

SaaS Software Cloud Update – August 2017

Public Markets and M&A Activity

Jeff Houston, CFA

Managing Director

+1 512 364 2258

jhouston@navidar.com

The Navidar SaaS Software Cloud Index was flat in August, but increased 19.1% in 2017 through the end of August, compared with the NASDAQ's +1.3% and +19.4%, 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.

Stamps.com (NASDAQ: STMP +29.1%). The leading provider of Web-based mailing and shipping solutions reported strong 2Q17 results on 8/2/17. Shipping growth continued to perform well, advancing 50%, due to a combination of healthy growth in new customers and volume. STMP also benefitted from two USPS contract renewals that carried more favorable terms. Revenue of \$116.1M accelerated 38% YOY while EBITDA margin improved 4.5 percentage points to 50%, exceeding expectations. Also, average revenue per user increased 20% and customer additions grew 14%. **ShippingEasy and ShipStation are two of STMP's critical SaaS software acquisitions—Navidar represented both firms as their sell-side M&A advisor.**

Shopify (NYSE: SHOP +20.1%). The ecommerce platform's stock continued its tear, advancing 159% in 2017 through August, due to significant outperformance and momentum with key operating metrics. While reporting 2Q17 results on 8/1/17, revenue of \$151.7M advanced 75% YOY, GMV grew 74%, and take rate expanded to 1.37%. SHOP is gaining share with SMBs and enterprises in part through the help of its partner ecosystem. More than 500K merchants across 175 countries now use Shopify and over 1.2M people are active users of the backend platform. Merchant growth was 56% in North America, 82% in Asia, 168% in South America, and 70% in Africa.

Ultimate Software (NASDAQ: ULTI -11.5%). The leading SaaS payroll and human capital management company reported disappointing 2Q17 results on 8/1/17. While EPS of \$0.93 were two pennies above Street consensus, revenue fell short of expectations (despite growing 20.5% YOY, to \$224.7M). Furthermore, ULTI lowered full-year guidance by four percentage points to 20% and operating margin by two points to 19%—its first full-year guidance reduction in about four years. The shortfall and reduction were attributed to delayed customer implementations, extending by about three months for enterprise and two months for midsize—ULTI only invoices clients for software once the deal goes live. Still, the company has historically been one of the best executing among its public SaaS peers, the demand environment is strong, and the competitive landscape is mostly unchanged.

Hortonworks (NASDAQ: HDP +26.8%). The enterprise data management software platform reported surprisingly good 2Q17 results on 8/3/17, overcoming concerns around competition, its open-source model, and recent senior management departures. Revenue of \$61.8M increased 42% YOY, above consensus. HDP experienced improved execution in the Americas with 29% growth, up several points sequentially, including 10 deals over \$1M as well as international strength.

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

Ticker	8/31 \$Price	Aug %ch	Ticker	8/31 \$Price	Aug %ch
AMZN	980.6	-0.7	IBM	143.03	-1.1
CSCO	32.2	2.4	MSFT	74.77	2.8
FB	172.0	1.6	ORCL	50.33	0.8
GOOGL	955.2	1.0	SAP	104.97	-0.2

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

Ticker	8/31 \$Price	Aug %ch	Ticker	8/31 \$Price	Aug %ch
ATHN	140.93	1.9	PEGA	57.55	-4.8
CRM	95.49	5.2	PYPL	61.68	5.3
CTXS	78.21	-1.0	RP	43.10	11.2
DATA	72.48	12.5	SHOP	110.92	20.1
EBAY	36.13	1.1	STMP	191.25	29.1
GDDY	44.82	4.3	TEAM	35.60	-0.6
GWRE	75.71	4.9	TWTR	16.91	5.1
INTU	141.45	3.1	ULTI	200.90	-11.0
LOGM	114.40	-1.8	VEEV	59.50	-6.7
NOW	116.19	5.2	WDAY	109.69	7.4
PAYC	74.61	6.4			

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

Ticker	8/31 \$Price	Aug %ch	Ticker	8/31 \$Price	Aug %ch
ACTA	12.80	-5.2	HUBS	73.35	1.4
ALRM	44.92	18.1	INST	29.60	-8.5
AMBR	8.06	-14.0	LPSN	13.40	-1.1
APPF	42.90	22.7	MB	23.65	-8.9
APTI	17.80	0.3	MODN	13.55	2.7
ASUR	11.58	-11.7	MULE	21.80	0.3
AYX	23.59	17.2	OKTA	26.99	23.0
BCOV	7.05	5.2	PCTY	49.14	8.1
BL	30.87	-20.4	Q TWO	40.60	4.4
BNFT	30.85	-13.7	RST	9.20	-11.2
BOX	19.62	4.1	SNCR	16.79	-0.5
BSFT	49.55	12.5	SPSC	60.92	5.4
BV	4.75	1.1	SREV	3.52	-7.4
CALD	25.75	6.0	TWLO	29.28	0.4
CLDR	19.40	12.5	TWOU	50.10	-3.2
COUP	30.46	-0.9	UPLD	23.00	-6.7
CSLT	3.90	-9.3	VRNS	38.80	4.2
CSOD	34.98	-13.2	WAGE	58.95	-9.6
ECOM	11.60	10.5	WEB	25.30	15.3
ELLI	82.98	-4.9	WIX	65.10	5.5
ENV	44.45	13.8	WK	20.20	3.1
EVBG	23.17	-2.0	YEXT	13.01	0.1
FNGN	33.05	-14.0	ZEN	27.40	-6.5
HDP	16.99	26.8			

Indexes (% change in Aug)

Mega-cap SaaS	0.9	NASDAQ	1.3
MidLgCap SaaS	4.9	DJIA	0.3
Small-cap SaaS	0.3	S&P 500	0.1
Micro-cap SaaS	-6.3	Russell2000	-1.3
Overall SaaS	0.2	S&P Volatility	3.2

Data source: S&P Capital IQ. 8/31/2017 Prices.
8/1-31/2017 %Change. All investing involves risk, including the risk of losing the entire investment. Prices are subject to change without prior notice.

Tableau (NYSE: DATA +12.5% in August). The data visualization software provider reported 2Q17 results on 8/2/17, exceeding top and bottom-line expectations. Revenue of \$212.9M advanced just 7% YOY while subscription annualized recurring revenue (ARR) grew 175% to \$103.5M—the company is making progress on its transition to a subscription model. Also, ratable license bookings increased to 38% of total, versus guidance of 30-35%. DATA added 4K customer accounts in the period, bringing the total to 61K, with 15 spending \$1M-plus and 372 spending over \$100K. There was pessimism going into the report as Tableau faces multiple headwinds, including competition from low-cost vendors.

On 8/9/17 DATA announced its acquisition ClearGraph, an early-stage company that helps users visualize business data through natural language queries, enabling them to ask questions and search for insights in a conversational manner. An example of this functionality is a data search for “how many customers purchased products in Austin.” DATA plans to integrate ClearGraph’s tech into all products as it gradually builds an end-to-end platform that addresses all layers of the analytics stack (beyond just the base data). We expect that the company will continue making tuck-in acquisitions to accomplish this endeavor.

