

SaaS Software Cloud Update – May 2017

Public Markets and M&A Activity

SaaS Software Cloud stocks advanced 4.1% in May, compared with the NASDAQ's +2.5%, the Russell 2000's -2.1%, and the DJIA's +0.3%. 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.

Xactly (NYSE:XTLY +35.3% in May) – the SaaS incentive compensation management provider, on 5/30, announced that it is being acquired by Vista Equity for \$550M (or \$15.65 per share), resulting in a 2018E EV/revenue multiple of about 4x. The price reflects a premium of about 17% to the 5/26 closing price of \$13.40. We suspect that Vista will use XTLY as a platform to bolt on complementary products, similar to the strategy of its larger competitor Callidus (NASDAQ:CALD). The deal is expected to close in 3Q17.

YEXT (NYSE:YEXT -0.7%, up 34% since its 4/3/17 IPO) – the recently public “local data play” has API connections to about 100 cloud partners, such as Apple Maps, Facebook, Google, and Instagram. Its 40,000 business customers use Yext to manage the digital data for 1M locations. The average price per location per year is about \$160. YEXT's solutions simplify the process of updating location data on the Web. 2017 revenue is expected to grow 34% while posting a 10.5% free cash flow margin. We view a risk for the stock to be losing a major API partner, such as Google.

Twilio (NYSE:TWLO -26.4%) – 1Q17 results were disappointing when reported on 5/2 due to less business than expected with Uber, which contributed 12% of revenue, down from 17% in 4Q17. While it is understandable for Uber to begin sharing communications services among multiple vendors, it fuels concerns that TWLO is easy to replace, in our opinion. As a result, the company lowered 2017 guidance for revenue by \$9M, to \$356-362M (reflecting 28-31% growth), and adjusted operating income by \$12.5M, to \$26-29M (-8% margin).

Stamps.com (NASDAQ:STMP +29.9%) – reported strong 1Q17 results on 5/3. Besides exceeding expectations and raising guidance, key metrics improved due in part to a growing mix of shipping, in our opinion, which now represents more than 70% of revenue. Total revenue of \$105.0M increased 28% year-over-year, operating margin of 47.6% was up 650 basis points, and monthly ARPU of \$47.36 increased 16%.

Upland (NASDAQ:UPLD +11.8%) – reported good 1Q17 results on 5/11, exceeding top-line expectations. The company continues to successfully apply its disciplined acquisition and EBITDA-margin-improvement strategy. Revenue advanced 18%, to \$20.8M, and adjusted EBITDA of \$5.5M was at the high end of guidance. It added 156 new customers during the quarter, including seven major accounts (versus 106 and seven, respectively, last quarter).

Angie's List (NASDAQ:ANGI +105.0%) – on 5/1 the home service online marketplace announced it is being acquired by HomeAdvisor, a subsidiary of IAC (NASDAQ:IAC), for \$586M (or \$8.50 per share), resulting in a 2017E revenue multiple of about 2x. The deal is expected to close in early 4Q17.

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Select Mega Cap (\$100B+ market cap)

Ticker	5/31 \$Price	May %ch	Ticker	5/31 \$Price	May %ch
AMZN	994.6	7.5	IBM	152.63	-4.8
CSCO	31.5	-7.5	MSFT	69.84	2.0
FB	151.5	0.8	ORCL	45.39	1.0
GOOGL	987.1	6.8	SAP	107.08	6.6

Select Mid-Large Cap (\$3B-\$100B market cap)

Ticker	5/31 \$Price	May %ch	Ticker	5/31 \$Price	May %ch
ATHN	133.98	36.7	NOW	104.65	10.8
CRM	89.64	4.1	PAYC	65.44	8.6
CTXS	82.54	2.0	PEGA	58.45	28.3
DATA	62.01	15.5	PYPL	52.21	9.4
EBAY	34.30	2.7	SHOP	91.86	20.9
ELLI	109.56	7.7	TEAM	35.76	3.7
GDDY	41.14	5.7	TWTR	18.32	11.2
GWRE	66.42	8.0	ULTI	220.74	8.9
INTU	140.64	12.3	VEEV	63.54	18.5
LOGM	111.00	-1.8	WDAY	99.98	14.4
MULE	26.02	12.9	WIX	73.70	-10.6

Select Small Cap (\$150M-\$3B market cap)

Ticker	5/31 \$Price	May %ch	Ticker	5/31 \$Price	May %ch
ACTA	14.00	0.0	LPSN	9.55	35.5
ALRM	32.55	-0.2	MB	28.05	-1.1
AMBR	7.23	-11.7	MODN	12.95	21.0
APPF	28.65	7.9	OKTA	26.10	0.2
APTI	16.52	26.6	PCTY	46.85	18.8
AYX	18.86	17.9	QTTW	39.60	3.8
BCOV	5.95	-31.6	RP	34.60	-6.6
BL	33.76	2.7	RST	11.87	5.5
BNFT	31.80	1.0	SALE	0.00	0.0
BOX	18.70	8.5	SNCR	12.78	-20.1
BSFT	40.00	4.2	SPSC	58.16	5.2
BV	4.55	-3.2	SREV	3.46	-8.0
CALD	23.90	13.5	STMP	137.90	29.9
CLDR	20.75	14.6	TNGO	6.46	0.6
COUP	34.22	23.3	TWLO	24.31	-26.4
CSLT	3.50	-9.1	TWOU	42.75	-5.8
CSOD	37.36	-4.9	UPLD	22.24	11.8
ECOM	11.40	-3.4	VRNS	36.35	15.8
ENV	35.85	3.0	WAGE	70.75	-4.1
EVBG	25.86	11.4	WEB	22.75	17.9
FNGN	37.90	-10.8	WK	18.20	8.3
HDP	12.36	18.7	XTLY	15.70	35.3
INST	26.70	11.7	YEXT	14.74	-0.7
JIVE	5.28	4.5	ZEN	25.98	-9.6

Select Micro Cap (<\$150M market cap)

Tickers					
1PG	COVS	EVOL	INLX	MRIN	SPRT
AKDS	COYN	FNJN	INUV	PYDS	SVVC
ASUR	CSTI	FUEL	IPAS	SCIL	WSTL
CAFN	CXDO	GSB	LVT	SHSP	
CCUR	EGAN	GSVC	MFON	SMSI	

Indexes (% change in May)

Mega-cap SaaS	1.5	NASDAQ	2.5
MidLgCap SaaS	9.2	DJIA	0.3
Small-cap SaaS	3.4	S&P 500	1.2
Micro-cap SaaS	2.3	Russell2000	-2.1
Overall SaaS	4.1	S&P Volatility	-3.8

Data source: S&P Capital IQ, 5/31/2017 Prices.
5/1-31/2017 %Change. All investing involves risk, including the risk of losing the entire investment. Prices are subject to change without prior notice.

Athenahealth (NASDAQ:ATHN +36.7%) – the cloud-based electronic health record (EHR) provider’s stock strength, in our opinion, was driven by an active investor, Elliott Management, establishing a 9.2% ownership position in the stock and publicly stating that “there are numerous operational and strategic opportunities to maximize shareholder value.”

Tableau (NYSE:DATA +15.5%) – reported good 1Q17 results on 5/3 driven by progress with its business-model transition to subscriptions, which represented 26% of bookings in the quarter. Revenue was slightly below consensus although within guidance due in part to the success of its model transition.

Veeva (NYSE:VEEV +18.5%) – on 5/25/17, the company reported strong 1Q17 results. Revenue advanced 32% year-over-year, to \$157.9M, and adjusted operating income was \$50.6M, both were above expectations. VEEV continued to experience success outside of healthcare, specifically in CPG—it inked a deal with a top 5 consumer packaging goods company.

Coupa (NASDAQ:COUP +23.3%) – the SaaS procurement provider hosted its annual conference on 5/16-18 where management announced positive data points. COUP now has more than 3M suppliers and \$360B-plus in spend on its network, up from about 2M and \$186B, respectively, at the time of its IPO in October 2016. Also, on 5/17/17 the company acquired Riskopy, which provides supplier analytics data.

Intuit (NASDAQ:INTU +12.3%) – reported good FY3Q17 results on 5/23, beating expectations and raising guidance. The TurboTax and Quickbooks Online businesses performed well. 2017E total revenue is guided to be \$5.13-5.15B, representing about 10% year-over-year growth with operating income of \$1.36-\$1.38B, up 11%.

