



## Investment Banking | **Industry Spotlight**



**Telecom, Media, & Technology** | Q3 2016

---

## Telecom, Media, & Technology Investment Banking

### Coverage Responsibilities

Focus on Middle Market and Mid-Cap Companies operating in the following industries and sectors:

#### Telecom

- Multichannel Video Operators
- Towers
- Business Process Outsourcing
- Wireless
- Wireline

#### Media

- Digital Marketing & Advertising
- Filmed Entertainment & TV
- Publishing
- TV Broadcasting
- TV Networks
- Radio Broadcasting

#### Technology

- Software
- Services
- Hardware
- Semiconductors

### Capital Markets Capabilities

Full-service Capital Markets platform staffed with over 200 professionals, offering the following capabilities:

#### Investment Banking

- M&A Advisory
- Capital Raising
- Strategic Alternatives

#### Debt Capital Markets (DCM)

- Loan Capital Markets:
  - Pro Rata
  - Institutional
- Bond Capital Markets:
  - Investment Grade
  - High Yield
  - Acquisition & Bridge Finance
- Securitization & Private Placements

#### Equity Capital Markets (ECM)

- Initial Public Offerings (IPO's)
- Follow-On Offerings
- Convertible Debt

## Key TMT Contacts

### Investment Banking

**Jeffrey Hoff**  
Managing Director  
Jeffrey.Hoff@53.com

**Alan McClure, Sr.**  
Managing Director  
Alan.Mcclure@53.com

**Bill Haverland**  
Vice President  
William.Haverland@53.com

**Zac Kennedy**  
Associate  
Zac.Kennedy@53.com

**Mark Basford**  
Associate  
Mark.Basford@53.com

### Debt Capital Markets

**Andrew Hensley**  
Managing Director  
Andrew.Hensley@53.com

**Curtis Baker**  
Vice President  
Curtis.Baker@53.com

### Equity Capital Markets

**Michael Ryan**  
Managing Director  
Michael.Ryan@53.com

**Susannah Lunke**  
Director  
Susannah.Lunke@53.com

### Corporate Banking

**Kevin Khanna**  
Media & Technology  
Kevin.Khanna@53.com

**Peter Foley**  
Telecom & Sponsor Coverage  
Peter.Foley@53.com

## Experienced Senior Leadership

### Jeffrey Hoff Managing Director

- Over 30 years experience in financial services primarily focusing on Mergers & Acquisitions and corporate finance advisory services
- Seventeen years focused on media, telecom, and technology corporate finance and M&A advisory
- BS - Colgate University
- MBA - Fordham University

### Alan McClure Sr. Managing Director

- Over 30 years of financial services experience with a focus on buy and sell-side Mergers & Acquisitions and capital raises for Middle Market companies
- Extensive experience with telecommunications and business services companies
- BS - University of Virginia
- MBA - Georgia State University

### Bill Haverland Vice President

- Over 7 years of financial services experience with a focus on Middle Market and Mid Corporate companies
- Responsible for building out Fifth Third's Telecom, Media, & Technology Investment Banking focus
- BS - University of Virginia

## Political Spend leading up to November will drive advertising revenue for TV Broadcasters <sup>[1]</sup>

- TV Broadcasters are projected to generate more than \$3.3 billion in political advertising revenue by the end of 2016, a 15% increase from the 2012 election cycle
- TV markets in North Carolina, Iowa, Ohio, and Pennsylvania will see a surge in political ad dollars as politicians and PACs use audience targeting to sway voters

## TV Station groups will generate billions in the incentive spectrum auction <sup>[2]</sup>

- The Federal Communications Commission (FCC) acquired a staggering \$86.4 billion worth of wireless airwaves from television broadcasters in the first phase of a complex auction, an effort to free up TV spectrum for cellular use
  - Analysts expected anywhere from \$35 billion to \$60 billion
- Stage 1 of the forward auction ended abruptly in early September after the FCC raised just 27% (\$23 billion) of the broadcasters ask
- The FCC has now moved into Stage 2 of the auction with most industry analysts expecting the multiple rounds required will spill the process into 2017

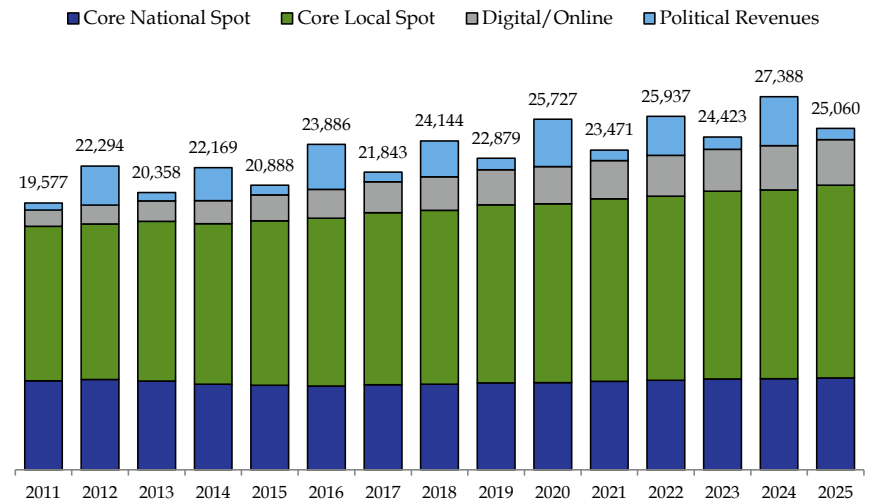
## Spectrum auction proceeds expected to boost broadcast M&A, deal multiples in 2017 <sup>[1]</sup>

- Broadcast M&A will ramp in 2017 as station groups look to deploy any spectrum auction proceeds in a tax-advantaged manner utilizing the two year window to invest in similar or related property
- As of June 30, 2016, year-to-date TV station deal multiples have averaged 8.4x 2016-2017 cash flow on \$5.3 billion in deal volume
- The majority of deal volume is related to Nexstar Broadcasting Group's pending acquisition of Media General, as well as the related spinoffs required to comply with FCC regulations

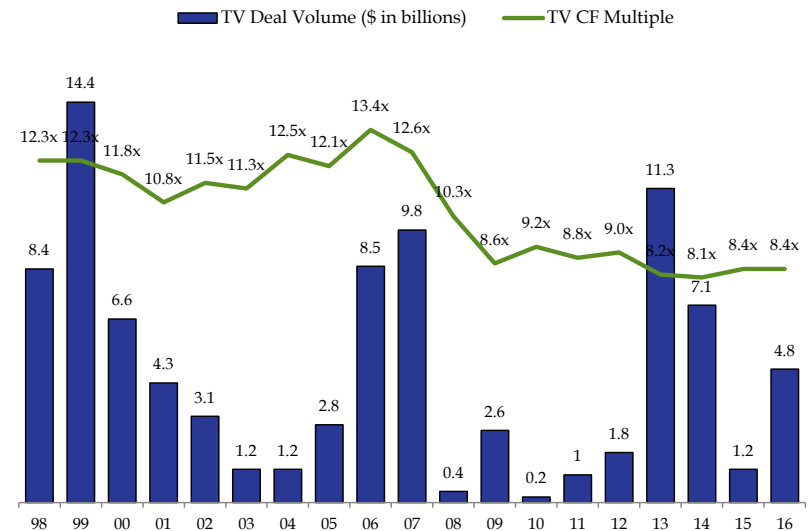
## TV Broadcasters paced the media sector's public market performance after the recession

- The TV Broadcaster comp set share price has increased 412% over the last five years<sup>[3]</sup>
- The brexit fallout filtered down to TV broadcasters resulting in a rocky year-to-date performance

