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SOLUTION

Industry Observations – September 30, 2018

## Business Services Industry

## Select Business Services Public Company Industry Data As of September 30, 2018

(USD in millions, except per share data)

Company Name	Ticker	Market Data					LTM Operating Data			Forward Estimates	
		Price at 09/30/18	% of 52 Week High	Equity Value	Enterprise Value	Debt / Total Capital	Total Assets	LTM Revenue	LTM EBITDA	CY 2018 Revenue Estimate	CY 2018 EBITDA Estimate
<b>Advertising</b>											
Omnicom Group Inc.	OMC	\$ 68.02	81.6%	\$ 15,261.8	\$ 19,024.4	60.9%	\$ 22,487.6	\$ 15,380.0	\$ 2,352.0	\$15,310.12	\$2,381.45
The Interpublic Group of Companies, Inc.	IPG	\$ 22.87	87.9%	\$ 8,777.2	\$ 10,520.1	58.9%	\$ 13,513.1	\$ 8,157.9	\$ 1,190.7	\$7,981.72	\$1,298.55
Lamar Advertising Company (REIT)	LAMR	\$ 77.80	98.0%	\$ 7,688.8	\$ 10,234.1	70.5%	\$ -	\$ 1,597.8	\$ 679.0	\$1,620.91	\$700.19
Clear Channel Outdoor Holdings, Inc.	CCO	\$ 5.95	98.3%	\$ 2,151.0	\$ 7,403.2	168.3%	\$ 4,479.4	\$ 2,705.1	\$ 567.6	\$2,709.73	\$583.42
<b>Consumer Credit Reporting, Mercantile Reporting, and Adjustment and Collection Agency</b>											
S&P Global Inc.	SPGI	\$ 195.39	89.9%	\$ 49,140.6	\$ 52,399.6	60.0%	\$ 9,383.0	\$ 6,309.0	\$ 3,147.0	\$6,365.70	\$3,147.69
Moody's Corporation	MCO	\$ 167.20	88.9%	\$ 32,085.7	\$ 36,225.7	89.1%	\$ 8,439.1	\$ 4,548.1	\$ 2,151.1	\$4,553.40	\$2,175.85
Equifax Inc.	EFX	\$ 130.57	94.1%	\$ 15,722.2	\$ 18,084.3	44.8%	\$ 7,134.0	\$ 3,415.2	\$ 850.7	\$3,418.94	\$1,152.56
The Dun & Bradstreet Corporation	DNB	\$ 142.51	98.3%	\$ 5,290.8	\$ 6,444.1	221.2%	\$ 1,931.4	\$ 1,792.1	\$ 505.1	\$1,735.21	\$510.29
<b>Services to Dwellings and Other Buildings</b>											
Rollins, Inc.	ROL	\$ 60.69	94.3%	\$ 13,241.0	\$ 13,153.1	0.0%	\$ 1,129.6	\$ 1,791.7	\$ 372.3	\$1,823.02	\$379.65
Healthcare Services Group, Inc.	HCSG	\$ 40.62	72.3%	\$ 2,995.3	\$ 2,947.7	2.3%	\$ 688.0	\$ 2,011.8	\$ 103.8	\$2,021.50	\$142.00
ABM Industries Incorporated	ABM	\$ 32.25	72.1%	\$ 2,123.7	\$ 3,103.1	41.3%	\$ 3,740.4	\$ 6,291.5	\$ 274.3	\$6,523.23	\$331.18
<b>Miscellaneous Equipment Rental and Leasing</b>											
United Rentals, Inc.	URI	\$ 163.60	85.8%	\$ 13,537.6	\$ 22,406.6	75.1%	\$ 16,354.0	\$ 7,663.0	\$ 2,287.0	\$7,957.42	\$3,828.93
Aaron's, Inc.	AAN	\$ 54.46	97.3%	\$ 3,767.3	\$ 3,945.9	14.4%	\$ 2,698.9	\$ 3,720.4	\$ 537.2	\$3,828.85	\$385.44
TAL Education Group	TAL	\$ 25.71	54.0%	\$ 14,585.1	\$ 12,911.3	11.6%	\$ 3,456.1	\$ 2,187.8	\$ 339.8	\$2,331.76	\$328.74
Apollo Power Ltd	APLP	\$ 0.29	9.9%	\$ 2.6	\$ 2.1	0.0%	\$ 1.0	\$ -	\$ (1.6)	\$0.00	\$0.00
Rent-A-Center, Inc.	RCII	\$ 14.38	96.3%	\$ 769.4	\$ 1,230.0	65.5%	\$ 1,352.1	\$ 2,637.7	\$ 127.0	\$2,630.22	\$164.71
<b>Personnel Supply Services</b>											
ManpowerGroup Inc.	MAN	\$ 85.96	62.8%	\$ 5,578.3	\$ 5,982.9	27.7%	\$ 8,725.3	\$ 22,235.5	\$ 934.3	\$22,110.74	\$893.99
Robert Half International Inc.	RHI	\$ 70.38	88.1%	\$ 8,469.8	\$ 8,161.9	0.1%	\$ 2,034.9	\$ 5,664.9	\$ 628.1	\$5,774.56	\$648.71
ASGN Incorporated	ASGN	\$ 78.93	83.7%	\$ 4,132.2	\$ 5,328.4	50.5%	\$ 2,664.6	\$ 3,149.2	\$ 359.6	\$3,402.60	\$404.08
Korn/Ferry International	KFY	\$ 49.24	71.4%	\$ 2,803.8	\$ 2,672.3	16.6%	\$ 2,079.5	\$ 1,831.5	\$ 248.4	\$1,897.48	\$295.03
TrueBlue, Inc.	TBI	\$ 26.05	87.3%	\$ 1,023.9	\$ 1,107.7	15.6%	\$ 1,141.6	\$ 2,518.7	\$ 125.5	\$2,499.26	\$128.55

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## Select Business Services Public Company Industry Data As of September 30, 2018

(USD in millions, except per share data)

