



Applied Technology & Digital Media Industry Update | Q4 2018

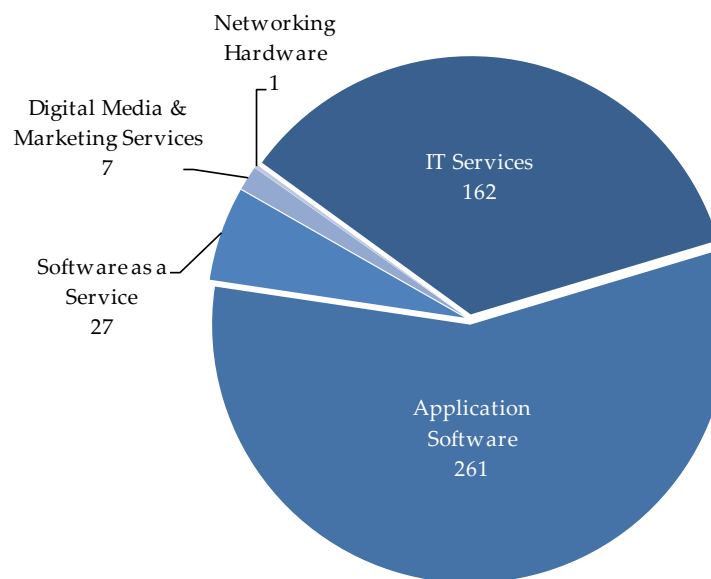
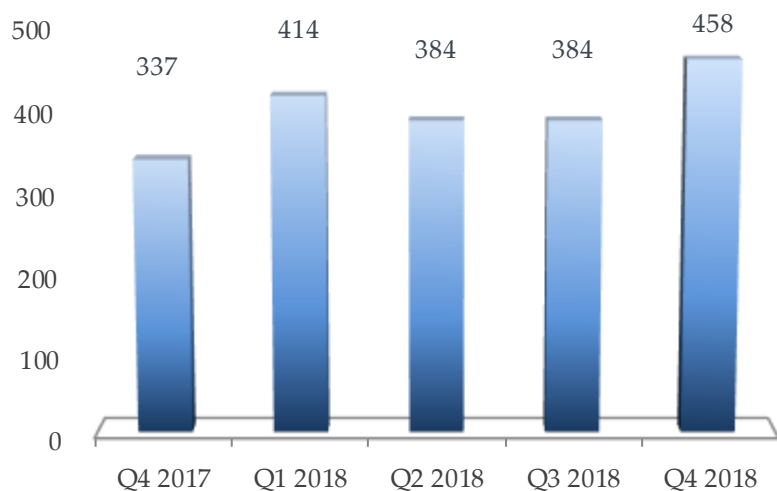


Q4 M&A TRANSACTION SUMMARY

Q4 Deal Volume ⁽¹⁾

- Applied Technology & Digital Media M&A increased substantially in Q4 2018 following no change in transaction activity in Q3 2018
- For Q4 2018, Application Software was the most active M&A segment of the Applied Technology & Digital Media universe

Number of Transactions



Q4 2018 total Applied Technology & Digital Media M&A transaction volume was 458, representing a 35.9% increase from Q4 2017

NOTABLE M&A TRANSACTIONS



Broadcom Inc. completed the acquisition of CA Technologies for \$18.9 billion on November 5, 2018. This implies a valuation of 14.7x LTM EBITDA.



CA Technologies develops, markets, delivers and licenses software products and services in the United States and internationally.

November 2018



Microsoft Corporation acquired GitHub, Inc. from Sequoia Capital and other investors for \$7.5 billion on October 25, 2018.



GitHub provides code hosting services that allow developers/people to build software for open source and private projects in organizations.

October 2018



The Carlyle Group acquired a majority stake in Sedgwick Claims Management Services, Inc. from KKR for \$6.7 billion on December 31, 2018.



sedgwick

December 2018

Sedgwick develops and operates a cloud-based platform that provides technology-enabled risk and productivity management solutions to businesses in North America.



Adobe Systems Inc. acquired Marketo, Inc. from Vista Equity Partners for \$4.8 billion on October 31, 2018.



Marketo provides a cloud platform for B2B marketing engagement that empowers marketers to create lasting relationships and grow revenue.

October 2018



Atos SE acquired Syntel, Inc. for \$3.4 billion on October 9, 2018. This implies a valuation of 13.4x LTM EBITDA.



October 2018

Syntel provides integrated IT services and knowledge process services intended to offer intelligent automation, scaled agile development and cloud computing technologies.



Concentrix Corporation acquired Convergys Corporation for \$2.4 billion on October 5, 2018. This implies a valuation of 7.4x LTM EBITDA.