## TV Station Advertising Historical & Projected Revenues (\$ in millions) <sup>[1]</sup>

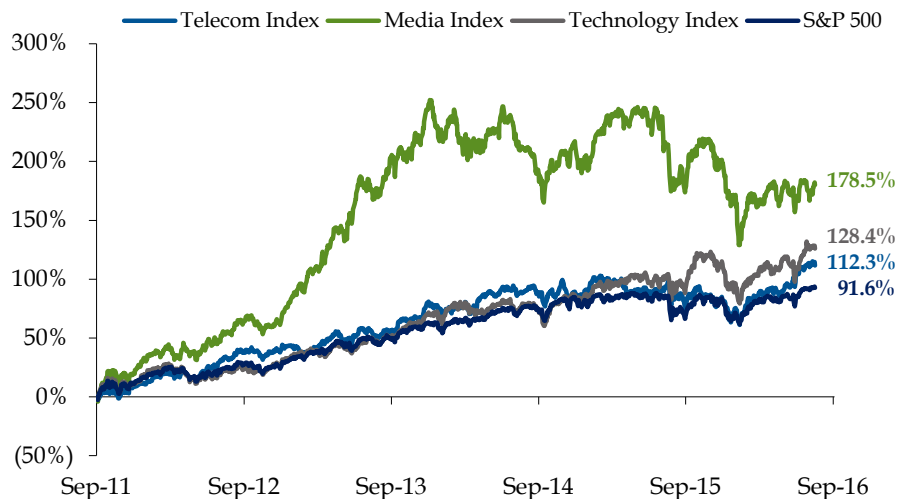


## History of Proposed TV Station Sales<sup>[1]</sup>

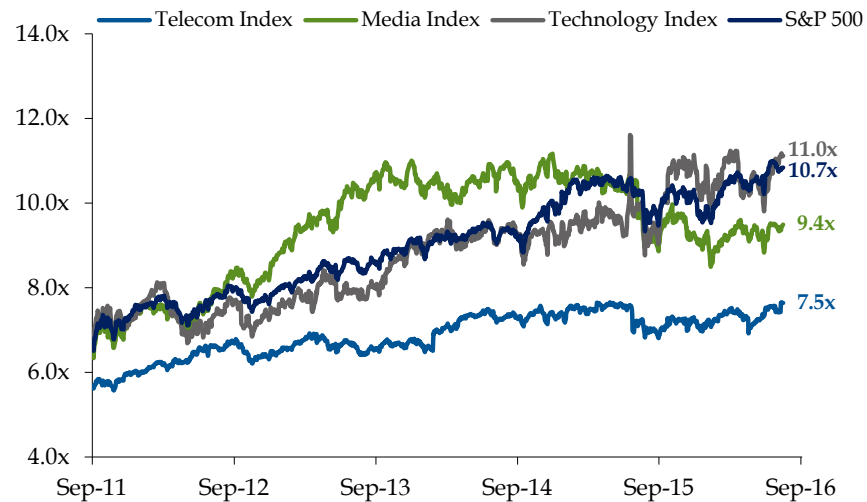


[1] SNL Kagan  
[2] Wall Street Journal  
[3] Comp set comprised of TGNA, NXST, SBGL, GTN and SSP

## 5-Year Share Price Performance



## 5-Year EV / Forward EBITDA Performance



## Sub Sector Indices' Stock Price Performance

Sub-Sector	Number of Companies	Median Enterprise Value \$ in millions	Median % Change in Stock Price		Median TEV / LTM Multiples		Median TEV / Forward Multiples	
			12 Months	YTD	Revenue	EBITDA	Revenue	EBITDA
<b>Telecom</b>	<b>14</b>	<b>\$40,240.8</b>	<b>19.7%</b>	<b>15.1%</b>	<b>2.4x</b>	<b>7.8x</b>	<b>2.4x</b>	<b>7.0x</b>
Multichannel Video Operators	3	145,596.4	15.6%	17.6%	2.8x	11.6x	2.7x	10.1x
Towers	3	43,963.3	18.4%	9.0%	13.8x	21.2x	11.7x	19.9x
Wireless	4	186,727.8	22.9%	18.7%	2.1x	6.9x	2.0x	6.7x
Wireline	4	16,484.5	20.5%	11.2%	1.9x	6.4x	2.0x	6.3x
<b>Media</b>	<b>23</b>	<b>\$8,716.0</b>	<b>(3.3%)</b>	<b>(14.3%)</b>	<b>2.5x</b>	<b>9.7x</b>	<b>2.4x</b>	<b>9.1x</b>
TV Broadcasting	5	3,238.2	(3.3%)	(14.3%)	2.9x	9.5x	2.7x	7.2x
Radio Broadcasting	2	656.3	48.0%	68.9%	2.1x	9.3x	NA	NA
Entertainment	4	34,569.3	1.6%	0.5%	1.7x	10.1x	1.6x	9.6x
TV Networks	4	17,302.2	(2.4%)	(3.3%)	3.0x	8.0x	2.9x	8.9x
Advertising	8	9,547.5	13.4%	5.4%	2.3x	13.5x	2.0x	11.1x
<b>Technology</b>	<b>17</b>	<b>\$23,007.6</b>	<b>22.2%</b>	<b>13.9%</b>	<b>4.8x</b>	<b>15.6x</b>	<b>4.7x</b>	<b>13.2x</b>
Software	5	185,899.9	25.2%	7.5%	4.6x	14.3x	4.2x	11.2x
Payment Processors	6	27,988.7	13.8%	13.9%	4.7x	16.8x	4.0x	12.9x
Semiconductors	6	12,477.5	31.2%	21.1%	5.3x	15.2x	5.2x	14.3x
<b>S&amp;P 500</b>	<b>500</b>		<b>12.7%</b>	<b>6.1%</b>	<b>2.2x</b>	<b>11.4x</b>	<b>2.1x</b>	<b>10.7x</b>

# Public Company Comparables: Telecom

Technology, Media, & Telecom | **Industry Spotlight**  
Q3 2016

## Operating & Trading Statistics (\$ in millions, except per-share data)

	Stock Price at 9/30/16	% of 52-Week High	Market Cap	Enterprise Value	LTM Financials		Revenue Growth		LTM Margins		Debt/EBITDA	Price/Earnings	Enterprise Value/			
					Revenue	EBITDA	'14A - '15A	'15A - '16E	Gross	EBITDA			Revenue		EBITDA	
													LTM	2016E	LTM	2016E
<b>Multichannel Video Operators</b>																
Comcast Corporation	\$66.34	97.0%	\$160,000	\$214,324	\$75,973	\$25,476	8.3%	7.1%	70.6%	33.5%	2.2x	20.2x	2.8x	2.7x	8.4x	8.1x
Charter Communications, Inc.	269.97	96.4%	73,142	145,596	37,764	12,599	7.1%	300.7% *	55.5%	33.4%	4.9x	12.1x	3.9x	3.7x	11.6x	10.1x
Dish Network Corp.	54.78	83.6%	25,465	36,518	15,137	3,111	2.9%	0.1%	35.1%	20.6%	4.6x	29.3x	2.4x	2.4x	11.7x	11.6x
<b>Mean</b>							<b>6.1%</b>	<b>3.6%</b>	<b>53.7%</b>	<b>29.1%</b>	<b>3.9x</b>	<b>20.5x</b>	<b>3.0x</b>	<b>2.9x</b>	<b>10.6x</b>	<b>9.9x</b>
<b>Median</b>							<b>7.1%</b>	<b>3.6%</b>	<b>55.5%</b>	<b>33.4%</b>	<b>4.6x</b>	<b>20.2x</b>	<b>2.8x</b>	<b>2.7x</b>	<b>11.6x</b>	<b>10.1x</b>
<b>Towers</b>																
American Tower Corporation	\$113.33	95.8%	\$48,221	\$67,679	\$5,158	\$3,186	16.4%	21.0%	70.8%	61.8%	5.9x	NM	13.1x	11.7x	21.2x	19.3x
Crown Castle International Corp.	94.21	91.6%	31,739	43,963	3,154	2,050	3.5%	4.9%	63.9%	65.0%	6.1x	NM	13.9x	11.4x	21.4x	19.9x
SBA Communications Corp.	112.16	92.3%	13,977	22,325	1,623	1,058	7.3%	0.0%	73.5%	65.2%	8.0x	NM	13.8x	13.6x	21.1x	20.0x
<b>Mean</b>							<b>9.1%</b>	<b>8.6%</b>	<b>69.4%</b>	<b>64.0%</b>	<b>6.7x</b>	<b>NM</b>	<b>13.6x</b>	<b>12.3x</b>	<b>21.3x</b>	<b>19.8x</b>
<b>Median</b>							<b>7.3%</b>	<b>4.9%</b>	<b>70.8%</b>	<b>65.0%</b>	<b>6.1x</b>	<b>NM</b>	<b>13.8x</b>	<b>11.7x</b>	<b>21.2x</b>	<b>19.9x</b>
<b>Wireless</b>																
Verizon Communications Inc.	\$51.98	91.3%	\$211,886	\$310,489	\$130,115	\$45,822	3.6%	(3.9%)	59.4%	35.2%	2.2x	14.7x	2.4x	2.5x	6.8x	7.0x
AT&T, Inc.	40.61	92.5%	249,833	374,156	162,265	53,354	10.8%	12.1%	55.4%	32.9%	2.4x	17.5x	2.3x	2.3x	7.0x	7.0x
T-Mobile US, Inc.	46.72	97.1%	38,438	62,966	33,315	8,408	8.4%	15.5%	56.9%	25.2%	3.6x	35.9x	1.9x	1.7x	7.5x	6.5x
Sprint Corporation	6.63	94.3%	26,377	58,250	32,165	8,665	(6.8%)	0.6%	53.4%	26.9%	4.3x	NM	1.8x	1.8x	6.7x	6.2x
<b>Mean</b>							<b>4.0%</b>	<b>6.1%</b>	<b>56.3%</b>	<b>30.1%</b>	<b>3.1x</b>	<b>22.7x</b>	<b>2.1x</b>	<b>2.1x</b>	<b>7.0x</b>	<b>6.6x</b>
<b>Median</b>							<b>6.0%</b>	<b>6.3%</b>	<b>56.2%</b>	<b>29.9%</b>	<b>3.0x</b>	<b>17.5x</b>	<b>2.1x</b>	<b>2.0x</b>	<b>6.9x</b>	<b>6.7x</b>
<b>Wireline</b>																
CenturyLink, Inc.	\$27.43	83.3%	\$14,976	\$34,401	\$17,829	\$6,840	(0.7%)	(2.0%)	59.2%	38.4%	2.9x	15.4x	1.9x	2.0x	5.0x	5.2x
Frontier Communications Corporation	4.16	71.1%	4,880	22,163	6,800	2,702	16.8%	64.8% *	63.9%	39.7%	6.6x	NM	3.3x	2.4x	8.2x	6.7x
Windstream Holdings, Inc.	10.05	96.1%	967	10,806	5,659	1,971	(1.1%)	(5.7%)	49.4%	34.8%	5.0x	NM	1.9x	2.0x	5.5x	5.9x
Cincinnati Bell Inc.	4.08	79.5%	858	2,118	1,177	286	0.5%	2.2%	42.6%	24.3%	4.0x	4.7x	1.8x	1.8x	7.4x	7.1x
<b>Mean</b>							<b>3.9%</b>	<b>(1.8%)</b>	<b>53.8%</b>	<b>34.3%</b>	<b>4.6x</b>	<b>10.0x</b>	<b>2.2x</b>	<b>2.0x</b>	<b>6.5x</b>	<b>6.2x</b>
<b>Median</b>							<b>(0.1%)</b>	<b>(2.0%)</b>	<b>54.3%</b>	<b>36.6%</b>	<b>4.5x</b>	<b>10.0x</b>	<b>1.9x</b>	<b>2.0x</b>	<b>6.4x</b>	<b>6.3x</b>
<b>Mean</b>							<b>5.7%</b>	<b>3.6%</b>	<b>52.1%</b>	<b>35.0%</b>	<b>3.9x</b>	<b>14.2x</b>	<b>4.1x</b>	<b>3.7x</b>	<b>9.5x</b>	<b>9.0x</b>
<b>Median</b>							<b>3.6%</b>	<b>1.2%</b>	<b>57.4%</b>	<b>34.2%</b>	<b>4.3x</b>	<b>15.0x</b>	<b>2.4x</b>	<b>2.4x</b>	<b>7.8x</b>	<b>7.0x</b>

