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Industry Observations – September 30, 2018

Telecommunication Services Industry

Select Telecommunication 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
Telecommunication Services											
Globakstar, Inc.	GSAT	\$0.51	26.9%	\$642.17	\$937.47	55.8%	\$1,057.82	\$127.59	\$23.39	\$124.55	\$24.46
ORBCOMM Inc.	ORBC	\$10.86	90.9%	\$853.36	\$1,014.99	48.7%	\$594.22	\$285.78	\$31.70	\$285.85	\$57.65
Vonage Holdings Corp.	VG	\$14.16	96.1%	\$3,385.08	\$2,985.63	28.1%	\$909.71	\$1,029.00	\$148.57	\$1,049.54	\$178.50
Cogent Communications Holdings, Inc.	CCOI	\$55.80	96.8%	\$2,519.48	\$2,820.66	118.9%	\$757.32	\$501.17	\$163.20	\$521.01	\$186.47
Boingo Wireless, Inc.	WIFI	\$34.90	97.0%	\$1,475.46	\$1,076.20	20.3%	\$438.70	\$240.36	\$77.53	\$249.44	\$90.99
Fusion Connect, Inc.	FSNN	\$2.57	43.9%	\$201.65	\$809.18	0.0%	\$0.00	\$0.00	\$0.00	\$488.11	\$103.54
Zayo Group Holdings, Inc.	ZAYO	\$34.72	87.5%	\$8,557.44	\$10,832.67	79.0%	\$9,314.90	\$2,602.00	\$1,194.60	\$2,590.80	\$1,284.68
Iridium Communications Inc.	IRDM	\$22.50	100.0%	\$2,491.93	\$4,066.62	56.0%	\$4,106.69	\$506.31	\$244.56	\$518.93	\$300.18
ATN International, Inc.	ATNI	\$73.88	97.3%	\$1,179.12	\$1,424.02	10.0%	\$1,184.05	\$451.10	\$132.26	\$451.70	\$127.32
Shenandoah Telecommunications	SHEN	\$38.75	92.7%	\$1,920.40	\$2,821.23	63.6%	\$1,469.83	\$622.44	\$261.09	\$626.95	\$289.61
Cincinnati Bell Inc.	CBB	\$15.95	71.8%	\$800.01	\$2,497.37	109.0%	\$0.00	\$1,503.20	\$319.60	\$1,377.28	\$367.78
T-Mobile US, Inc.	TMUS	\$70.18	99.0%	\$59,458.70	\$88,767.60	55.1%	\$70,182.00	\$42,553.00	\$11,270.00	\$43,233.18	\$12,192.64
United States Cellular Corporation	USM	\$44.78	99.5%	\$3,830.99	\$5,469.29	28.8%	\$7,228.00	\$3,944.00	\$772.00	\$3,966.63	\$775.15
Verizon Communications Inc.	VZ	\$53.39	96.3%	\$220,604.04	\$354,081.52	67.1%	\$265,562.00	\$130,537.00	\$47,651.00	\$130,964.86	\$47,423.38
AT&T Inc.	T	\$33.58	84.4%	\$243,857.96	\$403,453.12	50.0%	\$534,870.00	\$164,439.00	\$48,909.00	\$174,776.75	\$56,927.60
CenturyLink, Inc.	CTL	\$21.20	87.6%	\$22,898.61	\$58,906.00	61.6%	\$73,371.00	\$22,988.00	\$8,086.00	\$23,474.12	\$9,054.08
Consolidated Communications Holdings, CNSL		\$13.04	62.9%	\$929.13	\$3,316.28	82.7%	\$3,596.02	\$1,410.68	\$465.23	\$1,395.27	\$526.65
Windstream Holdings, Inc.	WIN	\$4.90	35.9%	\$210.40	\$10,613.80	115.0%	\$10,710.10	\$5,817.20	\$1,928.10	\$5,727.65	\$1,999.46
Frontier Communications Corporation	FTR	\$6.49	50.6%	\$686.71	\$17,591.72	90.0%	\$24,033.00	\$8,704.00	\$3,475.00	\$8,569.56	\$3,452.99
Sprint Corporation	S	\$6.54	81.8%	\$26,607.48	\$57,351.63	58.8%	\$87,851.00	\$32,880.00	\$12,669.00	\$33,061.86	\$12,314.78
Telephone and Data Systems, Inc.	TDS	\$30.43	98.1%	\$3,405.41	\$6,078.07	31.7%	\$9,719.00	\$5,085.00	\$1,073.00	\$5,106.03	\$1,256.63
Trilogy International Partners Inc.	TRL	\$2.94	53.2%	\$158.72	\$594.99	106.7%	\$717.67	\$792.05	\$128.73	\$777.15	\$136.50
IDT Corporation	IDT	\$5.34	32.4%	\$132.71	\$106.60	0.0%	\$399.60	\$1,547.50	\$21.99	\$0.00	\$0.00

