VISTA POINT ADVISORS

Software Market Update

August 2020

I. Vista Point Advisors Overview

A Truly Unconflicted Approach

Vista Point Advisors Is The Leading Sell-Side Investment Bank Exclusively Focused On M&A and Capital Raising For Founder-Led Software And Internet Companies

- Focus on **Founder-Led** minimally-funded businesses
- Unconflicted advice: **exclusively** a sell-side advisor
- Software and Internet domain expertise

Key Metrics

58
TRANSACTIONS

16
INVESTMENT BANKERS

26%
CROSS BORDER TRANSACTIONS

$25-$300M
TRANSACTION SIZE RANGE

$4.0B
TOTAL ENTERPRISE VALUE

8 Years
AVERAGE SENIOR BANKER TENURE AT VPA

100%
SELL SIDE TRANSACTIONS

1,100+
LOIs RECEIVED

800+
BUYER RELATIONSHIPS

Leading Advisor to Founder-Led SaaS Companies

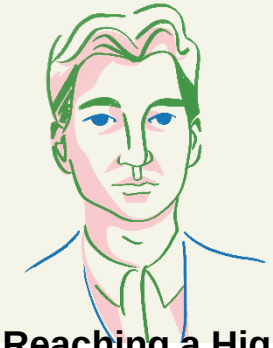
We have worked with exceptional companies over the years. Here are our results:

Resources for Founders

VPA knows the process of selling your business or raising capital can be opaque and confusing for many founders. That's why we have created a dedicated guide specifically designed to educate founders on the process and address the challenges they face including:

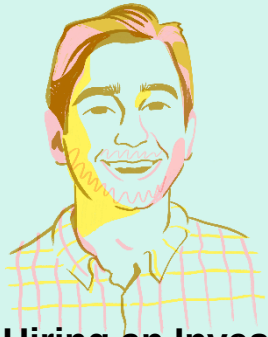
- Deciding to sell your business
- How to position your company
- How to run a competitive process
- Diligence and life post-transaction

CLICK HERE TO ACCESS FOUNDER RESOURCES



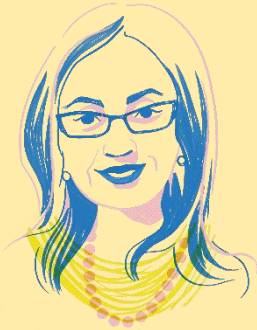
Reaching a High Valuation Through Strategic Positioning

By: Jake Harrington *Founder, On-Site*



Hiring an Investment Bank to Maximize Transaction Value

By: Neal Taparia *Co-Founder, ImagineEasy*

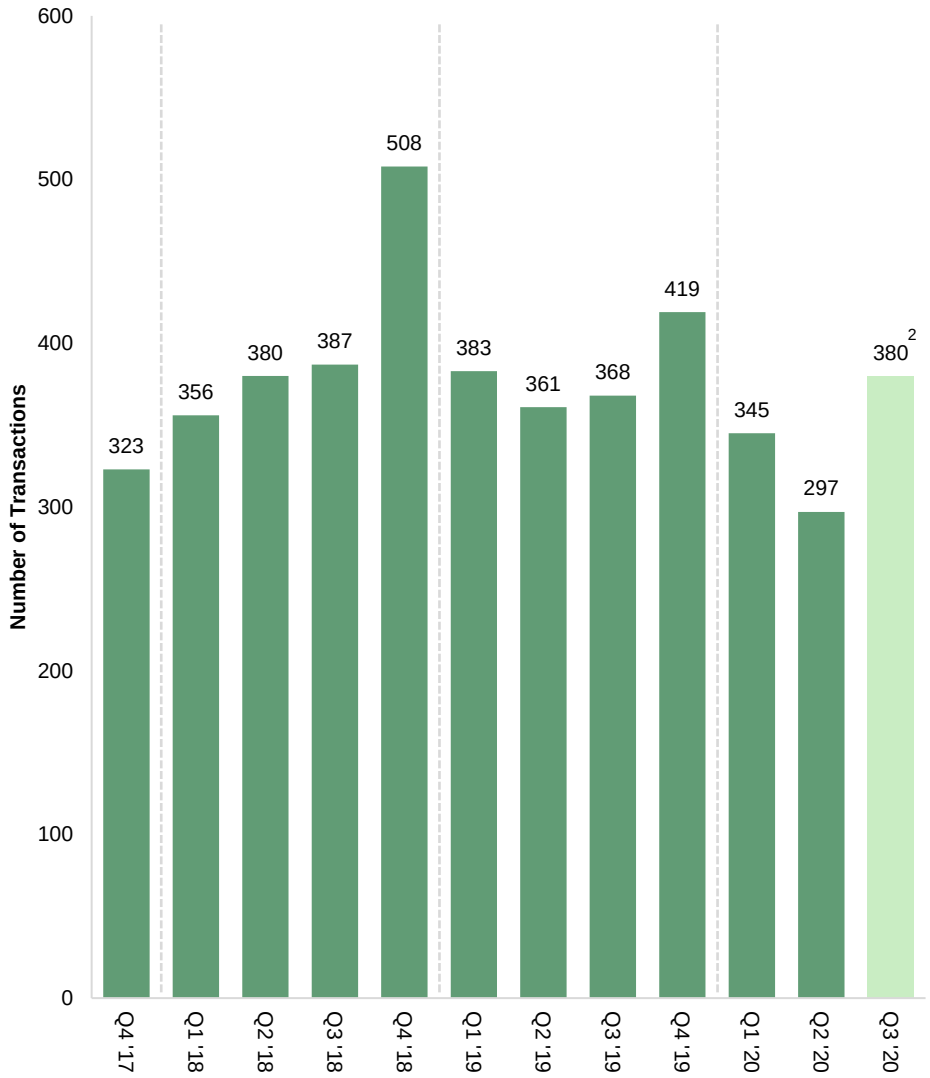


Selling Our Business to Accelerate Growth

By: Smita Bakshi *Co-Founder, zyBooks*

II. M&A and Financing Activity

Software M&A Activity



Top Strategic Acquirers[1]

Rank	Buyer	Deal Count
1	Microsoft	35
2		24
3	mri REAL ESTATE SOFTWARE	21
4	vmware	19
5	Alphabet	17

Top PE Acquirers[1]

Rank	Buyer	Deal Count
1	VISTA EQUITY PARTNERS	99
2	TA ASSOCIATES	94
3	THOMABRAVO	83
4	INSIGHT PARTNERS	74
5	PROVIDENCE EQUITY	70

1) Rank and deal count for the past 36 months
2) Estimated by run-rating July & August 2020 (July + August transaction totals * (3/2))
Source: Pitchbook as of 8/31/2020

Select Software M&A Transactions

Date	Target	Buyer	Sector	Deal Size	EV/Revenue	Commentary
Aug-31	callyo	MOTOROLA SOLUTIONS	GovTech	Undisclosed	Undisclosed	▪ Callyo develops a law enforcement mobile application intended to combat crimes such as human trafficking and child exploitation ▪ The acquisition is intended to bolster Motorola Solutions' command-center software suite
Aug-26	Clinical Ink	GI PARTNERS	Healthcare IT / Life Sciences Software	Undisclosed	Undisclosed	▪ Clinical Ink develops an eSource technology designed to revolutionize clinical research by eliminating paper source documents ▪ The acquisition comes as Clinical Ink launches new innovations later this year and expands into Asia-Pacific and Europe
Aug-26	Freebird	Capital One	Travel & Hospitality	Undisclosed	Undisclosed	▪ Freebird develops a travel platform that empowers travelers to skip the line and instantly book a new ticket after flight cancellations or delays ▪ The acquisition allows Capital One to expand its product suite and offer cardholders additional value additive services in the realm of travel
Aug-26	INNOVATIVE SYSTEMS	aptean	Accounting / ERP	Undisclosed	Undisclosed	▪ Innovative Systems develops management software designed to maximize growth and accelerate business operations in retail sectors ▪ The acquisition allows Aptean to significantly bolster its apparel resources planning and distribution capabilities
Aug-25	ACTIVATE	impact	Marketing Automation	Undisclosed	Undisclosed	▪ Activate provides a marketing technology platform for brands and influencers to manage and track social media ad campaigns ▪ The acquisition will allow the combined entity's offering to become the largest global influencer marketplace
Aug-25	STRATOZONE	Google Cloud Platform	Storage & Collaboration	Undisclosed	Undisclosed	▪ StratoZone provides a SaaS solution focused on cloud service automation ▪ The acquisition allows Google Cloud to ramp up its cloud migration discovery and assessment capabilities
Aug-25	waddle	xero	FinTech	$57m	Undisclosed	▪ Waddle develops a leading-edge financial technology platform that provides easy credit to enterprises via a cloud accounting package ▪ The acquisition allows Xero to help improve small business cash flow
Aug-24	Brandfolder	smartsheet	Storage & Collaboration	$155m	Undisclosed	▪ Brandfolder develops a digital asset management platform to organize, discover, control, distribute, and measure all forms of digital content ▪ The acquisition allows Smartsheet to add content management to its current workflow automation offering

Source: Pitchbook as of 8/31/20

Select Software M&A Transactions

Date	Target	Buyer	Sector	Deal Size	EV/Revenue	Commentary
Aug-24	Graphus	Kaseya	Security	Undisclosed	Undisclosed	▪ Graphus develops a security platform designed to eliminate sophisticated cyber attacks against Office 365 and G Suite businesses ▪ The acquisition allows Kaseya to continue building out its IT Complete Security Suite
Aug-24	node	sugarcrm	CRM	Undisclosed	Undisclosed	▪ Node provides a leading network analytics platform, leveraging artificial intelligence to provide companies with relevant, timely insights ▪ The acquisition provides SugarCRM with ample AI expertise as well as a customer prediction element to its platform
Aug-24	SPACES		Augmented & Virtual Reality	Undisclosed	Undisclosed	▪ Spaces develops virtual and mixed reality theme parks based on 3D technology spaces as well as VR video chat and broadcast software ▪ The acquisition allows Apple to expand its offering of location-based VR experiences
Aug-21	ACELYNK CUSTOMS COMPLIANCE SOFTWARE	Magaya	Governance, Risk, & Compliance	Undisclosed	Undisclosed	▪ Acelynk provides customs compliance software solutions for customs brokers, freight forwarders, and self-filers to reduce costs for brokers ▪ The acquisition provides complementary functionality to the Magaya ecosystem with an automated broker interface (ABI) solution
Aug-20	Citation	KKR	Governance, Risk, & Compliance	Undisclosed	Undisclosed	▪ Citation provides tech-enabled compliance and quality control related subscription services to small- and mid-sized enterprises in the U.K. ▪ The acquisition allows Citation to seize further growth opportunities by expanding its customer base and range of services
Aug-20	EMS	Collegis EDUCATION	EdTech	Undisclosed	Undisclosed	▪ EMS provides simulation management and skill evaluation software for medical centers, nursing schools, and more ▪ The acquisition brings together innovative education technology services and leading technology products in healthcare
Aug-20	SciBite	ELSEVIER	Business Intelligence / Analytics	Undisclosed	Undisclosed	▪ SciBite develops semantic analytics solutions to empower customers to identify and extract scientific terminology from unstructured text ▪ The acquisition allows Elsevier to accelerate its solutions for life sciences and corporate R&D industries
Aug-19	Motionsoft	daxko	Vertical Software	Undisclosed	Undisclosed	▪ Motionsoft develops gym membership and payment processing software to provide club professionals with an effective automated tool ▪ The acquisition allows Daxko to expand its position as the most extensive tech-based community in health and wellness