Company Name	Ticker	Market Data					LTM Operating Data			Forward Estimates	
		Price at 09/30/18	% of 52 Week High	Equity Value	Enterprise Value	Debt / Total Capital	Total Assets	LTM Revenue	LTM EBITDA	CY 2018 Revenue Estimate	CY 2018 EBITDA Estimate
<b>Computer Programming, Data Processing, and Other Computer Related Services</b>											
Alphabet Inc.	GOOG	\$1,193.47	93.7%	\$834,976.8	\$736,703.8	2.3%	\$221,538.0	\$129,866.0	\$39,334.0	\$136,487.96	\$49,722.39
Microsoft Corporation	MSFT	\$ 114.37	99.2%	\$877,014.0	\$830,853.0	49.2%	\$257,619.0	\$114,906.0	\$47,543.0	\$118,480.63	\$49,860.21
International Business Machines Corporation	IBM	\$ 151.21	88.4%	\$138,019.7	\$172,021.7	70.3%	\$121,990.0	\$ 80,373.0	\$16,954.0	\$79,746.25	\$18,917.36
Facebook, Inc.	FB	\$ 164.46	75.2%	\$474,832.0	\$432,644.0	0.1%	\$ 92,452.0	\$ 51,896.0	\$28,388.0	\$55,366.05	\$33,066.80
Oracle Corporation	ORCL	\$ 51.56	96.4%	\$195,342.2	\$194,044.2	60.2%	\$128,358.0	\$ 39,920.0	\$16,155.0	\$39,762.85	\$18,615.00
eBay Inc.	EBAY	\$ 33.02	70.3%	\$ 32,674.9	\$ 37,908.9	57.2%	\$ 23,652.0	\$ 10,216.0	\$ 2,985.0	\$10,735.46	\$3,608.80
Booking Holdings Inc.	BKNG	\$1,984.00	89.0%	\$ 94,184.5	\$ 95,615.0	46.7%	\$ 24,370.5	\$ 14,117.5	\$ 5,627.5	\$14,528.92	\$5,689.98
VMware, Inc.	VMW	\$ 156.06	94.6%	\$ 63,787.0	\$ 54,725.0	29.0%	\$ 23,409.0	\$ 8,407.0	\$ 2,262.0	\$8,826.69	\$3,503.94
Automatic Data Processing, Inc.	ADP	\$ 150.66	99.6%	\$ 65,904.7	\$ 65,733.8	34.4%	\$ 37,416.7	\$ 13,571.8	\$ 3,052.0	\$13,765.19	\$3,059.03
Adobe Inc.	ADBE	\$ 269.95	97.2%	\$131,771.6	\$128,712.1	17.5%	\$ 15,395.6	\$ 8,572.0	\$ 3,090.2	\$8,993.79	\$4,010.20
Cognizant Technology Solutions Corporation	CTSH	\$ 77.15	90.7%	\$ 44,765.0	\$ 41,267.0	6.2%	\$ 15,274.0	\$ 15,824.0	\$ 3,305.0	\$16,112.20	\$3,326.09
Intuit Inc.	INTU	\$ 227.40	98.9%	\$ 58,821.9	\$ 57,543.9	15.7%	\$ 5,178.0	\$ 5,964.0	\$ 1,735.0	\$6,340.27	\$2,301.36
Cerner Corporation	CERN	\$ 64.41	87.2%	\$ 21,191.2	\$ 20,746.5	8.0%	\$ 6,785.4	\$ 5,213.0	\$ 1,256.5	\$5,393.61	\$1,572.21
Fidelity National Information Services, Inc.	FIS	\$ 109.07	98.4%	\$ 35,864.5	\$ 44,178.5	47.1%	\$ 23,694.0	\$ 8,877.0	\$ 2,616.0	\$8,477.03	\$3,173.90
Fiserv, Inc.	FISV	\$ 82.38	100.0%	\$ 33,357.9	\$ 37,815.9	66.5%	\$ 10,748.0	\$ 5,788.0	\$ 1,862.0	\$5,830.13	\$2,162.16
Carrefour SA	CA	\$ 19.17	83.6%	\$ 14,905.7	\$ 30,804.3	57.1%	\$ 52,353.3	\$ 92,454.8	\$ 4,090.5	\$76,293.46	\$3,484.04
TripAdvisor, Inc.	TRIP	\$ 51.07	81.9%	\$ 7,024.5	\$ 6,346.5	0.0%	\$ 2,192.0	\$ 1,590.0	\$ 216.0	\$1,613.81	\$415.66
Symantec Corporation	SYMC	\$ 21.28	62.7%	\$ 13,226.3	\$ 15,933.3	45.9%	\$ 16,234.0	\$ 4,750.0	\$ 967.0	\$4,760.11	\$2,143.90
Activision Blizzard, Inc.	ATVI	\$ 83.19	99.3%	\$ 63,424.8	\$ 62,846.8	20.0%	\$ 16,713.0	\$ 7,162.0	\$ 2,099.0	\$7,474.58	\$2,659.35
Xerox Corporation	XRX	\$ 26.98	72.1%	\$ 6,882.6	\$ 11,094.6	49.0%	\$ 15,353.0	\$ 10,044.0	\$ 1,413.0	\$9,864.23	\$1,738.82
<b>Miscellaneous Business Services</b>											
Alliance Data Systems Corporation	ADS	\$ 236.16	84.8%	\$ 12,975.5	\$ 33,649.3	91.5%	\$ 29,763.0	\$ 7,841.5	\$ 1,785.8	\$7,929.78	\$2,075.79
ADT Inc.	ADT	\$ 9.39	72.1%	\$ 7,104.1	\$ 17,066.3	68.3%	\$ 16,968.0	\$ 4,501.5	\$ 2,253.7	\$4,541.25	\$2,415.81
Total System Services, Inc.	TSS	\$ 98.74	98.4%	\$ 18,012.0	\$ 21,626.5	59.6%	\$ 7,473.0	\$ 4,283.4	\$ 1,067.1	\$3,828.50	\$1,358.12
Sotheby's	BID	\$ 49.19	81.8%	\$ 2,538.9	\$ 2,831.5	65.8%	\$ 2,235.5	\$ 930.8	\$ 206.5	\$991.72	\$207.65
Shutterstock, Inc.	SFLY	\$ 65.89	65.7%	\$ 2,203.5	\$ 3,225.4	71.4%	\$ 2,046.4	\$ 1,605.6	\$ 174.6	\$1,998.80	\$397.83
Cardtronics plc	CATM	\$ 31.64	80.9%	\$ 1,458.3	\$ 2,291.9	67.0%	\$ 1,784.1	\$ 1,380.3	\$ 297.4	\$1,335.06	\$287.67
TTEC Holdings, Inc.	TTEC	\$ 25.90	59.2%	\$ 1,195.9	\$ 1,421.4	45.3%	\$ 1,038.6	\$ 1,516.7	\$ 174.9	\$1,498.83	\$197.17

