



**MEDIA  
MONTHLY**

REPORT SUMMARIZING  
SELECT MEDIA, EVENT TECH AND  
RETAIL TECH ACTIVITY

**DECEMBER 2018**


































— PJ —  
**SOLOMON**  
unrivaled wisdom

# SPECIAL HIGHLIGHTS IN THIS ISSUE

- Amazon's Advance Into Advertising
- DOOH at Inflection Point
- Proof of Play Standardization for Digital Out of Home
- The Age of the Distracted Viewer
- The Future of Advertising and Why Outdoor is Back
- AI: Collection of Technologies

## RECENT PJ SOLOMON TRANSACTIONS

<p>PENDING</p>  <p>Count On Us!</p> <p>Sale to</p>  <p>Serving as financial advisor to Martin's Super Markets</p> <p>PJ</p> 	<p>PENDING</p>  <p>Sale to</p>  <p>Serving as financial advisor to Best Market</p> <p>PJ</p> 	<p>PENDING</p>  <p>Has been sold to</p>  <p>Serving as financial advisor to VSS-Southern Theatres / Movie Tavern</p> <p>PJ</p> 	<p>PENDING</p> <p>A Consortium, including</p>    <p>Has agreed to acquire</p>  <p>Serving as financial advisor to the Consortium</p> <p>PJ</p> 	<p>NOVEMBER 2018</p>  <p>Has been sold to</p>  <p>Served as strategic and financial advisor to Exterion Media and Platinum Equity</p> <p>PJ</p> 
<p>OCTOBER 2018</p>  <p>Sale of</p>  <p>to</p>  <p>Served as financial advisor to SUPERVALU</p> <p>PJ</p> 	<p>OCTOBER 2018</p>  <p>Senior Secured Credit Facility</p> <p>Served as financial advisor to Key Food</p> <p>PJ</p> 	<p>OCTOBER 2018</p>  <p>Has acquired</p>  <p>Served as financial advisor to Hibbett Sports</p> <p>PJ</p> 	<p>OCTOBER 2018</p>  <p>Has divested</p>  <p>to THE ROCKPORT GROUP</p> <p>Served as financial advisor to V.F. Corporation</p> <p>PJ</p> 	<p>OCTOBER 2018</p> <p>BARE NECESSITIES</p> <p>Has been sold to</p>  <p>Served as financial advisor to Bare Necessities</p> <p>PJ</p> 

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### CAPITAL MARKETS

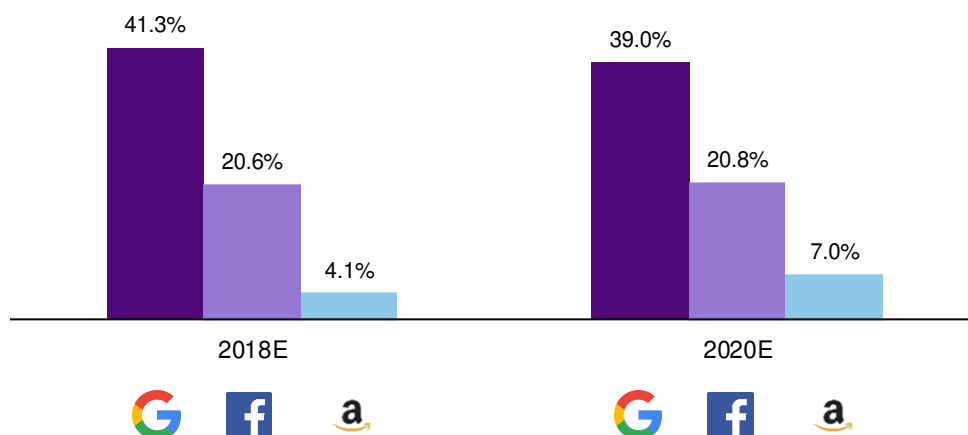
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# AMAZON'S ADVANCE INTO ADVERTISING

## Amazon Expected to Mount Challenge to Google and Facebook in Digital Advertising

- Amazon 2018E ad sales expected to surpass ~**\$5.8 billion**
  - #3 player in U.S. digital advertising behind Google and Facebook
  - Profits from ad business potentially may surpass Amazon Web Services (AWS) profits by 2021
  - 56% of Americans start search for any product on Amazon, creating key ad spend medium as brands continue to shift marketing dollars from physical retailers
  - Working on consolidated ad sales platform integrating Amazon Media Group, Amazon Marketing Services and Amazon Advertising Platform products
- Amazon market share of U.S. digital ad spending **expected to grow to ~7.0% by 2020**
  - Market share of “duopoly” expected to decline
  - Platform particularly attractive to CPG
    - Weak brand loyalty
    - Buyers more likely to be persuaded
  - Opportunities for Alexa and Echo ads

### U.S. DIGITAL ADVERTISING MARKET SHARE



Source: The Economist, Wall Street research and eMarketer.

Note: Facebook market share includes Instagram.

# DOOH AT INFLECTION POINT

The Brand Gap Report was published in October 2018 by Justin Gibbons and Tony Regan of Work Research

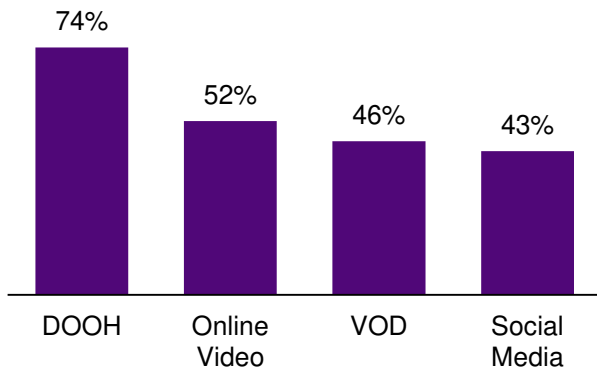
***“If you look at any medium beyond digital, OOH is the one that’s embraced digital the most. Compared with Print, it’s in another league. The digitization of screens has been a goal they’ve pursued relentlessly” – Ad Agency***

## DOOH ON THE RISE

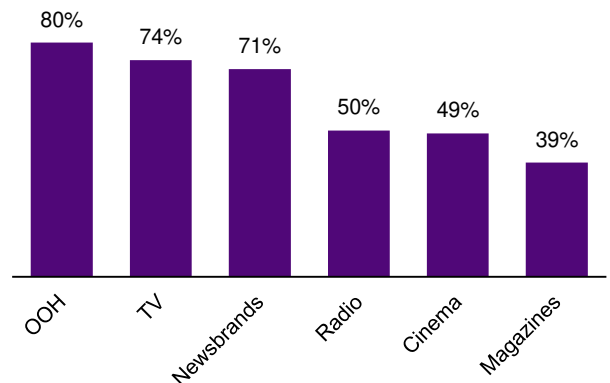
- A second wave of disruption is happening; the first disruption was the arrival of digital media, the second is the digitization of all media
- In a recent Work Research report unveiled at JCDecaux’s Upfronts, media agencies ranked DOOH as the most ‘on the up’ media channel
  - Research suggested that OOH and TV were the two channels most developed for the digital world
- This second wave of disruption is already being seen in the momentum data which shows VOD and DOOH muscling in on the territory of Social and Online Video

## SURVEY OF 10 ADVERTISERS

WHICH OF THE FOLLOWING MEDIA WOULD YOU DESCRIBE AS HAVING REPUTATIONS ‘ON THE UP’ RIGHT NOW?



HOW WELL-DEVELOPED FOR YOUR NEEDS ARE THE DIGITAL OFFERS OF THE FOLLOWING MEDIA?



Source: The Brand Gap report.

