

## SaaS Software Cloud Update – September 2017

### Public Markets and M&A Activity

The Navidar SaaS Software Cloud Index advanced 1.7% in September and 18.2% in 2017 through the end of the month, compared with the NASDAQ's +1.0% and +20.7%, respectively. Following is a summary of the company-specific issues related to selected stocks in our coverage universe that meaningfully out- or under-performed as well as relevant M&A activity.

**HubSpot (NYSE: HUBS +14.6% in September)** - the SaaS marketing provider's stock strength was driven in part by management's comments at analyst day that 3Q17 results are ahead of plan. The company also unveiled plans to launch a customer service product in 2018 to create a unified front office system for SMBs.

On 9/20, HUBS acquired Motion AI, a chatbot platform for websites and messaging platforms, such as Facebook Messenger and Slack. Chatbots reduce the strain on an organization's resources in meeting customers and prospects' demands for "always-on" support. Some 80,000 bots have been built and 40M messages facilitated since May 2016 on Motion AI's platform.

**Cornerstone OnDemand, Inc (NASDAQ: CSOD +16.1%)** - on 9/14, it was reported that the SaaS human capital management provider hired financial advisors to engage with potential suitors, driving the stock up about 12%. Also, activist investor Praesidium owns about 5% of the outstanding shares. This news is not a surprise because competition has increased, CSOD is struggling to expand outside of its flagship learning performance solution, and growth has slowed to less than 15% (from 40% a few years ago). We view the most likely buyers to be private equity and possibly Microsoft or ADP.

**Cloudera (NYSE: CLDR -14.3%)** - the data management and analytics platform company executed a \$175M secondary stock offering on 9/15, pressuring the stock and offsetting strong 2017 results (reported 9/7). Revenue of \$90M advanced 39% while loss per share of \$0.17 exceeded the Street mean of \$0.25. 2018 subscription revenue guidance was increased to \$290-295M, about 45% growth, up from the prior 42%. The company added 45 net new Global 8000 customers due in part to Microsoft Azure collaborative wins.

On 9/18, CLDR acquired machine learning, training, and consulting company Fast Forward Labs, which teaches enterprises how to utilize AI trends to stimulate growth. We expect that Fast Forward will gel well CLDR's expertise of managing big data and machine learning projects.

**Everbridge (NASDAQ: EVBG +14.0%)** - the SaaS critical events response platform is among the few companies that benefited from the recent natural disasters (e.g., Hurricanes Irma and Harvey). These headlines highlight that many enterprises are not appropriately equipped to handle such events. EVBG also announced a 7-year, \$10.9M total contract value deal to provide a mass notification system to the 20M citizens in the state of New York. We like that EVBG now has eight SaaS applications, up from just two in 2012, presenting a cross-selling opportunity to its 3,000 customers.

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**Actua Corporation (NASDAQ: ACTA +19.5% in September)** - the stock strength was driven by the aggregate-premium sale of its remaining three business units on 9/25, as the multi-vertical SaaS company is winding down operations. This follows the divestiture of GovDelivery (government-focused digital marketing) in September 2016 to Vista Equity for \$153M. CVC Growth Fund is buying both Bolt Solutions (SaaS property-and-casualty insurance platform) and Velocity EHS (SaaS safety compliance) for \$328M, representing a 3.7x 2017 revenue multiple. And FolioDynamix (SaaS financial advisor platform) is being purchased by Envestnet for \$195M, representing a 4.8x revenue multiple—less than the \$199M ACTA purchased it for three years ago, as growth has slowed.

**Envestnet Inc (NYSE: ENV +14.7%)** - the SaaS and tech enabled services provider for financial advisors acquired FolioDynamix from Actua. The deal is expected to close in 1Q18 and be immediately accretive to adjusted EBITDA and adjusted EPS. This consolidating transaction further crystallizes ENV as the leading turnkey asset management provider (TAMP) with \$2T of assets under management and 10M client accounts. It also serves to expand ENV's customer base to include commission based accounts because it previously only supported fee-based accounts. FolioDynamix is expected to generate \$40M in revenue in 2017 with 60% from licensing/subscription and 35% from advisory services. ENV's leverage will rise to about 3.5x from 2.1x post transaction.

**Synchronoss Technologies (NASDAQ: SNCR -44.4%)** - the cloud-based sync, backup, storage and content engagement provider's stock sold off significantly after filing a 13D indicating that Siris Capital has withdrawn its \$18 per share takeover offer from 6/22/17. Still, the investor owns about 13% of SNCR's outstanding shares and is open to other transactions. We think that a new potential deal could entail acquiring just Intralinks, which SNCR purchased itself on 10/16 for \$821M. SNCR is facing multiple headwinds, including \$850M in net debt, exposure to one large carrier (Verizon), and an ensuing deadline for filing financial restatements.

**AppFolio (NASDAQ: APPF +11.8%)** - the SaaS property management and legal solution provider has consistently delivered 30% revenue growth while maintaining profitability. Also, APPF held an upbeat investor day and user conference in September where it announced new products, including renter's insurance and payment option. It also unveiled plans to enter new SMB-focused verticals, organically or through acquisitions. We think logical expansion sectors include automotive, beauty salons, and dental.

**AthenaHealth (NASDAQ: ATHN -11.8%)** - the SaaS EHR (electronic health record) provider's stock was under pressure due to concerns about provider utilization in Texas and Florida after recent hurricanes as well as repeal/replace noise and high management turnover (four CFOs in four years). Still, activist investor Elliott Associates owns about 9% of ATHN's public equity, the company is gaining share in the ambulatory and small hospital healthcare IT markets, and it recently announced a \$100M cost savings program.

