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Industry Observations – December 31, 2018

Business Services Industry

Select Business Services Public Company Industry Data As of December 31, 2018

(USD in millions, except per share data)

USD in millions, except per share data)

Company Name	Ticker	Market Data					LTM Operating Data			Forward Estimates	
		Price at 12/31/18	% 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
Advertising											
Omnicom Group Inc.	OMC	\$ 73.24	87.9%	\$ 16,413.5	\$ 20,052.2	59.6%	\$ 24,617.0	\$ 15,290.2	\$ 2,344.0	\$15,216.21	\$2,374.84
The Interpublic Group of Companies, Inc.	IPG	\$ 20.63	79.3%	\$ 7,929.2	\$ 9,605.1	58.9%	\$ -	\$ 8,031.6	\$ 1,246.7	\$8,644.51	\$1,479.11
Lamar Advertising Company (REIT)	LAMR	\$ 69.18	85.7%	\$ 6,883.8	\$ 9,419.1	69.9%	\$ 4,124.6	\$ 1,597.8	\$ 680.3	\$1,731.27	\$749.89
Clear Channel Outdoor Holdings, Inc.	CCO	\$ 5.19	81.3%	\$ 1,877.7	\$ 7,114.6	168.3%	\$ 4,479.4	\$ 2,705.1	\$ 587.1	\$2,758.54	\$630.96
Consumer Credit Reporting, Mercantile Reporting, and Adjustment and Collection Agency											
S&P Global Inc.	SPGI	\$ 169.94	78.2%	\$ 42,637.9	\$ 45,678.9	61.4%	\$ 9,458.0	\$ 6,258.0	\$ 3,167.0	\$6,531.46	\$3,309.21
Moody's Corporation	MCO	\$ 140.04	74.5%	\$ 26,832.9	\$ 30,861.9	89.1%	\$ 8,439.1	\$ 4,548.1	\$ 2,151.1	\$4,711.63	\$2,255.02
Equifax Inc.	EFX	\$ 93.13	67.1%	\$ 11,229.2	\$ 13,665.3	44.8%	\$ 7,134.0	\$ 3,415.2	\$ 850.7	\$3,535.75	\$1,207.10
DNB ASA	DNB	\$ 15.94	79.3%	\$ 25,414.4	\$ -	0.0%	\$304,025.0	\$ 5,888.6	NA	\$54,509.17	\$0.00
Services to Dwellings and Other Buildings											
Rollins, Inc.	ROL	\$ 36.10	84.1%	\$ 11,816.2	\$ 11,697.5	0.0%	\$ 1,094.1	\$ 1,821.6	\$ 376.5	\$2,020.86	\$426.63
Healthcare Services Group, Inc.	HCSG	\$ 40.18	71.5%	\$ 2,965.2	\$ 2,885.3	0.0%	\$ 692.6	\$ 2,008.8	\$ 109.6	\$2,023.82	\$152.02
ABM Industries Incorporated	ABM	\$ 32.11	80.3%	\$ 2,120.2	\$ 3,020.1	39.2%	\$ 3,627.5	\$ 6,442.2	\$ 303.3	\$6,626.93	\$361.51
Miscellaneous Equipment Rental and Leasing											
United Rentals, Inc.	URI	\$ 102.53	53.8%	\$ 8,315.5	\$ 18,328.5	77.5%	\$ 18,133.0	\$ 8,047.0	\$ 2,392.0	\$9,312.69	\$4,456.32
Aaron's, Inc.	AAN	\$ 42.05	75.1%	\$ 2,884.4	\$ 3,146.8	19.4%	\$ 2,826.7	\$ 3,828.9	\$ 382.4	\$3,988.52	\$443.41
TAL Education Group	TAL	\$ 26.68	56.0%	\$ 15,135.4	\$ 13,752.0	11.9%	\$ 3,427.1	\$ 2,340.5	\$ 372.2	\$3,163.59	\$586.12
Apollo Power Ltd	APLP	\$ 0.16	17.2%	\$ 1.4	\$ (0.1)	0.0%	\$ 2.2	\$ -	\$ (1.9)	\$0.00	\$0.00
Rent-A-Center, Inc.	RCII	\$ 16.19	97.1%	\$ 866.4	\$ 1,295.1	65.5%	\$ 1,352.1	\$ 2,637.7	\$ 127.0	\$2,621.95	\$224.18
Personnel Supply Services											
ManpowerGroup Inc.	MAN	\$ 64.80	47.3%	\$ 4,006.7	\$ 4,487.5	28.5%	\$ 8,519.8	\$ 21,991.2	\$ 882.5	\$21,176.72	\$877.33
Robert Half International Inc.	RHI	\$ 57.20	71.6%	\$ 6,828.2	\$ 6,467.2	0.1%	\$ -	\$ 5,800.3	\$ 653.5	\$6,187.34	\$701.20
ASGN Incorporated	ASGN	\$ 54.50	57.8%	\$ 2,860.0	\$ 3,973.3	48.2%	\$ 2,687.9	\$ 3,399.8	\$ 355.2	\$3,857.33	\$451.92
Korn Ferry	KFY	\$ 39.54	57.3%	\$ 2,240.9	\$ 2,081.2	16.0%	\$ 2,134.5	\$ 1,883.7	\$ 265.6	\$2,033.02	\$324.39
TrueBlue, Inc.	TBI	\$ 22.25	74.5%	\$ 874.5	\$ 947.7	11.9%	\$ 1,114.8	\$ 2,499.2	\$ 115.0	\$2,548.42	\$121.69