\*Excluded from mean and median  
Source: Company Filings, S&P Capital IQ

# Public Company Comparables: Media

Technology, Media, & Telecom | **Industry Spotlight**  
Q3 2016

## Operating & Trading Statistics (\$ in millions, except per-share data)

	Stock Price at 9/30/16	% of 52-Week High	Market Cap	Enterprise Value	LTM Financials		Revenue Growth		LTM Margins		Debt/EBITDA	Price/Earnings	Enterprise Value/			
					Revenue	EBITDA	'14A-'15A	'15A-'16E	Gross	EBITDA			Revenue		EBITDA	
													LTM	2016E	LTM	2016E
<b>TV Broadcasting</b>																
TEGNA Inc.	\$21.86	75.5%	\$4,685	\$9,150	\$3,156	\$1,158	16.2%	11.9%	69.6%	36.7%	3.7x	11.1x	2.9x	2.7x	7.9x	7.2x
Sinclair Broadcast Group, Inc.	28.88	80.5%	2,727	6,775	2,302	710	12.3%	24.1%	52.3%	30.8%	5.9x	15.8x	2.9x	2.5x	9.5x	7.2x
Nexstar Broadcasting Group, Inc.	57.71	93.4%	1,771	3,238	993	336	42.0%	24.5%	65.3%	33.8%	4.4x	20.2x	3.3x	2.9x	9.7x	8.1x
Gray Television, Inc.	10.36	58.5%	744	2,273	691	239	17.6%	41.1%	39.1%	34.6%	7.1x	15.5x	3.3x	2.7x	9.5x	6.8x
The E. W. Scripps Company	15.90	69.4%	1,328	1,659	793	149	43.5%	39.3%	30.3%	18.8%	2.7x	NM	2.1x	1.7x	11.2x	7.0x
<b>Mean</b>							<b>26.3%</b>	<b>28.2%</b>	<b>51.3%</b>	<b>30.9%</b>	<b>4.8x</b>	<b>15.7x</b>	<b>2.9x</b>	<b>2.5x</b>	<b>9.6x</b>	<b>7.2x</b>
<b>Median</b>							<b>17.6%</b>	<b>24.5%</b>	<b>52.3%</b>	<b>33.8%</b>	<b>4.4x</b>	<b>15.6x</b>	<b>2.9x</b>	<b>2.7x</b>	<b>9.5x</b>	<b>7.2x</b>
<b>Radio Broadcasting</b>																
Radio One Inc.	\$3.03	85.1%	\$146	\$1,109	\$457	119	2.1%	NA	70.9%	26.1%	8.4x	NM	2.4x	NA	9.3x	NA
Beasley Broadcast Group Inc.	5.80	95.9%	135	203	110	22	80.5%	NA	28.3%	20.0%	3.7x	19.5x	1.8x	NA	9.3x	NA
<b>Mean</b>							<b>41.3%</b>	<b>NA</b>	<b>49.6%</b>	<b>23.0%</b>	<b>6.1x</b>	<b>19.5x</b>	<b>2.1x</b>	<b>NA</b>	<b>9.3x</b>	<b>NA</b>
<b>Median</b>							<b>41.3%</b>	<b>NA</b>	<b>49.6%</b>	<b>23.0%</b>	<b>6.1x</b>	<b>19.5x</b>	<b>2.1x</b>	<b>NA</b>	<b>9.3x</b>	<b>NA</b>
<b>Entertainment</b>																
Time Warner Inc.	\$79.61	97.9%	\$61,924	\$83,926	\$27,903	\$7,951	2.8%	3.2%	44.2%	28.5%	3.1x	16.0x	3.0x	2.9x	10.6x	10.2x
Twenty-First Century Fox, Inc.	24.22	77.1%	45,447	62,520	27,326	6,430	(5.7%)	3.0%	37.0%	23.5%	3.1x	17.1x	2.3x	2.2x	9.7x	9.0x
Live Nation Entertainment, Inc.	27.48	92.6%	5,581	6,619	7,747	583	5.5%	10.3%	27.9%	7.5%	3.5x	NM	0.9x	0.8x	11.3x	10.4x
Lions Gate Entertainment Corp.	19.99	48.3%	2,952	4,436	4,158	585	(2.2%)	94.1%	38.7%	14.1%	NM	NM	1.1x	1.0x	7.6x	5.9x
<b>Mean</b>							<b>0.1%</b>	<b>27.6%</b>	<b>36.9%</b>	<b>18.4%</b>	<b>3.2x</b>	<b>16.5x</b>	<b>1.8x</b>	<b>1.7x</b>	<b>9.8x</b>	<b>8.9x</b>
<b>Median</b>							<b>0.3%</b>	<b>6.8%</b>	<b>37.8%</b>	<b>18.8%</b>	<b>3.1x</b>	<b>16.5x</b>	<b>1.7x</b>	<b>1.6x</b>	<b>10.1x</b>	<b>9.6x</b>
<b>TV Networks</b>																
Viacom, Inc.	\$38.10	71.4%	\$15,346	\$27,782	\$13,050	\$3,469	(3.7%)	(5.0%)	48.2%	26.6%	3.6x	7.3x	2.1x	2.2x	8.0x	9.3x
Discovery Communications, Inc.	26.92	84.7%	14,846	22,687	6,152	2,480	2.1%	2.7%	63.7%	40.3%	3.2x	14.6x	3.7x	3.5x	9.1x	9.2x
Scripps Networks Interactive, Inc.	63.49	92.8%	8,193	11,918	3,245	1,490	13.2%	12.2%	67.5%	45.9%	2.4x	10.8x	3.7x	3.5x	8.0x	8.6x
AMC Networks Inc.	51.86	61.9%	3,703	6,283	2,703	882	18.6%	7.6%	57.0%	32.6%	3.4x	10.8x	2.3x	2.3x	7.1x	7.2x
<b>Mean</b>							<b>7.5%</b>	<b>4.4%</b>	<b>59.1%</b>	<b>36.4%</b>	<b>3.1x</b>	<b>10.9x</b>	<b>3.0x</b>	<b>2.9x</b>	<b>8.1x</b>	<b>8.6x</b>
<b>Median</b>							<b>7.6%</b>	<b>5.2%</b>	<b>60.4%</b>	<b>36.5%</b>	<b>3.3x</b>	<b>10.8x</b>	<b>3.0x</b>	<b>2.9x</b>	<b>8.0x</b>	<b>8.9x</b>
<b>Advertising</b>																
WPP plc	\$23.62	96.7%	\$29,795	\$36,054	\$17,193	\$2,545	0.4%	(2.3%)	85.7%	14.8%	3.3x	27.6x	2.1x	2.0x	14.2x	12.1x
Omnicom Group Inc.	85.00	97.1%	20,106	24,318	15,244	2,249	(1.2%)	2.4%	25.0%	14.8%	2.2x	18.6x	1.6x	1.6x	10.8x	10.5x
Publicis Groupe SA	75.67	96.8%	17,012	19,831	10,897	1,970	18.7%	6.5%	38.9%	18.1%	2.0x	16.6x	1.8x	1.8x	10.1x	10.1x
The Interpublic Group of Companies, Inc.	22.35	90.0%	8,956	10,379	7,722	1,050	1.0%	2.7%	36.1%	13.6%	1.7x	18.6x	1.3x	1.3x	9.9x	9.3x
Lamar Advertising Co.	65.31	94.2%	6,365	8,716	1,433	598	5.2%	11.0%	66.9%	41.8%	4.0x	21.5x	6.1x	5.8x	14.6x	13.4x
Outfront Media Inc.	23.65	96.8%	3,262	5,386	1,081	390	11.8%	(0.0%)	45.4%	36.1%	5.6x	NM	5.0x	3.6x	13.8x	12.0x
Endurance International Group Holdings, Inc.	8.75	56.5%	1,236	3,204	909	172	17.7%	48.1%	44.7%	18.9%	11.7x	NM	3.5x	2.9x	18.6x	11.7x
Web.com Group, Inc.	17.27	69.1%	808	1,505	608	114	(0.1%)	35.6%	66.5%	18.7%	6.2x	10.7x	2.5x	2.0x	13.3x	8.6x
<b>Mean</b>							<b>6.7%</b>	<b>13.0%</b>	<b>51.2%</b>	<b>22.1%</b>	<b>4.6x</b>	<b>18.9x</b>	<b>3.0x</b>	<b>2.6x</b>	<b>13.1x</b>	<b>11.0x</b>
<b>Median</b>							<b>3.1%</b>	<b>4.6%</b>	<b>45.1%</b>	<b>18.4%</b>	<b>3.7x</b>	<b>18.6x</b>	<b>2.3x</b>	<b>2.0x</b>	<b>13.5x</b>	<b>11.1x</b>
<b>Mean</b>							<b>13.5%</b>	<b>17.8%</b>	<b>49.0%</b>	<b>25.9%</b>	<b>4.1x</b>	<b>16.0x</b>	<b>2.7x</b>	<b>2.5x</b>	<b>10.6x</b>	<b>9.2x</b>
<b>Median</b>							<b>11.8%</b>	<b>10.6%</b>	<b>44.7%</b>	<b>26.6%</b>	<b>3.5x</b>	<b>15.9x</b>	<b>2.5x</b>	<b>2.4x</b>	<b>9.7x</b>	<b>9.1x</b>