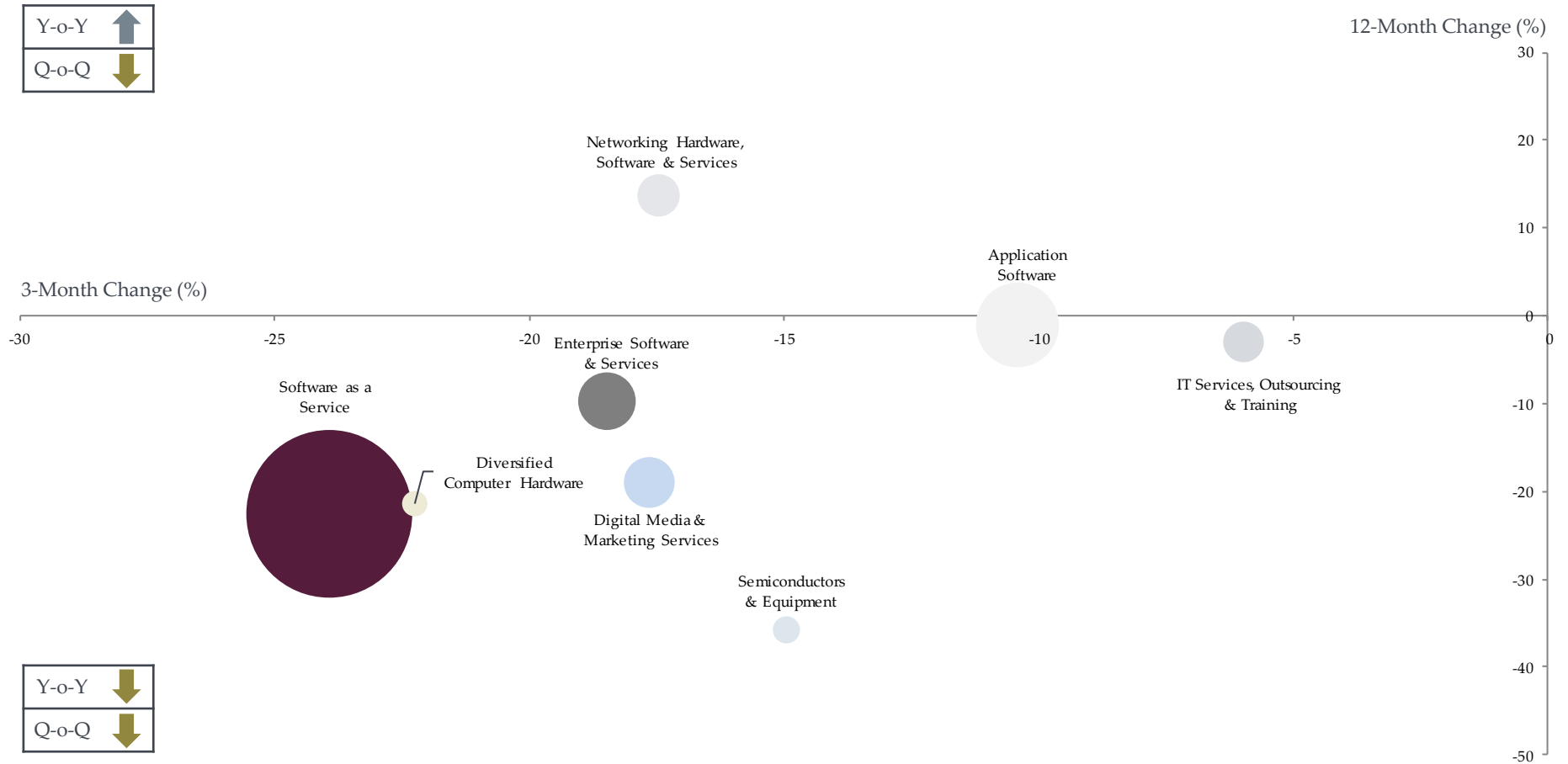


October 2018

Convergys provides customer and information management services to a variety of industry verticals worldwide.

