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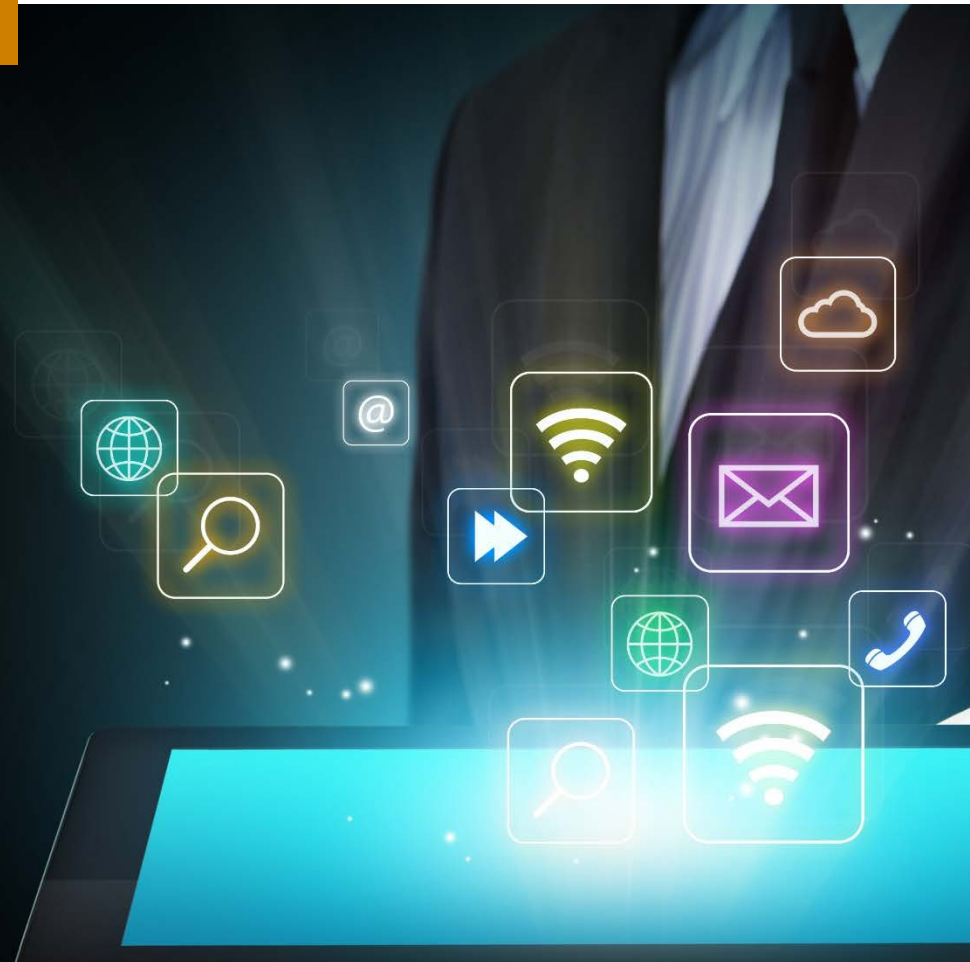
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# 2016 Top 25 Firm

*as ranked by Accounting Today*

# 2015 Best of the Best Firm

*as ranked by Accounting Today*

# 2014 Fastest Growing Firm

*as ranked by Inside Public Accounting*

**Strategic Thinking.**  
**Sound Insights.**  
**Positive Action.**

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## MARKET HIGHLIGHTS

**The S&P 500 Software (Industry) Index** has outperformed the S&P 500 Index over the past 3, 6, 12 and 24 months.

**All sectors saw median stock price increases in Q4**, with the IT Infrastructure Software sector increasing the most (+13.0%). Over the last 12 months all sectors also saw stock price increases. Engineering Software performed the best in the last 12 months (+41.6%), with CRM Software and Human Capital Management Software tied for second (+37.7% for both).

**The ERP Software and Human Capital Management Software sectors** ended the quarter tied for the highest median LTM revenue multiple (7.4x). The IT Infrastructure sector and ERP Software sector had the largest increase in LTM revenue multiples during Q4 (+11.4% and +10.2%, respectively), while the Security Software sector and the Human Capital Management Software sector decreased (-6.0% and -1.3%, respectively). Over the last 12 months, the Human Capital Management and the Engineering Software sectors had the largest increase in LTM revenue multiples (+66.1% and +42.8%, respectively). The ERP Software and Human Capital Management Software

sectors had the highest NTM revenue multiples (6.7x and 6.2x, respectively).

In terms of LTM EBITDA multiples, **Security Software** had the highest LTM EBITDA multiple (36.7x) while Human Capital Management had the highest NTM EBITDA multiple (25.6x). All sectors saw increases in LTM EBITDA multiples during Q4 and over the last 12 months.

**The best individual performer** in Q4 was Presidio (+35.5%), with Akamai Technologies (+33.5%) taking second place, and Temenos Group (+25.8%) in third place. The individual companies that declined the most in Q4 were SecureWorks (-28.2%) in the Security Software sector and Pegasystems (-18.2%) in the CRM Sector.

**In M&A news**, French Thales announced the acquisition of digital security provider Gemalto for \$6.5 billion; Cisco Systems acquired BroadSoft for \$1.9B. Private Equity stays active in the software industry, with Thoma Bravo, Elliot, and Marlin all making substantial acquisitions this quarter.

*Nadia Carey, CPA, ABV  
Enterprise Software Industry Analyst*

**SECTORS**

MARKET SECTOR	Median % Change		PEG Ratio	Earnings Ratio	
	Price			LTM	2018E
	3 mo	12 mo	2018E		
Enterprise Resource Planning (ERP)	2.6%	28.7%	2.2x	30.4x	23.8x
Customer Relationship Management (CRM)	7.6%	37.7%	2.4x	30.4x	32.4x
Supply Chain Management	2.6%	21.1%	2.2x	30.2x	36.9x
Human Capital Management	2.6%	37.7%	2.2x	53.1x	2.2x
Business Intelligence	2.7%	33.2%	2.3x	30.2x	25.9x
FinTech	7.2%	28.5%	2.1x	38.5x	29.8x
Engineering Software	5.8%	41.6%	3.0x	48.1x	33.8x
IT Infrastructure Software	13.0%	13.9%	2.3x	30.2x	21.6x
Security Software	0.3%	18.4%	2.4x	79.0x	37.3x

INDICIES	Price	% Change			
	12/31/17	3 mo	6 mo	12 mo	24 mo
S&P 500	2,673.61	6.1%	10.3%	19.4%	30.8%
Dow Jones Industrial Average	24,719.22	10.3%	15.8%	25.1%	41.9%
NASDAQ Composite Index	6,903.39	6.3%	12.4%	28.2%	37.9%
Russell 2000 Index	1,535.51	3.0%	8.5%	13.1%	35.2%
S&P 500 Software (Industry)	1,642.21	9.3%	16.3%	38.7%	51.2%
S&P 500 Software & Services (Industry Group)	1,560.25	7.8%	16.0%	36.6%	46.9%
S&P 500 Systems Software (Sub Ind)	1,670.29	10.5%	16.9%	34.6%	48.8%

Source: Capital IQ. (\$ in '000, except per share)

**EV/REVENUE MULTIPLES**

MARKET SECTOR	LTM			NTM
	Median	Median % Change		Median
	12/31/17	3 mo	12 mo	12/31/17
Enterprise Resource Planning (ERP)	7.4x	10.2%	21.7%	6.7x
Customer Relationship Management (CRM)	6.2x	4.2%	25.2%	5.6x
Supply Chain Management	4.8x	6.4%	14.9%	4.6x
Human Capital Management	7.4x	(1.3%)	66.1%	6.2x
Business Intelligence	5.0x	4.4%	28.5%	4.8x
FinTech	5.5x	6.5%	9.4%	5.2x
Engineering Software	6.4x	5.2%	42.8%	6.1x
IT Infrastructure Software	4.6x	11.7%	14.9%	4.6x
Security Software	4.7x	(6.0%)	4.6%	4.1x

