



# MEDIA SECTOR REVIEW

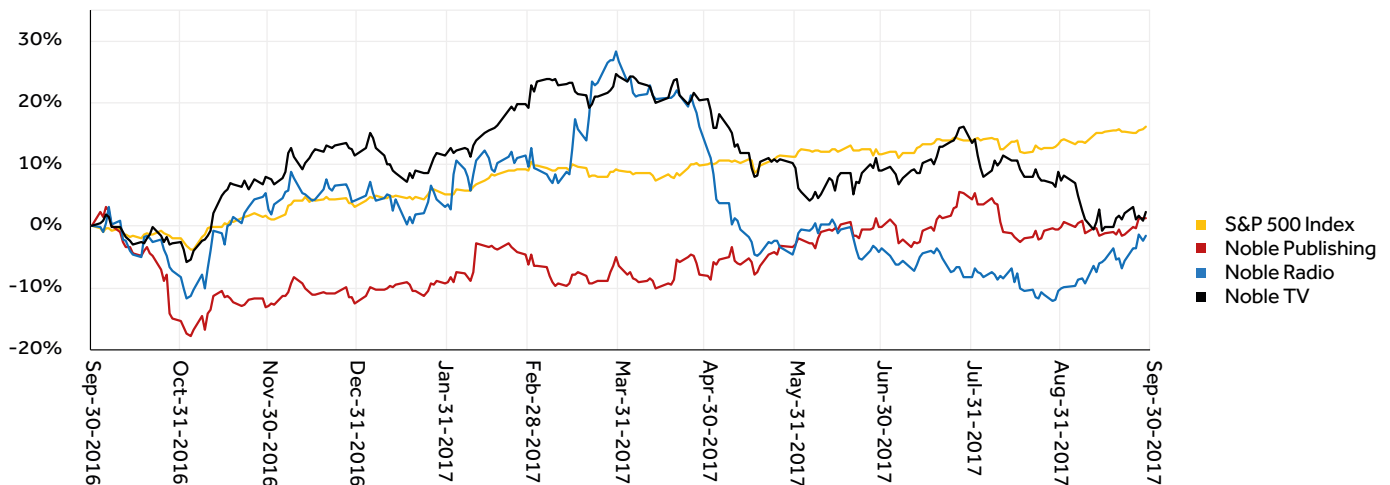
## A Tectonic Shift?

On September 25th, the media landscaped rumbled with news that Raycom Media, a privately held television broadcaster which owns 65 television stations, merged with Community Newspaper Holdings, owner of a string of 110 newspapers and websites. Newspapers! This was little noticed in the financial community given that it was a private transaction and the merger was with two companies owned by parent company Alabama Retirement System, but media companies certainly noticed it. After nearly a decade of broadcast television conglomerates divesting and/or spinning off newspaper assets, a large and respectable TV broadcaster now turned that strategy on its head. Raycom looked at the publishing business more from a news source to be delivered over various platforms, including digital, rather than just a print business. Makes sense, publishers are racing to build unique digital audiences above 100 million to attract national digital advertising. Such a strategy could be applied to television broadcasters as well. This was small market newspapers, however, and not likely to significantly move the needle for digital uniques. So, the question is, will there be more mergers and acquisitions like this and will there be a move toward larger markets, which arguably would have a larger digital footprint? We see the merit in such a merger, but there is a need for skill sets in managing the publishing business, which is still in midst of its digital transformation.

## INSIDE THIS ISSUE

<b>Outlook: Traditional Media</b>	<b>2</b>
TV	3
Radio	4
Publishing	5
Industry M&A Activity	6
<b>Outlook: Internet and Digital Media</b>	<b>7</b>
Digital Media	9
Advertising Tech.	10
Marketing Tech.	11
Social Media	12
Industry M&A Activity	13
<b>NOBLE Overview</b>	<b>15</b>

## STOCK MARKET PERFORMANCE: TRADITIONAL MEDIA



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# OUTLOOK - TRADITIONAL MEDIA

## TELEVISION BROADCASTING

It has been a painfully quiet summer for the broadcast television group, which underperformed the general market and most media segments. In the latest quarter, the Noble TV Broadcast Index declined 5.7%, versus a 4.0% advance by the S&P 500 and modest gains by Publishers and Radio Broadcasters. The year to date performance is upside down as well, with the TV stocks down 8.3% versus a gain by the S&P 500 of 12.5%. We believe that the fundamentals of the industry have been relatively stable to favorable. As such, the weak stock performance, in our view, is largely a function of the lack of M&A activity, which has been muted as companies await the new ownership caps and in-market rules from the FCC. Thank goodness the summer is over! We believe that the TV stocks will have a better performance in the fourth quarter, especially if history is a guide. Typically, the stocks perform best in the fourth quarter in a year prior to the Olympics and an election year. In addition, the stock performance may also be skewed upward due to the expected FCC relaxation of ownership rules, expected by year end, which should once again ignite M&A activity. As such, we are constructive on the TV stocks and encourage investors to Buy near current levels.

## RADIO BROADCASTING

The radio stocks under-performed the general market in the third quarter, but were among the top performers in the media sector. The Noble Radio stock index was up 2.7% in the third quarter versus a 4.0% gain for the S&P 500. We believe that the gain in Radio stocks was largely due to an increase in deal volume excluding the mega mergers announced earlier in the year, particularly Entercom and CBS Radio. There were an estimated \$124 million in deals in the quarter, up from \$116 million in the fourth quarter 2016. A large portion of the deal volume reflected sales of Entercom stations, in an effort to comply with ownership rules to complete the CBS Radio merger. We believe that M&A activity will continue to be strong in radio. In particular, we believe that the prospect of a pre-packaged bankruptcy at Cumulus Media could heighten the potential M&A activity as that company possibly realigns its station portfolio following the potential move. Consequently, we believe that there should be some follow through momentum in the Radio stocks in coming quarters.

## PUBLISHING

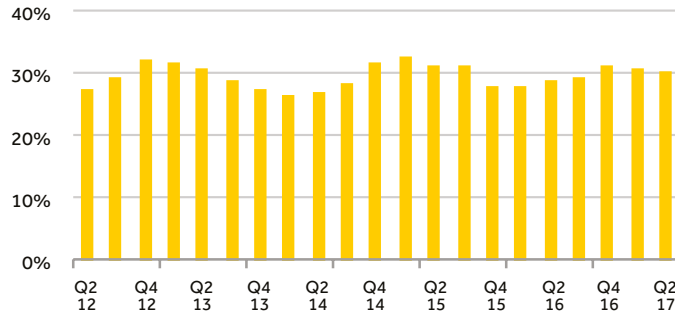
The Publishing stocks are the highlight so far this year, up a strong 15.6%, outperforming the general market as measured by the S&P 500 which is up 12.5% year to date. The Publishing stocks had more modest gains in the third quarter, up 1.4%, but still better than many media sectors. In our view, the stocks were favorably influenced by tronc's purchase of the New York Daily News and the merger between the Community Newspaper group and Raycom's broadcast TV stations, mentioned earlier in this newsletter. We believe that the Publishers have honed a digital strategy that focuses on building beyond 100 million unique visitors, a threshold needed to attract digital advertisers. Consequently, we believe that there will continue to be consolidation in Publishing to add scale to digital initiatives. However, investors are clearly focused on Publishers with more conservative balance sheets that would be more likely to participate in industry consolidation.

# TV-SEGMENT ANALYSIS

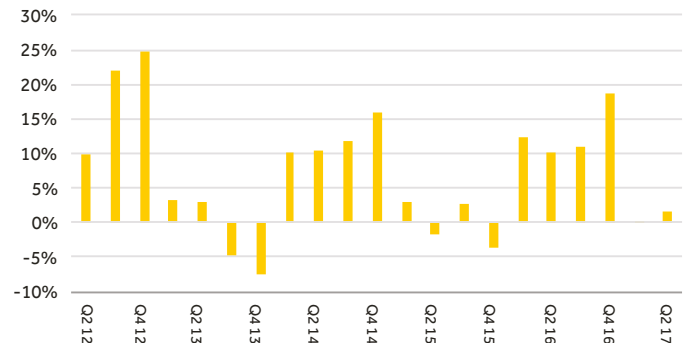
	SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP	NET DEBT.	ENT. VALUE (EV)	LTM		EV / REVENUE			EV / EBITDA			NET DEBT / EBITDA	3 YEAR REVENUE CAGR	EBITDA MARGIN	DIV YIELD
						REVENUE	EBITDA	LTM	2017E	2018E	LTM	2017E	2018E				
CBS Corporation	58.30	83.2%	23,416	9,014	32,464	13,202	3,049	2.5x	2.4x	2.3x	10.6x	10.3x	9.2x	3.0x	(2.0%)	23.1%	1.2%
Nexstar Media Group	62.70	84.8%	2,898	4,350	7,261	1,752	609	4.1x	3.0x	2.6x	11.9x	9.0x	7.0x	4.7x	30.0%	34.7%	1.9%
Sinclair Broadcast	32.25	74.9%	3,312	3,272	6,551	2,821	893	2.3x	2.4x	2.2x	7.3x	8.4x	6.6x	3.7x	26.2%	31.7%	2.2%
TEGNA Inc.	13.40	50.3%	2,883	3,281	6,440	3,352	1,168	1.9x	3.4x	2.9x	5.5x	9.7x	7.9x	2.8x	27.7%	34.8%	2.1%
Tribune Media	41.08	95.4%	3,584	2,654	6,245	1,909	370	3.3x	3.4x	3.1x	16.9x	15.4x	12.5x	7.2x	19.3%	19.4%	2.4%
Gray Television	16.15	96.7%	1,157	1,796	2,935	872	332	3.4x	3.3x	2.9x	8.8x	10.0x	7.9x	5.4x	32.9%	38.1%	NA
E.W. Scripps	19.07	79.0%	1,567	249	1,818	949	170	1.9x	1.9x	1.5x	10.7x	16.2x	8.3x	1.5x	29.7%	17.9%	NA
Entertainment	5.75	74.5%	520	232	752	264	62	2.9x	2.7x	2.5x	12.2x	12.1x	9.6x	3.8x	4.9%	23.3%	3.5%