# PROOF OF PLAY STANDARDIZATION FOR DIGITAL OUT OF HOME

## Ben Putland Argues that Standards for Independent Ad Verification will Support Digital OOH Growth Across the Globe

*Full article was published on October 29, 2018 by Ben Putland and is available on LinkedIn*

### HYPOTHESIS

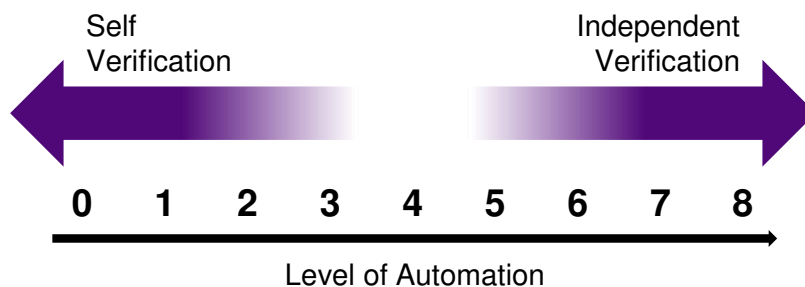
- Globally agreed standards for independent 3rd party verification of advertising play-outs (down to a panel and individual play level), will support the growth of the digital OOH market globally

### SITUATION ANALYSIS

- The medium is enjoying increased spend, digital inventory supply continues to grow at pace and digital OOH may soon be the fastest growing media channel in multiple markets
- There are new companies entering the sector with the goal of helping improve how the channel operates
  - This all reflects the significant opportunity we believe digital OOH has
- From the rise of ad blockers in the online world to on-demand TV and the decline of traditional print media, each advertising channel has its own unique challenges to overcome

### REPORTING LEVELS

- Ben has spent six years of his career working in Digital OOH and has condensed his view of various methods of reporting into the following diagram:



- As the diagram illustrates on the far left there is completely manual, quite time-consuming reporting and over to the far right we have fully automated and transparent reporting
  - What this diagram also illustrates is where self-verification ends and independent verification begins

### EFFORT VS. VALUE

- Being able to state that advertising is independently verified offers businesses high value and will build trust with advertisers
- Businesses will have to change their processes and find alignment with each other, even with competitors
  - We will have to be collaborative as there is no organization or individual that can solve these problems alone
- In the short term, there needs to be significant effort and investment to achieve an optimal way of working
  - This investment will return long-term value to the sector

*Source: Ben Putland.*

# THE AGE OF THE DISTRACTED VIEWER

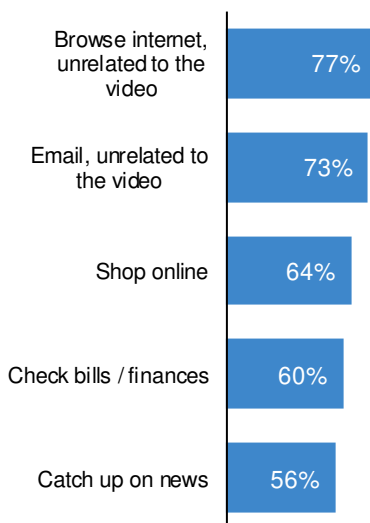
## Is Your TV Advertising Viewable?

### TV VIEWERS ARE USING MULTIPLE DEVICES

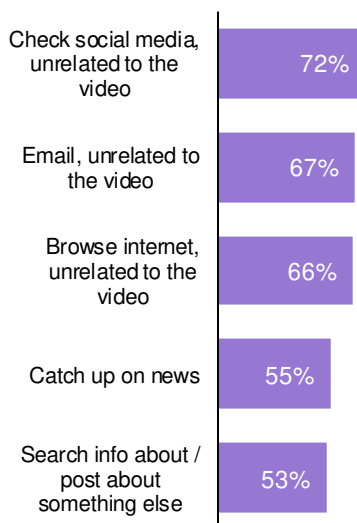
- The era in which families sat down together around their televisions – and only their televisions – is over
- Adults in the U.S. currently spend more time with their TVs than any other media
  - However a growing segment is consuming commercial-free OTT content like Netflix and Amazon Prime and many are using their DVRs to record programs for later viewing, often skipping commercials
- On top of that, the vast majority is also reaching for companion devices while the TV is on
  - While much has been written about digital ad viewability standards, TV is erroneously credited with 100% viewability
- According to a 2017 report from Deloitte, 89% of U.S. smartphone owners reported using their phone while watching TV
  - On average they're engaging with their devices as much during TV programming and commercials as they are during the 30-minute window before and after
- As we can tell by the number of digital ads served before, during and after TV viewing, second screen engagement doesn't change significantly
- The challenge here for advertisers is that TV viewers might be physically present while commercials air, but not fully *mentally* present
  - It doesn't matter whether they're Millennials or Baby Boomers; TV viewers are distracted across the board

### TOP 5 DIGITAL ACTIVITIES CONDUCTED WHILE WATCHING TV

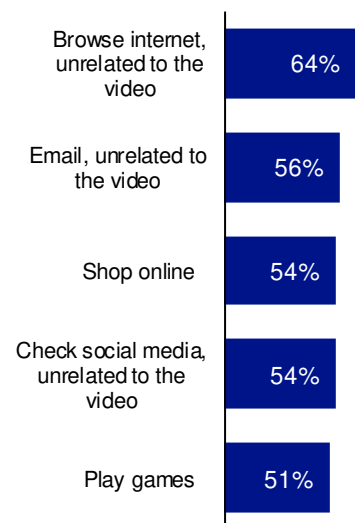
#### DESKTOP / LAPTOP



#### SMARTPHONE



#### TABLET



Source: Viantinc.com.

# THE FUTURE OF ADVERTISING AND WHY OUTDOOR IS BACK

Full article was published on October 2, 2018 and is available on AdNews

***“A poster doesn’t require me to click a banner or watch a digital ad. It doesn’t want my email address or attempt me to play a game with the product as hero. They don’t want my data. They’re communicating their prime selling points better than anyone out there - especially the mobile phone.” – Andy Flemming***



*Apple’s iconic ‘Shot on iPhone’ billboard campaign*

## THE FUTURE OF OUTDOOR ADVERTISING

- Static billboard campaigns remain an effective form of advertising, but new technology allows for innovation in the out of home sector
- There has been significant investment into augmented reality in advertising, which integrates simple animated objects into the real world, usually through a mobile screen
- The next step for the future of out of home is Mixed Reality
  - Mixed Reality is much more complex than Augmented Reality – it completely understands where surfaces and light sources are, meaning objects look like they belong
  - Wearable technology will allow advertising to be even more immersive
  - New technology will create far more detailed and customized advertisements

Source: Adnews.com.

# AI: COLLECTION OF TECHNOLOGIES

Full article was written by Jack Loechner published on November 7, 2018 and is available on MediaPost

***“Very few marketers are taking advantage of advanced AI capabilities that can not only enable them to do more than just acquire new prospects, but also convert them into loyal and more valuable customers.” – Jack Loechner***

## WHAT IS AI?

- When we think about AI, we often envision a future that isn't quite reality yet, but in reality, AI is already alive and well among us
  - From spam filters to voice assistants, AI is an important part of everyday life
- The truth is, AI is simply a collection of technologies used to mimic human behaviors and thought processes, using massive amounts of data to learn and return accurate results

**60%**

Of marketers are planning to increase their AI usage going forward

High performers are

**3.1x**

More likely to use AI compared to underperformers

**97%**

Of marketers are confident that AI can improve the customer experience

## AI CAPABILITIES

- AI allows marketers to leverage technology, rather than manpower, to harness the power of data to build stronger subscriber relationship
- AI can take over the heavy lifting on data analysis and provide marketers with quicker and more accurate data-driven insights
  - These insights will not only help marketers reduce or prevent deliverability issues, but also provides them the ability to build a better, adaptive program for their subscribers
- Email deliverability is complicated, with many different factors influencing the ultimate result
  - Marketers often struggle to not only monitor their KPIs, but to recognize when problems arise
  - AI technologies have the potential to identify problems, suggest solutions, and execute those solutions before any negative impact occurs
- With AI, marketers will leverage technology to build targeted campaigns for each subscriber, by analyzing vast amounts of data leading to better performance

Source: Mediapost.com



## SECTOR NEWS

## Broadcasting / Telecommunications

- **12/3: Nexstar Media Group**, a US-based television broadcasting company, acquired **Tribune Media**, a US-based media and entertainment company, for **\$4.1B**
- **11/20: Airspan Networks**, a US-based provider of broadband wireless access solutions, acquired **Mimosa Networks**, a US-based provider of wireless broadband solutions, from **Oak Investment Partners** for an undisclosed amount
- **11/11: AGC Networks**, an India-based communications solutions provider, acquired **Black Box Corporation**, a US-based infrastructure services, communications equipment and technical support services provider, for **\$151M**
- **11/9: II-VI Incorporated**, a US-based manufacturer of optoelectronic components, acquired **Finisar Corporation**, a US-based provider of fiber optic subsystems and network monitoring systems, for **\$3.5B**
- **11/8: CommScope Holding**, backed by **The Carlyle Group**, acquired **ARRIS International**, a US-based global communications company specializing in broadband network solutions, for **\$7.2B**
- **11/1: AMETEK**, a US-based manufacturer of electronic instruments and devices, acquired **Telular Corporation**, a US-based company engaged in the design and manufacture of wireless products, from **Avista Capital** for **\$525M**
- **11/1: Eureka Media**, a Canada-based movie production company, acquired **Aerostar TV SAS**, a France-based television channel, for an undisclosed amount
- **10/30: American Tower Corp**, a US-based owner and operator of broadcast and wireless communication sites, acquired a 15% stake in **ATC Telecom Infrastructure**, an India-based provider of telecommunications infrastructure solutions, for **\$400M**
- **10/30: Quincy Media**, a US-based a television broadcaster and newspaper publisher, acquired **WSIL-TV from Mel Wheeler**, a US-based TV and radio broadcasting company, for an undisclosed amount
- **10/29: EW Scripps**, a US-based media group that operates broadcast television stations, acquired 13 television stations from **Cordillera Communications**, a US-based owner and operator of television broadcasting stations, for **\$521M**
- **10/22: CoreLogic**, a US-based provider of information, analytics and business services, acquired a 72% stake in **Symbility Solutions**, a Canada-based designer of mobile and wireless technology solutions, for **\$65M**
- **10/17: Liberty Latin America**, a US-based telecommunications company with operations throughout Latin America, acquired the remaining 40% stake in **Liberty Cablevision of Puerto Rico**, a Puerto Rico-based broadband internet provider, from **Searchlight Capital** for **\$185M**
- **10/9: NEP Group**, a US-based company engaged in outsourcing tele product services for broadcast networks and production companies, acquired **SIS LIVE Ltd**, a UK-based company operating satellite uplink and outside broadcast united in Europe from Sports Information Services, for an undisclosed amount
- **10/8: DASAN Zhone Solutions**, a US-based provider of telecommunications services, acquired **KEYMILE GmbH**, a Germany-based solution provider and manufacturer of telecommunication systems, for **\$12M**
- **10/8: Azoff Music Management**, a US-based music distribution company, acquired a 50% stake in **Azoff MSG Entertainment**, a US-based company engaged in music, media and entertainment services, from **The Madison Square Garden Company** for **\$125M**
- **10/2: Telarix**, a US-based provider of business information exchange backed by Vista Equity Partners, acquired **Starhome BV**, a Switzerland-based provider of roaming solutions to network operators, for **\$100M**
- **10/1: GTT Communications**, a US-based operator of IP networks, acquired **Access Point**, a US-based provider of telecommunication services, for **\$40M**
- **9/27: BC Partners**, a UK-based private equity firm, acquired a minority stake in **United Group B.V.**, a Netherlands-based telecom and media operator, from **KKR** for an undisclosed amount