Source: Pitchbook as of 8/31/20

Select Software M&A Transactions

Date	Target	Buyer	Sector	Deal Size	EV/Revenue	Commentary
Aug-18	ComplyWorks	Veriforce	Governance, Risk, & Compliance	Undisclosed	Undisclosed	▪ ComplyWorks provides a SaaS platform leveraging global capabilities and local deployment to offer a leading risk and compliance platform ▪ The acquisition will provide premier third-party risk management solutions to leading global companies
Aug-18	Koantic	absorb	EdTech	Undisclosed	Undisclosed	▪ Koantic develops software intended to provide a simple, easy platform for eLearning and course/presentation creation ▪ The acquisition boosts Absorb's solution for engaging, interactive eLearning content that can be created quickly
Aug-17	FORESCOUT	Advent International GLOBAL PRIVATE EQUITY	Governance, Risk, & Compliance	$1,430m	4.3x	▪ ForeScout provides agentless network security solutions to meet the demands of growth in mobile computing, IoT, and cloud computing ▪ The acquisition will allow ForeScout to continue investing in the development and deployment of leading-edge cybersecurity products
Aug-17	Pype	AUTODESK.	Storage & Collaboration	Undisclosed	Undisclosed	▪ Pype develops a suite of construction software solutions intended to improve efficiency from the preconstruction phase through closeout ▪ The acquisition allows Autodesk to strengthen its existing integrations between its BIM 360 and other products with Pype's solutions
Aug-17	SIGNAL	TransUnion	Marketing Automation	Undisclosed	Undisclosed	▪ Signal develops a marketing technology platform connecting the world's brands to customers at scale via data collection and engagement ▪ The acquisition enables TransUnion to help customers use data and insights to provide better experiences for their clients
Aug-13	3P Learning	IXL LEARNING	EdTech	Undisclosed	Undisclosed	▪ 3P Learning develops, sells, and markets online educational programs, providing resources to schools and parents of students ▪ The acquisition allows 3P Learning to broaden its product portfolio and international footprint
Aug-13	CaseLines	THOMSON REUTERS	LegalTech	Undisclosed	Undisclosed	▪ CaseLines develops a digital evidence delivery platform to support police, prosecutors, and lawyers, enabling paperless hearings in court ▪ The acquisition boosts Reuters' offerings in the court administration space and furthers its effort to deliver solutions to the legal community
Aug-13	Vertafore	ROPER	FinTech	$5,350m	Undisclosed	▪ Vertafore develops cloud-based insurance software, specializing in complete integrated applications to determine areas of business growth ▪ The acquisition affords Roper the opportunity acquire a brand with high customer retention and clear leadership in its niche market

Source: Pitchbook as of 8/31/20

Select Software M&A Transactions

Date	Target	Buyer	Sector	Deal Size	EV/Revenue	Commentary
Aug-12	Recurly	AKKR	Accounting / ERP	Undisclosed	Undisclosed	▪ Recurly develops a subscription billing services platform designed to deliver recurring billing automation ▪ The acquisition will allow Recurly to leverage AKKR's resources to further their mission to make subscriptions a competitive advantage
Aug-11	STABILITAS	ONSOLVE	Business Intelligence / Analytics	Undisclosed	Undisclosed	▪ Stabilitas develops an event intelligence platform designed to help companies analyze critical events and minimize risk ▪ The acquisition will allow Stabilitas to pair its AI-powered platform with OnSolve's communications solutions for end-to-end threat intelligence
Aug-8	MAJESCO	THOMABRAVO	FinTech	$729m	4.6x	▪ Majesco provides core insurance software and consulting, enabling business transformation for the insurance industry ▪ The acquisition will allow Majesco to serve its high-profile client base and new clients as many insurers continue to transition to the cloud
Aug-7	ThousandEyes	CISCO	Business Intelligence / Analytics	Undisclosed	Undisclosed	▪ ThousandEyes develops a network intelligence platform designed to provide data visualizations and insights on application delivery ▪ The acquisition allows Cisco to continue to build out their core Enterprise Networking and Cloud and AppDynamics portfolios
Aug-6	MacMunnis	mri REAL ESTATE SOFTWARE	Real Estate	Undisclosed	Undisclosed	▪ MacMunnis develops lease administration software designed to reclaim tenant money through the understanding of lease agreements ▪ The acquisition will broaden MacMunnis' ability to serve the end-to-end requirements of real estate occupiers
Aug-6	undefined labs	DATADOG	Development & Testing	Undisclosed	Undisclosed	▪ Undefined Labs develops a software engineering tool designed to provide comprehensive support solutions to developers ▪ The acquisition will allow Undefined Labs access to DataDog's software development and pre-production workflows
Aug-5	autocab	Uber	Transportation & Logistics	Undisclosed	Undisclosed	▪ Autocab develops a mobility platform and booking and dispatch software designed for the taxi, limo, and paratransit industry ▪ The acquisition will allow Uber to expand into and capitalize on markets in which Uber doesn't normally operate
Aug-5	housingpartners	mri REAL ESTATE SOFTWARE	Real Estate	Undisclosed	Undisclosed	▪ Housing Partners provides social housing software designed to provide home exchange services and tenant management ▪ The acquisition will help to broaden Housing Partner's frontline digital services for housing tenants

Source: Pitchbook as of 8/31/20

Select Software M&A Transactions

Date	Target	Buyer	Sector	Deal Size	EV/Revenue	Commentary
Aug-5	Invenger	ONE INC	FinTech	Undisclosed	Undisclosed	▪ Invenger provides a comprehensive payment platform that allows insurers to replace checks and process claims payments electronically ▪ The acquisition will integrate Invenger's claims payment solution into One's digital payment solution and provide better customer service
Aug-5	REVIONICS	aptos	Business Intelligence / Analytics	Undisclosed	Undisclosed	▪ Revionics provides a pricing, promotion, and markdown platform designed to empower strategy-aligned, data-driven decisions ▪ The acquisition will add price optimization SaaS solutions to Aptos' merchandise lifecycle management suite
Aug-4	AppRev	CENTAURI HEALTH SOLUTIONS	Healthcare IT / Life Sciences Software	Undisclosed	Undisclosed	▪ AppRev provides healthcare business intelligence services and offers pricing analytics and revenue cycle software ▪ The acquisition will enhance Centauri's market leadership in hospital revenue cycle optimization
Aug-4	FOUNDATION	THOMABRAVO	Accounting / ERP	Undisclosed	Undisclosed	▪ Foundation develops construction accounting software and payroll services for small- to mid-sized specialty contractors ▪ The acquisition will allow Foundation to leverage Thoma Bravo's investment and operational expertise to optimize their service offerings
Aug-3	onsip	Intrado	Video Management	Undisclosed	Undisclosed	▪ OnSIP provides a communication application created to help small- and mid-sized businesses communicate faster and more efficiently ▪ The acquisition will provide Intrado with a fully integrated product suite to serve all market segments with flexible, easy-to-use tools
Aug-1	HOTEL CONNECTIONS	FLEETCOR	Transportation & Logistics	Undisclosed	Undisclosed	▪ Hotel Connections provides and develops crew logistics management software for air travel and cruise lines ▪ The acquisition will increase the reach of Fleetcor's air and cruise line network platform and expand their solutions to international markets
Aug-1	Mobeewave		FinTech	$74m	Undisclosed	▪ Mobeewave provides an online mobile payment platform to turn any Near-Field Communication phone into a mobile payment terminal ▪ The acquisition will allow Apple to assimilate Mobeewave's mobile payments technology into their ecosystem

Source: Pitchbook as of 8/31/20

Select Software Financings

Date	Target	Lead/Select Investor	Sector	Deal Size	Funding to Date	Commentary
Aug-27	shopmonkey	Bessemer Venture Partners	Vertical Software	$25m	$35m	▪ Shopmonkey develops a process management platform intended to streamline repair shop management ▪ Funding will be used to further reinforce Shopmonkey's auto repair platform and grow its customer base in wake of the COVID pandemic
Aug-27	Restream	INSIGHT PARTNERS	Video Management	$50m	$55m	▪ Restream develops a platform designed to distribute and monetize video content ▪ Funding raised will be used to fuel the launch of Restream Studio, a platform for creators to increase production quality of content
Aug-26	FINIX	Lightspeed	FinTech	$75m	$95m	▪ Finix develops a B2B payment processing platform designed for businesses to own, manage, and monetize their payments ▪ Funding will be used to hire additional engineers to meet growing customer demand and to match the acceleration in digital payments
Aug-26	Course Hero	NEWVIEW CAPITAL	EdTech	$80m	$98m	▪ Course Hero develops an online learning platform designed to let students access over 40 million course-specific study resources ▪ Funds will be used to further reinforce Course Hero's faculty portal and to energize employees in the coming years
Aug-25	split	COMCAST VENTURES	Development & Testing	$33m	$60m	▪ Split develops a feature delivery platform designed to empower businesses to make better product decisions ▪ Funding will be used to scale the business amid the transition to impact-driven software development and increased demand
Aug-25	RELIAQUEST	KKR	Security	$300m	$330m	▪ ReliaQuest provides information technology security services as well as visibility and automation on-demand ▪ Funds will be used for growth initiatives, including product development and strategic acquisitions
Aug-25	redis	BainCapital VENTURES	IT / Infrastructure	$100m	$246m	▪ Redis provides an in-memory database platform for applications and services designed for transactional analytics and hybrid deployments ▪ Funding will support ReliaQuest in accelerating their growth initiatives, including international expansion
Aug-25	MURAL	INSIGHT PARTNERS	Storage & Collaboration	$124m	$142m	▪ MURAL develops a visual collaboration tool created to enable innovative teams to think and collaborate visually ▪ Funds will enable MURAL to expand adoption to new types of teams and use cases within enterprises