Mean	2.8x	2.8x	2.5x	10.5x	11.4x	8.6x	4.0x	21.1%	27.9%	2.2%
Median	2.7x	2.9x	2.6x	10.7x	10.1x	8.1x	3.7x	26.9%	27.5%	2.2%

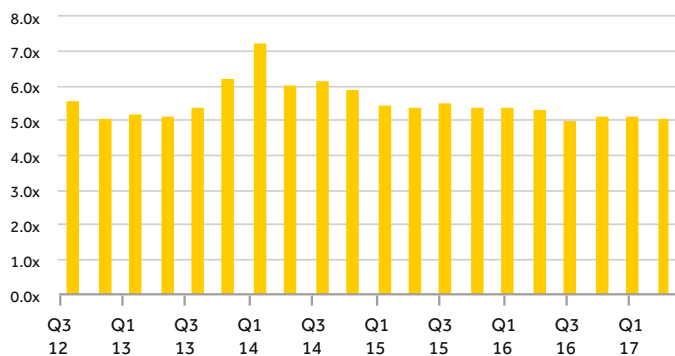
## LTM EBITDA MARGIN



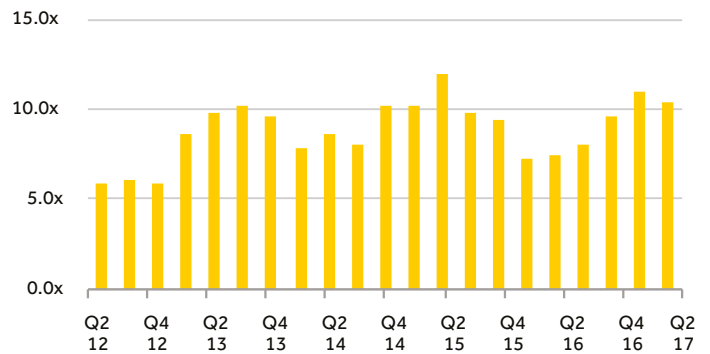
## REVENUE GROWTH



## NET DEBT / LTM EBITDA



## EV / LTM EBITDA



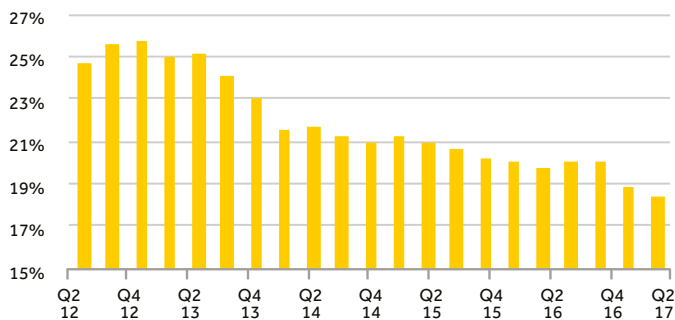


# RADIO-SEGMENT ANALYSIS

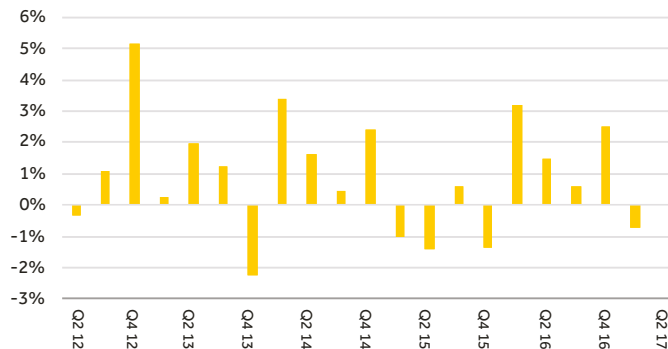
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						REVENUE	EBITDA	LTM	2017E	2018E	LTM	2017E	2018E				
Iheart Media	\$1.35	33.7%	\$122	\$20,120	\$20,358	\$6,217	\$1,476	3.3x	3.3x	NA	13.8x	11.1x	NA	13.6x	0.2%	23.7%	0.0%
Cumulus Media	0.33	11.8%	10	2,248	2,258	1,140	204	2.0x	2.0x	2.0x	11.1x	10.5x	9.2x	11.0x	3.6%	17.9%	0.0%
Urban One	2.10	60.0%	99	947	1,056	443	118	2.4x	NA	NA	8.9x	NA	NA	8.0x	0.6%	26.7%	0.0%
Entercom	12.30	74.3%	501	452	981	466	97	2.1x	2.1x	2.1x	10.1x	10.1x	9.0x	4.7x	6.8%	20.8%	2.5%
Townsquare Media	9.93	76.3%	183	533	718	514	104	1.4x	1.4x	1.3x	6.9x	6.8x	5.8x	5.1x	24.4%	20.3%	0.0%
Beasley Media	12.05	66.3%	347	195	542	196	37	NMF	NA	NA	NMF	NA	NA	4.3x	34.6%	18.7%	1.5%
Salem Media Group	6.50	78.8%	170	259	429	273	46	1.6x	1.6x	1.5x	9.3x	9.3x	8.6x	5.6x	5.0%	16.9%	3.9%
Emmis Communications	3.56	87.9%	45	215	292	199	19	1.5x	NA	NA	15.1x	NA	NA	4.4x	1.5%	9.7%	0.0%
Saga Communications	44.10	84.7%	261	5	266	141	35	1.9x	NA	NA	7.6x	NA	NA	0.1x	3.3%	25.0%	3.1%

Mean	2.0x	2.1x	1.7x	10.4x	9.6x	8.1x	7.1x	8.9%	20.0%	1.2%
Median	1.9x	2.0x	1.8x	9.7x	10.1x	8.8x	5.6x	3.6%	20.3%	0.0%

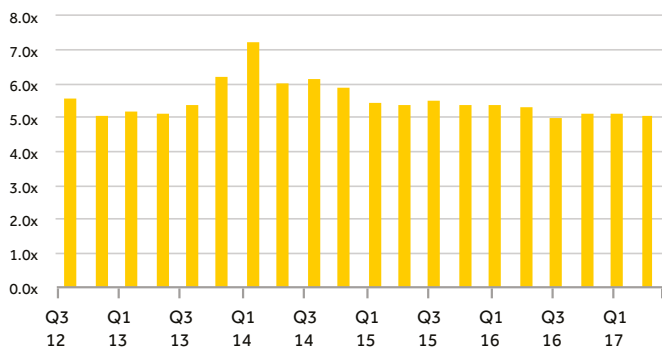
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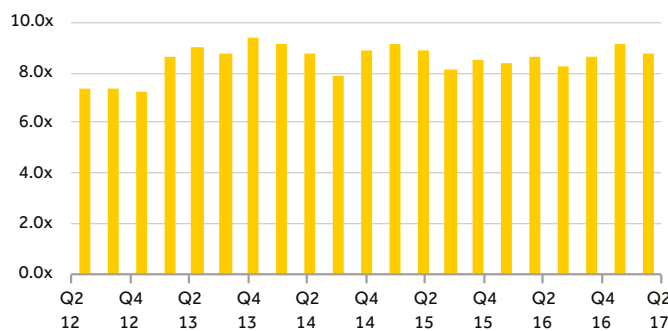
## REVENUE GROWTH



