,284	0%	4%	12%	(6%)	4%	7%
Median		81%	\$7,266	\$7,160	29%	28%	24%	(5%)	10%	11%
Mean		81%	\$37,525	\$37,441	24%	24%	23%	(3%)	13%	13%
Accounting / ERP										
Oracle	\$55.03	91%	\$180,637	\$199,959	0%	1%	2%	41%	47%	48%
SAP	118.03	84%	145,002	157,214	6%	4%	7%	23%	33%	34%
International Business Machines	145.42	94%	128,824	160,985	(4%)	(2%)	4%	23%	23%	24%
Intuit	265.94	90%	69,164	66,424	13%	11%	11%	31%	37%	37%
The Sage Group (Financial Software)	8.50	81%	9,256	9,840	6%	2%	6%	27%	25%	25%
Coupa	129.57	83%	8,143	8,089	46%	43%	27%	(15%)	5%	8%
Anaplan	47.00	78%	6,196	5,886	46%	42%	31%	(48%)	(15%)	(9%)
Xero	42.09	89%	5,972	5,960	31%	19%	26%	13%	22%	23%
Avalara	67.29	71%	5,080	4,638	36%	34%	25%	(16%)	(2%)	1%
Blackline	47.81	84%	2,645	2,521	26%	24%	21%	(2%)	8%	9%
Zuora	15.05	61%	1,692	1,530	26%	18%	16%	(28%)	(13%)	(11%)
Qad	46.18	80%	902	791	(4%)	(5%)	7%	1%	4%	7%
Upland Software	34.86	64%	880	1,084	51%	43%	12%	6%	37%	38%
Median		83%	\$6,196	\$5,960	26%	18%	12%	6%	22%	23%
Mean		81%	\$43,415	\$48,071	21%	18%	15%	4%	16%	18%
Supply Chain Management										
Dassault Systemes	\$143.05	86%	\$37,157	\$34,843	10%	5%	9%	30%	36%	37%
Aspen Technology	123.08	87%	8,415	8,563	15%	(0%)	10%	49%	50%	52%
PTC	68.18	63%	7,853	8,251	(0%)	18%	12%	9%	28%	34%
Manhattan Associates	80.67	90%	5,189	5,106	4%	7%	4%	23%	22%	23%
Descartes Systems Group	40.40	97%	3,399	3,408	15%	19%	11%	33%	37%	38%
SPS Commerce	47.07	80%	1,704	1,526	12%	12%	9%	18%	24%	26%
American Software	15.02	94%	471	388	(4%)	3%	7%	13%	13%	16%
Median		87%	\$5,189	\$5,106	10%	7%	9%	23%	28%	34%
Mean		85%	\$9,170	\$8,869	7%	9%	9%	25%	30%	32%

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Operating Metrics (cont.)