**Select Faster Growth Companies**

(2018E growth > 20%, excluding micro-caps)

	9/30	Sept		9/30	Sept
Ticker	\$Price	%ch	Ticker	\$Price	%ch
AMZN	961.35	-2.0	MULE	20.14	-7.6
APPF	47.95	11.8	NOW	117.53	1.2
ASUR	12.42	7.3	OKTA	28.21	4.5
AYX	20.37	-13.6	PAYC	74.96	0.5
BL	34.12	10.5	PCTY	48.82	-0.7
BOX	19.32	-1.5	QTWO	41.65	2.6
CLDR	16.62	-14.3	SHOP	116.49	5.0
COUP	31.15	2.3	TEAM	35.15	-1.3
CSLT	4.30	10.3	TWLO	29.85	1.9
EVBG	26.42	14.0	TWOU	56.04	11.9
FB	170.87	-0.6	WDAY	105.39	-3.9
HDP	16.95	-0.2	WIX	71.85	10.4
HUBS	84.05	14.6	YEXT	13.28	2.1
INST	33.15	12.0	ZEN	29.11	6.2
MB	25.85	9.3			

**Select Slower Growth Companies**

(2018E growth < 20%, excluding micro-caps)

	9/30	Sept		9/30	Sept
Ticker	\$Price	%ch	Ticker	\$Price	%ch
ACTA	15.30	19.5	INTU	142.14	0.5
ALRM	45.18	0.6	LOGM	110.05	-3.8
AMBR	7.68	-4.7	LPSN	13.55	1.1
APTI	18.47	3.8	MODN	14.95	10.3
ATHN	124.36	-11.8	MSFT	74.49	-0.4
BCOV	7.20	2.1	ORCL	48.35	-3.9
BNFT	33.65	9.1	PEGA	57.65	0.2
BSFT	50.30	1.5	PYPL	64.03	3.8
BV	4.95	4.2	RP	39.90	-7.4
CALD	24.65	-4.3	RST	10.21	11.0
CRM	93.42	-2.2	SAP	109.44	4.3
CSCO	33.63	4.4	SNCR	9.33	-44.4
CSOD	40.61	16.1	SPSC	56.71	-6.9
CTXS	76.82	-1.8	SREV	3.46	-1.7
DATA	74.89	3.3	STMP	202.65	6.0
EBAY	38.46	6.4	TWTR	16.87	-0.2
ECOM	11.50	-0.9	ULTI	189.60	-5.6
ELLI	82.13	-1.0	UPLD	21.16	-8.0
ENV	51.00	14.7	VEEV	56.41	-5.2
FNGN	34.75	5.1	VRNS	41.90	8.0
GDDY	43.51	-2.9	WAGE	60.70	3.0
GOOGL	973.72	1.9	WEB	25.00	-1.2
GWRE	77.86	2.8	WK	20.85	3.2
IBM	145.08	1.4			

**Indexes**

(% change in Sept)

Faster SaaS	2.3	NASDAQ	1.0
Slower SaaS	1.1	S&P 500	1.9
Others	1.1	Russell2000	6.0
Overall SaaS	1.7	S&P Volatility	-10.2

Data source: S&P Capital IQ. 9/30/2017 Prices. 9/1-30/2017 %Change. All investing involves risk, including the risk of losing the entire investment. Prices are subject to change without prior notice.

#### Additional M&A Transactions

- **Callidus Software (NASDAQ: CALD -4.3%)** - on 9/17, the SaaS sales effectiveness company acquired Orient Technologies, which provides a distributed multi-model database. CALD is already using this database in its Direct Selling Pro solution and plans to apply it to other applications in its lead-to-money suite.
- **Ellie Mae (NYSE: ELLI -1.0%)** - the SaaS mortgage services provider acquired Velocify on 9/4 for \$128M. Velocity has a portfolio of mortgage-industry-focused sales solutions, including automated dialing, de-duplicating contacts, and distributing leads from multiple sources. We believe that the deal will serve to accelerate ELLI's ability to deliver a true digital mortgage solution.
- **Nielsen Holdings (NYSE: NLSN +6.6%)** – on 9/27, the information and management company acquired Visual IQ, which provides multi-touch attribution (MTA) modeling of advertising on digital platforms that helps improve ROI for brand marketers. We expect Visual IQ to improve Nielsen's ability to automatically integrate and process large datasets. It will also provide NLSN with access to more proprietary big data from advertisers, publishers, and retailers.
- **Pitney Bowes (NYSE: PBI +8.6%)** - on 9/6, PBI acquired Newgistics, which provides omni-channel commerce software and technology services for retailers and brands. Its solutions include parcel delivery, returns, fulfillment and digital commerce for retailers and ecommerce brands. We expect Newgistics to accelerate PBI's expansion into the US parcels market.
- **The Meet Group (NASDAQ: MEET -4.6%)** - acquired online dating app, LOVOO GmbH on 9/20 for \$70M. Germany-based LOVOO is the top dating app in Germany, Switzerland, and Austria with \$32M of revenue (48% subscriptions, 24% in-app purchases, and 28% ads 28%). It has 5M monthly active users, 1.9M daily active users, and about 100 employees. MEET plans to accelerate LOVOO's growth by integrating its live-streaming video product and sharing best practices in monetization and engagement. LOVOO represents the company's third acquisition in the last 12 months.

#### Select Horizontal Companies<sup>1</sup>

Ticker	9/30 \$Price	Sept %ch	Ticker	9/30 \$Price	Sept %ch
1PG	0.00	-98.8	LPSN	13.55	1.1
APTI	18.47	3.8	LVT	0.16	4.1
ASUR	12.42	7.3	MFON	1.00	3.1
AYX	20.37	-13.6	MRIN	1.75	52.2
BCOV	7.20	2.1	MSFT	74.49	-0.4
BL	34.12	10.5	MULE	20.14	-7.6
BNFT	33.65	9.1	NOW	117.53	1.2
BOX	19.32	-1.5	OKTA	28.21	4.5
CALD	24.65	-4.3	ORCL	48.35	-3.9
CCUR	6.00	-5.1	PAYC	74.96	0.5
CLDR	16.62	-14.3	PCTY	48.82	-0.7
COUP	31.15	2.3	PEGA	57.65	0.2
CRM	93.42	-2.2	PYDS	1.61	-31.8
CSCO	33.63	4.4	PYPL	64.03	3.8
CSOD	40.61	16.1	SAP	109.44	4.3
CTXS	76.82	-1.8	SHSP	3.25	-11.0
DATA	74.89	3.3	SMSI	1.12	2.8
EGAN	2.70	58.8	SPRT	2.35	-0.4
EVBG	26.42	14.0	SREV	3.46	-1.7
FNJN	2.35	-5.2	TEAM	35.15	-1.3
FUEL	0.00	0.0	TWLO	29.85	1.9
GDDY	43.51	-2.9	ULTI	189.60	-5.6
GOOGL	973.72	1.9	UPLD	21.16	-8.0
GSB	3.83	5.2	VRNS	41.90	8.0
HDP	16.95	-0.2	WAGE	60.70	3.0
HUBS	84.05	14.6	WDAY	105.39	-3.9
IBM	145.08	1.4	WEB	25.00	-1.2
INLX	0.30	11.1	WK	20.85	3.2
INTU	142.14	0.5	YEXT	13.28	2.1
LOGM	110.05	-3.8	ZEN	29.11	6.2