Notes: LTM (latest twelve months); Enterprise Value (market capitalization less total cash and short-term investments plus short-term borrowings and total long-term debt);

EBITDA (earnings before interest, taxes, depreciation and amortization)

Source: Capital IQ

## Select Business Services Public Company Valuation Metrics As of September 30, 2018

(USD in millions, except per share data)

Company Name	Ticker	LTM Operating Statistics						Trading Multiples			
		Return On Assets	Return On Equity	Return On Capital	Revenue Growth	EBITDA Growth	EBITDA Margin	TEV/LTM Revenue	TEV/CY 2018 Revenue	TEV/LTM EBITDA	TEV/CY 2018 EBITDA
<b>Advertising</b>											
Omnicom Group Inc.	OMC	5.8%	40.5%	15.9%	0.3%	0.3%	15.3%	1.2x	1.2x	8.1x	8.0x
The Interpublic Group of Companies, Inc.	IPG	5.1%	25.6%	12.7%	7.2%	2.5%	14.6%	1.3x	1.3x	8.8x	8.1x
Lamar Advertising Company (REIT)	LAMR	0.0%	0.0%	8.0%	4.5%	4.3%	42.5%	6.4x	6.3x	15.1x	14.6x
Clear Channel Outdoor Holdings, Inc.	CCO	2.9%	NM	4.0%	4.7%	-1.5%	21.0%	2.7x	2.7x	13.0x	12.7x
	Mean	3.4%	22.0%	10.2%	4.2%	1.4%	23.3%	2.9x	2.9x	11.3x	10.8x
	Median	4.0%	25.6%	10.3%	4.6%	1.4%	18.1%	2.0x	2.0x	10.9x	10.4x
<b>Consumer Credit Reporting, Mercantile Reporting, and Adjustment and Collection Agency</b>											
S&P Global Inc.	SPGI	20.4%	83.1%	31.4%	7.4%	14.9%	49.9%	8.3x	8.2x	16.7x	16.6x
Moody's Corporation	MCO	14.6%	487.5%	22.0%	14.3%	13.5%	47.3%	8.0x	8.0x	16.8x	16.6x
Equifax Inc.	EFX	4.7%	14.2%	5.8%	2.7%	-26.9%	24.9%	5.3x	5.3x	21.3x	15.7x
The Dun & Bradstreet Corporation	DNB	14.3%	NM	42.5%	3.4%	11.0%	28.2%	3.6x	3.7x	12.8x	12.6x
	Mean	13.5%	194.9%	25.4%	7.0%	3.1%	37.6%	6.3x	6.3x	16.9x	15.4x
	Median	14.5%	83.1%	26.7%	5.4%	12.3%	37.7%	6.6x	6.6x	16.7x	16.2x
<b>Services to Dwellings and Other Buildings</b>											
Rollins, Inc.	ROL	17.6%	31.0%	27.7%	8.9%	11.7%	20.8%	7.3x	7.2x	35.3x	34.6x
Healthcare Services Group, Inc.	HCSG	8.7%	17.8%	13.9%	14.0%	-21.6%	5.2%	1.5x	1.5x	28.4x	20.8x
ABM Industries Incorporated	ABM	3.3%	7.0%	5.4%	19.2%	38.7%	4.4%	0.5x	0.5x	11.3x	9.4x
	Mean	9.9%	18.6%	15.7%	14.0%	9.6%	10.1%	3.1x	3.0x	25.0x	21.6x
	Median	8.7%	17.8%	13.9%	14.0%	11.7%	5.2%	1.5x	1.5x	28.4x	20.8x
<b>Miscellaneous Equipment Rental and Leasing</b>											
United Rentals, Inc.	URI	8.3%	60.7%	10.4%	22.8%	25.4%	29.8%	2.9x	2.8x	9.8x	5.9x
Aaron's, Inc.	AAN	10.8%	18.7%	14.3%	12.9%	13.1%	14.4%	1.1x	1.0x	7.3x	10.2x
TAL Education Group	TAL	5.9%	18.0%	10.0%	61.5%	67.1%	15.5%	5.9x	5.5x	38.0x	39.3x
Apollo Power Ltd	APLP	-162.9%	-1300.2%	-236.8%	0.0%	0.0%	0.0%	N/A	N/A	-1.3x	N/A
Rent-A-Center, Inc.	RCH	2.5%	16.0%	4.1%	-4.0%	42.4%	4.8%	0.5x	0.5x	9.7x	7.5x
	Mean	-27.1%	-237.4%	-39.6%	18.6%	29.6%	12.9%	2.6x	2.5x	12.7x	15.7x
	Median	5.9%	18.0%	10.0%	12.9%	25.4%	14.4%	2.0x	1.9x	9.7x	8.9x
<b>Personnel Supply Services</b>											
ManpowerGroup Inc.	MAN	6.1%	22.2%	14.1%	9.2%	6.4%	4.2%	0.3x	0.3x	6.4x	6.7x
Robert Half International Inc.	RHI	17.7%	32.6%	31.1%	9.2%	8.8%	11.1%	1.4x	1.4x	13.0x	12.6x
ASGN Incorporated	ASGN	7.2%	17.5%	8.5%	22.6%	33.9%	11.4%	1.7x	1.6x	14.8x	13.2x
Korn/Ferry International	KFY	6.5%	5.9%	9.6%	15.1%	26.1%	13.6%	1.5x	1.4x	10.8x	9.1x
TrueBlue, Inc.	TBI	4.6%	11.9%	7.6%	-2.2%	-8.2%	5.0%	0.4x	0.4x	8.8x	8.6x
	Mean	8.4%	18.0%	14.2%	10.8%	13.4%	9.1%	1.1x	1.0x	10.8x	10.0x
	Median	6.5%	17.5%	9.6%	9.2%	8.8%	11.1%	1.4x	1.4x	10.8x	9.1x

