

CONFIDENTIAL

## Technology-Enabled Business Services (TEBS)

### Quarterly Update – 2018 Q3



# TEBS Overview

**Cherry Tree has been tracking trends and activity in the Technology Enabled Business Services (TEBS) space for more than 15 years, including the TEBS 100 index**

**TEBS companies are defined as those that:**

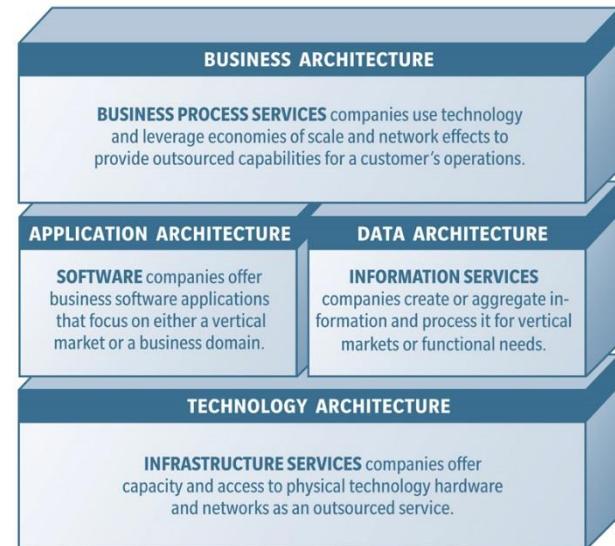
- *Offer a solution, product or service that is delivered or enhanced via technology*
- *Generate revenue primarily from other businesses ("B2B")*
- *Use their own intellectual property to differentiate their solution*

**The TEBS 100 is a broad index of 100 publicly-traded companies. The four segments of the TEBS 100 align with the open architecture framework:**

- *Business Process Services*
- *Software*
- *Information Services*
- *Infrastructure Services*

**TEBS companies are consistently valued at a premium to the overall market due to fundamental business advantages**

- *Recurring Revenue*
- *Operating Leverage*
- *High Switching Costs*



Cherry Tree Research, The Open Group

Valuation Multiples – 9/30/2018		
TEBS Segment	EV/Revenue	EV/EBITDA
Software	7.3x	22.5x
Information Services	6.6x	20.2x
Business Process Services	2.2x	18.3x
Infrastructure Services	5.0x	18.0x
S&P 500	3.3x	13.3x

Source: Cherry Tree Research, Capital IQ: 9/30/2018

## TEBS 100

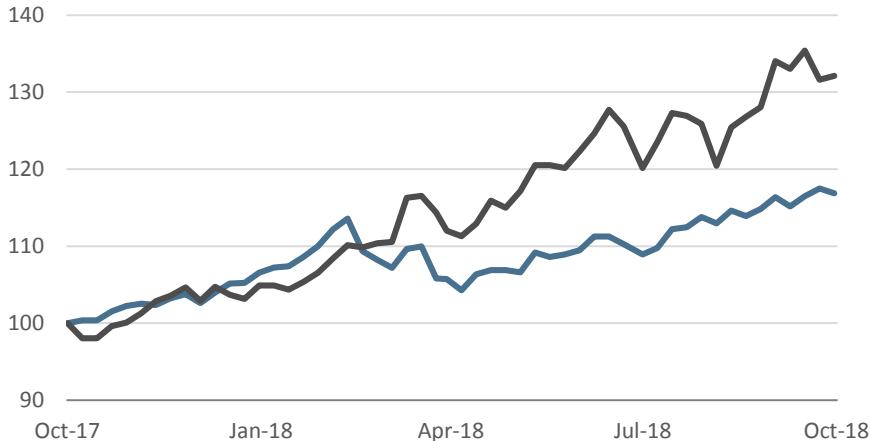
*An index of 100 publicly-traded Technology Enabled Business Services companies*

# TEBS 100 Index Performance

- The TEBS 100 continues to outperform the overall market over a three-year period (94% return over three years vs. 54% return)
- The long-term outperformance is most likely due to superior revenue growth from the TEBS 100

— S&P 500 — TEBS 100

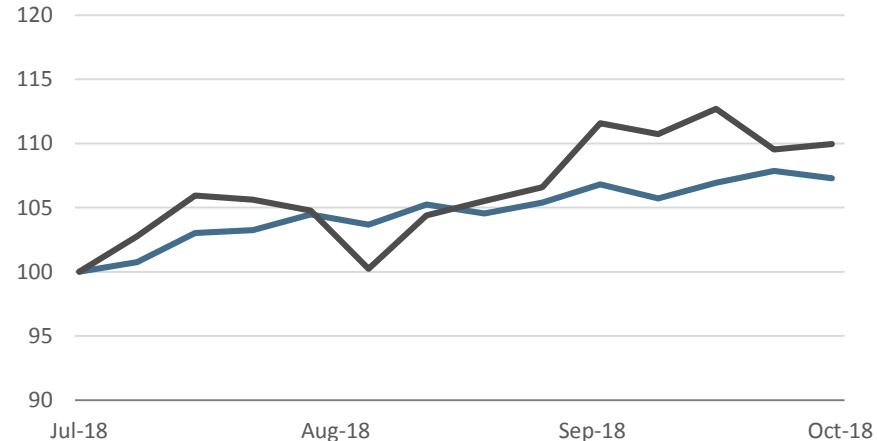
### 1-Year TEBS 100 Performance vs. S&P 500



### 3-Year TEBS 100 Performance vs. S&P 500



### 3-Month TEBS 100 Performance vs. S&P 500



# TEBS 100 Segment Operating Metrics

- The revenue growth of the TEBS 100 index and three of its four segments continue to outperform the S&P 500
- Gross margins for the TEBS 100 are much higher than the median S&P 500 company, allowing for greater operating leverage and potential for higher overall profitability
- However, EBITDA margins continue to lag the S&P 500, likely due to reinvestment of profits to drive revenue growth

Gross Margin			
	9/30/2016	9/30/2017	9/30/2018
Software	67.7%	69.1%	69.6%
Information Services	64.7%	64.3%	63.0%
Business Process Services	35.2%	39.2%	37.3%
Infrastructure Services	57.4%	58.2%	58.6%
TEBS 100	62.1%	64.3%	63.0%
S&P 500	42.6%	43.1%	44.8%

	Revenue Growth		
	9/30/2016	9/30/2017	9/30/2018
Software	18.2%	16.8%	15.6%
Information Services	11.4%	8.3%	10.1%
Business Process Services	6.7%	5.2%	6.4%
Infrastructure Services	23.0%	22.8%	19.6%
TEBS 100	14.0%	12.3%	13.4%
S&P 500	1.5%	5.5%	8.5%

EBITDA Margin			
	9/30/2016	9/30/2017	9/30/2018
Software	9.8%	10.7%	10.6%
Information Services	27.1%	27.0%	28.8%
Business Process Services	15.8%	17.2%	17.1%
Infrastructure Services	18.7%	21.4%	21.9%
TEBS 100	14.8%	16.7%	17.1%
S&P 500	22.7%	22.9%	22.9%

## TEBS 100 SEGMENT PERFORMANCE

*Software*

*Information Services*

*Business Process Services*

*Infrastructure Services*

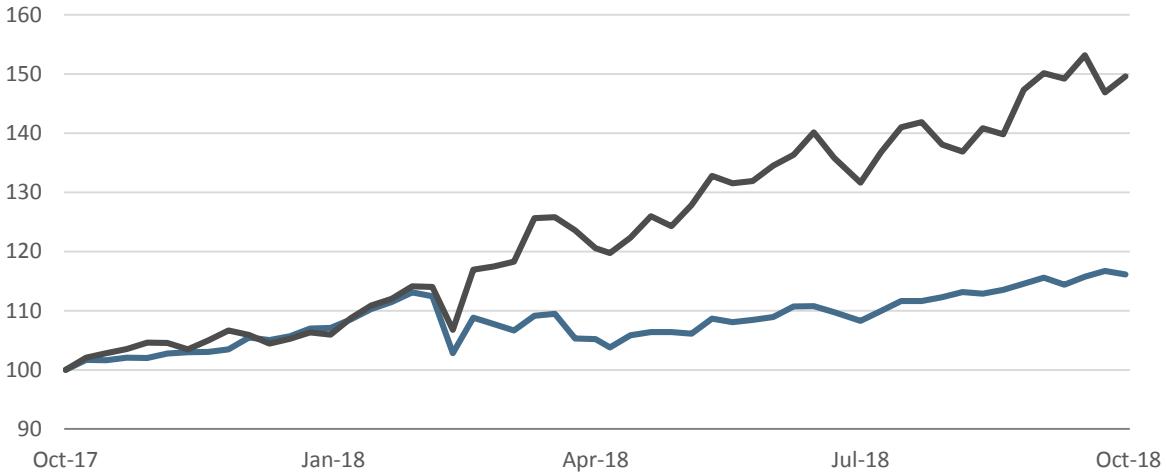
# TEBS 100 Companies – Software

Company	Enterprise Value	LTM Revenue	Gross Margin	EBITDA Margin	EV/Revenue		Revenue Growth
					Revenue	EBITDA	
8x8, Inc.	\$1,839	\$311	75.5%	-9.6%	5.9x	n/m	18.4%
ACI Worldwide, Inc.	\$3,878	\$996	55.1%	14.7%	3.9x	26.4x	-3.4%
Adobe Systems Incorporated	\$128,712	\$8,572	87.1%	36.0%	15.0x	n/m	24.2%
Allscripts Healthcare Solutions, Inc.	\$4,484	\$2,006	48.7%	5.2%	2.2x	n/m	21.1%
Amber Road, Inc.	\$279	\$82	54.1%	-7.7%	3.4x	n/m	7.4%
American Software, Inc.	\$290	\$113	54.1%	11.7%	2.6x	21.9x	7.1%
athenahealth, Inc.	\$5,453	\$1,287	54.2%	18.8%	4.2x	22.5x	11.7%
Atlassian Corporation Plc	\$21,789	\$874	80.2%	0.5%	24.9x	n/m	41.0%
Benefitfocus, Inc.	\$1,365	\$267	53.4%	0.2%	5.1x	n/m	14.4%
Blackbaud, Inc.	\$5,253	\$830	55.1%	17.1%	6.3x	37.0x	9.4%
Bottomline Technologies (de), Inc.	\$3,101	\$394	56.1%	10.7%	7.9x	n/m	12.8%
BlackLine, Inc.	\$2,931	\$204	77.7%	-9.1%	14.4x	n/m	37.9%
CA, Inc.	\$18,053	\$4,148	85.5%	30.2%	4.4x	14.4x	2.1%
Citrix Systems, Inc.	\$15,718	\$2,908	86.9%	30.6%	5.4x	17.6x	5.4%
Commvault Systems, Inc.	\$2,740	\$710	85.3%	2.3%	3.9x	n/m	7.6%
Cornerstone OnDemand, Inc.	\$3,233	\$519	71.7%	-2.3%	6.2x	n/m	16.7%
Ellie Mae, Inc.	\$3,040	\$463	59.2%	14.7%	6.6x	n/m	17.6%
Enghouse Systems Limited	\$1,591	\$262	69.6%	27.0%	6.1x	22.5x	6.7%
FireEye, Inc.	\$3,122	\$776	65.2%	-18.7%	4.0x	n/m	3.9%
Fiserv, Inc.	\$37,816	\$5,776	47.7%	32.0%	6.5x	20.5x	3.3%
Five9, Inc.	\$2,479	\$226	59.0%	4.8%	11.0x	n/m	25.3%
Fortinet, Inc.	\$14,173	\$1,631	74.9%	13.2%	8.7x	n/m	17.9%
HubSpot, Inc.	\$5,614	\$441	80.2%	-8.0%	12.7x	n/m	38.6%
Intuit Inc.	\$57,544	\$5,964	83.9%	29.1%	9.6x	33.2x	15.2%
Jack Henry & Associates, Inc.	\$12,323	\$1,537	43.4%	30.8%	8.0x	26.0x	7.4%
Manhattan Associates, Inc.	\$3,507	\$569	58.1%	29.3%	6.2x	21.0x	-4.7%
Medidata Solutions, Inc.	\$4,346	\$587	76.5%	15.5%	7.4x	n/m	15.5%
Mimecast Limited	\$2,424	\$282	73.3%	5.8%	8.6x	n/m	38.8%
MINDBODY, Inc.	\$1,861	\$212	70.7%	-5.6%	8.8x	n/m	32.5%