Alteryx (NYSE: AYX +17.2%). The self-service data analytics SaaS provider outperformed while reporting 2Q17 results on 8/2/17. Revenue advanced 52% to \$30.3M, exceeding consensus. Non-US revenue grew 77%, to \$7M, representing 22% of total revenue. AYX’s land-and-expand approach is bearing fruit as clients typically begin with small installations and then grows throughout organizations. It added 258 clients (up 54% YOY), bringing the total to 2,823.

RealPage (NASDAQ: RP +11.3%). The SaaS rental property solution provider reported good 2Q17 results on 8/2/17 with revenue of \$161.3M (up 13% YOY) and EBITDA of \$39.4M, slightly exceeding expectations.

RP also announced its \$250M (5x revenue multiple) acquisition of On-Site, a leasing platform for property managers and renters. On-Site brings 700K new units at an RPU of \$20 as well as a cross-sell opportunity. RP has purchased four companies year-to-date for a cumulative price of \$700M.

AppFolio (NASDAQ: APPF +22.7%). The SMB property management and legal services SaaS provider reported 2Q17 results on 8/7/17 with revenue (\$35.89M accelerated 367% YOY) and EPS handily exceeding Street consensus. It also raised full-year guidance to \$138.5M, representing 31% growth. APPF is experiencing success with its move up market. We like this strategy given the higher retention and better unit economics of larger property managers.

Asure Software (NASDAQ: ASUR -11.7%). The SaaS payroll, space, time, HR provider reported disappointing 2Q17 results on 8/14/17. Revenue of \$12.9M accelerated 33% YOY (lower organically), beating consensus, but EPS of \$0.07 was shy due to higher-than-anticipated interest expense and acquisition costs. Still, ASUR inked some larger space management deals as well as multiple smaller payroll/HCM deals. The company continues to target 36% revenue growth and a 24% EBITDA margin in 2018.

Faster Growth

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

	8/31	Aug		8/31	Aug
Ticker	\$Price	%ch	Ticker	\$Price	%ch
AMZN	980.60	-0.7	MULE	21.80	0.3
APPF	42.90	22.7	NOW	116.19	5.2
ASUR	11.58	-11.7	OKTA	26.99	23.0
AYX	23.59	17.2	PAYC	74.61	6.4
BL	30.87	-20.4	PCTY	49.14	8.1
BOX	19.62	4.1	QTWO	40.60	4.4
CLDR	19.40	12.5	SHOP	110.92	20.1
COUP	30.46	-0.9	TEAM	35.60	-0.6
CSLT	3.90	-9.3	TWLO	29.28	0.4
EVBG	23.17	-2.0	TWOU	50.10	-3.2
FB	171.97	1.6	WDAY	109.69	7.4
HDP	16.99	26.8	WIX	65.10	5.5
HUBS	73.35	1.4	YEXT	13.01	0.1
INST	29.60	-8.5	ZEN	27.40	-6.5
MB	23.65	-8.9			

Slower Growth

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

	8/31	Aug		8/31	Aug
Ticker	\$Price	%ch	Ticker	\$Price	%ch
ACTA	12.80	-5.2	INTU	141.45	3.1
ALRM	44.92	18.1	LOGM	114.40	-1.8
AMBR	8.06	-14.0	LPSN	13.40	-1.1
APTI	17.80	0.3	MODN	13.55	2.7
ATHN	140.93	1.9	MSFT	74.77	2.8
BCOV	7.05	5.2	ORCL	50.33	0.8
BNFT	30.85	-13.7	PEGA	57.55	-4.8
BSFT	49.55	12.5	PYPL	61.68	5.3
BV	4.75	1.1	RP	43.10	11.2
CALD	25.75	6.0	RST	9.20	-11.2
CRM	95.49	5.2	SAP	104.97	-0.2
CSCO	32.21	2.4	SNCR	16.79	-0.5
CSOD	34.98	-13.2	SPSC	60.92	5.4
CTXS	78.21	-1.0	SREV	3.52	-7.4
DATA	72.48	12.5	STMP	191.25	29.1
EBAY	36.13	1.1	TWTR	16.91	5.1
ECOM	11.60	10.5	ULTI	200.90	-11.0
ELLI	82.98	-4.9	UPLD	23.00	-6.7
ENV	44.45	13.8	VEEV	59.50	-6.7
FNGN	33.05	-14.0	VRNS	38.80	4.2
GGDY	44.82	4.3	WAGE	58.95	-9.6
GOOGL	955.24	1.0	WEB	25.30	15.3
GWRE	75.71	4.9	WK	20.20	3.1
IBM	143.03	-1.1			

Indexes (% change in Aug)

Faster SaaS	1.4	NASDAQ	1.3
Slower SaaS	1.1	S&P 500	0.1
Others	-6.3	Russell2000	-1.3
Overall SaaS	0.2	S&P Volatility	3.2

Data source: S&P Capital IQ. 8/31/2017 Prices. 8/1-31/2017 %Change. All investing involves risk, including the risk of losing the entire investment. Prices are subject to change without prior notice.

Blackline (NASDAQ: BL -20.4%). The accounting and finance operations automation SaaS provider reported mixed 2Q17 results on 8/3/17. Although revenue of \$42.3M (up 46% YOY) and profitability were above expectation, BL maintained full-year guidance due to caution around lengthening sales cycles and execution issues (e.g., customer service levels and Intercompany Hub sales). The stock was punished because with high valuation (traded at 9.1x 2018 EV/revenue before the report), investors expect perfection.

Envestnet (NYSE: ENV +13.8%). The SaaS platform that empowers fee-based financial advisors and institutions reported strong 2Q17 results on 8/8/17 for the second consecutive quarter, following several hiccups in 2016. Revenue of \$167.5M increased 18% YOY, adjusted EBITDA of \$29.5M exceeded expectations, and management increased full-year guidance. ENV's asset based business and licensing/subsidiary business performed well and Yodlee is in the early stages of being evaluated by Advisors. Still, the continued shift from active to passive investing combined with low fee sales, has been pressuring overall fee rates.

Financial Engines (NASDAQ: FNGN -14%). The software-enabled financial advisory services provider reported disappointing 2Q17 results on 8/8/17. Revenue of \$118.5M accelerated 12% YOY, short of expectations due to timing of asset pricing, a mix shift to more subadvised, lower AUM (currently \$151.8B, and the loss of a large passive sponsor, Kimberly Clark.

Cornerstone OnDemand (NASDAQ: CSOD -13.2%). The corporate learning and human capital management platform reported disappointing 2Q17 results on 8/3/17 as revenue accelerated just 8%, to \$116.7M, below consensus and CSOD reduced 3Q17 top-line expectations. Still, the number of complete suite deals to new clients more than doubled sequentially. CSOD views recruiting as its most compelling near-term opportunity—it is hoping to increase penetration to 40-50% from 21%.

Benefitfocus (NASDAQ: BNFT -13.7%). The SaaS benefits management platform for consumers, employers, insurance carriers, and brokers reported mixed 2Q17 results on 8/3/17. While revenue of \$63.7M (up 10% YOY) and EPS of \$0.10 exceeded expectations, BNFT lowered full-year guidance. The forecast pressure was attributed to adding just 40 new large-employer customers in the quarter, down from 62 in the year-ago period, due to political uncertainty (Affordable Care Act repeal debate) that caused lengthened deal cycle times and execution issues.

