



MEDIA SECTOR REVIEW

It's Tough Being A Media Stock

Concerns over the strength of the general economy and fears of an economic downturn weighed heavily on media stocks. Most media stocks have underperformed the general market over the past 12 months and year-to-date, as detailed in this report. (Deal stocks are largely the only stocks that have outperformed.) The underperformance is somewhat typical in a late stage economic cycle for consumer cyclical like media stocks. But, are investors too early on betting on an economic downturn?

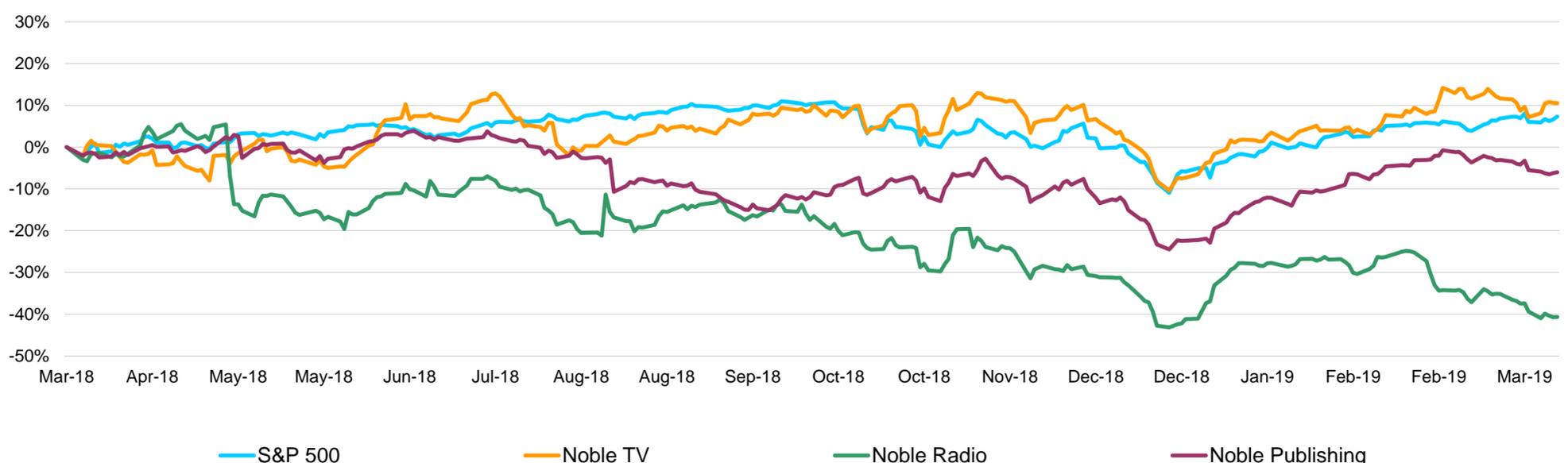
It is easy to see why investors are skittish. The economic recovery has now entered record territory: 123 months. The previous longest economic recovery was 120 months from March 1991 to March 2001. Slower growth has added to the concerns over the economy. The economy was growing a healthy 3.1% in the beginning of the year and economists are predicting that GDP will increase a more modest 1% to 1.5% in the second half of 2019. A more modest 1% GDP growth will feel like an economic downturn after a 3.1% report earlier in the year.

The curious question, however, is the effect of a slower growth economy on the upcoming third quarter results and the outlook for the fourth quarter. In our view, management teams likely will be somewhat cautious about the advertising environment heading into the fourth quarter. However, we would note that the economy is still healthy. In addition, it appears that many media stocks are oversold, with stock valuations trading near recession type valuations. Furthermore, we believe that investors will begin to focus on an improved advertising environment in 2020, fueled by political advertising. While we are constructive on many media stocks, we encourage investors to be selective and opportunistic.

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STOCK MARKET PERFORMANCE: TRADITIONAL MEDIA



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OUTLOOK - TRADITIONAL MEDIA

TELEVISION BROADCASTING

Apollo's Mission

The private equity group Apollo Global Management purchased a majority interest in Cox Media Group for \$3.1 billion earlier in the year. The Cox Group includes 14 television stations that cover 6.0% of the nation's TV households, which includes the UHF discount rule. It is not surprising that Apollo has already set its sights on its next target, TEGNA. News reports indicate that Apollo expressed interest in TEGNA even while it was pursuing the Cox stations in February. The consolidation wave in the television industry is fueled by the need to scale as a counterweight in negotiations with cable MVPDs and broadcast networks.

A potential merger with TEGNA, which currently covers roughly 31.8% of the nation's TV households, including the UHF discount rule, would put a potential merger very near the current ownership cap of 39%. In total, excluding the UHF discount rule, the combined company would cover roughly 50% of the nation's television households. This would allow the new company to join the ranks of its super broadcast peer group, including Nexstar and Sinclair, and provide sufficient negotiating leverage with MVPDs and the networks. We believe that Apollo needs to do a deal. Otherwise, its relatively small broadcast group will suffer, as many small broadcast groups have, without enough leverage to negotiate favorable retransmission deals with the cable operators and with the networks, which are clawing back more of the retrans revenue.

Aside from this potential deal, where do we stand with industry consolidation? The prospect of a raise in the ownership cap is unlikely. The FCC does not appear to have the will or the leadership to accomplish this, especially given the Democratic controlled House, which likely would have some say on the potential increase. Consequently, we are likely stuck with the 39% cap. There are still deals to be done for some broadcasters to reach that cap. However, large deals (aside from the potential TEGNA deal) will be few and far between. Nonetheless, there appears to be room for one or two more super broadcast groups to emerge from the remaining TV stations and smaller groups. A potential combination of some of the remaining groups under the ownership caps include: E.W. Scripps, Meredith, Graham Holdings, and Hearst, for instance.

It is obvious, however, that the industry is in the seventh inning stretch of its consolidation wave. Signs of continued industry consolidation from news about Apollo did little to bolster TV stocks overall and the sector underperformed the general market. Over the past 12 months, the Noble Television Index is down 8.3% versus a 2.1% increase for the general market, as measured by the S&P 500 Index. Even the year-to-date performance is uninspiring, up 7.7% versus an 18.7% increase for the S&P 500. What is disappointing about this performance is that it was largely driven by the larger cap stocks in the index, including Nexstar up 20% for the year, Sinclair, up 45% and TEGNA up 30%. So, what is happening? The rest of the smaller cap broadcast stocks performed poorly, with E.W. Scripps down 22%, and others like Entravision and Gray Television, roughly flat for the year. It is the tale of the haves and have nots. Investors appear to want to own television stocks heading into the election cycle, but want liquidity in case the outlook turns sour. At this time, we find value in the smaller cap names and would focus on our favorites SSP, EVC, and GTN.

RADIO BROADCASTING

Repairing Balance Sheets

The Radio industry is reeling, down a significant 44.8% over the past 12 months and down 21.9% year to date. In comparison, the general market as measured by the S&P 500 Index is up 2.2% and up 18.7%, respectively. We believe that investors have shied away from the sector given its relatively small size, lack of liquidity for large institutional investors, and high debt leverage. One of the largest market cap stocks and arguably one of the leaders in the industry, Entercom, is a relatively small \$440 million in market cap. Entercom does have decent trading volume, however, on average 1.5 million shares a day.

The high debt leverage in the industry is a problem. Investors have long memories from past economic cycles whereby a number of radio companies declared Chapter 11 and/or recapitalized in the economic downturns in 1991 and in 2000. Most recently, iHeart Media and Cumulus Media recapitalized. The aversion to high debt leverage is reflected in such stocks as Salem Media, down 26.8% for the last quarter and 37% through the end of September. The company's debt leverage to our estimated cash flow rests at 6.6 times.



OUTLOOK - TRADITIONAL MEDIA

RADIO BROADCASTING (cont.)

Radio management teams are trying to avoid recapitalizations by aggressively tackling their debt through asset sales, asset swaps to improve efficiencies and cash flow, and aggressive use of free cash flow to pare down debt. Cumulus Media is a good example of a company managing its station portfolio to maximize its cash flow and aggressively pare down debt. The company announced a voluntary debt payment of \$50 million in the latest quarter, which followed some station sales and asset swaps. As a result, the CMLS shares are among the few stocks that are up year-to-date, up 19.2%, and outperformed the market on a comparable year to date basis.

Yet another company that has beat the odds for the poor industry stock performance has been Townsquare Media. While the company has relatively high levels of debt, the company has been growing revenues and cash flow due its strong digital media performance. Like many in the industry, the company is using its free cash flow to aggressively pare down debt. We believe that there is time to repair balance sheets given that an economic downturn does not appear imminent. As such, we believe that many of the stocks that are currently out of favor have significant upside potential based on the prospect of debt reduction, like Salem Media. In addition, in spite of the above average performance, we continue to favor Townsquare Media, given the prospect of a revaluation of its shares to reflect its fast-growing digital media businesses.

PUBLISHING

Will it last?

The Publishing stocks outperformed the general market in the last twelve months and year-to-date, bolstered by the performance of the leadership stock in the group, New York Times, which was up 23% year to date. The Index is market cap weighted and, as such, the New York Times \$4.7 billion market cap significantly skewed the industry performance. The Publishing Index was also buoyed by the prospective merger between New Media and Gannett, \$1.2 billion market cap. The Gannett shares are up 18.1% year to date.

This market cap weighted index masks some of the more problematic stocks in the index, such as The McClatchy Company, down 61.6% and Tribune Publishing, down 31.4% year-to-date. While investors have avoided highly leveraged stocks, like McClatchy, the weakness in the shares of Tribune Publishing is noteworthy. The company has virtually no long-term debt and a large \$95 million cash position. We would also note that stock performance comparisons do not reflect the \$1.50 per share special cash dividend which was paid on July 2, 2019.

We believe that high debt leverage is likely to overhang the industry, even as investors digest the new Gannett, following the merger with New Media. In our view, the relatively high debt of the combined company likely will be a significant hurdle for investors. As such, we believe that there is an opportunity for the Tribune Publishing shares to shine. In our view, the company is in a solid position given its conservative balance sheet and ability to make acquisitions that could transform and/or transition the company toward revenue and cash flow growth.

*Source: Noble Capital Markets Equity Research Report; Director of Research: Michael Kupinski

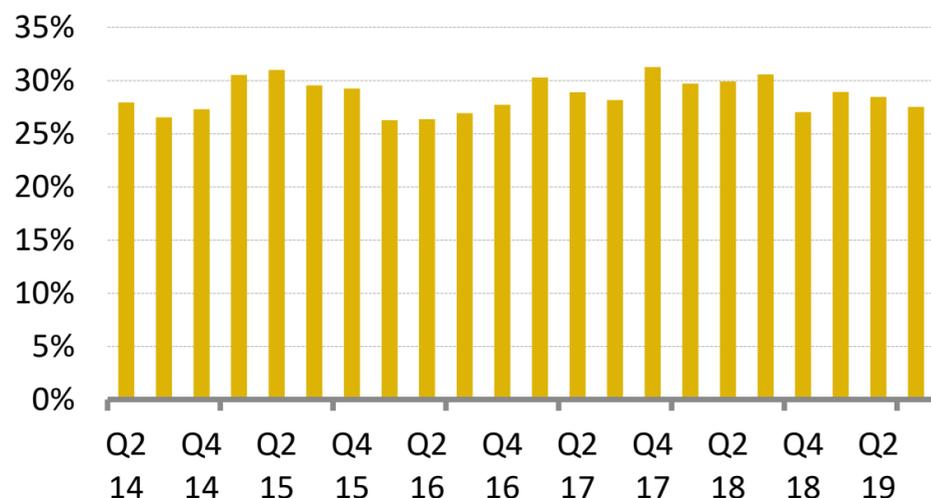


TV – SEGMENT ANALYSIS

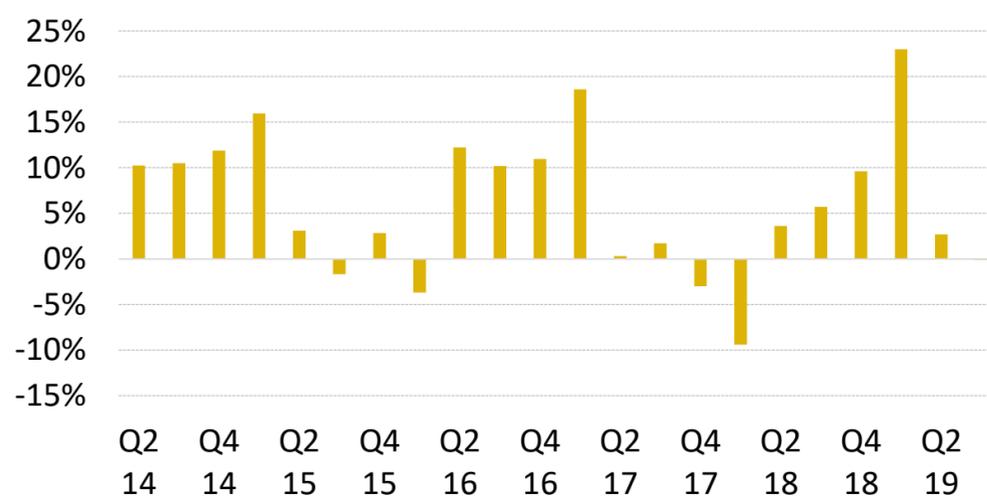
	Share Price	% of 52 Week High	Market Cap (\$M)	Net Debt (\$M)	Ent. Value (\$M)	LTM		Ent. Value /			Net Debt /		3 Year Revenue CAGR	EBITDA Margin	Dividend Yield		
						Revenues (\$M)	EBITDA (\$M)	Revenues LTM	2019E	2020E	LTM	2019E				2020E	
CBS Corporation	\$39.04	65.5%	\$14,627	\$10,159	\$24,879	\$15,263	\$3,123	1.6x	1.6x	1.5x	8.0x	7.3x	6.7x	3.3x	4.6%	20.5%	1.8%
Nexstar Media Group	98.99	82.5%	4,564	3,812	8,390	2,767	1,034	3.0x	2.7x	1.7x	8.1x	8.6x	4.2x	3.7x	45.6%	37.4%	1.8%
Sinclair Broadcast Group	41.61	62.5%	3,832	3,076	6,868	3,152	871	2.2x	1.4x	1.0x	7.9x	9.1x	6.3x	3.5x	11.2%	27.6%	1.9%
TEGNA Inc.	14.69	88.6%	3,183	3,014	6,197	2,235	773	2.8x	2.8x	2.3x	8.0x	9.5x	6.6x	3.9x	7.7%	34.6%	1.9%
Gray Television	15.42	60.9%	1,538	3,713	5,903	1,633	594	3.6x	2.8x	2.5x	9.9x	9.0x	6.8x	6.3x	22.0%	36.4%	0.0%
E.W. Scripps	12.62	53.9%	1,021	1,544	2,564	1,300	218	2.0x	1.8x	1.4x	11.8x	15.0x	6.5x	7.1x	22.7%	16.8%	1.6%
Entravision	2.79	51.5%	237	129	366	291	54	1.3x	1.3x	1.3x	6.8x	7.3x	6.5x	2.4x	5.4%	18.4%	7.2%