Source: Company press releases and Wall Street Research.

## SECTOR NEWS

## OOH Media

- **11/23: Business Growth Fund**, a UK-based private equity and venture capital firm, invested ~**\$7.5M** in **Evoke Creative**, a UK-based manufacturer of interactive digital solutions, video walls and digital signage
- **11/12: Stratacache**, a US-based provider of digital signage solutions, acquired **Sys-Teams**, a UK-based company specializing in installation and service solutions to digital signage, for an undisclosed amount
- **11/6: Jianguo Hong Zhou Investment**, a China-based investment company, acquired a ~20% stake in **AirMedia Group**, a China-based digital advertising company that operates advertising signage in airports, for **\$7.2M**
- **11/2: Guangdong Guangzhou Daily Media**, a China-based commercial and newspaper printing company, acquired **Advision Media**, a China-based outdoor digital media company, for an undisclosed amount
- **10/29: ALTAVIA SA**, a France-based marketing and publishing service company, acquired **SAS Fil Rouge**, a France-based marketing services company that offers OOH marketing at point of sale locations, for an undisclosed amount
- **10/12: Stingray Digital Group**, a Canada-based company engaged in providing multiplatform music services, acquired **Dj-Matic NV**, a Belgium-based provider of in-store media solutions for digital signage for business, for **\$12.5M**
- **10/12: Global**, a UK-based media group, acquired **Exterior Media**, a UK-based outdoor media company, for an undisclosed amount
- **10/11: InSite Mediacom**, a US-based billboard company operating across the Southeast region, has merged with **Martin Outdoor Media**, a Los Angeles-based OOH advertiser that owns transit benches, for an undisclosed amount
- **10/9: Ilbak Holdings**, a Turkey-based investment company, acquired a 90% stake in **Stroer Kentvizyon Reklam Pazarlama A.S.**, a Turkey-based out of home advertising company, for ~**\$17.2M**
- **10/5: Worldwide Media Corporation**, a US-based provider and developer of advertising platforms and selling systems, announced it would raise **\$50M** in a round of funding

Source: Company press releases and Wall Street Research.

## Radio / Music

- **11/19: iHeartMedia**, a US-based diversified media and entertainment company, acquired **Jelli**, a US-based cloud-based advertising platform, from **Intel Capital** for an undisclosed amount
- **11/5: Samramidas**, a South Korea-based investment company, acquired **Ulsan Broadcasting Corp**, a South Korea-based radio and television broadcasting company, for ~**\$17.8M**
- **10/30: Saga Communications**, a US-based radio and television broadcaster, acquired 4 local radio stations from **Ocala Broadcasting**, a US-based radio broadcasting company, for **\$9M**
- **10/30: Motor Oil Hellas**, a Greece-based petroleum company, acquired a joint stake in **Alpha Satellite Television and Radio**, a Greece-based radio and television broadcaster, for ~**\$20M**
- **10/25: Galaxy Communications**, a New York-based owner and operator of a network of radio stations, announced it will received **\$2.7M** in funding
- **10/17: Spotify**, a Sweden-based provider of digital music streaming services, acquired a minority stake in **PK Interactive**, a US-based provider of software for independent musicians and record labels, for an undisclosed amount
- **10/12: General Atlantic**, a US-based private equity firm, acquired an undisclosed stake in **NetEase Cloud Music**, a China-based online music streaming operation of NetEase Inc, for **\$600M**
- **10/9: Silversmith Capital**, a US-based private equity firm, acquired an undisclosed stake in **PK Interactive**, a US-based provider of software for independent musicians and record labels, for an undisclosed amount
- **10/8: Azoff Music Management**, a US-based music distribution company, agreed to acquire the remaining 50% stake in **Azoff MSG Entertainment**, a US-based provider of music, media and entertainment services, from **The Madison Square Garden Company** for **\$125M**
- **10/2: Tencent Music**, a China-based music streaming service and subsidiary of Chinese e-commerce giant Tencent Holdings, filed for an initial public offering seeking to raise **\$1B**
- **9/24: Sirius XM Radio**, a US-based satellite radio broadcasting company, acquired an 85% stake in **Pandora Media**, a US-based internet radio music station, for **\$2.25B**

## SECTOR NEWS

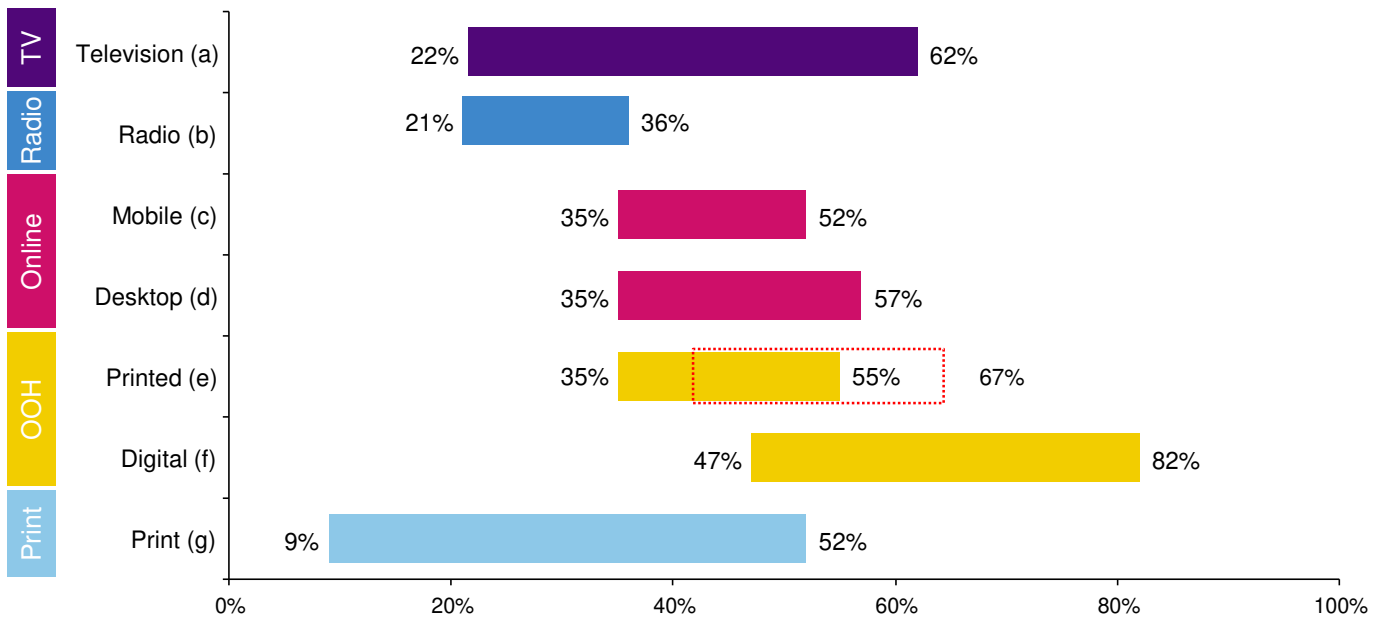
## Other Key Digital Media and Tech Headlines