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Select Business Services Public Company Industry Data

As of December 31, 2018

(USD in millions, except per share data)

Company Name	Ticker	Market Data					LTM Operating Data			Forward Estimates	
		Price at 12/31/18	% 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
Computer Programming, Data Processing, and Other Computer Related Services											
Alphabet Inc.	GOOG	\$1,035.61	81.3%	\$723,465.2	\$621,035.2	2.2%	\$232,792.0	\$136,819.0	\$40,421.0	\$163,520.56	\$59,226.83
Microsoft Corporation	MSFT	\$ 101.57	87.4%	\$779,804.9	\$731,961.9	48.1%	\$258,859.0	\$118,459.0	\$49,581.0	\$130,020.61	\$55,491.67
International Business Machines Corporation	IBM	\$ 113.67	66.4%	\$103,302.6	\$136,018.6	73.0%	\$123,382.0	\$ 79,591.0	\$17,696.0	\$78,265.53	\$18,631.79
Facebook, Inc.	FB	\$ 131.09	60.0%	\$376,724.8	\$335,588.8	0.6%	\$ 97,334.0	\$ 55,838.0	\$29,228.0	\$68,900.46	\$36,635.69
Oracle Corporation	ORCL	\$ 45.15	84.4%	\$162,039.7	\$171,424.7	65.2%	\$118,318.0	\$ 39,893.0	\$15,899.0	\$40,014.86	\$18,523.63
eBay Inc.	EBAY	\$ 28.07	59.7%	\$ 27,026.6	\$ 31,436.6	59.5%	\$ 22,819.0	\$ 10,746.0	\$ 3,004.0	\$10,856.36	\$3,770.05
Booking Holdings Inc.	BKNG	\$1,722.42	77.3%	\$ 79,799.0	\$ 81,377.1	46.7%	\$ 24,370.5	\$ 14,117.5	\$ 5,627.5	\$16,135.66	\$6,276.61
VMware, Inc.	VMW	\$ 137.13	81.0%	\$ 56,208.4	\$ 46,921.4	28.0%	\$ 23,962.0	\$ 8,669.0	\$ 2,359.0	\$9,897.68	\$3,721.88
Automatic Data Processing, Inc.	ADP	\$ 131.12	85.4%	\$ 57,395.5	\$ 58,233.5	40.2%	\$ 38,806.3	\$ 13,839.4	\$ 3,231.5	\$14,650.57	\$3,537.46
Adobe Inc.	ADBE	\$ 226.24	81.5%	\$110,435.3	\$111,331.2	30.6%	\$ 18,768.7	\$ 9,030.0	\$ 3,186.9	\$11,157.38	\$4,896.51
Cognizant Technology Solutions Corporation	CTSH	\$ 63.48	74.6%	\$ 36,756.7	\$ 32,717.7	6.1%	\$ 15,913.0	\$ 16,125.0	\$ 3,280.0	\$17,346.37	\$3,750.75
Intuit Inc.	INTU	\$ 196.85	84.9%	\$ 51,089.5	\$ 50,182.5	13.3%	\$ 4,928.0	\$ 6,070.0	\$ 1,749.0	\$6,895.10	\$2,493.10
Cerner Corporation	CERN	\$ 52.44	71.4%	\$ 17,278.4	\$ 16,905.9	8.3%	\$ 6,708.6	\$ 5,366.3	\$ 1,207.1	\$5,750.51	\$1,687.04
Fidelity National Information Services, Inc.	FIS	\$ 102.55	92.5%	\$ 33,583.9	\$ 42,074.9	46.8%	\$ 23,770.0	\$ 8,423.0	\$ 2,973.0	\$8,400.72	\$3,274.02
Fiserv, Inc.	FISV	\$ 73.49	88.8%	\$ 29,283.6	\$ 33,885.6	72.2%	\$ 11,262.0	\$ 5,823.0	\$ 2,082.0	\$6,187.88	\$2,375.45
Carrefour SA	CA	\$ 17.07	75.6%	\$ 13,273.4	\$ 28,940.9	57.1%	\$ 52,353.3	\$ 92,454.8	\$ 4,090.5	\$77,547.63	\$3,720.73
TripAdvisor, Inc.	TRIP	\$ 53.94	78.2%	\$ 7,425.7	\$ 6,762.7	0.0%	\$ 2,167.0	\$ 1,615.0	\$ 299.0	\$1,741.54	\$473.36
Symantec Corporation	SYMC	\$ 18.90	63.6%	\$ 12,071.8	\$ 14,674.8	46.1%	\$ 16,456.0	\$ 4,752.0	\$ 994.0	\$4,906.75	\$2,145.72
Activision Blizzard, Inc.	ATVI	\$ 46.57	55.0%	\$ 35,535.3	\$ 34,781.3	19.0%	\$ 17,835.0	\$ 7,500.0	\$ 2,507.0	\$6,424.60	\$2,324.71
Xerox Corporation	XRX	\$ 19.76	52.8%	\$ 4,708.5	\$ 9,030.5	49.9%	\$ 14,874.0	\$ 9,830.0	\$ 1,393.0	\$9,318.40	\$1,744.87
Miscellaneous Business Services											
Alliance Data Systems Corporation	ADS	\$ 150.08	53.9%	\$ 8,175.4	\$ 29,202.1	91.5%	\$ 30,387.7	\$ 7,791.2	\$ 1,995.7	\$8,009.60	\$2,076.95
ADT Inc.	ADT	\$ 6.01	46.2%	\$ 4,547.1	\$ 13,858.0	68.3%	\$ 16,967.6	\$ 4,501.8	\$ 2,244.6	\$4,862.14	\$2,536.81
Total System Services, Inc.	TSS	\$ 81.29	81.0%	\$ 14,830.7	\$ 18,242.1	60.2%	\$ 7,468.7	\$ 4,028.2	\$ 1,257.9	\$4,065.90	\$1,448.51
Sotheby's	BID	\$ 39.74	66.1%	\$ 1,947.9	\$ 2,660.8	65.8%	\$ 2,235.5	\$ 930.8	\$ 206.5	\$1,007.84	\$258.10
Shutterfly, Inc.	SFLY	\$ 40.26	40.1%	\$ 1,352.9	\$ 2,365.2	62.1%	\$ 2,302.2	\$ 1,961.8	\$ 297.7	\$2,153.83	\$325.02
Cardtronics plc	CATM	\$ 26.00	66.5%	\$ 1,198.8	\$ 1,988.2	67.0%	\$ 1,784.1	\$ 1,380.3	\$ 297.4	\$1,337.46	\$286.60
TTEC Holdings, Inc.	TTEC	\$ 28.57	67.5%	\$ 1,319.7	\$ 1,506.6	45.3%	\$ 1,038.6	\$ 1,516.7	\$ 174.9	\$1,562.56	\$216.48