Pegasystems (NASDAQ:PEGA +28.3%) – the full-lifecycle CRM provider reported strong 1Q17 results. Revenue advanced 25% year-over-year, to \$223M, and adjusted EPS was \$0.39, well above the Street means of \$199M and \$0.23, respectively. Much of the upside was attributed to a perpetual deal that was expected to close in 2Q17. PEGA also demonstrated progress on building out its system-integrator ecosystem.

Liveperson (NASDAQ:LPSN +35.5%) – reported 1Q17 results on 5/10/17. Revenue, despite declining 8% year-over-year, was ahead of expectations and the company is on track to regain top-line growth. Mobile messaging bookings were strong as it inked two seven-figure mobile messaging deals. LPSN also increased 2017 revenue guidance to \$207.7M (from \$201.4M) and established 2018 guidance of \$221.2M, representing 6% growth.

Web.com (NASDAQ:WEB +17.9%) – the stock reacted positively to rumors that WEB is in talks with PE firms after receiving takeover approaches. WEB is seeking to return to sequential growth after aligning premium products and resuming marketing for these products.

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

Ticker	5/31 \$Price	May %ch	Ticker	5/31 \$Price	May %ch
AMZN	994.62	7.5	OKTA	26.10	0.2
APPF	28.65	7.9	PAYC	65.44	8.6
AYX	18.86	17.9	PCTY	46.85	18.8
BL	33.76	2.7	QTWO	39.60	3.8
BOX	18.70	8.5	SHOP	91.86	20.9
COUP	34.22	23.3	TEAM	35.76	3.7
CSLT	3.50	-9.1	TWLO	24.31	-26.4
ELLI	109.56	7.7	TWOU	42.75	-5.8
EVBG	25.86	11.4	ULTI	220.74	8.9
FB	151.46	0.8	WDAY	99.98	14.4
HDP	12.36	18.7	WIX	73.70	-10.6
INST	26.70	11.7	XTLY	15.70	35.3
MB	28.05	-1.1	YEET	14.74	-0.7
MULE	26.02	12.9	ZEN	25.98	-9.6
NOW	104.65	10.8			

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

Ticker	5/31 \$Price	May %ch	Ticker	5/31 \$Price	May %ch
ACTA	14.00	0.0	JIVE	5.28	4.5
ALRM	32.55	-0.2	LOGM	111.00	-1.8
AMBR	7.23	-11.7	LPSN	9.55	35.5
APTI	16.52	26.6	MODN	12.95	21.0
ATHN	133.98	36.7	MSFT	69.84	2.0
BCOV	5.95	-31.6	ORCL	45.39	1.0
BNFT	31.80	1.0	PEGA	58.45	28.3
BSFT	40.00	4.2	PYPL	52.21	9.4
BV	4.55	-3.2	RP	34.60	-6.6
CALD	23.90	13.5	RST	11.87	5.5
CRM	89.64	4.1	SALE	0.00	0.0
CSCO	31.53	-7.5	SAP	107.08	6.6
CSOD	37.36	-4.9	SNCR	12.78	-20.1
CTXS	82.54	2.0	SPSC	58.16	5.2
DATA	62.01	15.5	SREV	3.46	-8.0
EBAY	34.30	2.7	STMP	137.90	29.9
ECOM	11.40	-3.4	TWTR	18.32	11.2
ENV	35.85	3.0	UPLD	22.24	11.8
FNGN	37.90	-10.8	VEEV	63.54	18.5
GDDY	41.14	5.7	VRNS	36.35	15.8
GOOGL	987.09	6.8	WAGE	70.75	-4.1
GWRE	66.42	8.0	WEB	22.75	17.9
IBM	152.63	-4.8	WK	18.20	8.3
INTU	140.64	12.3			

Others
(Micro-caps and those with no estimates)

Tickers					
IPG	CLDR	EGAN	GSVC	MFON	SMSI
AKDS	COVS	EVOL	INLX	MRIN	SPRT
ASUR	COYN	FNJN	INUV	PYDS	SWC
CAFN	CSTI	FUEL	IPAS	SCIL	TNGO
CCUR	CXDO	GSB	LVT	SHSP	WSTL

Indexes
(% change in May)

Faster SaaS	7.9	NASDAQ	2.5
Slower SaaS	4.2	S&P 500	1.2
Others	2.0	Russell2000	-2.1
Overall SaaS	4.1	S&P Volatility	-3.8

Data source: S&P Capital IQ. 5/31/2017 Prices. 5/1-31/2017 %Change. All investing involves risk, including the risk of losing the entire investment. Prices are subject to change without prior notice.

Synchronoss (NASDAQ: SNCR -20.1%) – the stock has been under pressure since late April when the company pre-announced poor 1Q17 results as well as the resignation of newly appointed CEO and CFO. Since then, AT&T canceled use of SNCR’s Personal Cloud. While the AT&T contract did not generate much revenue, the loss, in our view, drove concern about SNCR’s contract with Verizon, which represents about a third of revenue. On a positive note, private equity firm, Siris Capital, which accumulated a 13% position and seeks to discuss strategic alternatives.

Additional Noteworthy Acquisitions

- **Cisco (NASDAQ:CSCO -7.5%)** – paid \$125M on 5/11/17 for privately-held MindMeld, a conversational AI platform that powers chatbots.
- **Alphabet (NASDAQ:GOOGL +6.8%)** – on 5/10/17 acquired Owlchemy Labs, a development studio that creates games and VR experiences.
- **Zendesk (NYSE:ZEN -9.6%)** – on 5/4/17 acquired Outbound, which enables users to send behavioral and transactional messages to their customers.
- **Shopify (NYSE:SHOP +20.9%)** – momentum continues as the stock was up 114% year to date (as of 5/31). Also, on 5/12 Shopify acquired UAB Oberlo for \$15M. UAB operates an online marketplace for entrepreneurs to search and find products to sell online.
- **Callidus (NASDAQ:CALD +13.5%)** – acquired RevSym, a revenue recognition automation software.
- **ServiceNow (NYSE:NOW +10.8%)** – on 5/17/17 acquired PT Terraloq, which provides machine-learning message-based workflow automation, building on NOW’s 1/17 acquisition of DxContinuum, and its organically developed Intelligent Automation Engine. The company also announced an investment in HR chatbot developer, BuildOnMe.

Select Horizontal Companies¹

Ticker	5/31 \$Price	May %ch	Ticker	5/31 \$Price	May %ch
1PG	0.11	3.1	LPSN	9.55	35.5
APTI	16.52	26.6	LVT	0.17	-6.5
ASUR	15.50	50.0	MFON	0.79	12.9
AYX	18.86	17.9	MRIN	1.30	-23.5
BCOV	5.95	-31.6	MSFT	69.84	2.0
BL	33.76	2.7	MULE	26.02	12.9
BNFT	31.80	1.0	NOW	104.65	10.8
BOX	18.70	8.5	OKTA	26.10	0.2
CALD	23.90	13.5	ORCL	45.39	1.0
CCUR	6.72	35.8	PAYC	65.44	8.6
CLDR	20.75	14.6	PCTY	46.85	18.8
COUP	34.22	23.3	PEGA	58.45	28.3
COVS	2.05	2.5	PYDS	1.38	-5.3
CRM	89.64	4.1	PYPL	52.21	9.4
CSCO	31.53	-7.5	SAP	107.08	6.6
CSOD	37.36	-4.9	SHSP	4.35	-1.1
CTXS	82.54	2.0	SMSI	1.07	-5.3
DATA	62.01	15.5	SPRT	2.45	12.9
EGAN	1.55	3.3	SREV	3.46	-8.0
EVBG	25.86	11.4	TEAM	35.76	3.7
FNJN	2.96	51.8	TWLO	24.31	-26.4
FUEL	3.03	-39.7	ULTI	220.74	8.9
GDDY	41.14	5.7	UPLD	22.24	11.8
GOOGL	987.09	6.8	VRNS	36.35	15.8
GSB	4.48	10.6	WAGE	70.75	-4.1
HDP	12.36	18.7	WDAY	99.98	14.4
IBM	152.63	-4.8	WEB	22.75	17.9
INLX	0.90	5.9	WK	18.20	8.3
INTU	140.64	12.3	XTLY	15.70	35.3
JIVE	5.28	4.5	YEXT	14.74	-0.7
LOGM	111.00	-1.8	ZEN	25.98	-9.6