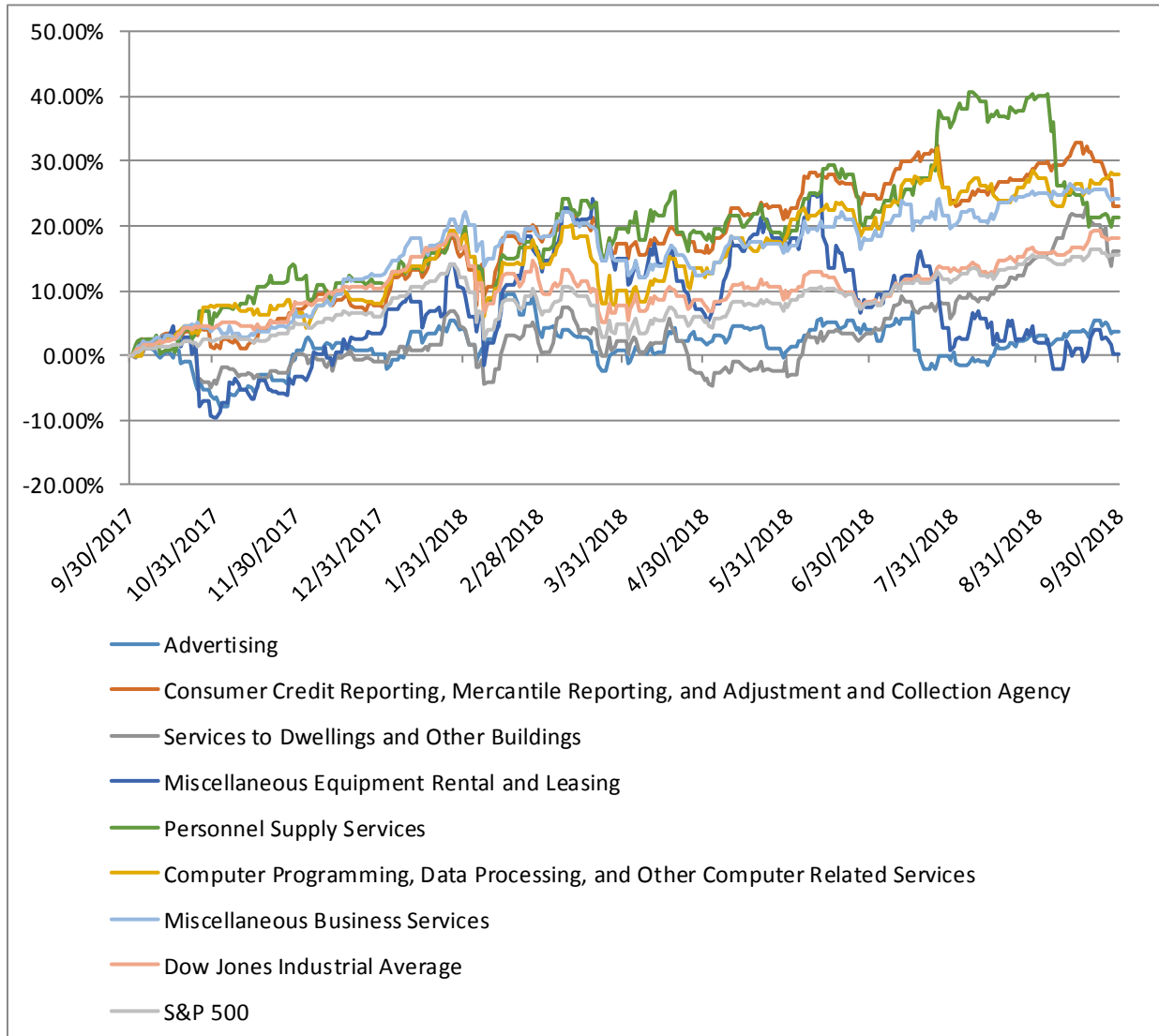
## Select Business Services Public Company Valuation Metrics As of September 30, 2018