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 December 31, 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
Advertising											
Omnicom Group Inc.	OMC	5.2%	43.1%	15.7%	0.1%	0.1%	15.3%	1.3x	1.3x	8.6x	8.4x
The Interpublic Group of Companies, Inc.	IPG	0.0%	26.5%	13.7%	1.9%	10.3%	15.5%	1.2x	1.1x	7.7x	6.5x
Lamar Advertising Company (REIT)	LAMR	7.0%	27.1%	8.0%	4.5%	4.5%	42.6%	5.9x	5.4x	13.8x	12.6x
Clear Channel Outdoor Holdings, Inc.	CCO	3.2%	NM	4.5%	4.7%	2.9%	21.7%	2.6x	2.6x	12.1x	11.3x
	Mean	3.9%	32.2%	10.4%	2.8%	4.5%	23.8%	2.8x	2.6x	10.6x	9.7x
	Median	4.2%	27.1%	10.8%	3.2%	3.7%	18.6%	2.0x	1.9x	10.3x	9.9x
Consumer Credit Reporting, Mercantile Reporting, and Adjustment and Collection Agency											
S&P Global Inc.	SPGI	19.6%	95.9%	31.8%	3.2%	8.1%	50.6%	7.3x	7.0x	14.4x	13.8x
Moody's Corporation	MCO	14.6%	487.5%	22.0%	14.3%	13.5%	47.3%	6.8x	6.6x	14.3x	13.7x
Equifax Inc.	EFX	4.7%	14.2%	5.8%	2.7%	-26.9%	24.9%	4.0x	3.9x	16.1x	11.3x
DNB ASA	DNB	0.9%	11.1%	0.0%	3.2%	NM	#VALUE!	0.0x	0.0x	N/A	N/A
	Mean	10.0%	152.2%	14.9%	5.8%	-1.8%	#VALUE!	4.5x	4.4x	14.9x	12.9x
	Median	9.7%	55.1%	13.9%	3.2%	8.1%	#VALUE!	5.4x	5.2x	14.4x	13.7x
Services to Dwellings and Other Buildings											
Rollins, Inc.	ROL	18.2%	33.9%	28.3%	8.8%	7.4%	20.7%	6.4x	5.8x	31.1x	27.4x
Healthcare Services Group, Inc.	HCSG	9.2%	19.9%	14.3%	7.6%	-19.3%	5.5%	1.4x	1.4x	26.3x	19.0x
ABM Industries Incorporated	ABM	3.2%	6.8%	4.8%	18.1%	47.6%	4.7%	0.5x	0.5x	10.0x	8.4x
	Mean	10.2%	20.2%	15.8%	11.5%	11.9%	10.3%	2.8x	2.6x	22.5x	18.3x
	Median	9.2%	19.9%	14.3%	8.8%	7.4%	5.5%	1.4x	1.4x	26.3x	19.0x
Miscellaneous Equipment Rental and Leasing											
United Rentals, Inc.	URI	7.9%	33.7%	9.4%	21.2%	22.8%	29.7%	2.3x	2.0x	7.7x	4.1x
Aaron's, Inc.	AAN	6.6%	11.2%	8.5%	13.2%	-22.8%	10.0%	0.8x	0.8x	8.2x	7.1x
TAL Education Group	TAL	6.1%	24.0%	11.2%	53.3%	61.9%	15.9%	5.9x	4.3x	36.9x	23.5x
Apollo Power Ltd	APLP	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	N/A	N/A	0.1x	N/A
Rent-A-Center, Inc.	RCII	2.5%	16.0%	4.1%	-4.0%	42.4%	4.8%	0.5x	0.5x	10.2x	5.8x
	Mean	4.6%	17.0%	6.6%	16.7%	20.9%	12.1%	2.4x	1.9x	12.6x	10.1x
	Median	6.1%	16.0%	8.5%	13.2%	22.8%	10.0%	1.5x	1.4x	8.2x	6.4x
Personnel Supply Services											
ManpowerGroup Inc.	MAN	5.7%	20.0%	13.1%	4.5%	-2.5%	4.0%	0.2x	0.2x	5.1x	5.1x
Robert Half International Inc.	RHI	0.0%	39.0%	33.0%	10.1%	12.4%	11.3%	1.1x	1.0x	9.9x	9.2x
ASGN Incorporated	ASGN	7.2%	14.5%	8.4%	29.5%	25.1%	10.4%	1.2x	1.0x	11.2x	8.8x
Korn Ferry	KFY	6.9%	6.8%	10.4%	15.4%	31.3%	14.1%	1.1x	1.0x	7.8x	6.4x
TrueBlue, Inc.	TBI	4.2%	11.5%	6.9%	-0.4%	-7.7%	4.6%	0.4x	0.4x	8.2x	7.8x
	Mean	4.8%	18.4%	14.4%	11.8%	11.7%	8.9%	0.8x	0.7x	8.4x	7.5x
	Median	5.7%	14.5%	10.4%	10.1%	12.4%	10.4%	1.1x	1.0x	8.2x	7.8x