- **11/20: Israel Growth Partners**, an Israel-based private equity firm, acquired an undisclosed stake in **SysAid Technologies**, a US-based provider of service desk and IT service management solutions, for **\$30M**
- **11/19: Microsoft** acquired **FSLogix**, a US-based provider of virtual desktop solutions, from **Noro-Moseley Partners** for an undisclosed amount
- **11/15: XALPHA Technologies**, a US-based investment holding company with interest in blockchain companies, acquired **Telecoin Global Operations**, a UK-based provider of multi-solution blockchain platform, from **Byzen Digital** for **\$56M**
- **11/14: nFuze**, a US-based software company that develops a video platform for customer relationship management, acquired **Sound Concepts**, a US-based provider of SaaS-based sales CRM software to marketing industries, for **\$25M**
- **11/13: Causeway Media Partners**, a US-based private equity company specializing in sports media and entertainment, acquired **YOUi Labs**, a Canada-based media company that offers a video app platform to engage users, for **\$23M**
- **11/12: Veritas Capital**, a US-based private equity firm, acquired a 91% stake in **Athenahealth**, a US-based provider of internet-based services for physician practices, for **\$4.9B**
- **11/11: SAP SE**, a Germany-based enterprise application software company, acquired **Qualtrics**, a US-based developer of a data management platform, from **Accel, Sequoia Capital** and **Insight Venture Partners** for **\$8.0B**
- **11/11: Vista Equity Partners**, a US-based private equity firm, acquired **Apptio**, a US-based provider of demand IT cost transparency and optimization solutions, for **\$1.6B**
- **11/8: Reworld Media Société**, a France-based digital media business, acquired a 69.34% stake in **TradeDoubler AB**, a Sweden-based digital performance marketing service provider, for **\$11M**
- **11/8: Deltatre SpA**, an Italy-based provider of sports-media technology and services, acquired **Massive Interactive**, a provider of technology and design services, for **\$92M**
- **11/5: ConversionPoint Technologies**, a US-based direct-to-consumer marketing company, acquired **Inuvo**, a US-based provider of internet software and analytics to advertisers, for **\$71M**
- **10/24: Christopher Munday**, Chairman and CEO of 2020 Companies, acquired **2020 Companies**, a US-based sales and marketing agency, from Golden Gate Capital for an undisclosed amount
- **10/23: Output Services Group**, a US-based company engaged in providing web-based communication solutions, acquired **Communis Plc**, a UK-based printing and direct marketing company, for **\$244M**
- **10/11: Apple** acquired certain power management technologies and other assets of **Dialog Semiconductor Plc**, a UK-based power management technology business, for **\$300M**
- **10/9: Sitecore**, a US-based provider of customer experience management software, acquired **Stylelabs**, a Belgium-based software company with a focus on enterprise marketing technology for brands, for an undisclosed amount
- **10/9: Bertram Capital Management**, a US-based private equity firm, agreed to acquire an undisclosed controlling stake in **Best Version Media**, a US-based media and marketing company, for an undisclosed amount
- **10/3: Tata Communications**, an India-based telecommunications service provider, announced its acquisition of **Teleena**, a Netherlands-based Internet of Things connectivity provider, for an undisclosed amount
- **9/26: ZephyrTel**, a US-based company providing software solutions, acquired **Vasona Networks**, a US-based company engaged in software development for mobile carrier infrastructure efficiency from **New Venture Partners**, for an undisclosed amount
- **9/20: Adobe Systems**, a US-based provider of software, acquired **Marketo**, a US-based provider of cloud based revenue performance management solutions, from **Vista Equity Partners** for **\$4.75B**
- **9/18: Impact Group**, a US-based sales and marketing agency, acquired **Cluep**, a Canada-based digital advertising platform provider, for **\$41M**

Source: Company press releases and Wall Street Research.

# ADVERTISING EFFECTIVENESS – PJ SOLOMON STUDY AND RECALL COMPARISON ANALYSIS

- Based on PJ SOLOMON independent study of the five primary advertising channels
- Advertising recall defined as advertising effectiveness in which respondents were exposed to an advertisement and then at a later point in time, respondents were asked if they remembered the advertisement on an aided or unaided basis

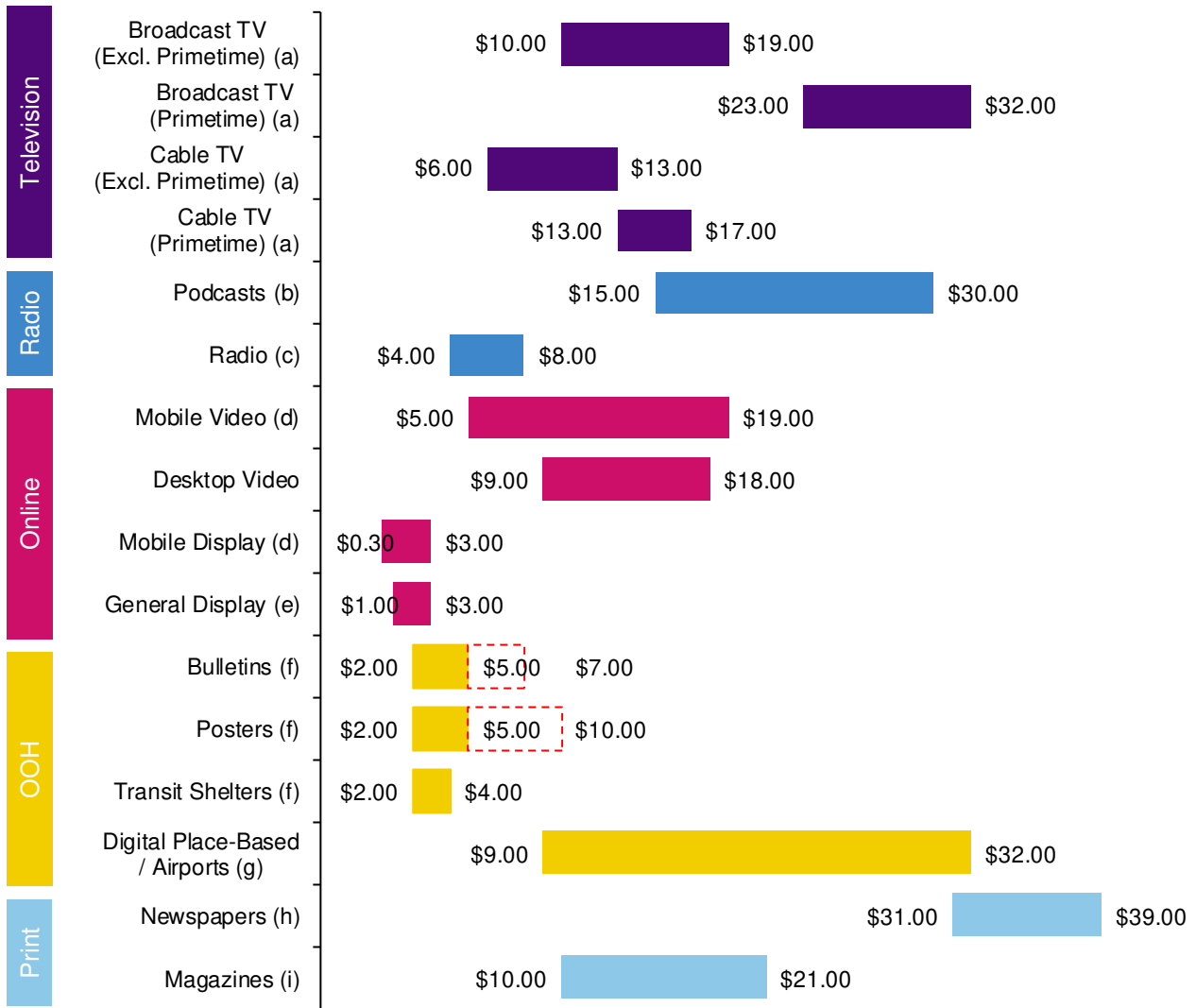


Source: PJ SOLOMON Study as of March 2017 and Wall Street Research.

Note: Ranges shift depending on aided vs. unaided recall basis, length of time for recall and sample size / nature and scope.

- Includes linear and non-linear television.
- Includes terrestrial and non-terrestrial / streaming radio, including either analog radio or digital audio over a variety of radio formats (broadcast, simulcast, satellite radio, internet radio, via streaming, media on the internet).
- Includes interactive and non-interactive banner ads that appear embedded in mobile websites, downloaded apps or in mobile games on smartphones and tablets. Does not include text ads via short message service (SMS).
- Includes all forms of desktop display advertising on websites, including text, image, flash, video and audio.
- Includes all forms of outdoor advertising, including billboards, posters, wallscapes, rotary programs, transit, airport advertising and in retail venues. Dotted box indicates revenue-weighted composite of printed and DOOH channels.
- Includes digital media used for marketing outside of the home and includes digital billboards, digital placed based networks and digital signage.
- Includes advertising in newspapers, magazines, directories and circulars.