Mean	2.4x	2.1x	1.7x	8.6x	9.4x	6.2x	4.3x	17.0%	27.4%	2.3%
Median	2.2x	1.8x	1.5x	8.0x	9.0x	6.5x	3.7x	11.2%	27.6%	1.8%

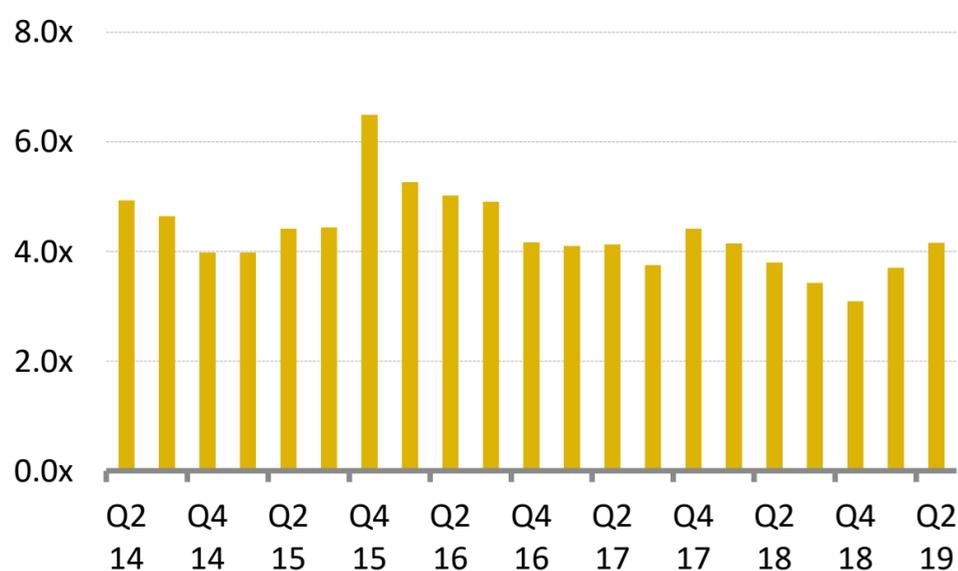
LTM EBITDA MARGIN



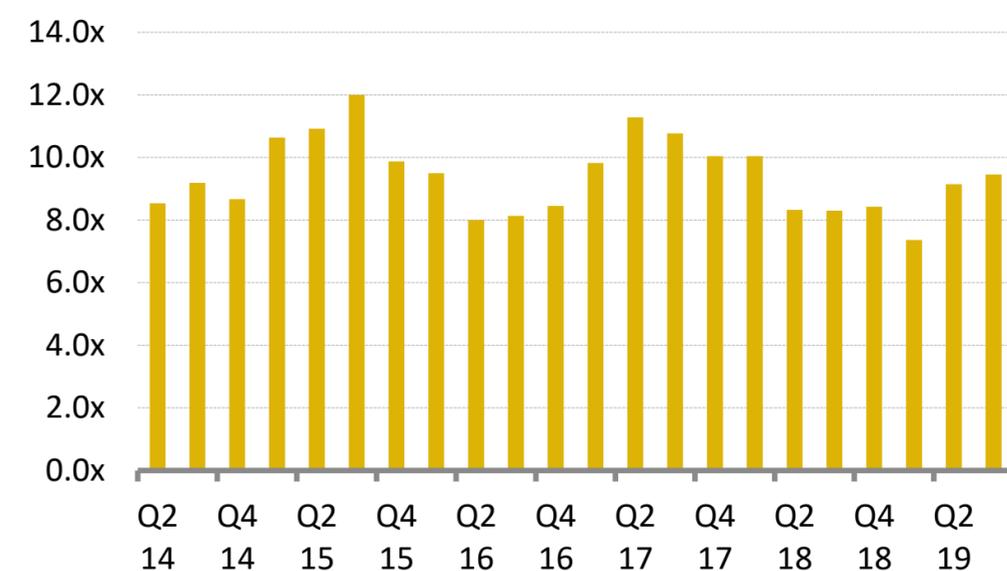
REVENUE GROWTH



NET DEBT / LTM EBITDA



EV / EBITDA



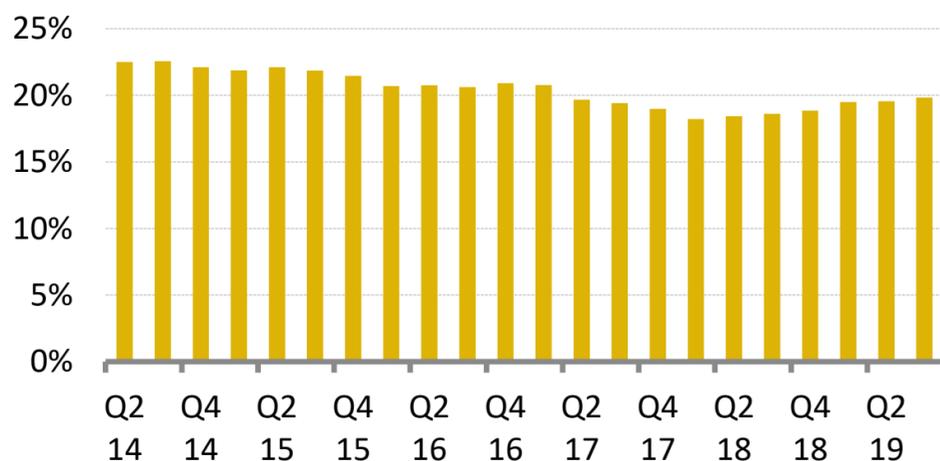


RADIO – SEGMENT ANALYSIS

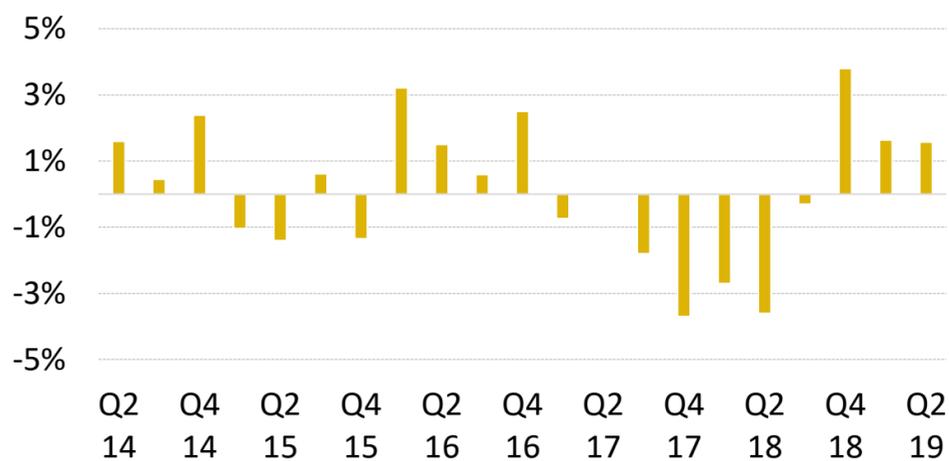
	Share Price	% of		Net Debt (\$M)	Ent. Value (\$M)	LTM		Revenues			Ent. Value / EBITDA			Net Debt / EBITDA	3 Year Revenue CAGR	EBITDA Margin	Dividend Yield
		52 Week High	Market Cap (\$M)			Revenues (\$M)	EBITDA (\$M)	LTM	2019E	2020E	LTM	2019E	2020E				
iHeartMedia	\$15.38	80.9%	\$989	\$6,626	\$7,624	\$6,370	\$1,575	1.2x	2.1x	2.0x	4.8x	7.6x	7.0x	4.2x	0.4%	24.7%	NA
Entercom	3.12	38.8%	445	1,978	2,423	1,480	310	1.6x	1.6x	1.6x	7.8x	7.0x	6.7x	6.4x	52.2%	21.0%	2.6%
Cumulus Media	14.53	72.7%	247	1,226	1,473	1,139	222	1.3x	1.3x	1.3x	6.6x	7.3x	7.2x	5.5x	(0.8%)	19.5%	NA
Urban One	1.95	81.0%	89	934	1,034	444	137	2.3x	NA	NA	7.5x	NA	NA	6.8x	(0.9%)	30.8%	NA
Townsquare Media	6.22	77.7%	118	538	658	444	100	1.5x	1.5x	1.4x	6.6x	6.6x	6.3x	5.4x	(0.8%)	22.5%	4.8%
Salem Media	1.50	43.4%	40	320	360	258	36	1.4x	1.4x	1.4x	10.1x	10.4x	10.1x	9.0x	(0.4%)	13.8%	17.3%
Beasley Media	2.96	42.0%	83	268	351	264	45	1.3x	1.3x	1.3x	7.9x	7.7x	7.0x	6.0x	34.4%	16.9%	6.8%
Emmis Communications	5.01	74.2%	66	105	199	114	14	1.7x	NA	NA	14.0x	NA	NA	1.7x	(21.0%)	12.5%	NA
Saga Communications	30.00	79.2%	178	(22)	156	125	27	1.3x	NA	NA	5.8x	NA	NA	NM	3.7%	21.6%	4.8%

Mean	1.5x	1.6x	1.5x	7.9x	7.8x	7.4x	5.6x	7.4%	20.4%	7.3%
Median	1.4x	1.5x	1.4x	7.5x	7.4x	7.0x	5.8x	-0.4%	21.0%	4.8%