#### Select Vertical Companies<sup>2</sup>

Ticker	9/30 \$Price	Sept %ch	Ticker	9/30 \$Price	Sept %ch
ACTA	15.30	19.5	GSVC	5.41	12.7
AKDS	0.64	12.1	GWRE	77.86	2.8
ALRM	45.18	0.6	INST	33.15	12.0
AMBR	7.68	-4.7	INUV	1.00	-2.5
AMZN	961.35	-2.0	IPAS	0.66	17.9
APPF	47.95	11.8	MB	25.85	9.3
ATHN	124.36	-11.8	MODN	14.95	10.3
BSFT	50.30	1.5	QWTO	41.65	2.6
BV	4.95	4.2	RP	39.90	-7.4
CAFN	1.05	0.0	RST	10.21	11.0
COYN	0.09	-31.8	SCIL	0.45	-6.3
CSLT	4.30	10.3	SHOP	116.49	5.0
CSTI	9.20	-16.4	SNCR	9.33	-44.4
CXDO	1.65	0.0	SPSC	56.71	-6.9
EBAY	38.46	6.4	STMP	202.65	6.0
ECOM	11.50	-0.9	SVVC	8.00	6.4
ELLI	82.13	-1.0	TWOU	56.04	11.9
ENV	51.00	14.7	TWTR	16.87	-0.2
EVOL	4.85	2.1	VEEV	56.41	-5.2
FB	170.87	-0.6	WIX	71.85	10.4
FNGN	34.75	5.1	WSTL	2.97	3.5

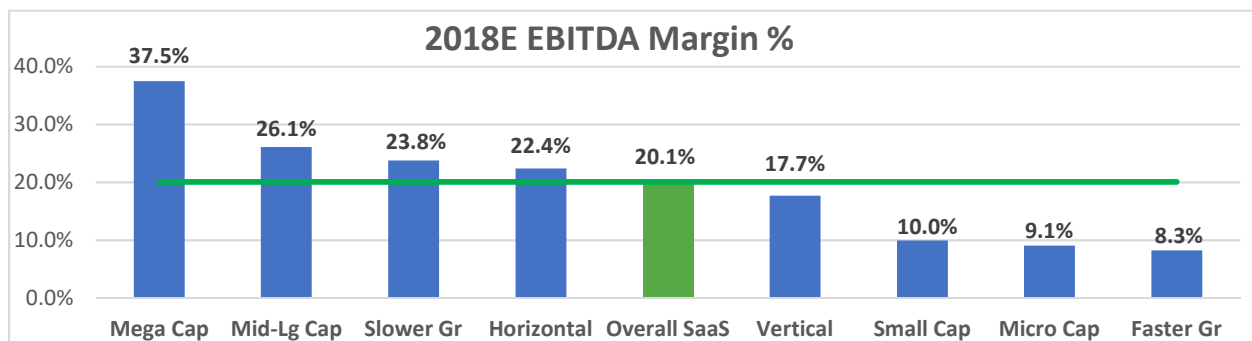
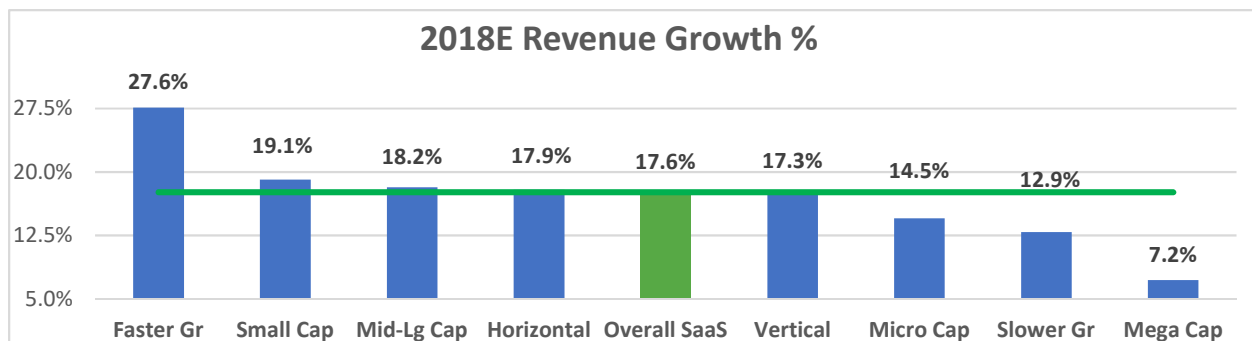
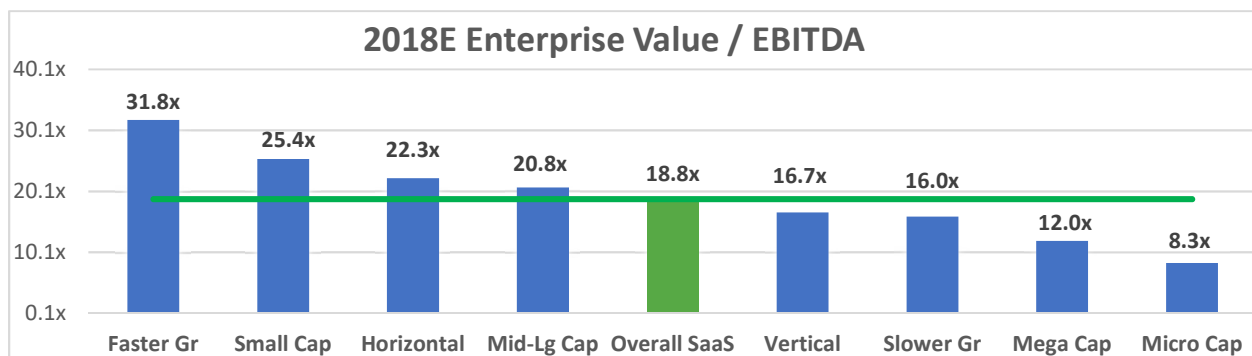
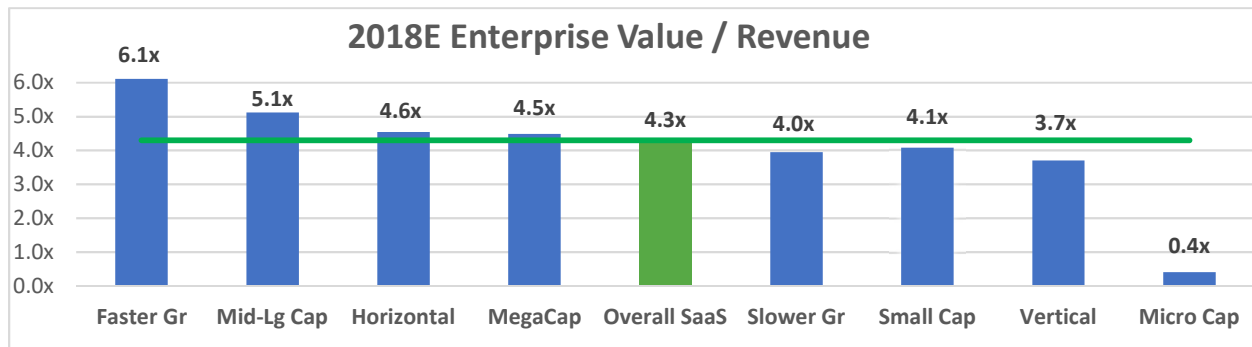
#### Indexes (% change in Sept)