# PJ SOLOMON US MAJOR MEDIA CPM COMPARISON



CPM (Cost Per Mille or Cost Per Thousand) is a commonly used measurement in advertising. Radio, television, newspaper, magazine, OOH advertising and online advertising can be purchased on the basis of showing the ad to one thousand viewers. It is used in marketing as a benchmarking metric to calculate the relative cost of an advertising campaign or an ad message in a given medium. The cost per thousand advertising impressions metric (CPM) is calculated by dividing the cost of an advertising placement by the number of impressions (expressed in thousands) that it generates. CPM is useful for comparing the relative efficiency of various advertising opportunities or media and in evaluating the overall costs of advertising campaigns.

Source: PJ SOLOMON Estimates as of November 2018 based on SEC filings, news, research and other industry sources.

- (a) 30-second advertisement.
- (b) 10- to 60-second advertisements. Includes both pre-roll and mid-roll advertising.
- (c) 30-second advertisement. Includes both spot and network.
- (d) Dataset includes mobile web, phone and tablet for both Android and iPhone.
- (e) 300x250 banner ads.
- (f) Calculated using SQUAD reporting from OOH media companies.
- (g) Represents data from 2014.
- (h) 1/2 page ad pre-discount. Calculated using estimated readership.
- (i) Full-page color ad. Calculated using estimated readership.

# MARKET INDICATORS

	11/29/18	Performance			Bloomberg Economic Forecast					
		% off 52	1-Month	YTD	4Q18E	1Q19E	2Q19E	3Q19E	4Q19E	
		Week	%	%		%	%	%	%	%
	High	Change	Change							
Nasdaq Composite	7,273	(10.3%)	3.2%	5.4%	Real GDP	3.10	3.10	2.80	2.50	2.30
Dow Jones Industrial	25,339	(5.6%)	3.7%	2.5%	Core CPI	2.80	2.40	2.40	2.30	2.20
S&P 500	2,738	(6.6%)	3.7%	2.4%	Fed Funds	2.45	2.70	2.95	3.10	3.15
					3 Mo. LIBOR	2.68	2.86	3.04	3.20	3.27
					10 Yr Treasury	3.20	3.30	3.36	3.41	3.44
					Unemployment	3.70	3.60	3.60	3.60	3.60

## Share Price Performance

	Stock Price	1-Week %	1 - Month %	YTD%
	11/29/18	Change	Change	Change
<b>Out of Home Media</b>				
APG SGA	\$325.21	(3%)	(7%)	(29%)
Boston Omaha	25.29	0%	(6%)	(22%)
Clear Channel Outdoor	5.12	(1%)	(9%)	11%
Clear Media	0.73	(2%)	(5%)	(27%)
Focus Media	0.84	(5%)	(10%)	(51%)
JCDecaux	33.98	6%	5%	(11%)
Lamar	75.32	2%	2%	1%
National CineMedia	7.11	4%	(15%)	4%
OUTFRONT Media	20.84	1%	17%	(10%)
Standard Diversified	14.73	(5%)	(10%)	28%
Ströer	52.43	(3%)	3%	(25%)

<b>Out of Home Median</b>		<b>0%</b>	<b>(6%)</b>	<b>(11%)</b>
<b>Out of Home Mean</b>		<b>0%</b>	<b>(3%)</b>	<b>(15%)</b>

<b>Broadcasting</b>	Stock Price	1-Week %	1 - Month %	YTD%
	11/29/18	Change	Change	Change
Entlevision	\$3.29	(2%)	(32%)	(54%)
Gray Television	18.13	1%	9%	8%
Nexstar Broadcasting	80.91	8%	12%	3%
Sinclair Broadcast Group	31.24	3%	17%	(17%)
TEGNA	13.53	8%	24%	(4%)

<b>Broadcasting Median</b>		<b>3%</b>	<b>12%</b>	<b>(4%)</b>
<b>Broadcasting Mean</b>		<b>4%</b>	<b>6%</b>	<b>(13%)</b>

<b>Diversified Media</b>	Stock Price	1-Week %	1 - Month %	YTD%
	11/29/18	Change	Change	Change
CBS	\$55.35	3%	2%	(6%)
Discovery	31.63	4%	4%	41%
Disney	116.61	3%	3%	8%
Hemisphere Media Group	13.98	2%	6%	21%
News Corp.	13.21	5%	6%	(19%)
Viacom	32.03	1%	5%	4%

<b>Diversified Media Median</b>		<b>3%</b>	<b>5%</b>	<b>6%</b>
<b>Diversified Media Mean</b>		<b>3%</b>	<b>4%</b>	<b>8%</b>

<b>Advertising Technology</b>	Stock Price	1-Week %	1 - Month %	YTD%
	11/29/18	Change	Change	Change
Criteo	\$23.71	5%	19%	(9%)
HubSpot	134.15	15%	8%	52%
Telaria	3.03	1%	5%	(25%)
The Trade Desk	140.81	19%	29%	208%

<b>Advertising Technology Median</b>		<b>10%</b>	<b>13%</b>	<b>21%</b>
<b>Advertising Technology Mean</b>		<b>10%</b>	<b>15%</b>	<b>56%</b>

	Stock Price	1-Week %	1 - Month %	YTD%
	11/29/18	Change	Change	Change
<b>Radio</b>				
Beasley Broadcast Group	\$5.33	(5%)	(17%)	(60%)
Emmis Communications	3.90	1%	(11%)	11%
Entercom Communications	6.53	1%	6%	(40%)
Saga Communications	37.76	6%	8%	(7%)
Salem Communications	2.88	1%	(3%)	(36%)
Sirius XM Radio	6.32	5%	12%	18%

<b>Radio Median</b>		<b>1%</b>	<b>2%</b>	<b>(21%)</b>
<b>Radio Mean</b>		<b>2%</b>	<b>(1%)</b>	<b>(19%)</b>

<b>Advertising/Marketing</b>	Stock Price	1-Week %	1 - Month %	YTD%
	11/29/18	Change	Change	Change
BlueFocus Communication	\$0.68	(5%)	10%	(15%)
Cheil Worldwide	21.24	3%	9%	12%
Dentsu Inc.	44.82	3%	(4%)	6%
Huntsworth	1.34	(1%)	(6%)	29%
M&C Saatchi	3.88	(5%)	(10%)	(18%)
MDC Partners	2.50	6%	4%	(74%)
Next Fifteen Communications	6.51	1%	7%	16%
Omnicom Group	77.18	1%	7%	6%
Publicis Groupe	59.80	2%	4%	(7%)
The Interpublic Group	24.35	6%	6%	21%
Viad	50.51	1%	8%	(9%)
WPP	11.07	4%	(0%)	(35%)

<b>Advertising/Marketing Median</b>		<b>2%</b>	<b>5%</b>	<b>(0%)</b>
<b>Advertising/Marketing Mean</b>		<b>1%</b>	<b>3%</b>	<b>(6%)</b>

<b>New Media</b>	Stock Price	1-Week %	1 - Month %	YTD%
	11/29/18	Change	Change	Change
Alphabet	\$1,094.58	5%	6%	4%
Amazon	1,673.57	10%	9%	43%
eBay	29.52	4%	10%	(22%)
Facebook	138.68	3%	(2%)	(21%)
Netflix	288.75	10%	1%	50%
PayPal	84.26	6%	4%	14%
Snap	6.40	1%	7%	(56%)
Twitter	31.30	(1%)	(3%)	30%

<b>New Media Median</b>		<b>5%</b>	<b>5%</b>	<b>9%</b>
<b>New Media Mean</b>		<b>5%</b>	<b>4%</b>	<b>5%</b>