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.

Publicly available information utilized in this publication has been obtained from sources deemed to be reliable. Houlihan does not guarantee the accuracy or completeness of the information provided within this publication. The material presented reflects information known to the authors at the time this publication was written and this information is subject to change.

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

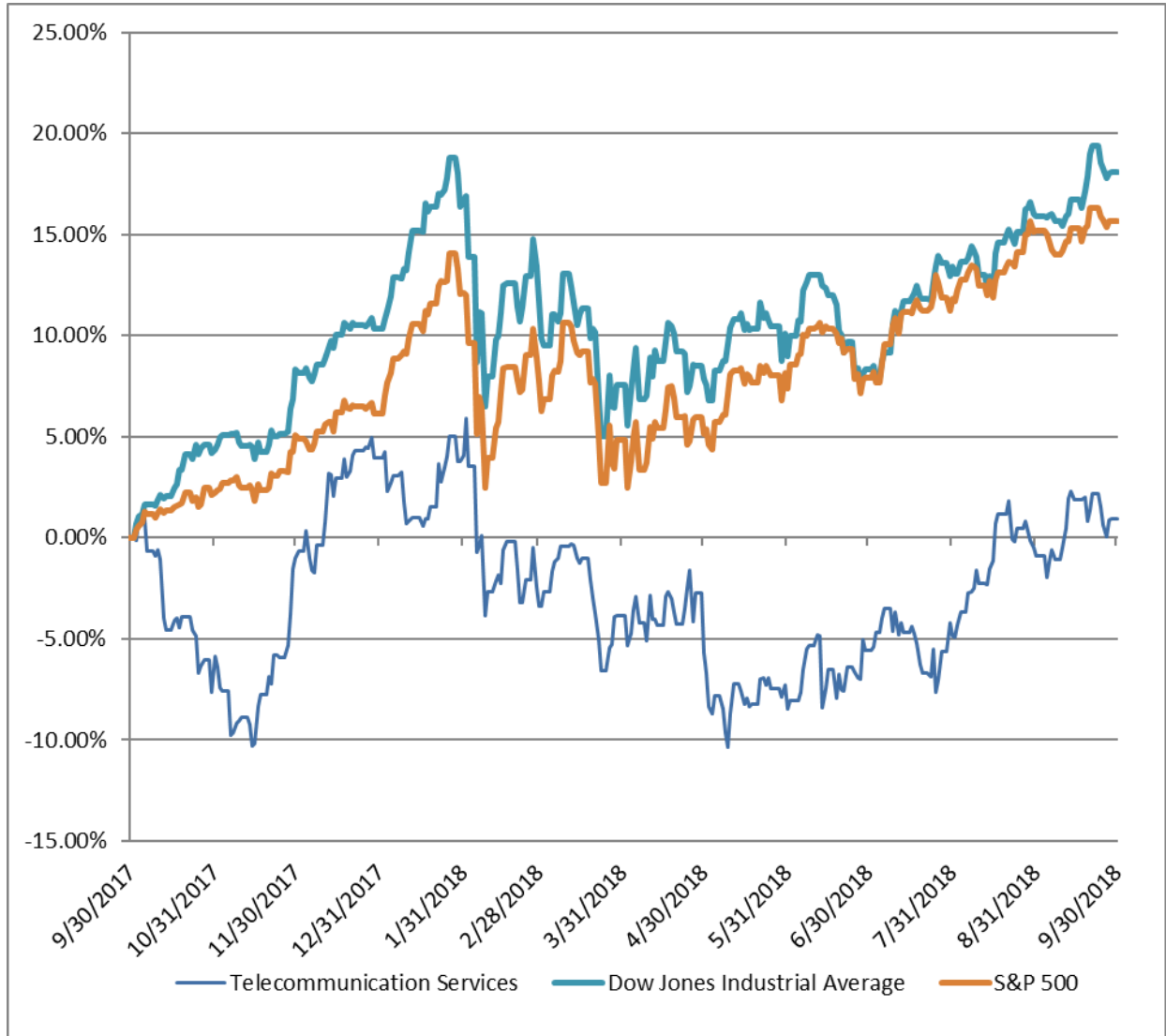
(USD in millions, except per share data)