Note: Includes financings $20m or more
Source: Pitchbook as of 8/31/20

Select Software Financings

Date	Target	Lead/Select Investor	Sector	Deal Size	Funding to Date	Commentary
Aug-24	data iku	stripes	Business Intelligence / Analytics	$100m	$248m	▪ Dataiku develops a centralized data platform intended to help businesses in their data journey from analytics at scale to enterprise AI ▪ Funding raised will allow the Company to expand its operations and its business reach
Aug-20	BlockFi	MORGAN CREEK DIGITAL ASSETS	FinTech	$50m	$154m	▪ BlockFi develops a wealth management platform designed to seamlessly manage crypto assets and maximize earning potential ▪ Funds will be used to enter new lines of business and to release a bitcoin rewards-based credit card
Aug-18	SEATED	INSIGHT PARTNERS	Travel & Hospitality	$30m	$30m	▪ Seated provides a restaurant discovery application designed to offer rewards for dining at restaurants in the city ▪ Funding raised will be used make strategic acquisitions in line with Seated's growth initiatives
Aug-18	Movable Ink	SILVERLAKE	Marketing Automation	$30m	$42m	▪ Movable Ink develops a digital marketing platform designed to take any data and activate it into real-time, personalized creation ▪ Funds will be used to develop the platform and expand on its extensive partner ecosystem within the Movable Ink Exchange
Aug-18	Buildkite	OPENVIEW	Business Intelligence / Analytics	$20m	$20m	▪ Buildkite develops build automation tools designed to deploy and test codes at scale ▪ Funding will be used to increase the scale and speed of Buildkite's offerings
Aug-18	ATTABOTICS	ONTARIO TEACHERS' PENSION PLAN	Supply Chain Management	$50m	$69m	▪ Attabiotics develops a robo-centric warehousing, fulfillment, storage, and retrieval system ▪ Funding raised will be used to further accelerate Attabotics' commercial deployment
Aug-17	KEEPER	INSIGHT PARTNERS	Security	$60m	$60m	▪ Keeper develops a password management software designed to help users protect their passwords and sensitive digital assets ▪ Funds will be used to bring new, unique, and increasingly critical cybersecurity solutions to new and existing customers globally
Aug-17	Grafana	Lightspeed	Business Intelligence / Analytics	$50m	$75m	▪ Grafana develops a performance monitoring platform intended to collect, store, and analyze data ▪ Funding will be used to aggressively accelerate its product roadmap in key areas

Note: Includes financings $20m or more.
Source: Pitchbook as of 8/31/20

Select Software Financings

Date	Target	Lead/Select Investor	Sector	Deal Size	Funding to Date	Commentary
Aug-17	Agiloft	FTV Capital	Business Software	$45m	$45m	▪ Agiloft develops and provides contract management software designed for automating the processes for competing vendors ▪ Funding will be used to build on its leadership position in the growing enterprise contract and commerce lifecycle management space
Aug-12	Reify Health	Battery	Healthcare IT / Life Sciences Software	$30m	$40m	▪ Reify Health develops cloud-based software designed to help accelerate the development of new life-saving therapies ▪ Funding will be used to expand its StudyTeam enrollment solution and accelerate additional platform solutions
Aug-12	Gong	Coatue	Business Intelligence / Analytics	$200m	$333m	▪ Gong develops a revenue intelligence platform leveraging artificial intelligence to go beyond traditional CRM ▪ Funding raised will be used to buy companies, make strategic investments, and accelerate growth initiative
Aug-12	blend	Canapi	FinTech	$75m	$389m	▪ Blend develops a digital lending platform intended to simplify and fasten consumer finance processes ▪ Funds raised will be used to accelerate the development of its unified digital platform
Aug-11	Trumid	Dragoneer Investment Group	FinTech	$200m	$475m	▪ Trumid develops an electronic trading platform designed to bring efficiency to credit trading ▪ Funds will be used to support the broadening of Trumid's trading protocols and expansion into adjacent products and geographies
Aug-10	Mux	Andreessen Horowitz	Video Management	$37m	$69m	▪ Mux develops a video platform designed to take the complexity out of live and on-demand video ▪ Funds will be used to expand product, sales, and marketing teams to help more companies deliver online video streaming experiences
Aug-06	Mode	H.I.G. Growth Partners	Business Intelligence / Analytics	$33m	$83m	▪ Mode develops a collaborative analytics platform designed to make data-informed decisions ▪ Funding will be used to accelerate customer acquisition efforts and to attempt to establish the Company as a market leader
Aug-06	Crossbeam	Redpoint	Business Intelligence / Analytics	$25m	$41m	▪ Crossbeam develops a collaborative intelligence platform designed to utilize data for accelerating customer networking ▪ Funding raised will be used to accelerate the growth of Crossbeam's partnerships platform

Note: Includes financings $20m or more.
Source: Pitchbook as of 8/31/20

Select Software Financings

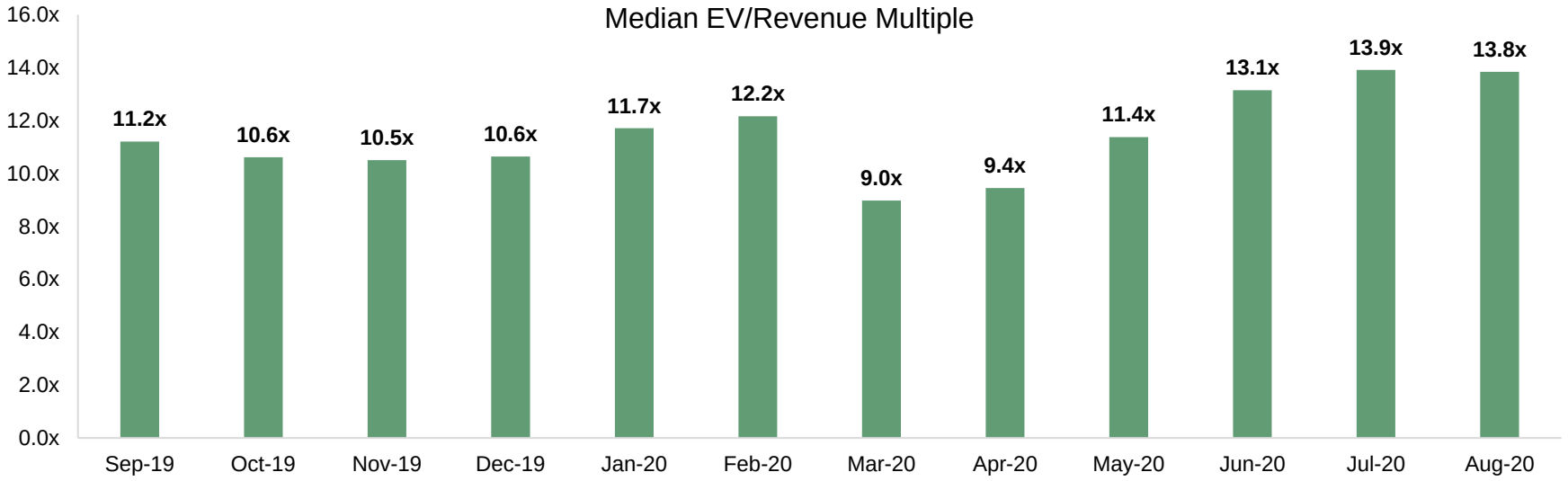
Date	Target	Lead/Select Investor	Sector	Deal Size	Funding to Date	Commentary
Aug-05	PandaDoc	ONE PEAK PARTNERS	Storage & Collaboration	$30m	$36m	▪ PandaDoc develops a digital transaction management platform ▪ Funds will be used to drive disruption in the eSignature market, while capturing additional market share in proposal and contract categories
Aug-04	servicetrade	FRONTIER GROWTH	Vertical Software	$30m	$34m	▪ ServiceTrade develops a service contracting platform designed to help manage job scheduling ▪ Funding raised will be used to expand the team and add additional products to the pipeline
Aug-04	RIPPLING	FOUNDERS FUND	Human Capital Management	$145m	$197m	▪ Rippling develops an employee management platform designed to eliminate the administrative work of running a company ▪ Funding raised will be used to increase R&D efforts
Aug-04	Diligent	Blackstone	Governance, Risk, & Compliance	$500m	$3,688m	▪ Diligent develops secure corporate governance and collaboration software ▪ Funds will be used to pursue the next stage of growth and to continue to build transformative solutions for clients
Aug-04	cloudpay	RUNWAY GROWTH CAPITAL	Accounting / ERP	$35m	$149m	▪ Cloudpay provides a cloud-based payroll platform intended to deliver end-to-end payroll management services to multinational organizations ▪ Funding raised will be used to scale the business and bring new products to market
Aug-03	Volanté	WAVECREST GROWTH PARTNERS	FinTech	$35m	$35m	▪ Volante provides financial software intended to accelerate digital transformation and modernization ▪ Funding raised will be used to speed expansion of cloud technology around the globe as well as market segments and industry verticals

Note: Includes financings $20m or more.
Source: Pitchbook as of 8/31/20

III. Public Company Performance

VPA SaaS Index Snapshot

The VPA SaaS Index is comprised of 69 public SaaS companies and is designed to track the performance of emerging public companies primarily involved in providing cloud software