**EV/EBITDA MULTIPLES**

MARKET SECTOR	LTM			NTM
	Median	Median % Change		Median
	12/31/17	3 mo	12 mo	12/31/17
Enterprise Resource Planning (ERP)	23.0x	11.4%	22.3%	16.2x
Customer Relationship Management (CRM)	23.0x	9.3%	22.3%	19.8x
Supply Chain Management	20.8x	7.8%	17.5%	18.7x
Human Capital Management	23.0x	3.5%	22.3%	25.6x
Business Intelligence	17.9x	9.3%	15.8%	14.3x
FinTech	18.6x	6.0%	5.3%	16.8x
Engineering Software	27.0x	9.4%	43.1%	22.3x
IT Infrastructure Software	13.7x	8.0%	15.8%	11.3x
Security Software	36.7x	6.1%	14.8%	19.1x

Source: Capital IQ. (\$ in '000, except per share)

COMPANY	TICKER	Price 12/31/17	% Change		52-Week		Market Cap	Ent Val (TEV)	LTM		NTM		EPS		Earnings Ratio		PEG Ratio 2018E	
			3 mo	12 mo	High	Low			Rev	EBITDA	Rev	EBITDA	2017E	2018E	LTM	2018E		
<b>Enterprise Resource Planning (ERP)</b>																		
Microsoft Corporation	MSFT	\$ 85.54	14.8%	37.7%	\$87.50	\$61.95	\$659,906	\$615,246	\$92,560	\$32,108	\$108,354	\$43,000	\$ 3.03	\$ 3.39	30.2x	25.9x	2.2x	
Oracle Corporation	ORCL	47.28	(2.2%)	23.0%	53.14	38.30	195,720	185,248	38,907	15,143	40,528	18,883	2.64	2.94	20.3x	16.6x	2.1x	
SAP SE	SAP	112.32	2.6%	28.7%	120.83	98.22	134,660	135,356	23,379	5,888	24,340	8,361	5.01	5.36	30.4x	20.5x	2.3x	
Intuit Inc.	INTU	157.78	11.0%	37.7%	161.44	111.90	40,336	40,434	5,285	1,634	5,810	2,164	4.39	5.07	41.8x	32.2x	2.1x	
The Sage Group plc	SGE	10.79	15.2%	33.4%	11.08	8.04	11,653	12,651	1,715	462	1,892	545	0.40	0.46	33.6x	23.8x	2.3x	
BlackLine, Inc.	BL	32.80	(3.9%)	18.7%	40.28	25.95	1,734	1,625	162	(18)	210	10	(0.10)	(0.04)	NM	NM	NM	
Coupa Software Incorporated	COUP	31.22	0.2%	24.8%	37.73	22.50	1,719	1,499	171	(38)	212	(14)	(1.69)	(0.39)	NM	NM	NM	
<b>Median</b>			<b>2.6%</b>	<b>28.7%</b>											<b>30.4x</b>	<b>23.8x</b>	<b>2.2x</b>	

COMPANY	TICKER	EV/REVENUE MULTIPLES					
		TTM			% Change		NTM 12/31/17
		Trailing 12/31/17	3 mo	12 mo	3 mo	12 mo	
<b>Enterprise Resource Planning (ERP)</b>							
Microsoft Corporation	MSFT	6.6x	5.9x	4.9x	12.1%	34.4%	5.7x
Oracle Corporation	ORCL	4.8x	4.9x	4.1x	(3.3%)	14.9%	4.6x
SAP SE	SAP	5.8x	4.9x	4.7x	19.0%	23.4%	5.6x
Intuit Inc.	INTU	7.7x	6.9x	6.3x	10.2%	21.7%	7.0x
The Sage Group plc	SGE	7.4x	4.6x	4.7x	61.5%	56.7%	6.7x
BlackLine, Inc.	BL	10.0x	11.3x	13.0x	(11.6%)	(23.1%)	7.7x
Coupa Software Incorporated	COUP	8.8x	9.2x	8.4x	(4.5%)	4.0%	7.1x
<b>Median</b>		<b>7.4x</b>	<b>5.9x</b>	<b>4.9x</b>	<b>10.2%</b>	<b>21.7%</b>	<b>6.7x</b>

COMPANY	TICKER	EV/EBITDA MULTIPLES					
		TTM			% Change		NTM 12/31/17
		Trailing 12/31/17	3 mo	12 mo	3 mo	12 mo	
<b>Enterprise Resource Planning (ERP)</b>							
Microsoft Corporation	MSFT	19.2x	17.5x	15.7x	9.3%	22.3%	14.3x
Oracle Corporation	ORCL	12.2x	12.7x	10.6x	(3.4%)	15.8%	9.8x
SAP SE	SAP	23.0x	19.5x	17.6x	17.7%	30.5%	16.2x
Intuit Inc.	INTU	24.7x	22.2x	20.9x	11.4%	18.2%	18.7x
The Sage Group plc	SGE	27.4x	16.0x	16.6x	70.7%	65.0%	23.2x
BlackLine, Inc.	BL	NM	NM	NM	NM	NM	NM
Coupa Software Incorporated	COUP	NM	NM	NM	NM	NM	NM
<b>Median</b>		<b>23.0x</b>	<b>17.5x</b>	<b>16.6x</b>	<b>11.4%</b>	<b>22.3%</b>	<b>16.2x</b>

Source: Capital IQ. (\$ in '000, except per share)

COMPANY	TICKER	Price 12/31/17	% Change		52-Week		Market Cap	Ent Val (TEV)	LTM		NTM		EPS		Earnings Ratio		PEG Ratio 2018E	
			3 mo	12 mo	High	Low			Rev	EBITDA	Rev	EBITDA	2017E	2018E	LTM	2018E		
<b>Customer Relationship Management (CRM)</b>																		
Microsoft Corporation	MSFT	\$ 85.54	14.8%	37.7%	\$87.50	\$61.95	\$659,906	\$615,246	\$92,560	\$32,108	\$108,354	\$43,000	\$ 3.03	\$ 3.39	30.2x	25.9x	2.2x	
Oracle Corporation	ORCL	47.28	(2.2%)	23.0%	53.14	38.30	195,720	185,248	38,907	15,143	40,528	18,883	2.64	2.94	20.3x	16.6x	2.1x	
SAP SE	SAP	112.32	2.6%	28.7%	120.83	98.22	134,660	135,356	23,379	5,888	24,340	8,361	5.01	5.36	30.4x	20.5x	2.3x	
Salesforce.com, inc.	CRM	102.23	9.4%	49.3%	109.19	69.00	73,841	72,800	9,923	553	11,975	2,667	0.98	1.34	NM	81.7x	3.1x	
Blackbaud, Inc.	BLKB	94.49	7.6%	47.6%	104.55	61.98	4,440	4,761	770	138	856	203	2.17	2.45	85.2x	38.8x	3.3x	
Pegasystems, Inc.	PEGA	47.15	(18.2%)	31.0%	64.85	35.35	3,671	3,477	801	55	862	99	0.73	0.79	85.7x	63.5x	2.4x	
Zendesk, Inc.	ZEN	33.84	16.2%	59.6%	35.89	21.43	3,435	3,208	396	(88)	520	21	(0.16)	(0.03)	NM	NM	NM	
<b>Median</b>			<b>7.6%</b>	<b>37.7%</b>											<b>30.4x</b>	<b>32.4x</b>	<b>2.4x</b>	

COMPANY	TICKER	EV/REVENUE MULTIPLES					
		TTM				NTM	
		Trailing		% Change		12/31/17	
		12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
<b>Customer Relationship Management (CRM)</b>							
Microsoft Corporation	MSFT	6.6x	5.9x	4.9x	12.1%	34.4%	5.7x
Oracle Corporation	ORCL	4.8x	4.9x	4.1x	(3.3%)	14.9%	4.6x
SAP SE	SAP	5.8x	4.9x	4.7x	19.0%	23.4%	5.6x
Salesforce.com, inc.	CRM	7.3x	7.1x	6.2x	4.0%	18.4%	6.1x
Blackbaud, Inc.	BLKB	6.2x	5.9x	4.7x	4.2%	31.4%	5.6x
Pegasystems, Inc.	PEGA	4.3x	5.3x	3.5x	(18.8%)	25.2%	4.0x
Zendesk, Inc.	ZEN	8.1x	7.4x	6.3x	9.8%	28.1%	6.2x
<b>Median</b>		<b>6.2x</b>	<b>5.9x</b>	<b>4.7x</b>	<b>4.2%</b>	<b>25.2%</b>	<b>5.6x</b>