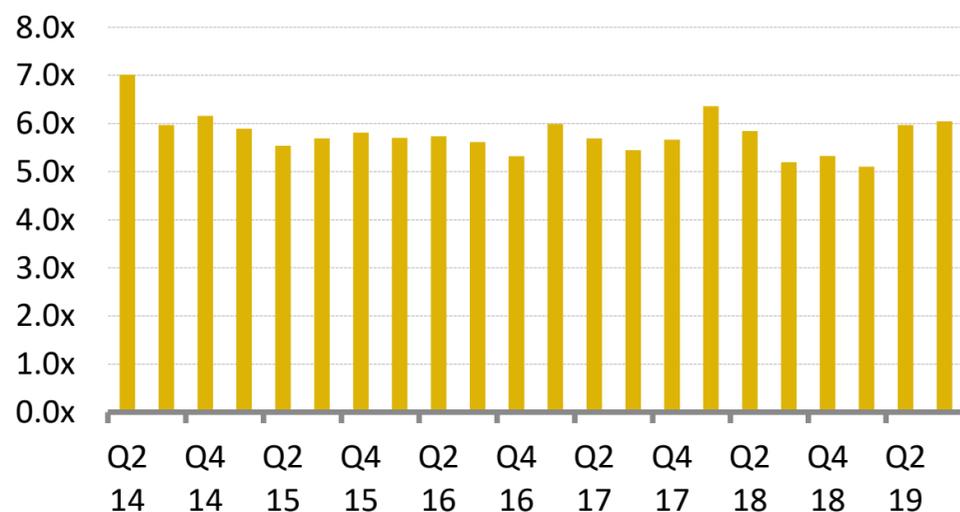
LTM EBITDA MARGIN



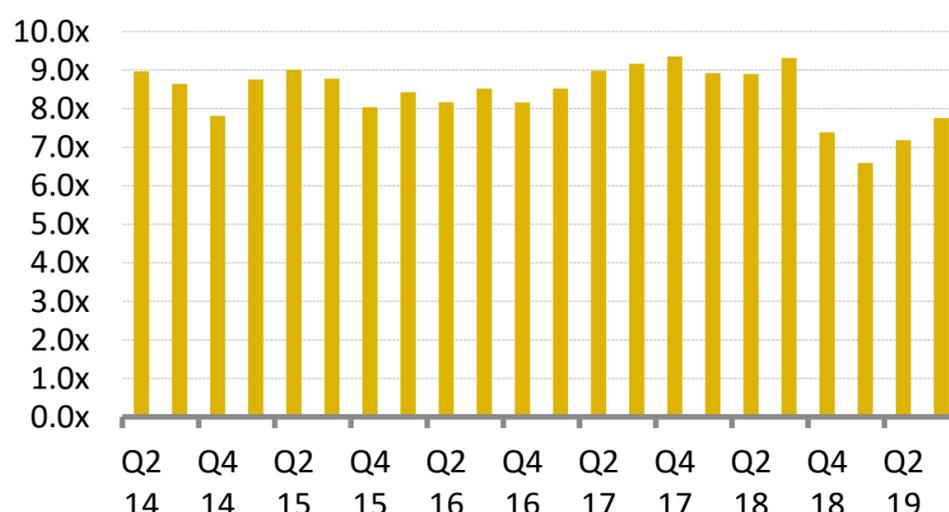
REVENUE GROWTH



NET DEBT / LTM EBITDA



EV / EBITDA

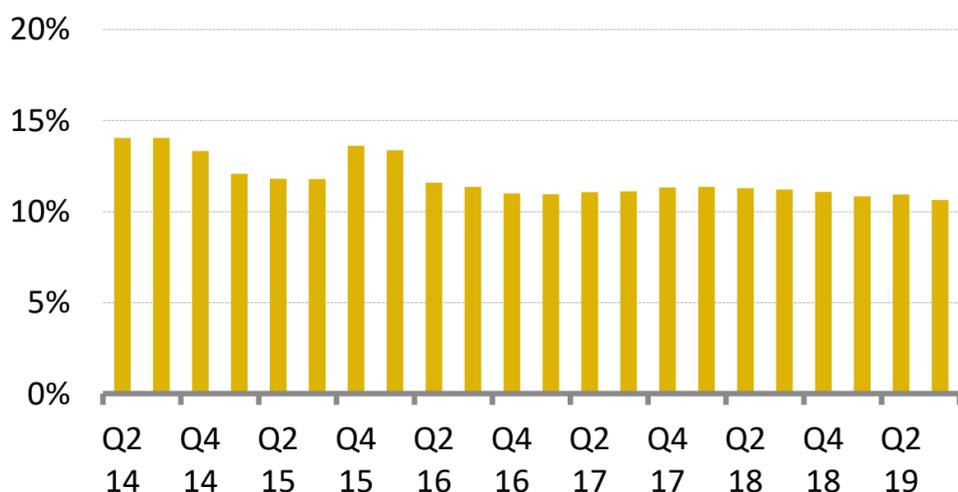




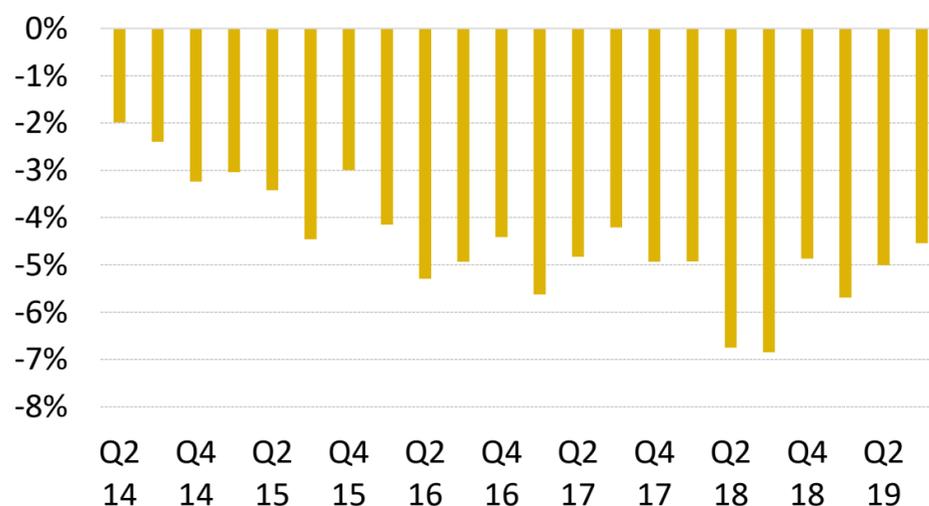
PUBLISHING – SEGMENT ANALYSIS

	Share Price	% of 52 Week High	Market Cap (\$M)	Net Debt (\$M)	Ent. Value (\$M)	LTM		Ent. Value /			EBITDA			Net Debt / EBITDA	3 Year Revenue CAGR	EBITDA Margin	Dividend Yield
						Revenues (\$M)	EBITDA (\$M)	Revenues LTM	2019E	2020E	LTM	2019E	2020E				
News Corporation	\$13.86	94.6%	\$8,154	(\$207)	\$9,165	\$10,074	\$1,040	0.9x	0.9x	0.9x	8.8x	8.0x	7.0x	NM	6.7%	10.3%	NA
The New York Times	29.01	80.0%	4,816	(386)	4,431	1,767	224	2.5x	2.4x	2.3x	19.8x	19.4x	16.9x	NM	3.4%	12.7%	0.7%
Gannett	10.70	89.2%	1,226	540	1,766	2,787	281	0.6x	0.6x	0.7x	6.3x	6.1x	6.6x	1.9x	0.4%	10.1%	NA
New Media Investment Group	8.52	52.4%	511	535	1,047	1,588	151	0.7x	NA	NA	7.0x	NA	NA	3.6x	8.5%	9.5%	NA
The McClatchy Company	2.85	31.6%	23	794	816	763	70	1.1x	1.1x	1.1x	11.7x	7.9x	7.7x	11.3x	(8.6%)	9.2%	0.0%
Lee Enterprises	2.00	54.2%	116	432	550	526	118	1.0x	NA	NA	4.7x	NA	NA	3.7x	(5.7%)	22.4%	0.0%
Tribune Publishing	8.48	50.3%	303	34	376	1,034	90	0.4x	0.4x	0.4x	4.2x	3.6x	3.6x	0.4x	(14.9%)	8.7%	0.0%
A.H. Belo Corporation	3.72	77.5%	80	(27)	53	196	4	0.3x	NA	NA	12.0x	NA	NA	1.7x	(9.4%)	2.3%	NA
Mean								0.9x	1.1x	1.1x	9.3x	9.0x	8.4x	3.8x	-2.5%	10.6%	0.2%
Median								0.8x	0.9x	0.9x	7.9x	7.9x	7.0x	2.7x	-2.7%	9.8%	0.0%

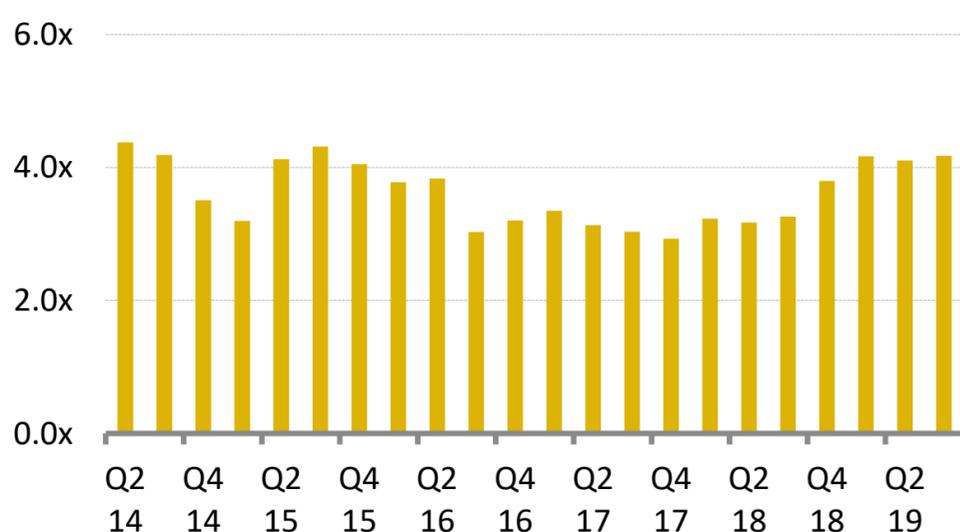
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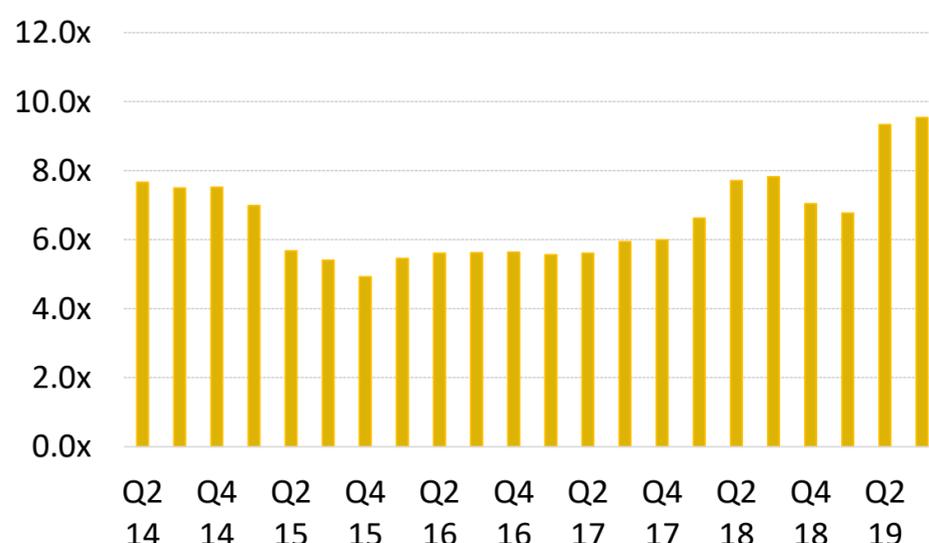
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NET DEBT / LTM EBITDA