BroadSoft (NASDAQ: BSFT +12.5%). The unified communication as a service (UCaaS) software provider to the telecom industry is reportedly exploring strategic options, including a possible sale. We think that Oracle is among potential buyers given its broad portfolio of telecom solutions. While BSFT is struggling to compete with Cisco and Ericsson, the company reported strong 2Q17 results on 8/7/17 with \$88.8M in revenue (up 9% YOY) and it now has 550-plus carriers customers.

Furthermore, the UCaaS sector is consolidating. For example, both 8x8 and RingCentral are also considering a sale. And there have been multiple recent UCaaS acquisitions, including Fusion buying Birch Communications (\$280M on 8/28/17), Mitel-Shortel (\$430M on 6/27/17), Windstream-Broadview Networks (\$228M on 7/28/17), Sonus-Genband (\$745M on 5/23/17), Apollo-West (\$2B on 5/9/17), and Nice Systems-inContact (\$940M on 11/14/16).

Select Horizontal Companies¹

Ticker	8/31 \$Price	Aug %ch	Ticker	8/31 \$Price	Aug %ch
IPG	0.11	0.8	LPSN	13.40	-1.1
APTI	17.80	0.3	LVT	0.15	-7.8
ASUR	11.58	-11.7	MFON	0.97	29.3
AYX	23.59	17.2	MRIN	1.15	0.0
BCOV	7.05	5.2	MSFT	74.77	2.8
BL	30.87	-20.4	MULE	21.80	0.3
BNFT	30.85	-13.7	NOW	116.19	5.2
BOX	19.62	4.1	OKTA	26.99	23.0
CALD	25.75	6.0	ORCL	50.33	0.8
CCUR	6.32	-6.2	PAYC	74.61	6.4
CLDR	19.40	12.5	PCTY	49.14	8.1
COUP	30.46	-0.9	PEGA	57.55	-4.8
CRM	95.49	5.2	PYDS	2.36	76.3
CSCO	32.21	2.4	PYPL	61.68	5.3
CSOD	34.98	-13.2	SAP	104.97	-0.2
CTXS	78.21	-1.0	SHSH	3.65	-13.1
DATA	72.48	12.5	SMSI	1.09	3.8
EGAN	1.70	-8.1	SPRT	2.36	1.3
EVBG	23.17	-2.0	SREV	3.52	-7.4
FNJN	2.48	-21.0	TEAM	35.60	-0.6
FUEL	2.59	-0.4	TWLO	29.28	0.4
GDDY	44.82	4.3	ULTI	200.90	-11.0
GOOGL	955.24	1.0	UPLD	23.00	-6.7
GSB	3.64	-28.6	VRNS	38.80	4.2
HDP	16.99	26.8	WAGE	58.95	-9.6
HUBS	73.35	1.4	WDAY	109.69	7.4
IBM	143.03	-1.1	WEB	25.30	15.3
INLX	0.27	-48.8	WK	20.20	3.1
INTU	141.45	3.1	YEXT	13.01	0.1
LOGM	114.40	-1.8	ZEN	27.40	-6.5

Select Vertical Companies²

Ticker	8/31 \$Price	Aug %ch	Ticker	8/31 \$Price	Aug %ch
ACTA	12.80	-5.2	GSVC	4.80	20.3
AKDS	0.57	-19.7	GWRE	75.71	4.9
ALRM	44.92	18.1	INST	29.60	-8.5
AMBR	8.06	-14.0	INUV	1.02	-5.4
AMZN	980.60	-0.7	IPAS	0.56	-54.1
APPF	42.90	22.7	MB	23.65	-8.9
ATHN	140.93	1.9	MODN	13.55	2.7
BSFT	49.55	12.5	QTWO	40.60	4.4
BV	4.75	1.1	RP	43.10	11.2
CAFN	1.05	-51.1	RST	9.20	-11.2
COYN	0.13	-13.0	SCIL	0.48	-9.2
CSLT	3.90	-9.3	SHOP	110.92	20.1
CSTI	11.00	0.0	SNCR	16.79	-0.5
CXDO	1.65	-2.9	SPSC	60.92	5.4
EBAY	36.13	1.1	STMP	191.25	29.1
ECOM	11.60	10.5	SVVC	7.52	-6.4
ELLI	82.98	-4.9	TWOU	50.10	-3.2
ENV	44.45	13.8	TWTR	16.91	5.1
EVOL	4.75	-3.1	VEEV	59.50	-6.7
FB	171.97	1.6	WIX	65.10	5.5
FNGN	33.05	-14.0	WSTL	2.87	-17.8

**Indexes
 (% change in Aug)**

Horizontal SaaS	0.3	NASDAQ	1.3
Vertical SaaS	-0.6	S&P 500	0.1
Overall SaaS	0.2	Russell2000	-1.3
		S&P Volatility	3.2

¹ Horizontal companies provide software that

² Vertical companies provide software for

Data source: S&P Capital IQ, 8/31/2017 Prices.

Web.com Group (NASDAQ: WEB +15.3%). The website and SaaS digital marketing provider reported better-than-expected 2Q17 results on 8/3/17 as revenue exceeded expectations, despite declining 3% YOY to \$188.1M. WEB demonstrated progress on strategic initiatives (including improved retention in premium services and sales productivity). And although the number of subscribers declined slightly sequentially, average revenue per user increased a bit—a first since the Yodle acquisition (\$300M on 2/11/16). The company is on track to return to growth by the end of 2017.

