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Industry Observations – September 30, 2019

# Telecommunication Services Industry

## Select Telecommunication Services Public Company Industry Data As of September 30, 2019

(USD in millions, except per share data)

Company Name	Ticker	Market Data					LTM Operating Data			Forward Estimates	
		Price at 09/30/19	% of 52 Week High	Equity Value	Enterprise Value	Debt / Total Capital	Total Assets	LTM Revenue	LTM EBITDA	CY 2019 Revenue Estimate	CY 2019 EBITDA Estimate
<b>Telecommunication Services</b>											
ORBCOMM Inc.	ORBC	\$4.76	43.5%	\$379.63	\$576.62	51.1%	\$588.22	\$270.52	\$41.63	\$280.56	\$63.71
Vonage Holdings Corp.	VG	\$11.30	77.5%	\$2,735.71	\$3,070.07	50.8%	\$1,354.50	\$1,112.46	\$109.31	\$1,188.31	\$159.96
Cogent Communications Holdings, Inc.	CCOI	\$55.10	85.8%	\$2,500.07	\$3,215.93	120.3%	\$949.07	\$518.32	\$171.23	\$544.43	\$194.58
Boingo Wireless, Inc.	WIFI	\$11.10	31.1%	\$489.63	\$533.91	66.4%	\$606.06	\$268.09	\$77.01	\$270.48	\$82.63
Zayo Group Holdings, Inc.	ZAYO	\$33.90	97.0%	\$8,009.57	\$13,951.96	81.8%	\$9,334.60	\$2,578.00	\$1,170.70	\$2,589.38	\$1,286.61
Iridium Communications Inc.	IRDM	\$21.28	75.4%	\$2,783.88	\$4,942.92	55.3%	\$3,917.06	\$545.71	\$285.27	\$557.78	\$335.67
ATN International, Inc.	ATNI	\$58.37	65.7%	\$922.49	\$1,039.11	16.2%	\$1,146.98	\$439.96	\$111.06	\$440.52	\$101.11
Shenandoah Telecommunications	SHEN	\$31.77	61.8%	\$1,583.95	\$2,553.26	70.8%	\$1,822.04	\$637.97	\$270.04	\$648.38	\$273.64
Cincinnati Bell Inc.	CBB	\$5.07	31.5%	\$255.63	\$2,352.89	105.9%	\$2,655.70	\$1,549.50	\$395.50	\$1,536.10	\$405.54
T-Mobile US, Inc.	TMUS	\$78.77	92.4%	\$67,305.58	\$111,894.70	61.6%	\$84,788.00	\$44,272.00	\$12,388.00	\$45,326.38	\$13,081.89
United States Cellular Corporation	USM	\$37.58	62.9%	\$3,259.24	\$5,201.83	38.1%	\$8,223.00	\$3,991.00	\$810.00	\$3,985.24	\$826.39
Verizon Communications Inc.	VZ	\$60.36	98.0%	\$249,648.96	\$387,423.80	70.0%	\$283,108.00	\$131,087.00	\$48,715.00	\$131,337.13	\$48,054.84
AT&T Inc.	T	\$37.84	97.7%	\$276,496.88	\$481,805.29	50.7%	\$546,914.00	\$183,516.00	\$56,256.00	\$182,267.37	\$59,911.20
CenturyLink, Inc.	CTL	\$12.48	56.2%	\$13,612.80	\$49,902.17	72.9%	\$64,508.00	\$22,821.00	\$9,216.00	\$22,287.41	\$9,058.76
Consolidated Communications Holdings, Inc.	CNSL	\$4.76	33.5%	\$343.08	\$2,640.83	87.0%	\$3,485.71	\$1,365.00	\$454.94	\$1,332.88	\$522.63
Frontier Communications Corporation	FTR	\$0.87	12.0%	\$91.36	\$16,999.42	128.2%	\$17,565.00	\$8,418.00	\$3,415.00	\$8,187.56	\$3,389.90
Sprint Corporation	S	\$6.17	76.6%	\$25,253.17	\$67,029.40	63.5%	\$88,546.00	\$33,617.00	\$12,545.00	\$33,118.47	\$11,912.90
Telephone and Data Systems, Inc.	TDS	\$25.80	69.2%	\$2,954.42	\$6,337.97	39.1%	\$10,795.00	\$5,147.00	\$1,109.00	\$5,145.73	\$1,270.64

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

The material contained in this publication is meant to provide general information regarding valuation topics. This publication does not constitute investment advice with respect to the securities of any company discussed herein, is not intended to provide information upon which to base an investment decision, and should not be construed as such. Professional advice should be obtained before taking any action based on the information contained herein.