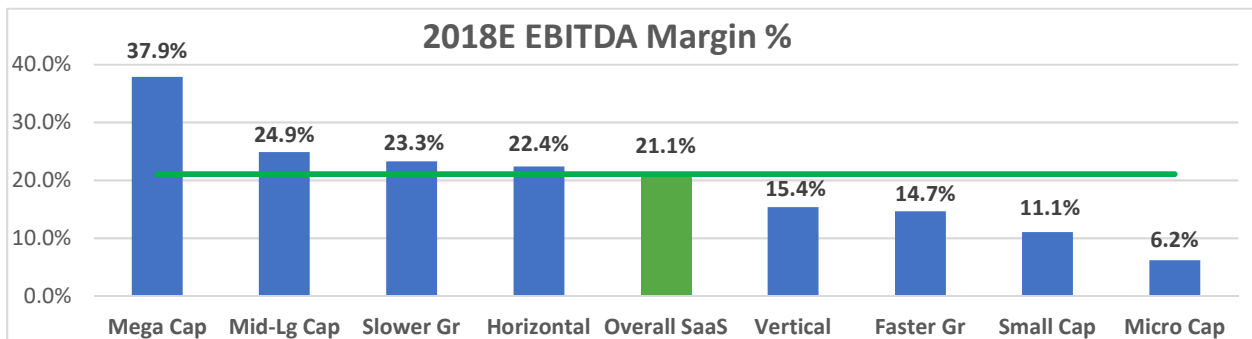
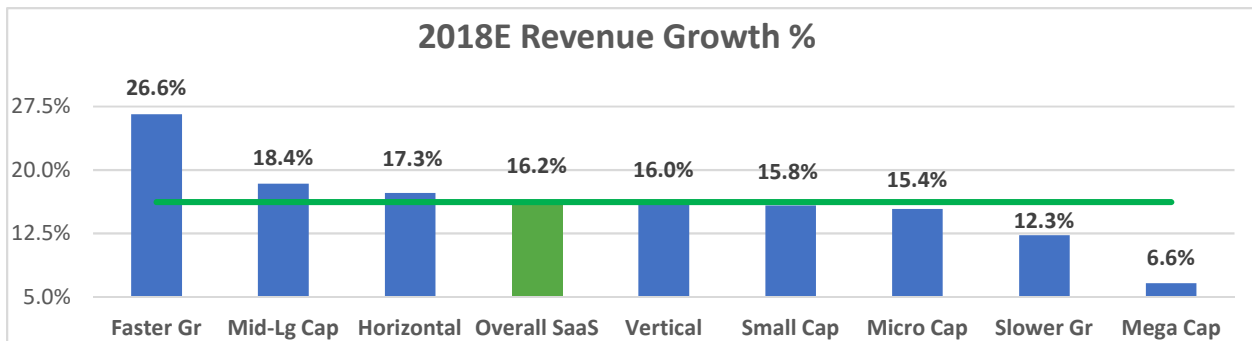
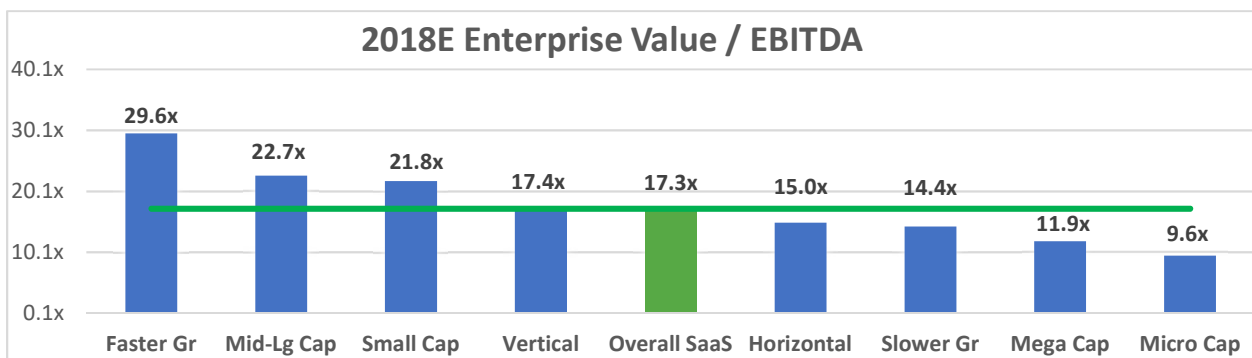
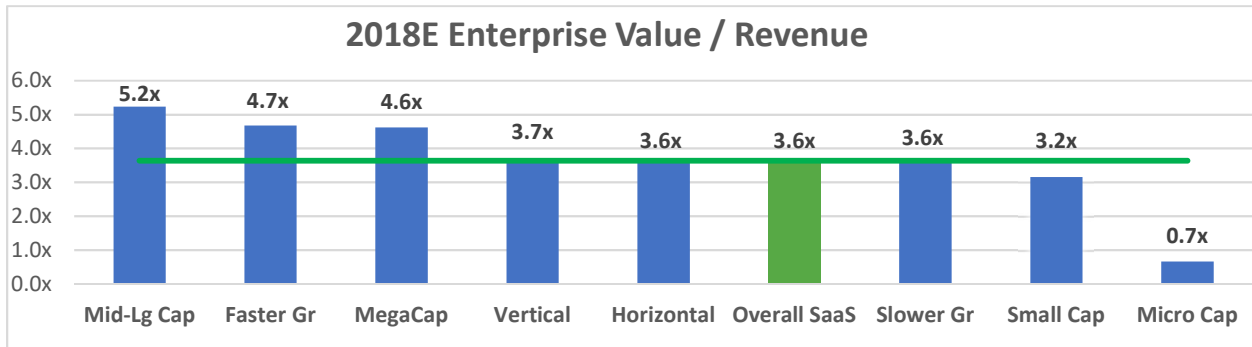
Select Vertical Companies²

Ticker	5/31 \$Price	May %ch	Ticker	5/31 \$Price	May %ch
ACTA	14.00	0.0	GWRE	66.42	8.0
AKDS	0.75	-42.3	INST	26.70	11.7
ALRM	32.55	-0.2	INUV	1.07	-14.4
AMBR	7.23	-11.7	IPAS	1.46	17.7
AMZN	994.62	7.5	MB	28.05	-1.1
APPF	28.65	7.9	MODN	12.95	21.0
ATHN	133.98	36.7	QTWO	39.60	3.8
BSFT	40.00	4.2	RP	34.60	-6.6
BV	4.55	-3.2	RST	11.87	5.5
CAFN	3.65	-4.9	SALE	0.00	0.0
COYN	0.09	-22.1	SCIL	0.55	-3.7
CSLT	3.50	-9.1	SHOP	91.86	20.9
CSTI	9.15	-9.5	SNCR	12.78	-20.1
CXDO	1.59	8.9	SPSC	58.16	5.2
EBAY	34.30	2.7	STMP	137.90	29.9
ECOM	11.40	-3.4	SWVC	8.56	1.5
ELLI	109.56	7.7	TNGO	6.46	0.6
ENV	35.85	3.0	TWOU	42.75	-5.8
EVOL	5.35	7.0	TWTR	18.32	11.2
FB	151.46	0.8	VEEV	63.54	18.5
FNGN	37.90	-10.8	WIX	73.70	-10.6
GSVC	4.51	2.0	WSTL	2.94	10.5

Indexes (% change in May)