Horizontal SaaS	1.1	NASDAQ	1.0
Vertical SaaS	2.7	S&P 500	1.9
Overall SaaS	1.7	Russell2000	6.0
		S&P Volatility	-10.2

<sup>1</sup> Horizontal companies provide software that can

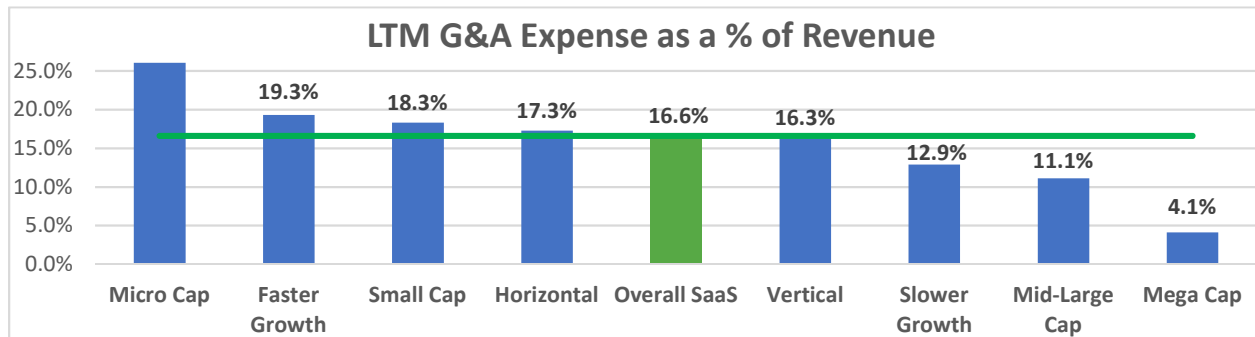
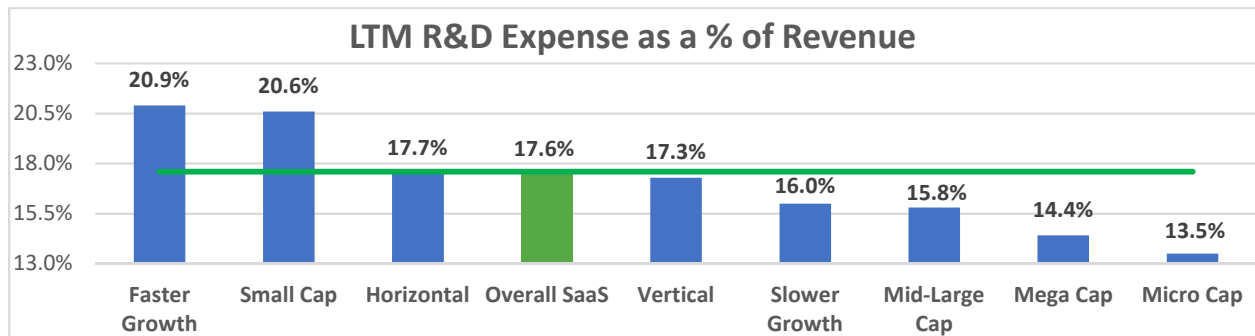
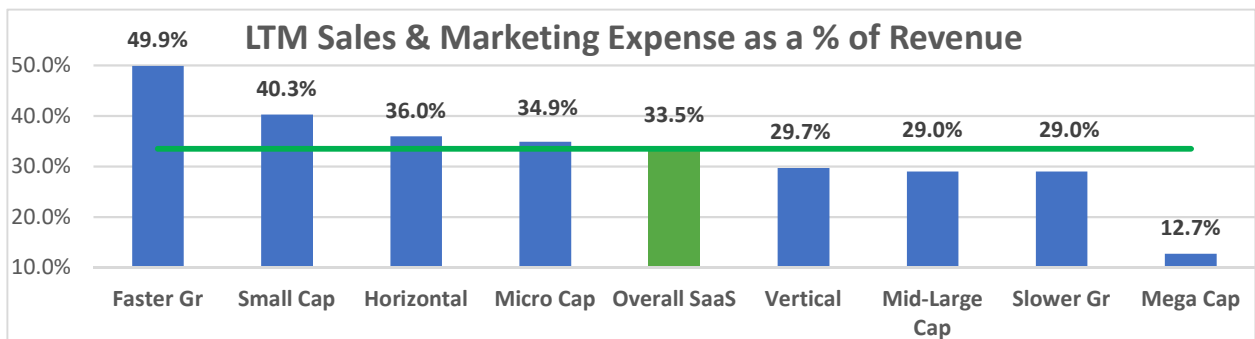
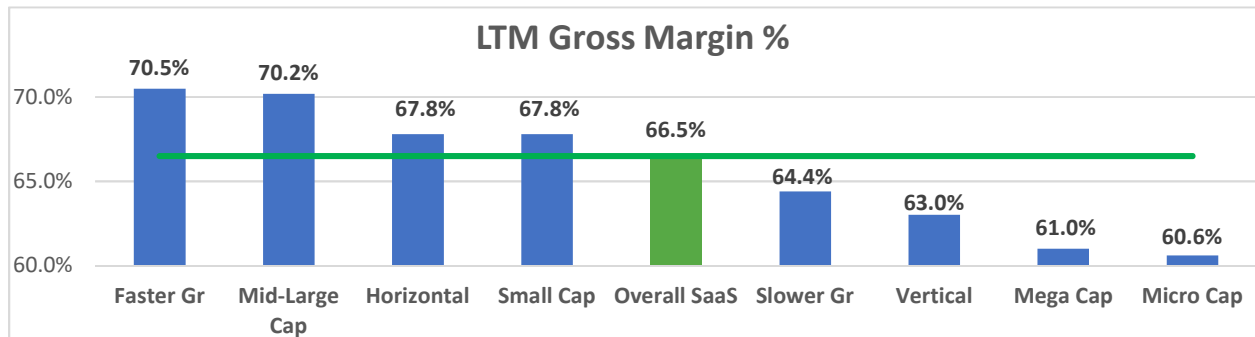
<sup>2</sup> Vertical companies provide software for specific  
Data source: S&P Capital IQ. 9/30/2017 Prices.