COMPANY	TICKER	EV/EBITDA MULTIPLES					
		TTM				NTM	
		Trailing		% Change		12/31/17	
		12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
<b>Customer Relationship Management (CRM)</b>							
Microsoft Corporation	MSFT	19.2x	17.5x	15.7x	9.3%	22.3%	14.3x
Oracle Corporation	ORCL	12.2x	12.7x	10.6x	(3.4%)	15.8%	9.8x
SAP SE	SAP	23.0x	19.5x	17.6x	17.7%	30.5%	16.2x
Salesforce.com, inc.	CRM	NM	NM	91.7x	NM	NM	27.3x
Blackbaud, Inc.	BLKB	34.4x	34.1x	28.8x	1.0%	19.4%	23.4x
Pegasystems, Inc.	PEGA	62.7x	57.1x	29.4x	9.8%	113.6%	35.3x
Zendesk, Inc.	ZEN	NM	NM	NM	NM	NM	NM
<b>Median</b>		<b>23.0x</b>	<b>19.5x</b>	<b>23.2x</b>	<b>9.3%</b>	<b>22.3%</b>	<b>19.8x</b>

Source: Capital IQ. (\$ in '000, except per share)

COMPANY	TICKER	Price 12/31/17	% Change		52-Week		Market Cap	Ent Val (TEV)	LTM		NTM		EPS		Earnings Ratio		PEG Ratio 2018E	
			3 mo	12 mo	High	Low			Rev	EBITDA	Rev	EBITDA	2017E	2018E	LTM	2018E		
<b>Supply Chain Management</b>																		
Microsoft Corporation	MSFT	\$ 85.54	14.8%	37.7%	\$87.50	\$61.95	\$659,906	\$615,246	\$92,560	\$32,108	\$108,354	\$43,000	\$ 3.03	\$ 3.39	30.2x	25.9x	2.2x	
Oracle Corporation	ORCL	47.28	(2.2%)	23.0%	53.14	38.30	195,720	185,248	38,907	15,143	40,528	18,883	2.64	2.94	20.3x	16.6x	2.1x	
SAP SE	SAP	112.32	2.6%	28.7%	120.83	98.22	134,660	135,356	23,379	5,888	24,340	8,361	5.01	5.36	30.4x	20.5x	2.3x	
Manhattan Associates, Inc.	MANH	49.54	19.2%	(6.6%)	55.74	40.75	3,415	3,285	598	200	567	166	1.87	1.28	28.5x	40.5x	NM	
Aspen Technology, Inc.	AZPN	66.20	5.4%	21.1%	69.38	52.23	4,802	4,883	486	218	498	240	1.97	2.01	30.8x	36.8x	1.8x	
SPS Commerce, Inc.	SPSC	48.59	(14.3%)	(30.5%)	72.60	45.02	837	673	213	23	238	36	0.92	1.06	101.3x	47.5x	2.2x	
QAD Inc.	QADA	38.85	13.1%	27.8%	42.00	26.04	722	596	298	9	312	18	0.40	0.33	NM	124.7x	3.6x	
American Software, Inc.	AMSW.A	11.63	2.4%	12.6%	13.05	9.00	351	270	106	15	113	19	0.27	0.35	19.8x	36.9x	2.3x	
Amber Road, Inc.	AMBR	7.34	(4.4%)	(19.2%)	9.82	6.14	200	214	78	(11)	85	3	(0.30)	(0.17)	NM	NM	NM	
<b>Median</b>			<b>2.6%</b>	<b>21.1%</b>											<b>30.2x</b>	<b>36.9x</b>	<b>2.2x</b>	

COMPANY	TICKER	EV/REVENUE MULTIPLES					
		TTM					NTM
		Trailing		% Change			
		12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
<b>Supply Chain Management</b>							
Microsoft Corporation	MSFT	6.6x	5.9x	4.9x	12.1%	34.4%	5.7x
Oracle Corporation	ORCL	4.8x	4.9x	4.1x	(3.3%)	14.9%	4.6x
SAP SE	SAP	5.8x	4.9x	4.7x	19.0%	23.4%	5.6x
Manhattan Associates, Inc.	MANH	5.5x	4.7x	6.1x	18.1%	(10.3%)	5.8x
Aspen Technology, Inc.	AZPN	10.1x	9.6x	8.8x	4.9%	13.8%	9.8x
SPS Commerce, Inc.	SPSC	3.2x	4.0x	5.8x	(20.4%)	(45.4%)	2.8x
QAD Inc.	QADA	2.0x	1.7x	1.6x	15.2%	24.3%	1.9x
American Software, Inc.	AMSW.A	2.6x	2.4x	2.1x	6.4%	19.6%	2.4x
Amber Road, Inc.	AMBR	2.8x	2.9x	3.5x	(4.7%)	(21.5%)	2.5x
<b>Median</b>		<b>4.8x</b>	<b>4.7x</b>	<b>4.7x</b>	<b>6.4%</b>	<b>14.9%</b>	<b>4.6x</b>

COMPANY	TICKER	EV/EBITDA MULTIPLES					
		TTM					NTM
		Trailing		% Change			
		12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
<b>Supply Chain Management</b>							
Microsoft Corporation	MSFT	19.2x	17.5x	15.7x	9.3%	22.3%	14.3x
Oracle Corporation	ORCL	12.2x	12.7x	10.6x	(3.4%)	15.8%	9.8x
SAP SE	SAP	23.0x	19.5x	17.6x	17.7%	30.5%	16.2x
Manhattan Associates, Inc.	MANH	16.5x	13.7x	18.6x	19.8%	(11.3%)	19.8x
Aspen Technology, Inc.	AZPN	22.4x	21.1x	18.8x	6.2%	19.2%	20.3x
SPS Commerce, Inc.	SPSC	29.0x	35.7x	57.6x	(18.8%)	(49.7%)	18.7x
QAD Inc.	QADA	68.0x	47.2x	56.3x	44.0%	20.8%	33.0x
American Software, Inc.	AMSW.A	18.4x	20.5x	22.0x	(10.2%)	(16.3%)	14.1x
Amber Road, Inc.	AMBR	NM	NM	NM	NM	NM	73.5x
<b>Median</b>		<b>20.8x</b>	<b>20.0x</b>	<b>18.7x</b>	<b>7.8%</b>	<b>17.5%</b>	<b>18.7x</b>

Source: Capital IQ. (\$ in '000, except per share)



COMPANY	TICKER	Price 12/31/17	% Change		52-Week		Market Cap	Ent Val (TEV)	LTM		NTM		EPS		Earnings Ratio		PEG Ratio 2018E	
			3 mo	12 mo	High	Low			Rev	EBITDA	Rev	EBITDA	2017E	2018E	LTM	2018E		
<b>Human Capital Management</b>																		
Microsoft Corporation	MSFT	\$ 85.54	14.8%	37.7%	\$87.50	\$61.95	\$659,906	\$615,246	\$92,560	\$32,108	\$108,354	\$43,000	\$ 3.03	\$ 3.39	30.2x	25.9x	2.2x	
Oracle Corporation	ORCL	47.28	(2.2%)	23.0%	53.14	38.30	195,720	185,248	38,907	15,143	40,528	18,883	2.64	2.94	20.3x	16.6x	2.1x	
SAP SE	SAP	112.32	2.6%	28.7%	120.83	98.22	134,660	135,356	23,379	5,888	24,340	8,361	5.01	5.36	30.4x	20.5x	2.3x	
Workday, Inc.	WDAY	101.74	(3.5%)	53.9%	116.89	66.75	21,365	19,628	1,995	(205)	2,516	423	0.03	0.98	NM	117.1x	3.4x	
The Ultimate Software Group, Inc.	ULTI	218.23	15.1%	19.7%	233.42	181.01	6,520	6,391	900	69	1,061	249	3.61	4.54	227.8x	50.1x	2.1x	
Paycom Software, Inc.	PAYC	80.33	7.2%	76.6%	86.10	42.52	4,680	4,648	407	86	514	157	1.26	1.54	75.7x	54.8x	2.0x	
Cornerstone OnDemand, Inc.	CSOD	35.33	(13.0%)	(16.5%)	44.25	33.24	2,046	1,983	459	(48)	507	81	0.42	0.75	NM	52.2x	3.5x	
Paylocity Holding Corporation	PCTY	47.16	(3.4%)	57.1%	53.96	29.69	2,477	2,379	316	23	388	78	0.58	0.86	269.9x	56.7x	2.0x	
Callidus Software Inc.	CALD	28.65	16.2%	70.5%	30.60	16.10	1,951	1,775	240	(7)	285	41	0.34	0.51	NM	57.5x	2.6x	
<b>Median</b>			<b>2.6%</b>	<b>37.7%</b>											<b>53.1x</b>	<b>52.2x</b>	<b>2.2x</b>	