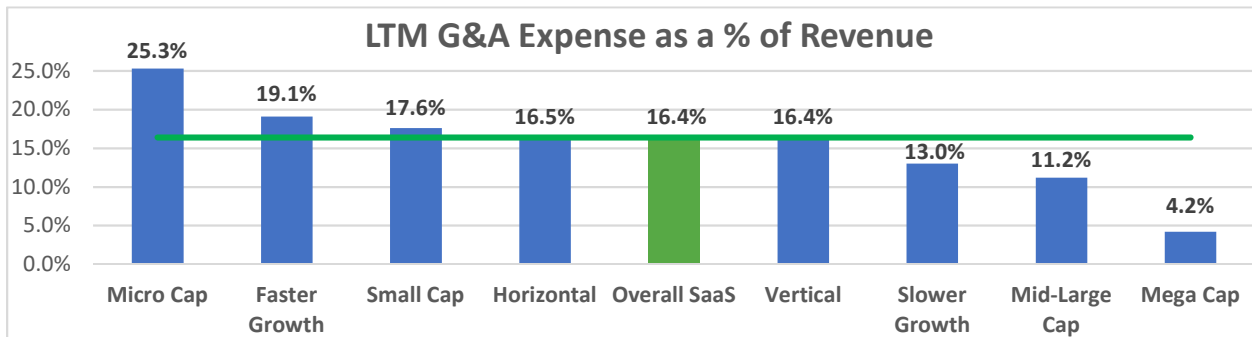
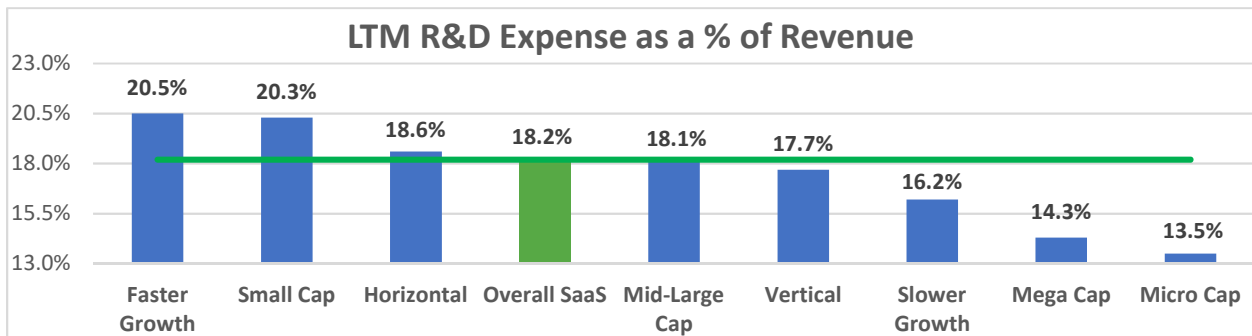
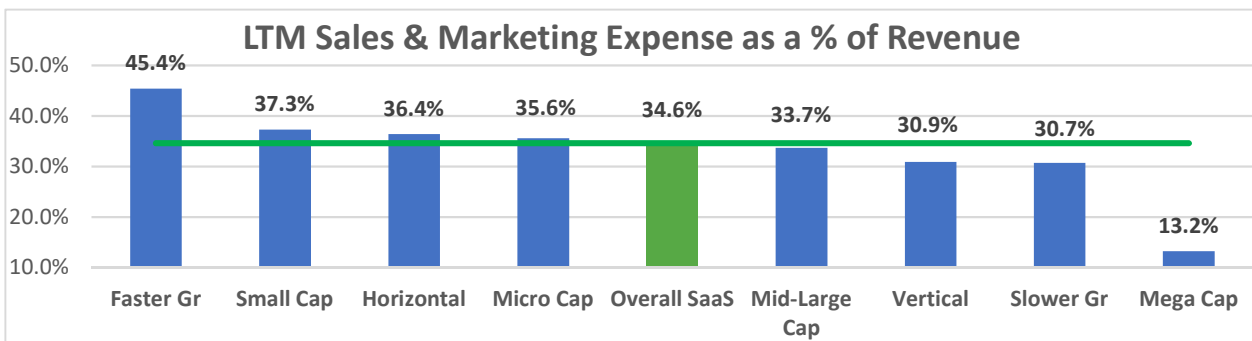
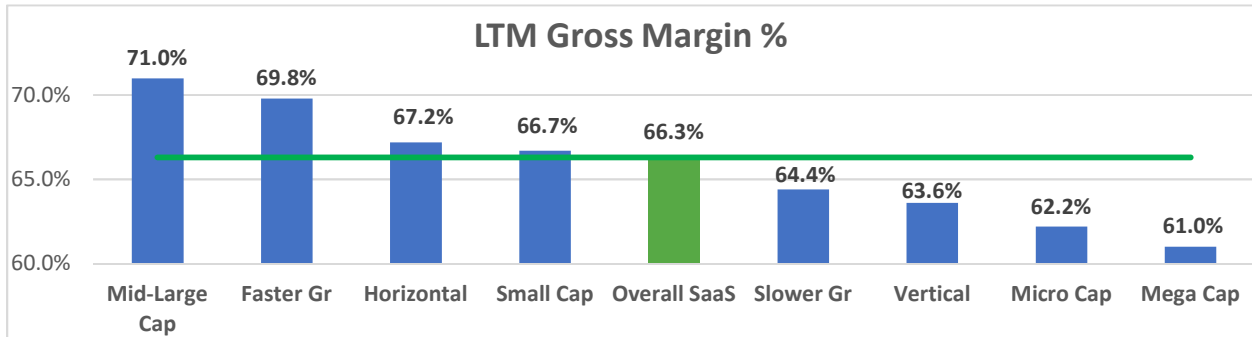
Horizontal SaaS	6.7	NASDAQ	2.5
Vertical SaaS	1.8	S&P 500	1.2
Overall SaaS	4.1	Russell2000	-2.1
		S&P Volatility	-3.8

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 5/31/2017

(In \$ million, except per share values)

Ticker	Company Name	5/31/17 Price	Market Cap	Enterprise Value (EV)	2018E Street		EBITDA margin	2019E Growth	EV/Sales		EV/FCF		Price % Change From			Momentum	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	\$994.62	\$475,404	\$483,702	\$200,594	21%	12.3%	18%	2.4x	2.0x	26.6x	20.0x	8%	18%	38%	18%	\$3,633.01	1.2%	17%
APPF	AppFolio	28.65	970	936	175	26%	14.3%	24%	5.4x	4.3x	91.2x	na	8%	15%	105%	15%	1.26	1.9%	46%
AYX	Alteryx	18.86	1,100	461	167	36%	na	33%	2.8x	2.1x	69.2x	na	18%	0%	0%	0%	5.04	5.6%	17%
BL	BlackLine	33.76	1,734	1,423	222	29%	0.7%	32%	6.4x	4.9x	na	na	3%	18%	0%	3%	9.63	5.1%	21%
BOX	Box	18.70	2,483	2,311	618	23%	na	22%	3.7x	3.1x	62.4x	17.2x	8%	6%	49%	8%	22.82	8.2%	5%
COUP	Coupa	34.22	1,743	867	209	24%	na	19%	4.2x	3.5x	na	na	23%	29%	0%	23%	23.55	9.3%	1%
CSLT	Castlight Health	3.50	457	257	169	26%	na	21%	1.5x	1.3x	na	8.7x	-9%	-1%	-17%	-9%	1.36	6.1%	5%
ELLI	Ellie Mae	109.56	3,733	3,324	540	23%	35.6%	15%	6.2x	5.3x	35.6x	21.2x	8%	15%	29%	15%	36.55	7.1%	2%
EVBG	Everbridge	25.86	721	487	128	26%	1.8%	23%	3.8x	3.1x	na	na	11%	36%	0%	11%	6.83	2.0%	15%
FB	Facebook	151.46	438,958	412,191	49,336	28%	60.7%	23%	8.4x	6.8x	24.1x	18.7x	1%	12%	27%	12%	2,509.25	0.9%	19%
HDP	Hortonworks	12.36	777	654	303	27%	21.6%	21%	2.2x	1.8x	na	18.3x	19%	24%	6%	19%	12.87	11.4%	7%
INST	Instructure	26.70	772	715	198	30%	na	27%	3.6x	2.8x	na	39.5x	12%	17%	54%	17%	5.81	10.1%	12%
MB	MINDBODY	28.05	1,226	1,056	226	25%	8.0%	29%	4.7x	3.6x	na	na	-1%	6%	109%	6%	14.14	12.7%	6%
MULE	MuleSoft	26.02	3,351	340	369	35%	na	31%	0.9x	0.7x	na	22.5x	13%	0%	0%	0%	16.65	1.4%	7%
NOW	ServiceNow	104.65	17,778	16,934	2,435	30%	24.6%	28%	7.0x	5.4x	25.8x	17.1x	11%	20%	46%	20%	186.35	3.8%	2%
OKTA	Okta	26.10	2,369	826	315	39%	na	38%	2.6x	1.9x	na	26.8x	0%	0%	0%	0%	14.50	0.6%	0%
PAYC	Paycom	65.44	3,889	3,800	534	25%	28.7%	23%	7.1x	5.8x	38.1x	28.1x	9%	22%	62%	22%	38.51	25.3%	23%
PCTY	Paylocity	46.85	2,413	2,303	409	24%	18.2%	na	5.6x	na	50.1x	na	19%	33%	28%	28%	14.92	10.9%	38%
QTWO	Q2 Holdings	39.60	1,622	1,504	246	27%	8.3%	26%	6.1x	4.8x	na	na	4%	10%	59%	10%	8.95	5.6%	2%
SHOP	Shopify	91.86	8,931	7,544	880	40%	4.3%	33%	8.6x	6.4x	na	79.7x	21%	55%	214%	55%	192.94	4.8%	19%
TEAM	Atlassian	35.76	8,063	7,340	913	29%	24.0%	na	8.0x	na	27.4x	na	4%	26%	58%	26%	28.82	5.7%	38%
TWLO	Twilio	24.31	2,200	1,435	455	27%	na	38%	3.2x	2.3x	na	61.9x	-26%	-23%	0%	-23%	90.75	26.1%	11%
TWOU	2U	42.75	2,032	1,877	353	30%	5.4%	29%	5.3x	4.1x	na	na	-6%	17%	54%	17%	21.17	15.6%	1%
ULTI	Ultimate Software	220.74	6,560	6,660	1,178	22%	24.9%	17%	5.7x	4.8x	45.9x	35.9x	9%	14%	8%	9%	62.58	12.2%	5%
WDAY	Workday	99.98	20,580	18,587	2,530	25%	15.1%	22%	7.3x	6.0x	52.0x	37.7x	14%	21%	32%	21%	141.69	10.6%	35%
WIX	Wix.com	73.70	3,350	3,015	560	32%	21.9%	30%	5.4x	4.1x	23.3x	14.8x	-11%	18%	166%	18%	92.37	3.2%	3%
XTLY	Xactly	15.70	504	452	135	21%	1.6%	15%	3.3x	2.9x	na	na	35%	27%	59%	35%	5.77	5.5%	4%
YEXT	Yext	14.74	1,438	594	221	33%	na	34%	2.7x	2.0x	na	na	-1%	0%	0%	0%	11.15	21.6%	31%
ZEN	Zendesk	25.98	2,571	2,218	546	30%	5.0%	26%	4.1x	3.2x	63.1x	na	-10%	-5%	6%	-5%	34.56	4.6%	4%
Select Faster Growth (2018E Rev. Growth >20%) Median					369	27%	14.7%	26%	4.7x	3.5x	42.0x	21.9x	8%	18%	49%	17%	21.17	5.7%	7%