Public Comparisons - Calendar Year (CY) 2018E Metrics - SaaS Software Cloud



**Data Source:** S&P Capital IQ | **Mega Cap** = \$100B+ mcap | **Mid-Large Cap** = \$3B-\$100B mcap | **Small Cap** = \$150M-3B mcap | **Micro Cap** = <\$150M mcap | **Fast Growth** = 2018E rev gr >20% | **Slow Growth** = 2018E rev gr <20% | **Horizontal** = Industry-neutral | **Vertical** = Industry-specific | **Overall SaaS** = median | **EBITDA** = earnings before int., tax, depr., amort.

Public Comparisons - Last Twelve Months (LTM) Metrics - SaaS Software Cloud



**Data Source:** S&P Capital IQ | **Mega Cap** = \$100B+ mcap | **Mid-Large Cap** = \$3B-\$100B mcap | **Small Cap** = \$150M-3B mcap | **Micro Cap** = <\$150M mcap | **Fast Gr** = 2018E rev gr >20% | **Slow Gr** = 2018E rev gr <20% | **Horizontal** = Industry-neutral solution | **Vertical** = Industry-specific solution | **Overall SaaS** = Group median



## Selected Fast Growth – SaaS Software Cloud Public Company Valuation Metrics

Date 9/30/2017

(In \$ million, except per share values)