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	Revenue Growth			EBITDA Margin		
					LTM	FY+1	FY+2	LTM	FY+1	FY+2
Human Capital Management										
Automatic Data Processing	\$161.42	93%	\$70,008	\$70,061	6%	6%	6%	24%	26%	27%
Workday	169.96	75%	38,751	38,367	34%	27%	23%	(7%)	20%	20%
Paychex	82.77	94%	29,643	29,727	12%	10%	6%	41%	41%	42%
Paycom Software	209.49	81%	12,239	11,050	31%	29%	23%	35%	42%	42%
Ceridian HCM	49.37	84%	7,067	3,559	9%	9%	13%	18%	23%	24%
Paylocity	97.58	87%	5,180	3,623	24%	21%	20%	20%	29%	29%
TriNet Group	62.19	81%	4,349	4,528	8%	(73%)	8%	8%	41%	41%
Insperty	98.62	68%	4,062	3,900	15%	13%	12%	6%	7%	7%
Cornerstone OnDemand	54.82	87%	3,327	3,301	7%	6%	14%	7%	22%	24%
Smartsheet	36.03	65%	3,276	2,773	56%	50%	38%	(26%)	(19%)	(13%)
Benefitfocus	23.81	39%	779	917	10%	14%	16%	(7%)	4%	7%
Median		81%	\$5,180	\$3,900	12%	13%	14%	8%	23%	24%
Mean		77%	\$16,244	\$15,619	19%	10%	16%	11%	21%	23%
Knowledge / Content Management										
Adobe Systems	\$276.25	88%	\$133,727	\$134,213	24%	23%	18%	34%	45%	46%
VeriSign	188.63	85%	22,328	22,899	3%	1%	6%	74%	73%	73%
Akamai Technologies	91.38	98%	14,974	15,220	7%	5%	7%	34%	41%	42%
OpenText	40.81	92%	10,990	12,665	2%	3%	3%	37%	39%	39%
DocuSign	61.92	95%	10,898	10,767	37%	35%	25%	(22%)	7%	9%
Dropbox	20.17	74%	8,338	8,233	22%	19%	15%	8%	23%	25%
Box	16.56	66%	2,447	2,644	18%	14%	12%	(12%)	8%	11%
MobileIron	6.55	84%	719	635	10%	8%	11%	(21%)	3%	NM
SDL	6.59	83%	598	623	20%	6%	6%	10%	12%	13%
Brightcove	10.48	81%	401	398	6%	12%	11%	(6%)	5%	9%
Median		85%	\$9,618	\$9,500	14%	10%	11%	9%	17%	25%
Mean		85%	\$20,542	\$20,830	15%	13%	11%	13%	26%	30%
Business Intelligence / Analytics										
Splunk	\$117.86	82%	\$17,838	\$17,127	36%	28%	22%	(10%)	15%	17%
Alteryx	107.43	73%	6,983	6,858	84%	47%	34%	13%	11%	12%
New Relic	61.45	56%	3,589	3,305	34%	23%	20%	3%	12%	14%
Teradata	31.00	63%	3,537	3,543	(6%)	(9%)	3%	9%	21%	24%
Medallia	27.43	61%	3,500	3,082	37%	NM	NM	(15%)	NM	NM
Verint Systems	42.78	67%	2,856	3,333	7%	11%	10%	15%	25%	26%
Cloudera	8.86	44%	2,478	2,285	55%	61%	10%	(34%)	5%	9%
SVMK	17.10	86%	2,276	2,427	19%	20%	22%	(37%)	12%	13%
MicroStrategy	148.37	97%	1,519	1,053	(4%)	(1%)	5%	6%	6%	11%
GlobalData	10.20	94%	1,207	1,326	20%	5%	5%	16%	24%	26%
Domo	15.98	34%	440	405	27%	18%	13%	(76%)	NM	NM
Median		67%	\$2,856	\$3,082	27%	19%	12%	3%	12%	14%
Mean		69%	\$4,202	\$4,068	28%	20%	15%	(10%)	15%	17%

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Operating Metrics (cont.)

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	Revenue Growth			EBITDA Margin		
					LTM	FY+1	FY+2	LTM	FY+1	FY+2
IT / Infrastructure										
Microsoft	\$139.03	98%	\$1,061,551	\$1,006,098	14%	11%	11%	46%	44%	44%
Oracle	55.03	91%	180,637	199,959	0%	1%	2%	41%	47%	48%
International Business Machines	145.42	94%	128,824	160,985	(4%)	(2%)	4%	23%	23%	24%
VMware	150.06	73%	61,319	63,205	13%	12%	10%	24%	38%	38%
ServiceNow	253.85	84%	47,597	47,051	33%	32%	28%	5%	27%	27%
Atlassian	125.44	84%	30,356	29,498	37%	28%	26%	(44%)	25%	26%
Hewlett Packard Enterprise	15.17	89%	19,806	28,820	(2%)	(5%)	0%	14%	18%	18%
Splunk	117.86	82%	17,838	17,127	36%	28%	22%	(10%)	15%	17%
Akamai Technologies	91.38	98%	14,974	15,220	7%	5%	7%	34%	41%	42%
Citrix Systems	96.52	86%	12,635	13,014	3%	1%	4%	25%	35%	34%
Datadog	33.91	82%	9,950	9,946	164%	NM	NM	(6%)	NM	NM
Juniper Networks	24.75	80%	8,559	7,716	(7%)	(4%)	3%	15%	21%	22%
MongoDB	120.48	65%	6,785	6,585	68%	47%	29%	(27%)	(12%)	(7%)
SolarWinds	18.45	87%	5,722	7,485	12%	13%	12%	42%	48%	48%
Cloudflare	18.57	84%	5,447	5,333	74%	NM	NM	(29%)	NM	NM
Dynatrace	18.67	68%	5,236	6,181	6%	NM	NM	(2%)	NM	NM
Nutanix	26.25	48%	4,957	4,508	7%	12%	27%	(43%)	(33%)	(23%)
New Relic	61.45	56%	3,589	3,305	34%	23%	20%	3%	12%	14%
LogMeIn	70.96	73%	3,505	3,705	10%	5%	5%	27%	33%	30%
Cloudera	8.86	44%	2,478	2,285	55%	61%	10%	(34%)	5%	9%
Fastly	24.00	68%	2,243	2,048	18%	33%	30%	(13%)	(12%)	(10%)
PagerDuty	28.25	47%	2,155	1,814	10%	39%	28%	(33%)	(15%)	(8%)
Software	27.42	59%	2,028	1,865	(1%)	NM	NM	29%	NM	NM
NetScout Systems	23.06	76%	1,749	1,893	(8%)	(2%)	3%	12%	22%	23%
Progress Software	38.06	80%	1,702	1,853	(1%)	7%	2%	30%	NM	NM
Median		80%	\$6,785	\$7,485	10%	12%	10%	12%	22%	23%
Mean		76%	\$65,666	\$65,900	23%	16%	14%	5%	19%	21%

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Operating Metrics (cont.)