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 5/31/2017

(In \$ million, except per share values)

Ticker	Company Name	5/31/17 Price	Market Cap	Enterprise Value (EV)	2018E Street		EBITDA margin	2019E Growth	EV/Sales		EV/FCF		Price % Change From			Momentum	60D avg Volume	Short as % of Float	Insider Ownership
					Sales	Growth			CY18E	CY19E	CY18E	CY19E	1M	3M	12M				
Slower Growth (2018E Revenue Growth < 20%, excluding Micro Caps)																			
ACTA	Actua	14.00	464	434	147	15%	5.0%	na	2.9x	na	na	na	0%	2%	44%	2%	2.92	2.8%	10%
ALRM	Alarm.Com	\$32.55	\$1,508	\$1,581	\$376	15%	21.6%	16%	4.2x	3.6x	60.8x	na	0%	14%	54%	14%	\$8.19	1.7%	4%
AMBR	Amber Road	7.23	196	203	93	13%	3.0%	na	2.2x	na	98.7x	na	-12%	-4%	21%	-4%	0.88	3.1%	9%
APTI	Apptio	16.52	639	318	209	15%	3.5%	10%	1.5x	1.4x	33.4x	11.7x	27%	27%	0%	27%	8.27	6.0%	20%
ATHN	AthenaHealth	133.98	5,337	5,578	1,396	14%	22.8%	17%	4.0x	3.4x	61.3x	17.9x	37%	14%	6%	14%	110.61	19.9%	1%
BCOV	Brightcove	5.95	203	171	162	7%	4.6%	na	1.1x	na	na	na	-32%	-29%	-11%	-29%	2.37	2.2%	10%
BNFT	Benefitfocus	31.80	987	1,003	317	19%	9.5%	19%	3.2x	2.7x	na	35.7x	1%	20%	-13%	1%	7.94	20.8%	17%
BSFT	BroadSoft	40.00	1,228	1,105	437	14%	23.8%	15%	2.5x	2.2x	19.3x	8.6x	4%	-7%	-8%	-7%	19.76	8.2%	1%
BV	Bazaarvoice	4.55	377	331	218	6%	11.3%	2%	1.5x	1.5x	15.4x	na	-3%	2%	22%	2%	1.83	1.2%	3%
CALD	CallidusCloud	23.90	1,550	1,269	289	18%	13.8%	22%	4.4x	3.6x	41.5x	na	14%	27%	29%	27%	10.27	4.7%	2%
CRM	salesforce.com	89.64	63,764	62,518	12,286	19%	22.4%	18%	5.1x	4.3x	24.8x	4.1x	4%	10%	7%	7%	402.40	2.2%	5%
CSCO	Cisco	31.53	157,652	123,998	48,690	2%	35.8%	1%	2.5x	2.5x	9.5x	4.1x	-7%	-8%	9%	-7%	670.30	0.8%	0%
CSOD	Cornerstone	37.36	2,123	2,044	557	16%	15.0%	17%	3.7x	3.1x	28.7x	6.1x	-5%	-11%	-7%	-7%	19.38	5.3%	9%
CTXS	Citrix	82.54	12,476	13,059	2,941	4%	35.7%	5%	4.4x	4.2x	14.0x	3.0x	2%	5%	-3%	2%	133.08	3.6%	0%
DATA	Tableau	62.01	4,836	3,762	950	8%	7.7%	15%	4.0x	3.4x	26.9x	15.1x	16%	18%	21%	18%	77.93	10.5%	22%
EBAY	eBay	34.30	37,124	40,868	9,987	6%	37.4%	6%	4.1x	3.9x	16.4x	3.7x	3%	1%	40%	3%	318.88	1.9%	7%
ECOM	ChannelAdvisor	11.40	300	232	138	11%	7.5%	na	1.7x	na	17.8x	na	-3%	6%	-8%	-3%	1.01	1.6%	9%
ENV	Investnet	35.85	1,571	1,788	754	14%	20.7%	15%	2.4x	2.1x	18.0x	6.7x	3%	-7%	6%	3%	10.78	6.1%	3%
FNGN	Financial Engines	37.90	2,383	2,266	545	13%	33.7%	2%	4.2x	4.1x	20.4x	4.6x	-11%	-14%	37%	-11%	11.37	16.4%	1%
GDDY	GoDaddy	41.14	3,779	4,016	2,544	15%	26.1%	12%	1.6x	1.4x	7.2x	4.3x	6%	12%	26%	12%	57.06	10.8%	0%
GOOGL	Alphabet	987.09	675,109	601,856	124,829	16%	41.1%	15%	4.8x	4.2x	18.9x	3.3x	7%	17%	32%	17%	1,543.03	0.6%	12%
GWRE	Guidewire	66.42	4,912	4,414	615	16%	23.3%	na	7.2x	na	34.5x	na	8%	22%	13%	13%	25.26	6.9%	0%
IBM	IBM	152.63	143,395	177,910	78,127	0%	24.0%	0%	2.3x	2.3x	15.6x	6.5x	-5%	-15%	-1%	-5%	757.13	2.3%	0%
INTU	Intuit	140.64	36,034	35,544	5,750	8%	39.8%	9%	6.2x	5.7x	22.3x	2.7x	12%	12%	32%	12%	287.52	1.3%	5%
JIVE	Jive	5.28	421	293	212	5%	11.6%	na	1.4x	na	na	na	4%	20%	39%	20%	5.83	0.7%	9%
LOGM	LogMeIn	111.00	5,841	3,054	1,166	16%	37.6%	9%	2.6x	2.4x	9.6x	3.1x	-2%	21%	81%	21%	72.71	3.6%	2%
LPSN	LivePerson	9.55	558	487	218	5%	10.9%	na	2.2x	na	35.8x	na	35%	35%	37%	35%	3.25	2.2%	8%
MODN	Model N	12.95	373	365	152	10%	4.5%	na	2.4x	na	na	na	21%	22%	5%	21%	1.46	6.2%	20%
MSFT	Microsoft	69.84	539,201	513,519	106,450	7%	39.9%	10%	4.8x	4.4x	13.3x	3.1x	2%	9%	32%	9%	1,619.07	0.5%	2%
ORCL	Oracle	45.39	186,765	186,308	39,280	3%	45.8%	4%	4.7x	4.6x	12.4x	2.9x	1%	7%	13%	7%	480.96	1.0%	27%
PEGA	Pegasystems	58.45	4,509	4,551	973	12%	17.7%	17%	4.7x	4.0x	48.2x	7.8x	28%	36%	122%	36%	21.02	4.4%	53%
PYPL	PayPal Holdings	52.21	62,718	54,546	14,911	17%	25.5%	18%	3.7x	3.1x	17.5x	4.7x	9%	24%	38%	24%	395.57	3.0%	6%
RP	RealPage	34.60	2,861	2,791	732	13%	27.1%	19%	3.8x	3.2x	20.7x	5.6x	-7%	3%	59%	3%	18.84	1.5%	29%
RST	Rosetta Stone	11.87	263	224	186	2%	7.0%	na	1.2x	na	na	na	6%	51%	57%	51%	1.79	2.3%	8%
SALE	RetailMeNot	0.00	na	(166)	na	na	na	na	na	na	na	na	0%	0%	0%	0%	0.00	0.8%	0%
SAP	SAP	107.08	128,347	129,219	28,693	7%	34.9%	8%	4.5x	4.2x	25.1x	4.8x	7%	14%	32%	14%	0.45	0.0%	7%
SNCR	Synchronoss	12.78	593	681	815	11%	29.7%	6%	0.8x	0.8x	5.6x	31.2x	-20%	-53%	-64%	-53%	31.24	13.0%	8%
SPSC	SPS Commerce	58.16	1,000	854	254	15%	15.4%	na	3.4x	na	46.4x	na	5%	5%	7%	5%	6.64	3.5%	0%
SREV	ServiceSource	3.46	307	249	256	7%	9.4%	na	1.0x	na	25.6x	na	-8%	-12%	-7%	-8%	0.64	7.0%	3%
STMP	Stamps.com	137.90	2,336	2,532	495	16%	50.8%	na	5.1x	na	13.5x	na	30%	9%	52%	30%	112.74	35.6%	7%
TWTR	Twitter	18.32	13,295	10,777	2,476	6%	28.2%	8%	4.4x	4.0x	29.1x	8.0x	11%	16%	20%	16%	366.98	8.7%	12%
UPLD	Upland Software	22.24	410	413	97	9%	32.7%	na	4.3x	na	19.4x	na	12%	85%	209%	85%	1.89	0.4%	18%
VEEV	Veeva Systems	63.54	8,860	8,798	799	19%	32.0%	15%	11.0x	9.5x	46.9x	3.0x	19%	45%	93%	45%	96.24	7.7%	22%
VRNS	Varonis Systems	36.35	989	846	238	17%	4.1%	14%	3.6x	3.1x	55.4x	11.3x	16%	33%	49%	33%	12.28	3.7%	5%
WAGE	WageWorks	70.75	2,634	2,303	530	10%	31.5%	7%	4.3x	4.0x	na	na	-4%	-8%	26%	-4%	18.23	5.1%	1%
WEB	Web.com Group	22.75	1,053	1,803	789	4%	26.3%	4%	2.3x	2.2x	10.8x	4.9x	18%	18%	34%	18%	8.01	6.4%	4%
WK	Workiva	18.20	753	699	236	15%	na	13%	3.0x	2.6x	na	47.1x	8%	22%	32%	22%	2.34	5.2%	42%
Select Slower Growth (2018E Rev. Growth < 20%) Median					586	12%	23.3%	12%	3.6x	3.4x	20.6x	4.9x	4%	12%	26%	12%	18.54	3.6%	7%