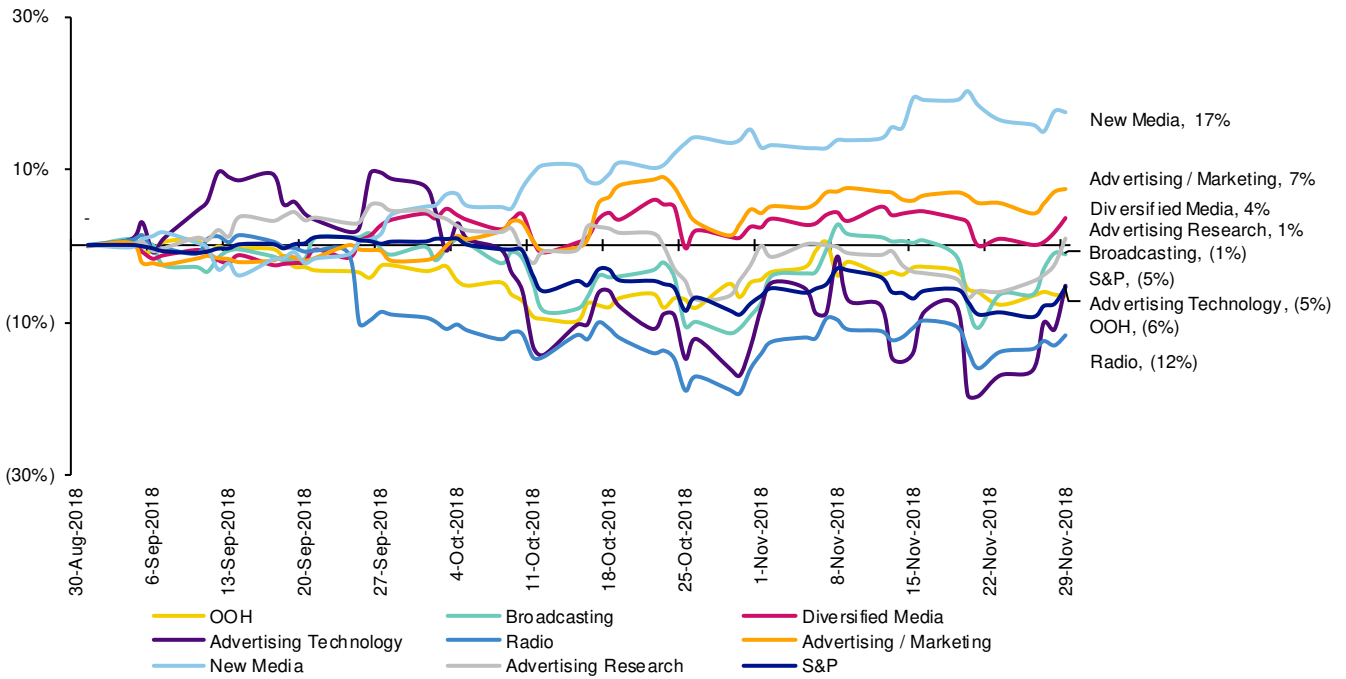
<b>Advertising Research</b>	Stock Price	1-Week %	1 - Month %	YTD%
	11/29/18	Change	Change	Change
comScore	\$16.10	(2%)	6%	(44%)
Nielson	27.15	8%	9%	(25%)
Ipsos	25.94	7%	0%	(26%)

<b>Advertising Research Median</b>		<b>7%</b>	<b>6%</b>	<b>(26%)</b>
<b>Advertising Research Mean</b>		<b>4%</b>	<b>5%</b>	<b>(31%)</b>

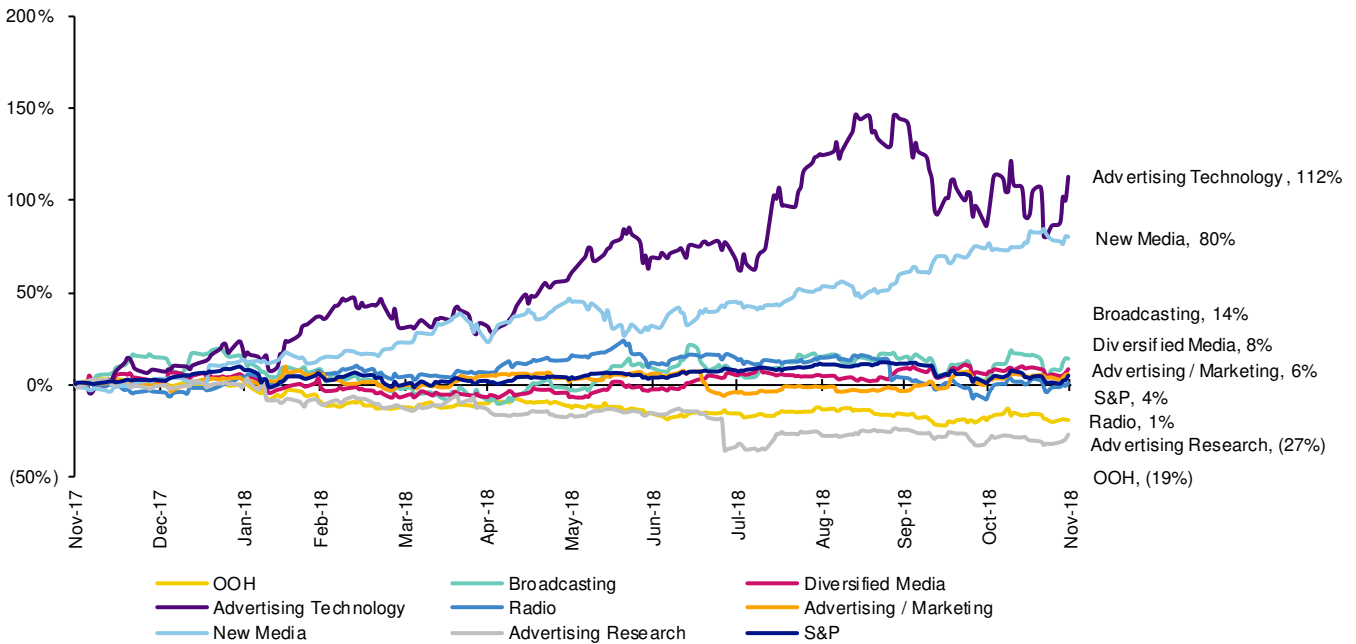
Source: Capital IQ as of November 29, 2018, Bloomberg and Wall Street Research.

# INDUSTRY SHARE PRICE PERFORMANCE

## Last Three Months



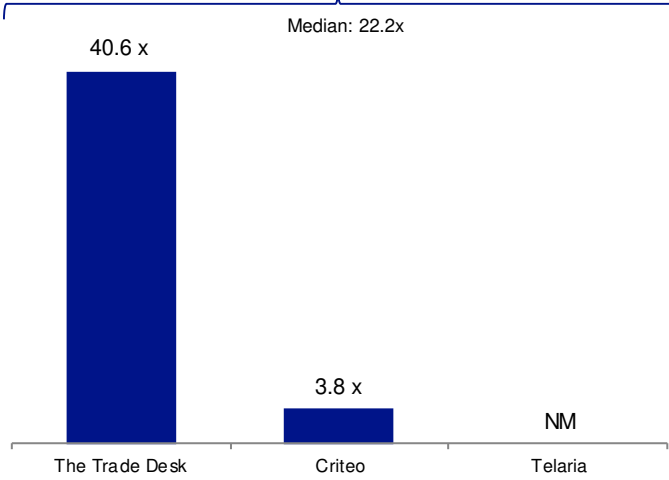
## Last Twelve Months (LTM)



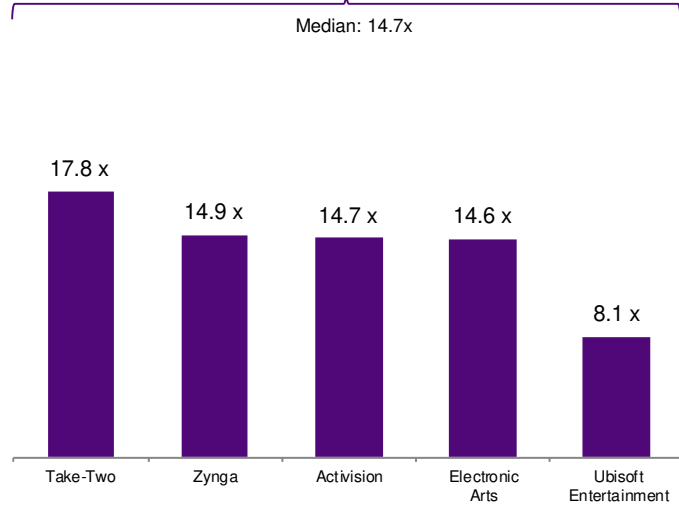
Source: Capital IQ as of November 29, 2018 and Wall Street Research.