EV / EBITDA



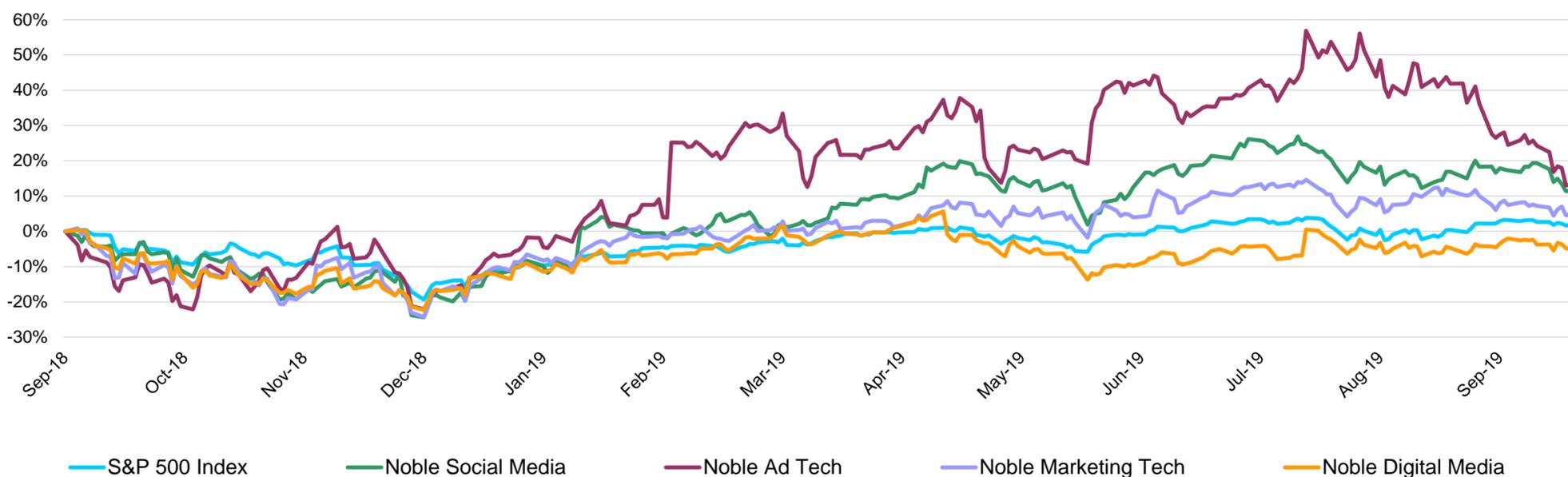
TRADITIONAL MEDIA M&A ACTIVITY

Date	BUYER	TARGET	TRANSACTION VALUE (\$M)	EV / REVENUE	EV / EBITDA	CLASSIFICATION
9/24/2019	Vox Media, Inc.	New York Media LLC	\$105.0	NA	NA	Bi-Weekly Magazine; Online Sites
9/23/2019	Outfront Media Inc.	Assets of Total Outdoor Corp. in Chicago	NA	NA	NA	Outdoor Advertising
9/23/2019	Leighton Enterprises, Inc.	Radio Stations Of Paradis Broadcasting	NA	NA	NA	Radio Stations
9/19/2019	Newcom Media Inc.	Finance et Investissement/Investment Executive/Advisor's Edge	NA	NA	NA	Publishing; B2B Magazines
9/16/2019	Arkansas County Broadcasters, Inc.	Stuttgart Daily Leader	NA	NA	NA	Newspaper
9/12/2019	Boat Rocker Media, Inc.	Platform One Media	NA	NA	NA	TV Production
9/12/2019	Entertainment One Ltd.	BLACKFIN INC.	NA	NA	NA	TV Production
9/10/2019	Serendipity Media LLC	Revue magazine	NA	NA	NA	Magazine
9/9/2019	Anthem Sports & Entertainment Corp.	AXS TV LLC	NA	NA	NA	Cable Networks
9/6/2019	Bullseye Total Media, LLC	Montani Films, LLC	NA	NA	NA	Video Production (Commercials; Videos)
9/5/2019	Andrew Bagley & Chuck Davis	The Helena-West Helena World	NA	NA	NA	Newspaper
9/3/2019	Link Media Georgia, LLC	Outdoor Advertising Assets of Image Outdoor Advertising, LLC	NA	NA	NA	Outdoor Advertising
9/3/2019	Iron Stream Media	Lighthouse Publishing of the Carolinas LLC	NA	NA	NA	Book Publishing
9/2/2019	Kinopolis Group NV	MJR Theatres, Inc.	\$152.3	1.9x	NA	Movie Theaters
8/30/2019	Champaign Multimedia Group LLC	Substantially all the Assets of News-Gazette Media	NA	NA	NA	Weekly Newspapers; Radio Stations
8/29/2019	Yankee Global Enterprises & Others	Yankees Entertainment & Sports Network, LLC	\$3,470.0	NA	NA	Cable Networks; Sports
8/26/2019	Shaw Media	NewsTribune/Illinois AgriNews/Indiana AgriNews	NA	NA	NA	Newspaper; Weekly Magazines
8/22/2019	Hasbro, Inc.	Entertainment One Ltd.	\$3,412.1	3.6x	30.4x	Movies; Entertainment; TV Production Studio
8/15/2019	Immaculate Heart Media, Inc.	Nine AM stations and four FM translators in eight markets	\$8.7	NA	NA	Radio Stations
8/14/2019	Telemundo Communications Group, Inc.	Underground Producciones	NA	NA	NA	TV Production
8/14/2019	Seven Mountains Media LLC	Two PA Stations of Connoisseur Media Licenses, LLC	\$1.1	NA	NA	Radio Stations
8/13/2019	CBS Corporation	Viacom Inc.	\$20,225.0	1.6x	6.7x	Cable Networks; Movie Studios
8/9/2019	The E.W. Scripps Company	TV Station in West Palm Beach	NA	NA	NA	TV Station
8/8/2019	Immaculate Heart Media, Inc.	Radio Stations in Florida	\$8.2	NA	NA	Radio Stations
8/8/2019	NA	WORL-AM in Orlando, Florida of Salem Media Group	\$0.9	NA	NA	Radio Stations
8/7/2019	Hackman Capital Partners, LLC	The MBS Group	\$650.0	NA	NA	Film and TV Production
8/6/2019	Nickelodeon	Paws, Inc.	NA	NA	NA	Publishing; Comic Strip (Garfield)
8/6/2019	Fox Entertainment Group, Inc.	Bento Box Entertainment LLC	NA	NA	NA	TV Production; Cartoons
8/5/2019	New Media Investment Group Inc.	Gannett Co., Inc.	\$2,227.2	0.8x	7.9x	Newspapers
8/2/2019	Avant Publications LLC	Capital Cities Media, Inc.	NA	NA	NA	Newspapers
8/2/2019	Rakuten, Inc.	KonMari Media Inc.	NA	NA	NA	Publishing; TV Show
8/1/2019	IdeaSoil, LLC	Commercial Architecture Magazine	NA	NA	NA	Magazine; Trade Publication
8/1/2019	Times Media Group	Southland Publishing, Inc.	NA	NA	NA	Newspapers; Magazines
8/1/2019	Pacific Publishing Company, Inc.	Nevada Appeal/The Record-Courier/Lahontan Valley News	NA	NA	NA	Newspapers
7/31/2019	ITV Global Entertainment Ltd	Armoza International Media Ltd.	NA	NA	NA	Television Production
7/30/2019	Sony Music Holdings Inc.	Milan Records/Jade	NA	NA	NA	Music Label
7/19/2019	Yankee Publishing Inc.	Family Tree Magazine of F+W Media, Inc.	NA	NA	NA	Magazine
7/18/2019	Ogden Newspapers, Inc.	Sandusky Register And Norwalk Reflector	NA	NA	NA	Newspapers
7/17/2019	CBS Corporation	PatMa Productions, LLC	NA	NA	NA	Film & TV Production Studio
7/16/2019	Jeff Warshaw/Management Team	Connoisseur Media, LLC (from Petrus Holding Co.)	NA	NA	NA	Radio Stations
7/15/2019	Lamar Advertising Company (REIT)	Ashby Street Outdoor Holdings LLC	NA	NA	NA	Outdoor Advertising; Billboards
7/8/2019	New Tradition Media, LLC	San Francisco Media Assets of Total Outdoor	NA	NA	NA	Outdoor Advertising; Billboards
7/2/2019	Pacific Media Group	4 Radio Stations in Hawaii from Ohana Broadcasting	\$5.5	NA	NA	Radio Stations
7/1/2019	Byrne Acquisition Group, LLC	Seven radio stations of First Media Radio	\$3.4	NA	NA	Radio Stations
7/1/2019	Stephens Media LLC	Thirty-Seven Radio Stations from Mapleton Communications	NA	NA	NA	Radio Stations

*Source: Capital IQ though 9/30/2019

OUTLOOK – INTERNET AND DIGITAL MEDIA

STOCK MARKET PERFORMANCE: INTERNET AND DIGITAL MEDIA



INTERNET AND DIGITAL MEDIA COMMENTARY

2019 – Podcasting’s Watershed Year

Podcasts have been around since 2004. Yet, for many years podcasting failed to elicit the same excitement as its video counterpart, streaming video or over-the-top TV (OTT). Just as video viewing has migrated from linear TV to video-on-demand, so too has audio listening moved from live/linear to on demand listening. History will probably look at 2019 as the year that podcasting graduated to the big leagues. We see three driving factors behind that change.

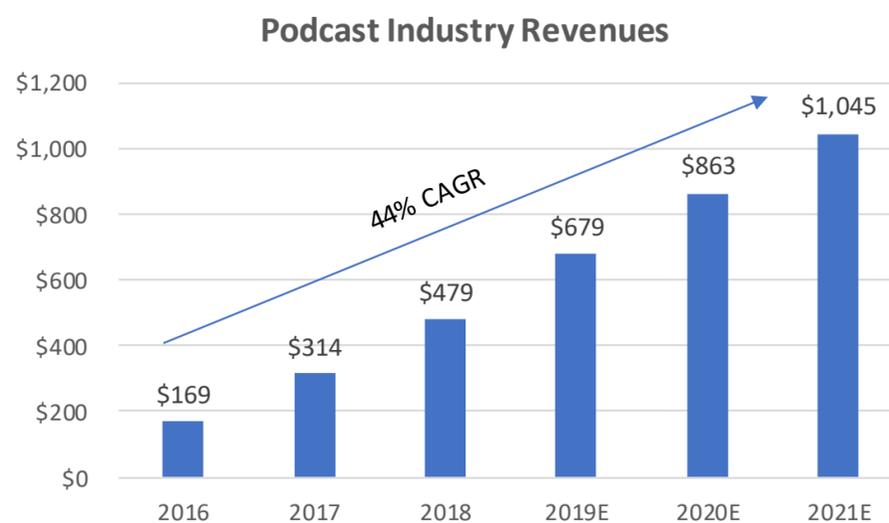
The first driver is consumer adoption at scale. It is hard to walk down the street and not see people with ear buds in the ears. Consumer adoption of online audio has reached scale with 189 million listeners or 67% of the total 12+ population listening to streaming audio each month. Nielsen reports that the average person 18+ listens to an hour and a half of streaming audio each week. Podcasting has also reached something of a tipping point, with Edison Research reporting that 51% have listened to a podcast, 33% of the 12+ population (90M people) have listened to a podcast in the last month, and 22% of the U.S. population listens each week.

The second driver is advertiser acceptance. Until recently podcast advertisers primarily consisted of direct response advertisers. 2019 appears to be the year in which brand advertisers began to adopt the platform at scale. There are several reasons for this: 1) podcast listeners hear live ads made personal from their favorite hosts; 2) podcast ads are native and integrated seamlessly into the show; 3) listeners pay attention to podcast ads (they don’t skip ads and their brand recall is higher than other mediums); 4) listeners buy products from podcast ads (according to podcaster Midroll, 63% of podcast listeners have bought a product they heard on a podcast); 5) podcast listeners are an attractive demo: young, educated, and affluent.

For these reasons, as shown in the chart below, eMarketer forecasts podcast advertising to grow to more than \$1B in 2021, up from \$479M in 2018, representing a 3-year CAGR (compound annual rate) growth of 30%. In 2019 alone, podcasting is projected to grow by more than 40%. Not bad for a medium that has been around for 15 years.

OUTLOOK – INTERNET AND DIGITAL MEDIA

INTERNET AND DIGITAL MEDIA COMMENTARY



Source: eMarketer, July 2019

Finally, Spotify has almost single handedly brought the sector to the forefront, having announced several acquisitions as part of its plan to become the world's leading audio platform. Spotify sees audio as only 1/10th the market size of video, representing a huge upside, but it also believes over time podcasts will represent 20% of all of Spotify's content. Spotify states that its podcast listeners are nearly twice as engaged as non-podcast listeners on their platform. Spotify's goal is to provide the best content, the best discovery and the best user experience for consumers.

A look at recent podcast M&A transactions shows that in addition to Spotify, a handful of radio companies, including Entercom, iHeart and Rogers Media have gotten in the game as well. We expect continued M&A activity in the podcast industry, as it pertains to both podcast content creators as well as software companies that provide the tools to create and distribute podcasts.

Notable Podcast M&A Transactions			
Date	Buyer	Target	Transaction Value
9/12/19	Spotify	SoundBetter LLC	NA
8/7/19	Entercom	Pineapple Street Media	\$18
8/7/19	Entercom	Cadence13	\$45
6/12/19	Triton Digital	Omny Studio	NA
5/1/19	Rogers Media	Pacific Content Company	NA
4/25/19	Acast AB	Pippa	NA
3/26/19	Spotify	Cutler Media (Parcast)	\$56
2/6/19	Spotify	Anchor FM	\$155
2/6/19	Spotify	Gimlet Media	\$196
10/17/18	E.W. Scripps	Triton Digital	\$150
9/13/18	iHeartMedia	Stuff Media LLC	\$55



OUTLOOK – INTERNET AND DIGITAL MEDIA

INTERNET AND DIGITAL MEDIA COMMENTARY

Internet & Digital Media Stock Price Performance: The third quarter of 2019 was a difficult quarter for the market in general and for three of Noble's four internet and digital media sectors. The S&P 500 Index was up 1% in the third quarter which only Noble's Digital Media Index (+4%) outperformed. Noble's Marketing Tech (-3%), Social Media (-6%) and Ad Tech (-14%) Indices all underperformed the broader market. Through the first nine months of the year, the S&P Index was up 19%, while Noble's Social Media (+40%), Ad Tech (+36%), and Marketing Tech (+24%) Indices outperformed the S&P while the Digital Media Index (+14%) underperformed.

Digital Media

Noble's Digital Media Index (+4%) outperformed the S&P 500 (+1%), driven almost entirely by shares of Alphabet (GGO.L, +13%). Other than microcap stock The Maven (MVEN, +37%, which recently acquired TheStreet.com), no other digital media stock was up in the quarter. Interactive Corp (IAC, +0%), was flat, while Netflix (NFLX, -27%) and Spotify (SPOT, -22%) were down. The most notable trend in the sector are the streaming content wars as services such as Netflix, Amazon Prime Video, Hulu, Disney+, HBO Now, Peacock (NBCUniversal's streaming service), AppleTV Plus and others compete to provide "binge-able" programming to its users. Netflix recently lost the U.S. streaming rights to both *The Office* and *Friends*. Peacock agreed to pay \$500M for the domestic streaming rights to *The Office* for 5 years beginning in 2021. Warner Media's HBO Max agreed to pay \$425M for the domestic streaming rights to *Friends* for 5 years starting in 2020.

Advertising Technology

Noble's Ad Tech Index fell by 16% in 3Q 2019 but for the year it is up 36%. Eight of the sector's twelve stocks were down in the quarter. The strongest quarter was turned in by Perion Networks (PERI, +68%) as the company turned the corner and posted year-over-year revenue growth for the first time in 3 years. Its search revenues were strong (+21%) while its Undertone advertising sector demonstrated a strong pipeline of new business for its new Synchronized Digital Branding solution, which uses AI to personalize the customer journey, and enable advertisers to deliver the right message at the right time. Rubicon Project (RUNI, +37%) also posted strong revenue growth and a big swing to positive EBITDA in 2Q 2019 vs. EBITDA losses in 2Q 2018. Laggards in the sector included SRAX (SRAX, -50%) and Fluent (-49%), both of whom missed Street expectations.

Marketing Technology

Noble's Marketing Technology Index finished the quarter down 5%, though year-to-date results are much stronger (+24%). 3Q 2019 performance leaders include Cardlytics (CDLX, +29%, after being up 57% in 2Q 2019), LivePerson (LPSN, +27%), and Akamai (AKAM, +14%). Laggards during the quarter included SharpSpring (SHSP, -25%), and Yext (-21%). Competition in the marketing technology sector is currently fueled by the post-GDPR transition from cookie-based marketing to people-based marketing. This is putting a premium on data assets and cross-device identity solutions so that marketers can more effectively use their own data about their customers and deliver relevant marketing messages to individuals across multiple online platforms and devices.