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## Select Telecommunication Services Public Company Valuation Metrics As of September 30, 2019

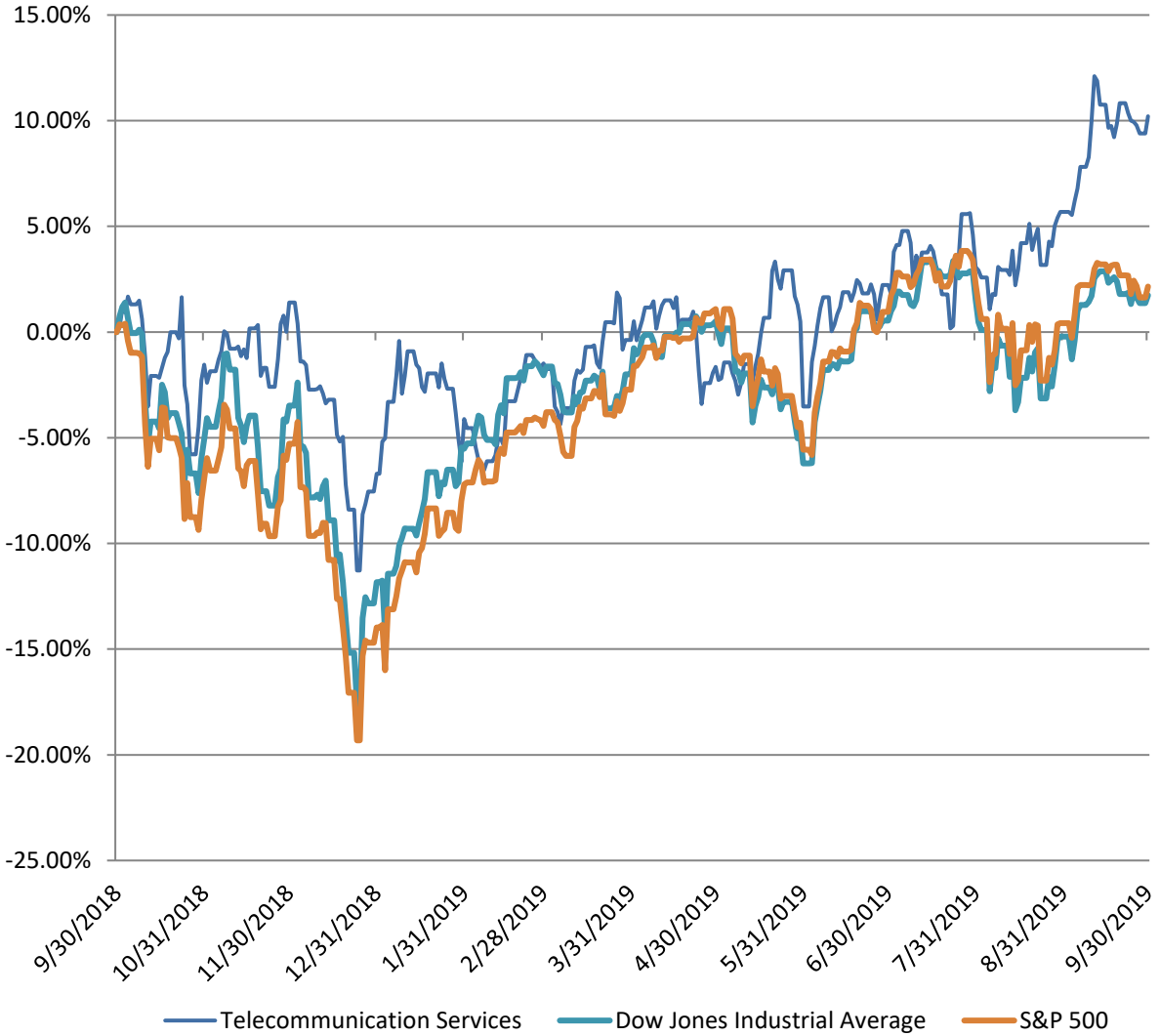
(USD in millions, except per share data)