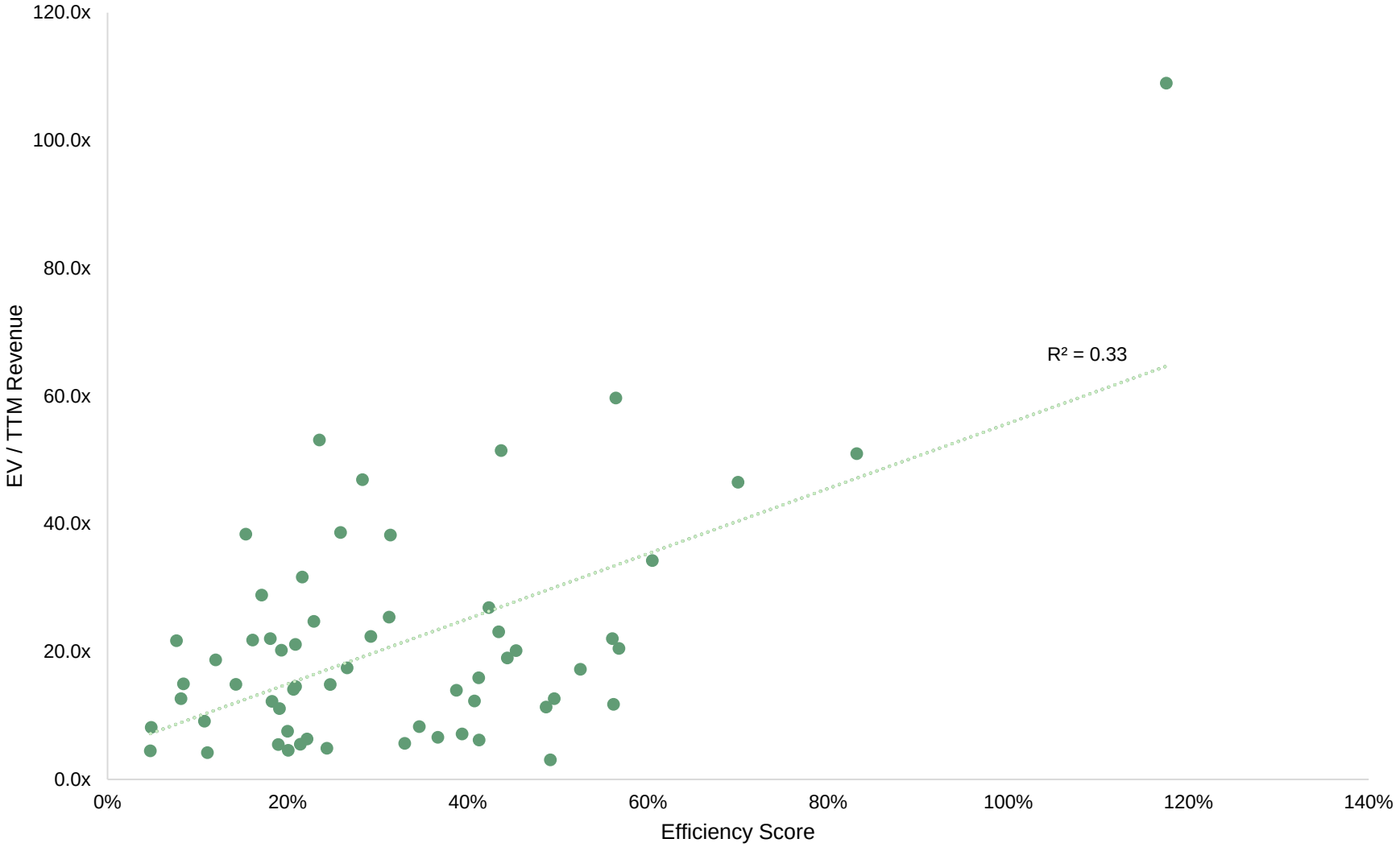


VPA SaaS Index Members

2U, Adobe, alteryx, Anaplan, ANSYS, appfolio, ATLASSIAN, AUTODESK, Avalara, bill.com, BLACKLINE, box, CERIDIAN, CLOUDERA, CLOUDFLARE, Cornerstone, coupa, CROWDSTRIKE, DATADOG, DocuSign, DOMO, Dropbox, dynatrace, elastic, everbridge, fastly, FIREEYE, Five9, HubSpot, J2 GLOBAL, Medallia, mimecast, New Relic, okta, PagerDuty, paloalto NETWORKS, paycom, paylocity, PayPal, Ping Identity, PLURALSIGHT, proofpoint, ptc, Q2, Qualys, REALPAGE, RingCentral, salesforce, servicenow, shopify, slack, smartsheet, splunk>, sproutsocial, Square, talend, tenable, twilio, upland, Veeva, vmware, WiX, workday, Workiva, YEXT, zendesk, ZOOM, zscaler, zuora

SaaS Valuations vs. Efficiency Score[1] ("Rule of 40%")

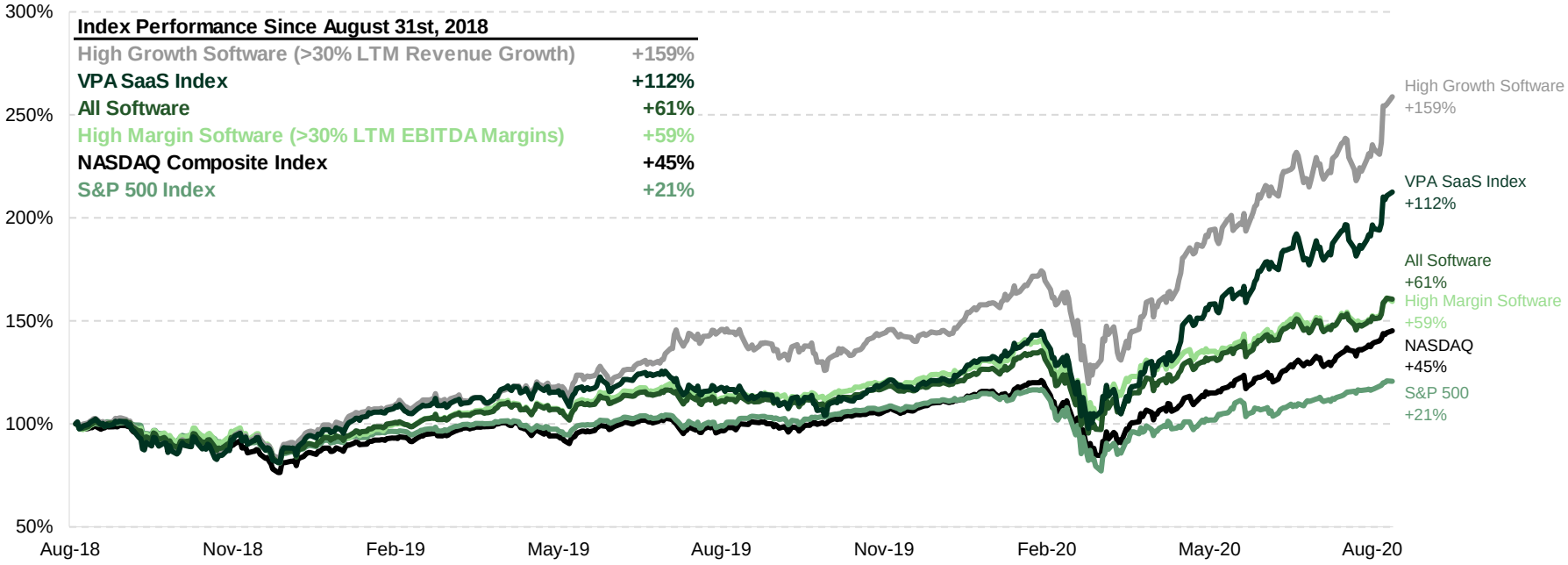
Sustaining revenue growth and profitability is rewarded with a significant valuation premium



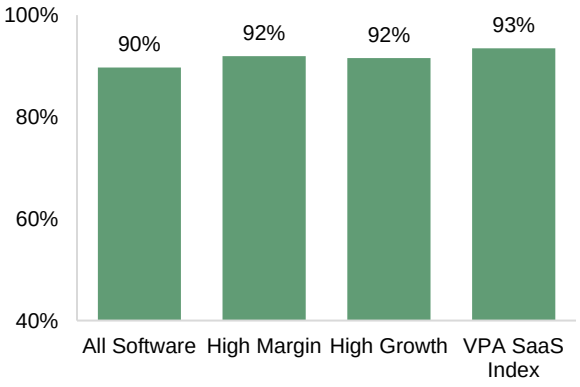
1) Efficiency Score = LTM Revenue Growth % + LTM EBITDA Margin
Source: Pitchbook as of 8/31/20

Software Public Market Performance

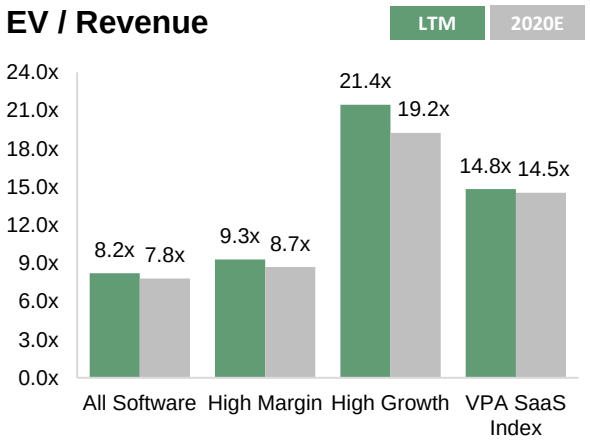
Public Market Performance Over Last 24 Months