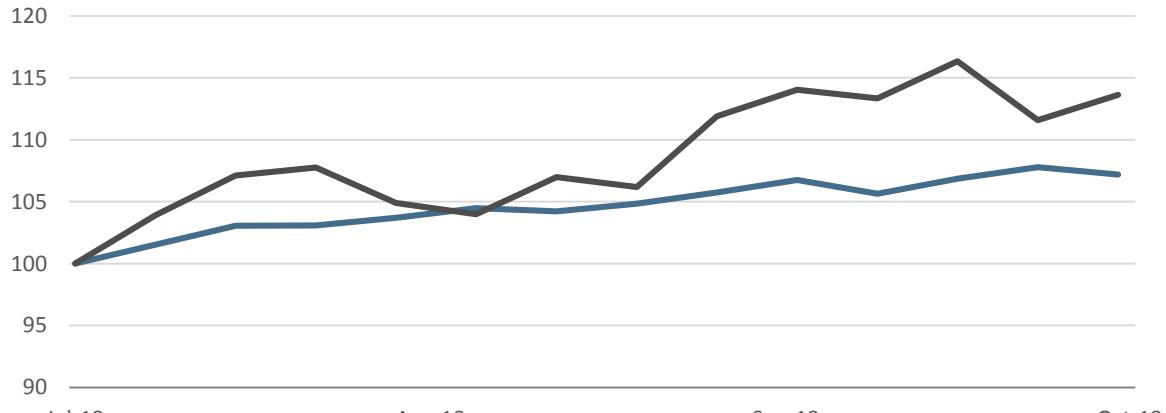
Company	Enterprise Value	LTM Revenue	Gross Margin	EBITDA Margin	EV/Revenue		Revenue Growth
					Revenue	EBITDA	
NextGen Healthcare, Inc.	\$1,308	\$533	54.6%	8.1%	2.5x	30.4x	2.9%
NIC Inc.	\$812	\$347	40.8%	24.9%	2.3x	9.4x	6.1%
Oracle Corporation	\$194,044	\$39,920	79.7%	40.5%	4.9x	12.0x	4.4%
Paycom Software, Inc.	\$9,092	\$498	85.9%	23.6%	18.3x	n/m	30.1%
Pegasystems Inc.	\$4,680	\$830	64.7%	-1.0%	5.6x	n/m	0.5%
Proofpoint, Inc.	\$5,658	\$612	71.5%	-5.9%	9.3x	n/m	37.5%
PROS Holdings, Inc.	\$1,356	\$184	59.6%	-24.4%	7.4x	n/m	15.6%
Q2 Holdings, Inc.	\$2,495	\$215	49.5%	-5.6%	11.6x	n/m	24.7%
QAD Inc.	\$936	\$328	51.5%	1.9%	2.9x	n/m	13.2%
RealPage, Inc.	\$6,190	\$774	60.6%	16.8%	8.0x	n/m	26.7%
Red Hat, Inc.	\$22,921	\$3,157	85.2%	19.1%	7.3x	38.1x	19.4%
salesforce.com, inc.	\$121,309	\$11,793	74.0%	9.4%	10.3x	n/m	25.3%
ServiceNow, Inc.	\$33,919	\$2,276	75.5%	1.7%	14.9x	n/m	40.5%
Shopify Inc.	\$15,997	\$854	56.5%	-5.6%	18.7x	n/m	67.7%
Splunk Inc.	\$16,905	\$1,464	79.5%	-16.6%	11.5x	n/m	38.3%
SPS Commerce, Inc.	\$1,562	\$235	66.7%	10.5%	6.7x	n/m	13.8%
Symantec Corporation	\$15,933	\$4,827	78.8%	25.6%	3.3x	12.9x	12.0%
Tableau Software, Inc.	\$8,356	\$993	87.1%	-12.5%	8.4x	n/m	14.2%
The Descartes Systems Group Inc	\$2,630	\$260	72.9%	32.0%	10.1x	31.6x	20.2%
The Ultimate Software Group, Inc.	\$9,867	\$1,035	62.6%	10.3%	9.5x	n/m	20.3%
Tyler Technologies, Inc.	\$9,319	\$889	47.4%	22.4%	10.5x	n/m	11.7%
Upland Software, Inc.	\$837	\$121	67.0%	21.0%	6.9x	32.8x	47.0%
Veeva Systems Inc.	\$14,722	\$763	69.7%	24.2%	19.3x	n/m	23.0%
VMware, Inc.	\$54,725	\$8,407	85.9%	26.9%	6.5x	24.2x	NA
Workday, Inc.	\$29,870	\$2,428	70.6%	-7.0%	12.3x	n/m	30.7%
<b>25th Percentile</b>	<b>\$2,483</b>	<b>\$315</b>	<b>55.4%</b>	<b>-2.0%</b>	<b>5.2x</b>	<b>19.0x</b>	<b>7.4%</b>
<b>Median</b>	<b>\$4,966</b>	<b>\$769</b>	<b>69.6%</b>	<b>10.6%</b>	<b>7.3x</b>	<b>22.5x</b>	<b>15.6%</b>
<b>75th Percentile</b>	<b>\$15,880</b>	<b>\$1,608</b>	<b>78.5%</b>	<b>24.1%</b>	<b>10.2x</b>	<b>31.0x</b>	<b>25.3%</b>

# Segment Performance – Software

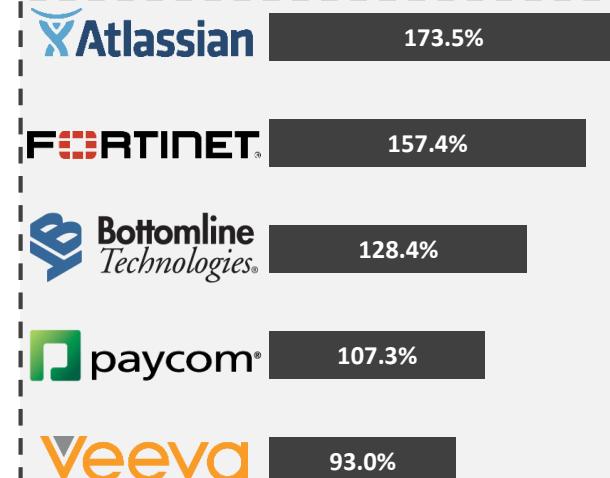
1-Year Stock Performance vs. S&P 500



3-Month Stock Performance vs. S&P 500



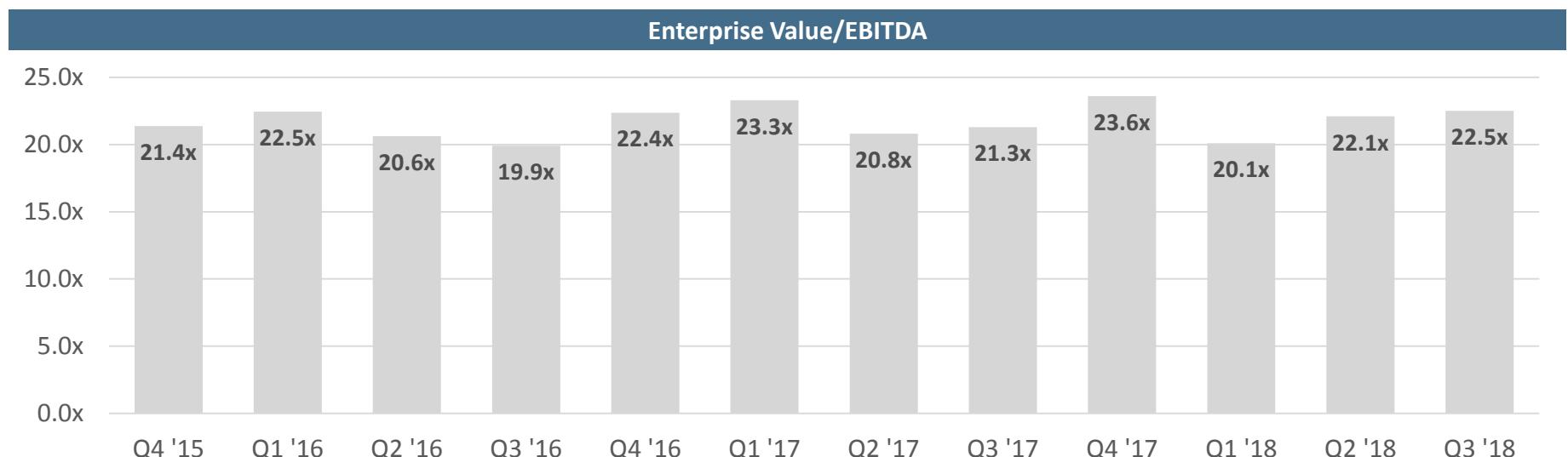
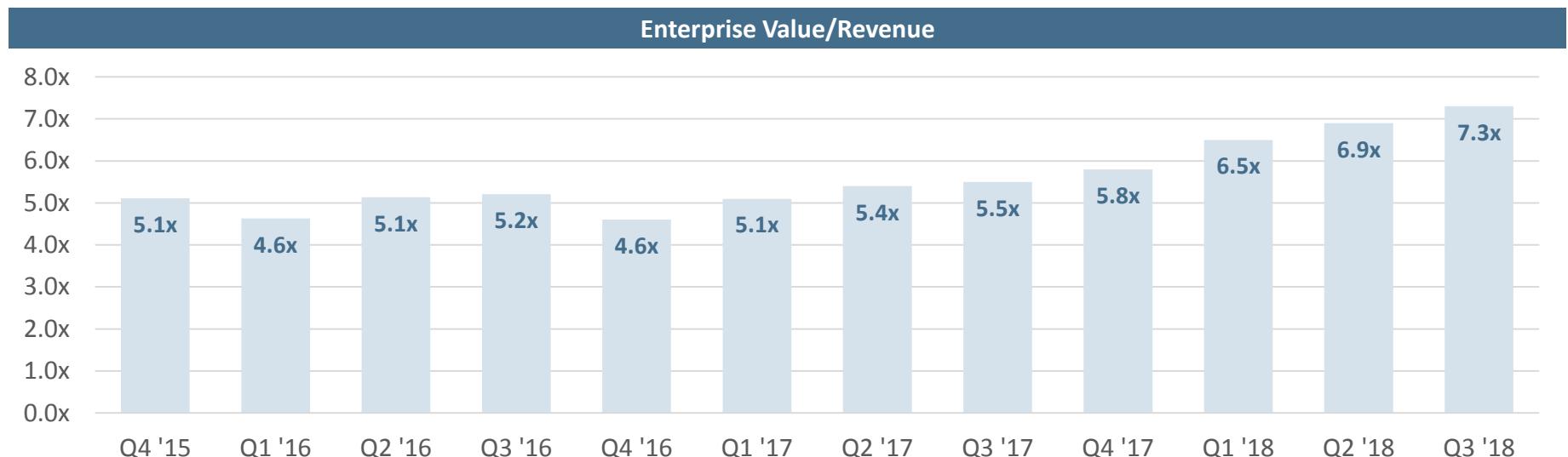
Top Performers (1-Yr)