COMPANY	TICKER	EV/REVENUE MULTIPLES					
		TTM			% Change		NTM
		Trailing	3 mo	12 mo	3 mo	12 mo	
		12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
<b>Human Capital Management</b>							
Microsoft Corporation	MSFT	6.6x	5.9x	4.9x	12.1%	34.4%	5.7x
Oracle Corporation	ORCL	4.8x	4.9x	4.1x	(3.3%)	14.9%	4.6x
SAP SE	SAP	5.8x	4.9x	4.7x	19.0%	23.4%	5.6x
Workday, Inc.	WDAY	9.8x	11.0x	8.2x	(10.5%)	20.4%	7.8x
The Ultimate Software Group, Inc.	ULTI	7.1x	6.5x	7.0x	10.1%	1.5%	6.0x
Paycom Software, Inc.	PAYC	11.4x	11.6x	8.8x	(1.3%)	30.2%	9.0x
Cornerstone OnDemand, Inc.	CSOD	4.3x	5.1x	5.8x	(15.4%)	(25.5%)	3.9x
Paylocity Holding Corporation	PCTY	7.5x	8.1x	5.8x	(6.9%)	28.8%	6.1x
Callidus Software Inc.	CALD	7.4x	6.6x	4.5x	13.0%	66.1%	6.2x
<b>Median</b>		<b>7.1x</b>	<b>6.5x</b>	<b>5.8x</b>	<b>(1.3%)</b>	<b>23.4%</b>	<b>6.0x</b>

COMPANY	TICKER	EV/EBITDA MULTIPLES					
		TTM			% Change		NTM
		Trailing	3 mo	12 mo	3 mo	12 mo	
		12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
<b>Human Capital Management</b>							
Microsoft Corporation	MSFT	19.2x	17.5x	15.7x	9.3%	22.3%	14.3x
Oracle Corporation	ORCL	12.2x	12.7x	10.6x	(3.4%)	15.8%	9.8x
SAP SE	SAP	23.0x	19.5x	17.6x	17.7%	30.5%	16.2x
Workday, Inc.	WDAY	NM	NM	NM	NM	NM	46.4x
The Ultimate Software Group, Inc.	ULTI	92.3x	89.2x	80.3x	3.5%	14.9%	25.6x
Paycom Software, Inc.	PAYC	54.0x	60.0x	43.4x	(10.0%)	24.4%	29.7x
Cornerstone OnDemand, Inc.	CSOD	NM	NM	NM	NM	NM	24.6x
Paylocity Holding Corporation	PCTY	NM	NM	NM	NM	NM	30.5x
Callidus Software Inc.	CALD	NM	NM	NM	NM	NM	42.9x
<b>Median</b>		<b>23.0x</b>	<b>19.5x</b>	<b>17.6x</b>	<b>3.5%</b>	<b>22.3%</b>	<b>25.6x</b>

Source: Capital IQ. (\$ in '000, except per share)

COMPANY	TICKER	Price 12/31/17	% Change		52-Week		Market Cap	Ent Val (TEV)	LTM		NTM		EPS		Earnings Ratio		PEG Ratio 2018E	
			3 mo	12 mo	High	Low			Rev	EBITDA	Rev	EBITDA	2017E	2018E	LTM	2018E		
<b>Business Intelligence</b>																		
Microsoft Corporation	MSFT	\$ 85.54	14.8%	37.7%	\$87.50	\$61.95	\$659,906	\$615,246	\$92,560	\$32,108	\$108,354	\$43,000	\$ 3.03	\$ 3.39	30.2x	25.9x	2.2x	
Oracle Corporation	ORCL	47.28	(2.2%)	23.0%	53.14	38.30	195,720	185,248	38,907	15,143	40,528	18,883	2.64	2.94	20.3x	16.6x	2.1x	
SAP SE	SAP	112.32	2.6%	28.7%	120.83	98.22	134,660	135,356	23,379	5,888	24,340	8,361	5.01	5.36	30.4x	20.5x	2.3x	
Splunk Inc.	SPLK	82.84	24.7%	62.0%	84.88	51.30	11,718	10,738	1,158	(255)	1,443	185	0.33	0.58	NM	154.0x	4.2x	
Open Text Corporation	OTEX	35.67	10.5%	15.4%	35.80	30.58	9,470	11,864	2,440	664	2,728	1,000	2.00	2.48	62.0x	13.6x	0.7x	
Tableau Software, Inc.	DATA	69.20	(7.6%)	64.2%	82.32	41.65	5,518	4,575	878	(112)	923	62	0.18	0.25	NM	292.2x	14.3x	
MicroStrategy Incorporated	MSTR	131.30	2.8%	(33.5%)	205.96	122.91	1,503	857	507	97	497	76	5.01	2.60	20.3x	53.3x	NM	
Workiva Inc.	WK	21.40	2.6%	56.8%	23.70	12.15	897	839	200	(34)	227	(20)	(0.63)	(0.46)	NM	NM	NM	
<b>Median</b>			<b>2.7%</b>	<b>33.2%</b>											<b>30.2x</b>	<b>25.9x</b>	<b>2.3x</b>	

COMPANY	TICKER
<b>Business Intelligence</b>	
Microsoft Corporation	MSFT
Oracle Corporation	ORCL
SAP SE	SAP
Splunk Inc.	SPLK
Open Text Corporation	OTEX
Tableau Software, Inc.	DATA
MicroStrategy Incorporated	MSTR
Workiva Inc.	WK
<b>Median</b>	

EV/REVENUE MULTIPLES							
COMPANY	TICKER	TTM				NTM	
		Trailing		% Change			
		12/31/17	3 mo	12 mo	3 mo		12 mo
<b>Business Intelligence</b>							
Microsoft Corporation	MSFT	6.6x	5.9x	4.9x	12.1%	34.4%	5.7x
Oracle Corporation	ORCL	4.8x	4.9x	4.1x	(3.3%)	14.9%	4.6x
SAP SE	SAP	5.8x	4.9x	4.7x	19.0%	23.4%	5.6x
Splunk Inc.	SPLK	9.3x	7.7x	6.9x	20.0%	33.5%	7.4x
Open Text Corporation	OTEX	4.9x	4.7x	5.0x	4.5%	(2.6%)	4.3x
Tableau Software, Inc.	DATA	5.2x	5.7x	3.0x	(8.1%)	73.2%	5.0x
MicroStrategy Incorporated	MSTR	1.7x	1.6x	3.3x	4.3%	(48.0%)	1.7x
Workiva Inc.	WK	4.2x	4.3x	3.1x	(1.3%)	36.4%	3.7x
<b>Median</b>		<b>5.0x</b>	<b>4.9x</b>	<b>4.4x</b>	<b>4.4%</b>	<b>28.5%</b>	<b>4.8x</b>

EV/EBITDA MULTIPLES							
COMPANY	TICKER	TTM				NTM	
		Trailing		% Change			
		12/31/17	3 mo	12 mo	3 mo		12 mo
<b>Business Intelligence</b>							
Microsoft Corporation	MSFT	19.2x	17.5x	15.7x	9.3%	22.3%	14.3x
Oracle Corporation	ORCL	12.2x	12.7x	10.6x	(3.4%)	15.8%	9.8x
SAP SE	SAP	23.0x	19.5x	17.6x	17.7%	30.5%	16.2x
Splunk Inc.	SPLK	NM	NM	NM	NM	NM	58.2x
Open Text Corporation	OTEX	17.9x	16.7x	16.2x	6.9%	10.1%	11.9x
Tableau Software, Inc.	DATA	NM	NM	NM	NM	NM	74.1x
MicroStrategy Incorporated	MSTR	8.8x	7.6x	13.2x	16.5%	(33.0%)	11.2x
Workiva Inc.	WK	NM	NM	NM	NM	NM	NM
<b>Median</b>		<b>17.9x</b>	<b>16.7x</b>	<b>15.7x</b>	<b>9.3%</b>	<b>15.8%</b>	<b>14.3x</b>

Source: Capital IQ. (\$ in '000, except per share)