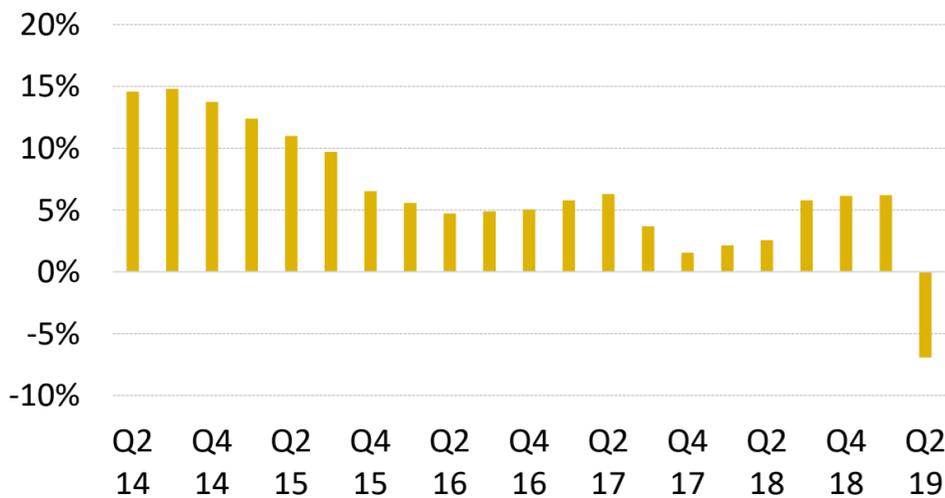
Social Media

Social media stocks were down in 3Q, reflecting weakness in shares of Facebook (FB, -8%) and The Meet Group (MEET, -6%). Nevertheless, several social media stocks performed well in the quarter, led by Twitter (TWTR, +18%) and Snap, Inc. (SNAP, +11%). The biggest news in the sector was Facebook's early September launch of Facebook Dating in the U.S. The service, which began rolling out overseas last year, provides users 18 years and up to access a suite of features, including specialized profiles and a matchmaking algorithm, designed to help find meaningful relationships. The service presents users with potential matches based on location and indicated preferences. Instagram is fully integrated into the service and allows users to share Instagram or Facebook stories.

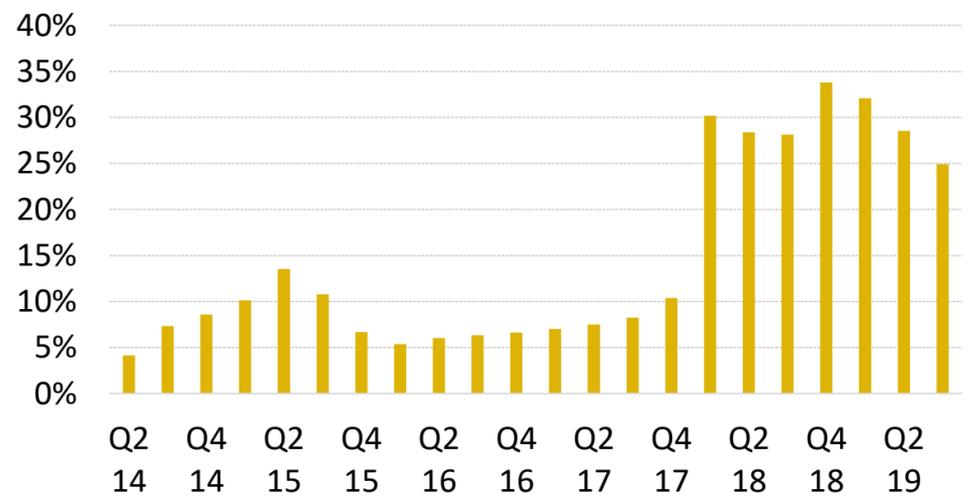
DIGITAL MEDIA – SEGMENT ANALYSIS

	Share Price	% of 52 Week High	Market Cap (\$M)	Net Debt (\$M)	Ent. Value (\$M)	LTM		Ent. Value /			EBITDA		Net Debt / EBITDA	3 Year Revenue CAGR	EBITDA Margin	Gross Margin	
						Revenues (\$M)	EBITDA (\$M)	Revenues LTM	2019E	2020E	LTM	2019E					2020E
Alphabet Inc.	\$1,210.96	93.4%	\$839,678	(\$106,830)	\$732,167	\$148,299	\$43,507	4.9x	4.5x	3.8x	16.8x	12.4x	10.7x	NM	22.2%	29.3%	55.8%
Netflix, Inc.	272.79	70.7%	119,437	8,674	128,111	17,630	1,955	7.3x	6.3x	5.2x	65.5x	40.1x	28.0x	4.4x	32.6%	11.1%	36.8%
Spotify Technology S.A.	116.42	69.3%	20,925	(860)	19,947	6,025	64	2.9x	2.7x	2.2x	311.7x	NM	NM	NM	39.4%	1.1%	25.7%
IAC/InterActiveCorp	221.10	82.3%	18,638	73	19,652	4,501	799	4.4x	4.1x	3.6x	24.6x	19.1x	15.1x	0.1x	9.7%	17.8%	77.2%
Tencent Music	12.93	64.7%	21,143	(19,797)	18,274	22,000	3,640	5.7x	5.1x	3.8x	5.0x	28.5x	19.5x	NM	0.0%	16.5%	35.3%
Pinterest, Inc.	27.31	74.2%	14,821	(1,695)	13,127	927	(1,168)	14.2x	11.7x	8.7x	NM	NM	296.9x	NM	0.0%	(126.0%)	66.4%
Akazoo S.A.	6.46	86.2%	321	2	323	105	6	2.7x	2.1x	1.4x	56.1x	26.1x	16.4x	0.3x	0.0%	5.5%	22.3%
Leaf Group Ltd.	3.36	32.6%	88	(1)	87	157	(18)	0.6x	0.5x	0.5x	NM	NM	34.3x	1.7x	7.2%	(11.2%)	39.3%
Mean								5.3x	4.6x	3.6x	80.0x	25.2x	60.1x	1.6x	13.9%	-7.0%	44.9%
Median								4.7x	4.3x	3.7x	40.4x	26.1x	19.5x	1.0x	8.4%	8.3%	38.0%

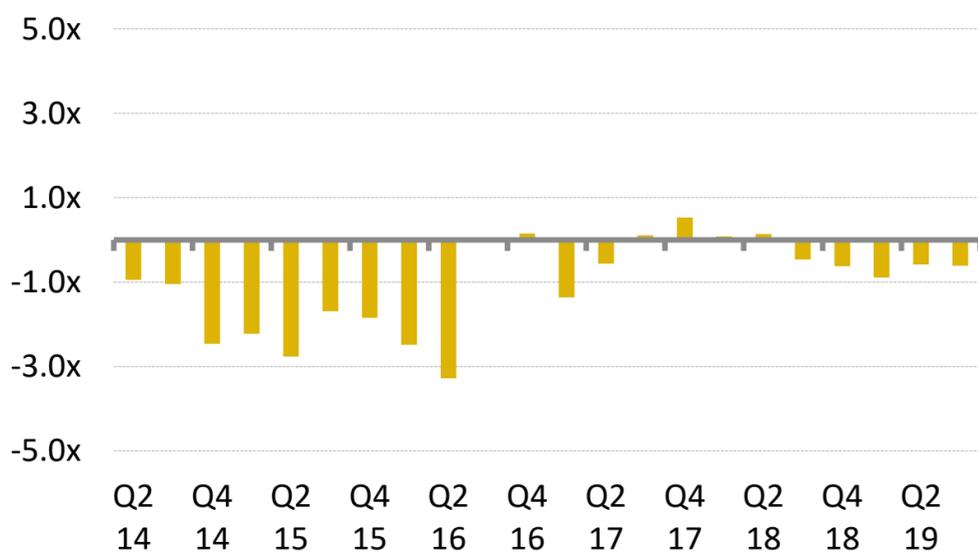
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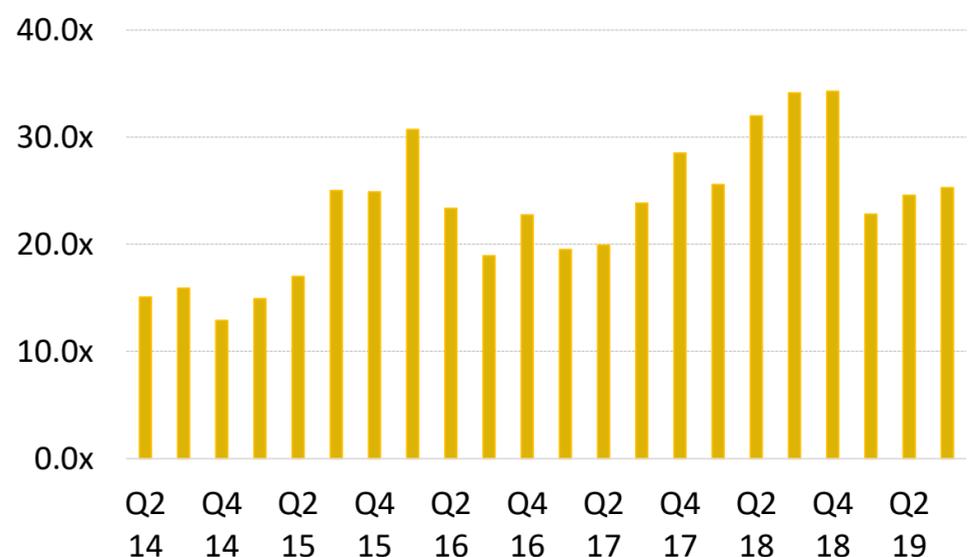
REVENUE GROWTH



NET DEBT / LTM EBITDA



EV / EBITDA

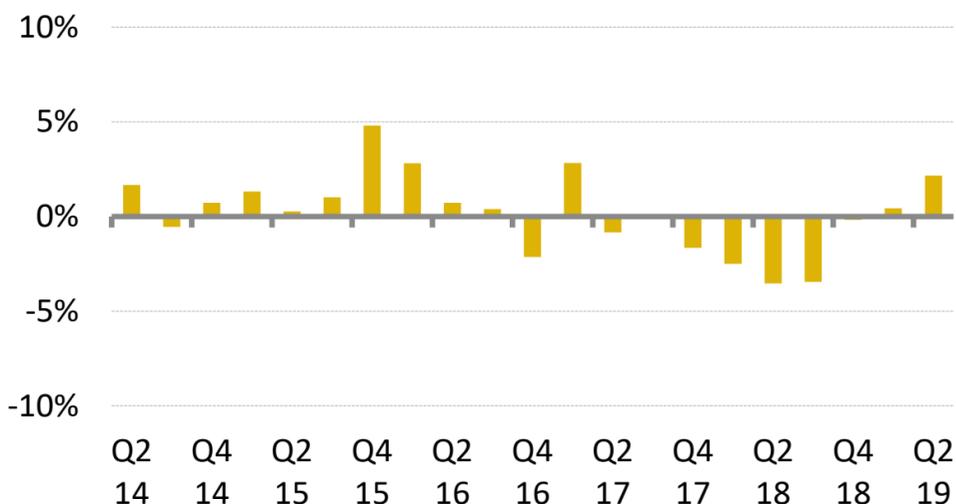


ADVERTISING TECHNOLOGY – SEGMENT ANALYSIS

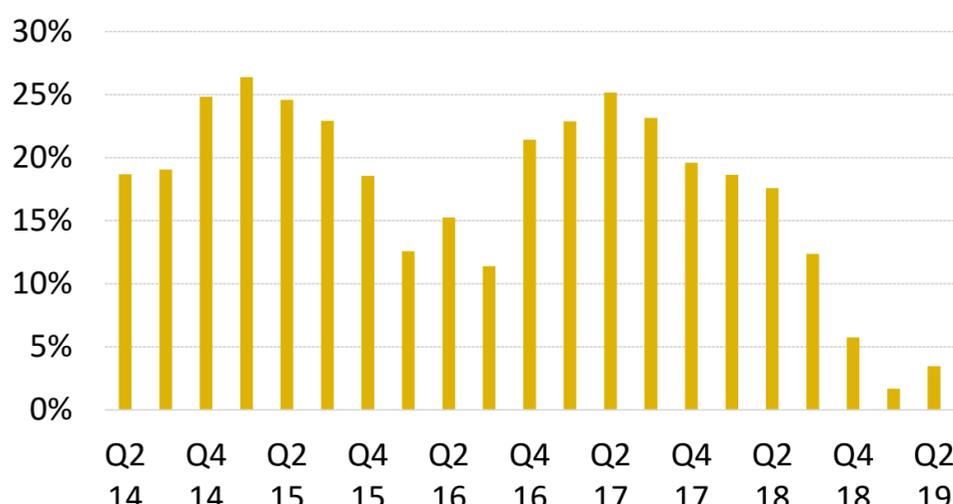
	Share Price	% of 52 Week High	Market Cap (\$M)	Net Debt (\$M)	Ent. Value (\$M)	LTM		Ent. Value /			3 Year			Gross Margin		
						Revenues (\$M)	EBITDA (\$M)	Revenues LTM	2019E	2020E	LTM	2019E	2020E		Revenue CAGR	EBITDA Margin
The Trade Desk	\$187.75	64.9%	\$8,446	(\$143)	\$8,303	\$560	\$122	14.8x	12.7x	9.8x	68.3x	40.4x	31.2x	61.3%	21.7%	76.2%
Criteo S.A.	17.78	57.6%	1,159	(222)	966	2,285	217	0.4x	1.0x	1.0x	4.5x	3.4x	3.2x	20.2%	9.5%	36.2%
QuinStreet	12.13	60.6%	620	(63)	557	455	26	1.2x	1.2x	1.1x	21.3x	15.1x	10.2x	15.2%	5.7%	13.5%
The Rubicon Project	8.58	79.1%	455	(71)	384	141	(11)	2.7x	2.4x	2.1x	NM	19.7x	14.6x	(20.5%)	(8.0%)	57.3%
Telaria	7.30	68.5%	335	(27)	308	65	(10)	4.7x	4.4x	3.7x	NM	100.1x	30.2x	79.0%	(14.7%)	83.7%
Fluent	2.68	35.9%	206	44	250	274	33	0.9x	0.9x	0.8x	7.6x	6.2x	4.3x	160.9%	12.0%	33.6%
iClick Interactive Asia Group	3.03	51.4%	173	18	193	171	(27)	1.1x	1.0x	0.8x	NM	119.9x	10.0x	34.9%	(15.5%)	27.6%
Perion Network	4.62	65.4%	119	4	124	247	24	0.5x	0.5x	0.5x	5.2x	4.8x	4.2x	4.6%	9.6%	39.3%
Tremor International	1.37	37.5%	167	(67)	115	278	28	0.5x	0.4x	0.3x	4.1x	2.3x	1.9x	54.0%	10.1%	40.1%
Synacor	1.44	64.9%	52	(3)	49	139	3	0.4x	0.4x	0.5x	14.8x	5.5x	7.2x	9.3%	2.4%	48.0%
SRAX	2.55	43.6%	36	(2)	34	5	(15)	7.4x	3.2x	1.7x	NM	NM	NM	(31.2%)	(335.3%)	61.2%
Inuvo	0.28	16.0%	14	3	16	63	(4)	0.3x	0.3x	0.2x	NM	NM	81.8x	1.4%	(7.0%)	58.1%
SITO Mobile	0.78	31.7%	13	1	14	42	(12)	0.3x	0.3x	0.3x	NM	NM	NM	45.9%	(28.3%)	40.6%
Matomy Media Group	0.02	7.7%	2	12	12	68	9	0.2x	NA	NA	1.4x	NA	NA	(31.1%)	12.8%	23.4%