Bottom Performers (1-Yr)

Source: Cherry Tree Research, Capital IQ: 9/30/2018

# Segment Valuation – Software

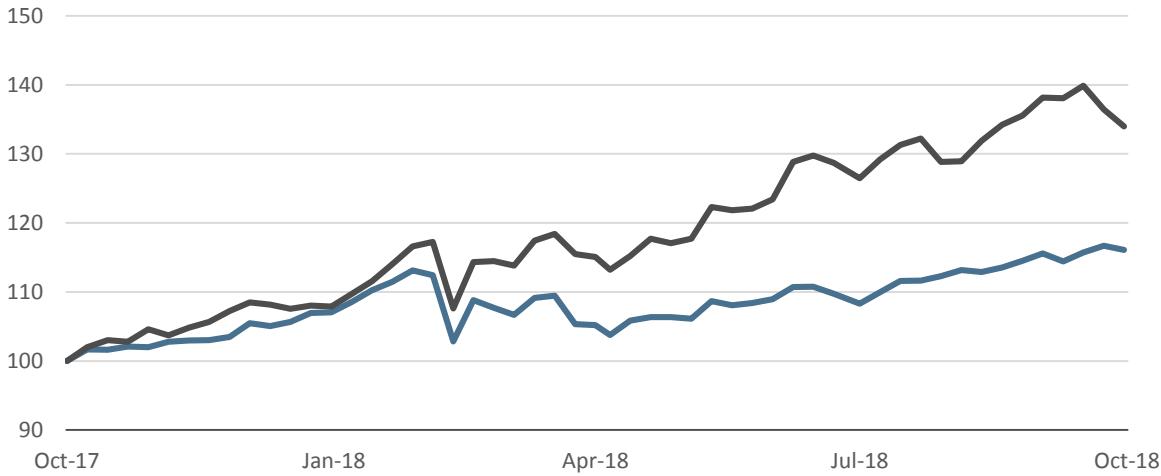


# TEBS 100 Companies – Information Services

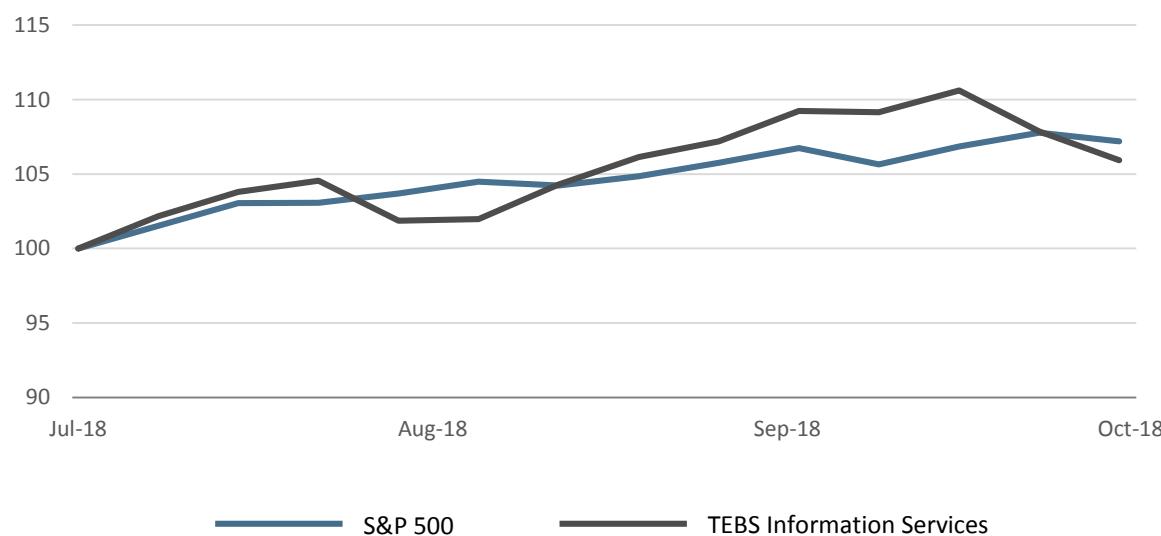
Company	Enterprise	LTM	Gross	EBITDA	EV/		Revenue
	Value	Revenue	Margin	Margin	Revenue	EBITDA	Growth
CoreLogic, Inc.	\$5,722	\$1,871	49.1%	21.9%	3.1x	14.0x	-2.2%
CoStar Group, Inc.	\$14,349	\$1,072	77.3%	26.7%	13.4x	n/m	19.8%
Equifax Inc.	\$18,084	\$3,416	61.7%	28.8%	5.3x	18.4x	3.7%
FactSet Research Systems Inc.	\$8,918	\$1,350	51.2%	31.4%	6.6x	21.1x	10.6%
Fair Isaac Corporation	\$7,300	\$1,006	69.5%	22.4%	7.3x	32.5x	10.0%
Forrester Research, Inc.	\$687	\$345	58.9%	9.2%	2.0x	21.7x	5.2%
Gartner, Inc.	\$16,684	\$3,807	61.8%	13.3%	4.4x	32.9x	38.6%
IHS Markit Ltd.	\$27,182	\$3,886	63.3%	32.9%	7.0x	21.2x	10.1%
Moody's Corporation	\$36,226	\$4,530	71.4%	47.2%	8.0x	17.0x	18.1%
Morningstar, Inc.	\$5,141	\$969	59.1%	27.3%	5.3x	19.4x	14.4%
Nielsen Holdings plc	\$18,286	\$6,659	57.3%	24.9%	2.7x	11.0x	4.1%
S&P Global Inc.	\$52,400	\$6,277	72.1%	48.9%	8.3x	17.1x	8.2%
The Dun & Bradstreet Corporation	\$6,444	\$1,813	68.5%	29.3%	3.6x	12.1x	5.6%
TransUnion	\$17,679	\$2,105	66.1%	36.3%	8.4x	23.1x	16.7%
Verisk Analytics, Inc.	\$22,501	\$2,302	63.0%	45.4%	9.8x	21.5x	13.4%
<b>25th Percentile</b>	<b>\$6,872</b>	<b>\$1,211</b>	<b>59.0%</b>	<b>23.6%</b>	<b>4.0x</b>	<b>17.0x</b>	<b>5.2%</b>
<b>Median</b>	<b>\$16,684</b>	<b>\$2,105</b>	<b>63.0%</b>	<b>28.8%</b>	<b>6.6x</b>	<b>20.2x</b>	<b>10.1%</b>
<b>75th Percentile</b>	<b>\$20,393</b>	<b>\$3,847</b>	<b>69.0%</b>	<b>34.6%</b>	<b>8.2x</b>	<b>21.7x</b>	<b>16.7%</b>

# Segment Performance – Information Services

## 1-Year Stock Performance vs. S&P 500



## 3-Month Stock Performance vs. S&P 500



## Top Performers (1-Yr)



62.7%



56.9%



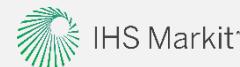
55.7%



48.1%



44.9%



22.4%



20.1%



9.7%



6.9%



(33.3%)

nielsen

## Bottom Performers (1-Yr)

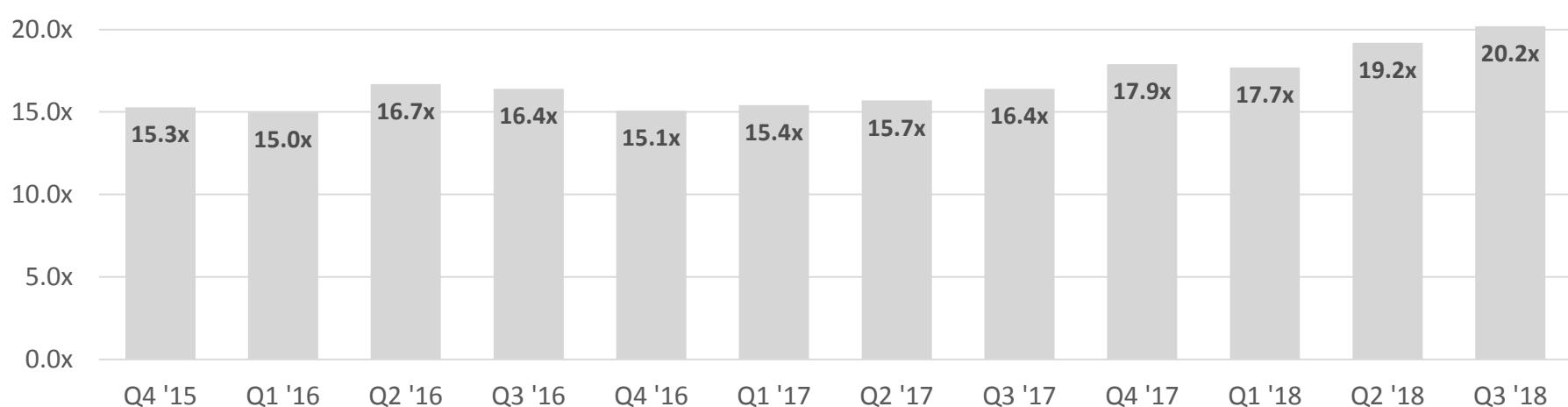
Source: Cherry Tree Research, Capital IQ: 9/30/2018