COMPANY	TICKER	Price 12/31/17	% Change		52-Week		Market Cap	Ent Val (TEV)	LTM		NTM		EPS		Earnings Ratio		PEG Ratio 2018E	
			3 mo	12 mo	High	Low			Rev	EBITDA	Rev	EBITDA	2017E	2018E	LTM	2018E		
<b>FinTech</b>																		
Automatic Data Processing, Inc.	ADP	\$ 117.19	7.2%	14.0%	\$121.77	\$94.11	\$ 51,973	\$ 51,627	\$12,542	\$ 2,714	\$ 13,434	\$ 2,843	\$ 3.72	\$ 3.93	29.7x	29.8x	2.8x	
Fidelity National Information Services, Inc.	FIS	94.09	0.7%	24.4%	96.67	75.40	31,414	39,907	9,240	2,529	9,134	3,163	4.41	4.88	58.2x	20.0x	1.7x	
Fiserv, Inc.	FISV	131.13	1.7%	23.4%	133.36	104.51	27,327	32,113	5,611	1,763	5,945	2,169	5.08	5.78	31.2x	23.9x	2.1x	
Experian plc	EXPN	22.11	10.0%	13.8%	23.09	19.30	20,074	23,577	4,439	1,548	4,760	1,658	0.90	0.96	26.5x	23.5x	2.7x	
First Data Corporation	FDC	16.71	(7.4%)	17.8%	19.23	14.45	15,431	36,516	7,991	2,820	12,479	3,222	1.52	1.53	22.0x	11.7x	1.0x	
Equifax Inc.	EFX	117.92	11.3%	(0.3%)	147.02	89.59	14,160	16,616	3,325	1,164	3,401	1,193	5.92	5.97	26.6x	20.4x	1.8x	
Global Payments Inc.	GPN	100.24	5.5%	44.4%	104.90	69.04	15,952	20,190	4,277	1,191	3,906	1,330	4.00	4.75	61.5x	21.9x	1.4x	
Broadridge Financial Solutions, Inc.	BR	90.58	12.1%	36.6%	92.44	65.22	10,557	11,561	4,172	733	4,277	842	3.14	3.78	31.8x	24.7x	2.5x	
Square, Inc.	SQ	34.67	20.3%	154.4%	49.56	13.66	13,472	12,958	2,050	(25)	1,191	212	0.26	0.45	NM	94.1x	0.9x	
Jack Henry & Associates, Inc.	JKHY	116.96	13.8%	31.7%	119.82	88.11	9,033	8,929	1,446	448	1,530	532	3.14	3.32	36.9x	36.9x	3.4x	
SS&C Technologies Holdings, Inc.	SSNC	40.48	0.8%	41.5%	42.50	28.51	8,333	10,447	1,638	610	1,746	751	1.93	2.22	38.6x	22.7x	1.4x	
Tyler Technologies, Inc.	TYL	177.05	1.6%	24.0%	188.22	142.75	6,651	6,487	816	183	907	277	3.90	4.34	52.1x	43.3x	2.5x	
Temenos Group AG	TEMN	128.26	25.8%	83.8%	136.88	68.08	9,016	9,292	694	192	799	289	2.47	2.94	70.3x	44.7x	2.9x	
Guidewire Software, Inc.	GWRE	74.26	(4.6%)	50.5%	83.52	49.25	5,704	5,143	528	36	658	124	0.85	0.88	279.6x	87.8x	5.6x	
Fair Isaac Corporation	FICO	153.20	9.0%	28.5%	159.92	118.95	4,595	5,094	932	211	993	258	4.93	5.43	38.5x	29.5x	1.8x	
Ellie Mae, Inc.	ELLI	89.40	8.9%	6.8%	114.95	79.71	3,088	2,721	400	82	472	122	1.54	1.62	59.2x	58.7x	4.4x	
ACI Worldwide, Inc.	ACIW	22.67	(0.5%)	24.9%	25.00	18.20	2,688	3,315	1,041	194	1,039	256	0.63	0.64	69.4x	36.5x	3.3x	
Envestnet, Inc.	ENV	49.85	(2.3%)	41.4%	55.15	30.80	2,209	2,419	656	58	752	155	1.30	1.72	NM	31.3x	2.1x	
Ebiz, Inc.	EBIX	79.25	21.5%	38.9%	81.85	52.40	2,493	2,775	339	119	414	145	3.12	3.59	25.6x	22.6x	1.5x	
Q2 Holdings, Inc.	QTWO	36.85	(11.5%)	27.7%	44.35	28.30	1,536	1,447	184	(15)	226	17	(0.01)	0.13	NM	278.2x	10.7x	
Bottomline Technologies (de), Inc.	EPAY	34.68	9.0%	38.6%	36.47	21.52	1,404	1,463	358	36	383	86	0.96	1.09	NM	33.3x	2.1x	
<b>Median</b>			<b>7.2%</b>	<b>28.5%</b>											<b>38.5x</b>	<b>29.8x</b>	<b>2.1x</b>	

Source: Capital IQ. (\$ in '000, except per share)

COMPANY	TICKER
<b>FinTech</b>	
Automatic Data Processing, Inc.	ADP
Fidelity National Information Services, Inc.	FIS
Fiserv, Inc.	FISV
Experian plc	EXPN
First Data Corporation	FDC
Equifax Inc.	EFX
Global Payments Inc.	GPN
Broadridge Financial Solutions, Inc.	BR
Square, Inc.	SQ
Jack Henry & Associates, Inc.	JKHY
SS&C Technologies Holdings, Inc.	SSNC
Tyler Technologies, Inc.	TYL
Temenos Group AG	TEMN
Guidewire Software, Inc.	GWRE
Fair Isaac Corporation	FICO
Ellie Mae, Inc.	ELLI
ACI Worldwide, Inc.	ACIW
Envestnet, Inc.	ENV
Ebix, Inc.	EBIX
Q2 Holdings, Inc.	QTWO
Bottomline Technologies (de), Inc.	EPAY
<b>Median</b>	

EV/REVENUE MULTIPLES

TTM					NTM
Trailing		% Change			
12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
4.1x	3.9x	3.8x	6.6%	7.3%	3.8x
4.3x	4.3x	4.0x	0.8%	6.9%	4.4x
5.7x	5.6x	5.0x	1.3%	13.7%	5.4x
5.3x	4.7x	4.9x	13.1%	9.0%	5.0x
4.6x	4.7x	4.4x	(3.4%)	4.6%	2.9x
5.0x	4.6x	5.6x	8.0%	(11.2%)	4.9x
4.7x	4.3x	4.7x	9.0%	(0.6%)	5.2x
2.8x	2.5x	2.7x	12.1%	0.8%	2.7x
6.3x	5.5x	2.6x	14.8%	140.5%	10.9x
6.2x	5.5x	5.0x	11.9%	24.2%	5.8x
6.4x	6.5x	5.9x	(2.2%)	7.6%	6.0x
7.9x	8.1x	7.2x	(1.4%)	10.0%	7.2x
13.4x	11.3x	8.3x	18.7%	62.2%	11.6x
9.7x	10.2x	7.1x	(5.0%)	37.2%	7.8x
5.5x	5.2x	4.7x	4.5%	15.1%	5.1x
6.8x	6.3x	7.4x	7.5%	(7.7%)	5.8x
3.2x	3.2x	2.9x	(0.3%)	9.4%	3.2x
3.7x	3.9x	3.2x	(6.3%)	13.4%	3.2x
8.2x	7.3x	7.0x	12.3%	17.2%	6.7x
7.8x	9.5x	7.7x	(17.5%)	1.9%	6.4x
4.1x	3.8x	2.8x	6.5%	46.4%	3.8x
<b>5.5x</b>	<b>5.2x</b>	<b>4.9x</b>	<b>6.5%</b>	<b>9.4%</b>	<b>5.2x</b>