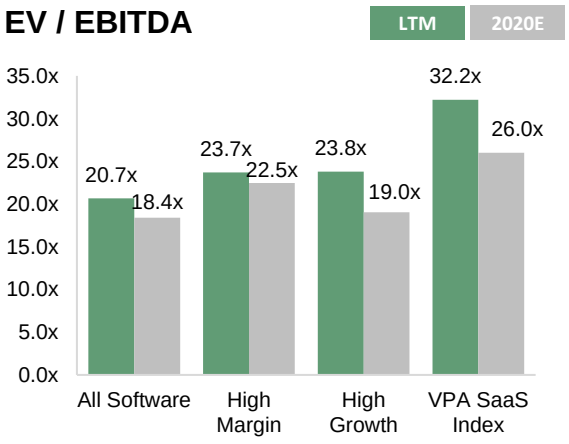
% of 52 Week High



EV / Revenue



EV / EBITDA



Source: Pitchbook as of 8/31/20

Ten Most Recent Software IPOs

Date	Company	As of IPO Date: Raised	Mkt Cap	EV	EV/Rev	Price Change Since IPO	Sector	Company Description
Aug-14	Duck Creek Technologies	$405m	$3,310m	$3,328m	16.5x	44%	FinTech	▪ Duck Creek develops property and casualty insurance SaaS software designed to optimize outcomes through streamlined operations
Aug-12	[K]ubient	$13m	$42m	$38m	NM	(25%)	Marketing Automation	▪ Kubient provides cloud-based advertising and marketing software, designed to use A.I. to inform marketing decisions
Aug-07	ibex.	$90m	$359m	$337m	0.9x	(16%)	Business Software	▪ Ibex provides customized customer experience programs, as well as customer experience outsourcing
Aug-05	BIGCOMMERCE	$216m	$1,787m	$1,748m	14.6x	391%	Business Software	▪ BigCommerce provides marketplace design software
Aug-05	rackspace technology.	$704m	$4,177m	$387m	0.2x	2%	IT / Infrastructure	▪ Rackspace provides cloud-based computing services, data analytics, and web-hosting
July-29	VERTEX	$402m	$804m	$657m	2.0x	35%	Accounting / ERP	▪ Vertex provides tax software and services for companies in more than 19,000 Jurisdictions globally
July-22	jamf	$468m	$856m	$677m	3.0x	48%	IT / Infrastructure	▪ Jamf develops mobile device enterprise management software (MDM) for Apple products
July-14	ncino	$250m	$698m	$797m	5.2x	200%	FinTech	▪ Ncino develops a cloud-based operating system providing a single platform for the financial services industry
July-01	dun & bradstreet	$1,723m	$3,445m	($436m)	(0.3x)	15%	Business Intelligence / Analytics	▪ Dun & Bradstreet provides business information and software for risk and supply management decisions
Jun-05	Shift4 PAYMENTS	$345m	$1,693m	$1,055m	1.4x	119%	FinTech	▪ Shift4 Payments provides an integrated end-to-end payments software solution with cloud enablement, business intelligence, and more

Note: $ in millions. EV/Revenue multiples in excess of 50x are considered not meaningful. All figures are as of the IPO date.
Source: Pitchbook as of 8/31/20

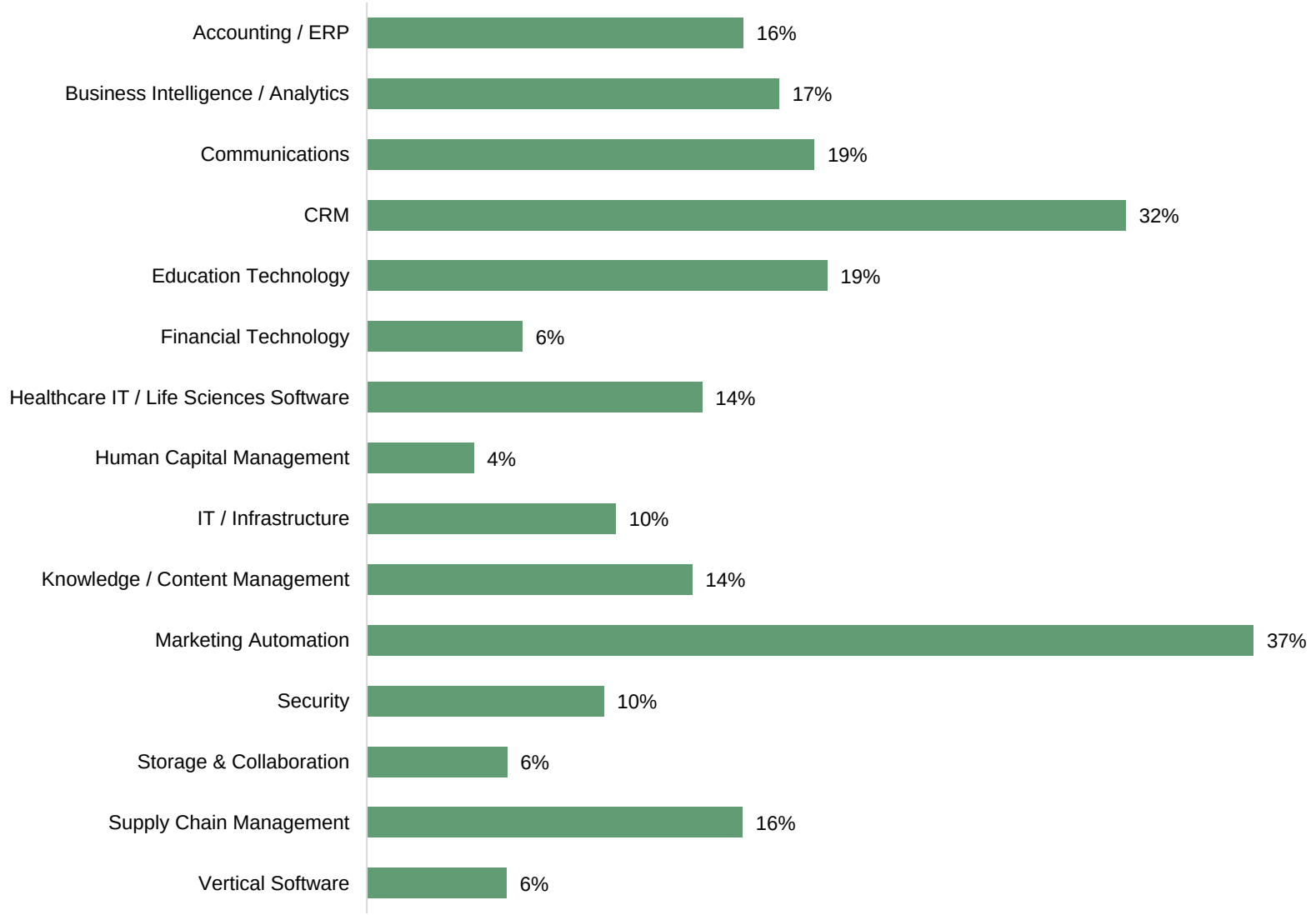
Recent Software IPO Registrations

Date[1]	Company	As of IPO Date: Raised	Mkt Cap	EV	EV/Rev	Price Change Since IPO	Sector	Company Description
Aug-25	ANT FINANCIAL			In IPO Registration			FinTech	▪ Ant Financial provides a cloud-based financial platform designed to provide cloud computing services to financial enterprises
Aug-24	asana			In IPO Registration			Business Software	▪ Asana develops a task management software designed to help teams track their work
Aug-24	JFrog			In IPO Registration			Development & Testing	▪ Jfrog develops a universal, hybrid, and end-to-end DevOps platform
Aug-24	snowflake			In IPO Registration			IT / Infrastructure	▪ Snowflake develops a SaaS-based cloud data warehousing platform
Aug-24	sumo logic			In IPO Registration			Business Intelligence / Analytics	▪ Sumo Logic develops a cloud-based machine data analytics platform designed to deliver real-time continuous intelligence
Aug-24	unity			In IPO Registration			Development & Testing	▪ Unity develops a real-time 3D (RT3D) development platform intended to help in game and application development
Aug-21	Bentley			In IPO Registration			CAD / CAM	▪ Bentley develops a SaaS based computer software designed for the application in construction and operation of infrastructure
Aug-19	airbnb			In IPO Registration			Travel & Hospitality	▪ Airbnb provides an online property rental marketplace designed to offer short-term travel stays
Jul-06	Palantir			In IPO Registration			Business Intelligence / Analytics	▪ Palantir develops a data fusion platform designed to integrate, visualize, secure, and analyze information

1) Filing date
Source: Pitchbook as of 8/31/20

VPA Public Company Coverage

Public Market Performance Over The Last 3 Months



Note: Performance measured by change in share price
Source: Pitchbook as of 8/31/20

Public Company Valuation & Operating Metrics

Company	Mkt Cap	EV	52-Wk High	LTM Operating Metrics: Revenue	Revenue Growth	Gross Margin	EBITDA Margin	Efficiency Score[1]	EV / Revenue: LTM	EV / Revenue: Forward	EV / EBITDA: LTM	EV / EBITDA: Forward
Accounting / ERP												
Microsoft	$1,706,733	$1,641,204	98%	$143,015	14%	68%	48%	61%	11.5x	10.5x	24.0x	22.5x
SAP	195,954	208,359	98%	31,066	4%	70%	29%	33%	6.7	6.3	23.4	18.4
Oracle	175,590	204,773	98%	39,068	-1%	80%	42%	41%	5.2	5.2	12.4	10.8
International Business Machines	109,817	165,615	78%	75,498	-3%	48%	20%	17%	2.2	2.2	11.1	10.0
Intuit	90,426	87,012	96%	7,679	13%	82%	31%	44%	11.3	10.6	36.4	28.0
Coupa	21,983	21,995	97%	428	50%	64%	-6%	44%	51.4	44.9	NM	NM
Wolters Kluwer	21,694	24,219	97%	5,199	3%	70%	30%	33%	4.7	4.5	15.5	14.8
Avalara	11,136	10,729	92%	434	34%	70%	-11%	23%	24.7	22.9	NM	NM
The Sage Group (Financial Software)	10,805	11,099	95%	2,483	-1%	93%	30%	29%	4.5	4.4	15.1	18.1
Xero	10,631	10,608	99%	477	24%	85%	19%	43%	22.2	19.0	NM	NM
Anaplan	8,424	8,157	96%	376	42%	75%	-34%	8%	21.7	18.6	NM	NM
BlackLine	4,971	4,761	93%	321	26%	80%	-1%	25%	14.8	14.1	NM	NM
Vertex	3,662	3,808	86%	336	23%	63%	7%	30%	11.3	9.9	NM	NM
Workiva	2,817	2,634	98%	324	21%	72%	-16%	5%	8.1	7.7	NM	NM
Technology One	1,897	1,864	89%	201	-10%	87%	31%	21%	9.3	8.6	30.1	24.3
Zuora	1,575	1,479	82%	286	16%	53%	-24%	-8%	5.2	4.9	NM	NM
Upland Software	1,153	1,603	87%	260	42%	68%	0%	41%	6.2	5.8	NM	17.0
Qad	890	783	83%	307	-6%	56%	3%	-2%	2.6	2.6	NM	36.4
Median	**$10,718**	**$10,668**	**95%**	**$431**	**15%**	**70%**	**13%**	**30%**	**8.7x**	**8.1x**	**19.5x**	**18.3x**
Mean	**$132,231**	**$133,928**	**92%**	**$17,098**	**16%**	**71%**	**11%**	**27%**	**12.4x**	**11.3x**	**21.0x**	**20.0x**