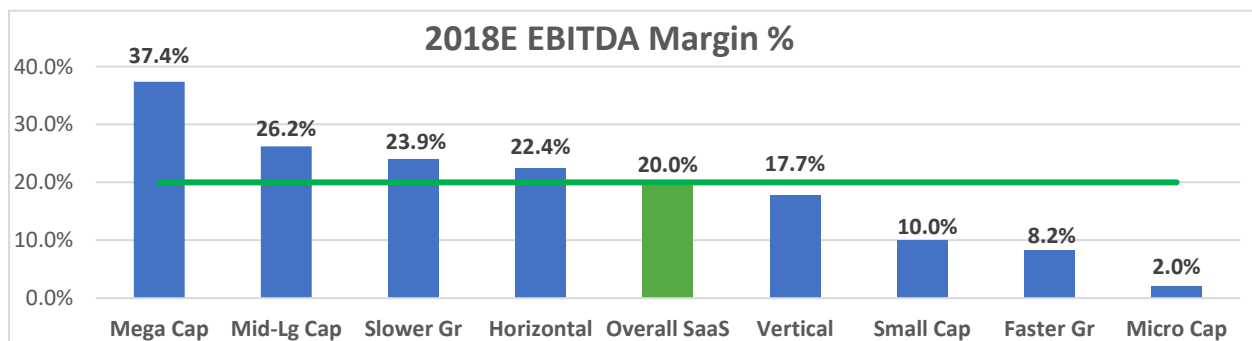
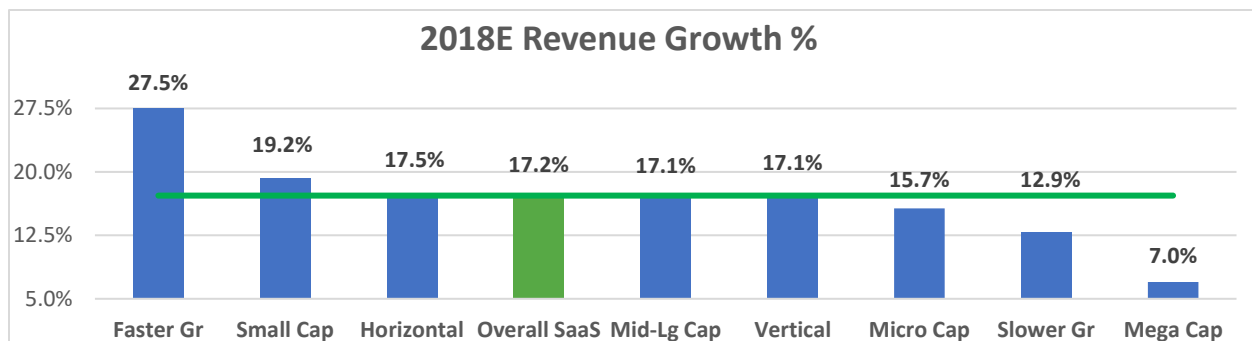
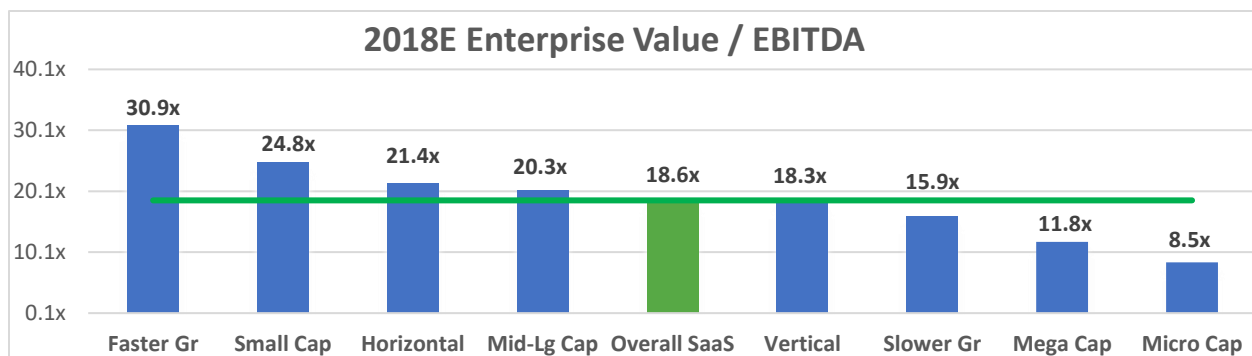
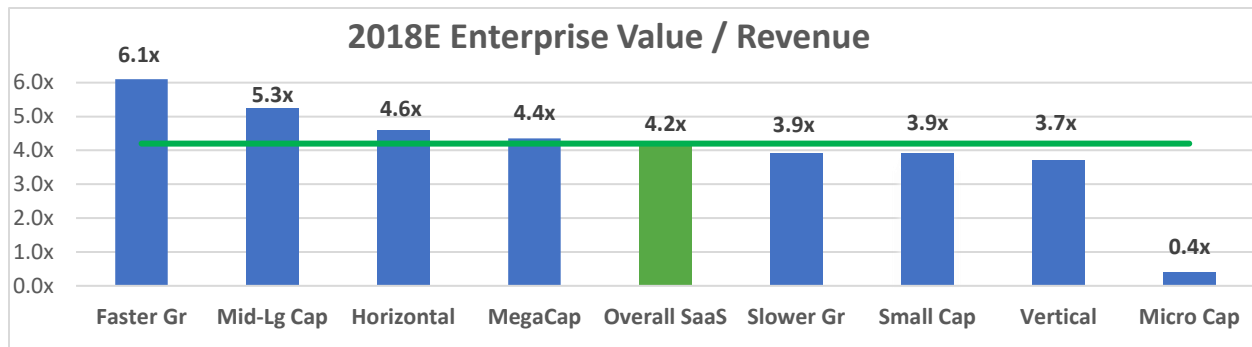
Alarm.com (NASDAQ: ALRM +18.1%). The connected property technology provider reported strong 2Q17 results on 8/8/17 due in part to strength in video door bell and camera products that drove an uptick in user engagement and retention. Revenue of \$86.0M accelerated 34% YOY and EPS was \$0.33, both exceeding expectations. As the first full quarter of the iControl acquisition (6/23/16 for \$140M), ALRM said that integration is on track and several joint projects have been launched. ALRM's solutions include interactive security, video monitoring, intelligent automation, and energy management.

Amber Road (NYSE: AMBR -14.0%). The SaaS global trade management (GTM) provider reported disappointing 2Q17 results on 8/3/17 as revenue of \$19.7M (up just 9% YOY) fell short of expectations and full-year top-line growth guidance was reduced to 8-11%. Headwinds include US trade negotiation noise from the White House. Still, Japan and the EU just inked a free trade agreement and EU and Canada are scheduled to sign one in September. While management pointed to continued demand for its solutions and improving operating metrics, investors are clearly impatient to see this materialize in results.