# Segment Valuation – Information Services

Enterprise Value/Revenue



Enterprise Value/EBITDA

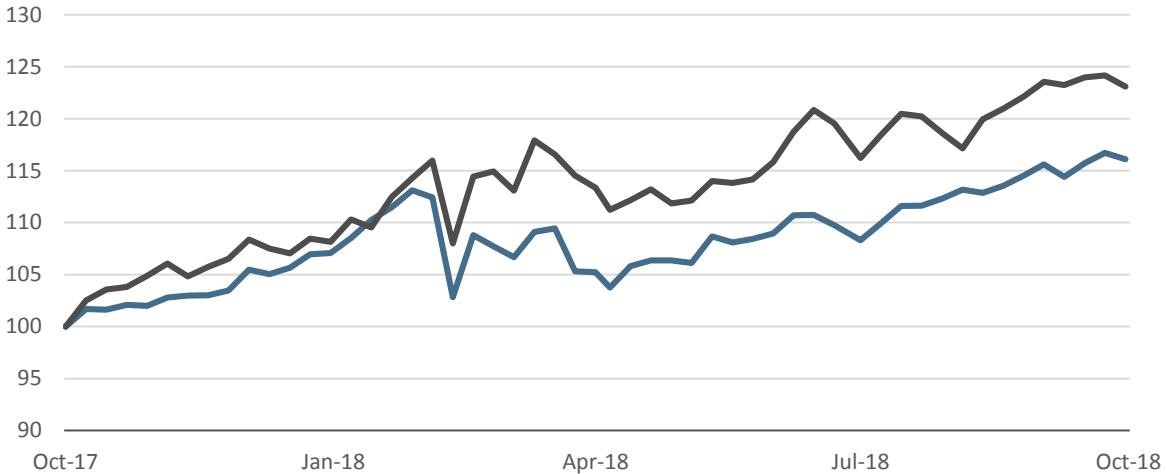


# TEBS 100 Companies – Business Process Services

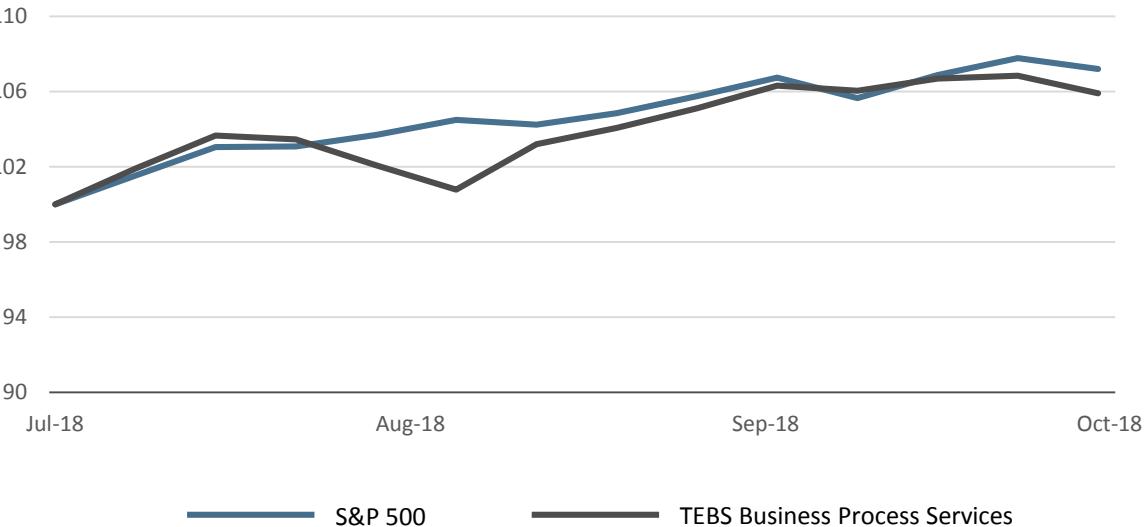
Company	Enterprise	LTM	Gross	EBITDA	EV/		Revenue
	Value	Revenue	Margin	Margin	Revenue	EBITDA	Growth
Amdocs Limited	\$8,815	\$3,952	34.8%	18.5%	2.2x	12.1x	3.2%
Automatic Data Processing, Inc.	\$65,734	\$13,326	43.2%	21.9%	4.9x	22.5x	7.6%
Broadridge Financial Solutions, Inc.	\$16,139	\$4,330	26.8%	18.6%	3.7x	20.0x	4.5%
Cimpres N.V.	\$5,237	\$2,593	50.6%	10.2%	2.0x	19.8x	21.4%
CSG Systems International, Inc.	\$1,520	\$819	49.9%	17.1%	1.9x	10.9x	6.4%
Conduent Incorporated	\$5,949	\$5,780	18.3%	12.3%	1.0x	8.3x	-6.2%
Global Payments Inc.	\$24,114	\$3,721	59.2%	32.8%	6.5x	19.7x	-11.2%
InnerWorkings, Inc.	\$549	\$1,150	23.6%	2.4%	0.5x	20.0x	4.7%
Exela Technologies, Inc.	\$2,361	\$1,528	24.6%	7.6%	1.5x	20.3x	84.9%
Paychex, Inc.	\$26,067	\$3,381	69.9%	42.2%	7.7x	18.3x	7.3%
PFSweb, Inc.	\$175	\$269	31.5%	7.5%	0.6x	8.7x	-4.7%
Genpact Limited	\$6,718	\$2,861	37.3%	14.5%	2.3x	16.2x	9.0%
TTEC Holdings, Inc.	\$1,421	\$1,511	24.2%	11.8%	0.9x	8.0x	12.0%
Worldpay, Inc.	\$38,253	\$3,957	75.3%	29.5%	9.7x	32.7x	4.2%
WageWorks, Inc.	\$1,047	\$462	63.3%	19.9%	2.3x	11.4x	33.1%
<b>25th Percentile</b>	<b>\$1,471</b>	<b>\$1,331</b>	<b>25.7%</b>	<b>11.0%</b>	<b>1.3x</b>	<b>11.1x</b>	<b>3.2%</b>
<b>Median</b>	<b>\$5,949</b>	<b>\$2,861</b>	<b>37.3%</b>	<b>17.1%</b>	<b>2.2x</b>	<b>18.3x</b>	<b>6.4%</b>
<b>75th Percentile</b>	<b>\$20,126</b>	<b>\$3,955</b>	<b>54.9%</b>	<b>20.9%</b>	<b>4.3x</b>	<b>20.0x</b>	<b>12.0%</b>

# Segment Performance – Business Process Services

1-Year Stock Performance vs. S&P 500



3-Month Stock Performance vs. S&P 500



Top Performers (1-Yr)

 **Broadridge** 63.3%

 **exela** 45.5%

 **CONDUENT** 43.7%

 **worldpay** 43.7%

 **cimpress** 39.9%

 **CSG International**

0.1%

(11.4%)  **PFSweb**

(29.6%)  **WageWorks**

(29.6%)  **InnerWorkings**  
we make marketing happen.

(38.0%)  **TeleTech**

Bottom Performers (1-Yr)

# Segment Valuation – Business Process Services

Enterprise Value/Revenue



Enterprise Value/EBITDA

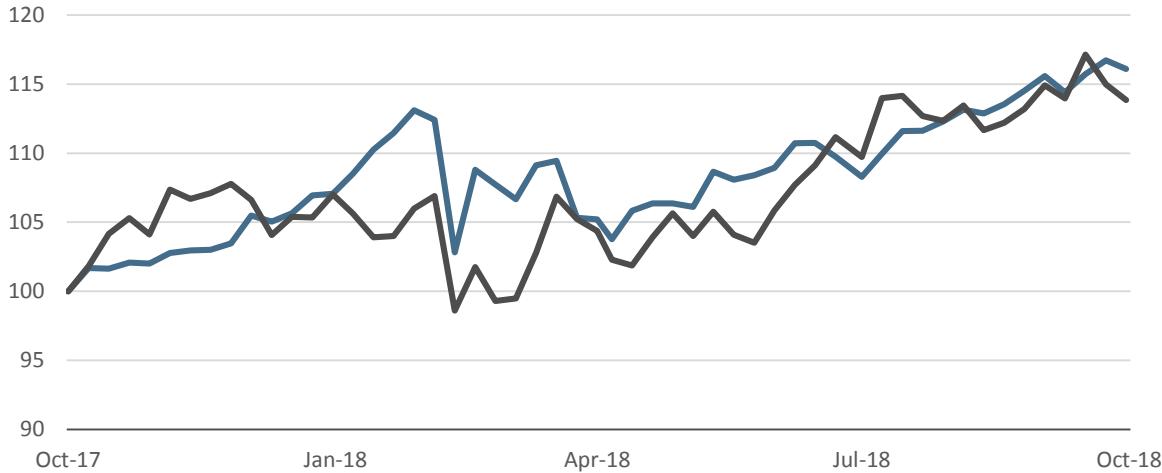


# TEBS 100 Companies – Infrastructure Services

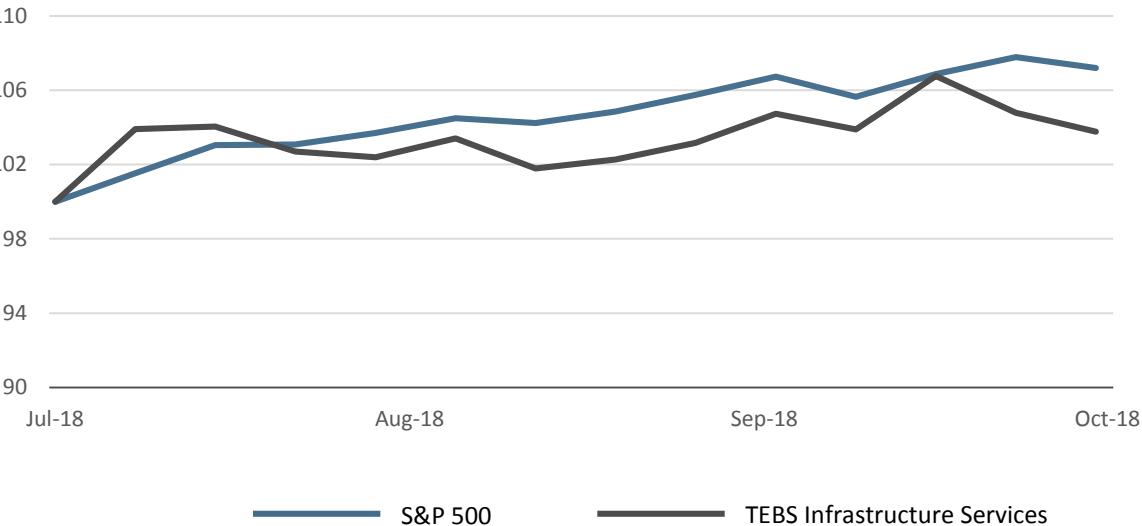
Company	Enterprise	LTM	Gross	EBITDA	EV/		Revenue
	Value	Revenue	Margin	Margin	Revenue	EBITDA	Growth
Akamai Technologies, Inc.	\$12,072	\$2,628	64.8%	25.5%	4.6x	18.0x	9.2%
Boingo Wireless, Inc.	\$1,479	\$229	34.3%	32.1%	6.5x	20.1x	27.7%
Box, Inc.	\$3,275	\$555	72.7%	-18.8%	5.9x	n/m	22.5%
Carbonite, Inc.	\$1,322	\$265	72.6%	10.1%	5.0x	n/m	19.6%
Cogent Communications Holdings, Inc.	\$3,016	\$494	58.6%	31.9%	6.1x	19.1x	8.5%
Endurance International Group Holdings, Inc.	\$3,045	\$1,169	52.7%	26.2%	2.6x	9.9x	-0.2%
Equinix, Inc. (REIT)	\$44,842	\$4,830	48.7%	44.2%	9.3x	21.0x	24.4%
GoDaddy Inc.	\$15,619	\$2,469	66.0%	15.3%	6.3x	n/m	23.1%
Gogo Inc.	\$1,204	\$820	47.3%	13.5%	1.5x	10.9x	27.1%
GTT Communications, Inc.	\$5,517	\$1,039	46.0%	21.9%	5.3x	24.2x	59.9%
Internap Corporation	\$906	\$295	55.2%	29.6%	3.1x	10.4x	1.8%
Limelight Networks, Inc.	\$520	\$197	58.2%	11.6%	2.6x	22.7x	13.4%
Pure Storage, Inc.	\$5,459	\$1,181	65.6%	-10.1%	4.6x	n/m	41.9%
Web.com Group, Inc.	\$1,963	\$751	67.5%	18.9%	2.6x	13.8x	0.1%
Zayo Group Holdings, Inc.	\$14,129	\$2,604	63.8%	45.7%	5.4x	11.9x	18.4%
<b>25th Percentile</b>	<b>\$1,401</b>	<b>\$395</b>	<b>50.7%</b>	<b>12.6%</b>	<b>2.9x</b>	<b>11.4x</b>	<b>8.5%</b>
<b>Median</b>	<b>\$3,045</b>	<b>\$820</b>	<b>58.6%</b>	<b>21.9%</b>	<b>5.0x</b>	<b>18.0x</b>	<b>19.6%</b>
<b>75th Percentile</b>	<b>\$8,795</b>	<b>\$1,825</b>	<b>65.8%</b>	<b>30.7%</b>	<b>6.0x</b>	<b>20.6x</b>	<b>27.1%</b>