Ticker	Company Name	9/30/17 Price	Market Cap	Enterprise Value (EV)	2018E Street		EBITDA margin	2019E Growth	EV/Sales		EV/FCF		Price % Change From			60D avg Volume	Short as % of Float	Insider Ownership
					Sales	Growth			CY18E	CY19E	CY18E	CY19E	1M	3M	12M			
Fast Growth (2018E Revenue Growth > 20%, excluding Micro Caps)																		
AMZN	Amazon	\$961.35	\$461,813	463,981	\$222,179	28%	11.1%	20%	2.1x	1.7x	24.2x	23.5x	-1%	-1%	15%	\$3,058.41	1.6%	17%
APPF	AppFolio	47.95	1,626	1,594	176	26%	17.7%	23%	9.0x	7.3x	na	na	14%	47%	147%	9.36	4.1%	45%
ASUR	Asure Software	12.42	154	200	70	27%	24.7%	na	2.9x	na	30.2x	12.8x	10%	-15%	93%	1.69	17.9%	9%
AYX	Alteryx	20.37	1,196	1,043	171	36%	na	32%	6.1x	4.6x	na	51.8x	-13%	4%	0%	10.55	10.0%	21%
BL	BlackLine	34.12	1,790	1,683	222	29%	2.4%	28%	7.6x	5.9x	na	81.0x	14%	-5%	0%	12.50	8.9%	20%
BOX	Box	19.32	2,584	2,502	624	23%	3.9%	23%	4.0x	3.3x	63.4x	26.8x	-2%	6%	23%	31.69	6.5%	5%
CLDR	Cloudera	16.62	2,315	1,920	453	26%	na	21%	4.2x	3.5x	na	na	-10%	4%	0%	13.96	5.1%	3%
COUP	Coupa	31.15	1,670	1,461	223	25%	na	22%	6.6x	5.4x	na	65.9x	3%	7%	0%	13.46	5.0%	1%
CSLT	Castlight Health	4.30	566	476	170	28%	na	20%	2.8x	2.3x	na	22.9x	13%	4%	3%	1.23	8.8%	6%
EVBG	Everbridge	26.42	742	697	129	26%	1.9%	23%	5.4x	4.4x	na	na	13%	8%	57%	7.20	3.2%	15%
FB	Facebook	170.87	496,240	460,788	50,938	30%	62.1%	25%	9.0x	7.2x	24.7x	20.0x	1%	13%	33%	2,417.82	0.9%	18%
HDP	Hortonworks	16.95	1,137	1,066	315	27%	5.0%	26%	3.4x	2.7x	na	26.0x	3%	32%	103%	16.56	5.4%	5%
HUBS	HubSpot	84.05	3,112	2,909	463	26%	6.8%	22%	6.3x	5.1x	na	67.2x	17%	28%	46%	27.14	9.2%	7%
INST	Instructure	33.15	974	948	200	30%	na	29%	4.7x	3.7x	na	67.2x	11%	12%	31%	10.38	8.6%	11%
MB	MINDBODY	25.85	1,198	990	226	25%	8.3%	26%	4.4x	3.5x	90.3x	45.6x	11%	-5%	31%	9.82	26.9%	7%
MULE	MuleSoft	20.14	2,597	2,341	377	35%	na	29%	6.2x	4.8x	na	na	-7%	-19%	0%	14.53	0.0%	7%
NOW	ServiceNow	117.53	20,064	19,512	2,488	30%	24.6%	28%	7.8x	6.1x	29.3x	21.0x	3%	11%	48%	141.59	6.9%	1%
OKTA	Okta	28.21	2,696	2,483	331	35%	na	36%	7.5x	5.5x	na	na	7%	24%	0%	10.62	9.0%	11%
PAYC	Paycom	74.96	4,466	4,432	539	25%	29.2%	26%	8.2x	6.5x	44.3x	32.3x	2%	10%	50%	36.37	16.5%	17%
PCTY	Paylocity	48.82	2,526	2,423	406	22%	19.7%	23%	6.0x	4.9x	66.7x	35.7x	1%	8%	10%	11.96	4.6%	37%
Q2WO	Q2 Holdings	41.65	1,720	1,641	245	26%	8.2%	26%	6.7x	5.3x	na	51.3x	2%	13%	45%	9.26	3.9%	2%
SHOP	Shopify	116.49	11,537	10,605	932	43%	4.9%	34%	11.4x	8.5x	na	94.7x	7%	34%	171%	203.11	4.6%	17%
TEAM	Atlassian	35.15	7,988	7,438	943	31%	26.9%	27%	7.9x	6.2x	26.8x	na	-1%	0%	17%	18.70	5.0%	36%
TWLO	Twilio	29.85	2,744	2,455	467	25%	0.1%	29%	5.3x	4.1x	na	na	2%	3%	-54%	57.96	24.9%	14%
TWOU	2U	56.04	2,913	2,891	390	37%	5.4%	34%	7.4x	5.5x	na	na	12%	19%	46%	27.68	15.6%	1%
WDAY	Workday	105.39	21,921	20,372	2,640	26%	17.0%	23%	7.7x	6.3x	54.5x	41.5x	-2%	9%	15%	177.08	10.5%	35%
WIX	Wix.com	71.85	3,266	3,082	559	32%	24.1%	27%	5.5x	4.3x	24.5x	17.0x	12%	3%	65%	49.67	8.3%	3%
YEXT	Yext	13.28	1,198	1,071	225	33%	na	35%	4.8x	3.5x	na	na	1%	0%	0%	2.38	15.1%	25%
ZEN	Zendesk	29.11	2,926	2,685	548	29%	5.1%	28%	4.9x	3.8x	78.1x	39.5x	6%	5%	-5%	24.94	6.2%	4%
Select Faster Growth (2018E Rev. Growth >20%) Median					390	28%	8.3%	26%	6.1x	4.8x	37.3x	37.6x	3%	7%	39%	14.53	7.6%	11%

Data Source: S&P Capital IQ | EV = Enterprise value | EBITDA = Earnings before int., tax, depr., amort | FCF = Free cash flow

## Selected Slower Growth - SaaS Software Cloud Public Company Valuation Metrics

Date 9/30/2017

(In \$ million, except per share values)