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
Telecommunication Services											
Globalstar, Inc.	GSAT	-3.6%	22.9%	-4.8%	18.6%	2.1%	18.3%	7.3x	7.5x	40.1x	38.3x
ORBCOMM Inc.	ORBC	-1.2%	-10.9%	-1.4%	27.0%	-14.1%	11.1%	3.6x	3.6x	32.0x	17.6x
Vonage Holdings Corp.	VG	5.3%	-2.4%	6.4%	3.4%	43.1%	14.4%	2.9x	2.8x	20.1x	16.7x
Cogent Communications Holdings, Inc.	CCOI	7.0%	N/A	8.0%	7.8%	12.0%	32.6%	5.6x	5.4x	17.3x	15.1x
Boingo Wireless, Inc.	WIFI	-0.4%	-1.1%	-1.2%	25.2%	68.8%	32.3%	4.5x	4.3x	13.9x	11.8x
Fusion Connect, Inc.	FSNN	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	N/A	1.7x	N/A	7.8x
Zayo Group Holdings, Inc.	ZAYO	3.2%	6.6%	4.0%	11.3%	12.7%	45.9%	4.2x	4.2x	9.1x	8.4x
Iridium Communications Inc.	IRDM	1.0%	8.9%	1.2%	15.1%	8.6%	48.3%	8.0x	7.8x	16.6x	13.5x
ATN International, Inc. Shenandoah	ATNI	2.5%	9.5%	3.1%	-10.1%	-12.5%	29.3%	3.2x	3.2x	10.8x	11.2x
Telecommunications	SHEN	4.0%	24.8%	4.9%	1.3%	17.7%	41.9%	4.5x	4.5x	10.8x	9.7x
Cincinnati Bell Inc.	CBB	0.0%	0.0%	4.3%	38.7%	13.1%	21.3%	1.7x	1.8x	7.8x	6.8x
T-Mobile US, Inc.	TMUS	4.5%	22.2%	5.9%	6.2%	3.8%	26.5%	2.1x	2.1x	7.9x	7.3x
United States Cellular Corporation	NYSE:USM	1.2%	11.2%	1.6%	2.0%	15.7%	19.6%	1.4x	1.4x	7.1x	7.1x
Verizon Communications Inc.	NYSE:VZ	7.2%	77.5%	11.9%	4.9%	5.8%	36.5%	2.7x	2.7x	7.4x	7.5x
AT&T Inc.	NYSE:T	3.2%	21.8%	4.7%	2.3%	7.0%	29.7%	2.5x	2.3x	8.2x	7.1x
CenturyLink, Inc. Consolidated	NYSE:CTL	3.1%	10.0%	3.9%	38.3%	43.0%	35.2%	2.6x	2.5x	7.3x	6.5x
Communications Holdings, Inc.	NasdaqGS:CNSL	0.5%	12.8%	0.7%	60.5%	49.4%	33.0%	2.4x	2.4x	7.1x	6.3x
Windstream Holdings, Inc.	NasdaqGS:WIN	2.1%	N/A	2.4%	2.7%	6.4%	33.1%	1.8x	1.9x	5.5x	5.3x
Frontier Communications Corporation	NasdaqGS:FTR	3.7%	-54.3%	4.6%	-6.6%	-4.0%	39.9%	2.0x	2.1x	5.1x	5.1x
	Mean	2.3%	9.4%	3.2%	13.1%	14.7%	28.9%	3.5x	3.4x	13.0x	11.0x
	Median	2.5%	9.5%	3.9%	6.2%	8.6%	32.3%	2.8x	2.7x	8.7x	7.8x