# Segment Performance – Infrastructure Services

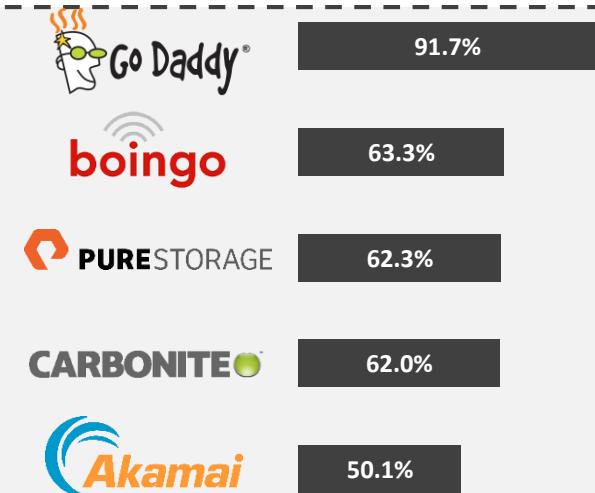
1-Year Stock Performance vs. S&P 500 – Update Chart



3-Month Stock Performance vs. S&P 500



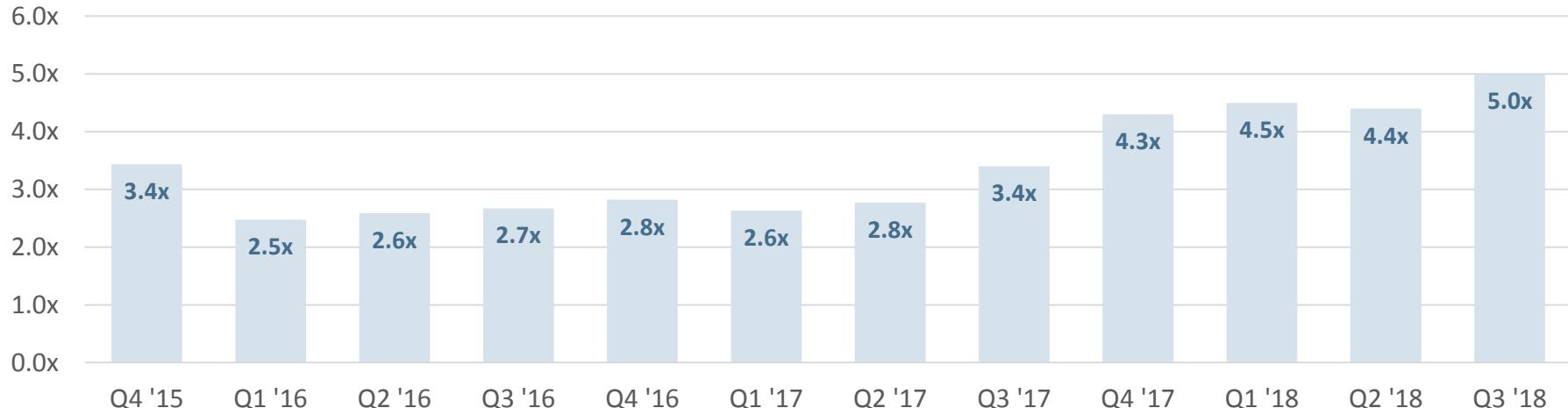
Top Performers (1-Yr)



Bottom Performers (1-Yr)

# Segment Valuation – Infrastructure Services

Enterprise Value/Revenue



Enterprise Value/EBITDA



## M&A ACTIVITY

# Select M&A Transactions

Date	Target	Acquirer	Enterprise	EV/			EBITDA		Margin	Segment
			Value	Revenue	EBITDA	Revenue	EBITDA			
9/30/2018	FusionStorm, Inc.	Computacenter plc (LSE:CCC)	\$90.0	0.2x	-	\$450.0	-	-	-	Infrastructure Services
9/28/2018	Federated Payment Systems	EVO Payments (Nasdaq:EVOP)	-	-	-	-	-	-	-	Business Process Services
9/28/2018	Powervision Software	Coretex Business Solutions (TSXV:CBX)	\$7.0	3.0x	-	\$2.33	-	-	-	Software
9/27/2018	SICOM Systems, Inc.	Global Payments Inc. (NYSE:GPN)	\$415.0	-	-	-	-	-	-	Business Process Services
9/27/2018	Navience Healthcare Solutions	Huntsworth plc (LSE:HNT)	\$70.0	10.9x	18.4x	\$6.4	\$3.8	59.2%	-	Information Services
9/27/2018	Iron Bow Technologies	H.I.G. Capital, LLC	-	-	-	-	-	-	-	Business Process Services
9/26/2018	RightScale, Inc.	Flexera Holdings LP	-	-	-	-	-	-	-	Software
9/26/2018	Datanyze, inc.	Zoom Information, Inc.	-	-	-	-	-	-	-	Information Services
9/26/2018	Vasona Networks, Inc.	Zephyr Telecommunications, Inc.	-	-	-	-	-	-	-	Software
9/26/2018	Augeo FI	Lightyear Capital	\$140.0	-	-	-	-	-	-	Business Process Services
9/26/2018	AppRev/Billing and Payments Business	Output Services Group, Inc.	-	-	-	-	-	-	-	Business Process Services
9/25/2018	NETfacilities, Inc.	Asset Management Technologies	-	-	-	-	-	-	-	Software
9/25/2018	ATM Business of Elan Financial	Fiserv, Inc. (Nasdaq:FISV)	\$690.0	-	-	-	-	-	-	Business Process Services
9/25/2018	Prime Analytics, LLC	KRM22 (AIM:KRM)	\$8.0	3.2x	-	\$2.5	-	-	-	Software
9/25/2018	Locus Energy, LLC	AlsoEnergy, Inc.	-	-	-	-	-	-	-	Software
9/25/2018	Comet Solutions, Inc.	Aras Corporation	-	-	-	-	-	-	-	Software
9/25/2018	Build A Sign LLC	Cimpres N.V. (Nasdaq:CMPR)	\$280.0	2.2x	-	\$127.3	-	-	-	Business Process Services
9/24/2018	OpsPanda, Inc.	Xactly Corporation	-	-	-	-	-	-	-	Software
9/24/2018	Recruiter.com	VocaWorks, Inc.	-	-	-	-	-	-	-	Information Services
9/24/2018	Astro Technology, Inc.	Slack Technologies, Inc.	-	-	-	-	-	-	-	Business Process Services
9/24/2018	Acuant Inc.	Audax Group, Inc.	-	-	-	-	-	-	-	Software
9/24/2018	Ascenty Ltda.	Digital Reality Trust, L.P.	\$1,826.8	-	15.3x	-	\$119.8	-	-	Infrastructure Services
9/20/2018	UnitedLex Corporation	CVC Capital Partners Limited	\$200.0	-	-	-	-	-	-	Business Process Services
9/20/2018	Allure Global Solutions	Creative Realities (OTCPK:CREX)	\$10.5	-	-	-	-	-	-	Software
9/20/2018	NewVoiceMedia Limited	Vonage Holdings	\$463.3	-	-	-	-	-	-	Business Process Services
9/20/2018	Marketo, Inc.	Adobe Systems (Nasdaq:ADBE)	\$4,750.0	-	-	-	-	-	-	Software
9/19/2018	TEAM Software	Accel-KKR LLC	-	-	-	-	-	-	-	Software
9/19/2018	Sitron, Inc	Limeade, Inc	-	-	-	-	-	-	-	Business Process Services
9/19/2018	Orchard & Grove	JAMF Software	-	-	-	-	-	-	-	Software
9/19/2018	Remedy Employer Services	CoAdvantage, Inc.	-	-	-	-	-	-	-	Business Process Services
9/18/2018	VeBridge Holdings	Konica Minolta Business Solutions	-	-	-	-	-	-	-	Business Process Services
9/18/2018	Hypemarks	Filestack, Inc.	-	-	-	-	-	-	-	Information Services
9/18/2018	e/Doc Systems	Novatech Inc.	-	-	-	-	-	-	-	Business Process Services
9/18/2018	Choice HR	Fourth Ltd.	-	-	-	-	-	-	-	Business Process Services
9/18/2018	StackPointCloud, Inc.	NetApp (Nasdaq:NTAP)	-	-	-	-	-	-	-	Software
9/18/2018	Advanced Technology Group	Cognizant Technology Solutions (NasdaqGS:CTSH)	-	-	-	-	-	-	-	Business Process Services
9/18/2018	ProcessUnity, Inc.	Long Ridge Equity Partners	\$25.3	-	-	-	-	-	-	Software

# Select M&A Transactions (Cont'd)

Date	Target	Acquirer	Enterprise		EV/		EBITDA		Margin	Segment
			Value	Revenue	EBITDA	Revenue	EBITDA			
9/18/2018	Oildex, Inc.	Drillinginfo, Inc.	-	-	-	-	-	-	-	Software
9/18/2018	Captio	Certify Inc.	-	-	-	-	-	-	-	Software
9/18/2018	Duncan Solutions, Inc.	Anacacia Capital	-	-	-	-	-	-	-	Business Process Services
9/17/2018	Core BTS, Inc.	Tailwind Capital Group	-	-	-	-	-	-	-	Business Process Services
9/17/2018	Vivonet Inc.	Infor, Inc.	-	-	-	-	-	-	-	Business Process Services
9/17/2018	Prolific Business Solutions	Talus	-	-	-	-	-	-	-	Business Process Services
9/17/2018	Simplified Business Solutions	iSolved HCM, LLC	-	-	-	-	-	-	-	Business Process Services
9/17/2018	OnCourse Learning Corp.	Bertelsmann SE & Co.	-	-	-	-	-	-	-	Information Services
9/16/2018	Lucro Solutions, Inc.	Validy LLC	-	-	-	-	-	-	-	Business Process Services
9/14/2018	Cinnober Financial Technology	Nasdaq Technology	\$176.5	4.4x	-	\$40.1	-	-	-	Information Services
9/14/2018	Forte Payment Systems	CSG Systems	\$85.0	-	-	-	-	-	-	Business Process Services
9/13/2018	AssetLock, LLC	Simplicity Financial Marketing	-	-	-	-	-	-	-	Software
9/13/2018	InXpo, Inc.	West Corporation	-	-	-	-	-	-	-	Business Process Services
9/13/2018	BeyondTrust Software	Bomgar Corporation	-	-	-	-	-	-	-	Software
9/12/2018	Questex LLC	MidOcean Partners	-	-	-	-	-	-	-	Business Process Services
9/11/2018	Apex Revenue Technologies	RevSpring	-	-	-	-	-	-	-	Business Process Services
9/11/2018	NOVAtime Technology	Ascentis Corporation	-	-	-	-	-	-	-	Business Process Services
9/10/2018	FutureSimple	Zendesk (NYSE:ZEN)	-	-	-	-	-	-	-	Software
9/10/2018	Ringail Solutions, Inc.	Nuix Pty	\$55.0	-	-	-	-	-	-	Business Process Services
9/6/2018	Vinyardsoft Corp	Eci Software Solutions	-	-	-	-	-	-	-	Software
9/6/2018	GlobalHosting Business Assets	CentralNic Group (AIM:CNIC)	\$3.0	3.0x	6.1x	\$1.0	\$0.5	49.2%	Business Process Services	
9/6/2018	Intralinks	SS&C Technologies Holdings, Inc. (NasdaqGS:SSNC)	\$1,500.0	4.6x	11.4x	\$326.1	\$131.6	40.4%	Software	
9/6/2018	Episerver AB	Insight Venture Partners	\$1,160.0	-	-	-	-	-	-	Business Process Services
9/6/2018	Gately Communication Co.	WJ Partners	-	-	-	-	-	-	-	Infrastructure Services
9/6/2018	CEB Challenger and Effortless Experience Solutions	Marlin Equity Partners, LLC	-	-	-	-	-	-	-	Information Services
9/5/2018	ListenFirst Media	Frontier Capital	-	-	-	-	-	-	-	Software
9/5/2018	Trendline Interactive	Growth Catalyst Partners	-	-	-	-	-	-	-	Business Process Services
9/5/2018	SuperData Research Holdings	Nielsen Holdings	-	-	-	-	-	-	-	Information Services
9/5/2018	Connected2Fiber	Access Point, Inc.	-	-	-	-	-	-	-	Software
9/5/2018	KnowledgeAdvisors, Inc.	eXplorance Inc.	-	-	-	-	-	-	-	Software
9/5/2018	Donuts Inc.	ABRY Partners, LLC	-	-	-	-	-	-	-	Business Process Services
9/4/2018	CHIEF Corporation	ByteCubed	-	-	-	-	-	-	-	Business Process Services
9/4/2018	WegoSide, Inc.	AppFolio (Nasdaq:APPF)	-	-	-	-	-	-	-	Information Services
9/4/2018	Merrill Corp, Marketing and Communications Solutions Business	Toppan Vintage Inc.	-	-	-	-	-	-	-	Software
9/4/2018	iFountain, LLC	Atlassian Corporation Plc (NasdaqGS:TEAM)	\$295.0	-	-	-	-	-	-	Software
8/31/2018	TAGG Logistics, LLC	Dot Family Holdings	-	-	-	-	-	-	-	Business Process Services