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

Selected Mega, Large, and Mid Caps - SaaS Software Cloud Public Company Valuation Metrics

Date 5/31/2017

(In \$ million, except per share values)

Ticker	Company Name	5/31/17 Price	Market Cap	Enterprise Value (EV)	2018E Street		EBITDA margin	2019E Growth	EV/Sales		EV/FCF		Price % Change From			Momentum	60D avg Volume	Short as % of Float	Insider Ownership
					Sales	Growth			CY18E	CY19E	CY18E	CY19E	1M	3M	12M				
Select Mega Cap (\$100B+ mcap)																			
AMZN	Amazon	994.62	475,404	483,702	200,594	21%	12.3%	18%	2.4x	2.0x	26.6x	20.0x	8%	18%	38%	18%	3,633.01	1.2%	17%
CSCO	Cisco	31.53	157,652	123,998	48,690	2%	35.8%	1%	2.5x	2.5x	9.5x	10.4x	-7%	-8%	9%	-7%	670.30	0.8%	0%
FB	Facebook	151.46	438,958	412,191	49,336	28%	60.7%	23%	8.4x	6.8x	24.1x	18.7x	1%	12%	27%	12%	2,509.25	0.9%	19%
GOOGL	Alphabet	987.09	675,109	601,856	124,829	16%	41.1%	15%	4.8x	4.2x	18.9x	15.7x	7%	17%	32%	17%	1,543.03	0.6%	12%
IBM	IBM	152.63	143,395	177,910	78,127	0%	24.0%	0%	2.3x	2.3x	15.6x	14.9x	-5%	-15%	-1%	-5%	757.13	2.3%	0%
MSFT	Microsoft	69.84	539,201	513,519	106,450	7%	39.9%	10%	4.8x	4.4x	13.3x	15.0x	2%	9%	32%	9%	1,619.07	0.5%	2%
ORCL	Oracle	45.39	186,765	186,308	39,280	3%	45.8%	4%	4.7x	4.6x	12.4x	13.7x	1%	7%	13%	7%	480.96	1.0%	27%
SAP	SAP	107.08	128,347	129,219	28,693	7%	34.9%	8%	4.5x	4.2x	25.1x	21.4x	7%	14%	32%	14%	0.45	0.0%	7%
Select Mega Cap (\$100B+) Median					63,731	7%	37.9%	9%	4.6x	4.2x	17.2x	15.3x	1%	10%	30%	10%	1,150.08	0.9%	10%
Select Mid-Large Cap (\$3B-\$100B mcap)																			
ATHN	AthenaHealth	133.98	5,337	5,578	1,396	14%	22.8%	17%	4.0x	3.4x	61.3x	71.3x	37%	14%	6%	14%	110.61	19.9%	1%
CRM	salesforce.com	89.64	63,764	62,518	12,286	19%	22.4%	18%	5.1x	4.3x	24.8x	20.8x	4%	10%	7%	7%	402.40	2.2%	5%
CTXS	Citrix	82.54	12,476	13,059	2,941	4%	35.7%	5%	4.4x	4.2x	14.0x	13.3x	2%	5%	-3%	2%	133.08	3.6%	0%
DATA	Tableau	62.01	4,836	3,762	950	8%	7.7%	15%	4.0x	3.4x	26.9x	59.6x	16%	18%	21%	18%	77.93	10.5%	22%
EBAY	eBay	34.30	37,124	40,868	9,987	6%	37.4%	6%	4.1x	3.9x	16.4x	15.1x	3%	1%	40%	3%	318.88	1.9%	7%
ELLI	Ellie Mae	109.56	3,733	3,324	540	23%	35.6%	15%	6.2x	5.3x	35.6x	21.2x	8%	15%	29%	15%	36.55	7.1%	2%
GDDY	GoDaddy	41.14	3,779	4,016	2,544	15%	26.1%	12%	1.6x	1.4x	7.2x	6.7x	6%	12%	26%	12%	57.06	10.8%	0%
GWRE	Guidewire	66.42	4,912	4,414	615	16%	23.3%	na	7.2x	na	34.5x	na	8%	22%	13%	13%	25.26	6.9%	0%
INTU	Intuit	140.64	36,034	35,544	5,750	8%	39.8%	9%	6.2x	5.7x	22.3x	16.6x	12%	12%	32%	12%	287.52	1.3%	5%
LOGM	LogMeIn	111.00	5,841	3,054	1,166	16%	37.6%	9%	2.6x	2.4x	9.6x	8.1x	-2%	21%	81%	21%	72.71	3.6%	2%
MULE	MuleSoft	26.02	3,351	340	369	35%	na	31%	0.9x	0.7x	na	22.5x	13%	0%	0%	0%	16.65	1.4%	7%
NOW	ServiceNow	104.65	17,778	16,934	2,435	30%	24.6%	28%	7.0x	5.4x	25.8x	17.1x	11%	20%	46%	20%	186.35	3.8%	2%
PAYC	Paycom	65.44	3,889	3,800	534	25%	28.7%	23%	7.1x	5.8x	38.1x	28.1x	9%	22%	62%	22%	38.51	25.3%	23%
PEGA	Pegasystems	58.45	4,509	4,551	973	12%	17.7%	17%	4.7x	4.0x	48.2x	36.5x	28%	36%	122%	36%	21.02	4.4%	53%
PYPL	PayPal Holdings	52.21	62,718	54,546	14,911	17%	25.5%	18%	3.7x	3.1x	17.5x	17.1x	9%	24%	38%	24%	395.57	3.0%	6%
SHOP	Shopify	91.86	8,931	7,544	880	40%	4.3%	33%	8.6x	6.4x	na	79.7x	21%	55%	214%	55%	192.94	4.8%	19%
TEAM	Atlassian	35.76	8,063	7,340	913	29%	24.0%	na	8.0x	na	27.4x	na	4%	26%	58%	26%	28.82	5.7%	38%
TWTR	Twitter	18.32	13,295	10,777	2,476	6%	28.2%	8%	4.4x	4.0x	29.1x	34.7x	11%	16%	20%	16%	366.98	8.7%	12%
ULTI	Ultimate Software	220.74	6,560	6,660	1,178	22%	24.9%	17%	5.7x	4.8x	45.9x	35.9x	9%	14%	8%	9%	62.58	12.2%	5%
VEEV	Veeva Systems	63.54	8,860	8,798	799	19%	32.0%	15%	11.0x	9.5x	46.9x	33.5x	19%	45%	93%	45%	96.24	7.7%	22%
WDAY	Workday	99.98	20,580	18,587	2,530	25%	15.1%	22%	7.3x	6.0x	52.0x	37.7x	14%	21%	32%	21%	141.69	10.6%	35%
WIX	Wix.com	73.70	3,350	3,015	560	32%	21.9%	30%	5.4x	4.1x	23.3x	14.8x	-11%	18%	166%	18%	92.37	3.2%	3%
Select Mid-Large Cap (\$3B-\$100B mcap) Median					1,172	18%	24.9%	17%	5.2x	4.2x	27.2x	21.9x	9%	18%	32%	18%	94.31	5.2%	6%