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	Revenue Growth			EBITDA Margin		
					LTM	FY+1	FY+2	LTM	FY+1	FY+2
Security										
VeriSign	\$188.63	85%	\$22,328	\$22,899	3%	1%	6%	74%	73%	73%
Palo Alto Networks	203.83	78%	19,770	18,396	28%	19%	20%	3%	22%	23%
Check Point Software Technologies	109.50	82%	17,014	15,399	4%	4%	4%	46%	51%	52%
Symantec	23.63	91%	14,604	17,576	0%	2%	2%	22%	39%	39%
CrowdStrike	58.31	57%	13,175	12,348	197%	NM	NM	(37%)	NM	NM
Fortinet	76.76	79%	13,125	11,295	20%	17%	13%	17%	26%	27%
Okta	98.46	69%	11,790	11,656	51%	41%	31%	(25%)	(9%)	(1%)
Proofpoint	129.05	97%	7,236	7,110	30%	23%	20%	(2%)	16%	18%
Zscaler	47.26	53%	6,024	5,659	59%	33%	28%	(8%)	4%	8%
Cloudflare	18.57	84%	5,447	5,333	75%	NM	NM	(29%)	NM	NM
CyberArk Software	99.82	67%	3,754	3,256	32%	23%	19%	19%	27%	27%
Qualys	75.57	78%	2,965	2,705	17%	15%	16%	30%	39%	39%
FireEye	13.34	65%	2,865	2,957	7%	5%	8%	(12%)	8%	13%
Sophos	4.92	74%	2,399	2,526	11%	7%	9%	13%	20%	21%
Rapid7	45.39	69%	2,217	2,229	28%	31%	23%	(11%)	3%	8%
Mimecast	35.67	65%	2,203	2,254	28%	23%	21%	10%	17%	18%
Tenable	22.38	57%	2,168	1,882	37%	30%	24%	(25%)	(12%)	(8%)
ForeScout	37.92	82%	1,752	1,689	25%	24%	22%	(24%)	(2%)	5%
SailPoint Technologies	18.69	54%	1,666	1,611	25%	12%	17%	4%	8%	11%
Ping Identity	17.25	82%	1,339	1,499	25%	NM	NM	18%	NM	NM
Radware	24.26	90%	1,139	906	9%	8%	9%	11%	NM	NM
SecureWorks	12.93	52%	1,050	960	8%	5%	6%	(1%)	1%	2%
Carbonite	15.49	43%	537	1,107	35%	62%	13%	17%	28%	29%
Zix	7.24	65%	403	683	65%	143%	22%	8%	23%	24%
Median		72%	\$2,915	\$2,831	26%	19%	17%	6%	18%	20%
Mean		72%	\$6,540	\$6,414	34%	25%	16%	5%	19%	21%
Financial Technology										
Fidelity National Information Services	\$132.76	94%	\$81,441	\$89,934	(0%)	22%	31%	33%	41%	45%
Fiserv	103.59	94%	70,409	75,798	3%	82%	52%	34%	38%	39%
Square	61.95	61%	26,461	25,838	47%	(31%)	33%	2%	18%	21%
Jack Henry and Associates	145.97	90%	11,240	11,146	6%	7%	7%	33%	32%	33%
Fair Isaac	303.52	81%	8,771	9,514	15%	21%	9%	27%	32%	33%
Guidewire Software	105.38	93%	8,622	7,815	10%	6%	14%	5%	15%	17%
Q2 Holdings	78.87	84%	3,757	3,586	29%	30%	22%	(11%)	7%	10%
ACI Worldwide	31.33	87%	3,656	4,969	7%	31%	15%	20%	28%	28%
Envestnet	56.70	77%	2,959	3,507	11%	11%	14%	6%	21%	23%
9F Group	11.16	75%	2,163	1,531	(38%)	NM	NM	25%	NM	NM
Bottomline Technologies	39.35	53%	1,726	1,736	7%	6%	10%	13%	23%	24%
Ebix	42.10	53%	1,284	2,029	28%	18%	24%	32%	35%	32%
Median		83%	\$6,189	\$6,392	9%	18%	15%	23%	28%	28%
Mean		79%	\$18,541	\$19,784	10%	18%	21%	18%	26%	28%