## NET DEBT / LTM EBITDA



## EV / LTM EBITDA



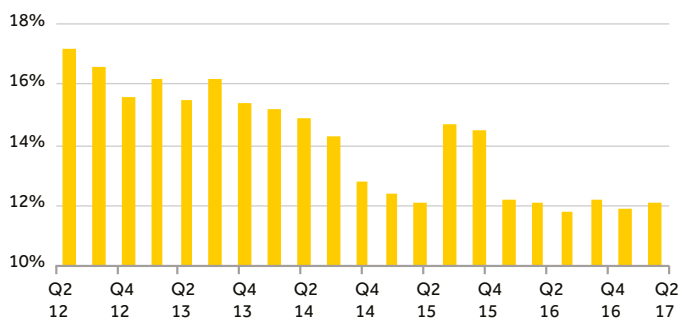


# PUBLISHING-SEGMENT ANALYSIS

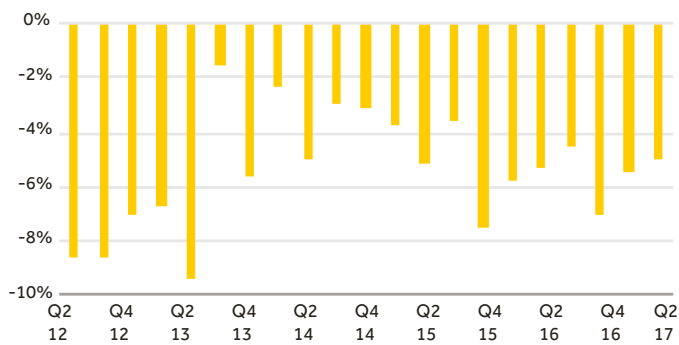
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						REVENUE	EBITDA	LTM	2016E	2017E	LTM	2016E	2017E				
News Corporation	\$13.29	91.3%	\$7,745	(\$1,637)	\$6,484	8,139	\$738	0.8x	0.8x	0.8x	8.8x	7.2x	6.9x	NM	(1.4%)	9.1%	1.5%
New York Times	19.65	97.5%	3,183	(338)	2,841	1,609	230	1.8x	1.7x	1.7x	12.3x	10.9x	9.7x	NM	(0.5%)	14.3%	0.8%
Gannett	9.46	79.4%	1,076	258	1,334	3,187	320	0.4x	0.4x	0.4x	4.2x	3.7x	3.9x	0.8x	(2.9%)	10.1%	6.6%
New Media Investment	15.45	89.9%	817	189	1,005	1,271	144	0.8x	0.8x	0.8x	7.0x	5.9x	6.4x	1.3x	34.4%	11.4%	9.0%
McClatchy Co.	8.35	44.1%	64	877	941	943	138	1.0x	1.0x	1.1x	6.8x	6.7x	NA	6.4x	(7.0%)	14.6%	NA
tronc	15.20	86.9%	500	188	688	1,540	126	0.4x	0.5x	0.5x	5.5x	4.0x	3.7x	1.5x	(3.6%)	8.2%	NA
Lee Enterprises	2.40	65.8%	136	520	657	575	132	1.1x	1.2x	NA	5.0x	4.8x	NA	3.9x	(3.2%)	23.0%	NA
A.H. Belo Corp.	\$4.45	59.7%	\$97	(\$65)	\$32	255	\$5	0.1x	NA	NA	6.0x	NA	NA	NM	(2.0%)	2.1%	NA

Mean	0.8x	0.9x	0.9x	6.9x	6.2x	6.1x	2.8x	1.7%	11.6%	4.5%
Median	0.8x	0.8x	0.8x	6.4x	5.9x	6.4x	1.5x	(2.4%)	10.7%	4.0%

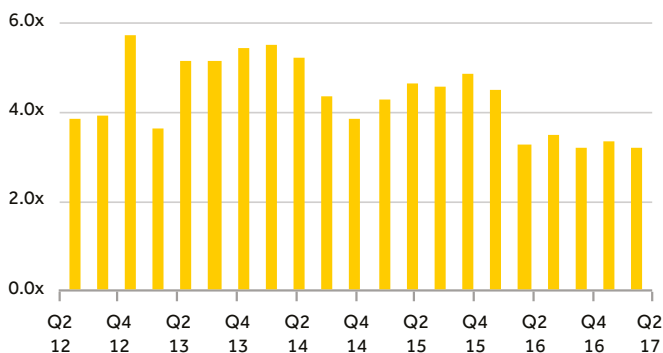
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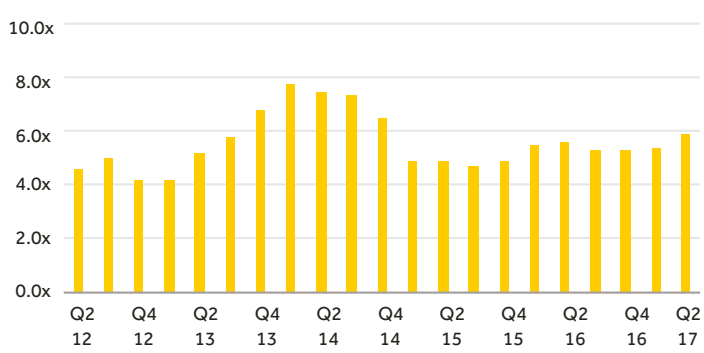
## REVENUE GROWTH



## NET DEBT / LTM EBITDA



## EV / LTM EBITDA



# TRADITIONAL MEDIA M&A ACTIVITY

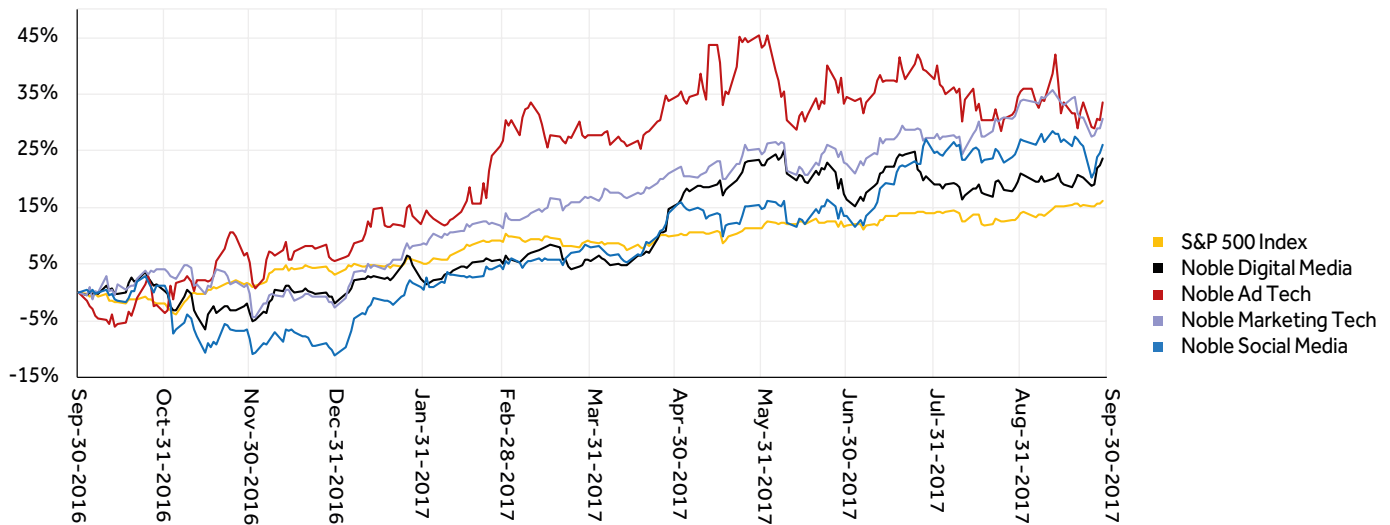
## 2Q 2017 M&A ACTIVITY

DATE	BUYER	TARGET	TRANSACTION VALUE (\$M)	EV / REVENUE	EV / EBITDA
9/26/17	Educational Media Foundation, Inc.	3 radio stations from Entercom	\$57.8	NA	NA
9/25/17	Raycom Media, Inc.	Community Newspaper Holdings, Inc	NA	NA	NA
9/8/17	HC2 Holdings, Inc.	Mako Communications: 38 low power TV stations	\$29.0	NA	NA
9/8/17	Weigel Broadcasting	KAZA-TV, Avalon, CA	\$9.0	NA	NA
9/8/17	Weigel Broadcasting	KNCL-TV, St. Louis	\$3.5	NA	NA
9/7/17	Warner Music Group Corp.	Spinnin' Records B.V.	NA	NA	NA
9/6/17	KRCB North Bay Public Media	KCSM Public Television	\$12.0	NA	NA
9/5/17	Valassis Communications Inc.	Staten Island View Publishing Group	NA	NA	NA
9/1/17	Salem Media Group, Inc.	Intelligence Report Investment Newsletter	NA	NA	NA
9/3/17	tronc, Inc.	Daily News, L.P.	NA	NA	NA
9/1/17	Dick Broadcasting Company	Alpha Media Licensee, LLC, 20 Radio Stations	\$19.5	NA	NA
9/1/17	Mspark, Inc.	Preferred Mail Advertising, Inc.	NA	NA	NA
8/31/17	Hearst Newspapers LLC	Civitas Media	NA	NA	NA
8/28/17	Paperbag Media, LLC	Aspen Daily News Ltd.	NA	NA	NA
8/28/17	JCDecaux (Mauritius) Ltd	LC OUTDOOR SAS	NA	NA	NA
8/27/17	CBS Corporation	Ten Network Holdings	\$167.0	NA	NA
8/7/17	Nexstar Broadcasting, Inc.	WLWC-TV from OTA Broadcasting LLC	\$4.1	NA	NA
8/7/17	Tang Media Partners, LLC	Open Road Films, Inc.	NA	NA	NA
8/9/17	Paxton Media Group LLC	Civitas Media, LLC	NA	NA	NA
8/9/17	New Media Investment Group Inc.	Morris Publishing Group, LLC	\$120.0	NA	NA
8/8/17	Boone Newspapers, Inc.	Valley Newspapers, Inc.	NA	NA	NA
8/7/17	Netflix, Inc.	Millarworld Limited	NA	NA	NA
8/4/17	Lamar Advertising Company	Steen Outdoor Advertising	NA	NA	NA
8/2/17	Jon Kelly	SummitMedia LLC	NA	NA	NA
8/1/17	The E. W. Scripps Company	Katz Broadcasting, LLC	\$307.4	NA	10.0x
7/30/17	Discovery Communications, Inc.	Scripps Networks Interactive, Inc.	\$14,920.1	4.3x	9.3x
7/27/17	The Gores Group LLC	AMI Entertainment Network, LLC	NA	NA	NA
7/27/17	Brite Media Group LLC	Clean Zone Marketing, LLC	NA	NA	NA
7/26/17	Times Media Group	West Valley View Inc.	NA	NA	NA
7/21/17	Entravision Communications	KMIR-TV from OTA Broadcasting	\$21.0	NA	NA
7/17/17	West End Holdings	American Hometown Publishing, Inc.	NA	NA	NA
7/7/17	Townsquare Media, Inc.	Gamma Broadcasting LLC	NA	NA	NA
7/7/17	Townsquare Media, Inc.	Berkshire Broadcasting Co., Inc.	NA	NA	NA
7/5/17	QVC Group	HSN, Inc.	\$2,604.2	0.7x	10.7x