# Select M&A Transactions (Cont'd)

Date	Target	Acquirer	Enterprise Value	EV/			EBITDA Margin	EBITDA	Segment
				Revenue	EBITDA	Revenue			
8/30/2018	Reis, Inc. (NasdaqGS:REIS)	Moody's Corporation (NYSE:MCO)	\$262.9	5.5x	37.8x	\$48.1	7.0	14.5%	Information Services
8/30/2018	Data Specialists, Inc.	Dairy, LLC	-	-	-	-	-	-	Software
8/30/2018	BE LOCALLY, Corp.	SEO Werkz LLC	-	-	-	-	-	-	Business Process Services
8/29/2018	Opcity Inc.	Move, Inc.	\$210.0	-	-	-	-	-	Software
8/28/2018	Health Services Integration, Inc.	N/A	-	-	-	-	-	-	Business Process Services
8/28/2018	easyBackgrounds, Inc.	Global HR Research, LLC	-	-	-	-	-	-	Business Process Services
8/28/2018	CamberView Partners, LLC	PJT Partners Holdings LP	\$165.0	-	-	-	-	-	Business Process Services
8/28/2018	D Software Inc.	SmartBear Software Inc.	-	-	-	-	-	-	Software
8/28/2018	Iatric Systems, Inc.	Harris Healthcare Group	-	-	-	-	-	-	Software
8/28/2018	Optim Earth, Inc.	RoadSafe Traffic Systems, Inc.	-	-	-	-	-	-	Software
8/27/2018	Airwavz Solutions, Inc.	Pamlico Capital	-	-	-	-	-	-	Infrastructure Services
8/27/2018	InfoArmor, Inc.	The Allstate Corporation (NYSE:ALL)	\$525.0	-	-	-	-	-	Business Process Services
8/27/2018	eShare Ltd.	Diligent Corporation	-	-	-	-	-	-	Software
8/27/2018	CloudHealth Technologies, Inc.	VMware, Inc. (NYSE:VMW)	-	-	-	-	-	-	Software
8/24/2018	Digium, Inc.	Sangoma Technologies Corporation (TSXV:STC)	\$27.9	0.9x	-	\$30.0	-	-	Software
8/23/2018	OnGuard Systems LLC	3SG Plus LLC	-	-	-	-	-	-	Software
8/23/2018	Certain Assets of Silicon Mechanics, Inc.	Source Code Corporation	-	-	-	-	-	-	Business Process Services
8/23/2018	ModoPayments, LLC	Deutsche Bank Aktiengesellschaft (DB:DBK)	-	-	-	-	-	-	Software
8/23/2018	DHI Group, Inc. (NYSE:DHX)	TCS Capital Management, LLC	\$156.8	0.8x	5.8x	\$188.0	\$26.9	14.3%	Information Services
8/23/2018	Compliance Science, Inc.	Vista Equity Partners LLC	-	-	-	-	-	-	Software
8/22/2018	Prime Education, LLC	Everyday Health, Inc.	-	-	-	-	-	-	Business Process Services
8/22/2018	Shoeboxed Inc.	Earth Class Mail, Inc.	-	-	-	-	-	-	Business Process Services
8/22/2018	Midrange Performance Group, Inc.	HelpSystems, LLC	-	-	-	-	-	-	Software
8/22/2018	Rock-Pond Solutions Inc	Mediware Information Systems, Inc.	-	-	-	-	-	-	Software
8/21/2018	Microsoft Solutions Practice	York Telecom Corporation	-	-	-	-	-	-	Business Process Services
8/21/2018	Predikto, Inc.	United Technologies Corporation (NYSE:UTX)	-	-	-	-	-	-	Software
8/21/2018	Yellow Pages Digital And Media Solutions Ltd, RedFlagDeals Division	VerticalScope Inc.	\$9.2	-	-	-	-	-	Information Services
8/21/2018	Nexsan Corporation	Drobo, Inc.	\$5.7	-	-	-	-	-	Software
8/21/2018	StorReduce, Inc.	Pure Storage, Inc. (NYSE:PSTG)	-	-	-	-	-	-	Software
8/21/2018	CourtesyConnect/CourtesyLimit of CourtesyCloud Management Solutions, LLC	Velocity Solutions, Inc.	-	-	-	-	-	-	Software
8/21/2018	Network Communications Telecom	Conterra Ultra Broadband, LLC	-	-	-	-	-	-	Infrastructure Services
8/20/2018	Amicus Digital Ventures Pty Ltd	Merkle Inc.	-	-	-	-	-	-	Business Process Services
8/20/2018	Financial-Information-Technologies, Inc.	Luminare Capital Management, Inc.; TA Associates Management, L.P.	-	-	-	-	-	-	Business Process Services
8/20/2018	Contract Management Strategies, Inc.	SpendMend LLC	-	-	-	-	-	-	Business Process Services
8/20/2018	Integral Solutions Group	Immediion, LLC	-	-	-	-	-	-	Business Process Services

Source: Cherry Tree Research, Capital IQ: 9/30/2018  
\$ in millions

# Select M&A Transactions (Cont'd)

Date	Target	Acquirer	Enterprise	EV/			EBITDA		Margin	Segment
			Value	Revenue	EBITDA	Revenue	EBITDA			
8/20/2018	Adapt Telephony Services, LLC	Avtex Solutions, LLC	-	-	-	-	-	-	-	Business Process Services
8/20/2018	cPanel, Inc.	WebPros Holdco B.V.	-	-	-	-	-	-	-	Software
8/20/2018	3D Results, LLC	Rizing, LLC	-	-	-	-	-	-	-	Business Process Services
8/18/2018	NextiraOne Federal, LLC (nka:Tyto Athene, LLC)	Arlington Capital Partners LP	\$75.0	-	-	-	-	-	-	Business Process Services
8/17/2018	BestX, Ltd.	State Street Corporation (NYSE:STT)	-	-	-	-	-	-	-	Software
8/17/2018	LenderLive Network, Inc.	Computershare Loan Services	-	-	-	-	-	-	-	Business Process Services
8/16/2018	Trinium Technologies, LLC	Wisetech Global Limited (ASX:WTC)	\$49.9	5.6x	17.8x	\$8.9	\$2.8	31.6%	-	Software
8/16/2018	CodeGuard Inc.	Comodo CA Limited	-	-	-	-	-	-	-	Software
8/16/2018	Approved Technologies Inc.	Credit Karma, Inc.	-	-	-	-	-	-	-	Software
8/15/2018	iCIMS, Inc.	Vista Equity Partners	-	-	-	-	-	-	-	Business Process Services
8/15/2018	Exaktime, Inc.	Providence Strategic Growth Capital Partners L.L.C	-	-	-	-	-	-	-	Software
8/15/2018	Industry People Group Inc.	Providence Strategic Growth Capital Partners L.L.C	-	-	-	-	-	-	-	Software
8/15/2018	SugarCRM Inc	Accel-KKR LLC	-	-	-	-	-	-	-	Software
8/15/2018	TRANSAX, Inc.	Synergy Commerce, LLC	-	-	-	-	-	-	-	Business Process Services
8/14/2018	DealCloud, Inc.	Intapp, Inc.	-	-	-	-	-	-	-	Software
8/14/2018	GEOSYS Inc.	UrtheCast Corp. (TSX:UR)	\$20.0	-	-	-	-	-	-	Software
8/14/2018	TradeTapp, Inc.	BuildingConnected Inc.	-	-	-	-	-	-	-	Software
8/14/2018	MercuryGate International, Inc.	Summit Partners LLP	-	-	-	-	-	-	-	Software
8/13/2018	Quorum Business Solutions, Inc.	Thoma Bravo, LLC	-	-	-	-	-	-	-	Software
8/13/2018	Wazee Digital, Inc.	Veritone, Inc. (NasdaqGM:VERI)	\$15.0	0.8x	-	\$19.0	-	-	-	Software
8/13/2018	Performance Bridge Media	Veritone One, Inc	\$11.0	3.0x	-	\$3.7	-	-	-	Business Process Services
8/13/2018	Innovative Discovery, LLC	Silver Oak Services Partners, LLC	-	-	-	-	-	-	-	Business Process Services
8/10/2018	TravelClick, Inc.	Amadeus Americas, Inc.	\$1,520.0	4.1x	17.7x	\$373.0	\$86.0	23.1%	-	Software
8/9/2018	TaskUs, LLC	The Blackstone Group L.P. (NYSE:BX)	-	-	-	-	-	-	-	Business Process Services
8/9/2018	Pillar Technology Group LLC	Accenture plc (NYSE:ACN)	-	-	-	-	-	-	-	Business Process Services
8/9/2018	RapidScale, Inc.	Cox Business Services, LLC	-	-	-	-	-	-	-	Software
8/9/2018	Cablesouth Media, LLC, Fiber Assets	Uniti Group Inc. (NasdaqGS:UNIT)	\$31.0	-	-	-	-	-	-	Infrastructure Services
8/9/2018	Discovery Data	Northlane Capital Partners, LLC	-	-	-	-	-	-	-	Information Services
8/9/2018	Premiere Credit of North America, LLC	Performant Financial Corporation (NasdaqGS:PFMT)	\$4.3	-	-	-	-	-	-	Business Process Services
8/8/2018	The Dun & Bradstreet Corporation (NYSE:DNB)	Thomas H. Lee Partners, L.P.	\$6,675.4	3.7x	12.5x	\$1,813.1	\$533.1	29.4%	-	Information Services
8/8/2018	Cloud Lending Inc.	Q2 Software, Inc.	\$105.0	-	-	-	-	-	-	Software
8/7/2018	Omega Performance Corporation	Moody's Corporation (NYSE:MCO)	-	-	-	-	-	-	-	Business Process Services
8/7/2018	Alegeus Technologies, LLC	Vista Equity Partners LLC	-	-	-	-	-	-	-	Software
8/7/2018	Veritext Corp	Leonard Green & Partners, L.P.	-	-	-	-	-	-	-	Business Process Services
8/6/2018	Conduent Incorporated, Local and Municipal Constituent Government Software Solutions Business	Avenu Insights & Analytics	-	-	-	-	-	-	-	Software