1) Efficiency Score = LTM Revenue Growth % + LTM EBITDA Margin
Note: $ in millions. EV/Revenue and EV/EBITDA multiples in excess of 50x or less than 0x are considered not meaningful.
Source: Pitchbook as of 8/31/20

Public Company Valuation & Operating Metrics

Company	Mkt Cap	EV	52-Wk High	LTM Operating Metrics: Revenue	Revenue Growth	Gross Margin	EBITDA Margin	Efficiency Score[1]	EV / Revenue: LTM	EV / Revenue: Forward	EV / EBITDA: LTM	EV / EBITDA: Forward
Business Intelligence / Analytics												
Splunk	$34,845	$35,386	98%	$2,368	24%	80%	-15%	8%	14.9x	15.2x	NM	NM
NICE Systems	14,264	13,774	96%	1,620	6%	66%	26%	33%	8.5	8.4	32.3	25.2
Dun & Bradstreet	10,722	14,712	90%	1,657	17%	NM	19%	36%	8.9	8.1	46.8	18.8
Pegasystems	10,331	10,381	98%	986	12%	68%	-11%	2%	10.5	9.8	NM	NM
Elasticsearch	9,339	9,023	92%	428	57%	71%	-37%	21%	21.1	16.5	NM	NM
Alteryx	7,996	8,007	65%	465	50%	90%	2%	53%	17.2	17.3	NM	NM
Medallia	5,108	4,747	96%	422	25%	64%	-30%	-5%	11.3	10.2	NM	NM
Cloudera	3,902	3,703	95%	817	45%	72%	-25%	20%	4.5	4.4	NM	24.8
New Relic	3,701	3,373	83%	621	21%	82%	-2%	19%	5.4	5.0	NM	NM
SVMK	3,492	3,616	97%	343	24%	76%	-8%	16%	10.5	9.6	NM	NM
Verint Systems	3,069	3,585	79%	1,276	2%	65%	13%	15%	2.8	2.8	21.0	11.4
Endava	2,995	2,950	96%	428	20%	29%	7%	26%	6.9	5.5	NM	26.5
Teradata	2,654	2,822	70%	1,844	-10%	53%	8%	-2%	1.5	1.6	18.4	5.8
GlobalData	2,615	2,718	95%	222	0%	42%	23%	23%	12.2	11.7	NM	37.4
MicroStrategy	1,399	966	88%	475	-2%	80%	8%	5%	2.0	2.1	25.9	16.3
Talend	1,302	1,296	96%	265	17%	77%	-21%	-5%	4.9	4.7	NM	NM
Domo	1,173	1,199	99%	181	20%	68%	-59%	-40%	6.6	6.1	NM	NM
Median	**$3,701**	**$3,616**	**95%**	**$475**	**20%**	**70%**	**-2%**	**16%**	**8.5x**	**8.1x**	**25.9x**	**21.8x**
Mean	**$6,994**	**$7,192**	**90%**	**$848**	**19%**	**68%**	**-6%**	**13%**	**8.8x**	**8.2x**	**28.9x**	**20.8x**

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Source: Pitchbook as of 8/31/20

Public Company Valuation & Operating Metrics

Company	Mkt Cap	EV	52-Wk High	LTM Operating Metrics: Revenue	Revenue Growth	Gross Margin	EBITDA Margin	Efficiency Score[1]	EV / Revenue: LTM	EV / Revenue: Forward	EV / EBITDA: LTM	EV / EBITDA: Forward
Communications												
Zoom Video Communications	$91,712	$90,293	100%	$829	111%	76%	6%	118%	NM	50.2x	NM	NM
Twilio	38,612	37,404	93%	1,392	58%	53%	-16%	42%	26.9	23.4	NM	NM
RingCentral	25,866	26,193	95%	1,032	32%	73%	-1%	31%	25.4	23.0	NM	NM
Slack	18,512	17,843	82%	697	53%	85%	-85%	-32%	25.6	20.5	NM	NM
NICE Systems	14,264	13,774	96%	1,620	6%	66%	26%	33%	8.5	8.4	32.3	25.2
Nuance	8,458	9,805	99%	1,815	13%	59%	16%	28%	5.4	6.7	34.5	25.5
Five9	8,326	8,295	97%	371	28%	58%	1%	29%	22.4	20.7	NM	NM
Juniper Networks	8,294	8,318	94%	4,426	-1%	59%	15%	14%	1.9	1.9	12.9	9.4
Everbridge	5,140	5,098	90%	234	36%	68%	-20%	16%	21.8	19.2	NM	NM
Vonage Holdings	2,812	3,330	86%	1,220	10%	56%	8%	18%	2.7	2.7	32.6	21.9
8X8	1,759	1,996	68%	471	29%	54%	-28%	0%	4.2	3.8	NM	NM
BlueCity Holdings	489	651	38%	125	14%	30%	-7%	7%	5.2	3.1	NM	NM
Synchronoss Technologies	201	452	53%	296	-11%	52%	-10%	-21%	1.5	1.5	NM	20.6
Median	**$8,326**	**$8,318**	**93%**	**$829**	**28%**	**59%**	**-1%**	**18%**	**7.0x**	**8.4x**	**32.4x**	**21.9x**
Mean	**$17,265**	**$17,189**	**84%**	**$1,118**	**29%**	**61%**	**-7%**	**22%**	**12.6x**	**14.3x**	**28.1x**	**20.5x**
CRM												
Salesforce	$248,112	$244,676	98%	$19,380	32%	75%	18%	50%	12.6x	11.8x	NM	39.1x
Adobe Systems	246,255	246,601	96%	12,045	19%	86%	38%	57%	20.5	19.4	NM	40.6
NICE Systems	14,264	13,774	96%	1,620	6%	66%	26%	33%	8.5	8.4	32.3	25.2
HubSpot	13,655	13,291	98%	762	29%	81%	-2%	27%	17.4	16.0	NM	NM
Zendesk	11,125	11,278	95%	924	31%	74%	-13%	18%	12.2	11.1	NM	NM
Pegasystems	10,331	10,381	98%	986	12%	68%	-11%	2%	10.5	9.8	NM	NM
Five9	8,326	8,295	97%	371	28%	58%	1%	29%	22.4	20.7	NM	NM
LivePerson	3,948	3,976	95%	324	21%	71%	-29%	-8%	12.3	11.1	NM	NM
Median	**$12,390**	**$12,284**	**96%**	**$955**	**25%**	**73%**	**-1%**	**28%**	**12.4x**	**11.5x**	**32.3x**	**39.1x**
Mean	**$69,502**	**$69,034**	**97%**	**$4,552**	**22%**	**72%**	**3%**	**26%**	**14.5x**	**13.5x**	**32.3x**	**35.0x**

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Source: Pitchbook as of 8/31/20

Public Company Valuation & Operating Metrics

Company	Mkt Cap	EV	52-Wk High	LTM Operating Metrics: Revenue	Revenue Growth	Gross Margin	EBITDA Margin	Efficiency Score[1]	EV / Revenue: LTM	EV / Revenue: Forward	EV / EBITDA: LTM	EV / EBITDA: Forward
Education Technology												
Chegg	$9,477	$9,719	82%	$504	40%	73%	20%	60%	19.3x	15.9x	NM	NM
Pluralsight	2,765	2,975	84%	359	31%	79%	-36%	-5%	8.3	7.8	NM	NM
2U	2,666	2,816	84%	675	41%	70%	-30%	11%	4.2	3.8	NM	NM
Afya Educacional	2,378	2,293	73%	218	61%	62%	45%	106%	10.5	12.3	23.4	31.8
Cornerstone OnDemand	2,269	3,452	55%	629	13%	72%	8%	21%	5.5	4.8	NM	18.6
K12	1,537	1,560	70%	1,041	2%	33%	10%	13%	1.5	1.2	14.9	9.0
Learning Technologies Group	1,497	1,507	89%	166	33%	NM	33%	66%	9.1	9.1	27.4	27.0
Median	**$2,378**	**$2,816**	**82%**	**$504**	**33%**	**71%**	**10%**	**21%**	**8.3x**	**7.8x**	**23.4x**	**22.8x**
Mean	**$3,227**	**$3,475**	**77%**	**$513**	**32%**	**65%**	**7%**	**39%**	**8.3x**	**7.8x**	**21.9x**	**21.6x**
Financial Technology												
Fidelity National Information Services	$93,467	$112,166	95%	$12,203	45%	35%	18%	63%	9.2x	8.9x	NM	21.1x
Square	70,770	69,004	99%	5,885	49%	37%	7%	56%	11.7	23.7	NM	NM
Fiserv	66,684	89,392	80%	14,407	141%	46%	33%	174%	6.2	6.4	19.0	16.3
MSCI (US)	31,219	33,356	94%	1,627	10%	82%	52%	62%	20.5	19.9	39.4	35.1
Broadridge Financial Solutions	15,823	17,643	95%	4,529	4%	28%	21%	25%	3.9	3.8	18.8	16.6
FactSet Research Systems	13,313	13,712	96%	1,475	4%	54%	34%	39%	9.3	8.8	27.0	25.0
Jack Henry and Associates	12,678	12,465	82%	1,697	9%	41%	33%	42%	7.3	7.1	22.6	23.1
Fair Isaac	12,203	13,078	94%	1,226	10%	71%	26%	36%	10.7	10.6	41.5	33.0
Temenos	11,447	12,452	90%	958	10%	80%	36%	46%	13.0	13.1	36.3	29.0
Guidewire Software	9,342	8,744	90%	706	-6%	53%	-3%	-9%	12.4	11.2	NM	NM
Ncino	8,332	8,238	92%	153	67%	55%	-15%	52%	53.8	45.1	NM	NM
Q2 Holdings	5,203	5,293	91%	357	29%	46%	-15%	14%	14.8	13.2	NM	NM
Duck Creek Technologies	5,096	5,102	88%	201	18%	56%	5%	23%	25.4	25.4	NM	NM
Envestnet	4,463	5,050	90%	958	14%	70%	10%	24%	5.3	5.1	NM	22.4
Shift4 Payments	3,931	4,337	90%	737	1%	24%	-8%	-7%	5.9	11.5	NM	30.8
ACI Worldwide	3,420	4,667	75%	1,346	26%	51%	24%	50%	3.5	3.4	14.4	12.6
Bottomline Technologies	2,128	2,131	83%	442	5%	57%	10%	15%	4.8	4.5	49.1	20.7
Ebix	713	1,383	50%	543	-2%	60%	27%	26%	2.5	2.8	9.3	8.6
9F Group	308	(340)	11%	640	-24%	74%	-57%	-81%	NM	NM	0.9	NM
Median	**$9,342**	**$8,744**	**90%**	**$958**	**10%**	**54%**	**18%**	**36%**	**9.2x**	**9.8x**	**22.6x**	**22.4x**
Mean	**$19,502**	**$21,993**	**83%**	**$2,636**	**22%**	**54%**	**13%**	**34%**	**12.2x**	**12.5x**	**25.3x**	**22.6x**