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, 2018



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

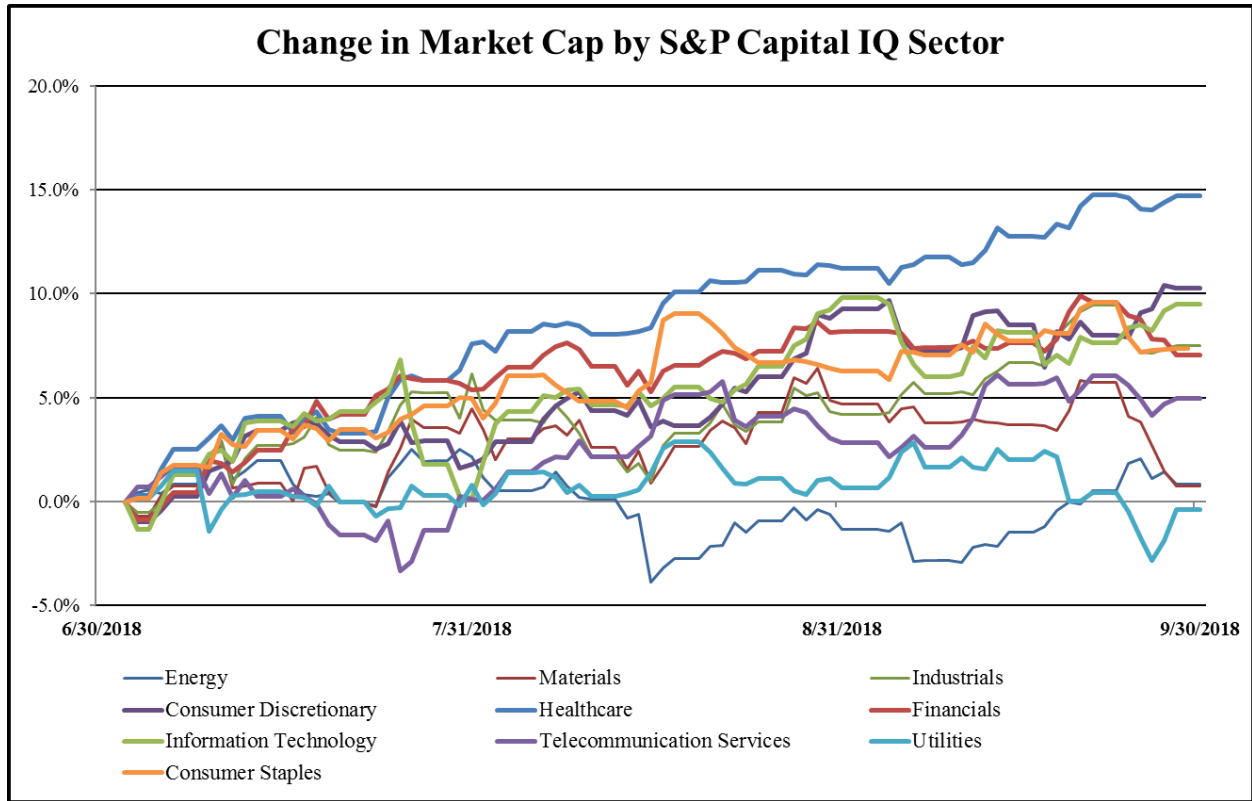
Recent M&A Activity in the Telecommunication Services Industry September 30, 2017 to September 30, 2018

USD in millions)