EV/EBITDA MULTIPLES

TTM					NTM
Trailing		% Change			
12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
19.0x	17.6x	17.2x	8.3%	10.5%	18.2x
15.8x	16.0x	15.9x	(1.6%)	(0.9%)	12.6x
18.2x	17.8x	14.9x	2.4%	22.2%	14.8x
15.2x	13.4x	15.7x	13.7%	(3.3%)	14.2x
12.9x	12.4x	12.9x	4.8%	0.3%	11.3x
14.3x	12.5x	16.3x	14.3%	(12.6%)	13.9x
16.9x	15.8x	19.8x	7.2%	(14.2%)	15.2x
15.8x	14.6x	14.1x	7.7%	11.8%	13.7x
NM	NM	NM	NM	NM	61.2x
19.9x	17.7x	14.1x	12.8%	41.4%	16.8x
17.1x	18.0x	17.2x	(4.9%)	(0.3%)	13.9x
35.4x	36.6x	35.4x	(3.2%)	0.0%	23.4x
48.5x	42.1x	32.1x	15.3%	51.3%	32.2x
NM	NM	NM	NM	NM	41.6x
24.1x	23.7x	20.8x	1.8%	15.9%	19.8x
33.2x	30.5x	35.5x	8.9%	(6.3%)	22.3x
17.1x	19.0x	38.6x	(10.1%)	(55.6%)	12.9x
41.4x	44.7x	37.5x	(7.3%)	10.4%	15.6x
23.3x	20.4x	18.7x	14.1%	24.5%	19.1x
NM	NM	NM	NM	NM	87.6x
40.5x	44.6x	28.3x	(9.3%)	42.7%	16.9x
<b>18.6x</b>	<b>17.9x</b>	<b>18.0x</b>	<b>6.0%</b>	<b>5.3%</b>	<b>16.8x</b>

Source: Capital IQ. (\$ in '000, except per share)

COMPANY	TICKER	Price 12/31/17	% Change		52-Week		Market Cap	Ent Val (TEV)	LTM		NTM		EPS		Earnings Ratio		PEG Ratio 2018E	
			3 mo	12 mo	High	Low			Rev	EBITDA	Rev	EBITDA	2017E	2018E	LTM	2018E		
<b>Engineering Software</b>																		
Dassault Systèmes SE	DSY	\$ 106.38	5.2%	39.2%	\$110.88	\$85.01	\$ 27,136	\$ 24,991	\$ 3,193	\$ 845	\$ 3,397	\$ 1,123	\$ 3.14	\$ 3.46	49.8x	31.5x	3.3x	
Autodesk, Inc.	ADSK	104.83	(6.6%)	41.6%	131.10	74.50	23,091	23,222	1,982	(328)	2,404	305	(0.55)	(0.51)	NM	NM	NM	
Synopsys, Inc.	SNPS	85.24	5.8%	44.8%	94.80	59.04	12,676	11,776	2,725	512	2,898	768	3.31	3.51	96.9x	25.5x	NM	
Ansys, Inc.	ANSS	147.59	20.3%	59.6%	155.14	91.89	12,525	11,598	1,064	467	1,147	550	3.96	4.23	46.4x	36.0x	3.0x	
Cadence Design Systems, Inc.	CDNS	41.82	6.0%	65.8%	45.64	25.24	11,808	11,770	1,910	436	2,008	638	1.40	1.52	45.5x	29.5x	2.5x	
PTC Inc.	PTC	60.77	8.0%	31.3%	67.12	45.93	7,057	7,471	1,164	111	1,234	293	1.20	1.36	NM	48.4x	1.9x	
Altair Engineering Inc.	ALTR	23.92	0.0%	0.0%	25.59	16.55	1,505	1,580	326	(14)	352	36	0.20	0.34	NM	77.1x	4.2x	
<b>Median</b>			<b>5.8%</b>	<b>41.6%</b>											<b>48.1x</b>	<b>33.8x</b>	<b>3.0x</b>	

COMPANY	TICKER	EV/REVENUE MULTIPLES					
		TTM					NTM
		Trailing		% Change			
		12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
<b>Engineering Software</b>							
Dassault Systèmes SE	DSY	7.8x	6.3x	5.7x	24.3%	38.1%	7.4x
Autodesk, Inc.	ADSK	11.7x	12.5x	7.3x	(6.4%)	61.2%	9.7x
Synopsys, Inc.	SNPS	4.3x	4.2x	3.3x	2.4%	32.1%	4.1x
Ansys, Inc.	ANSS	10.9x	9.2x	7.4x	18.2%	47.6%	10.1x
Cadence Design Systems, Inc.	CDNS	6.2x	5.9x	4.1x	4.4%	49.1%	5.9x
PTC Inc.	PTC	6.4x	6.1x	5.1x	6.0%	26.0%	6.1x
Altair Engineering Inc.	ALTR	4.8x	NA	NA	NM	NM	4.5x
<b>Median</b>		<b>6.4x</b>	<b>6.2x</b>	<b>5.4x</b>	<b>5.2%</b>	<b>42.8%</b>	<b>6.1x</b>

COMPANY	TICKER	EV/EBITDA MULTIPLES					
		TTM					NTM
		Trailing		% Change			
		12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
<b>Engineering Software</b>							
Dassault Systèmes SE	DSY	29.6x	25.0x	20.7x	18.4%	43.1%	22.3x
Autodesk, Inc.	ADSK	NM	NM	NM	NM	NM	76.1x
Synopsys, Inc.	SNPS	23.0x	21.0x	17.8x	9.4%	29.1%	15.3x
Ansys, Inc.	ANSS	24.8x	20.7x	16.0x	20.1%	55.1%	21.1x
Cadence Design Systems, Inc.	CDNS	27.0x	26.2x	18.1x	3.0%	49.2%	18.5x
PTC Inc.	PTC	67.6x	75.5x	55.5x	(10.5%)	21.8%	25.5x
Altair Engineering Inc.	ALTR	NM	NA	NA	NM	NM	44.0x
<b>Median</b>		<b>27.0x</b>	<b>25.0x</b>	<b>18.1x</b>	<b>9.4%</b>	<b>43.1%</b>	<b>22.3x</b>

Source: Capital IQ. (\$ in '000, except per share)

COMPANY	TICKER	Price 12/31/17	% Change		52-Week		Market Cap	Ent Val (TEV)	LTM		NTM		EPS		Earnings Ratio		PEG Ratio 2018E	
			3 mo	12 mo	High	Low			Rev	EBITDA	Rev	EBITDA	2017E	2018E	LTM	2018E		
<b>IT Infrastructure Software</b>																		
Microsoft Corporation	MSFT	\$ 85.54	14.8%	37.7%	\$ 87.50	\$61.95	\$659,906	\$615,246	\$92,560	\$32,108	\$108,354	\$43,000	\$ 3.03	\$ 3.39	30.2x	25.9x	2.2x	
Oracle Corporation	ORCL	47.28	(2.2%)	23.0%	53.14	38.30	195,720	185,248	38,907	15,143	40,528	18,883	2.64	2.94	20.3x	16.6x	2.1x	
International Business Machines Corporation	IBM	153.42	5.7%	(7.6%)	182.79	139.13	142,035	176,292	78,366	16,839	78,951	20,011	13.78	13.90	12.8x	11.8x	2.4x	
VMware, Inc.	VMW	125.32	14.8%	59.2%	129.50	77.94	50,521	43,141	7,093	1,850	8,442	3,271	NA	5.14	45.1x	25.9x	2.0x	
CA, Inc.	CA	33.28	(0.3%)	4.8%	36.54	30.45	13,929	14,029	4,078	1,199	4,277	1,627	2.45	2.46	19.2x	13.8x	3.1x	
Red Hat, Inc.	RHT	120.10	8.3%	72.3%	130.93	69.39	21,251	20,298	2,777	531	3,241	893	2.27	2.88	64.9x	43.9x	2.7x	
Citrix Systems, Inc.	CTXS	88.00	14.6%	(1.5%)	95.90	70.24	13,259	13,172	3,464	989	2,879	1,007	4.80	4.85	25.1x	18.5x	1.7x	
Akamai Technologies, Inc.	AKAM	65.04	33.5%	(2.5%)	71.64	44.65	11,002	10,907	2,456	659	2,630	936	2.56	2.65	38.9x	24.6x	2.6x	
Progress Software Corporation	PRGS	42.57	11.5%	33.3%	43.12	27.16	2,035	1,967	398	139	399	185	1.85	1.91	NM	26.5x	2.7x	
Presidio, Inc.	PSDO	19.17	35.5%	0.0%	19.49	12.75	1,758	2,656	2,845	221	3,009	242	1.23	1.30	91.3x	14.4x	1.6x	
<b>Median</b>			<b>13.0%</b>	<b>13.9%</b>											<b>30.2x</b>	<b>21.6x</b>	<b>2.3x</b>	