APPLIED TECHNOLOGY & DIGITAL MEDIA PERFORMANCE INDEX

Public Company Trading Multiple Trend Analysis ⁽¹⁾



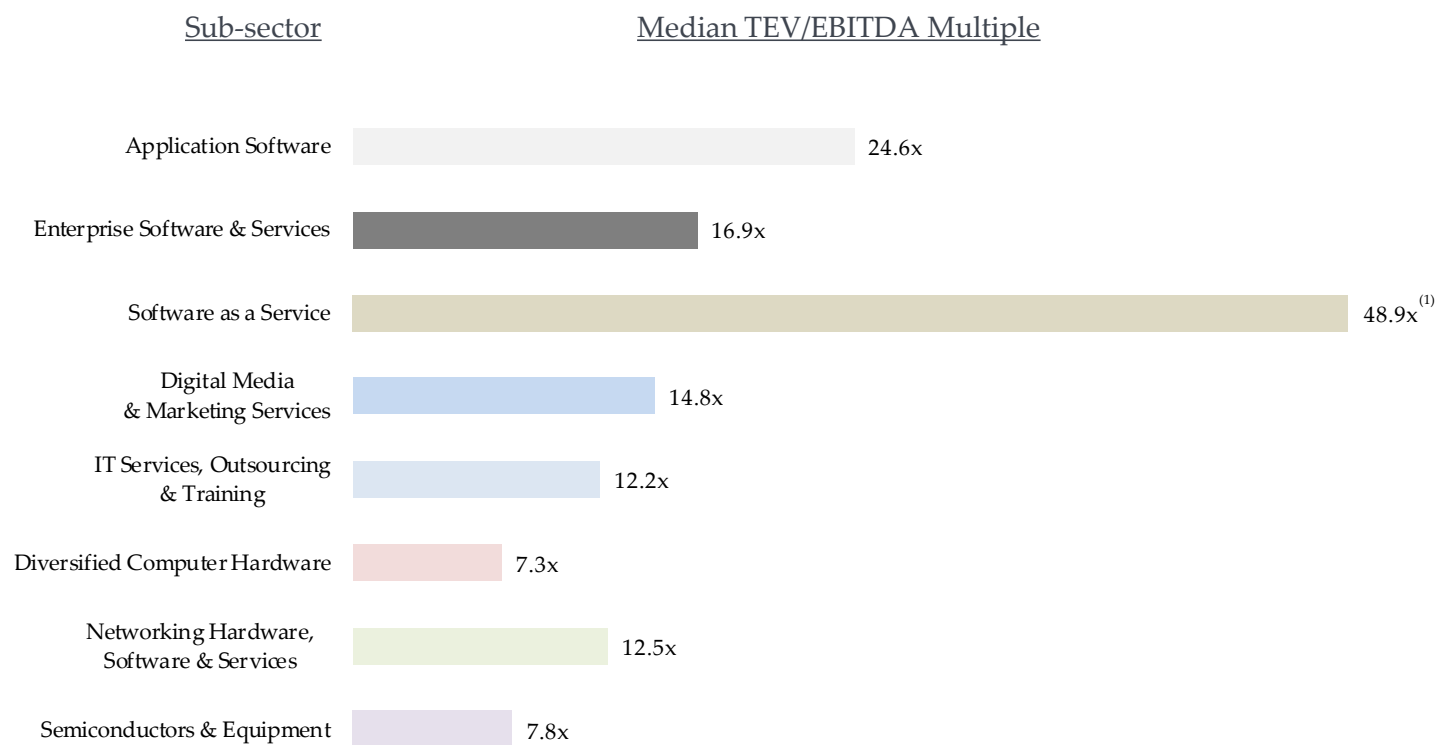
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Footnote:

(1) Size of each data point corresponds to the relative size of each sub-sector's trading multiple

PUBLIC COMPANY TRADING MULTIPLE SNAPSHOT

As of December 31, 2018



COMPARABLE PUBLIC COMPANY ANALYSIS

(\$ in Millions Except Per Share Amounts)