Mean	2.5x	2.2x	1.7x	15.9x	31.7x	18.1x	28.8%	(23.2)%	45.6%
Median	0.7x	1.0x	0.8x	6.4x	10.6x	10.0x	17.7%	4.1%	40.4%

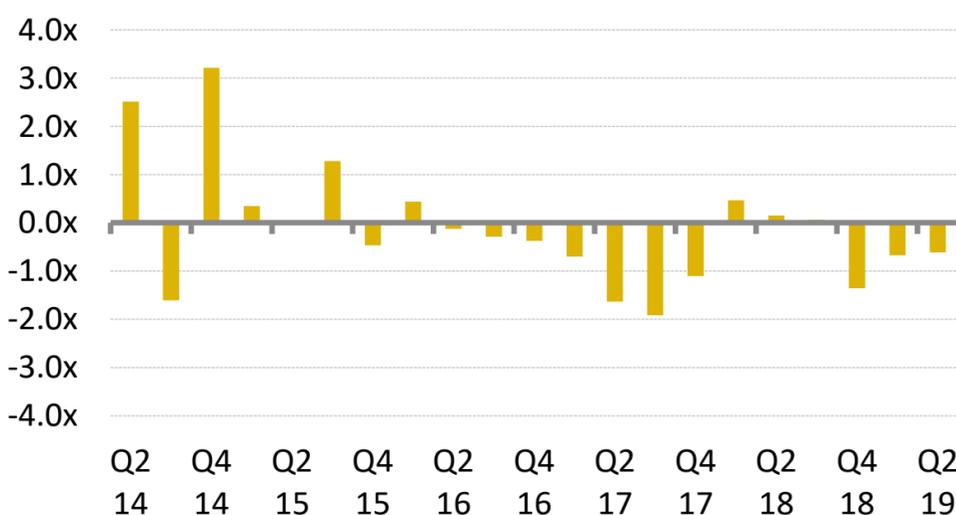
LTM EBITDA MARGIN



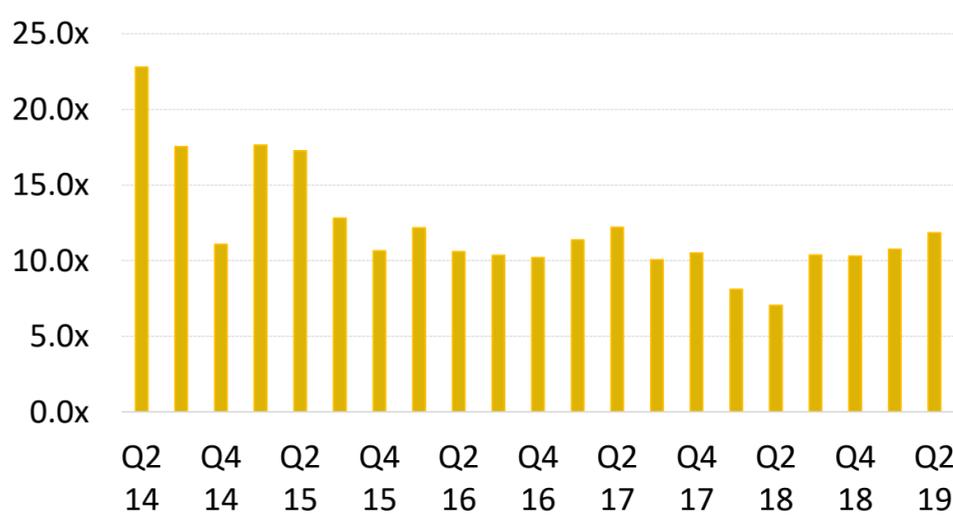
REVENUE GROWTH



NET DEBT / LTM EBITDA



EV / EBITDA

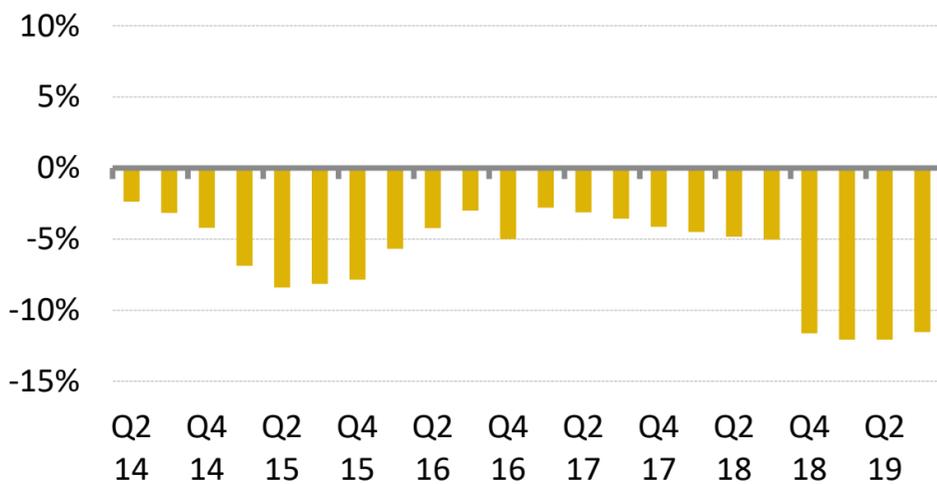


MARKETING TECHNOLOGY – SEGMENT ANALYSIS

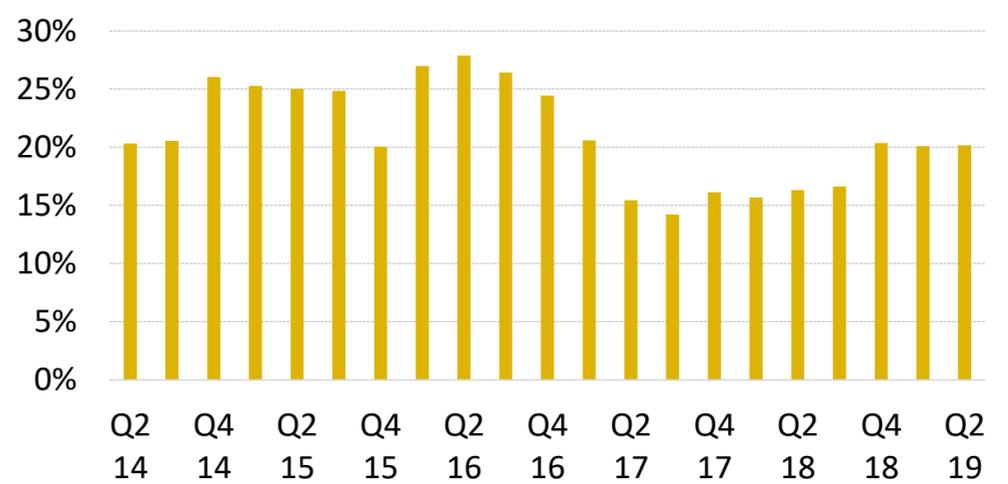
	Share Price	% of 52 Week High	Market Cap (\$M)	Net Debt (\$M)	Ent. Value (\$M)	LTM		Revenues			Ent. Value /		3 Year		Gross Margin	
						Revenues (\$M)	EBITDA (\$M)	LTM	2019E	2020E	LTM	2019E	2020E	Revenue CAGR		EBITDA Margin
Adobe Inc.	\$276.96	88.5%	\$134,070	\$486	\$134,557	\$10,644	\$3,567	12.6x	12.1x	10.2x	37.7x	26.7x	22.2x	23.5%	33.5%	85.2%
salesforce.com	148.03	88.3%	129,578	390	129,968	14,729	2,064	8.8x	7.7x	6.2x	63.0x	28.9x	24.3x	25.8%	14.0%	74.8%
Shopify Inc.	327.20	79.9%	37,735	(1,899)	35,836	1,296	(94)	27.6x	23.3x	17.4x	NM	NM	NM	73.6%	(7.2%)	55.6%
Akamai Technologies	90.91	97.6%	14,999	246	15,244	2,795	783	5.5x	5.3x	5.0x	19.5x	12.9x	11.8x	7.3%	28.0%	65.4%
HubSpot, Inc.	159.38	76.6%	6,774	(375)	6,398	591	(34)	10.8x	9.6x	7.8x	NM	76.0x	56.0x	41.3%	(5.7%)	80.7%
Survey Monkey	18.11	91.4%	2,410	152	2,562	277	(118)	9.3x	8.4x	6.9x	NM	72.8x	54.8x	0.0%	(42.7%)	71.5%
LivePerson	36.87	89.9%	2,316	(31)	2,285	267	(27)	8.5x	7.9x	6.5x	NM	NM	99.4x	1.5%	(10.0%)	74.1%
LiveRamp Holdings	41.91	66.3%	2,835	(981)	1,854	306	(171)	6.1x	5.3x	4.0x	NM	NM	NM	(30.5%)	(56.0%)	56.3%
Yext	15.85	68.0%	1,787	(159)	1,629	263	(81)	6.2x	5.4x	4.2x	NM	NM	NM	36.5%	(30.9%)	74.8%
Cardlytics	33.44	84.4%	814	4	818	167	(28)	4.9x	4.3x	3.2x	NM	NM	73.0x	24.7%	(16.7%)	38.0%
Brightcove	10.45	81.1%	400	(3)	397	171	(6)	2.3x	2.1x	1.9x	NM	40.9x	25.9x	7.0%	(3.6%)	58.7%
ChannelAdvisor	9.16	63.8%	257	(31)	226	131	2	1.7x	1.7x	1.6x	147.6x	12.8x	10.4x	9.3%	1.2%	77.2%
SharpSpring	9.76	46.3%	107	(10)	96	21	(8)	4.6x	4.3x	3.5x	NM	NM	NM	26.6%	(39.2%)	70.9%
Marin Software	2.36	19.7%	16	3	19	55	(15)	0.3x	NA	NA	NM	NA	NA	(18.6%)	(26.8%)	55.7%

Mean	7.8x	7.5x	6.0x	67.0x	38.7x	42.0x	16.3%	(11.6%)	67.1%
Median	6.1x	5.4x	5.0x	50.3x	28.9x	25.9x	16.4%	-8.6%	71.2%