COMPANY	TICKER	EV/REVENUE MULTIPLES					
		TTM					NTM
		Trailing		% Change			
		12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
<b>IT Infrastructure Software</b>							
Microsoft Corporation	MSFT	6.6x	5.9x	4.9x	12.1%	34.4%	5.7x
Oracle Corporation	ORCL	4.8x	4.9x	4.1x	(3.3%)	14.9%	4.6x
International Business Machines Corporation	IBM	2.2x	2.2x	2.4x	4.6%	(5.3%)	2.2x
VMware, Inc.	VMW	6.1x	5.2x	3.7x	15.9%	63.5%	5.1x
CA, Inc.	CA	3.4x	3.5x	3.1x	(0.3%)	9.3%	3.3x
Red Hat, Inc.	RHT	7.3x	7.1x	5.1x	3.0%	42.1%	6.3x
Citrix Systems, Inc.	CTXS	3.8x	3.4x	4.0x	12.1%	(4.5%)	4.6x
Akamai Technologies, Inc.	AKAM	4.4x	3.4x	4.9x	29.1%	(9.3%)	4.1x
Progress Software Corporation	PRGS	4.9x	4.4x	3.6x	11.3%	36.0%	4.9x
Presidio, Inc.	PSDO	0.9x	0.8x	NA	16.5%	NM	0.9x
<b>Median</b>		<b>4.6x</b>	<b>3.9x</b>	<b>4.0x</b>	<b>11.7%</b>	<b>14.9%</b>	<b>4.6x</b>

COMPANY	TICKER	EV/EBITDA MULTIPLES					
		TTM					NTM
		Trailing		% Change			
		12/31/17	3 mo	12 mo	3 mo	12 mo	12/31/17
<b>IT Infrastructure Software</b>							
Microsoft Corporation	MSFT	19.2x	17.5x	15.7x	9.3%	22.3%	14.3x
Oracle Corporation	ORCL	12.2x	12.7x	10.6x	(3.4%)	15.8%	9.8x
International Business Machines Corporation	IBM	10.5x	9.8x	10.9x	6.7%	(3.6%)	8.8x
VMware, Inc.	VMW	23.3x	20.1x	13.6x	15.9%	71.3%	13.2x
CA, Inc.	CA	11.7x	11.3x	9.9x	4.0%	18.6%	8.6x
Red Hat, Inc.	RHT	38.2x	38.4x	30.2x	(0.6%)	26.7%	22.7x
Citrix Systems, Inc.	CTXS	13.3x	11.8x	13.6x	12.6%	(2.2%)	13.1x
Akamai Technologies, Inc.	AKAM	16.5x	12.2x	15.8x	36.1%	4.6%	11.6x
Progress Software Corporation	PRGS	14.1x	13.3x	14.2x	6.2%	(0.4%)	10.6x
Presidio, Inc.	PSDO	12.0x	10.7x	NA	11.8%	NM	11.0x
<b>Median</b>		<b>13.7x</b>	<b>12.4x</b>	<b>13.6x</b>	<b>8.0%</b>	<b>15.8%</b>	<b>11.3x</b>

Source: Capital IQ. (\$ in '000, except per share)

COMPANY	TICKER	Price 12/31/17	% Change		52-Week		Market Cap	Ent Val (TEV)	LTM		NTM		EPS		Earnings Ratio		PEG Ratio 2018E	
			3 mo	12 mo	High	Low			Rev	EBITDA	Rev	EBITDA	2017E	2018E	LTM	2018E		
<b>Security Software</b>																		
Check Point Software Technologies Ltd.	CHKP	\$ 103.62	(9.1%)	22.7%	\$119.20	\$84.00	\$ 16,936	\$ 15,426	\$ 1,835	\$ 912	\$ 1,941	\$ 1,073	\$ 5.26	\$ 5.72	22.1x	18.0x	1.9x	
Symantec Corporation	SYMC	28.06	(14.5%)	17.5%	34.20	23.77	17,397	21,580	4,571	596	5,063	2,545	1.19	1.68	NM	17.1x	1.9x	
Palo Alto Networks, Inc.	PANW	144.94	0.6%	15.9%	157.65	107.31	13,318	12,346	1,869	(81)	2,266	579	2.59	3.39	NM	45.5x	1.5x	
Fortinet, Inc.	FTNT	43.69	21.9%	45.1%	45.64	29.90	7,598	6,322	1,441	170	1,638	348	1.02	1.19	91.2x	37.3x	2.4x	
FireEye, Inc.	FEYE	14.20	(15.3%)	19.3%	18.00	10.35	2,621	2,512	734	(139)	781	105	(0.19)	(0.02)	NM	NM	NM	
Proofpoint, Inc.	PFPT	88.81	1.8%	25.7%	97.92	70.30	3,982	3,903	477	(34)	623	82	0.75	1.03	NM	96.7x	3.9x	
CyberArk Software Ltd.	CYBR	41.39	1.0%	(9.0%)	55.65	39.34	1,438	1,164	246	29	293	65	1.10	1.32	66.9x	32.9x	2.4x	
Imperva, Inc.	IMPV	39.70	(8.5%)	3.4%	52.40	37.05	1,350	1,007	309	(7)	362	50	0.93	1.02	145.2x	42.1x	1.5x	
SecureWorks Corp.	SCWX	8.87	(28.2%)	(16.2%)	12.99	8.10	719	619	466	(28)	491	(14)	(0.23)	(0.29)	NM	NM	NM	
Qualys, Inc.	QLYS	59.35	14.6%	87.5%	62.35	31.80	2,251	1,948	220	57	259	96	1.05	1.17	53.9x	54.5x	3.2x	
Barracuda Networks, Inc.	CUDA	27.50	13.5%	28.3%	27.95	19.06	1,474	1,268	373	32	388	74	0.78	0.76	161.7x	36.0x	4.0x	
ForeScout Technologies, Inc.	FSCT	31.89	0.0%	0.0%	32.58	21.56	1,209	1,445	204	(63)	249	(40)	(4.52)	(1.18)	NM	NM	NM	
<b>Median</b>			<b>0.3%</b>	<b>18.4%</b>											<b>79.0x</b>	<b>37.3x</b>	<b>2.4x</b>	

EV/REVENUE MULTIPLES

COMPANY	TICKER	TTM				NTM	
		Trailing		% Change			
		12/31/17	3 mo	12 mo	3 mo		12 mo
<b>Security Software</b>							
Check Point Software Technologies Ltd.	CHKP	8.4x	9.4x	7.9x	(10.8%)	6.3%	7.9x
Symantec Corporation	SYMC	4.7x	5.6x	4.5x	(15.4%)	4.6%	4.3x
Palo Alto Networks, Inc.	PANW	6.6x	7.0x	7.2x	(6.0%)	(7.6%)	5.4x
Fortinet, Inc.	FTNT	4.4x	3.7x	3.5x	19.1%	26.9%	3.9x
FireEye, Inc.	FEYE	3.4x	4.0x	2.6x	(15.1%)	32.7%	3.2x
Proofpoint, Inc.	PFPT	8.2x	8.6x	8.6x	(5.3%)	(4.7%)	6.3x
CyberArk Software Ltd.	CYBR	4.7x	4.9x	6.3x	(4.0%)	(24.3%)	4.0x
Imperva, Inc.	IMPV	3.3x	3.9x	3.9x	(16.6%)	(15.8%)	2.8x
SecureWorks Corp.	SCWX	1.3x	2.0x	1.8x	(33.0%)	(27.7%)	1.3x
Qualys, Inc.	QLYS	8.8x	7.9x	4.8x	12.5%	82.9%	7.5x
Barracuda Networks, Inc.	CUDA	3.4x	3.0x	2.8x	13.5%	21.8%	3.3x
ForeScout Technologies, Inc.	FSCT	7.1x	NA	NA	NM	NM	5.8x
<b>Median</b>		<b>4.7x</b>	<b>4.9x</b>	<b>4.5x</b>	<b>(6.0%)</b>	<b>4.6%</b>	<b>4.1x</b>