Select Business Services Public Company Valuation Metrics As of December 31, 2018

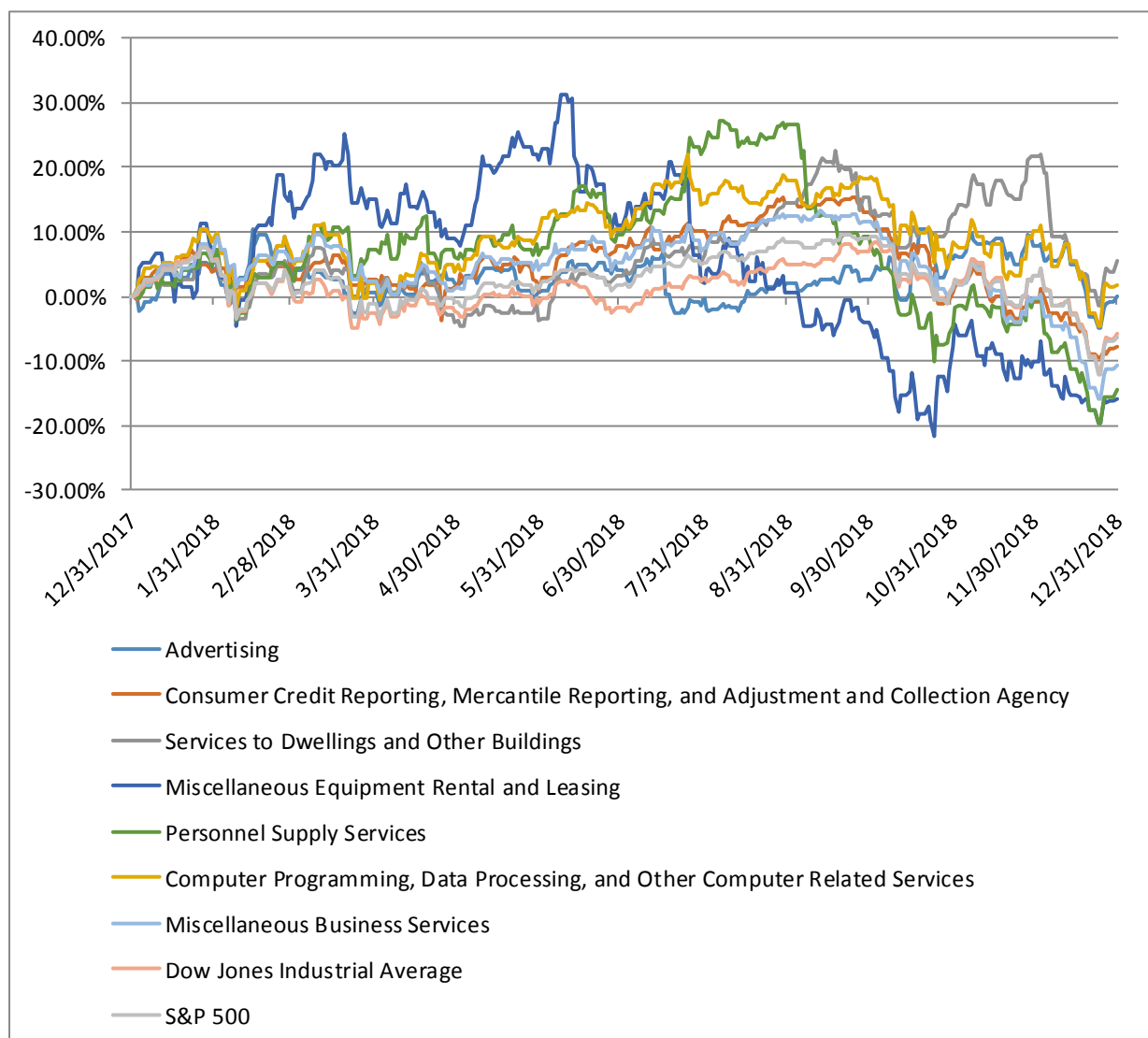
(USD in millions, except per share data)