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

Selected Small Caps - SaaS Software Cloud Public Company Valuation Metrics

Date 5/31/2017

(In \$ million, except per share values)

Ticker	Company Name	5/31/17 Price	Market Cap	Enterprise Value (EV)	2018E Street		EBITDA margin	2019E Growth	EV/Sales		EV/FCF		Price % Change From			Momentum	60D avg Volume	Short as % of Float	Insider Ownership
					Sales	Growth			CY18E	CY19E	CY18E	CY19E	1M	3M	12M				
Select Small Cap (\$150M-\$3B mcap)																			
ACTA	Actua	14.00	464	434	147	15%	5.0%	na	2.9x	na	na	na	0%	2%	44%	2%	2.92	2.8%	10%
ALRM	Alarm.Com	32.55	1,508	1,581	376	15%	21.6%	16%	4.2x	3.6x	60.8x	na	0%	14%	54%	14%	8.19	1.7%	4%
AMBR	Amber Road	7.23	196	203	93	13%	3.0%	na	2.2x	na	98.7x	na	-12%	-4%	21%	-4%	0.88	3.1%	9%
APPF	AppFolio	28.65	970	936	175	26%	14.3%	24%	5.4x	4.3x	91.2x	na	8%	15%	105%	15%	1.26	1.9%	46%
APTI	Apptio	16.52	639	318	209	15%	3.5%	10%	1.5x	1.4x	33.4x	17.8x	27%	27%	0%	27%	8.27	6.0%	20%
AYX	Alteryx	18.86	1,100	461	167	36%	na	33%	2.8x	2.1x	69.2x	na	18%	0%	0%	0%	5.04	5.6%	17%
BCOV	Brightcove	5.95	203	171	162	7%	4.6%	na	1.1x	na	na	na	-32%	-29%	-11%	-29%	2.37	2.2%	10%
BL	BlackLine	33.76	1,734	1,423	222	29%	0.7%	32%	6.4x	4.9x	na	na	3%	18%	0%	3%	9.63	5.1%	21%
BNFT	Benefitfocus	31.80	987	1,003	317	19%	9.5%	19%	3.2x	2.7x	na	na	1%	20%	-13%	1%	7.94	20.8%	17%
BOX	Box	18.70	2,483	2,311	618	23%	na	22%	3.7x	3.1x	62.4x	17.2x	8%	6%	49%	8%	22.82	8.2%	5%
BSFT	BroadSoft	40.00	1,228	1,105	437	14%	23.8%	15%	2.5x	2.2x	19.3x	21.7x	4%	-7%	-8%	-7%	19.76	8.2%	1%
BV	Bazaarvoice	4.55	377	331	218	6%	11.3%	2%	1.5x	1.5x	15.4x	na	-3%	2%	22%	2%	1.83	1.2%	3%
CALD	CallidusCloud	23.90	1,550	1,269	289	18%	13.8%	22%	4.4x	3.6x	41.5x	na	14%	27%	29%	27%	10.27	4.7%	2%
CLDR	Cloudera	20.75	2,657	1,178	417	23%	na	26%	2.8x	2.2x	na	na	15%	0%	0%	0%	32.72	0.0%	3%
COUP	Coupa	34.22	1,743	867	209	24%	na	19%	4.2x	3.5x	na	na	23%	29%	0%	23%	23.55	9.3%	1%
CSLT	Castlight Health	3.50	457	257	169	26%	na	21%	1.5x	1.3x	na	8.7x	-9%	-1%	-17%	-9%	1.36	6.1%	5%
CSOD	Cornerstone	37.36	2,123	2,044	557	16%	15.0%	17%	3.7x	3.1x	28.7x	22.5x	-5%	-11%	-7%	-7%	19.38	5.3%	9%
ECOM	ChannelAdvisor	11.40	300	232	138	11%	7.5%	na	1.7x	na	17.8x	na	-3%	6%	-8%	-3%	1.01	1.6%	9%
ENV	Envestnet	35.85	1,571	1,788	754	14%	20.7%	15%	2.4x	2.1x	18.0x	15.8x	3%	-7%	6%	3%	10.78	6.1%	3%
EVBG	Everbridge	25.86	721	487	128	26%	1.8%	23%	3.8x	3.1x	na	na	11%	36%	0%	11%	6.83	2.0%	15%
FNNG	Financial Engines	37.90	2,383	2,266	545	13%	33.7%	2%	4.2x	4.1x	20.4x	19.0x	-11%	-14%	37%	-11%	11.37	16.4%	1%
HDP	Hortonworks	12.36	777	654	303	27%	21.6%	21%	2.2x	1.8x	na	18.3x	19%	24%	6%	19%	12.87	11.4%	7%
INST	Instructure	26.70	772	715	198	30%	na	27%	3.6x	2.8x	na	39.5x	12%	17%	54%	17%	5.81	10.1%	12%
JIVE	Jive	5.28	421	293	212	5%	11.6%	na	1.4x	na	na	na	4%	20%	39%	20%	5.83	0.7%	9%
LPSN	LivePerson	9.55	558	487	218	5%	10.9%	na	2.2x	na	35.8x	na	35%	35%	37%	35%	3.25	2.2%	8%
MB	MINDBODY	28.05	1,226	1,056	226	25%	8.0%	29%	4.7x	3.6x	na	na	-1%	6%	109%	6%	14.14	12.7%	6%
MODN	Model N	12.95	373	365	152	10%	4.5%	na	2.4x	na	na	na	21%	22%	5%	21%	1.46	6.2%	20%
OKTA	Okta	26.10	2,369	826	315	39%	na	38%	2.6x	1.9x	na	26.8x	0%	0%	0%	0%	14.50	0.6%	0%
PCTY	Paylocity	46.85	2,413	2,303	409	24%	18.2%	na	5.6x	na	50.1x	na	19%	33%	28%	28%	14.92	10.9%	38%
OTWO	Q2 Holdings	39.60	1,622	1,504	246	27%	8.3%	26%	6.1x	4.8x	na	na	4%	10%	59%	10%	8.95	5.6%	2%
RP	RealPage	34.60	2,861	2,791	732	13%	27.1%	19%	3.8x	3.2x	20.7x	21.3x	-7%	3%	59%	3%	18.84	1.5%	29%
RST	Rosetta Stone	11.87	263	224	186	2%	7.0%	na	1.2x	na	na	na	6%	51%	57%	51%	1.79	2.3%	8%
SALE	RetailMeNot	0.00	na	(166)	na	na	na	na	na	na	na	na	0%	0%	0%	0%	0.00	0.8%	0%
SNGR	Synchronoss	12.78	593	681	815	11%	29.7%	6%	0.8x	0.8x	5.6x	26.1x	-20%	-53%	-64%	-53%	31.24	13.0%	8%
SPSC	SPS Commerce	58.16	1,000	854	254	15%	15.4%	na	3.4x	na	46.4x	na	5%	5%	7%	5%	6.64	3.5%	0%
SREV	ServiceSource	3.46	307	249	256	7%	9.4%	na	1.0x	na	25.6x	na	-8%	-12%	-7%	-8%	0.64	7.0%	3%
STMP	Stamps.com	137.90	2,336	2,532	495	16%	50.8%	na	5.1x	na	13.5x	na	30%	9%	52%	30%	112.74	35.6%	7%
TNGO	Tangoe	6.46	258	(2)	na	na	na	na	na	na	na	na	1%	13%	-19%	1%	3.38	0.5%	5%
TWLO	Twilio	24.31	2,200	1,435	455	27%	na	38%	3.2x	2.3x	na	61.9x	-26%	-23%	0%	-23%	90.75	26.1%	11%
TWOU	2U	42.75	2,032	1,877	353	30%	5.4%	29%	5.3x	4.1x	na	na	-6%	17%	54%	17%	21.17	15.6%	1%
UPLD	Upland Software	22.24	410	413	97	9%	32.7%	na	4.3x	na	19.4x	na	12%	85%	209%	85%	1.89	0.4%	18%
VRNS	Varonis Systems	36.35	989	846	238	17%	4.1%	14%	3.6x	3.1x	55.4x	40.3x	16%	33%	49%	33%	12.28	3.7%	5%
WAGE	WageWorks	70.75	2,634	2,303	530	10%	31.5%	7%	4.3x	4.0x	na	na	-4%	-8%	26%	-4%	18.23	5.1%	1%
WEB	Web.com Group	22.75	1,053	1,803	789	4%	26.3%	4%	2.3x	2.2x	10.8x	11.2x	18%	18%	34%	18%	8.01	6.4%	4%
WK	Workiva	18.20	753	699	236	15%	na	13%	3.0x	2.6x	na	na	8%	22%	32%	22%	2.34	5.2%	42%
XTLY	Xactly	15.70	504	452	135	21%	1.6%	15%	3.3x	2.9x	na	na	35%	27%	59%	35%	5.77	5.5%	4%
YEXT	Yext	14.74	1,438	594	221	33%	na	34%	2.7x	2.0x	na	na	-1%	0%	0%	0%	11.15	21.6%	31%
ZEN	Zendesk	25.98	2,571	2,218	546	30%	5.0%	26%	4.1x	3.2x	63.1x	na	-10%	-5%	6%	-5%	34.56	4.6%	4%
Select Small Cap (\$150M-\$3B mcap) Median					242	16%	11%	21%	3.2x	2.9x	31.1x	21.3x	4%	13%	30%	8%	8.27	5.3%	7%