Ticker	Company Name	9/30/17 Price	Market Cap	Enterprise Value (EV)	2018E Street Sales	2018E Street Growth	EBITDA margin	2019E Growth	EV/Sales CY18E	EV/Sales CY19E	EV/FCF CY18E	EV/FCF CY19E	Price % Change From 1M	Price % Change From 3M	Price % Change From 12M	60D avg Volume	Short as % of Float	Insider Ownership
<b>Slower Growth (2018E Revenue Growth &lt; 20%, excluding Micro Caps)</b>																		
ACTA	Actua	15.30	468	418	149	16%	4.8%	na	2.8x	na	na	na	20%	9%	18%	2.47	1.8%	11%
ALRM	Alarm.Com	\$45.18	\$2,110	2,114	\$380	16%	22.3%	15%	5.6x	4.8x	59.0x	na	-1%	20%	57%	\$24.38	4.1%	3%
AMBR	Amber Road	7.68	209	221	90	12%	3.2%	na	2.5x	na	na	na	-3%	-10%	-20%	0.61	2.3%	16%
APTIO	Apptio	18.47	738	614	210	15%	2.2%	11%	2.9x	2.6x	78.7x	13.6x	5%	6%	-15%	4.74	2.1%	22%
ATHN	AthenaHealth	124.36	4,966	5,174	1,392	14%	22.3%	15%	3.7x	3.2x	71.9x	na	-11%	-12%	-1%	52.37	14.1%	1%
BCOV	Brightcove	7.20	247	220	163	6%	3.8%	na	1.3x	na	na	na	2%	16%	-45%	1.37	3.5%	2%
BNFT	Benefitfocus	33.65	1,049	1,102	293	14%	9.3%	18%	3.8x	3.2x	na	15.4x	12%	-7%	-16%	5.88	17.7%	17%
BSFT	BroadSoft	50.30	1,560	1,400	432	13%	24.0%	13%	3.2x	2.9x	21.5x	7.7x	5%	17%	8%	21.34	11.6%	1%
BV	Bazaarvoice	4.95	417	360	215	5%	12.2%	5%	1.7x	1.6x	17.5x	7.5x	6%	0%	-16%	1.35	0.7%	2%
CALD	CallidusCloud	24.65	1,667	1,495	294	19%	15.1%	20%	5.1x	4.2x	52.5x	9.7x	-2%	2%	34%	8.69	2.9%	2%
CRM	salesforce.com	93.42	67,141	66,222	12,448	20%	22.4%	19%	5.3x	4.5x	25.9x	3.9x	-2%	8%	31%	399.82	2.4%	5%
CSCO	Cisco	33.63	166,534	129,759	48,574	1%	36.0%	2%	2.7x	2.6x	9.7x	3.5x	5%	7%	6%	720.47	1.2%	0%
CSD	Cornerstone	40.61	2,338	2,272	556	16%	16.3%	18%	4.1x	3.5x	32.8x	5.5x	16%	14%	-12%	33.04	9.9%	9%
CTXS	Citrix	76.82	11,639	11,680	2,931	4%	34.0%	5%	4.0x	3.8x	12.6x	2.6x	0%	-3%	-10%	112.37	3.9%	1%
DATA	Tableau	74.89	5,923	4,931	963	9%	8.9%	16%	5.1x	4.4x	32.1x	9.3x	4%	22%	35%	62.09	6.9%	22%
EBAY	eBay	38.46	41,164	43,613	10,099	6%	36.5%	6%	4.3x	4.1x	17.4x	3.6x	8%	10%	17%	276.08	2.5%	6%
ECOM	ChannelAdvisor	11.50	304	247	138	11%	6.9%	5%	1.8x	1.7x	18.8x	9.0x	6%	0%	-11%	0.79	1.6%	9%
ELLI	Ellie Mae	82.13	2,824	2,490	484	20%	31.4%	22%	5.1x	4.2x	36.1x	5.2x	-1%	-25%	-22%	35.46	10.2%	2%
ENV	Envestnet	51.00	2,245	2,477	769	14%	20.5%	15%	3.2x	2.8x	24.1x	6.4x	18%	29%	40%	16.28	4.3%	3%
FNGN	Financial Engines	34.75	2,195	2,025	547	13%	33.6%	8%	3.7x	3.4x	18.4x	4.6x	6%	-5%	17%	14.82	13.6%	1%
GGDY	GoDaddy	43.51	5,420	8,066	2,542	14%	26.2%	11%	3.2x	2.8x	13.8x	3.7x	-1%	3%	26%	74.29	6.1%	0%
GOOGL	Alphabet	973.72	669,590	578,832	127,581	18%	40.3%	16%	4.5x	3.9x	18.0x	3.5x	3%	5%	21%	1,413.15	0.4%	12%
GWRE	Guidewire	77.86	5,840	5,267	660	20%	22.5%	14%	8.0x	7.0x	33.8x	4.1x	2%	13%	30%	40.18	6.0%	0%
IBM	IBM	145.08	135,206	168,710	77,806	0%	25.7%	0%	2.2x	2.2x	14.3x	6.4x	2%	-6%	-9%	535.09	2.3%	0%
INTU	Intuit	142.14	36,242	35,953	5,900	10%	37.5%	11%	6.1x	5.5x	23.6x	3.1x	2%	7%	29%	196.06	1.0%	5%
LOGM	LogMeIn	110.05	5,803	5,517	1,165	15%	38.1%	9%	4.7x	4.3x	16.2x	2.9x	-3%	5%	22%	48.20	5.8%	2%
LPSN	LivePerson	13.55	798	744	231	7%	10.8%	8%	3.2x	3.0x	na	17.3x	3%	23%	61%	4.40	1.3%	9%
MODN	Model N	14.95	435	440	155	13%	6.1%	na	2.8x	na	54.6x	na	12%	12%	35%	2.17	5.0%	20%
MSFT	Microsoft	74.49	573,740	533,337	107,872	8%	39.0%	4%	4.9x	4.7x	17.2x	3.2x	1%	8%	29%	1,419.52	0.6%	1%
ORCL	Oracle	48.35	201,788	188,589	40,457	4%	47.4%	5%	4.7x	4.5x	12.8x	2.8x	-3%	-4%	23%	700.35	0.9%	27%
PEGA	Pegasystems	57.65	4,475	4,295	943	11%	17.9%	15%	4.6x	3.9x	36.4x	7.5x	2%	-1%	95%	20.09	4.8%	52%
PYPL	PayPal Holdings	64.03	76,989	67,824	15,197	18%	26.0%	17%	4.5x	3.8x	19.7x	4.2x	4%	19%	56%	415.86	2.3%	6%
RP	RealPage	39.90	3,298	3,369	807	20%	na	na	4.2x	na	20.6x	na	-5%	11%	55%	22.12	4.1%	27%
RST	Rosetta Stone	10.21	228	204	186	2%	7.6%	na	1.1x	na	na	na	10%	-5%	20%	0.76	1.5%	9%
SAP	SAP	109.44	131,212	133,185	30,034	7%	34.1%	7%	4.4x	4.1x	24.9x	4.8x	4%	4%	20%	0.43	0.0%	1%
SNCR	Synchronoss	9.33	433	556	787	8%	27.0%	9%	0.7x	0.7x	7.5x	16.2x	-44%	-43%	-77%	10.91	27.0%	8%
SPSC	SPS Commerce	56.71	977	818	253	14%	15.6%	15%	3.2x	2.8x	42.4x	10.6x	-7%	-11%	-23%	4.84	3.2%	0%
SREV	ServiceSource	3.46	309	269	255	6%	10.6%	na	1.1x	na	27.6x	na	-3%	-11%	-29%	0.85	4.4%	3%
STMP	Stamps.com	202.65	3,427	3,466	533	17%	51.4%	na	6.5x	na	15.4x	na	4%	31%	114%	96.45	15.0%	6%
TWTR	Twitter	16.87	12,389	10,055	2,548	6%	29.4%	7%	3.9x	3.7x	23.9x	6.2x	0%	-6%	-27%	187.51	7.9%	12%
ULTI	Ultimate Software	189.60	5,655	5,554	1,123	20%	23.8%	20%	4.9x	4.1x	42.5x	7.1x	-4%	-10%	-7%	80.55	11.0%	5%
UPLD	Upland Software	21.16	440	455	106	11%	34.0%	na	4.3x	na	20.6x	na	-8%	-4%	140%	2.69	0.8%	15%
VEEV	Veeva Systems	56.41	7,932	7,208	805	19%	32.9%	17%	9.0x	7.6x	32.8x	3.0x	-2%	-8%	37%	81.62	4.7%	20%
VRNS	Varonis Systems	41.90	1,152	1,031	241	17%	4.6%	17%	4.3x	3.6x	52.2x	7.4x	8%	13%	39%	10.97	1.6%	2%
WAGE	WageWorks	60.70	2,410	1,880	528	9%	31.6%	7%	3.6x	3.3x	na	na	4%	-10%	0%	20.42	8.8%	1%
WEB	Web.com Group	25.00	1,175	1,787	787	4%	26.2%	4%	2.3x	2.2x	11.5x	5.1x	3%	-1%	45%	7.44	4.8%	4%
WK	Workiva	20.85	872	820	235	14%	na	14%	3.5x	3.1x	93.9x	na	4%	9%	15%	2.06	5.1%	40%
<b>Select Slower Growth (2018E Rev. Growth &lt; 20%) Median</b>					<b>660</b>	<b>13%</b>	<b>23.8%</b>	<b>12%</b>	<b>3.9x</b>	<b>3.7x</b>	<b>23.7x</b>	<b>5.3x</b>	<b>2%</b>	<b>5%</b>	<b>20%</b>	<b>21.34</b>	<b>4.1%</b>	<b>5%</b>