# OUTLOOK - INTERNET AND DIGITAL MEDIA

## STOCK MARKET PERFORMANCE: INTERNET AND DIGITAL MEDIA



## INTERNET & DIGITAL MEDIA

For the last few years there has been talk that consolidation in the advertising technology sector was needed for a variety of reasons: 1) too much capital had been raised to finance too many “point solution” companies; 2) brands, agencies and publishers all want to reduce the number of middlemen/vendors they work with; 3) capital to the sector had dried up (particularly after multiples for publicly traded companies fell to levels that were far lower than private market multiples), prompting a need to focus on profitability; and 4) the need for scale to compete against the likes of Google and Facebook.

While there has been a steady level of M&A activity in recent years, 3Q 2017 was notable in two respects: 1) several publicly traded companies were active; and 2) private equity firms, which historically sat on the sidelines when it comes to ad tech, began acquiring companies in the sector. For example, publicly traded companies such as Maxpoint Interactive (MXPT), Rocket Fuel (FUEL) and Yume (YUME) agreed to be sold during the third quarter, while Cogint (COGT) agreed to merge its lead generation business, Fluent, with Chinese firm Blue Focus. Yume, a video DSP company agreed to sell to RhythmOne, for \$185M. RhythmOne, formerly known as Blinkx, has been very acquisitive in recent months, having acquired Perk for \$42M in January and certain assets of RadiumOne for \$26M in June. Telaria (TLRA; formerly known as Tremor Video) was also active, as it agreed to sell its video DSP business, previously known as ScanScout, to another publicly traded ad tech firm, Israeli based Taptica (AIM: TAP), for \$50M.

Private equity firms were also active: Maxpoint sold to shopper marketing firm Valassis, a portfolio company of Harland Clarke for \$121M. Rocket Fuel was acquired by ad serving company Sizmek, a portfolio company of Vector Capital, for \$210M. GTCR entered the ad tech space with its purchase of a majority stake in Simplifi, a search advertising retargeting company and DSP. Finally, Providence Equity Partners entered the sector with its purchase of ad verification company DoubleVerify.

# OUTLOOK - INTERNET AND DIGITAL MEDIA

3Q 2017 - ADTECH M&A BY PUBLICLY TRADED COMPANIES AND PE FIRMS							
DATE	BUYER	BUYER TYPE	TARGET	TARGET TYPE	TRANS-ACTION VALUE	ENTER-PRISE REVENUE	VALUE/EBITDA
9/6/2017	BlueFocus Int'l	Strategic	Cogint (COGT)	Lead Gen	NA	NA	NA
9/4/2017	RhythmOne (AIM: RTHM)	Strategic	YuMe (YUME)	Video DSP	\$111.0	0.7x	11.0x
8/31/2017	GTCR, LLC	PE	Simplifi	DSP/Retargeter	NA	NA	NA
8/29/2017	RTL Group SA	Strategic	SpotXchange	Video Exchange	\$388.7	NA	NA
8/27/2017	Harland Clarke/Valassis	PE/Strategic	MaxPoint (MXPT)	Predictive Analytics, Local	\$105.0	0.7x	NM
8/23/2017	Providence Equity Partners	PE	DoubleVerify	Ad Verification	NA	NA	NA
8/7/2017	Taptica (AIM: TAP)	Strategic S	canScout (TLRA)	Video DSP	\$50.0	NA	NA
7/17/2017	Taptica (AIM: TAP)	Strategic	Adinnovation	Ad Operations; Mobile	\$8.9	NA	NA
7/17/2017	Vector Capital/Sizmek	PE/Strategic	Rocket Fuel (FUEL)	Ad Network; Programmatic	\$147.3	0.4x	NM
7/11/2017	Rubicon Project (RUBI)	Strategic	nToggle, Inc.	Bid request optimization	\$38.5	NA	NA
<b>Average</b>					<b>\$121.3</b>	<b>0.6x</b>	<b>11.0x</b>

It has been a very strong year for stocks in the internet and digital media sectors. Thru September, the S&P 500 was up 13%, and each of the subsectors we follow significantly outperformed the broader market. Year-to-date, the digital media, social media, ad tech and marketing tech sectors posted stock price increases of 23%, 42%, 29%, and 34%, respectively.

Driving the performance of the digital media stocks is Interactive Corp (IAC). The stock is up 82% year-to-date driven by strong operating results and the merger of its subsidiary by its HomeAdvisor subsidiary with Angie's List. Shares of Angie's List doubled in the month after the announcement. The transaction closed in late September and the new company now trades as ANGI Homeservices (ANGI). Social media stocks are up 42% year-to-date driven by Facebook (+49% YTD) and Match.com (+36%). The performance of the rest of the group is mixed. Twitter shares are up only 4%, as investors are concerned about 1) whether the company can ever be more than a niche service, and 2) whether it can arrest its year-over-year revenue declines. Shares of Snap are down 15% since its March IPO. The company has missed analyst expectations in each of its first two quarters as a publicly traded company. Finally, shares of The Meet Group are down 26% year-to-date as the company lowered 2H 2017 guidance due to softness in ad rates as the supply of ad inventory has outstripped demand.

Ad tech stocks increased 29% year-to-date. Increased M&A activity in the ad tech sector was a significant factor behind this performance. Maxpoint Interactive shares increased 132% after the company agreed to be acquired by shopper marketing firm Valassis. Rocket Fuel shares increased by 52% after the company agreed to be acquired by ad-serving company Sizmek. Shares of video ad network Yume increased by 29% upon agreeing to be acquired by RhythmOne. M&A also contributed to the 75% increase in shares of Telaria (formerly Tremor Video), which sold its video DSP business to Taptica. Finally, shares of The Trade Desk (TTD) increased by 122% as the company continued to significantly outperform expectations and raised guidance in each of the first two quarters of the year.

Marketing technology stocks continued to perform well, up 34% year-to-date. Hubspot (HUBS) was the strongest performing stock in the group (+79%), followed by Adobe (ADBE) +45%; and Salesforce (CRM) +37%. The newest addition to the group, Yext, is up 20% since its IPO. Laggards in the sector include Akamai (-27%) and Marin Software (-26%).

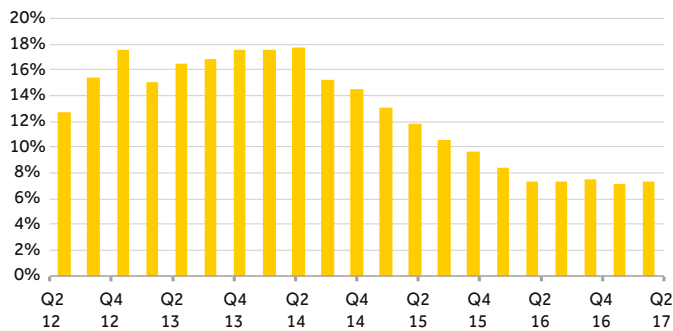


# DIGITAL MEDIA - SEGMENT ANALYSIS

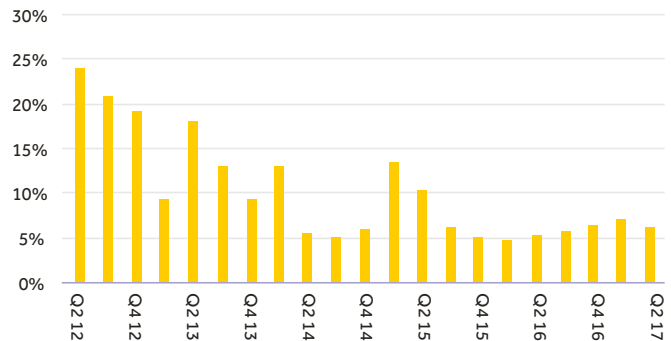
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						REVENUE	EBITDA	LTM	2017E	2018E	LTM	2017E	2018E			
Alphabet Inc.	\$993.64	98.5%	\$688,473	(\$90,758)	\$592,586	99,275	\$32,251	6.0x	5.5x	4.6x	18.4x	13.6x	11.5x	17.6%	32.5%	60.2%
IAC/InterActiveCorp	122.24	99.0%	9,749	36	10,032	3,103	449	3.2x	3.2x	2.8x	22.4x	16.9x	13.1x	1.3%	14.5%	78.5%
Pandora Media, Inc.	8.12	55.9%	1,970	125	2,268	1,437	(288)	1.6x	1.5x	1.3x	NM	NM	NM	28.4%	(20.1%)	35.9%
XO Group Inc.	20.71	98.7%	512	(98)	413	156	14	2.7x	2.5x	2.3x	29.3x	14.8x	10.9x	4.4%	9.1%	93.6%
Leaf Group Ltd.	7.30	78.1%	147	(30)	116	118	(21)	1.0x	0.9x	0.8x	NM	NM	NM	(18.5%)	(17.9%)	41.4%