Source: Capital IQ and Pitchbook as of 9/30/19

# Public Company Operating Metrics (cont.)

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	Revenue Growth			EBITDA Margin		
					LTM	FY+1	FY+2	LTM	FY+1	FY+2
Vertical Software										
Veeva Systems	\$152.69	86%	\$22,596	\$21,186	26%	23%	19%	31%	39%	39%
SS&C Technologies	51.57	76%	13,086	21,141	102%	35%	3%	36%	39%	40%
Tyler Technologies	262.50	99%	10,128	10,125	12%	17%	11%	22%	28%	29%
Guidewire Software	105.38	93%	8,622	7,815	10%	6%	14%	5%	15%	17%
RealPage	62.86	95%	5,957	6,403	20%	14%	11%	20%	28%	30%
Medidata Solutions	91.50	93%	5,715	5,702	17%	16%	15%	12%	24%	25%
Blackbaud	90.34	88%	4,442	5,071	5%	6%	5%	15%	21%	21%
Q2 Holdings	78.87	84%	3,757	3,586	29%	30%	22%	(11%)	7%	10%
AppFolio	95.14	87%	3,239	3,267	34%	34%	27%	14%	15%	18%
Model N	27.76	95%	908	899	(8%)	(1%)	11%	(4%)	10%	13%
Qad	46.18	80%	902	791	(4%)	(5%)	7%	1%	4%	7%
Median		88%	\$5,715	\$5,702	17%	16%	11%	14%	21%	21%
Mean		89%	\$7,214	\$7,817	22%	16%	13%	13%	21%	23%
Healthcare IT / Life Sciences Software										
Veeva Systems	\$152.69	86%	\$22,596	\$21,186	26%	23%	19%	31%	39%	39%
Cerner	68.17	89%	21,705	21,790	5%	7%	6%	26%	29%	31%
Medidata Solutions	91.50	93%	5,715	5,702	17%	16%	15%	12%	24%	25%
Allscripts Healthcare Solutions	10.98	77%	1,830	2,653	3%	2%	4%	3%	17%	18%
Health Catalyst	31.64	63%	1,155	1,739	11%	NM	NM	(30%)	NM	NM
NextGen Healthcare	15.67	74%	1,025	1,056	(1%)	3%	4%	14%	17%	19%
Phreesia	24.24	83%	867	791	38%	NM	NM	(6%)	NM	NM
HealthStream	25.89	83%	838	709	12%	10%	(1%)	17%	17%	16%
Cegedim	28.45	85%	394	659	1%	(0%)	4%	17%	17%	18%
Castlight Health	1.41	34%	205	161	5%	(9%)	1%	(16%)	(5%)	(2%)
Median		83%	\$1,090	\$1,397	8%	5%	4%	13%	17%	18%
Mean		77%	\$5,633	\$5,644	12%	7%	7%	7%	19%	21%
Education Technology										
Chegg	\$29.95	62%	\$3,584	\$3,662	26%	25%	22%	11%	30%	32%
Cornerstone OnDemand	54.82	87%	3,327	3,301	7%	6%	14%	7%	22%	24%
Pluralsight	16.80	47%	2,352	2,408	41%	36%	30%	(48%)	(17%)	(10%)
Afya Educacional	25.64	79%	2,248	2,248	98%	NM	NM	36%	NM	NM
Instructure	38.74	77%	1,437	1,440	25%	24%	21%	(21%)	(5%)	(2%)
K12	26.40	71%	1,062	804	11%	1%	5%	12%	13%	14%
2U	16.28	20%	1,031	1,123	38%	38%	28%	(8%)	(4%)	(2%)
Learning Technologies Group	1.39	64%	926	961	84%	30%	8%	28%	33%	34%
Median		67%	\$1,843	\$1,844	32%	25%	21%	9%	13%	14%
Mean		63%	\$1,996	\$1,993	41%	23%	18%	2%	10%	13%

Source: Capital IQ and Pitchbook as of 9/30/19

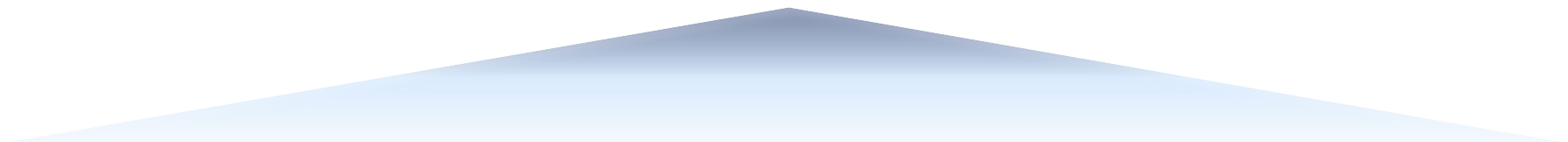
# Public Company Operating Metrics (cont.)