# Select M&A Transactions (Cont'd)

Date	Target	Acquirer	Enterprise Value	EV/		EBITDA Margin		Segment	
				Revenue	EBITDA	Revenue	EBITDA		
8/6/2018	Data Strategy, LLC	Trace3, Inc.	-	-	-	-	-	Business Process Services	
8/6/2018	Independent Technologies, LLC	DataOnline LLC	-	-	-	-	-	Software	
8/6/2018	Michigan Evaluation Group, Inc.	Medlogix, LLC	-	-	-	-	-	Business Process Services	
8/2/2018	MediQuality	WebMD Health Corp.	-	-	-	-	-	Software	
8/2/2018	Duo Security, Inc.	Cisco Systems, Inc. (NasdaqGS:CSCO)	\$2,350.0	-	-	-	-	Software	
8/2/2018	AdvancedMD, Inc.	Global Payments Inc. (NYSE:GPN)	\$700.0	-	-	-	-	Software	
8/2/2018	LeaseLabs Inc.	RealPage, Inc. (NasdaqGS:RP)	\$117.0	-	-	-	-	Business Process Services	
8/2/2018	FRAME, Inc.	Nutanix, Inc. (NasdaqGS:NTNX)	-	-	-	-	-	Software	
8/2/2018	Aleyant Systems, LLC	Volaris Group Inc.	-	-	-	-	-	Software	
8/2/2018	Mojo Networks, Inc.	Arista Networks, Inc. (NYSE:ANET)	-	-	-	-	-	Infrastructure Services	
8/2/2018	Integrity Medicolegal Enterprises, LLC	Medlogix, LLC	-	-	-	-	-	Business Process Services	
8/1/2018	KryptonCloud, Inc.	Splunk Inc. (NasdaqGS:SPLK)	-	-	-	-	-	Software	
8/1/2018	AMS Legal, LLC	HighQ Solutions Limited	-	-	-	-	-	Software	
8/1/2018	Vitals Consumer Services, LLC	WebMD Health Corp.	-	-	-	-	-	Software	
8/1/2018	BlueStrata EHR	Mediware Information Systems, Inc.	-	-	-	-	-	Software	
8/1/2018	Mendix Inc.	Siemens Aktiengesellschaft (DB:SIE)	\$700.1	-	-	-	-	Software	
8/1/2018	Cardinal Solution Group, Inc.	Insight Enterprises, Inc. (NasdaqGS:NSIT)	\$79.0	-	-	-	-	Business Process Services	
8/1/2018	Elaauvit Networks, LLC	Boingo Wireless, Inc. (NasdaqGS:WIFI)	\$43.0	-	-	-	-	Infrastructure Services	
8/1/2018	Apogee Corporation Limited	HP Inc. (NYSE:HPQ)	\$498.5	1.8x	-	\$281.1	-	Business Process Services	
8/1/2018	Telefónica Digital Inc	Nexmo, Inc.	\$35.0	-	-	-	-	Software	
8/1/2018	Merrill Corporation, Transactions and Compliance Business	Toppan Vintage Inc.	-	-	-	-	-	Business Process Services	
8/1/2018	Yiptel, LLC	BroadVoice, Inc.	-	-	-	-	-	Infrastructure Services	
8/1/2018	Afinety, Inc.	Netgain Technology, Inc.	-	-	-	-	-	Business Process Services	
8/1/2018	Celergo LLC	Automatic Data Processing, Inc. (NasdaqGS:ADP)	-	-	-	-	-	Business Process Services	
8/1/2018	ESI Software Inc.	Dye & Durham Corporation	-	-	-	-	-	Software	
8/1/2018	Synetra, Inc.	Computex Inc.	-	-	-	-	-	Business Process Services	
7/31/2018	DATALINK LLC	Revelstoke Capital Partners LLC	-	-	-	-	-	Business Process Services	
7/31/2018	Eze Software Group LLC	SS&C Technologies Holdings, Inc. (NasdaqGS:SSNC)	\$1,450.0	5.2x	13.8x	\$280.0	\$105.0	37.5%	Software
7/31/2018	SpringCM Inc.	DocuSign, Inc. (NasdaqGS:DOCU)	\$220.0	-	-	-	-	-	Software
7/31/2018	Hubdoc Inc.	Xero Limited (ASX:XRO)	\$70.0	-	-	-	-	-	Software
7/31/2018	DATTUS, Inc.	Plex Systems, Inc.	-	-	-	-	-	-	Software
7/31/2018	Promapp Solutions Limited	Nintex Global Ltd	-	-	-	-	-	-	Software
7/30/2018	Social Reality, Inc., SRAxmd Product Line	Halyard Capital	-	-	-	-	-	-	Information Services
7/30/2018	Quantum Technology Sciences, Inc.	Geospace Technologies Corporation (NasdaqGS:GEOS)	\$27.9	-	-	-	-	-	Infrastructure Services
7/30/2018	Stellar Loyalty Inc.	Cheetah Digital, Inc.	-	-	-	-	-	-	Software

# Select M&A Transactions (Cont'd)

Date	Target	Acquirer	Enterprise Value	EV/		EBITDA		Margin	Segment
				Revenue	EBITDA	Revenue	EBITDA		
7/30/2018	PLATINUM Advisor Marketing Strategies, LLC	Faulkner Media Group, LLC	-	-	-	-	-	-	Business Process Services
7/29/2018	Treasure Data, Inc.	ARM Holdings plc	\$600.0	-	-	-	-	-	Business Process Services
7/27/2018	DesertMicro, Inc.	Advanced Manufacturing Control Systems Limited	-	-	-	-	-	-	Software
7/27/2018	Brandt Information Services, LLC	NexPhase Capital, LP	-	-	-	-	-	-	Software
7/26/2018	Improving Holdings, LLC	Trinity Hunt Partners	-	-	-	-	-	-	Business Process Services
7/26/2018	Personify Inc	Pamlico Capital	-	-	-	-	-	-	Software
7/26/2018	Prevoty, Inc.	Imperva, Inc. (NasdaqGS:IMPV)	\$140.6	-	-	-	-	-	Software
7/26/2018	Spookfish Limited (ASX:SFI)	EagleView Technologies, Inc.	-	-	-	-	-	-	Software
7/26/2018	Draker Corporation	AlsoEnergy, Inc.	-	-	-	-	-	-	Software
7/26/2018	Beeline.com, Inc.	New Mountain Capital, LLC	-	-	-	-	-	-	Software
7/26/2018	Indusa Technical Corp.	Synoptek, Inc.	-	-	-	-	-	-	Business Process Services
7/25/2018	Aimia, Aeroplan loyalty program business	Air Canada (TSX:AC); Canadian Imperial Bank of Commerce (TSX:CM); The Toronto-Dominion Bank (TSX:TD); Visa Canada Corporation	\$1,791.6	-	-	-	-	-	Business Process Services
7/25/2018	MetaPack Limited	Stamps.com Inc. (NasdaqGS:STMP)	\$230.0	4.6x	-	\$50.5	-	-	Software
7/25/2018	SCVNGR, Inc.	GrubHub Inc. (NYSE:GRUB)	\$390.0	-	-	-	-	-	Software
7/24/2018	Invenias Limited	Bullhorn, Inc.	-	-	-	-	-	-	Software
7/24/2018	Figur8 Cloud Solutions	All Cloud BSD	\$10.0	-	-	-	-	-	Business Process Services
7/24/2018	HealthCast Inc.	Identity Automation Systems, LLC	-	-	-	-	-	-	Software
7/24/2018	Arrow Digital LLC	Softvision, LLC	-	-	-	-	-	-	Business Process Services
7/24/2018	REAN Cloud LLC	Hitachi Vantara Corporation	-	-	-	-	-	-	Business Process Services
7/24/2018	The National Research Center for College & University Admissions, Inc.	ACT, Inc.	-	-	-	-	-	-	Information Services
7/24/2018	Arrow Digital LLC	Softvision, LLC	-	-	-	-	-	-	Business Process Services
7/23/2018	National Gift Card Corporation	LaSalle Capital	-	-	-	-	-	-	Business Process Services
7/22/2018	Syntel, Inc. (NasdaqGS:SYNT)	Atos SE (ENXTPA:ATO)	\$3,541.5	3.7x	13.5x	\$966.2	\$262.8	27.2%	Business Process Services
7/20/2018	Alight HR Services India Pvt Ltd	Wipro Limited (BSE:507685)	\$117.0	-	-	-	-	-	Business Process Services
7/20/2018	Charles River Systems, Inc.	State Street Corporation (NYSE:STT)	\$2,600.0	8.4x	-	\$311.2	-	-	Software
7/20/2018	Indus Software Technologies Pvt. Ltd.	Ebix, Inc. (NasdaqGS:EBIX)	\$29.0	1.3x	-	\$22.0	-	-	Software
7/20/2018	Advanced Integrated Technologies, Inc.	Evolve IP, LLC	-	-	-	-	-	-	Infrastructure Services
7/19/2018	Paywire, Incorporated	Payscout, Inc.	-	-	-	-	-	-	Software
7/19/2018	MB3 Technologies Inc.	GCR Inc.	-	-	-	-	-	-	Software
7/19/2018	Marsh ClearSight LLC	Riskconnect, Inc.	-	-	-	-	-	-	Software
7/19/2018	Mosaik Solutions, Inc.	j2 Global, Inc. (NasdaqGS:JCOM)	-	-	-	-	-	-	Software
7/19/2018	basys, LLC	WindRose Health Investors, LLC	-	-	-	-	-	-	Software
7/18/2018	AuthClub Inc.	Okta, Inc. (NasdaqGS:OKTA)	-	-	-	-	-	-	Software
7/18/2018	W4 LLC	Digital Media Solutions, LLC	-	-	-	-	-	-	Software