Mean	2.9x	2.7x	2.4x	23.3x	15.1x	11.8x	6.6%	3.6%	61.9%
Median	2.7x	2.5x	2.3x	22.4x	14.8x	11.5x	4.4%	9.1%	60.2%

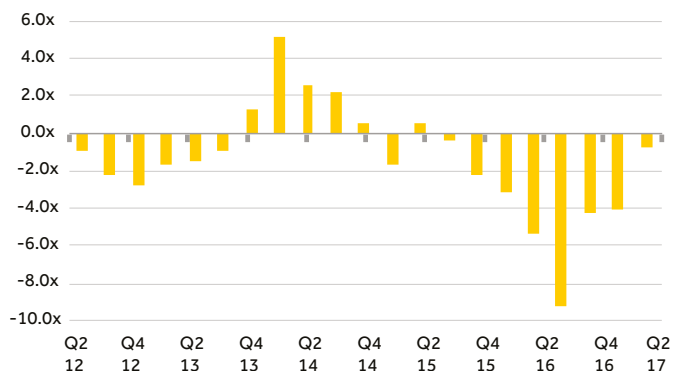
## LTM EBITDA MARGIN



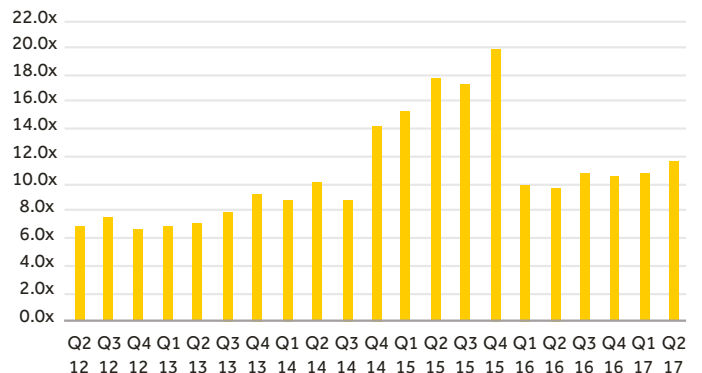
## REVENUE GROWTH



## NET DEBT / LTM EBITDA



## EV / LTM EBITDA

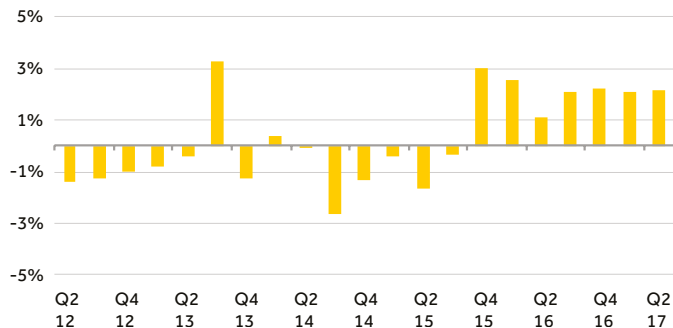


# ADVERTISING TECHNOLOGY - SEGMENT ANALYSIS

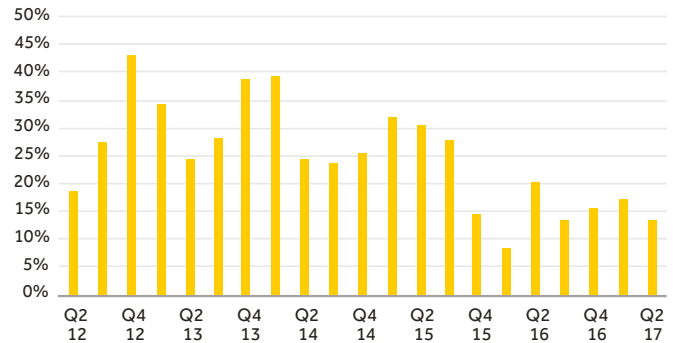
	SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP	NET DEBT.	ENT. VALUE (EV)	LTM		EV / REVENUE			EV / EBITDA			3 YEAR REVENUE CAGR	EBITDA MARGIN	GROSS MARGIN
						REVENUE	EBITDA	LTM	2017E	2018E	LTM	2017E	2018E			
Criteo S.A.	\$45.20	80.7%	\$2,951	(\$300)	\$2,666	\$2,049	\$186	1.3x	2.8x	2.3x	14.3x	9.0x	7.2x	45.1%	9.1%	35.5%
The Trade Desk	64.28	102.3%	2,621	(89)	2,533	252	64	10.1x	8.3x	6.5x	39.4x	27.9x	20.6x	0.0%	25.5%	79.6%
Taptica International Ltd	4.45	96.7%	275	(33)	250	140	27	2.3x	1.5x	0.9x	9.4x	10.9x	8.5x	42.7%	19.0%	38.6%
Telaria, Inc.	4.65	92.8%	235	(35)	200	185	(2)	1.1x	1.7x	1.5x	NM	NM	24.3x	8.2%	(1.1%)	46.8%
SITO Mobile, Ltd.	7.46	100.8%	163	1	165	33	(3)	4.9x	4.0x	3.0x	NM	NM	47.6x	0.0%	(8.4%)	51.9%
Perion Network Ltd.	1.15	48.3%	89	42	131	291	25	0.5x	0.5x	0.4x	5.3x	4.3x	4.1x	(1.3%)	8.6%	48.3%
Matomy Media Group	0.93	67.4%	91	7	120	293	19	0.5x	0.6x	0.6x	6.3x	7.0x	5.2x	12.7%	6.5%	21.2%
RhythmOne plc	3.06	61.1%	151	(50)	112	149	(3)	0.9x	0.6x	0.3x	NM	11.8x	3.0x	(15.5%)	(2.3%)	33.9%
Maxpoint Interactive	13.85	99.7%	94	8	101	144	(9)	0.7x	1.0x	0.9x	NM	28.8x	10.8x	31.2%	(6.2%)	53.7%
Synacor	2.85	67.1%	110	(18)	92	124	(4)	0.7x	0.6x	0.4x	NM	39.7x	6.4x	4.4%	(3.5%)	52.0%
YuMe, Inc.	4.50	74.3%	156	(73)	84	160	10	0.5x	NA	NA	8.3x	NA	NA	2.0%	6.3%	51.2%
SeaChange International	2.62	87.6%	93	(30)	63	78	(9)	0.8x	0.8x	0.8x	NM	22.5x	11.4x	(17.0%)	(11.7%)	55.1%
Inuvo, Inc.	1.02	44.2%	29	1	31	73	(1)	0.4x	0.4x	0.3x	NM	25.4x	15.2x	9.2%	(1.6%)	60.6%
Social Reality	2.37	26.5%	19	1	20	32	(4)	0.6x	0.6x	0.4x	NM	10.1x	3.0x	118.8%	(12.8%)	39.1%
The Rubicon Project	3.70	40.1%	181	(193)	(11)	227	7	NM	NM	NM	NM	NM	NM	49.2%	3.1%	70.4%

Mean	1.4x	1.4x	1.1x	18.2x	16.0x	7.2x	21.9%	(0.2)%	47.0%
Median	0.6x	0.6x	0.6x	17.5x	16.9x	6.7x	10.4%	(2.3)%	48.3%