Company	Price 09/30/19	52-Wk High	Mkt Cap	EV	Revenue Growth			EBITDA Margin		
					LTM	FY+1	FY+2	LTM	FY+1	FY+2
Marketing Automation										
Oracle	\$55.03	91%	\$180,637	\$199,959	0%	1%	2%	41%	47%	48%
Adobe Systems	276.25	88%	133,727	134,213	24%	23%	18%	34%	45%	46%
Salesforce	148.44	89%	130,182	130,160	24%	27%	24%	17%	27%	25%
Zendesk	72.88	77%	8,088	8,253	39%	35%	30%	(19%)	7%	9%
HubSpot	151.61	73%	6,443	6,068	34%	30%	24%	(4%)	13%	13%
LivePerson	35.70	87%	2,339	2,308	14%	16%	20%	(14%)	1%	7%
Median		88%	\$69,135	\$69,206	24%	25%	22%	7%	20%	19%
Mean		84%	\$76,903	\$80,160	23%	22%	20%	9%	23%	25%
Storage & Collaboration										
Atlassian	\$125.44	84%	\$30,356	\$29,498	37%	28%	26%	(44%)	25%	26%
NetApp	52.51	60%	12,493	10,687	(3%)	(8%)	4%	22%	23%	25%
OpenText	40.81	92%	10,990	12,665	2%	3%	3%	37%	39%	39%
Dropbox	20.17	74%	8,338	8,233	22%	19%	15%	8%	23%	25%
Smartsheet	36.03	65%	3,276	2,773	56%	50%	38%	(26%)	(19%)	(13%)
Box	16.56	66%	2,447	2,644	18%	14%	12%	(12%)	8%	11%
CommVault Systems	44.71	64%	2,020	1,588	(2%)	(5%)	5%	2%	14%	14%
Median		66%	\$8,338	\$8,233	18%	14%	12%	2%	23%	25%
Mean		72%	\$9,989	\$9,727	19%	14%	15%	(2%)	16%	18%
Communications										
Zoom Video Communications	\$76.20	71%	\$20,845	\$20,143	207%	78%	39%	5%	8%	2%
Twilio	109.96	73%	14,942	13,685	79%	72%	33%	(21%)	10%	10%
Slack	23.73	57%	12,911	12,137	130%	NM	NM	(92%)	NM	NM
NICE Systems	143.80	92%	9,076	9,161	9%	8%	8%	25%	32%	32%
Nuance	14.11	90%	4,659	5,909	12%	(6%)	(4%)	15%	NM	NM
Five9	53.74	82%	3,259	3,166	28%	22%	17%	7%	17%	19%
Everbridge	61.71	59%	2,071	1,929	40%	35%	27%	(15%)	2%	5%
8X8	20.72	78%	2,057	1,999	18%	24%	21%	(17%)	(9%)	(1%)
Synchronoss Technologies	5.40	60%	240	471	(7%)	5%	8%	(40%)	10%	11%
Median		73%	\$4,659	\$5,909	28%	23%	19%	(15%)	10%	10%
Mean		73%	\$7,785	\$7,622	57%	30%	19%	(15%)	10%	11%

Source: Capital IQ and Pitchbook as of 9/30/19

# Vista Point Advisors Overview

Vista Point Advisors is a boutique investment bank focused on capital raises and M&A advisory for growing technology companies



Software	Internet	Mobile	Hardware
<ul style="list-style-type: none"><li>• Software-as-a-Service</li><li>• On-premise</li><li>• Application Software</li><li>• Healthcare IT</li><li>• Financial Tech</li></ul>	<ul style="list-style-type: none"><li>• Advertising and Marketing</li><li>• Digital Media</li><li>• Gaming</li><li>• Content</li><li>• Platforms</li></ul>	<ul style="list-style-type: none"><li>• Consumer Applications</li><li>• Enterprise Applications</li><li>• Gaming</li><li>• Payments</li><li>• Infrastructure</li></ul>	<ul style="list-style-type: none"><li>• Communications</li><li>• Entertainment</li><li>• Industrial</li><li>• Systems</li><li>• Consumer</li></ul>

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