# Select M&A Transactions (Cont'd)

Date	Target	Acquirer	Enterprise	EV/		EBITDA		Margin	Segment
			Value	Revenue	EBITDA	Revenue	EBITDA		
7/18/2018	Blue Software, LLC	Esko-Graphics bvba	-	-	-	-	-	-	Software
7/17/2018	Federal Data Systems, Inc.	McNally Capital, LLC; Pine Crest Capital LLC; Profile Capital Management LLC	-	-	-	-	-	-	Business Process Services
7/17/2018	PeopleDoc SAS	The Ultimate Software Group, Inc. (NasdaqGS:ULTI)	-	-	-	-	-	-	Software
7/17/2018	NAVEX Global, Inc.	BC Partners; Noble Rock Advisors, Inc.	-	-	-	-	-	-	Software
7/17/2018	Abacus Labs, Inc.	Certify Inc.	-	-	-	-	-	-	Software
7/17/2018	onramp access, llc	LightEdge Solutions, Inc.	-	-	-	-	-	-	Infrastructure Services
7/16/2018	Datorama	salesforce.com, inc. (NYSE:CRM)	\$757.9	-	-	-	-	-	Software
7/16/2018	DataX Ltd.	Equifax Inc. (NYSE:EFX)	-	-	-	-	-	-	Business Process Services
7/16/2018	Agrible, Inc.	Nutrien Ltd. (TSX:NTR)	\$63.0	-	-	-	-	-	Software
7/16/2018	ELEAD1ONE	CDK Global, Inc. (NasdaqGS:CDK)	-	-	-	-	-	-	Software
7/16/2018	Donnelley Language Solutions	SDL plc (LSE:SDL)	\$77.5	1.1x	10.5x	\$71.4	\$7.4	10.4%	Business Process Services
7/13/2018	Student Loan Hero, Inc.	LendingTree, LLC	\$60.0	-	-	-	-	-	Software
7/13/2018	United Screening Services Corporation	Sarma Ltd.	-	-	-	-	-	-	Business Process Services
7/13/2018	Beneflex Insurance Services, LLC	OneDigital Health and Benefits, Inc.	-	-	-	-	-	-	Business Process Services
7/12/2018	Intellinet Corporation	FPT Corporation (HOSE:FPT)	\$53.3	1.8x	-	\$30.0	-	-	Business Process Services
7/12/2018	Pomeroy IT Solutions, Inc.	Getronics Services UK Ltd	-	-	-	-	-	-	Business Process Services
7/12/2018	Safe Banking Systems LLC	Accuity Com	-	-	-	-	-	-	Software
7/11/2018	Compusoft AS	TA Associates Management, L.P.	-	-	-	-	-	-	Software
7/11/2018	CA, Inc. (NasdaqGS:CA)	Broadcom Inc. (NasdaqGS:AVGO)	\$18,448.0	4.4x	14.7x	\$4,148.0	\$1,255.0	30.3%	Software
7/11/2018	SoftVu LLC	LoyaltyExpress, Inc.	-	-	-	-	-	-	Business Process Services
7/10/2018	MediaMath, Inc.	LightTree Capital Solutions; Searchlight Capital Partners	-	-	-	-	-	-	Software
7/10/2018	SWC Technology Partners, Inc.	BDO USA, LLP	-	-	-	-	-	-	Business Process Services
7/10/2018	Butter AI Corporation	Box, Inc. (NYSE:BOX)	-	-	-	-	-	-	Software
7/10/2018	Centrify Corporation	Thoma Bravo, LLC	-	-	-	-	-	-	Software
7/10/2018	Zumasys, Inc., Cloud Hosting, Infrastructure and Managed Services Business Units	Nexus Technologies, Inc.	-	-	-	-	-	-	Infrastructure Services
7/10/2018	Atata, Inc.	Mimecast Limited (NasdaqGS:MIME)	-	-	-	-	-	-	Business Process Services
7/10/2018	Machinio, Inc.	Liquidity Services, Inc. (NasdaqGS:LQDT)	\$28.7	-	-	-	-	-	Software
7/10/2018	AlienVault, Inc.	AT&T Communications Americas, Inc.	-	-	-	-	-	-	Software
7/9/2018	Young's Communications Co., Inc.	Cotton Creek Capital Management, LLC	-	-	-	-	-	-	Infrastructure Services
7/9/2018	San Jose Data Center	Carter Validus Mission Critical REIT II, Inc.	\$49.2	-	-	-	-	-	Infrastructure Services
7/9/2018	Nuesoft Technologies, Inc.	ADP AdvancedMD, Inc.	-	-	-	-	-	-	Software
7/9/2018	Assemble Systems, Inc.	Autodesk, Inc. (NasdaqGS:ADSK)	-	-	-	-	-	-	Software
7/9/2018	Exiger LLC	Carrick Capital Partners, LLC	-	-	-	-	-	-	Business Process Services
7/6/2018	Value Payment Systems, LLC	Greater Sum Ventures, LLC; Providence Equity Partners LLC	-	-	-	-	-	-	Software

# Select M&A Transactions (Cont'd)

Date	Target	Acquirer	Enterprise	EV/		EBITDA		Margin	Segment
			Value	Revenue	EBITDA	Revenue	EBITDA		
7/3/2018	USA Payroll Inc.	Asure Software, Inc. (NasdaqCM:ASUR)	\$3.5	-	-	-	-	-	Business Process Services
7/3/2018	Affinion Benefits Group, LLC	Mill Point Capital LLC	\$550.0	-	-	-	-	-	Business Process Services
7/3/2018	PLI Card Marketing Solutions	Platinum Equity, LLC	-	-	-	-	-	-	Business Process Services
7/2/2018	TC Technology	SSP Innovations, LLC	-	-	-	-	-	-	Software
7/2/2018	IQ Payment Systems LLC	American Bancard, LLC	-	-	-	-	-	-	Business Process Services
7/2/2018	SUSE International Holdings GmbH/SUSE GmbH/SUSE LLC	EQT Fund Management	\$2,535.0	7.3x	22.9x	\$347.3	\$110.5	31.8%	Software
7/2/2018	The Gordian Group, Inc.	Fortive Corporation (NYSE:FTV)	\$775.0	-	-	-	-	-	Software
7/2/2018	Winxnet, Inc.	The Riverside Company	-	-	-	-	-	-	Business Process Services
7/2/2018	K&R Network Solutions, Inc.	Winxnet, Inc.	-	-	-	-	-	-	Business Process Services
7/2/2018	ADS Data Systems, Inc.	Consolo Services Group, LLC	-	-	-	-	-	-	Software

## ABOUT CHERRY TREE & ASSOCIATES

# Cherry Tree & Associates Overview

**Cherry Tree & Associates provides a broad array of M&A advisory services to owner-operators, private equity firms, corporations, management teams and public companies.**

## M&A Services

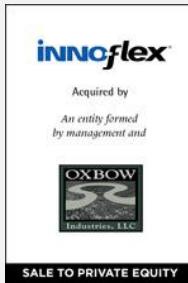
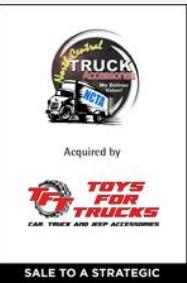
- Sell-side Advisory
- Recapitalizations
- Non-core Divestitures
- Management-led Buyouts
- Buy-side Advisory

## Highlights

- Based on over 30 years of growing and advising hundreds of entrepreneurial companies
- Been advisor or principal in more than 300 transactions
- Completed over \$3 billion in transactions in the past 10 years
- Expertise in multiple industries
- Experience completing transactions globally
- Cherry Tree professionals have closed deals with leading private equity and venture capital firms
- 13 M&A professionals

## RECENT M&A ENGAGEMENTS

### Sell-side Advisory



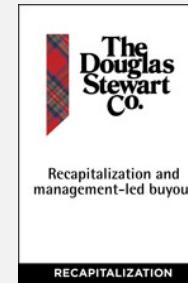
### Recapitalizations



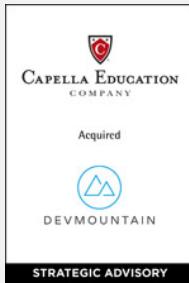
### Non-core Divestitures



### Management-led Buyouts



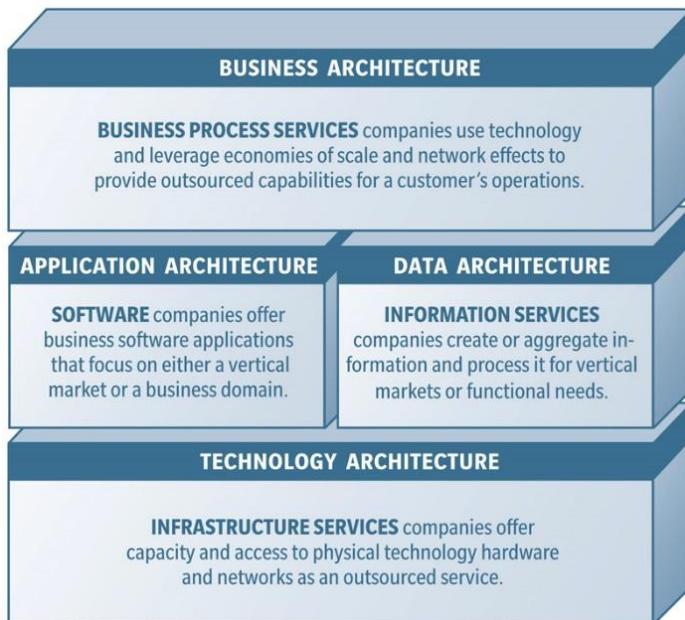
### Buy-side Advisory



# TEBS Expertise

Cherry Tree has been tracking trends and activity in the Technology Enabled Business Services (TEBS) space for more than 15 years. TEBS companies are defined as those that:

- Offer a solution, product or service that is delivered or enhanced via technology
- Generate revenue primarily from other businesses ("B2B")
- Use their own intellectual property to differentiate their solution



## SELECT TRANSACTIONS



Acquired the remittance processing business of

**First Data**

STRATEGIC ADVISORY



Has Partnered With

**N|E|P**

Norwest Equity Partners

PRIVATE EQUITY TRANSACTION



Acquired by



SALE TO A STRATEGIC

**GeoComm**

Welcomes as an Equity Partner

**GRANITE EQUITY PARTNERS**

SALE TO PRIVATE EQUITY

**DELUXE**

Acquired

**DATA MYX**

STRATEGIC ADVISORY



Acquired

**Hackbright Academy**

STRATEGIC ADVISORY

**GroupCast**

**SchoolReach**

Acquired by

**west**

SALE TO A STRATEGIC

Marquette Companies

The operating group of

**POHLAD companies**

Has completed the sale of

**avtex**

to

LaSalle Capital

SALE TO PRIVATE EQUITY

**DELUXE**

Acquired

**RDM**

STRATEGIC ADVISORY

# Cherry Tree TEBS Team

**Each of our senior investment bankers has many years of transaction experience as either an operating executive or private equity professional, in addition to deep investment banking experience.**



**Mik Gusenius**  
*Director*

- Joined Cherry Tree & Associates in 2007
- Over 10 years of middle market investment banking experience
- Completed more than 30 M&A transactions totaling more than \$1 billion of transaction value
- B.A., Economics, Gustavus Adolphus College
- M.B.A., University of Minnesota – Carlson School of Management



**Elmer Baldwin**  
*Managing Director*

- Joined Cherry Tree & Associates in 2015
- Previously the President and CEO of five information technology companies (20 years)
- Strategic advisor and consultant to over 100 companies over last 30+ years
- Experience working with publicly-traded companies, private-equity syndicates, and owner-operator situations
- B.B.A., Finance, Loyola Marymount University



**Dave Latzke**  
*Managing Director*

- Joined Cherry Tree & Associates in 2007
- Previously the CFO for two publicly-traded enterprise software companies (13 years)
- Previously with Arthur Andersen (11 years)
- B.A., Accounting, University of Northern Iowa
- Certified Public Accountant (inactive)



**Ben Ikeda**  
*Vice President*

- Joined Cherry Tree & Associates in 2012
- Completed 18 M&A transactions
- Previously with Sterling Partners' Education Opportunity Fund, UnitedHealth Group and Mayo Clinic Ventures
- B.A., Economics, *magna cum laude* and *Phi Beta Kappa*, Gustavus Adolphus College
- M.B.A. Candidate, University of Chicago Booth School of Business



**Alex Young**  
*Senior Analyst*

- Joined Cherry Tree & Associates in 2017
- Previous experience with Grant Thornton's Transaction Advisory Services group
- B.B.A., Finance and Economics, University of Notre Dame – Mendoza College of Business

# Important Disclosures

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