# EV / 2018E EBITDA

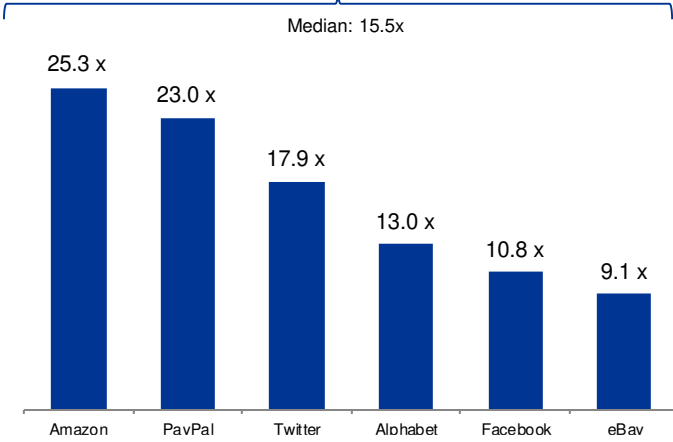
## Advertising Tech



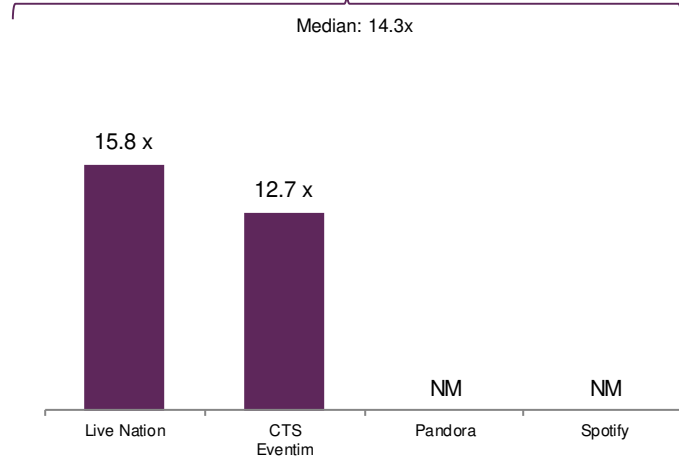
## Video Games



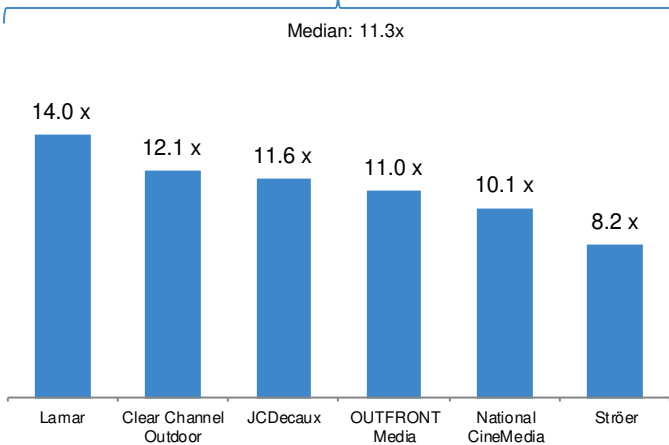
## New Media



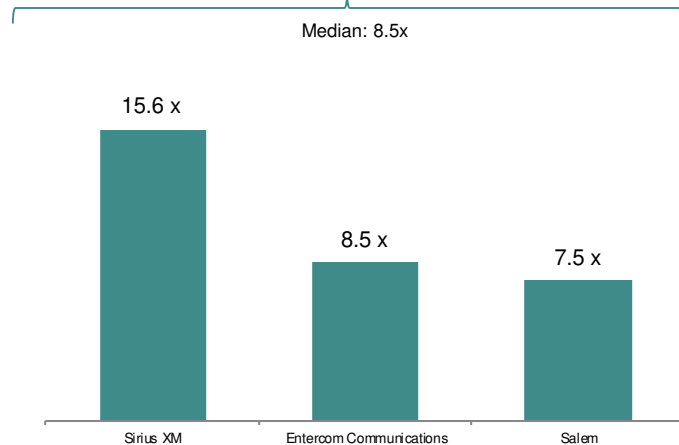
## Music / Events



## Out-of-Home Advertising



## Radio



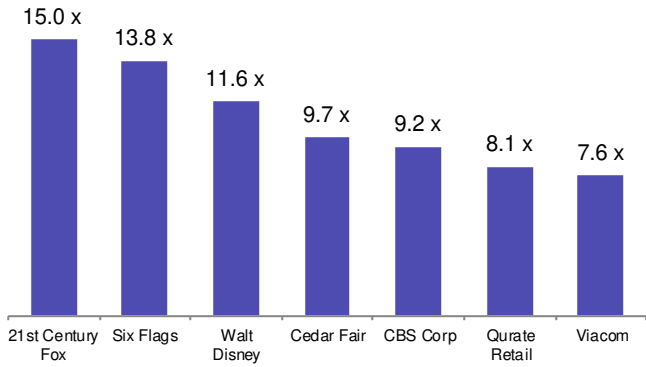
Source: Capital IQ as of November 29, 2018 and Wall Street Research.



# EV / 2018E EBITDA

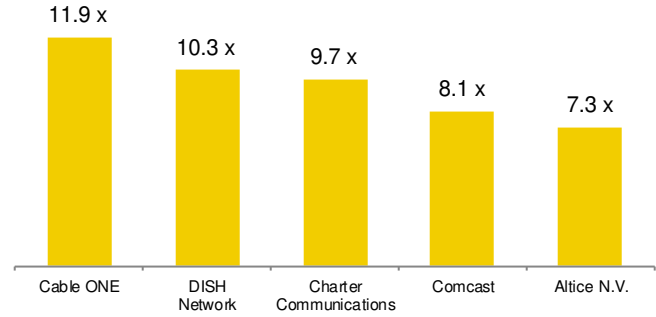
## Cable / Content

Median: 9.7x



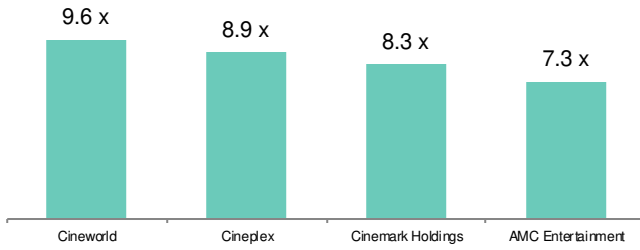
## Cable

Median: 9.7x



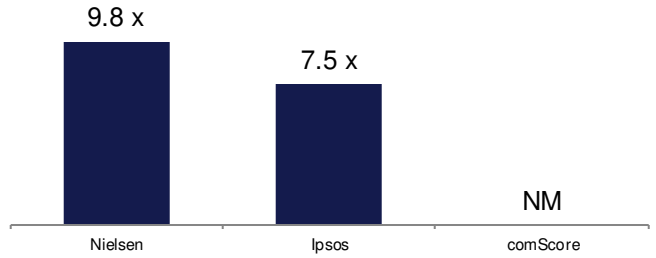
## Theaters

Median: 8.6x



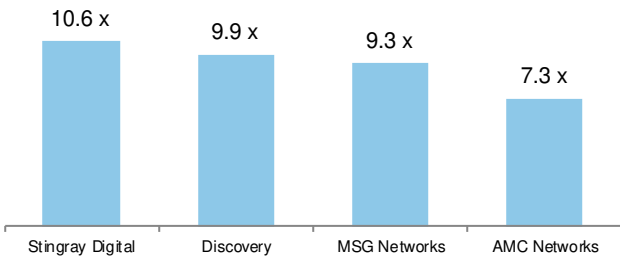
## Advertising Research

Median: 8.6x



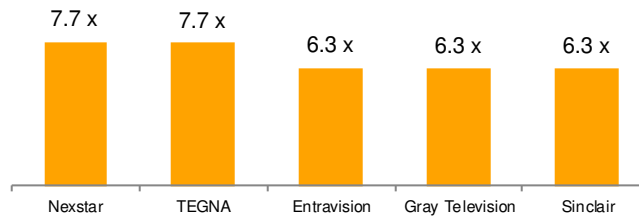
## Cable Content

Median: 9.6x



## Broadcasting

Median: 6.3x



Source: Capital IQ as of November 29, 2018 and Wall Street Research.