Additional Noteworthy M&A Activity

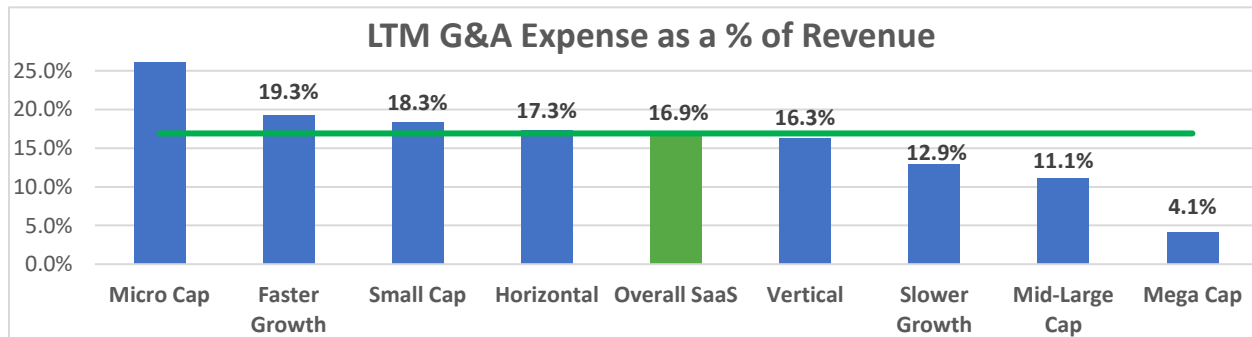
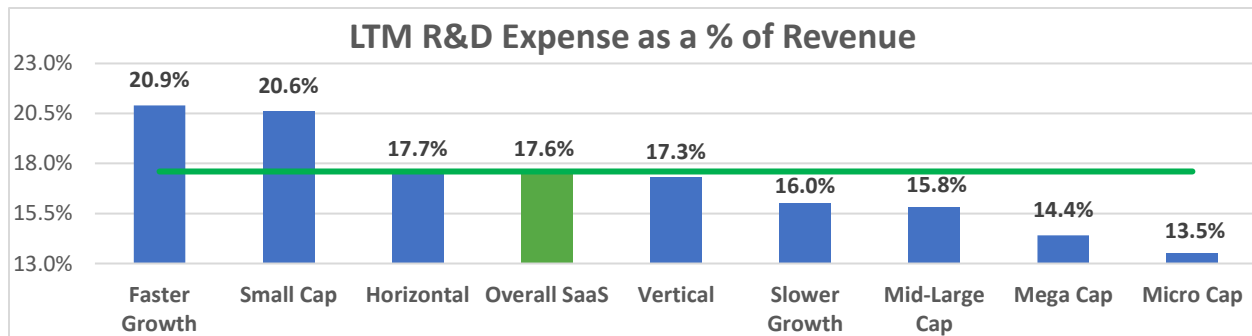
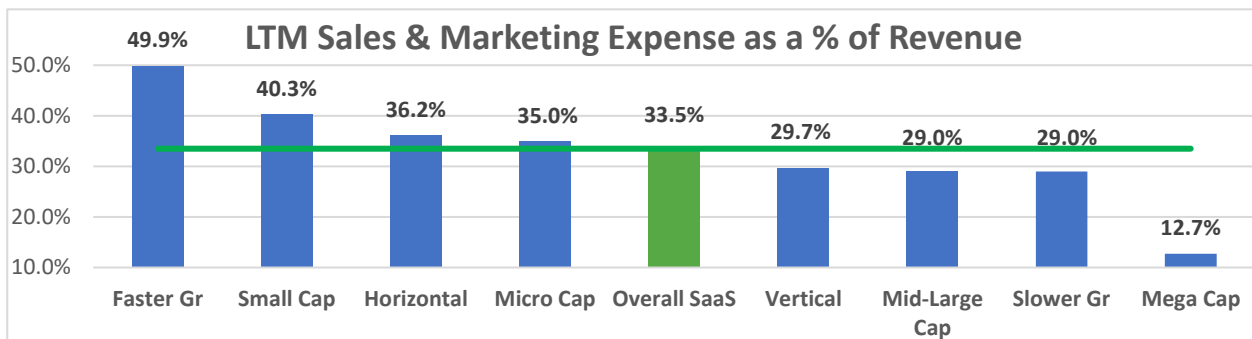
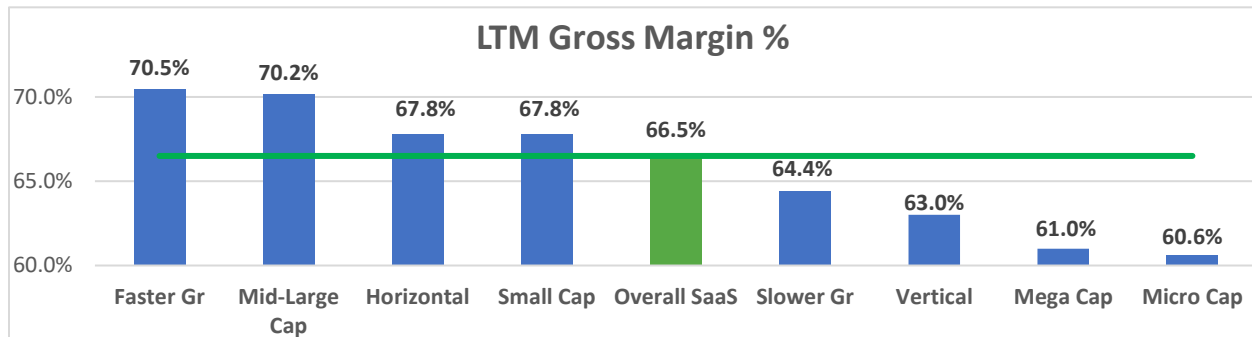
- **LogMeIn (NASDAQ:LOGM) acquired Nanorep** on 8/1/17 for about \$50M. Nanorep's chatbot and virtual assistant provide digital self-service based on artificial intelligence and natural language processing. LOGM plans to use this technology across all products. Supporting the rationale for this transaction, Gartner forecasts that customer service experiences handled by conversational agents will increase from 3% in 2017 to 30% by 2022.
- **Workday (NYSE:WDAY) acquired Pattern Technologies** on 8/16/17. Pattern Technologies provides an intelligent workspace that integrates with CRM and calendars including Google and Outlook as well as an enterprise notepad that enables collaborative documents to be created.
- **Global Payments (NYSE:GPN) acquired ACTIVE Network's** Communities and Sports divisions, from Vista Equity on 8/3/17 for \$1.2B. ACTIVE will leverage GPN's global distribution and it brings two new verticals to GPN. Furthermore, ACTIVE's data and analytics services will extend GPN's "Insight" offering to merchants. The deal is expected to be accretive and close in 4Q17.
- **Ellie Mae (NYSE:ELLI) acquired Velocify** on 8/31/17 for \$128M. Velocify provides cloud-based intelligent sales software for the mortgage origination market. Combining Velocify's lead management and distribution capabilities complements ELLI's strategy of building a fully digital mortgage service, pushing it deeper into lead generation. Synergies include cross selling Velocify to ELLI's 1,500-plus customers. The deal is expected to close in 4Q17.
- **The Advisory Board Company (NasdaqGS:ABCO) was acquired by Vista Equity and UnitedHealth's OptumInsight business unit** on 8/29/17 for \$3.04B, representing multiples of 3.3x revenue and 12.6x EBITDA. Vista is purchasing the education business for \$1.6B and OptumInsight will acquire the healthcare businesses for \$1.3B. Combining ABCO's research and advisory expertise with Optum's data and technology analytics will aid healthcare clients in adapting to the changing industry landscape. The deal is expected to close in late 2017 or early 2018.
- **Harland Clarke's Valassis acquired MaxPoint Interactive (NasdaqGM:MXPT)** on 8/28/17 for \$124M, representing 0.7x revenue and 20.5x EV/ EBITDA multiples. Valassis will cross-sell MXPT's digital media advertising solutions to its 58,000 advertiser clients. It also brings new verticals, such as financial services, healthcare, and automotive, into Valassis' fold.
- **Alphabet (NasdaqGS:GOOGL) acquired AIMATTER OOO** on 08/16/2017. AIMATTER develops neural-network based AI and SDK for detecting and processing images on mobile devices. Google hopes to install the photo filtering technology into its selfie app and Android camera application.
- **Qualys (NasdaqGS:QLYS) acquired Aviram Networks (aka Nevis)** on 8/1/17. Aviram develops secure switching and identity-based policy enforcement appliances. The deal enables QLYS to strengthen its technology stack and broaden its footprint in India. The company plans to integrate Nevis' high performance and low-cost network traffic analysis tools that improve enterprises' network access into the Qualys Cloud Platform.