Company	Market Data					LTM Financial and Performance Data ⁽¹⁾				Valuation Multiples	
	Price 12/31/2018	52-Week		Equity Value	TEV ⁽²⁾	Revenue	EBITDA	EBITDA Margin	3 Yr. Revenue CAGR %	TEV/LTM:	
		High	Low							Revenue	EBITDA
Software											
<i>Application Software</i>											
Adobe Inc.	\$226.24	\$277.61	\$175.26	\$110,435	\$111,331	\$9,030	\$3,160	35.0%	23.5%	12.3x	35.2x
Intuit Inc.	196.85	231.84	150.43	51,090	50,183	6,070	1,749	28.8%	12.2%	8.3x	28.7x
Autodesk, Inc.	128.61	159.94	101.55	28,167	28,676	2,386	(31)	(1.3%)	(1.8%)	12.0x	NM
Dassault Systèmes SE	118.73	161.44	100.21	30,279	28,347	3,885	1,073	27.6%	7.2%	7.3x	26.4x
Symantec Corporation	18.90	29.73	17.43	12,072	14,675	4,750	966	20.3%	8.8%	3.1x	15.2x
Synopsys, Inc.	84.24	103.40	79.14	12,595	12,347	3,121	526	16.9%	11.7%	4.0x	23.5x
Cadence Design Systems, Inc.	43.48	47.40	35.49	12,268	12,063	2,070	491	23.7%	7.1%	5.8x	24.6x
ANSYS, Inc.	142.94	190.45	136.80	11,944	11,215	1,181	454	38.5%	7.7%	9.5x	24.7x
Open Text Corporation	32.60	40.31	30.99	8,721	10,554	2,842	830	29.2%	15.7%	3.7x	12.7x
Tyler Technologies, Inc.	185.82	252.47	173.26	7,214	6,942	911	194	21.3%	17.6%	7.6x	35.8x
Nuance Communications, Inc.	13.23	18.75	12.18	3,805	5,539	2,052	363	17.7%	2.0%	2.7x	15.3x
Teradata Corporation	38.36	44.27	33.63	4,534	4,263	2,202	154	7.0%	(5.0%)	1.9x	27.7x
Manhattan Associates, Inc.	42.37	62.39	39.01	2,770	2,676	559	152	27.2%	0.8%	4.8x	17.6x
Median								23.7%	7.7%	5.8x	24.6x
<i>Enterprise Software & Services</i>											
Microsoft Corporation	\$101.57	\$116.18	\$83.83	\$779,805	\$731,962	\$114,906	\$47,543	41.4%	8.2%	6.4x	15.4x
SAP SE	99.83	124.14	93.16	119,155	122,564	27,983	7,250	25.9%	6.6%	4.4x	16.9x
Red Hat, Inc.	175.64	179.49	115.31	31,046	29,635	3,255	593	18.2%	18.2%	9.1x	50.0x
Cerner Corporation	52.44	73.43	48.78	17,278	16,906	5,213	1,256	24.1%	8.3%	3.2x	13.5x
Citrix Systems, Inc.	102.46	116.82	83.70	13,808	14,131	2,950	912	30.9%	(2.9%)	4.8x	15.5x
The Sage Group plc	7.66	10.52	6.26	8,321	9,148	2,408	639	26.5%	8.7%	3.8x	14.3x
Allscripts Healthcare Solutions, Inc.	9.64	16.13	8.54	1,684	3,898	2,079	90	4.4%	14.6%	1.9x	43.1x
Pegasystems Inc.	47.83	67.95	43.21	3,764	3,558	842	(24)	(2.8%)	9.2%	4.2x	NM
NextGen Healthcare, Inc.	15.15	23.73	12.24	980	991	531	37	7.1%	2.1%	1.9x	26.4x
MicroStrategy Incorporated	127.75	151.23	115.50	1,465	766	503	24	4.9%	(2.1%)	1.5x	31.3x
Median								21.2%	8.2%	4.0x	16.9x
<i>Software as a Service</i>											
salesforce.com, inc.	\$136.97	\$161.19	\$102.27	\$104,782	\$105,723	\$12,484	\$1,176	9.4%	25.6%	8.5x	89.9x
ServiceNow, Inc.	178.05	206.30	130.14	31,925	31,114	2,457	60	2.4%	38.9%	12.7x	NM
The Ultimate Software Group, Inc.	244.87	332.44	207.02	7,657	7,532	1,087	116	10.7%	23.1%	6.9x	64.8x
RealPage, Inc.	48.19	66.25	42.90	4,362	4,679	830	141	17.0%	22.5%	5.6x	33.1x
LogMeIn, Inc.	81.57	134.80	74.87	4,173	4,206	1,170	343	29.3%	66.1%	3.6x	12.3x
2U, Inc.	49.72	98.58	44.50	2,880	2,437	383	(20)	(5.3%)	40.7%	6.4x	NM
Cornerstone OnDemand, Inc.	50.43	59.18	34.97	2,956	2,853	532	1	0.1%	18.4%	5.4x	NM
Median								9.4%	25.6%	6.4x	48.9x
Sub-Sector Median											24.7x

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Footnotes:

- (1) LTM refers to the most recent twelve-month period for which data was available
- (2) Total enterprise value equals equity value plus minority interest, preferred stock and net debt; net debt equals total debt less cash and cash equivalents