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Public Company Valuation & Operating Metrics

Company	Mkt Cap	EV	52-Wk High	LTM Operating Metrics: Revenue	Revenue Growth	Gross Margin	EBITDA Margin	Efficiency Score[1]	EV / Revenue: LTM	EV / Revenue: Forward	EV / EBITDA: LTM	EV / EBITDA: Forward
Healthcare IT / Life Sciences Software												
Veeva Systems	$42,382	$40,944	98%	$1,196	31%	72%	29%	60%	34.2x	28.8x	NM	NM
Cerner	22,406	23,303	91%	5,614	2%	82%	24%	26%	4.2	4.2	17.3	13.6
Inovalon Holdings	3,844	4,711	96%	656	12%	75%	27%	40%	7.2	6.9	26.2	20.3
Allscripts Healthcare Solutions	1,455	2,419	76%	1,718	-2%	39%	12%	10%	1.4	1.4	11.6	8.3
Health Catalyst	1,238	1,064	76%	171	22%	49%	-38%	-17%	6.2	5.9	NM	NM
Phreesia	1,188	1,125	91%	130	24%	65%	-4%	20%	8.7	8.3	NM	NM
Tabula Rasa Healthcare	1,162	1,381	73%	297	19%	35%	0%	19%	4.6	4.5	NM	47.1
NextGen Healthcare	884	918	72%	539	2%	50%	10%	13%	1.7	1.7	16.4	9.6
HealthStream	663	548	70%	247	-1%	62%	21%	20%	2.2	2.3	10.7	13.2
Cegedim	451	728	85%	564	2%	94%	14%	16%	1.3	1.2	9.3	6.9
Castlight Health	208	179	77%	146	-5%	60%	-51%	-56%	1.2	1.3	NM	NM
Median	**$1,188**	**$1,125**	**77%**	**$539**	**2%**	**62%**	**12%**	**19%**	**4.2x**	**4.2x**	**14.0x**	**13.2x**
Mean	**$6,898**	**$7,029**	**82%**	**$1,025**	**10%**	**62%**	**4%**	**14%**	**6.6x**	**6.1x**	**15.3x**	**17.0x**
Human Capital Management												
Automatic Data Processing	$59,804	$60,244	76%	$14,590	3%	42%	26%	29%	4.1x	4.2x	16.0x	19.2x
Workday	56,811	56,195	96%	3,995	23%	71%	-2%	21%	14.1	13.2	NM	NM
Paychex	27,435	27,402	84%	4,041	7%	68%	41%	49%	6.8	7.1	16.4	17.7
Paycom Software	17,528	17,447	88%	792	21%	86%	35%	56%	22.0	21.1	NM	NM
Ceridian HCM	11,691	12,176	91%	839	9%	44%	12%	21%	14.5	14.5	NM	NM
Paylocity	7,924	7,820	94%	561	20%	68%	19%	39%	13.9	12.7	NM	NM
Smartsheet	6,530	6,061	90%	300	52%	80%	-33%	19%	20.2	16.6	NM	NM
TriNet Group	4,565	4,522	92%	3,983	9%	21%	12%	21%	1.1	4.7	9.3	11.6
Insperity	2,614	2,599	62%	4,391	11%	17%	5%	16%	0.6	0.6	12.0	11.9
Cornerstone OnDemand	2,269	3,452	55%	629	13%	72%	8%	21%	5.5	4.8	NM	18.6
Benefitfocus	334	512	39%	287	5%	50%	2%	7%	1.8	1.9	NM	13.7
Median	**$7,924**	**$7,820**	**88%**	**$839**	**11%**	**68%**	**12%**	**21%**	**6.8x**	**7.1x**	**14.0x**	**15.7x**
Mean	**$17,955**	**$18,039**	**79%**	**$3,128**	**16%**	**56%**	**11%**	**27%**	**9.5x**	**9.2x**	**13.4x**	**15.5x**

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IT / Infrastructure												
Microsoft	$1,706,733	$1,641,204	98%	$143,015	14%	68%	48%	61%	11.5x	10.5x	24.0x	22.5x
Oracle	175,590	204,773	98%	39,068	-1%	80%	42%	41%	5.2	5.2	12.4	10.8
International Business Machines	109,817	165,615	78%	75,498	-3%	48%	20%	17%	2.2	2.2	11.1	10.0
ServiceNow	92,451	91,307	98%	3,955	31%	78%	12%	43%	23.1	20.7	NM	NM
VMware	60,733	63,295	83%	11,279	12%	83%	21%	33%	5.6	5.5	26.9	14.3
Atlassian	47,549	46,547	97%	1,614	33%	83%	-16%	17%	28.8	24.3	NM	NM
Splunk	34,845	35,386	98%	2,368	24%	80%	-15%	8%	14.9	15.2	NM	NM
Datadog	25,344	24,505	84%	481	81%	78%	2%	83%	51.0	43.0	NM	NM
Akamai Technologies	18,944	20,256	99%	3,041	9%	65%	35%	44%	6.7	6.4	18.9	14.8
Citrix Systems	17,937	18,999	84%	3,203	7%	85%	23%	30%	5.9	5.9	25.3	17.1
Hewlett Packard Enterprise	12,436	23,479	55%	27,390	-10%	33%	10%	0%	0.9	0.9	8.7	5.3
Dynatrace	12,432	12,741	99%	579	27%	78%	-9%	18%	22.0	19.5	NM	NM
MongoDB	11,850	11,829	96%	463	51%	71%	-33%	18%	25.6	22.4	NM	NM
Cloudflare	11,697	11,042	84%	349	49%	77%	-27%	22%	31.7	27.2	NM	NM
Fastly	9,767	9,413	79%	246	45%	57%	-14%	31%	38.2	31.8	NM	NM
Juniper Networks	8,294	8,318	94%	4,426	-1%	59%	15%	14%	1.9	1.9	12.9	9.4
SolarWinds	6,569	8,273	97%	981	12%	73%	41%	53%	8.4	8.2	20.3	17.4
Nutanix	5,798	5,722	76%	1,280	3%	77%	-60%	-57%	4.5	4.2	NM	NM
Jamf	4,492	4,671	76%	220	50%	74%	7%	57%	21.2	15.6	NM	NM
Appian	4,278	4,074	95%	280	16%	67%	-14%	2%	14.6	14.2	NM	NM
Cloudera	3,902	3,703	95%	817	45%	72%	-25%	20%	4.5	4.4	NM	24.8
New Relic	3,701	3,373	83%	621	21%	82%	-2%	19%	5.4	5.0	NM	NM
Software	3,684	3,355	98%	985	-2%	76%	25%	23%	3.4	3.4	13.6	13.6
PagerDuty	2,571	2,255	83%	179	37%	85%	-29%	8%	12.6	10.8	NM	NM
Progress Software	1,706	1,821	72%	434	14%	84%	26%	40%	4.2	4.1	16.3	4.1
NetScout Systems	1,677	1,780	78%	890	0%	73%	16%	15%	2.0	2.1	12.9	9.0
uCloudlink Group	408	371	59%	152	21%	36%	-23%	-2%	2.4	2.4	NM	NM
Median	**$11,697**	**$11,042**	**84%**	**$981**	**16%**	**76%**	**7%**	**20%**	**6.7x**	**6.4x**	**14.9x**	**13.6x**
Mean	**$88,711**	**$89,930**	**86%**	**$11,993**	**22%**	**71%**	**3%**	**24%**	**13.3x**	**11.7x**	**16.9x**	**13.3x**

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Public Company Valuation & Operating Metrics

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Knowledge / Content Management												
Adobe Systems	$246,255	$246,601	96%	$12,045	19%	86%	38%	57%	20.5x	19.4x	NM	40.6x
DocuSign	40,922	40,838	97%	1,057	39%	75%	-13%	26%	38.6	31.0	NM	NM
VeriSign	24,671	25,270	97%	1,246	2%	86%	71%	72%	20.3	20.0	28.8	29.2
Akamai Technologies	18,944	20,256	99%	3,041	9%	65%	35%	44%	6.7	6.4	18.9	14.8
OpenText	12,295	15,079	94%	3,110	8%	68%	33%	42%	4.8	4.7	14.6	12.4
Dropbox	8,751	8,723	88%	1,797	18%	77%	6%	24%	4.9	4.6	NM	17.2
SVMK	3,492	3,616	97%	343	24%	76%	-8%	16%	10.5	9.6	NM	NM
Box	3,012	3,195	89%	717	14%	69%	-9%	5%	4.5	4.2	NM	19.5
Pluralsight	2,765	2,975	84%	359	31%	79%	-36%	-5%	8.3	7.8	NM	NM
SDL	891	892	84%	472	0%	52%	14%	14%	1.9	1.8	13.8	13.1
MobileIron	763	688	84%	215	6%	79%	-15%	-9%	3.2	3.3	NM	NM
Brightcove	438	430	83%	190	11%	60%	-5%	6%	2.3	2.3	NM	40.3
Median	**$6,121**	**$6,169**	**91%**	**$887**	**12%**	**76%**	**1%**	**20%**	**5.8x**	**5.6x**	**16.7x**	**18.3x**
Mean	**$30,267**	**$30,713**	**91%**	**$2,049**	**15%**	**73%**	**9%**	**24%**	**10.5x**	**9.6x**	**19.0x**	**23.4x**
Marketing Automation												
Salesforce	$248,112	$244,676	98%	$19,380	32%	75%	18%	50%	12.6x	11.8x	NM	39.1x
Adobe Systems	246,255	246,601	96%	12,045	19%	86%	38%	57%	20.5	19.4	NM	40.6
Oracle	175,590	204,773	98%	39,068	-1%	80%	42%	41%	5.2	5.2	12.4	10.8
Shopify	127,994	124,146	96%	2,080	60%	53%	-4%	56%	59.7	47.9	NM	NM
Zoom Information	15,111	16,095	60%	383	31%	76%	2%	33%	42.0	28.0	NM	NM
HubSpot	13,655	13,291	98%	762	29%	81%	-2%	27%	17.4	16.0	NM	NM
Zendesk	11,125	11,278	95%	924	31%	74%	-13%	18%	12.2	11.1	NM	NM
BigCommerce	7,877	8,153	72%	120	30%	76%	-26%	4%	68.1	49.0	NM	NM
LivePerson	3,948	3,976	95%	324	21%	71%	-29%	-8%	12.3	11.1	NM	NM
Cardlytics	2,070	1,985	71%	199	19%	36%	-15%	4%	10.0	11.7	NM	NM
WiMi Hologram Cloud	457	451	23%	46	36%	54%	40%	76%	9.8	5.4	24.2	13.8
Ibex	283	388	86%	392	15%	NM	9%	24%	1.0	1.0	10.5	10.4
Median	**$12,390**	**$12,284**	**95%**	**$577**	**30%**	**75%**	**0%**	**30%**	**12.4x**	**11.7x**	**12.4x**	**13.8x**
Mean	**$71,040**	**$72,984**	**82%**	**$6,310**	**27%**	**69%**	**5%**	**32%**	**22.6x**	**18.1x**	**15.7x**	**22.9x**