<b>Computer Programming, Data Processing, and Other Computer Related Services</b>											
Alphabet Inc.	GOOG	9.4%	11.5%	11.5%	24.2%	14.4%	30.3%	5.7x	5.4x	18.7x	14.8x
Microsoft Corporation	MSFT	9.2%	21.4%	13.1%	15.9%	15.7%	41.4%	7.2x	7.0x	17.5x	16.7x
International Business Machines Corporation	IBM	6.4%	28.8%	11.7%	2.6%	0.7%	21.1%	2.1x	2.2x	10.1x	9.1x
Facebook, Inc.	FB	17.8%	25.7%	20.2%	42.2%	40.5%	54.7%	8.3x	7.8x	15.2x	13.1x
Oracle Corporation	ORCL	6.8%	8.3%	8.7%	4.4%	3.8%	40.5%	4.9x	4.9x	12.0x	10.4x
eBay Inc.	EBAY	5.8%	-9.1%	7.6%	6.3%	2.3%	29.2%	3.7x	3.5x	12.7x	10.5x
Booking Holdings Inc.	BKNG	13.0%	24.5%	15.8%	15.5%	20.2%	39.9%	6.8x	6.6x	17.0x	16.8x
VMware, Inc.	VMW	0.0%	0.0%	0.0%	0.0%	0.0%	26.9%	6.5x	6.2x	24.2x	15.6x
Automatic Data Processing, Inc.	ADP	4.6%	39.7%	25.2%	8.2%	11.8%	22.5%	4.8x	4.8x	21.5x	21.5x
Adobe Inc.	ADBE	11.8%	28.3%	16.6%	24.2%	33.3%	36.0%	15.0x	14.3x	41.7x	32.1x
Cognizant Technology Solutions Corporation	CTSH	11.8%	13.1%	15.0%	9.6%	13.8%	20.9%	2.6x	2.6x	12.5x	12.4x
Intuit Inc.	INTU	20.2%	65.3%	40.4%	15.2%	7.2%	29.1%	9.6x	9.1x	33.2x	25.0x
Cerner Corporation	CERN	8.0%	17.4%	9.8%	3.0%	-9.4%	24.1%	4.0x	3.8x	16.5x	13.2x
Fidelity National Information Services, Fiserv, Inc.	FISV	9.1%	57.2%	12.3%	3.2%	5.7%	32.2%	6.5x	6.5x	20.3x	17.5x
Carrefour SA	CA	2.6%	-10.0%	4.7%	-1.0%	-10.2%	4.4%	0.3x	0.4x	7.5x	8.8x
TripAdvisor, Inc.	TRIP	4.7%	1.5%	6.7%	2.5%	23.4%	13.6%	4.0x	3.9x	29.4x	15.3x
Symantec Corporation	SYMC	2.3%	24.9%	3.5%	3.9%	35.1%	20.4%	3.4x	3.3x	16.5x	7.4x
Activision Blizzard, Inc.	ATVI	5.6%	5.6%	7.0%	2.5%	-13.9%	29.3%	8.8x	8.4x	29.9x	23.6x
Xerox Corporation	XRX	3.9%	0.7%	5.6%	-2.0%	4.6%	14.1%	1.1x	1.1x	7.9x	6.4x
	Mean	7.9%	18.5%	12.1%	9.0%	10.2%	28.0%	5.5x	5.4x	19.1x	15.2x
	Median	6.6%	16.4%	10.6%	4.2%	6.5%	29.2%	4.9x	5.0x	16.9x	14.4x
<b>Miscellaneous Business Services</b>											
Alliance Data Systems Corporation	ADS	3.1%	48.9%	3.4%	5.4%	18.8%	22.8%	4.3x	4.2x	18.8x	16.2x
ADT Inc.	ADT	1.2%	4.9%	1.5%	5.6%	2.0%	50.1%	3.8x	3.8x	7.6x	7.1x
Total System Services, Inc.	TSS	7.3%	27.4%	8.5%	-10.5%	11.8%	24.9%	5.0x	5.6x	20.3x	15.9x
Sotheby's	BID	5.3%	20.5%	8.1%	-9.4%	8.9%	22.2%	3.0x	2.9x	13.7x	13.6x
Shutterstock, Inc.	SFLY	2.8%	-3.3%	3.3%	38.7%	19.5%	10.9%	2.0x	1.6x	18.5x	8.1x
Cardtronics plc	CATM	4.0%	6.7%	5.8%	-5.1%	-7.3%	21.5%	1.7x	1.7x	7.7x	8.0x
TTEC Holdings, Inc.	TTEC	6.6%	-6.0%	10.5%	8.7%	2.3%	11.5%	0.9x	0.9x	8.1x	7.2x
	Mean	4.3%	14.2%	5.9%	4.8%	8.0%	23.4%	3.0x	3.0x	13.5x	10.9x
	Median	4.0%	6.7%	5.8%	5.4%	8.9%	22.2%	3.0x	2.9x	13.7x	8.1x

Notes: LTM (latest twelve months); NTM (next twelve months); EBITDA (earnings before interest, taxes, depreciation and amortization); TEV (total enterprise value)

Source: Capital IQ

### Business Services Public Company LTM Equity Performance As of September 30, 2018



Note: The indices are derived from the equity performance of the previously listed companies. Source: Capital IQ



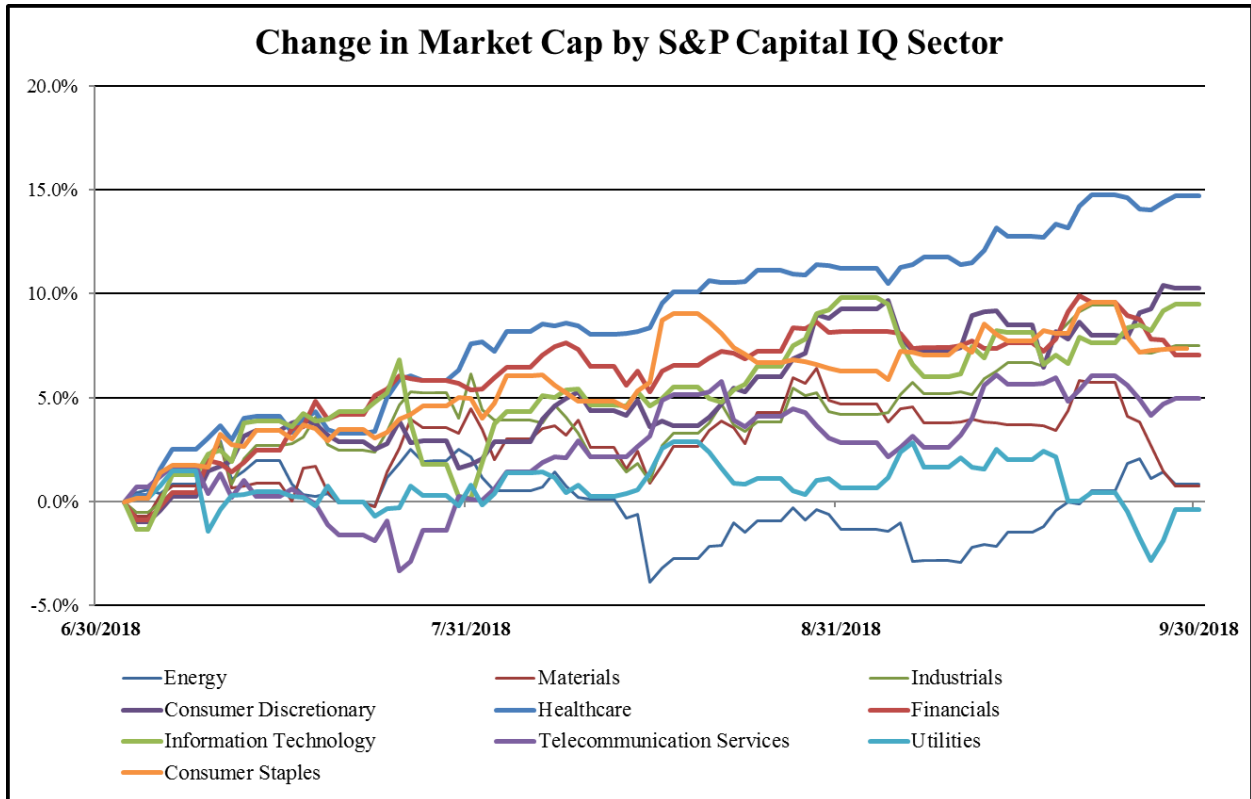
## Recent M&A Activity in the Business Services Industry September 30, 2017 to September 30, 2018