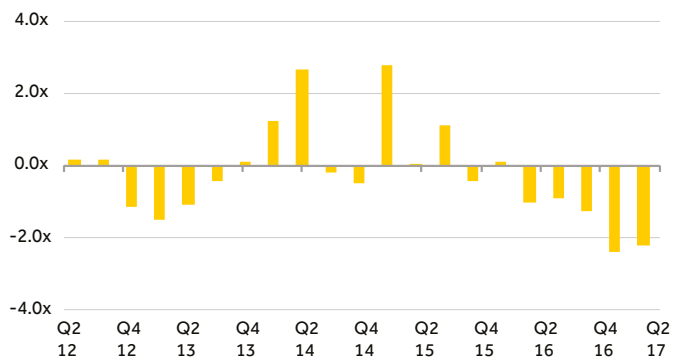
## LTM EBITDA MARGIN



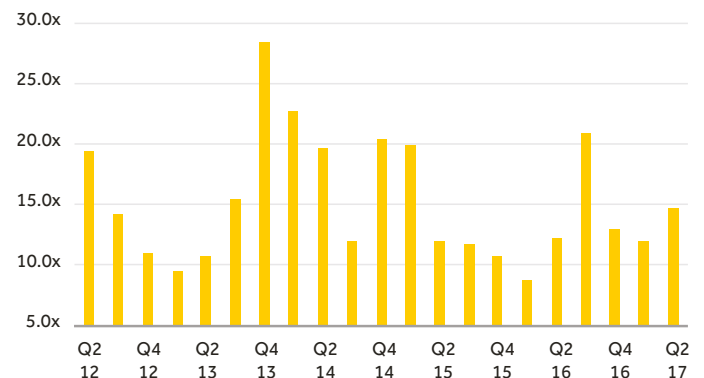
## REVENUE GROWTH



## NET DEBT / LTM EBITDA



## EV / LTM EBITDA

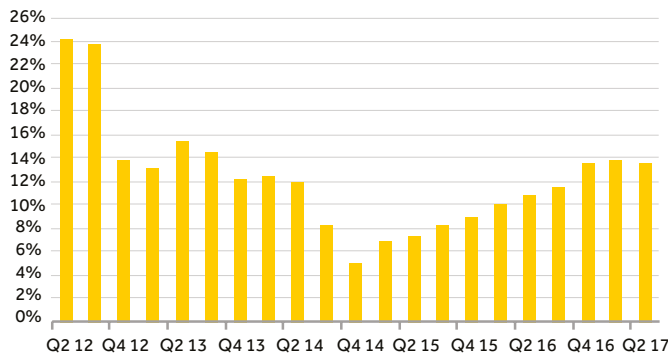


# MARKETING TECHNOLOGY - SEGMENT ANALYSIS

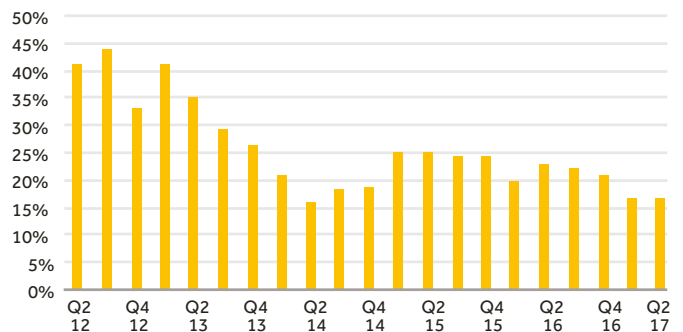
	SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP	NET DEBT.	ENT. VALUE (EV)	LTM		EV / REVENUE			EV / EBITDA			3 YEAR REVENUE CAGR	EBITDA MARGIN	GROSS MARGIN
						REVENUE	EBITDA	LTM	2017E	2018E	LTM	2017E	2018E			
Adobe Systems	\$151.12	95.7%	\$74,494	(\$3,479)	\$71,014	\$6,903	\$2,316	10.3x	9.8x	8.2x	30.7x	23.3x	19.2x	13.0%	33.6%	86.1%
Salesforce.com	\$96.32	98.1%	69,225	(919)	68,306	9,388	464	7.3x	6.6x	5.5x	147.2x	30.4x	24.5x	27.3%	4.9%	73.0%
Akamai Technologies	50.63	70.7%	8,679	(32)	8,647	2,418	684	3.6x	3.5x	3.2x	12.6x	9.5x	8.8x	14.0%	28.3%	65.7%
HubSpot, Inc.	85.80	98.7%	3,177	(203)	2,974	318	(35)	9.3x	8.1x	6.4x	NM	NM	NM	51.7%	(10.9%)	78.5%
Yext, Inc.	13.15	87.0%	1,187	(127)	1,059	145	(52)	7.3x	NM	NM	NM	NM	NM	0.0%	(35.8%)	73.0%
Marin Software	14.80	539.9%	585	(29)	556	86	(12)	6.5x	NA	NA	NM	NM	NM	8.9%	(13.5%)	60.9%
Bazaarvoice, Inc.	5.00	81.5%	429	(58)	372	203	(3)	1.8x	1.8x	1.7x	NM	18.5x	14.2x	6.2%	(1.5%)	61.9%
Brightcove Inc.	7.33	55.4%	252	(28)	224	153	(11)	1.5x	1.5x	1.4x	NM	NM	36.1x	11.0%	(6.9%)	60.8%
SharpSpring, Inc.	4.20	72.4%	35	(7)	28	12	(6)	2.3x	2.1x	1.6x	NM	NM	NM	26.1%	(48.8%)	59.9%

Mean	5.5x	4.8x	4.0x	63.5x	20.4x	20.6x	17.6%	(5.6)%	68.9%
Median	6.5x	3.5x	3.2x	30.7x	20.9x	19.2x	13.0%	(6.9)%	65.7%

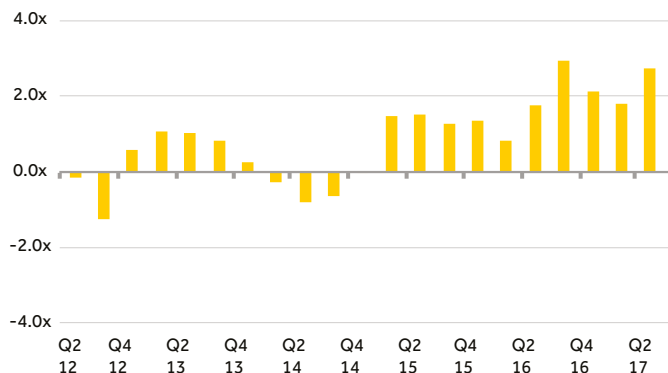
## LTM EBITDA MARGIN



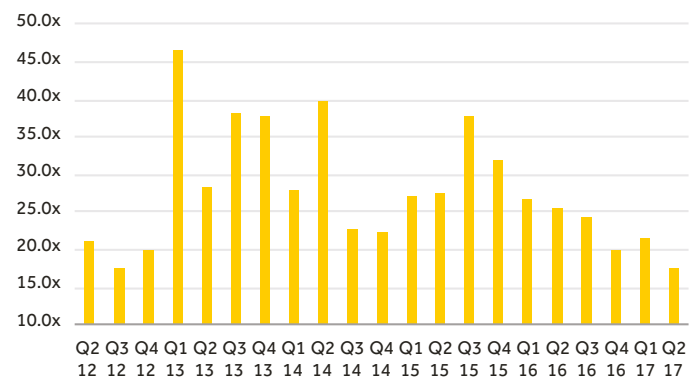
## REVENUE GROWTH



## NET DEBT / LTM EBITDA



## EV / LTM EBITDA



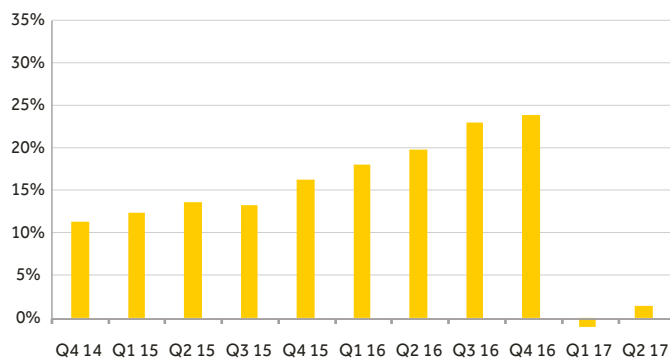


# SOCIAL MEDIA - SEGMENT ANALYSIS

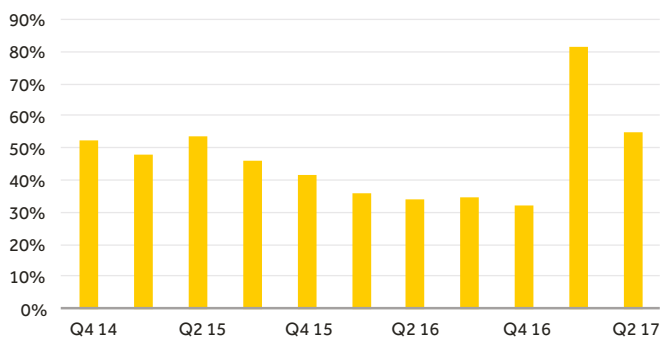
	SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP	NET DEBT.	ENT. VALUE (EV)	LTM		EV / REVENUE			EV / EBITDA			3 YEAR REVENUE CAGR	EBITDA MARGIN	GROSS MARGIN
						REVENUE	EBITDA	LTM	2017E	2018E	LTM	2017E	2018E			
Facebook, Inc.	\$172.23	98.1%	\$500,190	(\$35,452)	\$464,738	33,173	\$18,084	14.0x	11.9x	9.1x	25.7x	18.8x	14.8x	52.0%	54.5%	86.6%
Snap Inc.	14.79	50.2%	17,706	(2,782)	14,924	625	(2,920)	23.9x	16.8x	9.1x	NM	NM	NM	NA	(467.1%)	4.6%
Twitter, Inc.	17.85	85.5%	13,109	(2,334)	10,775	2,455	143	4.4x	4.5x	4.2x	NM	15.6x	14.4x	56.1%	5.8%	62.7%
Match Group, Inc.	25.38	99.5%	6,847	685	7,539	1,295	370	5.8x	5.9x	5.1x	20.4x	16.5x	13.8x	15.0%	28.6%	79.6%
The Meet Group, Inc.	3.64	56.4%	261	(19)	242	98	26	2.5x	2.0x	1.8x	9.2x	7.3x	5.7x	23.5%	27.0%	100.0%

Mean	10.1x	8.2x	5.9x	18.4x	14.6x	12.2x	36.7%	(70.2)%	66.7%
Median	5.8x	5.9x	5.1x	20.4x	16.1x	14.1x	37.8%	27.0%	79.6%