\*Excluded from mean and median  
Source: Company Filings, S&P Capital IQ



# Public Company Comparables: Technology

Technology, Media, & Telecom | **Industry Spotlight**  
Q3 2016

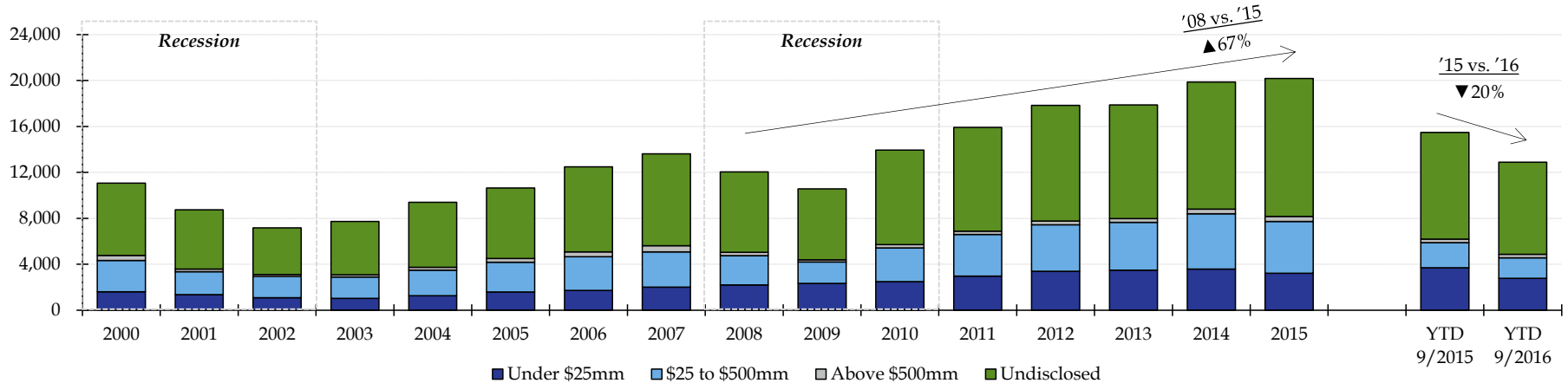
## Operating & Trading Statistics (\$ in millions, except per-share data)

	Stock Price at 9/30/16	% of 52-Week High	Market Cap	Enterprise Value	LTM Financials		Revenue Growth		LTM Margins		Debt/ EBITDA	Price/ Earnings	Enterprise Value/			
					Revenue	EBITDA	'14A - '15A	'15A - '16E	Gross	EBITDA			Revenue		EBITDA	
													LTM	2016E	LTM	2016E
<b>Software</b>																
Alphabet Inc.	\$804.06	98.2%	\$543,411	\$472,740	\$81,761	\$26,903	13.6%	18.0%	62.1%	32.9%	0.2x	31.2x	5.8x	5.3x	17.6x	13.2x
Microsoft Corporation	57.60	98.1%	448,849	389,794	85,320	27,170	(8.8%)	8.0%	61.6%	31.8%	2.0x	27.4x	4.6x	4.2x	14.3x	11.2x
International Business Machines Corporation	158.85	96.3%	151,836	185,900	78,506	17,973	(11.9%)	(2.5%)	48.9%	22.9%	2.5x	12.9x	2.4x	2.3x	10.3x	9.8x
Oracle Corporation	39.28	93.5%	161,270	147,327	37,194	14,612	(3.1%)	1.0%	58.4%	39.3%	3.7x	18.7x	4.0x	3.9x	10.1x	8.8x
SAP SE	91.41	98.5%	109,532	114,109	23,643	6,658	6.2%	9.2%	68.3%	28.2%	1.4x	27.6x	4.8x	4.6x	17.1x	13.6x
<b>Mean</b>							<b>(0.8%)</b>	<b>6.7%</b>	<b>59.8%</b>	<b>31.0%</b>	<b>2.0x</b>	<b>23.6x</b>	<b>4.3x</b>	<b>4.1x</b>	<b>13.9x</b>	<b>11.3x</b>
<b>Median</b>							<b>(3.1%)</b>	<b>8.0%</b>	<b>61.6%</b>	<b>31.8%</b>	<b>2.0x</b>	<b>27.4x</b>	<b>4.6x</b>	<b>4.2x</b>	<b>14.3x</b>	<b>11.2x</b>
<b>Payment Processors</b>																
Fidelity National Information Services, Inc.	\$77.03	94.3%	\$25,252	\$35,727	\$7,939	\$2,000	2.8%	43.6%	31.9%	25.2%	5.6x	NM	4.5x	3.8x	17.9x	12.2x
First Data Corporation	13.16	73.2%	11,976	33,852	7,842	2,378	2.9%	51.6%	58.0%	30.3%	8.0x	NM	4.3x	2.9x	14.2x	11.8x
Alliance Data Systems Corporation	214.53	70.6%	12,556	29,821	3,341	1,552	21.4%	11.6%	25.2%	46.4%	12.0x	26.7x	8.9x	4.1x	19.2x	14.7x
Fiserv, Inc.	99.47	89.2%	21,865	26,156	5,375	1,670	3.7%	6.1%	45.5%	31.1%	2.7x	25.2x	4.9x	4.7x	15.7x	13.7x
Total System Services, Inc.	47.15	83.2%	8,668	11,875	3,316	769	13.6%	51.5%	31.7%	23.2%	4.7x	24.1x	3.6x	2.8x	15.5x	11.7x
Global Payments Inc.	76.76	96.0%	11,801	15,781	2,898	664	4.5%	(5.7%)	60.4%	22.9%	7.4x	37.6x	5.4x	5.8x	23.8x	18.2x
<b>Mean</b>							<b>8.2%</b>	<b>26.5%</b>	<b>42.1%</b>	<b>29.9%</b>	<b>6.7x</b>	<b>28.4x</b>	<b>5.3x</b>	<b>4.0x</b>	<b>17.7x</b>	<b>13.7x</b>
<b>Median</b>							<b>4.1%</b>	<b>27.6%</b>	<b>38.7%</b>	<b>27.8%</b>	<b>6.5x</b>	<b>26.0x</b>	<b>4.7x</b>	<b>4.0x</b>	<b>16.8x</b>	<b>12.9x</b>
<b>Semiconductors</b>																
Analog Devices, Inc.	\$64.45	96.3%	\$19,839	\$17,767	\$3,397	\$1,233	19.9%	(0.0%)	64.8%	36.3%	1.4x	30.4x	5.2x	5.2x	14.4x	13.3x
Linear Technology Corporation	59.29	92.0%	14,564	13,116	1,424	685	(3.5%)	3.8%	75.9%	48.1%	0.0x	29.4x	9.2x	8.9x	19.1x	18.1x
Microchip Technology Inc.	62.14	98.5%	13,378	16,113	2,439	713	1.2%	43.5%	56.8%	29.2%	4.7x	NM	6.6x	5.2x	22.6x	15.8x
Xilinx Inc.	54.34	97.9%	13,774	11,839	2,240	744	(6.9%)	4.1%	69.6%	33.2%	2.1x	25.8x	5.3x	5.1x	15.9x	15.2x
Maxim Integrated Products, Inc.	39.93	94.2%	11,326	10,295	2,195	710	(4.9%)	1.4%	59.2%	32.3%	1.7x	NM	4.7x	4.6x	14.5x	12.1x
ON Semiconductor Corp.	12.32	98.2%	5,120	8,028	3,440	611	10.6%	10.8%	34.1%	17.8%	5.7x	31.6x	2.3x	2.1x	13.1x	10.4x
<b>Mean</b>							<b>2.7%</b>	<b>10.6%</b>	<b>60.1%</b>	<b>32.8%</b>	<b>2.6x</b>	<b>29.3x</b>	<b>5.6x</b>	<b>5.2x</b>	<b>16.6x</b>	<b>14.2x</b>
<b>Median</b>							<b>(1.1%)</b>	<b>4.0%</b>	<b>62.0%</b>	<b>32.8%</b>	<b>1.9x</b>	<b>29.9x</b>	<b>5.3x</b>	<b>5.2x</b>	<b>15.2x</b>	<b>14.3x</b>
<b>Mean</b>							<b>2.5%</b>	<b>10.7%</b>	<b>56.9%</b>	<b>30.7%</b>	<b>2.9x</b>	<b>26.8x</b>	<b>4.9x</b>	<b>4.6x</b>	<b>16.0x</b>	<b>13.2x</b>
<b>Median</b>							<b>2.5%</b>	<b>5.1%</b>	<b>59.8%</b>	<b>31.5%</b>	<b>2.3x</b>	<b>27.5x</b>	<b>4.8x</b>	<b>4.7x</b>	<b>15.6x</b>	<b>13.2x</b>