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 2019 Revenue	TEV/LTM EBITDA	TEV/CY 2019 EBITDA
<b>Telecommunication Services</b>											
ORBCOMM Inc.	ORBC	-0.6%	-8.0%	-0.7%	-4.8%	33.0%	15.4%	2.2x	2.1x	14.1x	9.1x
Vonage Holdings Corp.	VG	1.8%	1.2%	2.2%	9.0%	-27.3%	9.8%	3.0x	2.6x	30.1x	19.2x
Cogent Communications Holdings, Inc.	CCOI	6.8%	N/A	7.6%	4.9%	8.7%	33.0%	6.1x	5.9x	18.3x	16.5x
Boingo Wireless, Inc.	WIFI	-0.6%	-4.4%	-1.4%	17.2%	4.8%	28.7%	2.3x	2.0x	7.9x	6.5x
Zayo Group Holdings, Inc.	ZAYO	3.6%	10.6%	4.6%	-0.9%	-1.5%	45.4%	5.4x	5.4x	11.8x	10.8x
Iridium Communications Inc.	IRDM	0.1%	-3.6%	0.1%	12.3%	20.1%	52.3%	8.3x	8.9x	16.0x	14.7x
ATN International, Inc.	ATNI	1.4%	3.6%	1.7%	-2.7%	-15.1%	25.2%	2.4x	2.4x	9.5x	10.3x
Shenandoah Telecommunications	SHEN	4.0%	13.1%	4.6%	3.7%	8.8%	42.3%	4.1x	3.9x	9.6x	9.3x
Cincinnati Bell Inc.	CBB	2.4%	N/A	3.3%	34.8%	35.3%	25.5%	1.5x	1.5x	6.0x	5.8x
T-Mobile US, Inc.	TMUS	4.8%	13.0%	6.0%	5.9%	10.0%	28.0%	2.5x	2.5x	8.8x	8.6x
United States Cellular Corporation	USM	1.2%	3.6%	1.4%	2.2%	9.2%	20.3%	1.3x	1.3x	6.6x	6.3x
Verizon Communications Inc.	VZ	7.2%	29.3%	10.9%	1.1%	4.3%	37.2%	2.9x	2.9x	7.9x	8.1x
AT&T Inc.	T	3.3%	9.7%	4.7%	15.9%	15.4%	30.7%	2.6x	2.6x	8.5x	8.0x
CenturyLink, Inc. Consolidated	CTL	3.9%	-43.3%	4.8%	7.6%	22.1%	40.4%	2.2x	2.2x	5.4x	5.5x
Communications Holdings, Inc.	CNSL	0.8%	-9.9%	1.0%	-4.3%	-3.8%	33.3%	2.0x	2.0x	6.0x	5.1x
Frontier Communications Corporation	FTR	4.5%	N/A	5.7%	-4.7%	-2.4%	40.6%	2.0x	2.1x	5.0x	5.0x
Sprint Corporation	S	2.3%	-8.2%	2.9%	3.8%	9.3%	37.3%	2.0x	2.0x	5.3x	5.6x
Telephone and Data Systems, Inc.	TDS	1.3%	3.5%	1.6%	2.1%	6.4%	21.5%	1.2x	1.2x	5.7x	5.0x
	Mean	2.7%	0.7%	3.4%	5.7%	7.6%	31.5%	3.0x	3.0x	10.1x	8.9x
	Median	2.3%	3.5%	3.1%	3.7%	8.7%	31.8%	2.3x	2.3x	8.2x	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