(USD in millions)

Close Date	Target	Acquirer	Target Company Primary Industry	Implied Enterprise Value
5/1/2018	MuleSoft, Inc.	salesforce.com, inc.	Application Software	\$6,607.41
4/16/2018	DST Systems, Inc.	SS&C Technologies Holdings, Inc.	Data Processing and	\$5,671.07
6/15/2018	Blackhawk Network Holdings, Inc.	Silver Lake; P2 Capital Partners, LLC; P2 Capital Master	Data Processing and	\$3,019.24
4/5/2018	Callidus Software Inc.	SAP America, Inc.	Application Software	\$2,425.92
9/6/2018	Athena SuperHoldCo, Inc.	Fortive Corporation	Application Software	\$2,000.00
2/1/2018	BroadSoft, Inc.	Cisco Systems, Inc.	Application Software	\$1,916.95
8/2/2018	Ipreeo Holdings LLC	Markit North America, Inc.	Application Software	\$1,855.00
8/1/2018	PowerSchool Group LLC	Onex Corporation; Onex Partners IV LP	Application Software	\$1,744.00
6/19/2018	Magento, Inc.	Adobe Systems Incorporated (nka:Adobe Inc.)	Application Software	\$1,680.00
11/8/2017	Baton Holding, LLC	Red Ventures Holdco, LP	Application Software	\$1,434.66
2/12/2018	Barracuda Networks, Inc.	Thoma Bravo, LLC; Thoma Bravo Fund XII, L.P.	Systems Software	\$1,405.06
1/10/2018	IO Data Centers, LLC	Iron Mountain Incorporated	Data Processing and	\$1,340.00
12/27/2017	Gigamon Inc.	Elliott Management Corporation; Elliott Associates, L.P.;	Systems Software	\$1,329.10
7/2/2018	Viewpoint, Inc.	Trimble Inc.	Application Software	\$1,200.00
6/4/2018	PowerPlan, Inc.	Roper Technologies, Inc.	Application Software	\$1,110.00
5/21/2018	CommerceHub, Inc.	GTCR, LLC; Sycamore Partners; Sycamore Partners II;	Application Software	\$1,055.87
1/11/2018	Cayan LLC	Total System Services, Inc.	Data Processing and	\$1,050.00
11/14/2017	IntraLinks Holdings, Inc.	Siris Capital Group, LLC	Application Software	\$1,020.76
1/9/2018	Big Fish Games, Inc.	Aristocrat Technologies, Inc.	Interactive Home	\$990.00
1/5/2018	Silver Spring Networks, Inc.	Itron, Inc.	Application Software	\$838.77
2/21/2018	ThreatMetrix Inc.	LexisNexis Risk Solutions Inc.	Application Software	\$830.00
11/16/2017	Radial, Inc.	bpost SA/NV	Application Software	\$820.00
3/31/2018	Fiserv Solutions, LLC	Warburg Pincus LLC	Application Software	\$761.82
12/1/2017	BluePay, Inc.	First Data Corporation	Data Processing and	\$760.00
8/20/2018	Datorama Inc.	salesforce.com, inc.	Application Software	\$757.85
10/23/2017	eVestment Alliance, LLC	Nasdaq, Inc.	Application Software	\$705.00
8/15/2018	Affinion Benefits Group, LLC	Mill Point Capital LLC; Mill Point Capital Partners, L.P.	Advertising	\$550.00
12/31/2017	Shipt, LLC	Target Corporation	Application Software	\$550.00
12/11/2017	Black Duck Software, Inc.	Synopsys, Inc.	Application Software	\$548.00
12/4/2017	Paradigm Ltd.	Roxar, Inc.	Application Software	\$510.00
3/7/2018	LiquidHub, Inc.	Capgemini SE	Application Software	\$500.00
2/2/2018	e-Builder, Inc.	Trimble Inc.	Application Software	\$500.00
12/15/2017	IWCO Direct Holdings Inc.	ModusLink Global Solutions, Inc. (nka:Steel Connect, Inc.)	Advertising	\$475.60
10/2/2017	Newgistics, Inc.	Pitney Bowes Inc.	Application Software	\$475.00
2/1/2018	Bazaarvoice, Inc.	Marlin Equity Partners, LLC; Marlin Equity IV LP; Marlin	Application Software	\$455.99
11/21/2017	nuTonomy Inc.	Delphi Automotive PLC (nka:Aptiv PLC)	Systems Software	\$454.00
10/27/2017	GENBAND US LLC	Ribbon Communications Inc.	Application Software	\$425.21
6/27/2018	Wipro Data Centre and Cloud Services, Inc. and Portion of	Ensono, LP	Data Processing and	\$405.00
2/26/2018	PhishMe, Inc.	BlackRock, Inc.; Pamplona Capital Management LLP	Systems Software	\$400.00
9/13/2018	SCVNGR, Inc.	GrubHub Holdings Inc.	Application Software	\$390.00
11/17/2017	Exa Corporation	Dassault Systèmes Simulia Corp.	Application Software	\$385.91
2/21/2018	ForRent.com	Apartments, LLC	Application Software	\$385.00
4/9/2018	Phantom Cyber Corporation	Splunk Inc.	Systems Software	\$350.00
11/1/2017	Gigya, Inc.	hybris AG	Application Software	\$350.00
1/10/2018	TSheets.com, LLC	Intuit Inc.	Application Software	\$340.00
4/16/2018	Public Relations Solutions and Digital Media Services	West Corporation	Advertising	\$335.00
7/17/2018	Actian Corporation	HCL Technologies Limited; Sumeru Equity Partners, Inc.	Application Software	\$330.00
3/26/2018	Evident.io, Inc.	Palo Alto Networks, Inc.	Application Software	\$300.00
12/4/2017	Lease Rent Options Business	RealPage, Inc.	Application Software	\$300.00
12/1/2017	Respawn Entertainment, LLC	Electronic Arts Inc.	Interactive Home	\$291.00
11/1/2017	Cyence Inc.	Guidewire Software, Inc.	Application Software	\$265.97
4/2/2018	OneContent Business	Hyland Software, Inc.	Application Software	\$260.00
12/18/2017	Planet Payment, Inc.	Fintrax Group Holdings Ltd.	Data Processing and	\$250.42
1/30/2018	CoreOS, Inc.	Red Hat, Inc.	Systems Software	\$250.00
3/7/2018	Airbus DS Communications, Inc.	Motorola Solutions, Inc.	Application Software	\$237.00
10/31/2017	TeleSign Corporation	Belgacom International Carrier Services SA	Application Software	\$230.00
2/28/2018	Wombat Security Technologies, Inc.	Proofpoint, Inc.	Application Software	\$225.00
2/21/2018	Dealer Inspire, Inc. and Launch Digital Marketing, LLC	Cars.com Inc.	Application Software	\$205.00