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Security												
Cisco Systems	$178,265	$163,429	84%	$50,575	-1%	64%	31%	30%	3.2x	3.4x	10.3x	9.5x
Okta	27,586	26,994	95%	704	45%	74%	-29%	15%	38.4	33.6	NM	NM
Crow dStrike	27,157	26,192	99%	563	89%	72%	-19%	70%	46.5	34.0	NM	NM
Palo Alto Netw orks	24,831	24,504	94%	3,264	19%	72%	1%	20%	7.5	6.1	NM	26.0
VeriSign	24,671	25,270	97%	1,246	2%	86%	71%	72%	20.3	20.0	28.8	29.2
Fortinet	21,363	19,836	87%	2,354	20%	78%	21%	42%	8.4	7.8	39.4	27.2
Zscaler	18,708	18,358	98%	391	43%	79%	-15%	28%	46.9	33.1	NM	NM
Check Point Softw are Technologies	17,702	16,110	97%	2,027	4%	89%	44%	48%	7.9	7.8	17.9	15.7
NortonLifeLock	13,900	16,460	82%	2,454	-2%	84%	48%	47%	6.7	6.6	13.9	12.5
Cloudflare	11,697	11,042	84%	349	49%	77%	-27%	22%	31.7	27.2	NM	NM
Proofpoint	6,322	6,185	82%	979	22%	73%	0%	22%	6.3	6.0	NM	43.2
CyberArk Softw are	4,280	3,854	76%	451	16%	84%	10%	26%	8.5	8.4	NM	44.8
Qualys	4,166	3,872	85%	342	14%	79%	35%	49%	11.3	10.8	32.7	24.6
Tenable	3,812	3,623	99%	399	28%	82%	-18%	11%	9.1	8.4	NM	NM
SailPoint Technologies	3,557	3,440	98%	333	23%	78%	8%	31%	10.3	10.0	NM	NM
FireEye	3,311	3,418	80%	916	7%	65%	-16%	-9%	3.7	3.7	NM	28.1
Rapid7	3,293	3,435	99%	368	30%	71%	-11%	19%	9.3	8.6	NM	NM
Mimecast	3,116	3,140	91%	443	23%	75%	17%	39%	7.1	6.4	42.3	31.9
Ping Identity	2,780	2,771	91%	250	16%	75%	3%	19%	11.1	11.3	NM	NM
Radw are	1,201	1,000	96%	249	2%	82%	10%	11%	4.0	4.1	42.1	23.3
SecureWorks	1,062	929	71%	561	7%	55%	-1%	6%	1.7	1.7	NM	46.2
Absolute Softw are	519	483	96%	105	6%	88%	20%	26%	4.6	4.1	23.2	17.5
Tufin	361	289	50%	100	4%	79%	-40%	-36%	2.9	3.0	NM	NM
Zix	346	640	65%	204	83%	51%	15%	98%	3.1	3.0	21.4	12.6
Median	**$4,223**	**$3,863**	**91%**	**$447**	**18%**	**77%**	**5%**	**26%**	**8.2x**	**7.8x**	**26.0x**	**26.0x**
Mean	**$16,834**	**$16,053**	**87%**	**$2,901**	**23%**	**75%**	**7%**	**29%**	**12.9x**	**11.2x**	**27.2x**	**26.1x**

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Storage & Collaboration												
Atlassian	$47,549	$46,547	97%	$1,614	33%	83%	-16%	17%	28.8x	24.3x	NM	NM
DocuSign	40,922	40,838	97%	1,057	39%	75%	-13%	26%	38.6	31.0	NM	NM
OpenText	12,295	15,079	94%	3,110	8%	68%	33%	42%	4.8	4.8	14.6	12.6
NetApp	10,521	9,670	72%	5,479	-7%	67%	21%	14%	1.8	1.8	8.4	8.4
Dropbox	8,751	8,723	88%	1,797	18%	77%	6%	24%	4.9	4.6	NM	17.2
Kingsoft Cloud	7,233	6,501	81%	725	27%	4%	-8%	18%	9.0	6.8	NM	NM
Smartsheet	6,530	6,061	90%	300	52%	80%	-33%	19%	20.2	16.6	NM	NM
Box	3,012	3,195	89%	717	14%	69%	-9%	5%	4.5	4.2	NM	19.5
CommVault Systems	2,006	1,664	83%	682	-2%	83%	2%	0%	2.4	2.4	NM	12.1
Median	**$8,751**	**$8,723**	**89%**	**$1,057**	**18%**	**75%**	**-8%**	**18%**	**4.9x**	**4.8x**	**11.5x**	**12.6x**
Mean	**$15,424**	**$15,364**	**88%**	**$1,720**	**20%**	**67%**	**-2%**	**18%**	**12.8x**	**10.7x**	**11.5x**	**13.9x**
Supply Chain Management												
SAP	$195,954	$208,359	98%	$31,066	4%	70%	29%	33%	6.7x	6.3x	23.4x	18.4x
ServiceNow	92,451	91,307	98%	3,955	31%	78%	12%	43%	23.1	20.7	NM	NM
Dassault Systemes	49,107	51,644	99%	4,756	11%	83%	28%	39%	10.9	9.6	38.9	28.5
PTC	10,614	11,552	99%	1,402	14%	76%	21%	35%	8.2	8.1	39.4	26.6
Aspen Technology	8,602	8,782	89%	587	4%	89%	45%	49%	15.0	12.1	33.4	21.7
Manhattan Associates	6,177	6,082	97%	605	3%	53%	20%	23%	10.1	10.8	NM	43.2
Descartes Systems Group	5,139	5,105	99%	331	16%	74%	36%	52%	15.4	14.4	42.8	36.2
Kinaxis	4,081	3,835	90%	218	33%	72%	25%	58%	17.6	17.4	NM	NM
Endava	2,995	2,950	96%	428	20%	29%	7%	26%	6.9	5.5	NM	26.5
SPS Commerce	2,806	2,603	96%	293	11%	68%	18%	30%	8.9	8.5	48.8	31.4
American Softw are	459	369	66%	115	6%	55%	12%	18%	3.2	3.2	27.6	28.0
Tecsys	308	296	87%	79	35%	48%	8%	43%	3.8	3.5	48.7	45.9
Median	**$5,658**	**$5,594**	**97%**	**$507**	**13%**	**71%**	**21%**	**37%**	**9.5x**	**9.1x**	**39.1x**	**28.3x**
Mean	**$31,558**	**$32,740**	**93%**	**$3,653**	**16%**	**66%**	**22%**	**37%**	**10.8x**	**10.0x**	**37.9x**	**30.6x**

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Vertical Software												
Veeva Systems	$42,382	$40,944	98%	$1,196	31%	72%	29%	60%	34.2x	28.8x	NM	NM
SS&C Technologies	16,413	23,386	95%	4,659	6%	44%	28%	34%	5.0	5.1	17.9	13.0
Tyler Technologies	13,896	13,512	90%	1,112	11%	48%	22%	33%	12.2	11.9	NM	41.8
Black Knight (US)	13,206	14,174	99%	1,183	3%	NM	46%	50%	12.0	12.0	25.9	24.4
Guidewire Software	9,342	8,744	90%	706	-6%	53%	-3%	-9%	12.4	11.2	NM	NM
Amdocs	8,145	8,033	79%	4,146	2%	34%	19%	21%	1.9	1.9	10.3	9.7
RealPage	6,382	7,051	90%	1,072	15%	56%	21%	37%	6.6	6.1	30.7	23.1
AppFolio	5,763	5,819	93%	289	31%	62%	15%	45%	20.1	18.2	NM	NM
CDK Global	5,666	8,142	82%	1,960	2%	51%	34%	36%	4.2	4.2	12.2	11.2
CoreLogic	5,276	6,802	95%	1,806	4%	52%	27%	32%	3.8	3.6	13.8	11.5
Q2 Holdings	5,203	5,293	91%	357	29%	46%	-15%	14%	14.8	13.2	NM	NM
Blackbaud	3,165	3,729	67%	915	5%	53%	14%	19%	4.1	4.1	28.8	16.6
AssetMark	1,750	1,805	71%	435	12%	28%	6%	18%	4.1	6.1	NM	16.1
NIC	1,433	1,224	82%	362	6%	38%	21%	27%	3.4	3.2	15.8	13.7
Model N	1,358	1,282	88%	156	11%	58%	-5%	6%	8.2	8.0	NM	NM
Qad	890	783	83%	307	-6%	56%	3%	-2%	2.6	2.6	NM	36.4
Median	**$5,715**	**$6,926**	**90%**	**$993**	**6%**	**52%**	**20%**	**29%**	**5.8x**	**6.1x**	**16.9x**	**16.1x**
Mean	**$8,767**	**$9,420**	**87%**	**$1,291**	**10%**	**50%**	**17%**	**26%**	**9.3x**	**8.8x**	**19.4x**	**19.8x**

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