## Telecommunication Services Public Company LTM Equity Performance As of September 30, 2019



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

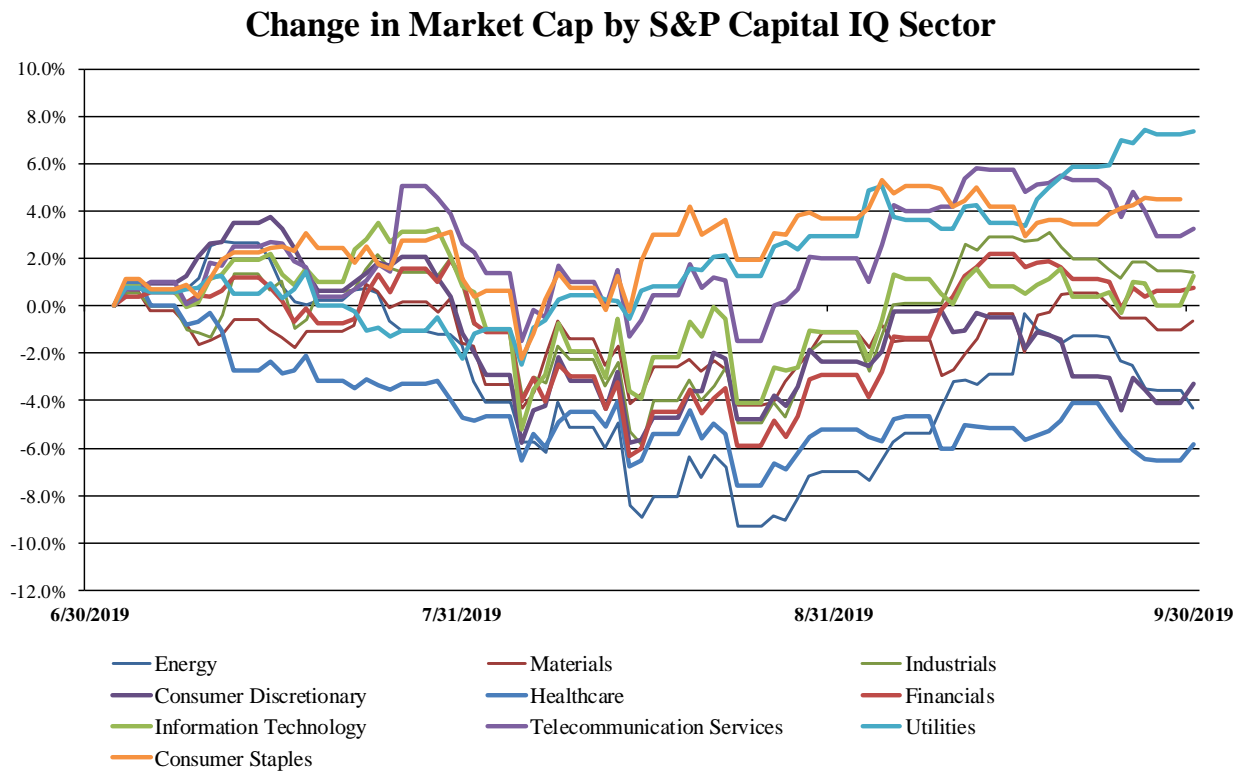
## Recent M&A Activity in the Telecommunication Services Industry September 30, 2018 to September 30, 2019

USD in millions)