Data Source: S&P Capital IQ | EV = Enterprise value | EBITDA = Earnings before int., tax, depr., amort | FCF = Free cash flow

## Selected Micro-Caps – SaaS Software Cloud Public Company Valuation Metrics

Date 9/30/2017

(In \$ million, except per share values)

Ticker	Company Name	9/30/17 Price	Market Cap	Enterprise Value (EV)	2018E Street		EBITDA margin	2019E Growth	EV/Sales		EV/FCF		Price % Change From			60D avg Volume	Short as % of Float	Insider Ownership
					Sales	Growth			CY18E	CY19E	CY18E	CY19E	1M	3M	12M			
Select Micro Cap (<\$150M mcap)																		
AKDS	Arkados Group	0.64	14	23	na	na	na	na	na	na	na	na	12%	-25%	0%	0.01	0.0%	19%
CAFN	Cachet	1.05	10	7	24	67%	16.3%	na	0.3x	na	na	na	0%	-67%	-90%	2.44	15.3%	33%
CCUR	Concurrent	6.00	59	17	na	na	na	na	na	na	na	na	-3%	-10%	9%	0.16	0.4%	20%
COYN	COPsync	0.09	1	2	15	56%	na	na	0.1x	na	na	na	-37%	-52%	-87%	0.00	0.0%	12%
CSTI	Costar	9.20	13	24	na	na	na	na	na	na	na	na	-16%	-8%	3%	0.00	0.0%	0%
CXDO	Crexendo	1.65	23	23	na	na	na	na	na	na	na	na	0%	-9%	18%	0.01	1.2%	77%
EGAN	eGain	2.70	74	79	na	na	na	na	na	na	na	na	54%	64%	-13%	0.37	0.7%	36%
EVOL	Evolving Systems	4.85	61	60	na	na	na	na	na	na	na	na	2%	-6%	11%	0.11	0.1%	31%
FNJN	FinJan	2.35	65	43	22	-37%	na	na	2.0x	na	na	na	-2%	-28%	38%	0.41	1.0%	2%
FUEL	Rocket Fuel	0.00	na	na	na	na	na	na	na	na	na	na	0%	0%	0%	0.00	7.3%	0%
GSB	GlobalSCAPE	3.83	83	69	na	na	na	na	na	na	na	na	5%	-28%	8%	0.35	0.1%	21%
GSVC	GSV Capital	5.41	120	193	1	12%	na	na	na	na	na	na	16%	25%	15%	0.53	0.0%	1%
INLX	Intellinetics	0.30	5	6	na	na	na	na	na	na	na	na	-6%	-57%	-66%	0.02	0.0%	54%
INUV	Inuvo	1.00	29	30	100	20%	2.0%	na	0.3x	na	na	na	-1%	-2%	-22%	0.05	1.4%	16%
IPAS	iPass	0.66	44	34	64	17%	na	na	0.5x	na	4.2x	na	16%	-50%	-60%	0.26	1.2%	3%
LVT	LiveTiles	0.16	66	63	na	na	na	na	na	na	na	na	10%	-9%	17%	0.05	0.0%	59%
MFON	Mobivity	1.00	36	37	na	na	na	na	na	na	na	na	4%	27%	33%	0.02	0.0%	19%
MRIN	Junein Software	12.25	69	40	na	na	na	na	na	na	na	na	59%	35%	-31%	0.27	1.1%	20%
PYDS	Payment Data Sy:	1.61	19	16	na	na	na	na	na	na	na	na	-1%	33%	-33%	0.32	0.6%	62%
SCIL	Scientific Learnin	0.45	11	na	na	na	na	na	na	na	na	na	-15%	-3%	-4%	0.00	0.0%	0%
SHSP	SharpSpring	3.25	27	20	17	30%	na	na	1.2x	na	na	na	-12%	-28%	-37%	0.04	1.0%	37%
SMSI	Smith Micro Softv	1.12	16	18	na	na	na	na	na	na	na	na	1%	-23%	-45%	0.04	2.1%	12%
SPRT	Support.com	2.35	44	(8)	na	na	na	na	na	na	na	na	-3%	1%	-7%	0.14	0.2%	2%
SVVC	First Technology	8.00	59	53	na	na	na	na	na	na	na	na	7%	-5%	2%	0.17	0.0%	8%
WSTL	Westell	2.97	46	22	na	na	na	na	na	na	na	na	0%	-5%	45%	0.09	0.1%	32%
Select Micro Cap (<\$150M) Median					22	15%	9.1%	#NUM!	0.4x	#NUM!	4.2x	na	1%	-8%	-2%	0.10	0.6%	20%

Data Source: S&P Capital IQ | EV = Enterprise value | EBITDA = Earnings before int., tax, depr., amort | FCF = Free cash flow



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