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 8/31/2017

(In \$ million, except per share values)

Ticker	Company Name	8/31/17 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	\$980.60	\$471,060	473,228	\$220,689	27%	11.5%	19%	2.1x	1.8x	22.9x	25.3x	-1%	-1%	27%	\$3,562.18	1.3%	17%
APPF	AppFolio	42.90	1,455	1,423	176	26%	17.7%	23%	8.1x	6.5x	na	na	23%	50%	133%	6.82	1.6%	45%
ASUR	Asure Software	11.58	144	190	70	27%	24.7%	na	2.7x	na	38.0x	na	-12%	-25%	118%	1.54	9.3%	9%
AYX	Alteryx	23.59	1,386	1,233	171	36%	na	32%	7.2x	5.5x	na	61.2x	17%	25%	0%	4.53	17.7%	17%
BL	BlackLine	30.87	1,620	1,513	222	29%	2.4%	28%	6.8x	5.3x	na	72.8x	-20%	-9%	0%	8.40	6.8%	20%
BOX	Box	19.62	2,652	2,570	624	23%	3.9%	23%	4.1x	3.4x	65.1x	27.5x	4%	5%	43%	24.70	7.1%	5%
CLDR	Cloudera	19.40	2,544	2,980	439	26%	na	23%	6.8x	5.5x	na	na	12%	-7%	0%	9.04	6.6%	3%
COUP	Coupa	30.46	1,614	1,376	217	25%	na	25%	6.3x	5.1x	na	87.6x	-1%	-11%	0%	12.41	7.8%	1%
CSLT	Castlight Health	3.90	514	423	170	28%	na	20%	2.5x	2.1x	na	20.4x	-9%	11%	-7%	1.14	9.2%	6%
EVBG	Everbridge	23.17	651	606	129	26%	1.9%	23%	4.7x	3.8x	na	na	-2%	-10%	0%	4.77	3.4%	15%
FB	Facebook	171.97	499,435	463,983	50,815	30%	62.1%	25%	9.1x	7.3x	25.1x	20.2x	2%	14%	36%	2,893.62	0.9%	18%
HDP	Hortonworks	16.99	1,140	1,068	316	27%	3.0%	25%	3.4x	2.7x	na	26.0x	27%	37%	113%	17.39	6.6%	6%
HUBS	HubSpot	73.35	2,716	2,513	458	26%	6.7%	22%	5.5x	4.5x	na	82.3x	1%	2%	32%	25.42	8.8%	7%
INST	Instructure	29.60	870	844	201	31%	na	32%	4.2x	3.2x	na	59.8x	-9%	11%	24%	8.71	10.0%	11%
MB	MINDBODY	23.65	1,096	888	226	25%	8.2%	26%	3.9x	3.1x	81.0x	40.9x	-9%	-16%	36%	9.16	21.7%	7%
MULE	MuleSoft	21.80	2,811	2,555	377	35%	na	29%	6.8x	5.2x	na	na	0%	-16%	0%	12.47	3.0%	7%
NOW	ServiceNow	116.19	19,835	19,283	2,491	31%	24.7%	28%	7.7x	6.0x	28.9x	20.7x	5%	11%	60%	184.30	6.2%	1%
OKTA	Okta	26.99	2,572	2,348	321	36%	na	38%	7.3x	5.3x	na	76.5x	23%	3%	0%	7.77	5.3%	11%
PAYC	Paycom	74.61	4,445	4,411	539	25%	29.3%	26%	8.2x	6.5x	43.5x	32.2x	6%	14%	45%	36.46	23.2%	20%
PCTY	Paylocity	49.14	2,543	2,440	406	22%	19.7%	23%	6.0x	4.9x	67.1x	35.9x	8%	5%	9%	11.16	6.1%	37%
QTWO	Q2 Holdings	40.60	1,676	1,598	245	26%	8.2%	26%	6.5x	5.2x	na	49.9x	4%	3%	43%	7.63	4.7%	2%
SHOP	Shopify	110.92	10,932	9,999	931	43%	4.7%	33%	10.7x	8.0x	na	na	20%	21%	168%	199.30	5.0%	19%
TEAM	Atlassian	35.60	8,027	7,477	945	31%	26.9%	26%	7.9x	6.3x	26.6x	na	-1%	0%	21%	19.53	4.5%	38%
TWLO	Twilio	29.28	2,691	2,402	467	25%	0.1%	29%	5.1x	4.0x	na	na	0%	20%	-45%	53.68	27.0%	14%
TWOU	2U	50.10	2,401	2,379	390	37%	5.5%	34%	6.1x	4.6x	na	na	-3%	17%	42%	17.62	17.0%	1%
WDAY	Workday	109.69	22,816	21,266	2,640	26%	17.0%	23%	8.1x	6.6x	57.0x	43.3x	7%	10%	29%	128.00	9.8%	35%
WIX	Wix.com	65.10	2,959	2,775	558	32%	24.1%	28%	5.0x	3.9x	22.0x	15.3x	6%	-12%	56%	59.65	5.8%	3%
YEXT	Yext	13.01	1,171	1,038	225	33%	na	35%	4.6x	3.4x	na	na	0%	-12%	0%	1.77	28.0%	25%
ZEN	Zendesk	27.40	2,754	2,513	548	30%	5.1%	29%	4.6x	3.6x	75.4x	36.4x	-7%	5%	-10%	25.12	5.9%	4%
Select Faster Growth (2018E Rev. Growth >20%) Median					390	27%	8.2%	26%	6.1x	5.0x	40.7x	36.4x	1%	5%	36%	12.47	6.6%	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 8/31/2017

(In \$ million, except per share values)