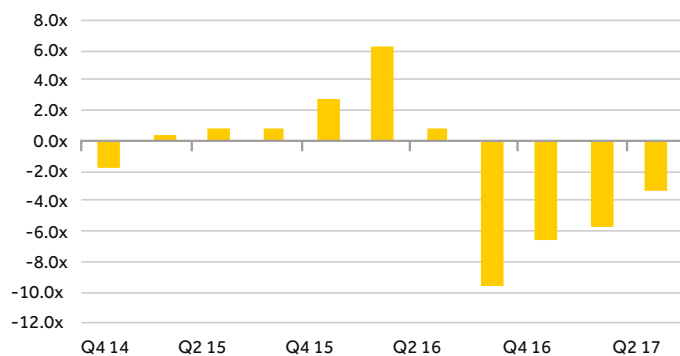
## LTM EBITDA MARGIN



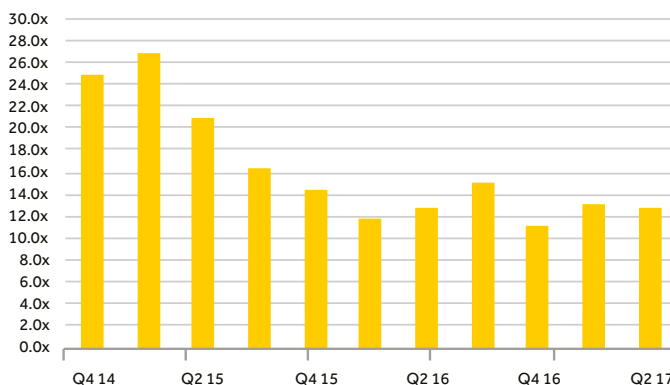
## REVENUE GROWTH



## NET DEBT / LTM EBITDA



## EV / LTM EBITDA



# INTERNET AND DIGITAL MEDIA M&A ACTIVITY

## 3Q 2017 M&A ACTIVITY

DATE	BUYER	TARGET	TRANSACTION VALUE (\$M)	EV / REVENUE	EV / EBITDA
9/27/17	Nielsen Holdings plc	Visual IQ, Inc.	NA	NA	NA
9/27/17	Stratacache, Inc.	Walkbase Oy	NA	NA	NA
9/26/17	IHS Markit Ltd.	automotiveMastermind, Inc.	\$545.6	NA	NA
9/25/17	OpenX Technologies, Inc.	Curiosity Media, Inc.	NA	NA	NA
9/24/17	hybris AG	Gigya, Inc.	NA	NA	NA
9/20/17	HubSpot, Inc.	Motion AI, Inc.	NA	NA	NA
9/20/17	Bally Gaming and Systems UK Ltd	NYX Gaming Group Limited	\$581.5	3.1x	21.9x
9/18/17	The Meet Group, Inc.	LOVOO GmbH	\$70.0	2.2x	NA
9/14/17	Atlantic Business Technologies	BoostSuite Corp	NA	NA	NA
9/13/17	Main Capital Partners B.V.	evania video GmbH	NA	NA	NA
8/31/17	SPYR APPS, LLC	Spectacle Games Inc.	\$2.0	NA	NA
9/11/17	Apartments, LLC	ForRent.com	\$385.0	NA	NA
9/11/17	Surefire Local	Sequoia Technologies IMS LLC	NA	NA	NA
9/11/17	Ansira, Inc.	Local Biz Now, LLC	NA	NA	NA
9/8/17	The Collinson Group Ltd.	Linkable Networks, Inc.	NA	NA	NA
9/6/17	BlueFocus International Marketing	Cogint, Inc.	NA	NA	NA
9/6/17	OBAR Camden Holdings Ltd	Snap Interactive, Inc.	\$34.0	1.4x	NM
9/4/17	RhythmOne plc	YuMe, Inc.	\$111.0	0.7x	11.0x
8/31/17	SPYR APPS, LLC	Spectacle Games Inc.	\$2.0	NA	NA
8/31/17	GTCR, LLC	Simplifi Holdings, Inc.	NA	NA	NA
8/29/17	RTL Group SA	SpotXchange, Inc.	\$388.7	NA	NA
8/29/17	Big Rhino Corporation	The Blender Company LLC	NA	NA	NA
8/29/17	Iversoft Solutions Inc.	ReSoMe Inc.	NA	NA	NA
8/29/17	Resilient Data Corporation	Squeeze Report, Inc.	NA	NA	NA
8/27/17	Harland Clarke Holdings Corp.	MaxPoint Interactive, Inc.	\$105.0	0.7x	NM
8/25/17	OBAR Camden Holdings Ltd	Slacker, Inc.	\$50.0	1.7x	NA
8/23/17	Semcasting, Inc.	Visible Customer Inc.	NA	NA	NA
8/23/17	Providence Equity Partners LLC	DoubleVerify, Inc.	NA	NA	NA
8/22/17	Spreaker Inc.	BlogTalkRadio, Inc.	NA	NA	NA
8/18/17	Twitch Interactive, Inc.	ClipMine, Inc.	NA	NA	NA
8/16/17	Alphabet Inc.	AIMATTER OOO	NA	NA	NA
8/15/17	Netserive, Inc.	Mixpo, Inc.	NA	NA	NA
8/15/17	AppSwarm, Inc.	MEDIAPLAY	NA	NA	NA
8/15/17	Helios and Matheson Analytics Inc.	MoviePass Inc.	\$26.7	NA	NA
8/14/17	Great Hill Partners, LLC	Zoom Information, Inc.	NA	NA	NA
8/14/17	MarketCast LLC	Fizziology LLC	NA	NA	NA
8/14/17	XLMedia PLC	Moneyblogs, LLC	\$7.0	NA	NA



DATE	BUYER	TARGET	TRANSACTION VALUE (\$M)	EV / REVENUE	EV / EBITDA
8/14/17	Grey Global Group Inc.	hug digital FZ LLC	NA	NA	NA
8/10/17	Aristocrat Leisure Limited	Plarium Global Ltd.	\$500.0	NA	NA
8/10/17	Lyft, Inc.	DataScore Inc.	\$501.0	NA	NA
8/10/17	AppCard Inc.	ProLogic Consumer Marketing	NA	NA	NA
8/10/17	Genesis Media LLC	Altitude Digital Partners, Inc.	NA	NA	NA
8/9/17	Accenture plc	Wire Stone, LLC	NA	NA	NA
8/8/17	Millennial Esports Corp.	Eden Games SAS	\$14.3	NA	NA
8/8/17	Advantage Solutions Inc.	Brand Connections, LLC	NA	NA	NA
8/8/17	The Walt Disney Company	BAM Technologies, LLC	\$3,761.9	NA	NA
8/7/17	Taptica	Tremor Video's DSP	\$50.0	NA	NA
8/3/17	PatientPoint, LLC	Patient Education Network	NA	NA	NA
8/2/17	OpenX Technologies, Inc.	Mezzobit Inc.	NA	NA	NA
8/1/17	CrownPeak Technology, Inc.	Evidon, Inc.	NA	NA	NA
7/31/17	Sony Pictures Television Networks UK	FUNimation Entertainment Ltd.	\$150.5	NA	NA
7/27/17	Dentsu Aegis Network Ltd.	Sokrati Technologies	NA	NA	NA
7/25/17	Z Capital Management LLC	Daily Racing Form, Inc.	NA	NA	NA
7/25/17	HubSpot, Inc.	Kemvi, Inc.	NA	NA	NA
7/25/17	Outbrain Inc.	Zemanta d.o.o.	NA	NA	NA
7/24/17	Facebook, Inc.	Source3, Inc.	NA	NA	NA
7/24/17	MH SUB I, LLC	WebMD Health Corp.	\$2,641.2	3.7x	14.3x
7/23/17	Scorpion	Driven Local	NA	NA	NA
7/18/17	Zeta Interactive Corp.	boomtrain, Inc.	NA	NA	NA
7/17/17	Taptica International Ltd	Adinnovation Inc.	\$8.9	NA	NA
7/17/17	Sizmek Inc.	Rocket Fuel Inc.	\$147.3	0.4x	NM
7/14/17	Warner Music Group Corp.	Songkick.com, Inc.	NA	NA	NA
7/11/17	Beattie Communications Group Ltd.	Tartan Group	NA	NA	NA
7/11/17	The Rubicon Project, Inc.	nToggle, Inc.	\$38.5	NA	NA
7/8/17	Amazon.com, Inc.	Game Sparks Ltd	NA	NA	NA
7/3/17	Merkle Inc.	Aquila Insight Ltd.	NA	NA	NA

$$R + (e^2 + p^2) = \text{NF}$$

# NOBLE CAPITAL MARKETS

## NOBLE CAPITAL MARKETS

NOBLE CAPITAL MARKETS is a research-driven investment and merchant bank focused on small cap, emerging growth companies in the healthcare, technology, media and natural resources sectors. That's what we are. Who we are is what makes us different.

Our people are talented, dedicated, experienced professionals who come together with a common cause; advising on long-term client-solutions by employing innovative, collaborative and responsive strategies. We're passionate and personable. We approach things from our clients' perspective.

We know that developing lasting relationships is reliant upon putting our clients' interests before ours. We understand the impact of our services. Insightful advisory and effective capital procurement can change lives. Empowering our clients to create employment, engineer technological and medical breakthroughs, producing products and services that lay the foundation for the future. For more than 30 years these have been our guiding principles. While much has changed over the three decades since we began, these core values and our reputation have not. Our clients must know what to expect from us. Then we can strive to exceed expectations.

## A SIMPLE FORMULA. OUR VALUE PROPOSITION

It starts with research With a fundamental belief that information guides the management process, NOBLE understands that there is no short-path to success. With this as a solid foundation, apply experience and execution delivered by people with passion. This is our formula to add value to your creation.