		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
Company Name	Ticker										
Computer Programming, Data Processing, and Other Computer Related Services											
Alphabet Inc.	GOOG	9.1%	18.6%	11.6%	23.4%	13.0%	29.5%	4.5x	3.8x	15.4x	10.5x
Microsoft Corporation	MSFT	9.4%	39.3%	13.6%	15.8%	17.4%	41.9%	6.2x	5.6x	14.8x	13.2x
International Business Machines Corporation	IBM	6.6%	50.3%	13.0%	0.6%	7.6%	22.2%	1.7x	1.7x	7.7x	7.3x
Facebook, Inc.	FB	17.1%	27.9%	19.6%	37.4%	25.8%	52.3%	6.0x	4.9x	11.5x	9.2x
Oracle Corporation	ORCL	6.9%	9.3%	8.6%	2.8%	-1.2%	39.9%	4.3x	4.3x	10.8x	9.3x
eBay Inc.	EBAY	5.9%	35.3%	8.6%	8.3%	2.2%	28.0%	2.9x	2.9x	10.5x	8.3x
Booking Holdings Inc.	BKNG	13.0%	24.5%	15.8%	15.5%	20.2%	39.9%	5.8x	5.0x	14.5x	13.0x
VMware, Inc.	VMW	0.0%	0.0%	0.0%	0.0%	0.0%	27.2%	5.4x	4.7x	19.9x	12.6x
Automatic Data Processing, Inc.	ADP	4.3%	36.8%	25.5%	8.2%	16.9%	23.4%	4.2x	4.0x	18.0x	16.5x
Adobe Inc.	ADBE	10.7%	29.1%	14.9%	23.7%	27.8%	35.3%	12.3x	10.0x	34.9x	22.7x
Cognizant Technology Solutions Corporation	CTSH	11.3%	19.0%	14.9%	8.9%	8.2%	20.3%	2.0x	1.9x	10.0x	8.7x
Intuit Inc.	INTU	21.2%	62.6%	36.0%	14.3%	5.6%	28.8%	8.3x	7.3x	28.7x	20.1x
Cerner Corporation	CERN	7.3%	13.0%	9.1%	4.4%	-11.8%	22.5%	3.2x	2.9x	14.0x	10.0x
Fidelity National Information Services, Fiserv, Inc.	FIS	4.0%	8.3%	5.0%	-7.7%	18.6%	35.3%	5.0x	5.0x	14.2x	12.9x
	FISV	8.9%	47.3%	12.0%	2.2%	16.4%	35.8%	5.8x	5.5x	16.3x	14.3x
Carrefour SA	CA	2.6%	-10.0%	4.7%	-1.0%	-10.2%	4.4%	0.3x	0.4x	7.1x	7.8x
TripAdvisor, Inc.	TRIP	5.2%	8.0%	7.3%	3.8%	72.8%	18.5%	4.2x	3.9x	22.6x	14.3x
Symantec Corporation	SYMC	2.4%	-1.3%	3.6%	0.3%	53.6%	20.9%	3.1x	3.0x	14.8x	6.8x
Activision Blizzard, Inc.	ATVI	6.8%	17.4%	9.0%	6.9%	12.6%	33.4%	4.6x	5.4x	13.9x	15.0x
Xerox Corporation	XRX	3.5%	7.0%	5.0%	-4.2%	0.6%	14.2%	0.9x	1.0x	6.5x	5.2x
	Mean	7.8%	22.1%	11.9%	8.2%	14.8%	28.7%	4.5x	4.2x	15.3x	11.9x
	Median	6.9%	18.8%	10.3%	5.6%	12.8%	28.4%	4.4x	4.1x	14.3x	11.5x
Miscellaneous Business Services											
Alliance Data Systems Corporation	ADS	3.1%	46.0%	3.4%	0.9%	14.8%	25.6%	3.7x	3.6x	14.6x	14.1x
ADT Inc.	ADT	1.2%	4.9%	1.5%	5.6%	1.6%	49.9%	3.1x	2.9x	6.2x	5.5x
Total System Services, Inc.	TSS	7.7%	23.4%	8.8%	-18.3%	28.1%	31.2%	4.5x	4.5x	14.5x	12.6x
Sotheby's	BID	5.3%	20.5%	8.1%	-9.4%	8.9%	22.2%	2.9x	2.6x	12.9x	10.3x
Shutterfly, Inc.	SFLY	4.8%	8.2%	6.0%	64.8%	79.6%	15.2%	1.2x	1.1x	7.9x	7.3x
Cardtronics plc	CATM	4.0%	6.7%	5.8%	-5.1%	-7.3%	21.5%	1.4x	1.5x	6.7x	6.9x
TTEC Holdings, Inc.	TTEC	6.6%	-6.0%	10.5%	8.7%	2.3%	11.5%	1.0x	1.0x	8.6x	7.0x
	Mean	4.7%	14.8%	6.3%	6.8%	18.3%	25.3%	2.6x	2.5x	10.2x	9.1x
	Median	4.8%	8.2%	6.0%	0.9%	8.9%	22.2%	2.9x	2.6x	8.6x	7.3x