Close Date	Target	Acquirer	Target Company Primary Industry	Implied Enterprise Value
6/14/2018	Time Warner Inc. (nka:Warner Media, LLC)	AT&T Inc.	Movies and Entertainment	\$13,426,026.15
11/1/2017	Level 3 Communications, Inc. (nka:Level 3 Parent, LLC)	CenturyLink, Inc.	Alternative Carriers	\$4,358,469.69
3/6/2018	Scripps Networks Interactive, Inc.	Discovery Communications, Inc. (nka:Discovery,	Broadcasting	\$1,726,070.91
11/1/2017	LTS Group Holdings LLC	Crown Castle International Corp. (REIT)	Alternative Carriers	\$812,950.00
2/28/2018	Regal Entertainment Group	Gineworld Group plc	Movies and Entertainment	\$664,796.50
11/17/2017	CBS Radio Inc.	Entercom Communications Corp.	Broadcasting	\$355,875.62
3/8/2018	General Communication, Inc. (nka:GCI Liberty, Inc. prior to	Liberty Ventures (nka:GCI Liberty, Inc.)	Cable and Satellite	\$354,769.59
1/30/2018	Time Inc.	Meredith Corporation	Publishing	\$318,945.26
2/28/2018	Straight Path Communications Inc.	Verizon Communications Inc.	Alternative Carriers	\$249,778.39
9/30/2017	Rocket Ball, Ltd.	1/0/1900	Movies and Entertainment	\$246,400.00
7/9/2018	Carolina Panthers, LLC	1/0/1900	Movies and Entertainment	\$244,221.25
1/4/2018	Metrocast Cablevision of New Hampshire, LLC	Atlantic Broadband Finance, LLC	Cable and Satellite	\$162,729.00
10/2/2017	Miami Marlins, L.P.	MSD Partners, L.P.	Movies and Entertainment	\$134,904.00
1/9/2018	Big Fish Games, Inc.	Aristocrat Technologies, Inc.	Interactive Home Entertainment	\$112,553.10
11/17/2017	Lumos Networks Corp.	EQT Partners AB; EQT Infrastructure, L.P.	Alternative Carriers	\$110,555.23
7/2/2018	Hawaiian Telcom Holdco, Inc.	Cincinnati Bell Inc.	Integrated Telecommunication Services	\$77,002.27
6/18/2018	Los Angeles Times Communications and The San Diego Union-	Nant Capital, LLC	Publishing	\$63,430.90
1/10/2018	Nextlink Wireless, LLC	Verizon Communications Inc.	Alternative Carriers	\$59,750.00
8/15/2018	Affinion Benefits Group, LLC	Mill Point Capital LLC; Mill Point Capital Partners,	Advertising	\$59,515.50
12/15/2017	IWCO Direct Holdings Inc.	ModusLink Global Solutions, Inc. (nka:Steel	Advertising	\$53,875.97
10/2/2017	Over 500 Sites in United States	American Tower Corporation (REIT)	Integrated Telecommunication Services	\$53,309.93
2/15/2018	Broadcasting Stations of Midwest Television, Inc.	TEGNA Inc.	Broadcasting	\$36,816.00
1/22/2018	Layer3 TV, Inc.	T-Mobile US, Inc.	Cable and Satellite	\$36,809.50
4/3/2018	Jive Communications, Inc.	LogMeIn USA, Inc.	Alternative Carriers	\$36,771.84
4/16/2018	Public Relations Solutions and Digital Media Services Business	West Corporation	Advertising	\$35,952.20
10/2/2017	Katz Broadcasting, LLC	The E.W. Scripps Company	Broadcasting	\$34,591.24
12/1/2017	Respawn Entertainment, LLC	Electronic Arts Inc.	Interactive Home Entertainment	\$33,415.53
5/29/2018	3 Arts Entertainment Inc.	Lions Gate Entertainment Corp.	Movies and Entertainment	\$32,448.87