Close Date	Target	Acquirer	Target Company Primary Industry	Implied Enterprise Value
3/20/2019	Twenty-First Century Fox, Inc. (nka:TFCF Corporation)	The Walt Disney Company	Movies and Entertainment	\$83,203.21
8/23/2019	Fox Sports Net LLC	Sinclair Broadcast Group, Inc.	Cable and Satellite	\$10,600.00
9/19/2019	Tribune Media Company	Nexstar Media Group, Inc.	Broadcasting	\$6,239.08
7/1/2019	Epsilon Data Management, LLC	Publicis Groupe Holdings B.V.; MMS USA	Advertising	\$4,400.00
1/2/2019	Raycom Media Inc.	Gray Television, Inc.	Broadcasting	\$3,547.00
8/29/2019	Yankees Entertainment & Sports Network, LLC	Amazon.com, Inc.; Yankee Global Enterprises	Broadcasting	\$3,470.00
2/1/2019	Pandora Media, LLC	Sirius XM Holdings Inc.; Sirius XM Radio Inc.	Movies and Entertainment	\$3,453.84
10/1/2018	Axiom LLC	The Interpublic Group of Companies, Inc.	Interactive Media and Services	\$2,300.00
4/30/2019	Turnitin, LLC	Advance Publications, Inc.	Interactive Media and Services	\$1,750.00
7/30/2019	MG LLC	Willis Towers Watson Public Limited Company	Advertising	\$1,334.50
12/21/2018	XO Group Inc.	WeddingWire, Inc.	Interactive Media and Services	\$810.75
9/10/2019	Broadcast Satellite Service Business of EchoStar Corporation	DISH Network Corporation	Alternative Carriers	\$810.37
9/19/2019	11 Local Television Stations In Eight Markets	TEGNA Inc.	Broadcasting	\$740.00
9/19/2019	Eight Television Stations of Nexstar Media Group Inc.	Scripps Broadcasting Holdings LLC	Broadcasting	\$580.00
5/1/2019	15 Television Stations of Cordillera Communications	Scripps Media, Inc.	Broadcasting	\$521.00
9/3/2019	U.S. Tower Portfolio of Grain Management, LLC	American Tower Corporation (REIT)	Wireless Telecommunication Services	\$500.00
12/21/2018	GTCR/FMG Blocker Corp/NCP Fairway, Inc.	Lamar Media Corp.	Advertising	\$418.50
9/19/2019	Elemica, Inc.	Eurazeo SE; Eurazeo Capital IV	Interactive Media and Services	\$390.00
1/8/2019	Delta Communications, LLC	Cable One, Inc.	Integrated Telecommunication Services	\$357.00
3/4/2019	Pluto, Inc.	Viacom Inc.	Movies and Entertainment	\$340.00
12/31/2018	Windstream Business Holdings, LLC	Trive Capital	Integrated Telecommunication Services	\$330.00
9/3/2019	Fiber Network of Bluebird Network, LLC	Uniti Group Inc.	Alternative Carriers	\$319.00
1/17/2019	BiteSquad.com, LLC	Waitr Holdings Inc.	Interactive Media and Services	\$317.97
1/23/2019	BuildingConnected, Inc.	Autodesk, Inc.	Interactive Media and Services	\$275.00
7/31/2019	4Front Holdings, LLC	Cannex Capital Holdings Inc. (nka:4Front Ventures	Advertising	\$272.22
7/1/2019	Zoosk, Inc.	Spark Networks SE	Interactive Media and Services	\$257.90
3/29/2019	US K12 Courseware Business of Pearson PLC	Nexus Capital Management LP	Publishing	\$250.00