Source: Capital IQ

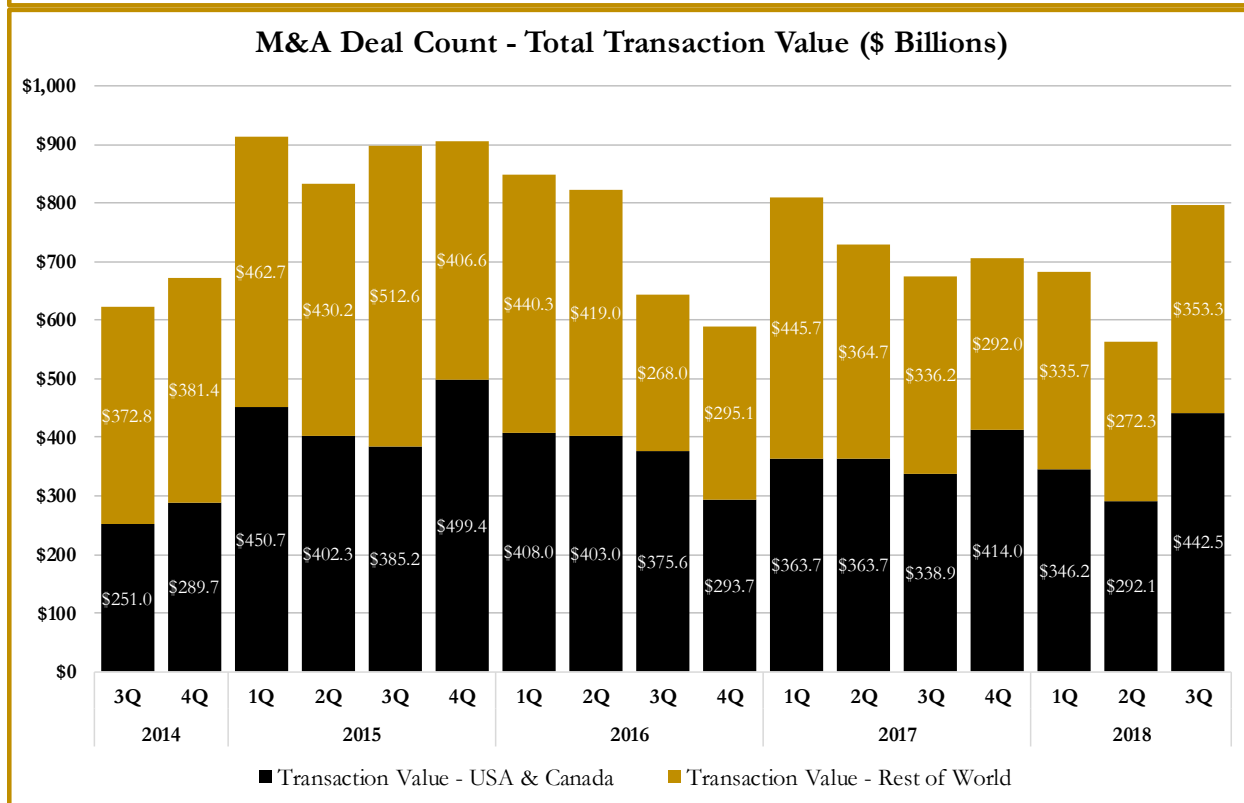
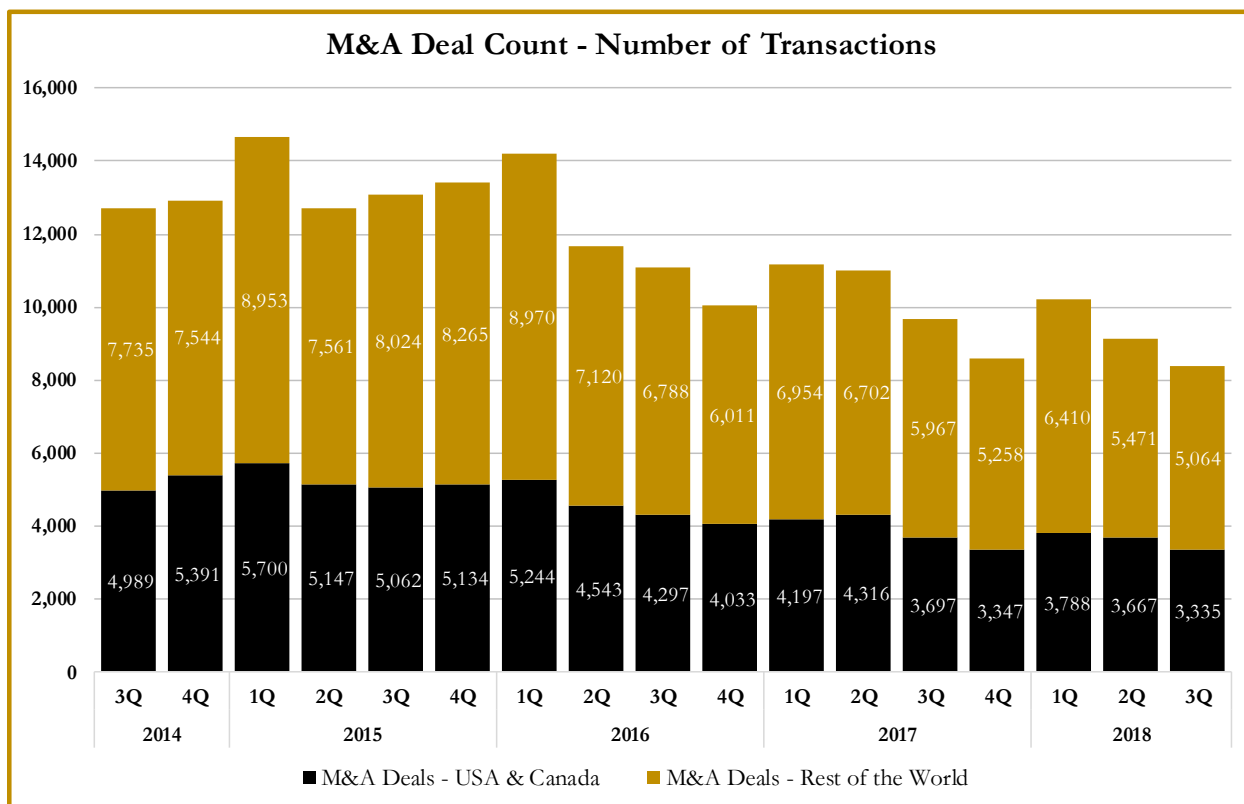
S&P Capital IQ - Sector Last 3 Month Equity Performance  
As of September 30, 2018