3/22/2018	Weather Group Television, LLC	Entertainment Studios Inc.	Broadcasting	\$31,650.00
12/31/2017	Carlin America, Inc.	Round Hill Music, LLC	Movies and Entertainment	\$27,409.38
4/9/2018	Social Bicycles Inc.	Uber Technologies, Inc.	Interactive Media and Services	\$26,350.00
2/9/2018	FiberTower Corporation	AT&T Mobility Spectrum LLC	Wireless Telecommunication Services	\$26,221.73
12/14/2017	WideOpenWest, Inc., Fiber-Optic Network Assets	Verizon Communications Inc.	Alternative Carriers	\$25,321.50
2/22/2018	Vubiquity, Inc.	Amdocs Limited	Movies and Entertainment	\$24,151.68
9/4/2018	SpringCM Inc.	DocuSign, Inc.	Interactive Media and Services	\$23,601.60
5/7/2018	NeuLion, Inc.	Endeavor, LLC	Cable and Satellite	\$22,813.17
11/28/2017	Meetup, Inc.	WeWork Companies Inc.	Interactive Media and Services	\$22,460.00
8/20/2018	CQ Roll Call, Inc.	FiscalNote, Inc.	Publishing	\$19,387.80
10/10/2017	FUNimation Entertainment Ltd.	Sony Pictures Television Networks UK	Movies and Entertainment	\$16,986.89
9/21/2018	Eight Radio Stations in San Francisco and Sacramento	Bonneville International Corporation	Broadcasting	\$15,288.63
5/3/2018	Edmodo, Inc.	Best Assistant Education Online Limited	Interactive Media and Services	\$14,520.00
2/28/2018	Spread Networks, LLC	Zayo Group Holdings, Inc.	Integrated Telecommunication Services	\$14,438.63
9/5/2018	B2C Business Division of Purch, Inc.	Future US, Inc.	Publishing	\$14,327.23
10/2/2017	11 Newspapers and Other Assets	GateHouse Media Management Services, Inc.	Publishing	\$13,556.40
9/10/2018	Substantially All of the Assets of LeaseLabs Inc.	RealPage, Inc.	Advertising	\$12,639.51
8/9/2018	Quartz Media LLC	Uzabase, Inc.	Publishing	\$11,986.70
2/21/2018	Ivie & Associates, Inc.	Quad/Graphics, Inc.	Advertising	\$11,586.72
11/6/2017	UltiSat Inc.	SpeedCast International Limited	Alternative Carriers	\$11,401.50
12/31/2017	MC Sign LLC	AIM Group Holding Limited	Advertising	\$11,080.00
9/19/2018	Fiber Assets of U.S. TelePacific Corp.	Uniti Group Inc.	Integrated Telecommunication Services	\$10,203.00
2/6/2018	BestReviews LLC	Tribune Publishing Company, LLC	Interactive Media and Services	\$9,098.92
12/7/2017	Leapforce, Inc.	Appen Limited	Interactive Media and Services	\$8,984.00
8/31/2018	All Assets of Waitt Outdoor LLC	Link Media Omaha, LLC	Advertising	\$8,906.02
12/14/2017	David & Goliath LLC	Innocent Worldwide Inc.	Advertising	\$8,112.28
5/30/2018	Wongdody Holding Company, Inc.	Infosys Limited	Advertising	\$7,860.00
7/23/2018	Student Loan Hero, Inc.	LendingTree, LLC	Interactive Media and Services	\$6,474.00
4/30/2018	St. Louis Stations KSHE and The Point KPNT of Emmis	Hubbard Radio, LLC	Broadcasting	\$6,405.00
4/4/2018	YouCaring Dot Com, LLC	GoFundMe, Inc	Interactive Media and Services	\$5,837.70
6/21/2018	AMC Theatre in United States	1/0/1900	Movies and Entertainment	\$5,756.33