12/6/2018	Azoff MSG Entertainment LLC (nka:The Azoff Company)	Azoff Music Management, LLC	Movies and Entertainment	\$250.00
8/8/2019	WBNS TV, Inc.	TEGNA Inc.	Broadcasting	\$245.00
1/3/2019	SiriusDecisions, Inc.	Forrester Research, Inc.	Advertising	\$238.90
1/9/2019	One Sixty Over Ninety, Inc.	Endeavor, LLC	Advertising	\$200.00
10/31/2018	Time Media Brand of Time Inc.	1/0/1900	Publishing	\$190.00
7/3/2019	Bayou City Broadcasting Evansville, Inc. and Bayou City	Allen Media Broadcasting LLC	Broadcasting	\$165.00
10/19/2018	Handy Technologies, Inc.	ANGI Homeservices Inc.	Interactive Media and Services	\$162.93
4/1/2019	RhythmOne plc	Taptica International Ltd. (nka:Tremor	Interactive Media and Services	\$162.30
12/24/2018	MightyHive, Inc.	S4 Capital plc	Advertising	\$150.00
12/21/2018	Fortune Media Group Holdings Limited	1/0/1900	Publishing	\$150.00
10/1/2018	Riverside Clinical & Standardized Testing Portfolio of Houghton	Alpine Investors, LP; Alpine Investors VI, LP;	Publishing	\$140.00
1/3/2019	Periscope, Inc.	Quad/Graphics, Inc.	Advertising	\$121.10
3/1/2019	MoNa Mobile Nations, LLC	Future plc	Publishing	\$120.58
6/24/2019	KIXEYE, Inc.	Stillfront Group AB (publ)	Interactive Home Entertainment	\$120.00
1/15/2019	ValuePenguin Inc.	LendingTree, LLC	Interactive Media and Services	\$105.00
1/2/2019	WTOL in Toledo and KWES in Odessa-Midland of Gray	TEGNA Inc.	Broadcasting	\$105.00
6/12/2019	Infinite Esports & Entertainment	Immortals, LLC	Movies and Entertainment	\$100.00
7/1/2019	Appeast, Inc.	StepStone Deutschland GmbH	Advertising	\$93.18
6/18/2019	Justice Network, LLC/Quest Network LLC	TEGNA Inc.	Broadcasting	\$90.59
1/23/2019	Six FM Stations and Two Translator of Alpha Media LLC	Hubbard Radio, LLC	Broadcasting	\$88.00
2/14/2019	The Deal, LLC	Euromoney Institutional Investor PLC	Publishing	\$87.30
6/30/2019	82 Communication Sites	SBA Communications Corporation	Wireless Telecommunication Services	\$83.00
1/22/2019	Portfolio of Wireless Communication Towers of Frontier	Everest Infrastructure Partners, Inc.	Wireless Telecommunication Services	\$80.00
11/2/2018	Eleven Inc.	Vision 7 Communications U.S. Inc.	Advertising	\$80.00
10/31/2018	eHarmony, Inc.	PARSHIP ELITE Group; NCG - NuCom Group	Interactive Media and Services	\$74.62
10/4/2018	Navience Healthcare Solutions LLC	Huntsworth plc	Advertising	\$70.00
9/3/2019	GetFeedback, Inc.	SVMK Inc.	Interactive Media and Services	\$68.30
11/8/2018	Cozy Services Ltd.	Apartments, LLC	Interactive Media and Services	\$68.00
10/2/2018	WTNZ in Knoxville, WFXG in Augusta, WPGX in Panama City	Lockwood Broadcast Group	Broadcasting	\$67.00
7/29/2019	SmartBrief, Inc.	Future plc	Publishing	\$66.10
12/31/2018	QuikOrder, Inc.	Pizza Hut, LLC	Interactive Media and Services	\$66.00
12/19/2018	ForeSee Results, Inc.	Verint Systems Inc.	Advertising	\$64.76