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		High	Low							Revenue	EBITDA
Technology Services											
<i>Digital Media & Marketing Services</i>											
Alphabet Inc.	\$1,035.61	\$1,273.89	\$970.11	\$723,465	\$621,035	\$129,866	\$39,334	30.3%	21.9%	4.8x	15.8x
Facebook, Inc.	131.09	218.62	123.02	376,725	335,589	51,896	28,388	54.7%	48.2%	6.5x	11.8x
Akamai Technologies, Inc.	61.08	83.08	58.33	9,948	9,691	2,674	698	26.1%	7.5%	3.6x	13.9x
Forrester Research, Inc.	44.70	50.00	36.19	816	672	349	31	9.0%	3.7%	1.9x	21.4x
Median								28.2%	14.7%	4.2x	14.8x
<i>IT Services, Outsourcing & Training</i>											
Cognizant Technology Solutions Corp.	\$63.48	\$85.10	\$59.47	\$36,757	\$32,718	\$15,824	\$3,305	20.9%	9.9%	2.1x	9.9x
CGI Group Inc.	61.19	63.92	48.41	16,915	18,154	8,902	1,493	16.8%	3.8%	2.0x	12.2x
ManTech International Corporation	52.30	68.11	46.00	2,078	2,063	1,924	161	8.4%	7.3%	1.1x	12.8x
Median								16.8%	7.3%	2.0x	12.2x
Sub-Sector Median											12.8x
Hardware and Equipment											
<i>Diversified Computer Hardware</i>											
Apple Inc.	\$157.74	\$233.47	\$146.59	\$748,539	\$796,721	\$265,595	\$81,801	30.8%	4.4%	3.0x	9.7x
Samsung Electronics Co., Ltd.	34.76	48.63	34.22	230,997	171,905	225,656	79,467	35.2%	7.8%	0.8x	2.2x
International Business Machines Corp.	113.67	171.13	105.94	103,303	136,019	80,373	16,954	21.1%	(1.4%)	1.7x	8.0x
HP Inc.	20.46	27.08	19.22	31,784	31,917	58,472	4,854	8.3%	4.3%	0.5x	6.6x
Median								25.9%	4.4%	1.2x	7.3x
<i>Networking Hardware, Software & Services</i>											
Cisco Systems, Inc.	\$43.33	\$49.47	\$37.35	\$194,810	\$177,862	\$50,266	\$15,090	30.0%	0.4%	3.5x	11.8x
F5 Networks, Inc.	162.03	199.71	131.31	9,823	8,784	2,161	661	30.6%	4.0%	4.1x	13.3x
Juniper Networks, Inc.	26.91	30.80	23.61	9,288	8,037	4,706	842	17.9%	0.5%	1.7x	9.6x
NETGEAR, Inc.	52.03	78.30	45.69	1,642	1,137	1,509	85	5.6%	5.3%	0.8x	13.3x
Median								24.0%	2.3%	2.6x	12.5x
<i>Semiconductors & Equipment</i>											
Intel Corporation	\$46.93	\$57.60	\$42.04	\$214,189	\$228,877	\$69,244	\$31,323	45.2%	7.9%	3.3x	7.3x
Texas Instruments Incorporated	94.50	120.75	87.70	90,771	90,725	15,817	7,601	48.1%	6.5%	5.7x	11.9x
QUALCOMM Incorporated	56.91	76.50	48.56	68,984	73,266	22,732	6,792	29.9%	(3.5%)	3.2x	10.8x
Micron Technology, Inc.	31.73	64.66	28.39	35,571	35,109	31,501	20,619	65.5%	28.1%	1.1x	1.7x
Applied Materials, Inc.	32.74	62.40	28.79	31,385	32,664	17,253	5,253	30.4%	21.3%	1.9x	6.2x
Microchip Technology Incorporated	71.92	104.20	60.70	17,010	27,432	4,641	1,520	32.7%	29.3%	5.9x	18.1x
Lam Research Corporation	136.17	234.88	122.64	21,131	19,897	10,930	3,442	31.5%	24.2%	1.8x	5.8x
KLA-Tencor Corporation	89.49	123.96	80.65	13,699	13,156	4,160	1,682	40.4%	13.9%	3.2x	7.8x
Marvell Technology Group Ltd.	16.19	25.18	14.34	10,643	11,839	2,736	611	22.3%	(2.7%)	4.3x	19.4x
Cypress Semiconductor Corporation	12.72	18.87	11.75	4,604	5,278	2,477	520	21.0%	22.7%	2.1x	10.1x
Cabot Corporation	42.94	68.63	39.57	2,578	3,557	3,242	529	16.3%	4.1%	1.1x	6.7x
Silicon Laboratories Inc.	78.81	110.70	73.13	3,401	3,150	854	148	17.4%	9.7%	3.7x	21.2x
Cirrus Logic, Inc.	33.18	55.13	31.47	1,986	1,741	1,407	257	18.3%	7.2%	1.2x	6.8x
Median								30.4%	9.7%	3.2x	7.8x
Sub-Sector Median											9.6x

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