EV/EBITDA MULTIPLES

COMPANY	TICKER	TTM				NTM	
		Trailing		% Change			
		12/31/17	3 mo	12 mo	3 mo		12 mo
<b>Security Software</b>							
Check Point Software Technologies Ltd.	CHKP	16.9x	19.1x	15.7x	(11.3%)	7.8%	14.4x
Symantec Corporation	SYMC	36.2x	36.2x	18.0x	0.1%	101.2%	8.5x
Palo Alto Networks, Inc.	PANW	NM	NM	NM	NM	NM	21.3x
Fortinet, Inc.	FTNT	37.3x	35.8x	69.6x	4.1%	(46.5%)	18.2x
FireEye, Inc.	FEYE	NM	NM	NM	NM	NM	23.9x
Proofpoint, Inc.	PFPT	NM	NM	NM	NM	NM	47.6x
CyberArk Software Ltd.	CYBR	39.6x	33.1x	32.5x	19.7%	21.9%	17.9x
Imperva, Inc.	IMPV	NM	NM	NM	NM	NM	20.1x
SecureWorks Corp.	SCWX	NM	NM	NM	NM	NM	NM
Qualys, Inc.	QLYS	34.3x	31.8x	20.0x	8.1%	71.8%	20.4x
Barracuda Networks, Inc.	CUDA	39.4x	30.0x	38.3x	31.1%	2.9%	17.0x
ForeScout Technologies, Inc.	FSCT	NM	NA	NA	NM	NM	NM
<b>Median</b>		<b>36.7x</b>	<b>32.4x</b>	<b>26.2x</b>	<b>6.1%</b>	<b>14.8%</b>	<b>19.1x</b>

Source: Capital IQ. (\$ in '000, except per share)

ACQUIRER	TARGET	Date Announced	Headquarters		Enterprise Value	LTM		Enterprise Value / LTM	
			Buyer	Target		Revenue	EBITDA	Revenue	EBITDA
<b>Selected Enterprise Application Software M&amp;A Transactions Announced Q4 2017 (with Deal Value Disclosed)</b>									
Thales S.A.	Gemalto N.V.	12/17/2017	France	Netherlands	\$6,521,405	\$ 3,559,153	\$ 547,560	1.8x	11.9x
Cisco Systems, Inc.	BroadSoft, Inc.	10/23/2017	United States	United States	1,916,954	361,884	23,756	5.3x	80.7x
Thoma Bravo, LLC; et al	Barracuda Networks, Inc.	11/27/2017	NA	United States	1,405,064	366,569	32,622	3.8x	43.1x
Elliott Intl.; Qatar Invest. Authority; et al	Gigamon Inc.	10/26/2017	NA	United States	1,329,098	302,924	4,284	4.4x	310.2x
bpost SA/NV	Radial, Inc.	10/8/2017	Belgium	United States	820,000	NA	NA	NA	NA
First Data Corporation	BluePay, Inc.	10/20/2017	United States	United States	760,000	NA	NA	NA	NA
TMX Group Limited	Trayport Limited	10/27/2017	Canada	United Kingdom	721,321	76,067	39,345	9.5x	18.3x
Synopsys, Inc.	Black Duck Software, Inc.	11/2/2017	United States	United States	548,000	NA	NA	NA	NA
Roxar, Inc.	Paradigm Ltd.	10/16/2017	United States	United States	510,000	NA	NA	NA	NA
Marlin Equity Partners, LLC; et al	Bazaarvoice, Inc.	11/27/2017	NA	United States	455,992	206,301	877	2.2x	519.9x
Delphi Automotive PLC (nka:Aptiv PLC)	nuTonomy Inc.	10/24/2017	United Kingdom	United States	454,000	NA	NA	NA	NA
Assystem Technologies SA	SQS Software Quality Systems AG	12/15/2017	France	Germany	418,007	377,326	30,490	1.1x	13.7x
Intuit Inc.	TSheets.com, LLC	12/5/2017	United States	United States	340,000	NA	NA	NA	NA
Guidewire Software, Inc.	Cyence Inc.	10/6/2017	United States	United States	265,966	NA	NA	NA	NA
JAGGAER, Inc.	BravoSolution SpA	11/29/2017	United States	Italy	218,268	NA	NA	NA	NA
Schneider Electric Industries SAS	IGE+XAO Group	11/8/2017	France	France	172,151	34,108	9,365	5.0x	18.4x
MYOB Group Limited	Reckon Limited, Reckon Accountants Practice Management Business	11/16/2017	Australia	Australia	136,612	NA	NA	NA	NA
Jack Henry & Associates, Inc.	Ensenta Corporation	11/28/2017	United States	United States	130,000	27,000	NA	4.8x	NA
Proofpoint, Inc.	Cloudmark Inc.	11/7/2017	United States	United States	110,000	NA	NA	NA	NA
Appen Limited	Leapforce, Inc.	11/28/2017	Australia	United States	80,000	47,200	8,800	1.7x	9.1x
Warburg Pincus LLC	CYREN Ltd.	11/20/2017	United States	United States	72,861	31,388	(4,950)	2.3x	NM
Proofpoint, Inc.	Weblife Balance Inc.	11/29/2017	United States	United States	60,000	NA	NA	NA	NA
<b>Median</b>					<b>436,004</b>	<b>206,301</b>	<b>16,561</b>	<b>3.8x</b>	<b>18.4x</b>

Source: Capital IQ. (\$ in '000, except per share)



## CORPORATE FINANCE SERVICES

The sale of a company can represent the culmination of years of effort by its investors and management. With this in mind, Armanino guides our clients through the sale process, bringing to bear extensive structuring, preparation, negotiation, valuation and corporate finance experience and judgment to optimize value.

Our team has developed its expertise through many M&A, divestiture and strategic partnering transactions for closely-held businesses across most major technology sectors.

### **Corporate Finance Services include:**

- Sell-Side Representation
- Buy-Side Representation
- Exit Planning
- Special Situations M&A
- Purchaser Representative (SEC Reg 501)

The professionals in our practice have many years of business valuation and corporate finance experience with companies in every major industrial sector and size to deliver superior results for private technology companies in Silicon Valley.

### **SELL SIDE M&A ADVISORY**

We help companies pursuing a sale or merger involving all or part of their business, as well as organizations interested in partial divestitures of a division or assets. We provide end-to-end strategic advisory, introducing the company to potential acquirers and managing a rigorous process to optimize competition, achieve strategic valuations and successfully close transactions.

### **BUY SIDE M&A ADVISORY**

We represent clients pursuing strategic acquisitions, such as asset purchases, mergers, and intellectual property procurements. Our financial advisory includes market analyses, target identification, financial modeling, deal negotiations, preliminary due diligence and final negotiation of the definitive agreements.

### **SPECIAL SITUATIONS M&A**

Armanino is among Silicon Valley's most experienced restructuring specialists on behalf of investors, creditors, boards, and executive management of distressed technology companies, including monetizing assets such as intellectual property (IP) on an accelerated timeline.

### **PURCHASER REPRESENTATIVE SERVICES**

A Purchaser Representative may be necessary in merger and acquisition transactions where the consideration is not all cash, but includes securities that are not registered with the SEC.

## CONTACT

### CORPORATE FINANCE

*Sell-Side and Buy-Side Advisory, Special Situations M&A, Purchaser Representative*

**Gunther Hofmann, CFA, CVA**  
**Managing Director**

44 Montgomery Street, Suite 900  
San Francisco, CA 94104

[gunther.hofmann@armaninollp.com](mailto:gunther.hofmann@armaninollp.com)

+1 667 800 6773

### TRANSACTION ADVISORY

*Financial Due Diligence and other pre and post transaction support*

**John Dunican, CPA**  
**Partner**

12657 Alcosta Blvd., Suite 500  
San Ramon, CA 94583

[john.dunican@amllp.com](mailto:john.dunican@amllp.com)

+1 925 498 1902

### VALUATION

*Purchase Price Allocation, M&A Valuation  
409A Valuation, Gift & Estate Tax*

**Gregory Ansel, ASA**  
**Partner**

12657 Alcosta Blvd., Suite 500  
San Ramon, CA 94583

[greg.ansel@armaninollp.com](mailto:greg.ansel@armaninollp.com)

+1 925 302 4107

### AUDIT

**Matthew Perreault, CPA**  
**Partner**

12657 Alcosta Blvd., Suite 500  
San Ramon, CA 94583

[matt.perreault@armaninollp.com](mailto:matt.perreault@armaninollp.com)

+1 925 790 2755

### TAX

**David Sordello, CPA**  
**Partner**

50 West Fernando Ave., Suite 500  
San Jose, CA 95113

[david.sordello@armaninollp.com](mailto:david.sordello@armaninollp.com)

+1 408 200 6403

### BUSINESS SYSTEMS / ERP

**Jeffrey J. Russell, Esq.**  
**Partner**

50 West Fernando Ave., Suite 500  
San Jose, CA 95113

[Jeffrey.Russell@armaninollp.com](mailto:Jeffrey.Russell@armaninollp.com)

+1 408 386 8985

**GENERAL:** [info@armaninollp.com](mailto:info@armaninollp.com), 925 790 2600