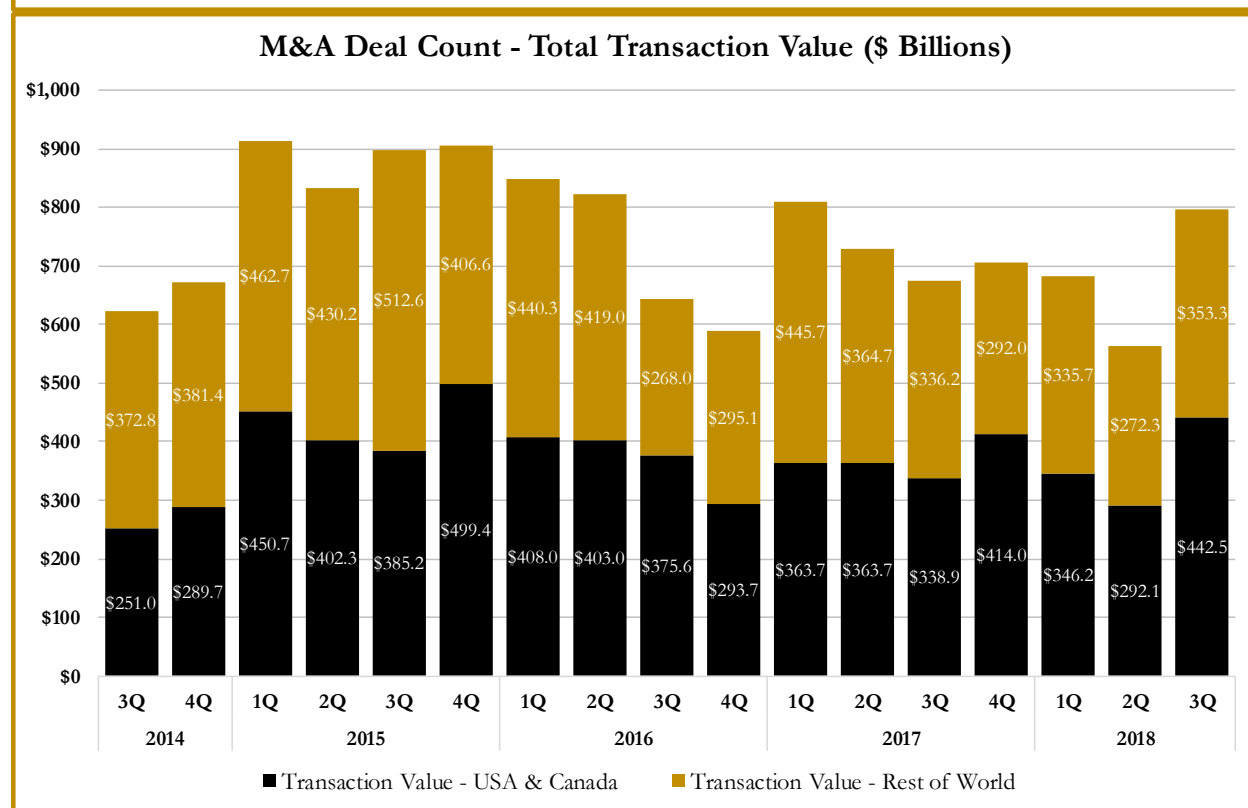
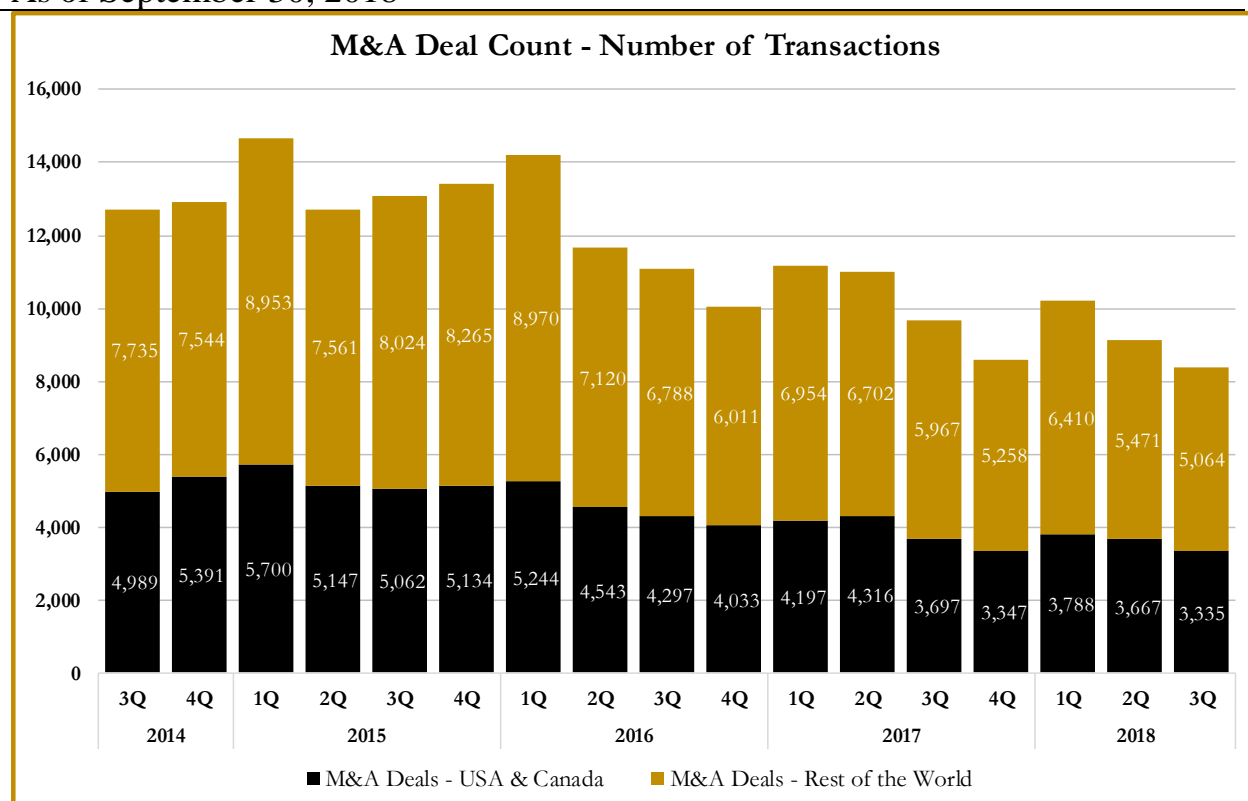
Source: Capital IQ