\*Excluded from mean and median  
Source: Company Filings, S&P Capital IQ

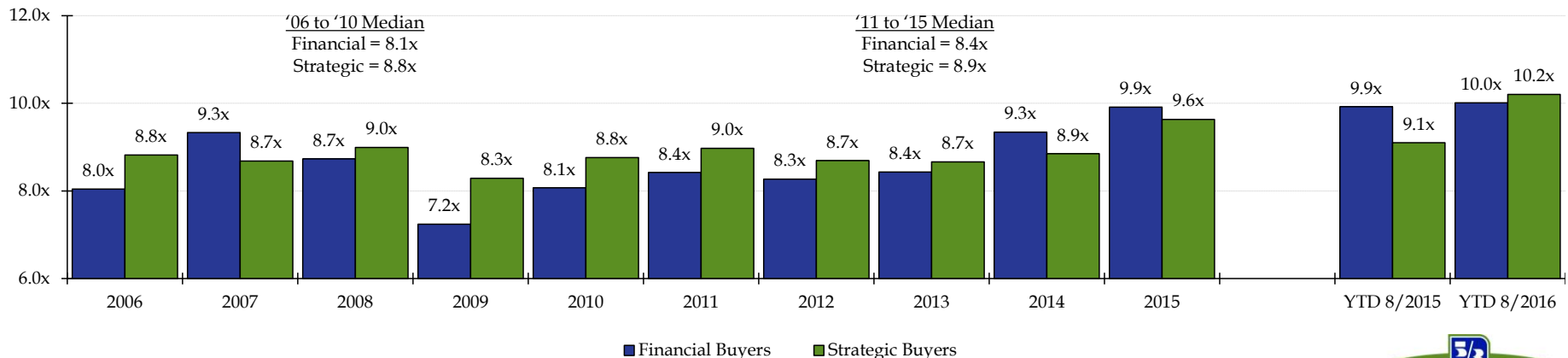
## Transaction Volume

- Historically, M&A cycles have not extended past seven years; 2016 is year six of the cycle
  - Relative to past cycles, interest rates are lower, corporate balance sheets are stronger, and private equity firms have more untapped capital
- 2016 has demonstrated signs that the buyout cycle is slowing, however, plenty of positive drivers remain



## Median Transaction Multiples (Enterprise Value / LTM EBITDA)

- Purchase multiples by both financial and strategic buyers remain above their five-year median
- Deal multiples may to remain elevated due to strong competition for high quality assets as strategic corporate and private equity firms continue to seek acquisitions to fuel growth and deploy capital

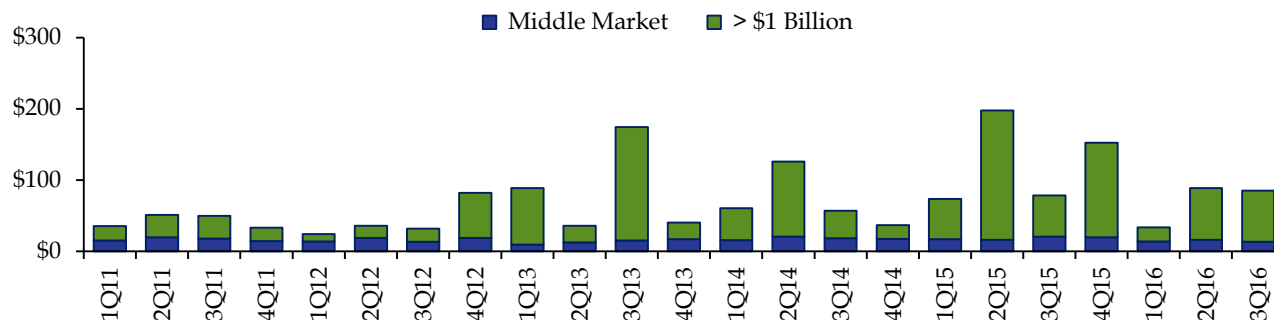


Note: This data represents the entire U.S. market (all industries)  
Source: Pitchbook, S&P Capital IQ, and S&P Capital IQ LCD

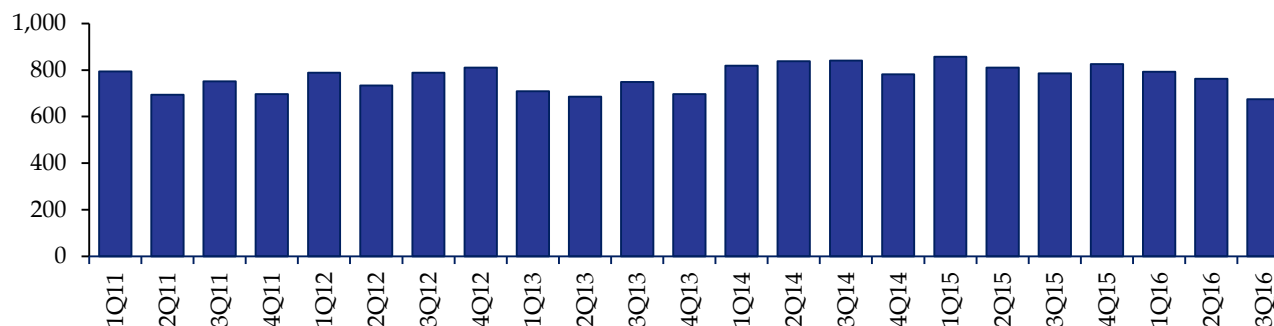


- M&A boom remains in full swing
- The TMT sector's M&A growth continues to be driven by large transaction announcements
  - Charter Communications acquisition of Time Warner Cable in 2Q 2015
  - Denali Holding's (Dell) announced acquisition of EMC Corporation in 4Q 2015
  - Microsoft's announced acquisition of LinkedIn Corporation in 2Q 2016
- Deal volume continues at a steady pace
- Competitive market is driving an increase in average deal multiples
- The average deal multiple continues to be over 12.0x EBITDA
- Favorable equity and debt capital markets
- Strategic buyers continue to aggressively pursue transactions as a means for growth
- Financial buyers have capital to deploy

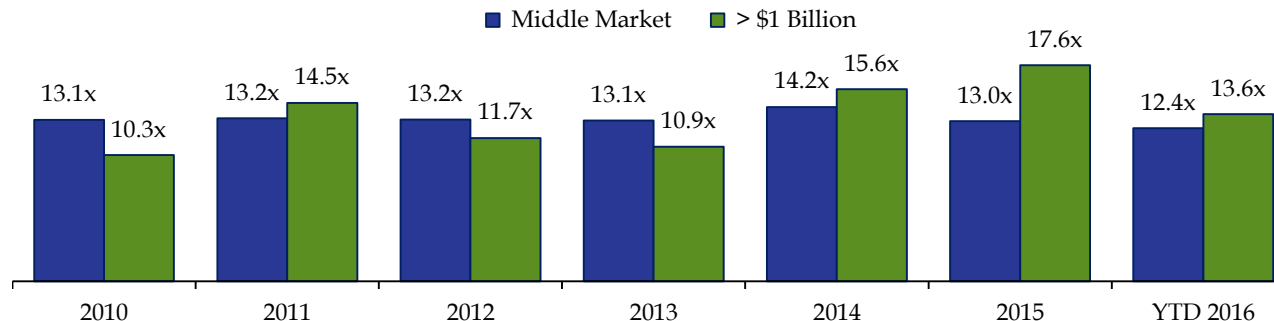
### U.S. TMT M&A Announced Deal Value (\$ in billions)



### U.S. TMT M&A Announced Deal Volume



### U.S. TMT M&A Closed Deal Average EV / EBITDA Multiple



Source: Fifth Third Securities, S&P Capital IQ

Note: Middle Market defined as transactions with disclosed deal values less than \$1 billion.