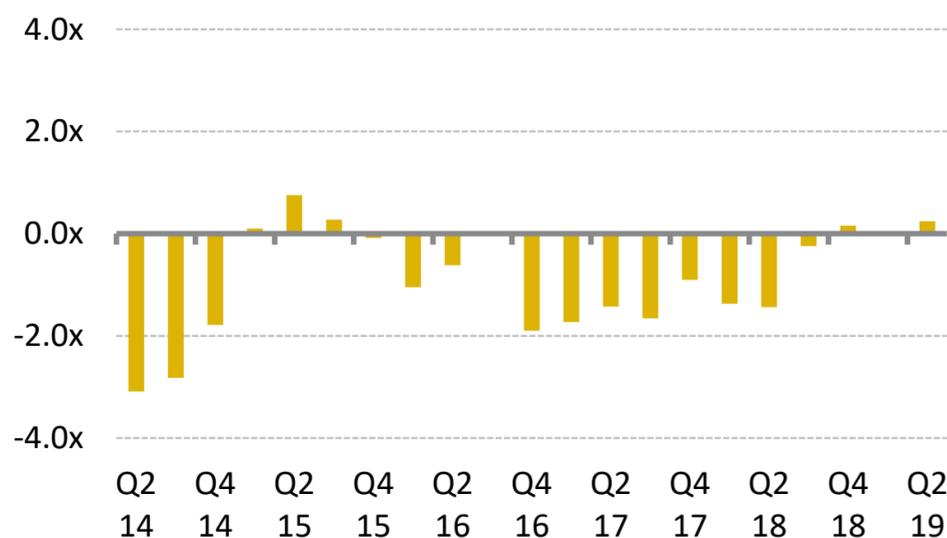
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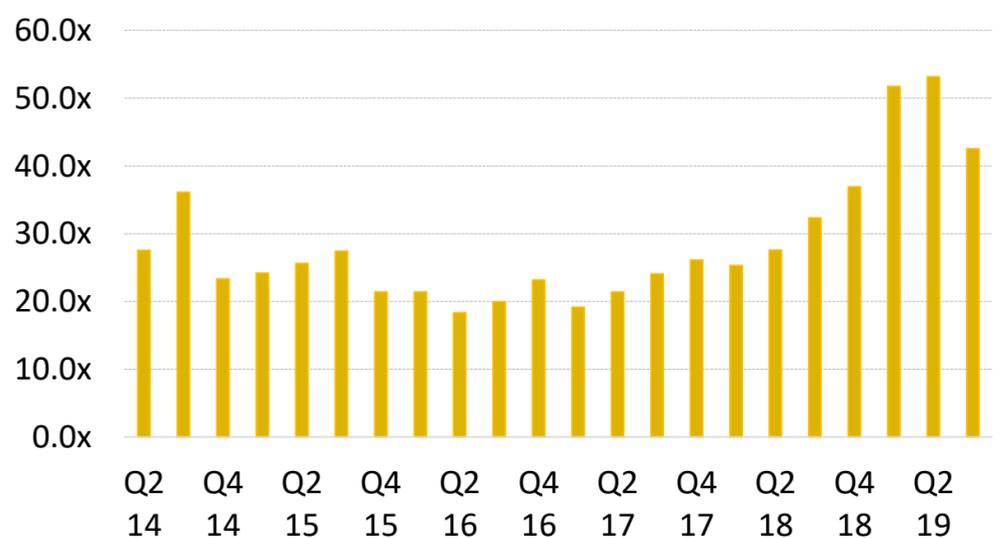
REVENUE GROWTH



NET DEBT / LTM EBITDA



EV / EBITDA

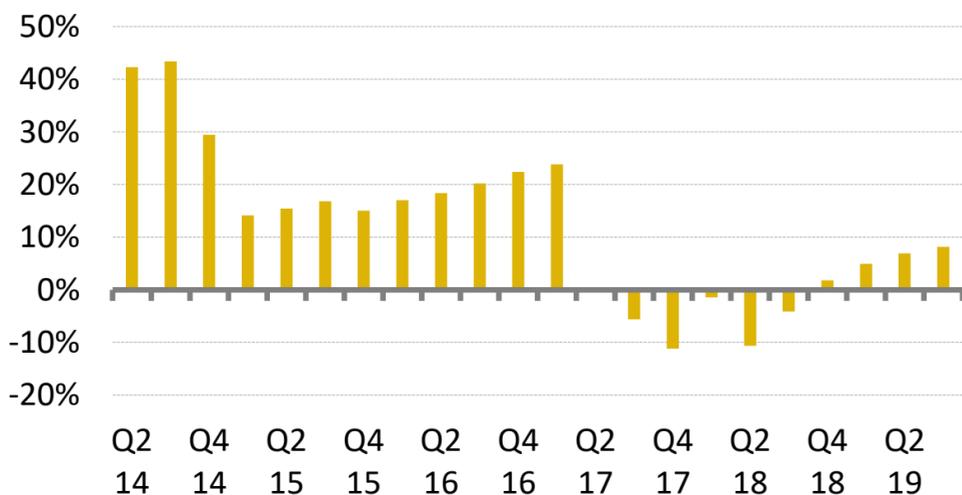




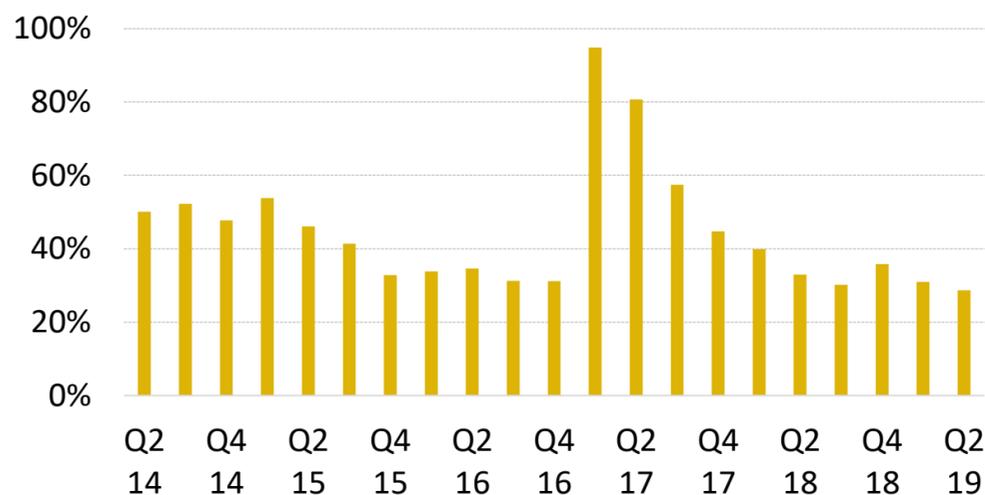
SOCIAL MEDIA– SEGMENT ANALYSIS

	Share Price	% of 52 Week High	Market Cap (\$M)	Net Debt (\$M)	Ent. Value (\$M)	LTM		Ent. Value /			3 Year			Gross Margin		
						Revenues (\$M)	EBITDA (\$M)	Revenues LTM	2019E	2020E	LTM	2019E	2020E		Revenue CAGR	EBITDA Margin
Facebook	\$180.45	86.5%	\$514,815	(\$40,392)	\$474,423	\$62,604	\$26,732	7.6x	6.8x	5.6x	17.7x	12.6x	10.2x	46.0%	42.7%	81.9%
Twitter	40.36	88.0%	31,126	(3,192)	27,934	3,295	812	8.5x	7.8x	6.8x	34.4x	21.3x	17.9x	11.1%	24.7%	68.0%
Match Group	74.43	78.1%	20,913	1,387	22,302	1,864	615	12.0x	10.8x	9.2x	36.3x	28.1x	22.8x	23.9%	33.0%	75.1%
Snap	14.52	79.1%	20,027	(826)	19,201	1,396	(1,018)	13.8x	11.3x	8.4x	NM	NM	NM	172.0%	(72.9%)	40.6%
The Meet Group	4.32	68.8%	318	12	330	200	27	1.7x	1.6x	1.4x	12.4x	7.9x	7.1x	46.4%	13.4%	100.0%
Spark Networks	5.40	30.6%	140	(2)	139	101	5	1.2x	0.8x	0.5x	27.1x	6.9x	2.8x	20.0%	5.1%	35.1%
Mean								7.4x	6.5x	5.3x	25.6x	15.4x	12.2x	53.2%	7.6%	66.8%
Median								8.0x	7.3x	6.2x	27.1x	12.6x	10.2x	35.0%	19.0%	71.6%