Ticker	Company Name	8/31/17 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			
Slower Growth (2018E Revenue Growth < 20%, excluding Micro Caps)																		
ACTA	Actua	12.80	392	341	148	16%	4.8%	na	2.3x	na	na	na	-5%	-9%	26%	1.33	2.3%	11%
ALRM	Alarm.Com	\$44.92	\$2,098	2,102	\$380	16%	22.3%	15%	5.5x	4.8x	58.6x	na	18%	38%	64%	\$17.39	5.3%	3%
AMBR	Amber Road	8.06	219	231	90	12%	3.2%	na	2.6x	na	na	na	-14%	11%	-23%	0.70	2.5%	9%
APTI	Apptio	17.80	711	587	210	15%	2.2%	11%	2.8x	2.5x	71.8x	13.7x	0%	8%	0%	4.46	3.7%	22%
ATHN	AthenaHealth	140.93	5,627	5,836	1,393	14%	22.5%	15%	4.2x	3.6x	90.7x	na	2%	5%	15%	80.63	15.3%	1%
BCOV	Brightcove	7.05	242	214	163	6%	4.3%	na	1.3x	na	na	na	5%	18%	-45%	1.59	3.4%	2%
BNFT	Benefitfocus	30.85	962	1,015	293	14%	9.3%	18%	3.5x	2.9x	na	15.4x	-14%	-3%	-24%	4.92	18.6%	17%
BSFT	BroadSoft	49.55	1,537	1,377	432	13%	24.0%	13%	3.2x	2.8x	21.2x	7.7x	12%	24%	8%	19.61	11.1%	1%
BV	Bazaarvoice	4.75	400	341	213	5%	12.2%	4%	1.6x	1.5x	16.6x	7.5x	1%	4%	19%	1.19	1.0%	3%
CALD	CallidusCloud	25.75	1,742	1,569	294	19%	15.1%	20%	5.3x	4.5x	55.1x	9.9x	6%	8%	33%	9.15	3.6%	2%
CRM	salesforce.com	95.49	68,629	67,710	12,449	20%	22.4%	19%	5.4x	4.6x	26.5x	3.9x	5%	7%	20%	358.90	2.4%	5%
CSCO	Cisco	32.21	161,052	124,277	48,575	1%	36.0%	2%	2.6x	2.5x	9.3x	3.5x	2%	2%	2%	636.60	0.8%	0%
CSOD	Cornerstone	34.98	2,014	1,947	556	16%	16.3%	18%	3.5x	3.0x	28.1x	5.5x	-13%	-6%	-20%	25.07	9.7%	9%
CTXS	Citrix	78.21	11,850	11,891	2,930	4%	34.0%	5%	4.1x	3.9x	12.8x	2.6x	-1%	-5%	-10%	103.50	4.2%	0%
DATA	Tableau	72.48	5,733	4,740	962	9%	8.9%	16%	4.9x	4.2x	30.9x	9.3x	12%	17%	25%	57.10	8.4%	22%
EBAY	eBay	36.13	38,670	41,119	10,077	6%	36.6%	6%	4.1x	3.8x	16.5x	3.7x	1%	5%	12%	310.28	2.0%	6%
ECOM	ChannelAdvisor	11.60	307	250	138	11%	6.9%	na	1.8x	na	18.5x	na	10%	2%	-7%	0.74	1.6%	9%
ELLI	Ellie Mae	82.98	2,853	2,519	486	20%	31.5%	23%	5.2x	4.2x	36.5x	5.2x	-5%	-24%	-15%	42.08	8.5%	2%
ENV	Envestnet	44.45	1,957	2,189	770	14%	20.4%	15%	2.8x	2.5x	21.3x	6.4x	14%	24%	13%	10.67	5.1%	3%
FNGN	Financial Engines	33.05	2,087	1,917	547	13%	33.6%	8%	3.5x	3.3x	17.4x	4.6x	-14%	-13%	3%	12.79	14.6%	1%
GDDY	GoDaddy	44.82	4,986	7,631	2,542	14%	26.2%	11%	3.0x	2.7x	13.3x	3.8x	4%	9%	38%	44.85	8.1%	0%
GOOGL	Alphabet	955.24	656,334	565,576	127,512	17%	40.2%	16%	4.4x	3.8x	17.5x	3.4x	1%	-3%	21%	1,659.33	0.5%	12%
GWRE	Guidewire	75.71	5,631	5,154	637	17%	23.1%	na	8.1x	na	39.2x	na	5%	14%	23%	29.24	6.1%	0%
IBM	IBM	143.03	133,295	166,799	77,806	0%	24.2%	0%	2.1x	2.1x	14.1x	6.4x	-1%	-6%	-10%	577.40	2.3%	0%
INTU	Intuit	141.45	36,242	35,953	5,889	10%	38.4%	11%	6.1x	5.5x	27.0x	3.1x	3%	1%	27%	175.78	1.1%	5%
LOGM	LogMeIn	114.40	6,032	5,747	1,165	15%	38.1%	9%	4.9x	4.5x	16.7x	2.9x	-2%	3%	37%	55.54	5.3%	2%
LPSN	LivePerson	13.40	789	735	230	7%	11.0%	5%	3.2x	3.0x	94.1x	26.9x	-1%	40%	72%	5.10	1.0%	9%
MODN	Model N	13.55	394	399	155	13%	6.1%	na	2.6x	na	73.1x	na	3%	5%	26%	1.75	5.4%	20%
MSFT	Microsoft	74.77	575,897	535,494	107,697	7%	38.8%	4%	5.0x	4.8x	17.6x	3.2x	3%	7%	30%	1,586.89	0.5%	1%
ORCL	Oracle	50.33	208,199	200,416	40,315	4%	47.0%	4%	5.0x	4.8x	13.8x	2.9x	1%	11%	22%	512.18	1.1%	27%
PEGA	Pegasystems	57.55	4,467	4,287	943	11%	17.9%	15%	4.5x	3.9x	36.4x	7.5x	-5%	-2%	123%	16.71	3.2%	52%
PYPL	PayPal Holdings	61.68	74,164	64,999	15,173	18%	25.9%	17%	4.3x	3.7x	18.9x	4.4x	5%	18%	66%	484.70	2.4%	6%
RP	RealPage	43.10	3,562	3,633	766	15%	26.4%	13%	4.7x	4.2x	26.3x	4.9x	11%	25%	67%	22.75	4.5%	28%
RST	Rosetta Stone	9.20	205	181	186	2%	7.6%	na	1.0x	na	na	na	-11%	-22%	4%	0.59	1.8%	9%
SAP	SAP	104.97	125,852	127,836	30,034	7%	34.1%	8%	4.3x	4.0x	23.9x	4.8x	0%	-2%	19%	0.51	0.0%	7%
SNCR	Synchronoss	16.79	779	902	794	8%	27.8%	8%	1.1x	1.1x	11.9x	16.4x	-1%	31%	-60%	8.82	18.0%	8%
SPSC	SPS Commerce	60.92	1,049	891	253	14%	15.6%	15%	3.5x	3.1x	46.1x	10.6x	5%	5%	-7%	7.62	3.3%	0%
SREV	ServiceSource	3.52	314	274	255	6%	10.6%	na	1.1x	na	28.2x	na	-7%	2%	-30%	0.66	4.9%	3%
STMP	Stamps.com	191.25	3,234	3,273	533	17%	51.4%	na	6.1x	na	14.5x	na	29%	39%	98%	95.60	18.0%	6%
TWTR	Twitter	16.91	12,419	10,085	2,548	6%	29.4%	7%	4.0x	3.7x	24.0x	6.2x	5%	-8%	-12%	275.04	8.5%	12%
ULTI	Ultimate Software	200.90	5,992	5,891	1,123	20%	23.8%	20%	5.2x	4.4x	45.1x	7.1x	-11%	-9%	-4%	73.88	13.2%	5%
UPLD	Upland Software	23.00	478	493	106	11%	34.0%	na	4.7x	na	22.3x	na	-7%	3%	171%	3.15	1.2%	16%
VEEV	Veeva Systems	59.50	8,315	7,591	805	19%	33.0%	17%	9.4x	8.0x	34.5x	3.0x	-7%	-6%	45%	81.43	5.3%	22%
VRNS	Varonis Systems	38.80	1,067	946	241	17%	4.6%	17%	3.9x	3.3x	47.9x	7.4x	4%	7%	31%	7.98	3.0%	3%
WAGE	WageWorks	58.95	2,340	1,810	528	9%	31.6%	7%	3.4x	3.2x	na	na	-10%	-17%	-5%	22.22	8.2%	1%
WEB	Web.com Group	25.30	1,107	1,719	787	4%	26.2%	4%	2.2x	2.1x	11.1x	5.1x	15%	11%	45%	9.78	5.9%	5%
WK	Workiva	20.20	845	792	235	14%	na	14%	3.4x	2.9x	90.8x	na	3%	11%	13%	2.05	5.0%	41%
Select Slower Growth (2018E Rev. Growth < 20%) Median					637	13%	23.9%	13%	3.9x	3.7x	24.0x	5.2x	1%	5%	19%	19.61	4.4%	5%