Research + Experience & Execution + People with Passion = Value

### FULL-SERVICE INVESTMENT BANK

- Established 1984.
- Private firm, employee owned.
- Built on commitment to provide value and support for our clients.

### FOCUSED INSTITUTIONAL SALES AND TRADING

- Seasoned sales and sales trading team.
- Long standing relationships with premier growth- focused Investors.

### RESEARCH DRIVEN CAPITAL MARKETS PLATFORM

- Experience team of Research Analysts covering approximately 100 companies.
- Focus on Technology, Media, Healthcare and Natural Resources.
- Strong Institutional Sponsorship.

### INVESTMENT BANKING COMMITMENT

- Proven track record.
- Senior level attention to every client and transaction
- Ability to deliver complete "mind share" of NOBLE on all transactions.

$$R + (e^2 + p^2) = \text{TF}$$

## INVESTMENT BANKING

Our investment banking team, together with our well-recognized equity research analysts and the equity capital markets group, provide our clients with fundamental capital markets advisory and support - prior, during and most importantly, after a transaction. NOBLE's investment banking team works closely with the management and Board of our corporate clients in order to fully understand operational and financial objectives. With this knowledge our banking team will develop an efficient and effective advisory program which offers a variety of services including:

### EQUITY CAPITAL MARKETS

- Secondary and Follow-on Offerings
- Registered Direct Offerings
- Initial Public Offerings
- At the market Offerings (ATM's)
- PIPEs/Private Sale Offerings

### DEBT CAPITAL MARKETS

- Senior Debt
- Mezzanine
- Convertible Debt
- Bridge Financings

### ADVISORY SERVICES

- Merger & Acquisitions
- Fairness Opinions
- Valuation Services

## SELECT MEDIA TRANSACTIONS

**AUDIONOW®**

(M&A)

**M&A Advisory**

Acquisition by ZenoRadio




July 2017

**SALEM MEDIA GROUP.**

(SALM)

**\$255,000,000**

Senior Secured Note Co-Manager




May 2017

**SRAX**

(SRAX)

**\$5,000,000**

Private Placement, Co-Placement Agent




April 2017

**SRAX**

(SRAX)

**Valuation Services**

ASC 350



April 2017

**THE McCLATCHY COMPANY**  
Since 1857

(MNI)

**Valuation Services**

ASC 350




March 2017

**SALEM COMMUNICATIONS**

(SALM)

**Valuation Services**

ASC 350




March 2017

**CUMULUS**

(CMLS)

**Valuation Services**

ASC 350




March 2017

**SRAX**

(SRAX)

**\$8,000,000**

Debt Refinancing



September 2016



$$R + (e^2 + p^2) = \text{NF}$$

## VALUATION SERVICES

NOBLE's Valuation and Advisory Services team specializes in providing business and intangible asset valuations, fairness opinions, financial and strategic analysis, and transaction support services covering a broad spectrum of industries and situations from early stage, middle market and Fortune 500 companies and capital market constituents. NOBLE's team is made up of professionals with numerous accreditations and bring excellence in accounting, taxation, and financial due diligence to provide companies with valuation advice for a multitude of purposes.

**Valuation** – NOBLE's professionals have significant experience in the valuation of privately owned and public businesses across a wide range of industries. We perform an extensive analysis of the business as well as evaluate industry trends and various other factors in order to inform our clients as to the likely range of value they can expect. Our services are characterized by intellectual and analytical rigor and our conclusions are backed by thorough documentation.

Chief Accounting Officers, Corporate Controllers, CFOs, and Corporate Boards rely on Noble's experienced valuation professionals to produce sophisticated, supportable, and timely valuations to assist in complying with financial reporting requirements, including:

- Purchase price allocation and fresh start accounting
- Goodwill and long-lived asset impairment testing
- Tangible asset valuation
- Fair Value measurement of financial assets & liabilities

**Opinions** - Whether our clients are looking to fulfill their fiduciary duties, mitigate risk or determine corporate value, we are there throughout the transaction process to offer objective advice based on rigorous analysis. We work on behalf of boards of directors, investors, trustees and other corporate leaders to advise and provide opinions on a wide range of transactions.

We have advised Corporate Boards, special transaction committees, independent trustees, management and other fiduciaries of middle-market public and private companies on the financial aspects of a transaction. Our independent advice withstands scrutiny from shareholders, bondholders, the SEC, IRS, or counterparties to a transaction..

## MERCHANT BANKING

Our Principal Investment focus is primarily on private and small-cap public (\$10mill to \$50mill market caps) companies in industries within NOBLE's research verticals. Investments are made directly by NOBLE and its affiliates and may also involve syndicate participants. We work to identify those companies with game-changing or superior products and technologies that have management teams with proven track-records of success. NOBLE structures investments to meet a company's capital needs whether its growth capital, liquidity or debt repayment. Capital commitment ranges from \$200k to \$2million principal and \$2million above with syndicate.

The scope of our Merchant Banking activities includes:

- Targeting domestic companies within our areas of focus and expertise
- Analyzing a company's opportunities and assessing its risks within their respective industry
- Structuring, negotiating and executing the transaction
- Work in assessing the appropriate time and manner in which to harvest the investment

NOBLE's Merchant Banking Team works continuously with our portfolio companies to assist the management team and Board of Directors to create value and grow their businesses to facilitate long-term shareholder value. Through our extensive sector research coverage, institutional investor non-deal road shows, equity conferences and market making, we blend a powerful mix of capital markets acumen to procure success.

$$R + (e^2 + p^2) = \text{RF}$$

## INVESTMENT BANKING TEAM

### Richard Giles, Managing Director (Boston)

rgiles@noblefcm.com - 617.692.9346

- Joined NOBLE in 2010 as Head of the Technology, Media & Telecommunications Investment Banking Group.
- 25 years of investment banking experience.
- Executed more than 100 M&A and capital raising transactions totaling \$10+ billion.
- Former head of Stifel Nicolaus' Technology Group.
- Former head of A.G. Edwards' Emerging Growth Group and member of Investment Committee for A.G. Edwards Capital.
- A.B., Harvard College; M.B.A., Harvard Business School.

### Christopher Ensley, Managing Director (New York)

censley@noblefcm.com - 646-790-5873

- Joined Noble in 2016
- 20 years of equity capital market expertise
- Previous experience at Salomon Brother, Lazard, Bear Stearns, Coady Diemar Partners
- Participated in \$16+ billion transactions over his tenure on Wall Street
- M.B.A., Vanderbilt University - Owen Graduate School of Management
- B.S., William & Mary

### John Cooleen, Managing Director Investment Banking / Head of Private Placements

jcooleen@noblefcm.com - 212.896.4625

- Joined Noble in 2016 as Head of Private Placements
- 20 years of Capital Markets experience gained working with emerging growth companies in sectors ranging from TMT, Healthcare, Consumer, Industrial and Energy
- Previous Investment Banking and Capital Markets experience at Merriman Capital, Roth Capital, Wells Fargo/Van Kasper, and Merrill Lynch
- B.A., Stockton State College

### Francisco Penafiel, Managing Director, Operations and Investment Banking

fpenafiel@noblefcm.com - 561.994.5740

- Executed M&A and capital raising transactions totaling over \$1 billion dollars in value.
- 7 years of sell side equity research experience, covering enterprise & infrastructure software, business services, media, communications, and banks.
- 6 years of portfolio managing experience.
- Manage the business development efforts in LATAM for NOBLE.
- Engineering, IT & Statistics, Escuela Superior Politecnica (Guayaquil, Ecuador); M.S. Economics, Florida Atlantic University.

### Stevan Grubic, Director - Valuation Services

sgrubic@noblefcm.com - 323.578.4936

- 15 years of middle-market investment banking experience
- Expertise in valuations, including business valuations, fairness opinions, litigation, and valuations for financial and tax reporting purposes (ASC805, ASC350, 123R, 409A).
- Accredited Senior Appraiser with the American Society of Appraisers (ASA) and has completed over 100 valuation engagements representing well over \$1.0 billion in asset values.
- Prior experience includes Orion Valuation Group, Singer Lewak, B. Riley & Co., L.H. Friend Weinress, Frankson & Presson and North American Capital Partners.

### John Connery, Analyst (Boca Raton)

jconnery@noblecapitalmarkets.com - 561.998.5478

- Joined Noble Capital Markets as an Investment Banking Analyst in 2016
- Worked previously as a private equity analyst for the family office of Marc Bell
- B.S. Investment Management, Lynn University

$$R + (e^2 + p^2) = \text{TF}$$

## RESEARCH - MEDIA & ENTERTAINMENT

**Michael Kupinski,  
Director of Research**

mkupinski@noblefcm.com - 561.994.5734

## SALES & TRADING

**Steven Rashkin, Managing Director,  
Head of Institutional Equity Sales**

srashkin@noblefcm.com - 561.994.5738

**Dan Pollitt, Managing Director,  
Head of Institutional Equity Trading**

dpollitt@noblefcm.com - 561.998.5483

## EQUITY CAPITAL MARKETS

**Renny Chavanikamannil, Managing Director,  
Equity Capital Markets**

rchav@noblecapitalmarkets.com - 646.790.5874

## NOBLE CAPITAL MARKETS

225 NE Mizner Boulevard, Suite 150

Boca Raton, Florida 33432

Phone: 561-994-1191

Fax: 561-994-5741

www.nobleresearch.com



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