EV - Enterprise Value NA - Not Available

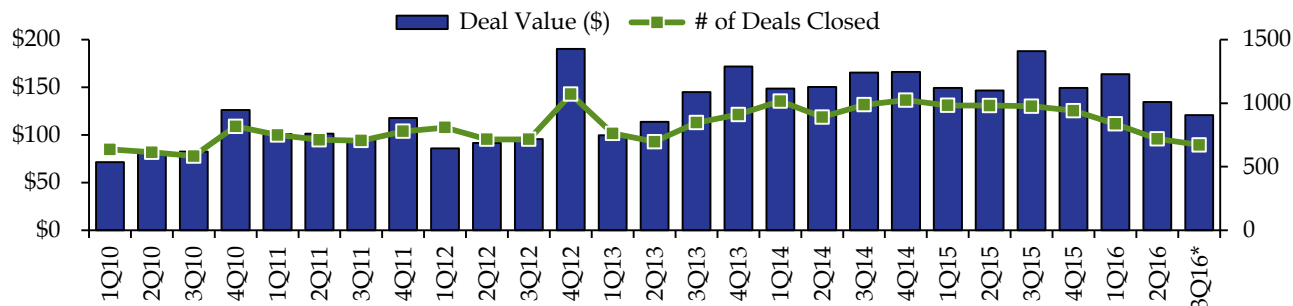
### Telecom, Media, and Technology (\$ in millions)

Announced Date	Acquirer	Target	Enterprise Value (EV)	LTM		LTM		
				Revenue	EBITDA	Revenue	EBITDA	
<b>Telecom</b>								
8/2/2016	WideOpenWest Finance	HC Operating Company	\$53.0	NA	\$8.4	-	6.3x	
6/20/2016	Communications Sales & Leasing, Inc. (NasdaqGS:CSAL)	Tower Cloud, Inc.	362.2	\$41.0	13.0	8.8x	27.9x	
4/4/2016	Brocade Communications Systems, Inc. (NasdaqGS:BRCD)	Ruckus Wireless, Inc.	1,073.0	391.9	17.6	2.7x	61.2x	
2/8/2016	GTT Communications, Inc. (NYSE:GTT)	Telnes Broadband, Inc.	20.0	17.0	1.0	1.2x	20.0x	
11/16/2015	Nelnet, Inc. (NYSE:NNI)	Allo Communications LLC	50.0	12.5	2.9	4.0x	17.2x	
9/15/2015	GTT Communications, Inc. (NYSE:GTT)	One Source Networks Inc.	175.0	74.6	13.9	2.3x	12.6x	
8/10/2015	Shenandoah Telecommunications Co. (NasdaqGS:SHEN)	NTELOS Holdings Corp.	585.8	476.5	114.9	1.2x	5.1x	
<b>Media</b>								
8/3/2016	Vector Capital	Sizmek Inc.	\$76.5	\$185.2	\$9.0	0.4x	8.5x	
7/12/2016	AMC Entertainment Holdings, Inc. (NYSE:AMC)	Odeon and UCI Cinemas Holdings Ltd	1,869.0	1,101.9	146.9	1.7x	12.7x	
6/30/2016	Lions Gate Entertainment Corp. (NYSE:LGF)	Starz (NasdaqGS:STRZ.A)	4,295.4	1,681.3	390.5	2.6x	11.0x	
6/10/2016	Axel Springer SE (DB:SPR)	eMarketer, Inc.	260.2	45.5	13.5	5.7x	19.3x	
4/28/2016	NBCUniversal Media, LLC	DreamWorks Animation SKG Inc. (NasdaqGS:DWA)	4,147.3	939.8	120.8	4.4x	34.3x	
4/25/2016	Gannett Co., Inc. (NYSE:GCI)	tronc, Inc. (NasdaqGM:TRNC)	764.4	1,672.8	120.2	0.5x	6.4x	
3/24/2016	Entertainment One Ltd. (LSE:ETO)	Renegade 83, Inc.	35.4	35.1	5.2	1.0x	6.8x	
3/3/2016	AMC Entertainment Holdings, Inc. (NYSE:AMC)	Carmike Cinemas Inc. (NasdaqGS:CKEC)	1,098.9	804.4	131.5	1.4x	8.4x	
1/27/2016	Nexstar Broadcasting Group, Inc. (NasdaqGS:NXST)	Media General, Inc. (NYSE:MEG)	4,499.9	1,304.9	332.2	3.4x	13.6x	
12/10/2015	News + Media Capital Group LLC	Stephens Media LLC	125.4	145.4	20.8	0.9x	6.0x	
10/7/2015	Gannett Co., Inc. (NYSE:GCI)	Journal Media Group, Inc.	279.0	411.8	23.3	0.7x	12.0x	
<b>Technology</b>								
9/20/2016	Tessera Technologies Inc. (NasdaqGS:TSRA)	DTS Inc. (NasdaqGS:DTSI)	\$898.7	\$163.7	\$33.7	5.5x	26.7x	
9/12/2016	Renesas Electronics Corporation (TSE:6723)	Intersil Corporation (NasdaqGS:ISIL)	2,833.8	518.3	94.5	5.5x	30.0x	
9/7/2016	Micro Focus International plc (LSE:MCRO)	Hewlett Packard Enterprise Company, Software Business	8,730.4	3,172.0	658.0	2.8x	13.3x	
8/26/2016	Apollo Global Management, LLC. (NYSE:APO)	Rackspace Hosting, Inc. (NYSE:RAX)	4,404.7	2,073.4	588.4	2.1x	7.5x	
8/25/2016	Ascential plc (LSE:ASCL)	Oneclickretail.com LLC	225.0	4.9	3.4	45.9x	66.2x	
8/11/2016	Hewlett Packard Enterprise Company (NYSE:HPE)	Silicon Graphics International Corp. (NasdaqGS:SGL)	285.5	532.9	10.2	0.5x	28.0x	
8/9/2016	Randstad North America	Monster Worldwide, Inc. (NYSE:MWW)	382.8	635.0	75.7	0.6x	5.1x	
7/27/2016	DII	Epiq Systems, Inc. (NasdaqGS:EPIQ)	1,009.0	529.8	87.2	1.9x	11.6x	
7/26/2016	Analog Devices, Inc. (NasdaqGS:ADI)	Linear Technology Corporation (NasdaqGS:LLTC)	14,209.5	1,423.9	685.0	10.0x	20.7x	
7/18/2016	Softbank Group Corp. (TSE:9984)	ARM Holdings plc (LSE:ARM)	31,260.0	1,465.1	654.0	21.3x	47.8x	
7/7/2016	AVAST Software	AVG Technologies (NYSE:AVG)	1,453.3	433.4	128.3	3.4x	11.3x	
6/15/2016	Cavium, Inc. (NasdaqGS:CAVM)	QLogic Corp. (NasdaqGS:QLGC)	946.9	458.9	100.1	2.1x	9.5x	
6/13/2016	Microsoft Corporation (NasdaqGS:MSFT)	LinkedIn Corporation (NYSE:LNKD)	26,190.9	3,213.9	266.1	8.1x	98.4x	
5/31/2016	Accel-KKR LLC	SciQuest, Inc. (NasdaqGS:SQI)	378.0	106.3	9.4	3.6x	40.1x	
5/31/2016	Vista Equity Partners	Marketo, Inc. (NasdaqGS:MKTO)	1,700.0	226.1	NM	7.5x	NM	
5/5/2016	Bankrate, Inc. (NYSE:RATE)	NextAdvisor, Inc.	209.4	NA	28.9	-	7.3x	
4/29/2016	Rovi Corporation (NasdaqGS:ROVI)	TiVo Inc. (NasdaqGS:TIVO)	1,235.3	489.6	85.4	2.5x	14.5x	