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 8/31/2017

(In \$ million, except per share values)

Ticker	Company Name	8/31/17 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			
Micro Caps and Those with No 2018E Revenue Estimates																		
1PG	1-PAGE	0.19	29	5	na	na	na	na	na	na	na	na	15733%	53%	6%	0.00	0.0%	8%
AKDS	Arkados Group	\$0.57	\$8	9	na	na	na	na	na	na	na	na	-20%	-24%	-5%	\$0.01	0.2%	29%
CAFN	Cachet	\$1.05	\$10	7	\$24	67%	16.3%	na	0.3x	na	na	na	-51%	-71%	-88%	\$0.93	0.4%	33%
CCUR	Concurrent	6.32	62	44	na	na	na	na	na	na	na	na	-6%	-6%	16%	0.15	0.4%	20%
COYN	COPsync	0.13	2	3	15	56%	na	na	0.2x	na	na	na	-13%	42%	-87%	0.00	0.0%	12%
CSTI	Costar	11.00	16	26	na	na	na	na	na	na	na	na	0%	20%	33%	0.00	0.0%	0%
CXDO	Crexendo	1.65	23	23	na	na	na	na	na	na	na	na	-3%	4%	22%	0.00	1.2%	73%
EGAN	eGain	1.70	46	55	na	na	na	na	na	na	na	na	-8%	10%	-46%	0.03	0.7%	37%
EVOL	Evolving	4.75	59	59	na	na	na	na	na	na	na	na	-3%	-11%	16%	0.10	0.1%	31%
FNJN	FinJan	2.48	68	46	22	-37%	na	na	2.1x	na	na	na	-21%	-16%	54%	0.71	1.3%	2%
FUEL	Rocket Fuel	2.59	122	142	289	-29%	na	-14%	0.5x	0.6x	na	na	0%	-15%	-14%	2.16	10.8%	5%
GSB	GlobalSCAPE	3.64	79	65	na	na	na	na	na	na	na	na	-29%	-19%	5%	0.31	0.2%	21%
GSVC	GSV Capital	4.80	106	180	1	12%	na	na	na	na	na	na	20%	6%	-1%	0.40	0.0%	1%
INLX	Intellinetics	0.27	5	6	na	na	na	na	na	na	na	na	-49%	-70%	-68%	0.02	0.4%	54%
INUV	Inuvo	1.02	29	30	100	20%	2.0%	na	0.3x	na	na	na	-5%	-5%	-18%	0.04	1.2%	16%
IPAS	iPass	0.56	37	27	68	25%	0.8%	na	0.4x	na	3.4x	na	-54%	-62%	-65%	0.11	0.4%	3%
LVT	LiveTiles	0.15	27	24	na	na	na	na	na	na	na	na	-8%	-12%	11%	0.05	0.0%	131%
MFON	Mobivity	0.97	35	36	na	na	na	na	na	na	na	na	29%	23%	29%	0.02	0.0%	19%
MRIN	Junein Software	1.15	45	16	na	na	na	na	na	na	na	na	0%	-12%	-55%	0.09	1.1%	18%
PYDS	Payment Data Sy	2.36	28	25	na	na	na	na	na	na	na	na	76%	71%	59%	0.36	1.6%	46%
SCIL	Scientific Learnin	0.48	11	13	na	na	na	na	na	na	na	na	-9%	-12%	-1%	0.00	0.0%	1%
SHSP	SharpSpring	3.65	31	23	17	30%	na	na	1.4x	na	na	na	-13%	-16%	-24%	0.05	1.1%	37%
SMSI	Smith Micro Softw	1.09	16	18	na	na	na	na	na	na	na	na	4%	2%	-55%	0.04	2.0%	12%
SPRT	Support.com	2.36	44	(8)	na	na	na	na	na	na	na	na	1%	-4%	-9%	0.15	0.2%	2%
SVVC	First Technology	7.52	56	49	na	na	na	na	na	na	na	na	-6%	-12%	8%	0.10	0.0%	8%
WSTL	Westell	2.87	44	21	na	na	na	na	na	na	na	na	-18%	-3%	33%	0.12	0.2%	32%
Select Micro Caps and Those with No Rev. Estimates Medi					637	13%	23.9%	13%	3.9x	3.7x	24.0x	5.2x	1%	5%	19%	19.61	4.2%	5%

About Navidar

Navidar LLC is a Registered Investment Advisor and a subsidiary of Navidar Holdco LLC (which was referred to as “Navidar” in this report) For more information, please visit www.Navidar.com.

Disclaimer

Certain statements in this Monthly Report (the “Monthly”) may be “Forward-looking” in that they do not discuss historical facts but instead note future expectations, projections, intentions, or other items relating to the future. We caution you to be aware of the speculative nature of forward-looking statements as these statements are not guarantees of performance or results.

Forward-looking statements, which are generally prefaced by the words “may,” “anticipate,” “estimate,” “could,” “should,” “would,” “expect,” “believe,” “will,” “plan,” “project,” “intend” and similar terms, are subject to known and unknown risks, uncertainties and other facts that may cause actual results or performance to differ materially from those contemplated by the forward-looking statements.

We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. In light of these risks, uncertainties, and assumptions, the forward-looking events discussed might not occur.

This Monthly has been prepared solely for informational purposes and may not be used or relied upon for any purpose other than as specifically contemplated by a written agreement with us.

This Monthly is not intended to provide the sole basis for evaluating, and should not be considered a recommendation with respect to, any transaction or other matter. This Monthly does not constitute an offer, or the solicitation of an offer, to buy or sell any securities or other financial product, to participate in any transaction or to provide any investment banking or other services, and should not be deemed to be a commitment or undertaking of any kind on the part of Navidar Holdco LLC (“Navidar”) or any of its affiliates to underwrite, place or purchase any securities or to provide any debt or equity financing or to participate in any transaction, or a recommendation to buy or sell any securities, to make any investment or to participate in any transaction or trading strategy.

Although the information contained in this Monthly has been obtained or compiled from sources deemed reliable, neither Navidar nor any of the Company affiliates make any representation or warranty, express or implied, as to the accuracy or completeness of the information contained herein and nothing contained herein is, or shall be relied upon as, a promise or representation whether as to the past, present or future performance. The information set forth herein may include estimates and / or involve significant elements of subjective judgment and analysis. No representations are made as to the accuracy of such estimates or that all assumptions relating to such estimates have been considered or stated or that such estimates will be realized. The information contained herein does not purport to contain all of the information that may be required to evaluate a participation in any transaction and any recipient hereof should conduct its own independent analysis of the data referred to herein. We assume no obligation to update or otherwise revise these materials.

Navidar does and seeks to do business with companies covered in Navidar Research. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of Navidar Research.

Navidar and its affiliates do not provide legal, tax or accounting advice. Prior to making any investment or participating in any transaction, you should consult, to the extent necessary, your own independent legal, tax, accounting and other professional advisors to ensure that any transaction or investment is suitable for you in the light of your financial capacity and objectives.