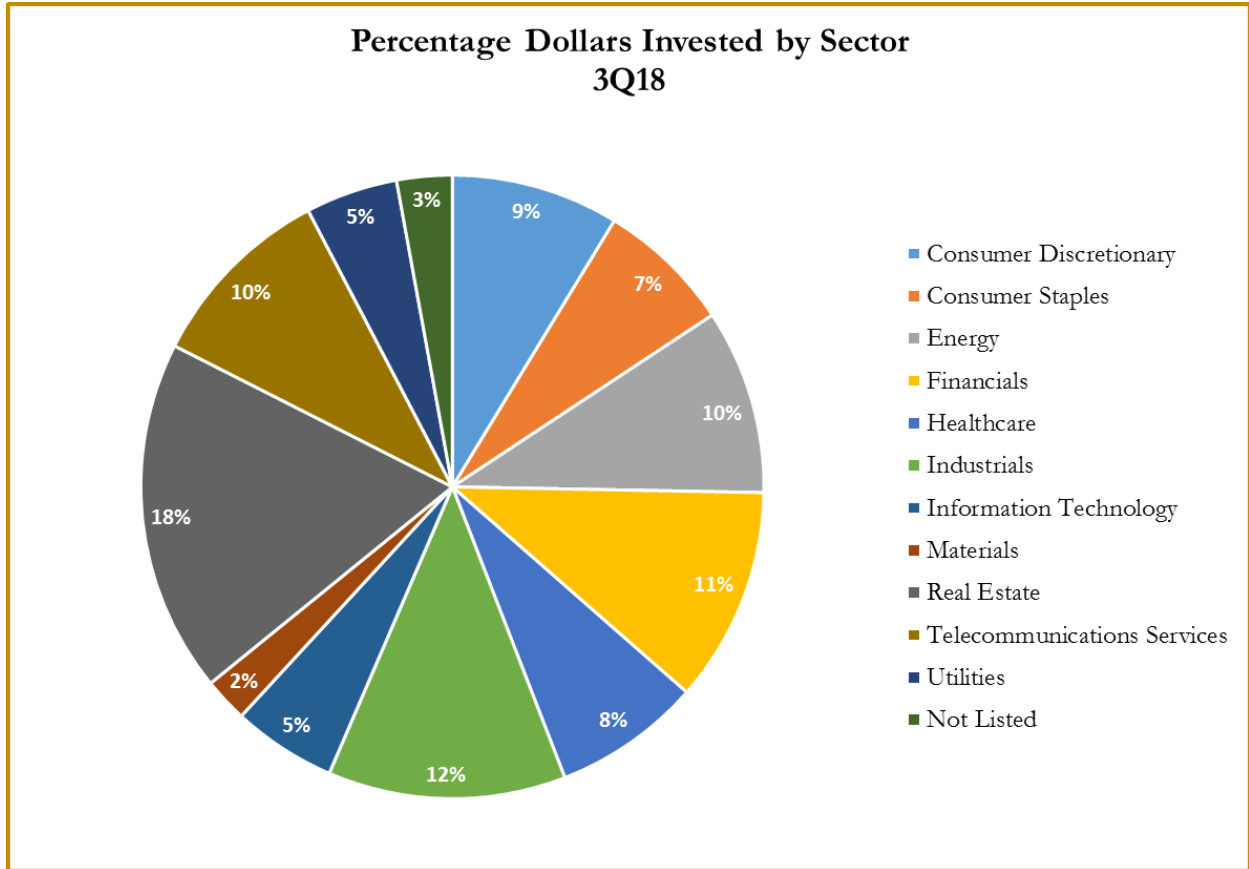
Note: The indices are derived from the equity performance of the S&P Capital IQ Sectors. Source: Capital IQ



### M&A Deal Flow Statistics by S&P Capital IQ Sector As of September 30, 2018



M&A Deal Flow Statistics by S&P Capital IQ Sector  
As of September 30, 2018





## About Us

Houlihan Capital is a leading, solutions-driven valuation, financial advisory and boutique investment banking firm. We pride ourselves on being thought leaders in an ever-changing landscape.

Houlihan Capital is SOC-compliant, a FINRA and SIPC member and committed to the highest levels of professional ethics and standards.

## Valuation & Financial Advisory

We provide an array of services that include enterprise valuations, portfolio valuation, valuation of carried interest, transaction opinions, tax and financial reporting compliance, purchase price allocations, and a wide variety of consulting services through our Financial Advisory Group.

## Investment Banking

Through our Investment Banking Group, we offer sell side/buy side advisory and capital raises. Through our Special Situations desk, we provide services that fit outside the archetypal verticals, including liquidity solutions, transactional advisory, and secondary market advisory and trading.

## Litigation Support

Our team provides support for a wide variety of situations including commercial and shareholder disputes, derivatives and structured finance litigation, and fraudulent conveyance.

**For additional information about our industry expertise and services, visit:**

**[www.houlihancapital.com](http://www.houlihancapital.com)**

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