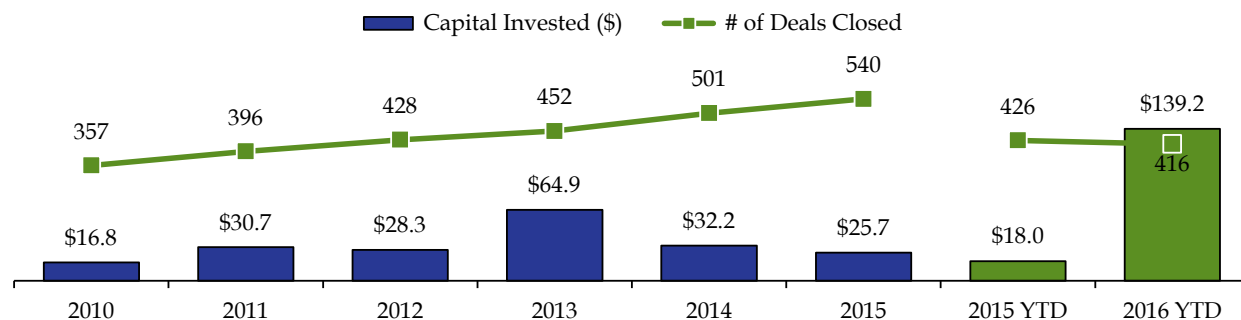
\*Excluded from mean and median  
 Source: Company Filings, S&P Capital IQ

- U.S. private equity deal flow continues to be down during the third quarter of 2016 both on a volume and dollar value amount
- Strategics have become feasible buyers given the frothy environment and can justify higher bids due to synergistic opportunities
- Private equity activity is likely to remain soft during the remainder of 2016, and most of the private equity activity will be in the form of add-on acquisitions
- Technology, Media, and Telecom capital invested increased in Q3 driven by large deals, including:
  - Dell's \$60 billion public-to-private leverage buyout of EMC via its financial sponsors MSD Capital, Silver Lake, and Temasek Holdings (NYSE:EMC)
  - Thoma Bravo's \$3 billion public-to-private leveraged buyout of Qlik Technologies (Nasdaq:QLIK)
  - Apollo Global Management's \$4.4 billion public-to-private leveraged buyout of Rackspace U.S. (NYSE:RAX)

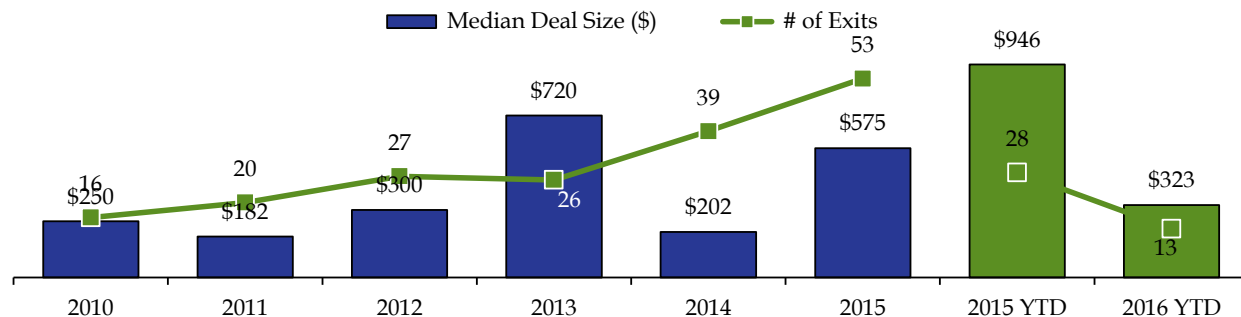
## Overall U.S. Private Equity Deal Flow (\$ in billions)



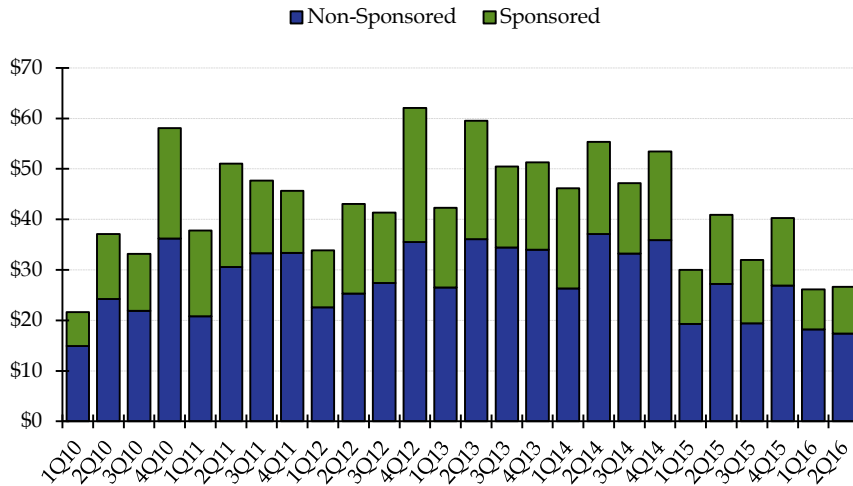
## U.S. TMT Private Equity Deal Flow (\$ in billions)



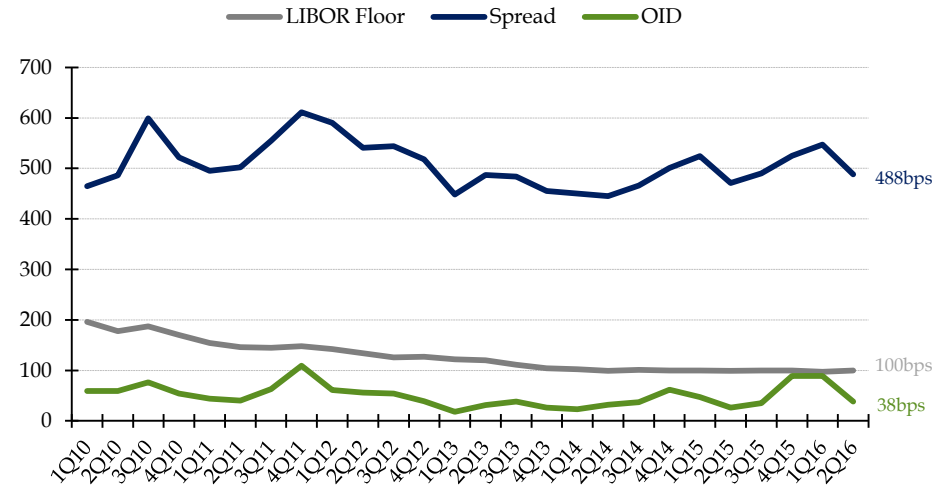
## U.S. TMT Private Equity Exits (\$ in millions)



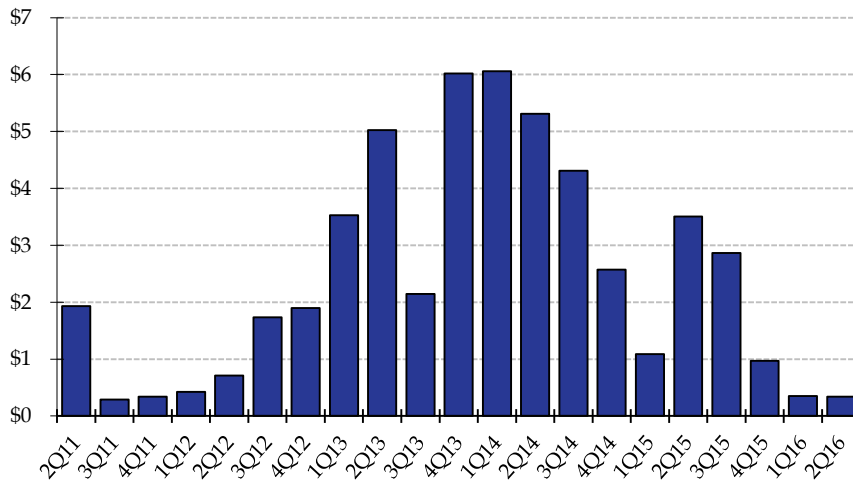
## Loan Volume: Low Level of Supply Continues (\$ in billions)



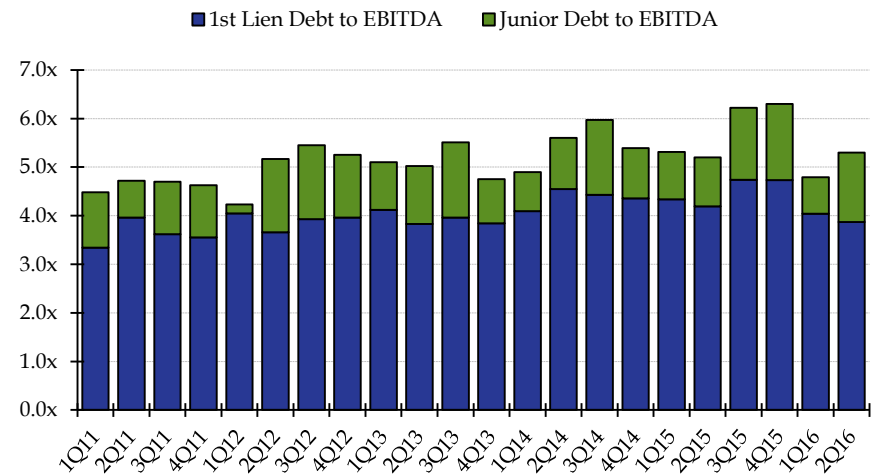
## Term Loan Spreads Tightening [1]