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 December 31, 2018



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

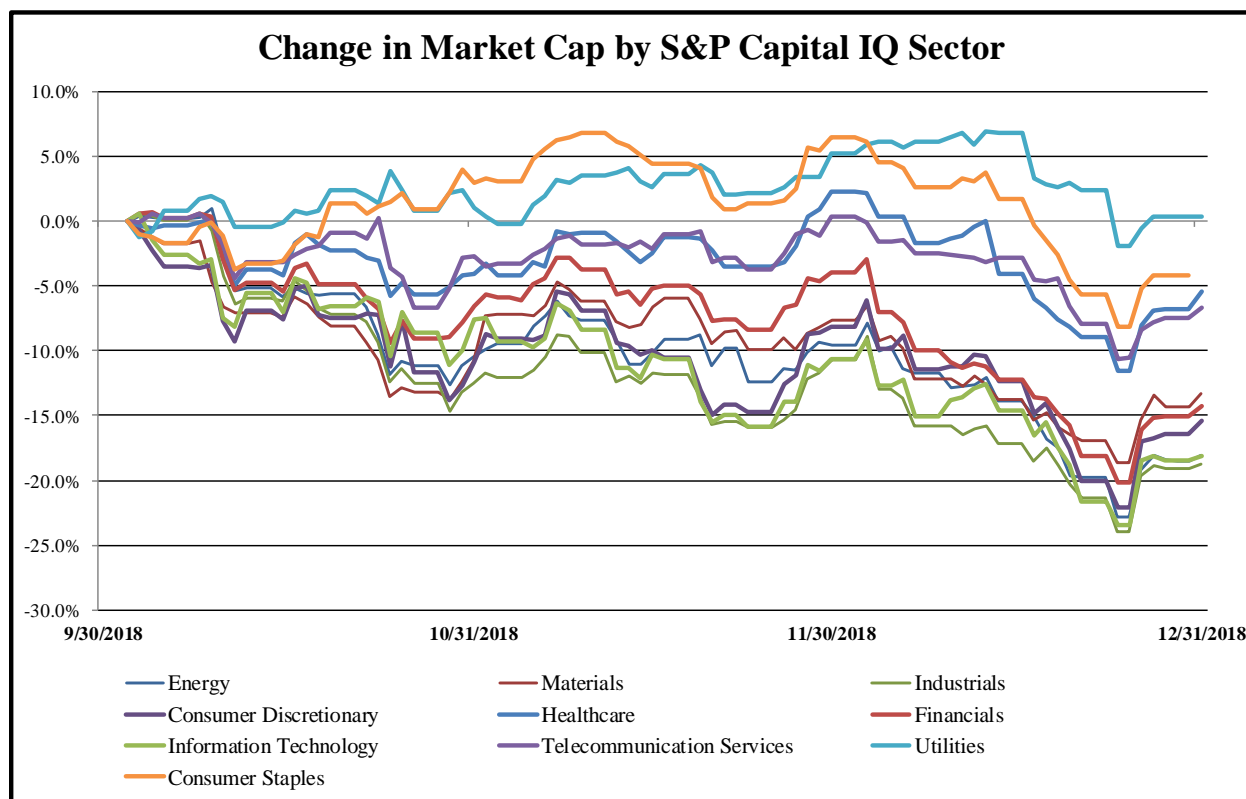
Recent M&A Activity in the Business Services Industry December 31, 2017 to December 31, 2018

(USD in millions)