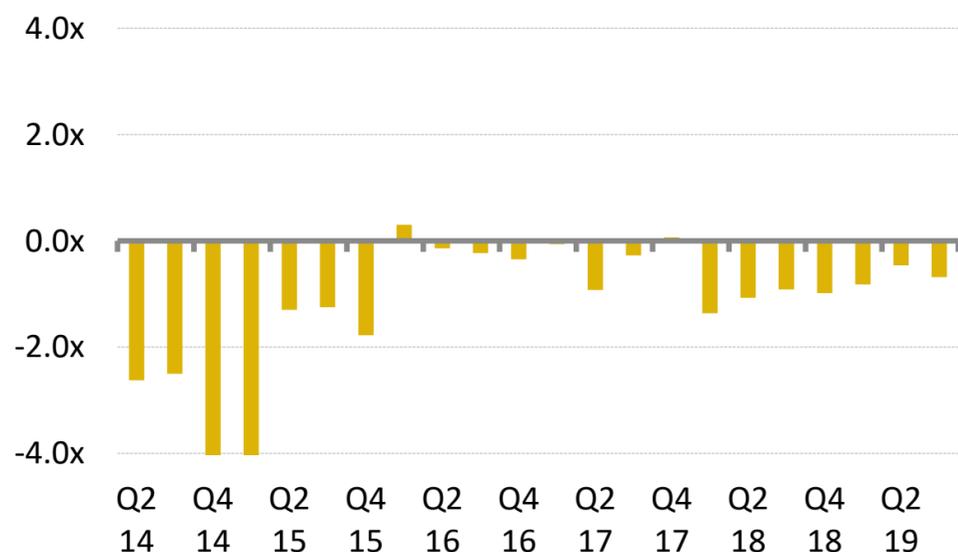
LTM EBITDA MARGIN



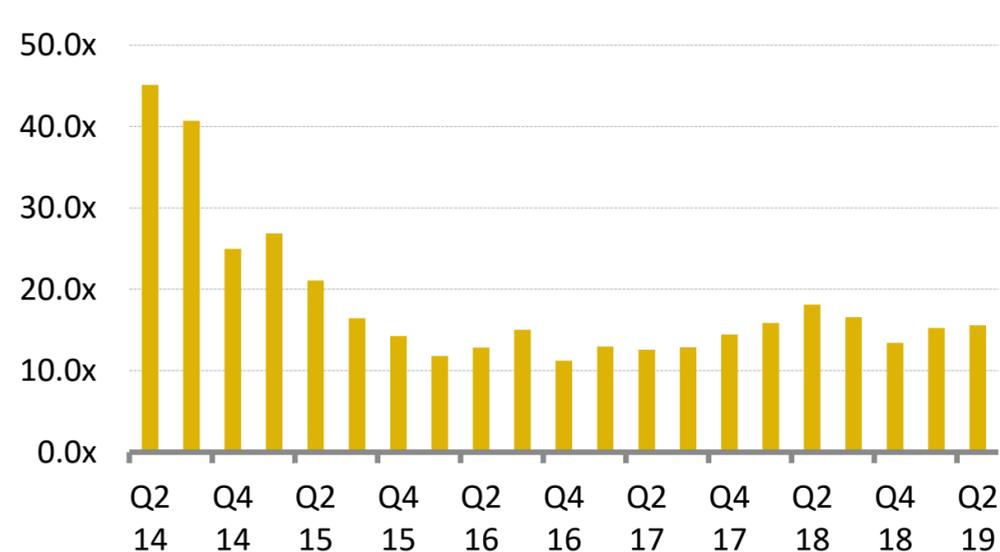
REVENUE GROWTH



NET DEBT / LTM EBITDA



EV / EBITDA



INTERNET AND DIGITAL MEDIA M&A ACTIVITY

Date	BUYER	TARGET	TRANSACTION VALUE (\$M)	EV / REVENUE	EV/ EBITDA	CLASSIFICATION
9/30/19	Verizon Communications Inc.	Software, Technology, and Other Assets of Jaunt	NA	NA	NA	Video; Virtual Reality
9/26/19	App Annie Inc.	Libring Technologies, Inc.	NA	NA	NA	Analytics; Mobile; Optimization
9/26/19	Logitech International S.A.	Streamlabs, Inc.	\$118.0	NA	NA	Cloud; Live Streaming Tools
9/26/19	Omnicom Precision Marketing Group	Smart Digital GmbH	NA	NA	NA	Marketing; AI; Consulting
9/26/19	Veeva Systems Inc.	Crossix Solutions Inc.	\$430.0	NA	NA	Analytics; Measurement; Optimization
9/24/19	Vista Equity Partners LLC	Acquia Inc.	\$1,000.0	NA	NA	Content Mgmt; Web; Cloud
9/24/19	Montagu Private Equity LLP	IHS Global Limited	NA	NA	NA	Information; Market Analysis; Research
9/23/19	Publishers Clearing House, Inc.	Topix LLC	NA	NA	NA	News; Entertainment
9/22/19	Facebook, Inc.	servicefriend	NA	NA	NA	Customer Experience; ; Chatbot; AI
9/19/19	Baller, Inc.	Fieldvision Co.	NA	NA	NA	Video; Production; Live Streaming
9/18/19	Rokt Pte Ltd.	OfferLogic, Inc.	NA	NA	NA	Merchandising; Personalization
9/18/19	Zeta Interactive Corp.	Programmatic Business & Certain Assets Of IgnitionOne	NA	NA	NA	DSP
9/18/19	Innovid, Inc.	Herolens Group LLC	\$30.0	NA	NA	Ad Operations; Programmatic Creative
9/18/19	Tribe of Noise BV	The Free Music Archive	NA	NA	NA	Audio; Music Archive
9/16/19	Ocean Outdoor Limited	Visual Art Sweden AB	\$69.3	2.5x	14.3x	DOOH; Digital Signage
9/16/19	SITO Mobile, Ltd.	MediaJel, Inc.	\$17.4	NA	NA	Ad Tech; Mobile; Location
9/14/19	Axenic LLC	Mercy Company, LLC	NA	NA	NA	Digital Agency
9/12/19	Improbable Worlds Ltd.	Midwinter Entertainment, Inc.	NA	NA	NA	Games; Home Entertainment
9/12/19	Spotify Technology S.A.	SoundBetter LLC	NA	NA	NA	Audio; Online Production Tools
9/9/19	Sohu.com Limited	Changyou.com Limited	\$325.0	0.7x	2.6x	Games; Online Gaming; Cinema Ads
9/9/19	Opus Events Agency LLC	Tencue Productions, Inc.	NA	NA	NA	Marketing; Experiential Mktg; Consulting
9/9/19	Endurance International Group Holdings	Substantially all Assets of Ecomdash	\$9.6	6.0x	NA	Internet retail; Inventory Mgmt; Listings
9/9/19	Shopify Inc.	6 River Systems, Inc.	\$381.0	NA	NA	eCommerce; Fulfillment
9/9/19	LTN Global Communications, Inc.	make.tv, inc.	NA	NA	NA	CDN; Live Video Cloud Platform
9/6/19	Crain Communications Inc.	GenomeWeb LLC	NA	NA	NA	News; Information Services
9/5/19	Falfurrias Capital	Industry Dive LLC	NA	NA	NA	News; B2B
9/5/19	Mediafly, Inc.	iPresent Limited	NA	NA	NA	Software; Collaboration; Tools
9/5/19	Alibaba Group Holding Limited	Import E-Commerce Platform Kaola of NetEase	NA	NA	NA	eCommerce
9/5/19	Powerplay Retail	Deal Rise Retail, LLC	NA	NA	NA	In-Store
9/4/19	Microsoft Corporation	Movere, Inc	NA	NA	NA	BI; Business Intelligence
9/4/19	Havas SA	Buzzman SAS	NA	NA	NA	Digital Agency
9/3/19	Minerva Networks, Inc.	TOK.tv Inc.	NA	NA	NA	Social Media
9/3/19	MobilityWare, Inc.	Jump Ramp Games, Inc.	NA	NA	NA	Games; Mobile; Lead Gen; Discovery
9/3/19	Kabbage, Inc.	Radius Intelligence Inc.	NA	NA	NA	Database; Analytics
8/30/19	Broadhead & Co, Inc.	Kohnstamm Communications Inc.	NA	NA	NA	IR/PR; Influencer Mktg
8/28/19	Bazaarvoice, Inc.	Inflenster Inc.	NA	NA	NA	Shopper Marketing; Product Discovery
8/28/19	iProspect, Inc.	MuteSix, Inc. (nka:MuteSix, an iProspect Company)	NA	NA	NA	Search; SEM; Agency
8/27/19	Anaplan, Inc.	Mintigo Ltd.	NA	NA	NA	Customer Experience; Predictive Mktg
8/26/19	Playtika Ltd.	Seriously Digital Entertainment Ltd.	NA	NA	NA	Games; Mobile
8/26/19	Starfish Parent, LP	Software Solutions business of Pitney Bowes Inc.	\$700.0	NA	NA	Customer Experience; Location Intel
8/22/19	360insights.com	Ohana Companies Inc.	NA	NA	NA	Loyalty; Rewards Programs
8/21/19	Publicis Groupe S.A.	Affinity iD Limited	NA	NA	NA	Database; Marketing
8/20/19	Free Stream Media Corp.	Axwave Inc.	NA	NA	NA	Data; Audio Fingerprinting; Ad IDs
8/20/19	Batanga, Inc.	Pongalo Inc.	NA	NA	NA	Video; OTT; Latino
8/20/19	Apifia Inc.	GroupHigh LLC	NA	NA	NA	Marketing; Influencer Mktg
8/19/19	Publicis Groupe S.A.	Rauxa LLC	NA	NA	NA	Content mgmt; Customer Experience
8/19/19	Sony Interactive Entertainment LLC	Insomniac Games, Inc.	NA	NA	NA	Games;
8/19/19	REQ, Inc.	Internet Marketing Inc.	NA	NA	NA	SEO; Content Mgmt; Email; Social
8/14/19	Publicis Groupe S.A.	McCready Bale Media Limited	NA	NA	NA	Media Buying; Agency
8/13/19	Roger	Big Machine Design, LLC	NA	NA	NA	Brand mgmt; Branded Content
8/12/19	Automattic Inc.	Tumblr, Inc.	\$3.0	NA	NA	Publishing; Blogging Site
8/12/19	Syndigo LLC	Sellpoints Inc.	NA	NA	NA	Merchandising; eCommerce; Optimization
8/12/19	MediaMonks B.V.	IMAgency B.V.	\$1.4	NA	NA	Digital Agency
8/8/19	inMarket Media LLC	All Assets of ThinkNear Inc.	NA	NA	NA	Ad Network; Mobile
8/8/19	NA	MaisonBrison Inc.	NA	NA	NA	IR/PR
8/8/19	Roper Technologies, Inc.	iPipeline	\$1,625.0	NA	NA	CRM; Insurance vertical

*Source: Capital IQ as of 09/30/2019

INTERNET AND DIGITAL MEDIA M&A ACTIVITY

Date	BUYER	TARGET	TRANSACTION VALUE (\$M)	EV / REVENUE	EV/ EBITDA	CLASSIFICATION
8/7/19	UMG Media Ltd.	Activate Entertainment LLC	\$2.7	NA	NA	Entertainment; eSports; Events; Streaming
8/7/19	Match Group, Inc.	Harmonica	NA	NA	NA	Social Media; Dating App
8/7/19	Entercom Communications Corp.	Pineapple Street Media LLC	\$18.0	NA	NA	Audio; Podcast Production
8/7/19	Entercom Communications Corp.	Cadence13 Inc. (nka:Cadence13, a division of RADIO.COM)	\$90.9	NA	NA	Audio; Podcast Network
8/7/19	Mesmerize, LLC.	Pharmacy Health Network	NA	NA	NA	Out-of-Home; DOOH
8/5/19	Omnia Media, Inc.	WiseCrack, Inc.	NA	NA	NA	Video; Podcasting
8/5/19	InnerWorkings, Inc.	Marketing Execution Business of Madden Communications	NA	NA	NA	Marketing; Creative; Logistics
8/5/19	Dennis Publishing Limited	Car Throttle Limited	NA	NA	NA	Video; Auto Vertical
8/5/19	aQuantive, Inc.	SpotFront, Inc.	NA	NA	NA	Merchandising; eCommerce
8/1/19	London Stock Exchange Group plc	Refinitiv US Holdings Inc.	\$28,291.5	NA	NA	Data; Information; Analytics
8/1/19	DoorDash, Inc.	Caviar Inc.	\$410.0	NA	NA	eCommerce; Food Delivery
8/1/19	O3 Industries LLC	Peer39 Inc.	\$18.0	NA	NA	Ad Tech; AI; Fraud Detection
8/1/19	Drillinginfo, Inc. (nka:Enverus)	RigData, Inc.	NA	NA	NA	Information
7/31/19	Innocean Worldwide Inc.	Wellcom Group Limited	\$181.5	1.6x	14.4x	Content mgmt; Content Marketing
7/31/19	T-Mobile US, Inc.	PushSpring, Inc.	NA	NA	NA	Marketing; Mobile; App Audience Data
7/31/19	Ubisoft Entertainment SA	Green Panda Games	NA	NA	NA	Games; Mobile
7/30/19	MissionSide, Inc.	Blue Water	NA	NA	NA	Marketing; Agency
7/29/19	Future plc	SmartBrief, Inc.	\$66.1	1.9x	NA	Publishing; Business News/Information
7/29/19	Takeaway.com N.V.	Just Eat plc	\$6,336.2	5.9x	48.7x	eCommerce; Food Delivery
7/25/19	Ernst & Young Private Limited	C Centric Solutions Pvt. Ltd	NA	NA	NA	CRM
7/25/19	Superfly Productions, LLC	We Are Listen, LLC	NA	NA	NA	Marketing; Experiential
7/24/19	Frankly Inc.	Assets Of Vemba Corp.	\$0.8	NA	NA	Ad Exchange; Video
7/24/19	Moody's Investors Service, Inc.	Four Twenty Seven, Inc.	NA	NA	NA	Research; Market Research; Risk Mgmt
7/23/19	AVI-SPL, Inc.	Digital Video Networks Inc.	NA	NA	NA	NA Video; Collaboration; Unified Communication
7/24/19	Web.com Group, Inc.	Dreamscape Networks Limited	\$83.0	1.6x	9.9x	Web; Domain Name Hosting
7/23/19	BDG Media Inc.	Full Stack Media, Inc.	NA	NA	NA	Digital Content; News; Science
7/22/19	Etsy, Inc.	Reverb Holdings, Inc.	\$275.0	7.6x	NA	eCommerce; Music
7/22/19	HERO Digital LLC	Bulldog Solutions, Inc.	NA	NA	NA	Marketing; Agency; B2B
7/21/19	Jellyfish Group Limited	Spicy Internet LTD	NA	NA	NA	Marketing; Media Buying; SEO; Analytics
7/19/19	Vobile Group Limited	RightsID and ChannelID Assets of ZEFR	\$90.0	2.3x	NA	Measurement; Video; Rights Mgmt
7/18/19	Sports Venues of Florida, Inc.	Live Youth Sports Network	\$5.5	NA	NA	Video; High School Sports
7/18/19	AllTrails, LLC	Trails.com, Inc.	NA	NA	NA	Guides; Maps
7/18/19	Legends Hospitality, LLC	Maingate, Inc.	NA	NA	NA	Merchandising; eCommerce
7/18/19	Affinitiv, Inc.	Loop, LLC	NA	NA	NA	Marketing; Automation; Auto Vertical
7/18/19	Giant Partners, Inc.	Worxstudio Inc	NA	NA	NA	Marketing; SEO; Content Marketing
7/18/19	Legends Hospitality, LLC	Maingate, Inc.	NA	NA	NA	Merchandising; eCommerce
7/17/19	8x8, Inc.	Wavecell Pte. Ltd.	\$129.6	NA	NA	Cloud; Communications; Voice; SMS
7/17/19	Legato Healthcare Marketing, Inc.	Fresh Digital Marketing, LLC	NA	NA	NA	Search; Pay-per-click
7/15/19	Merkle Inc.	Ugam Interactive Solution Pvt Ltd.	NA	NA	NA	Analytics; Comparison Shopping
7/15/19	The Blackstone Group Inc.	Vungle, Inc.	\$750.0	NA	NA	Ad Network; Mobile; In-App Advertising
7/15/19	Dalet S.A.	Ooyala Flex Media Platform Business of Ooyala Group	\$5.4	NA	NA	CDN; Multimedia Distribution; Workflow
7/15/19	Amino Technologies plc	24i Unit Media B.V.	\$28.5	8.7x	253.6x	Video; OTT; TV Apps for Every Screen
7/12/19	Bain Capital Private Equity, LP	Kantar	\$4,019.5	1.2x	8.3x	Research; Market Research
7/9/19	AppLovin Corporation	SafeDK Mobile LTD	NA	NA	NA	Mobile; Security
7/9/19	PAN Communications, Inc.	Capella Pr Ltd.	NA	NA	NA	IR/PR
7/8/19	Norwest Venture Partners; Marlin Equity	Clarus Commerce, LLC	NA	NA	NA	Loyalty; Subscription Loyalty
7/8/19	InComm Inc.	Meridian Loyalty	NA	NA	NA	Loyalty
7/4/19	WPP plc	AQuest S.r.l.	NA	NA	NA	Marketing; Agency
7/1/19	Providence Equity Partners LLC	Chime Group Holdings Limited	\$276.9	NA	NA	Digital Agency; Creative
7/1/19	NEXON US Holding Inc.	Embark Studios AB	\$293.8	NA	NA	Games
7/1/19	Content Square SAS	Clicktale Ltd.	NA	NA	NA	Customer Experience; Sales Conversions

*Source: Capital IQ as of 09/30/2019

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

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.

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

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

 MODERN MEDIA Acquisition Corporation
akazoo

PIPE acquisition financing for Akazoo (SONG)

\$55,000,000

Co-Placement Agent

 **September 2019**

 SOCIAL REALITY
(SRAX)

Valuation Services

ASC 350 Analysis

 **May 2019**

 **SeaChange**
(SEAC)

Valuation Services

ASC 350 Analysis

 **April 2019**

 CUMULUS
(CMLS)

Valuation Services

ASC 350 Analysis

 **April 2019**

 THE McCLATCHY COMPANY Since 1857
(MNI)

Valuation Services

ASC 350 Analysis

 **March 2019**

 SOCIAL REALITY
(SRAX)

M&A Advisory

\$43,500,000 Sale of SRAXmd to Halyard Capital

 **August 2018**

 **BEASLEY** MEDIA GROUP, LLC
(BBGI)

\$23,500,000

Secondary Offering Co-manager

 **July 2018**

 gray
(GTN)

\$250,125,000

Follow-on Offering Co-Manager

 **November 2017**

$$R + (e^2 + p^2) = \pi$$

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.

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

INVESTMENT BANKING TEAM

Richard Giles, Managing Director

rgiles@noblecapitalmarkets.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

censley@noblecapitalmarkets.com – (917) 970-8850

- 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

Mark Suarez, Managing Director

msuarez@noblecapitalmarkets.com – (917) 810-5378

- Joined Noble as a Managing Director in 2017
- Over 12 years of investment banking and equity research experience
- Prior experience holding senior positions at McQuilling Partners and Euro Pacific Capital
- B.Com McGill University with concentrations in Economics and Finance; M.S. in Economics University of Toronto
- Holds a CFA and various FINRA licenses

Francisco Penafiel, Managing Director, Investment Banking Operations

fpenafiel@noblecapitalmarkets.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@noblecapitalmarkets.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

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

RESEARCH – MEDIA & ENTERTAINMENT

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