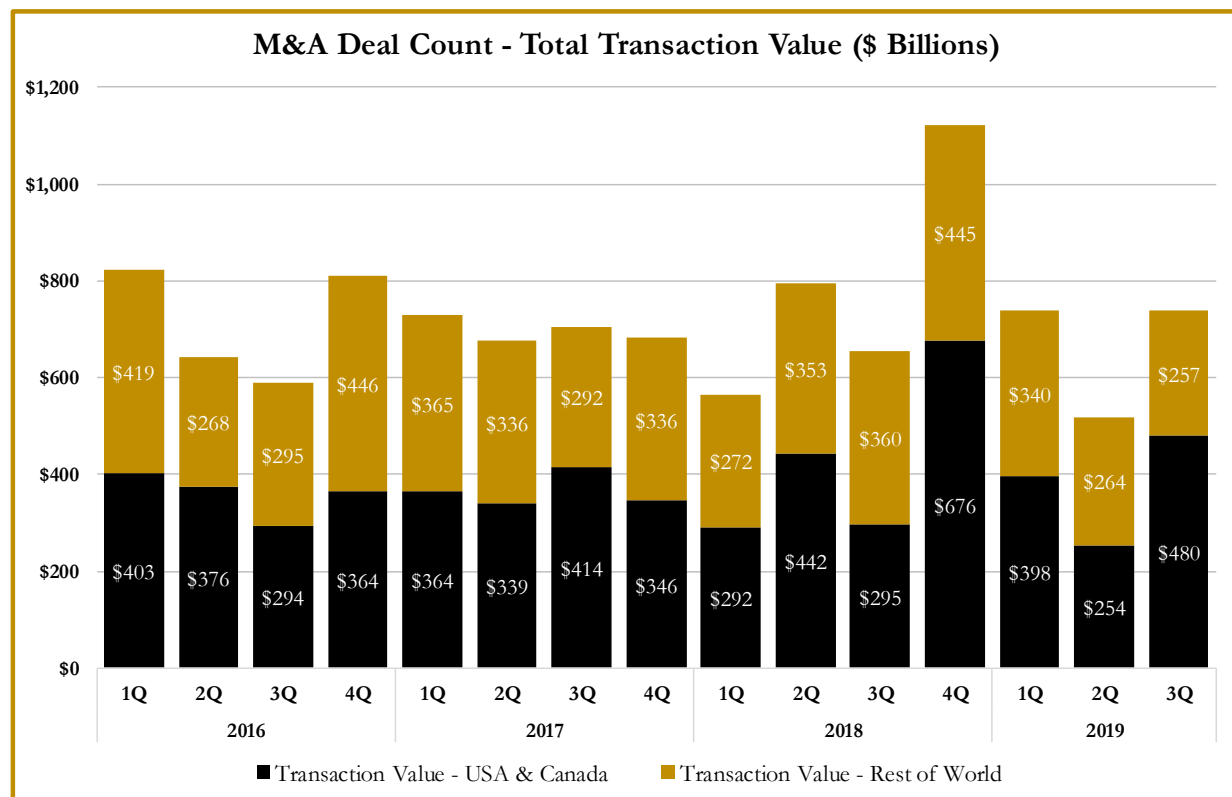
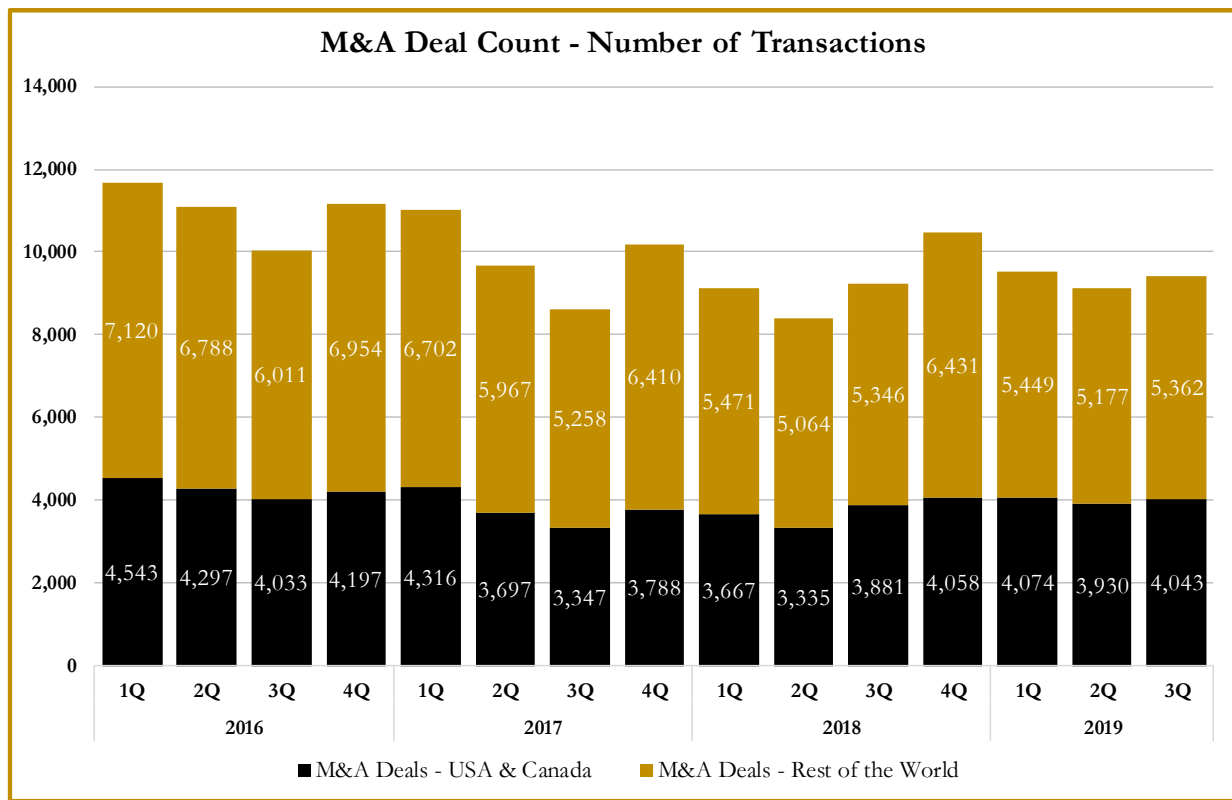
Source: Capital IQ