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

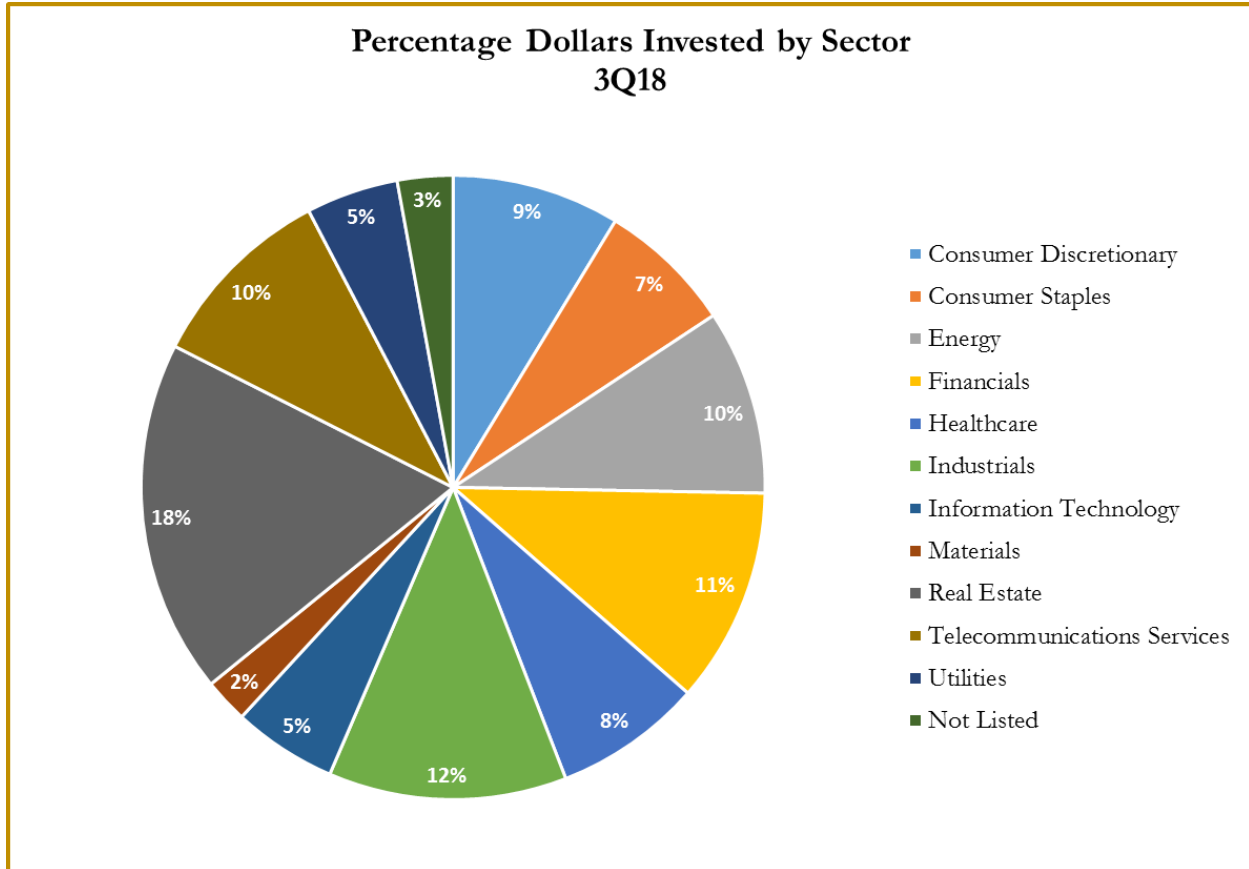


Note: The indices are derived from the equity performance of the S&P Capital IQ Sectors. Source: Capital IQ

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

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