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 5/31/2017

(In \$ million, except per share values)

Ticker	Company Name	5/31/17 Price	Market Cap	Enterprise Value (EV)	2018E Street		EBITDA margin	2019E Growth	EV/Sales		EV/FCF		Price % Change From			Momentum	60D avg Volume	Short as % of Float	Insider Ownership	
					Sales	Growth			CY18E	CY19E	CY18E	CY19E	1M	3M	12M					
Select Micro Cap (<\$150M mcap)																				
1PG	1-PAGE	0.11	16	(7)	na	na	na	na	na	na	na	na	3%	18%	-73%	3%	0.00	0.0%	19%	
AKDS	Arkados Group	0.75	11	10	na	na	na	na	na	na	na	na	-42%	-23%	7%	-23%	0.01	0.3%	34%	
ASUR	Asure Software	15.50	187	139	70	28%	23.7%	na	2.0x	na	13.8x	na	50%	40%	213%	50%	1.61	2.1%	9%	
CAFN	Cachet	3.65	36	5	23	70%	12.1%	na	0.2x	na	na	na	-5%	-39%	-55%	-39%	0.11	1.0%	33%	
CCUR	Concurrent	6.72	66	44	na	na	na	na	na	na	na	na	36%	34%	3%	34%	0.34	0.4%	20%	
COVS	Covisint	2.05	84	53	na	na	na	na	na	na	na	na	3%	3%	2%	3%	0.09	1.0%	2%	
COYN	COPsync	0.09	1	2	15	56%	na	na	0.1x	na	na	na	-22%	-73%	-95%	-73%	0.01	0.2%	12%	
CSTI	Costar	9.15	13	25	na	na	na	na	na	na	na	na	-9%	-9%	7%	-9%	0.01	0.0%	4%	
CXDO	Crexendo	1.59	22	21	na	na	na	na	na	na	na	na	9%	3%	6%	6%	0.00	1.1%	73%	
EGAN	eGain	1.55	42	51	na	na	na	na	na	na	na	na	3%	-14%	-52%	-14%	0.05	0.4%	37%	
EVOL	Evolving Systems	5.35	67	62	na	na	na	na	na	na	na	na	7%	15%	2%	7%	0.15	0.1%	31%	
FNJN	FinMay	2.96	69	48	22	-37%	na	na	2.2x	na	na	na	52%	111%	100%	100%	1.41	0.7%	2%	
FUEL	Rocket Fuel	3.03	141	160	440	4%	2.7%	5%	0.4x	0.3x	na	na	-40%	7%	18%	7%	4.01	19.6%	5%	
GSB	GlobalSCAPE	4.48	97	84	na	na	na	na	na	na	na	na	11%	19%	25%	19%	0.19	0.1%	21%	
GSVC	GSV Capital	4.51	100	166	1	13%	na	na	na	na	na	na	2%	-15%	-13%	-13%	0.27	0.0%	1%	
INLX	Intellinetics	0.90	16	16	na	na	na	na	na	na	na	na	6%	0%	6%	6%	0.00	0.0%	54%	
INUV	Inuvo	1.07	31	27	105	18%	2.7%	na	0.3x	na	na	na	-14%	-33%	-36%	-33%	0.08	0.8%	16%	
IPAS	iPass	1.46	96	82	85	23%	6.2%	na	1.0x	na	10.1x	na	18%	14%	14%	14%	0.21	0.6%	2%	
LVT	LiveTiles	0.17	66	53	na	na	na	na	na	na	na	na	-6%	14%	27%	14%	0.03	0.0%	206%	
MFON	Mobivity	0.79	29	27	na	na	na	na	na	na	na	na	13%	-1%	-5%	-1%	0.03	0.0%	20%	
MRIN	Mavin Software	1.30	51	20	na	na	na	na	na	na	na	na	-24%	-43%	-45%	-43%	0.12	1.9%	15%	
PYDS	Payment Data Sys	1.38	16	7	na	na	na	na	na	na	na	na	-5%	-15%	-21%	-15%	0.22	1.5%	46%	
SCIL	Scientific Learning	0.55	13	15	na	na	na	na	na	na	na	na	-4%	6%	27%	6%	0.00	0.0%	1%	
SHSP	SharpSpring	4.35	36	28	17	31%	na	na	1.6x	na	na	na	-1%	-16%	13%	-1%	0.08	1.2%	36%	
SMSI	Smith Micro Software	1.07	15	15	na	na	na	na	na	na	na	na	-5%	-18%	-62%	-18%	0.12	2.2%	13%	
SPRT	Support.com	2.45	46	(5)	na	na	na	na	na	na	na	na	13%	13%	3%	13%	0.15	0.4%	2%	
SWVC	First Technology	8.56	64	69	na	na	na	na	na	na	na	na	2%	2%	16%	2%	0.15	0.0%	8%	
WSTL	Westell	2.94	46	23	na	na	na	na	na	na	na	na	11%	4%	-8%	4%	0.10	0.1%	128%	
Select Micro Cap (<\$150M) Median					23	23%	6.2%	5%	0.7x	0.3x	12.0x	na	2%	3%	3%	3%	3%	0.11	0.5%	18%

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

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