## Covenant Lite Volume Remains Relatively Low (\$ in billions)

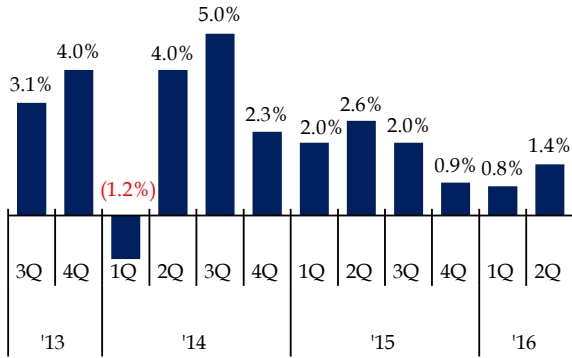


## LBO Leverage Climbs Higher, However Lack of Supply Continues



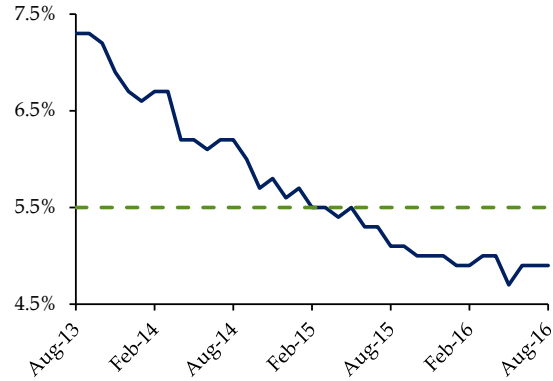
Note: This data represents the entire U.S. middle market (all industries)  
 Note: The middle market is defined as deal size ≤ \$100 million and borrower sales ≤ \$500 million  
 [1] Includes both non-sponsored and sponsored transactions  
 Source: Bloomberg, S&P Capital IQ LCD, and Thomson Reuters LPC

## Real GDP Growth



Source: Bureau of Economic Analysis

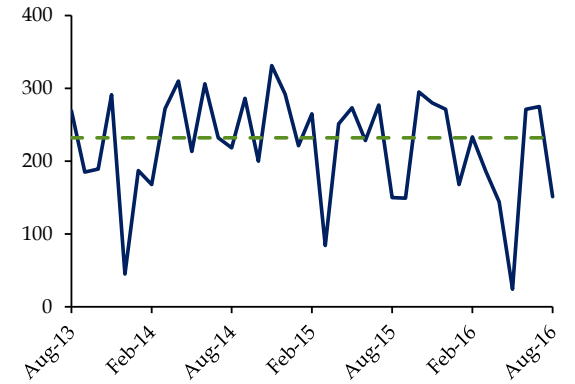
## National Unemployment Rate



Source: Bureau of Labor Statistics

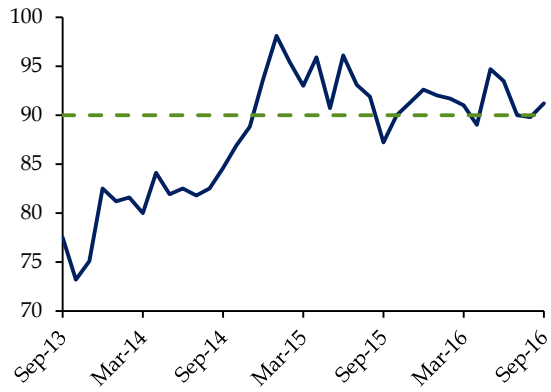
## Additions to Non-Farm Payrolls

(in thousands of employees)



Source: Bureau of Labor Statistics

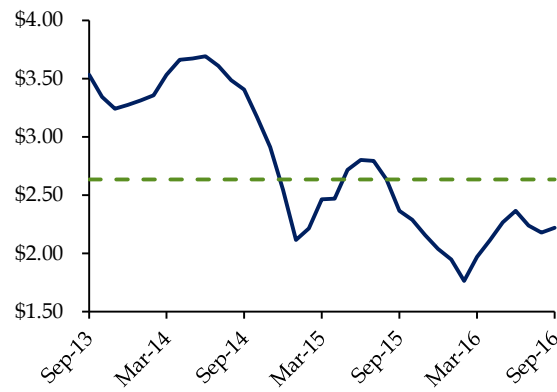
## Consumer Sentiment Index



Source: University of Michigan

## Retail Gas Prices

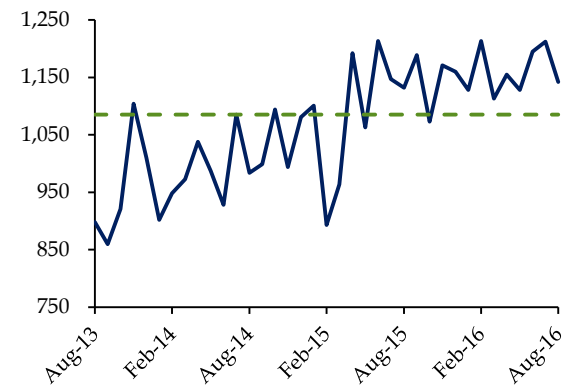
(in \$'s per gallon)



Source: Energy Information Administration

## Housing Starts

(in thousands of units)



Source: United States Census Bureau

S&P 500 Index- A broad index that includes American Companies.

EBITDA- A company's earnings before interest, taxes, depreciation, and amortization, is an accounting measure calculated using a company's net earnings, before interest expenses, taxes, depreciation and amortization are subtracted, as a proxy for a company's current operating profitability.

Dry Powder- Refers to cash reserves kept on hand to cover future obligations or to purchase assets.

GDP- Gross domestic product is the market value of the goods and services produced by labor and property located in the United States

Consumer Sentiment Index- The University of Michigan Consumer Sentiment Index is a consumer confidence index published monthly by the University of Michigan. The index is normalized to have a value of 100 in December 1964

National Unemployment Rate- the percentage of the total labor force that is unemployed but actively seeking employment and willing to work.

Non-Farm Payroll- Nonfarm payroll employment is a compiled name for goods, construction and manufacturing companies in the US. It does not include farm workers, private household employees, non-profit organization employees, or government employees . It is an economic indicator released monthly by the United States Department of Labor as part of a comprehensive report on the state of the labor market.

Housing Starts- are the number of new residential construction projects that have begun during any particular month.

The Economist- offers authoritative insight and opinion on international news, politics, business, finance, science, technology and the connections between them

LBO -- leveraged buyout (LBO) is the acquisition of another company using a significant amount of borrowed money to meet the cost of acquisition. The assets of the company being acquired are often used as collateral for the loans, along with the assets of the acquiring company.

Industrial Production Index (IPI)- is an economic indicator published by the Federal Reserve Board of the United States that measures the real production output of manufacturing, mining, and utilities Capital Goods Orders.

Covenant-lite loans- means that debt is being issued, both personally and commercially, to borrowers with less restrictions on collateral, payment terms, and level of income.

IRR-Internal Rate of Return.

## About Fifth Third Capital Markets

Fifth Third Capital Markets is the marketing name under which Fifth Third Bank and its subsidiary, Fifth Third Securities, Inc., provide certain securities and investment banking products and services. Banking products and services are offered by Fifth Third Bank. Securities products and services are offered by licensed securities representatives of Fifth Third Securities, Inc., who may be employees of Fifth Third Bank.

### Important notice

This document has been prepared by Fifth Third Bank ("Fifth Third") or one of its subsidiaries for the sole purpose of providing a proposal to the parties to whom it is addressed in order that they may evaluate the capabilities of Fifth Third to supply the proposed services. It is not intended to provide specific investment advice or investment recommendations and does not constitute either a commitment to enter into a specific transaction or an offer or solicitation, with respect to the purchase or sale of any security.

The information contained in this document has been compiled by Fifth Third and includes material which may have been obtained from information provided by various sources and discussions with management but has not been verified or audited. This document also contains confidential material proprietary to Fifth Third. Except in the general context of evaluating our capabilities, no reliance may be placed for any purposes whatsoever on the contents of this document or on its completeness. No representation or warranty, express or implied, is given and no responsibility or liability is or will be accepted by or on behalf of Fifth Third or by any of its subsidiaries, members, employees, agents or any other person as to the accuracy, completeness or correctness of the information contained in this document or any other oral information made available and any such liability is expressly disclaimed.

This document and its contents are confidential and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person in whole or in part without our prior written consent.

Past performance is No Guarantee of Future Results.

Fifth Third Capital Markets is a wholly owned subsidiary of Fifth Third Bank offering investment banking++, debt capital markets+, bond capital markets++, equity capital markets++, financial risk management+, and fixed income sales and trading++. Fifth Third Bank provides access to investments and investment services through various subsidiaries, including Fifth Third Securities. Fifth Third Securities is the trade name used by Fifth Third Securities, Inc., member FINRA/SIPC, a registered broker-dealer and registered investment advisor registered with the U.S. Securities and Exchange Commission (SEC). Registration does not imply a certain level of skill or training. Securities and investments offered through Fifth Third Securities, Inc. and insurance products:

Are Not FDIC Insured	Offer No Bank Guarantee	May Lose Value
Are Not Insured By Any Federal Government Agency		Are Not A Deposit

+ Services and activities offered through Fifth Third Bank

++ Services and activities offered through Fifth Third Securities, Inc