S&P Capital IQ - Sector Last 3 Month Equity Performance  
As of September 30, 2019

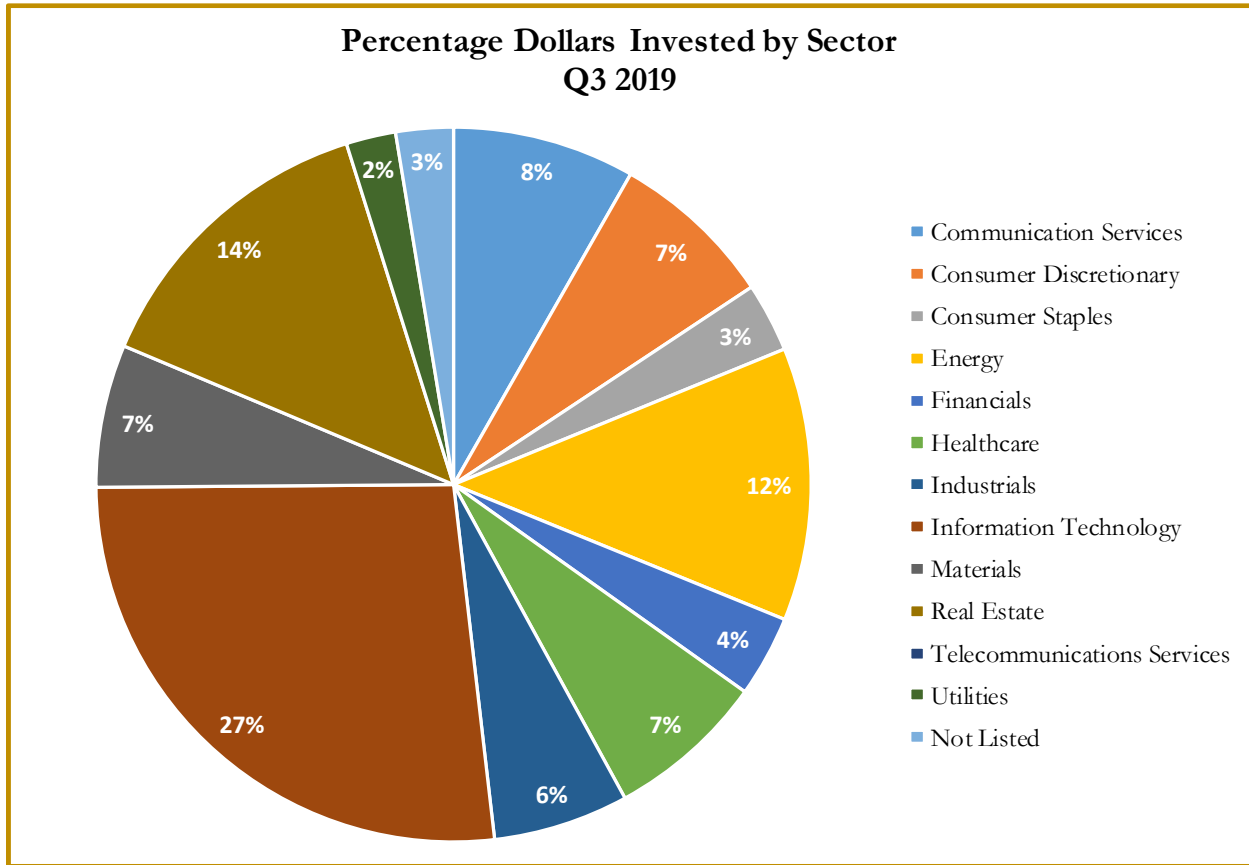


Note: The indices are derived from the equity performance of the S&P Capital IQ Sectors. Source: Capital IQ

### M&A Deal Flow Statistics by S&P Capital IQ Sector As of September 30, 2019



M&A Deal Flow Statistics by S&P Capital IQ Sector  
As of September 30, 2019







## About Houlihan Capital

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.

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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.

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

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