Close Date	Target	Acquirer	Target Company Primary Industry	Implied Enterprise Value
11/5/2018	CA, Inc.	Broadcom Inc.	Systems Software	\$18,448.02
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
10/31/2018	Marketo, Inc.	Adobe Systems Incorporated (nka:Adobe Inc.)	Application Software	\$4,750.00
10/9/2018	Atos Syntel	Atos SE	Data Processing and	\$3,541.56
10/1/2018	Charles River Systems, Inc.	State Street Bank and Trust Company (Boston, MA)	Application Software	\$2,600.00
10/5/2018	Convergys Corporation	Concentrix Corporation	Data Processing and	\$2,544.74
4/5/2018	Callidus Software Inc.	SAP America, Inc.	Application Software	\$2,425.92
10/1/2018	Duo Security, Inc.	Cisco Systems, Inc.	Systems Software	\$2,350.00
6/15/2018	Blackhawk Network Holdings, Inc.	Silver Lake; P2 Capital Partners, LLC; P2 Capital Master	Data Processing and	\$2,341.92
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	Ipreo 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
6/18/2018	Magento, Inc.	Adobe Systems Incorporated (nka:Adobe Inc.)	Application Software	\$1,680.00
10/4/2018	TravelClick, Inc.	Amadeus Americas, Inc.	Application Software	\$1,520.00
11/16/2018	IntraLinks Holdings, Inc.	SS&C Technologies Holdings, Inc.	Application Software	\$1,500.00
10/1/2018	Eze Software Group LLC	SS&C Technologies Holdings, Inc.	Application Software	\$1,450.00
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
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
12/31/2018	Data Center Colocation Operations and Assets of AT&T	Brookfield Infrastructure Partners L.P.	Data Processing and	\$1,100.00
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
1/9/2018	Big Fish Games, Inc.	Aristocrat Technologies, Inc.	Interactive Home	\$990.00
12/31/2018	Veracode, Inc.	Thoma Bravo, LLC	Application Software	\$950.00
12/19/2018	PlanGrid, Inc.	Autodesk, Inc.	Application Software	\$875.00
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
7/27/2018	The Gordian Group, Inc.	Fortive Corporation	Application Software	\$778.00
3/31/2018	Fiserv Solutions, LLC	Warburg Pincus LLC	Application Software	\$761.82
8/20/2018	Datorama Inc.	salesforce.com, inc.	Application Software	\$757.85
10/1/2018	Mendix Inc.	Siemens Aktiengesellschaft	Application Software	\$700.12
10/31/2018	ATM and Debit Servicing business of Elan Financial	Fiserv, Inc.	Data Processing and	\$690.00
8/15/2018	Franklin Madison 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
10/5/2018	InfoArmor, Inc.	The Allstate Corporation	Systems Software	\$525.00
10/4/2018	CloudHealth Technologies, Inc.	VMware, Inc.	Application Software	\$500.00
3/7/2018	LiquidHub, Inc.	Cappgemini SE	Application Software	\$500.00
2/2/2018	e-Builder, Inc.	Trimble Inc.	Application Software	\$500.00
2/1/2018	Bazaarvoice, Inc.	Marlin Equity Partners, LLC; Marlin Equity IV LP; Marlin	Application Software	\$455.99
12/21/2018	GTCR/FMG Blocker Corp/NCP Fairway, Inc.	Lamar Media Corp.	Advertising	\$418.50
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
2/21/2018	ForRent.com	Apartments, LLC	Application Software	\$385.00
4/9/2018	Phantom Cyber Corporation	Splunk Inc.	Systems 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
12/17/2018	Liaison Technologies, Inc.	Open Text Corporation	Application Software	\$310.00
3/26/2018	Evident.io, Inc.	Palo Alto Networks, Inc.	Application Software	\$300.00
10/25/2018	Relayr, Inc.	HSB Group, Inc.	Application Software	\$297.91
10/1/2018	iFountain, LLC	Atlassian Corporation Plc	Application Software	\$295.00
4/2/2018	OneContent Business	Hyland Software, Inc.	Application Software	\$260.00
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

Source: Capital IQ

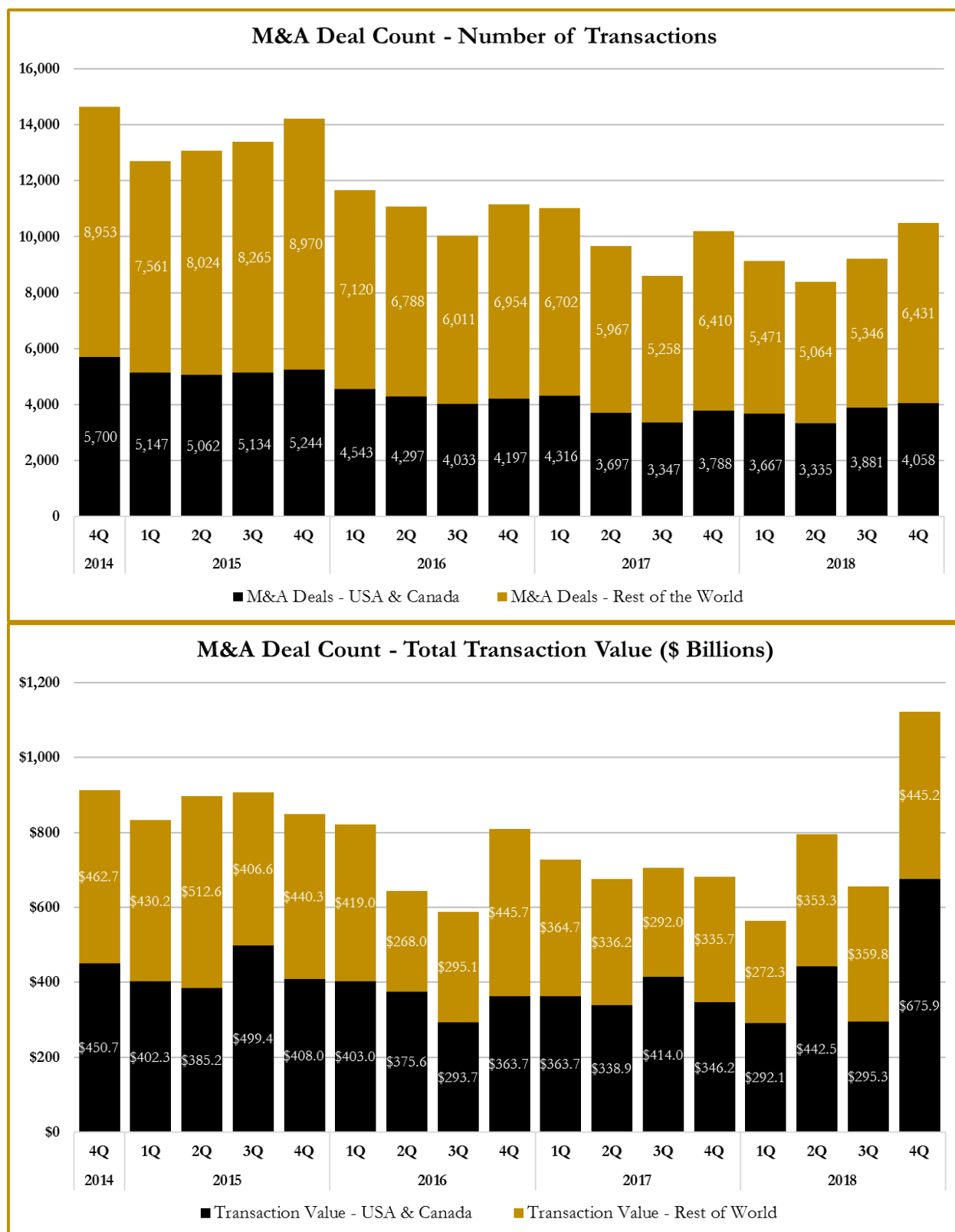
S&P Capital IQ - Sector Last 3 Month Equity Performance As of December 31, 2018



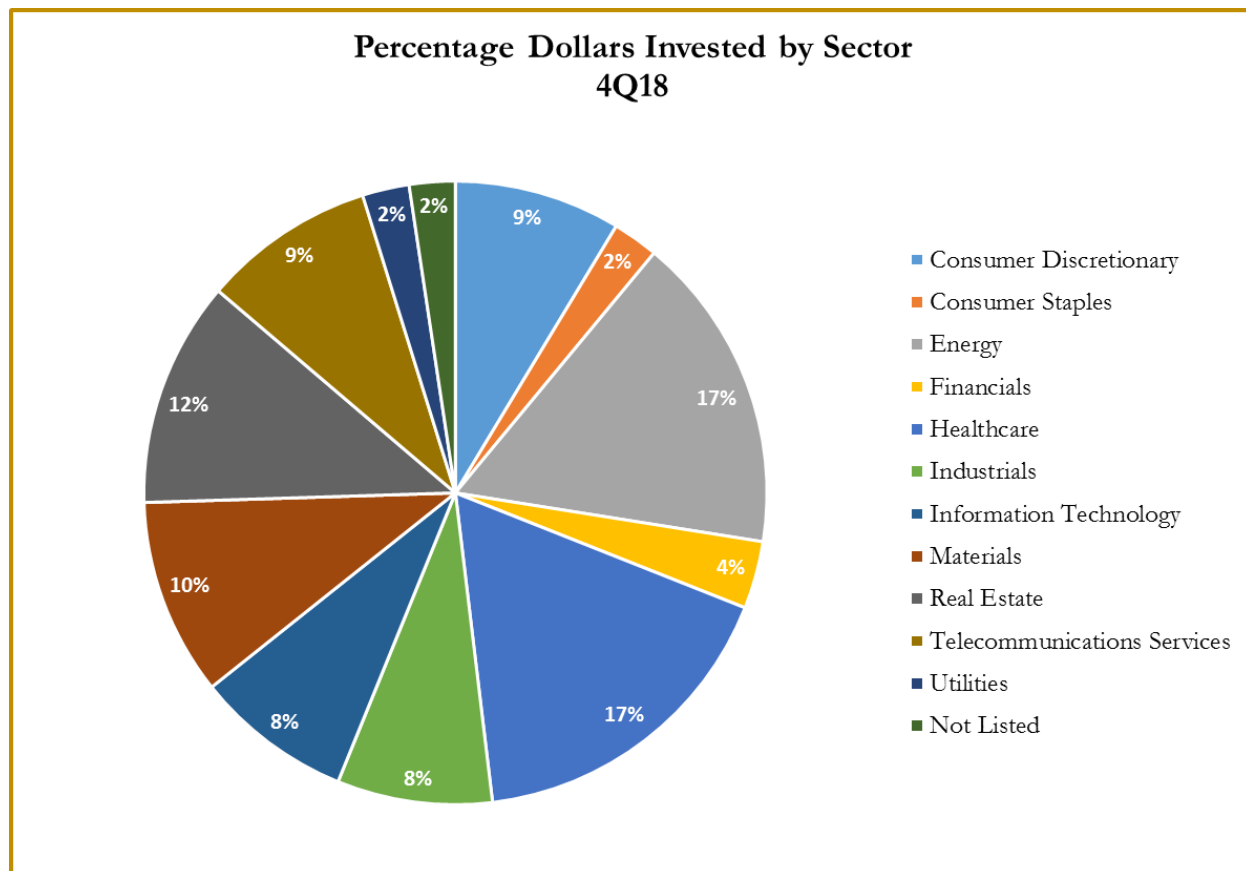
Note: The indices are derived from the equity performance of the S&P Capital IQ Sectors. Source: Capital IQ

M&A Deal Flow Statistics by S&P Capital IQ Sector

As of December 31, 2018



M&A Deal Flow Statistics by S&P Capital IQ Sector As of December 31, 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.

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

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