## VALUATION METRICS

	Stock Price 11/29/18	52-Week Low	52-Week High	Equity Value	Enterprise Value	Valuation Multiples		Growth	
						EV / Revenue 2018E	EV / EBITDA 2018E	'16A - '18E CAGR Revenue	EBITDA
<b>Out of Home Media</b>									
Boston Omaha	\$25.29	\$19.90	\$33.75	\$558	\$451	NM	NM	NM	NM
Clear Channel Outdoor	5.12	4.05	6.25	1,852	7,089	2.6 x	12.1 x	0%	(5%)
JCDecaux	33.98	29.51	41.42	7,229	7,863	1.9 x	11.6 x	10%	4%
Lamar	75.32	62.10	80.47	7,495	10,030	6.2 x	14.0 x	4%	4%
National CineMedia	7.11	5.19	10.69	1,120	2,065	4.7 x	10.1 x	(0%)	(1%)
OUTFRONT Media	20.84	17.52	24.06	2,906	5,225	3.3 x	11.0 x	3%	3%
Standard Diversified	14.73	9.50	18.53	253	488	NA	NA	NA	NA
<b>Global / U.S. Median</b>						3.3 x	11.6 x	3%	3%
<b>Global / U.S. Mean</b>						3.7 x	11.8 x	3%	1%
APG SGA	\$325.21	\$324.70	\$464.01	\$974	\$953	3.1 x	13.0 x	(2%)	(4%)
Ströer <sup>(a)</sup>	52.43	48.87	74.90	2,933	4,930	2.7 x	8.2 x	20%	36%
<b>Europe Median</b>						2.9 x	10.6 x	9%	16%
<b>Europe Mean</b>						2.9 x	10.6 x	9%	16%
Clear Media	\$0.73	\$0.61	\$1.09	\$395	\$324	NA	NA	NA	NA
Focus Media	0.84	0.83	1.85	12,290	11,918	5.6 x	12.5 x	20%	23%
<b>China Median</b>						5.6 x	12.5 x	20%	23%
<b>China Mean</b>						5.6 x	12.5 x	20%	23%
<b>Total Out of Home Advertising Median</b>						3.2 x	11.9 x	3%	4%
<b>Total Out of Home Advertising Mean</b>						3.8 x	11.6 x	7%	8%
<b>Radio</b>									
Beasley Broadcast Group	\$5.33	\$5.22	\$14.05	\$146	\$380	1.5 x	7.8 x	36%	29%
Emmis Communications	3.90	2.83	5.83	50	160	NA	NA	NA	NA
Entercom Communications	6.53	6.11	11.80	931	2,656	1.8 x	8.5 x	77%	71%
Salem Media Group	2.88	2.85	6.05	75	326	1.2 x	7.5 x	(2%)	(6%)
Sirius XM Holdings	6.32	5.21	7.64	28,071	34,592	6.0 x	15.6 x	7%	13%
<b>Radio Median</b>						1.7 x	8.1 x	22%	21%
<b>Radio Mean</b>						2.6 x	9.8 x	30%	27%
<b>Broadcasting</b>									
Entravision Communications	\$3.29	\$3.27	\$7.75	\$292	\$352	1.2 x	6.3 x	8%	(7%)
Gray Television	18.13	10.75	19.91	1,578	2,827	2.6 x	6.3 x	15%	21%
Nexstar Broadcasting Group	80.91	61.20	84.00	3,691	7,744	2.8 x	7.7 x	58%	56%
Sinclair Broadcast Group	31.24	25.40	39.90	3,039	5,880	1.9 x	6.3 x	5%	3%
TEGNA	13.53	10.09	15.59	2,913	5,879	2.7 x	7.7 x	5%	(3%)
<b>Broadcasting Median</b>						2.6 x	6.3 x	8%	3%
<b>Broadcasting Mean</b>						2.2 x	6.9 x	18%	14%
<b>Advertising/Marketing</b>									
BlueFocus	\$0.68	\$0.57	\$1.21	\$1,487	\$1,825	0.6 x	11.8 x	31%	23%
Cheil Worldwide	21.24	16.12	21.24	2,151	1,752	0.5 x	8.9 x	6%	8%
Dentsu	44.82	38.94	50.03	12,633	10,933	1.2 x	6.9 x	10%	1%
Huntsworth	1.34	0.95	1.77	462	513	1.8 x	11.0 x	11%	30%
M&C Saatchi	3.88	3.76	5.25	337	340	1.0 x	7.9 x	8%	39%
MDC Partners	2.50	2.27	11.80	144	1,320	0.9 x	7.3 x	3%	10%
Next Fifteen Communications Group	6.51	4.72	7.64	543	573	2.0 x	10.7 x	15%	24%
The Interpublic Group	24.35	19.76	25.33	9,359	11,035	1.4 x	8.4 x	1%	9%
Omnicom Group	77.18	67.31	82.78	17,296	20,935	1.4 x	8.8 x	(0%)	2%
Publicis Groupe	59.80	56.99	71.29	13,793	17,299	1.7 x	9.2 x	(3%)	(3%)
WPP	11.07	10.61	18.75	13,806	20,240	1.0 x	6.9 x	3%	(4%)
<b>Advertising/Marketing Median</b>						1.2 x	8.8 x	6%	9%
<b>Advertising/Marketing Mean</b>						1.2 x	8.9 x	8%	13%
<b>Advertising Technology / New Media</b>									
Alphabet	\$1,094.58	\$1,005.18	\$1,285.50	\$759,048	\$656,618	4.8 x	13.0 x	23%	30%
Amazon	1,673.57	1,133.95	2,039.51	818,323	835,777	3.6 x	25.3 x	31%	68%
Criteo	23.71	19.99	36.27	1,597	1,163	1.2 x	3.8 x	(27%)	31%
Facebook	138.68	131.55	217.50	398,537	357,401	6.5 x	10.8 x	41%	50%
HubSpot	134.15	77.35	160.35	5,263	5,015	9.9 x	NM	37%	NM
Netflix	288.75	184.04	418.97	125,920	131,189	8.3 x	NM	34%	113%
PayPal	84.26	70.97	93.07	99,289	91,702	5.9 x	23.0 x	19%	38%
Telaria	3.03	2.26	5.27	144	74	1.4 x	NM	33%	NM
The Trade Desk	140.81	42.80	155.75	6,089	5,923	12.7 x	40.6 x	51%	57%
Twitter	31.30	20.40	46.76	23,749	20,500	6.8 x	17.9 x	9%	331%
<b>Advertising Technology / New Media Median</b>						6.2 x	17.9 x	32%	53%
<b>Advertising Technology / New Media Mean</b>						6.1 x	19.2 x	25%	90%
<b>Advertising Research</b>									
comScore	\$16.10	\$15.14	\$29.10	\$948	\$1,094	2.6 x	NM	2%	NM
Ipsos	25.94	24.24	39.15	1,130	1,677	0.9 x	7.5 x	(1%)	(1%)
Nielsen	27.15	21.75	38.51	9,638	17,996	2.8 x	9.8 x	2%	7%
<b>Advertising Research Median</b>						2.6 x	8.6 x	2%	3%
<b>Advertising Research Mean</b>						2.1 x	8.6 x	1%	3%

Source: Capital IQ as of November 29, 2018 and Wall Street Research.

(a) EBITDA reflects growth related to new IFRS accounting rules.

## UPCOMING EVENTS

DATES	NAME	LOCATION	DESCRIPTION
December 5, 2018	Advertising Club of New York Out-of-Home: Now 2018	New York, NY	<ul style="list-style-type: none"> <li>OOH veterans alongside a consortium of data-tech partners will weigh in on OOH's new data-driven world</li> <li><b>PJ SOLOMON's Mark Boidman and Ben Zinder to attend</b></li> </ul>
December 6, 2018	MMA Forum Paris	Paris, France	<ul style="list-style-type: none"> <li>Mobile Marketing Forum Paris offers a day of conferences and debates, with spaces for exchanges and networking around Mobile Marketing</li> <li>Thirty speakers, high profile advertisers, will intervene in the form of keynotes, conversations &amp; round tables, in an exceptional setting with spaces for exchange and networking</li> </ul>
January 8-11, 2019	International Consumers Electronics Show (CES)	Las Vegas, NV	<ul style="list-style-type: none"> <li>CES is the world's gathering place for all those who thrive on the business of consumer technologies</li> <li>Owned and produced by the Consumer Technology Association (CTA)</li> <li><b>PJ SOLOMON's Mark Boidman and Ben Zinder to attend</b></li> </ul>
March 25, 2019	Advanced Advertising 2019	New York, NY	<ul style="list-style-type: none"> <li>Explores the advertising world's hot-button issues through one-on-one networking with tech leaders, brands, agencies and other C-suite leaders</li> <li>Learn the latest trends in data automation, television, big data, measurement, new technology and more</li> </ul>
March 26-28, 2019	Adobe Summit	Las Vegas, NV	<ul style="list-style-type: none"> <li>The event annually convenes the advisory solutions industry's most senior marketing and sales executives for an exclusive, closed-door session devoted to strategies to build stronger relationships and grow assets</li> </ul>
March 26-29, 2019	Digital Signage Expo 2019	Las Vegas, NV	<ul style="list-style-type: none"> <li>World's largest and longest running conference and trade show exclusively dedicated to showcasing innovative digital communications and interactive technology solutions for customer and employee-facing organizations</li> <li><b>PJ SOLOMON's Mark Boidman and Ben Zinder to attend</b></li> </ul>
May 1-3, 2019	FEPE Annual Congress	Dubai, U.A.E.	<ul style="list-style-type: none"> <li>Annual global outdoor advertising conference that explores the broader and fast changing media and technological environment</li> <li><b>PJ SOLOMON's Mark Boidman and Ben Zinder to attend</b></li> </ul>
May 13-17, 2019	London Digital Signage Week	London, United Kingdom	<ul style="list-style-type: none"> <li>Like its counterpart in NY, the week includes events for retail, employee communications, digital out of home and digital signage</li> <li><b>PJ SOLOMON's Mark Boidman and Ben Zinder to attend</b></li> </ul>
May 20-22, 2019	OAAA/Geopath OOH Media Conference	Las Vegas, NV	<ul style="list-style-type: none"> <li>Attracts the best and brightest in the industry who gather each year to discuss the challenges &amp; opportunities in the industry</li> <li><b>PJ SOLOMON's Mark Boidman, Ben Zinder and Christian Bermel to attend</b></li> </ul>
June 8-14, 2019	InfoComm 2019	Orlando, FL	<ul style="list-style-type: none"> <li>Largest professional audiovisual trade show in the US, with thousands of products for audio, unified communications and collaboration, display, video, control, digital signage, home automation, security, VR, and live events</li> </ul>

PJ SOLOMON, an investment banking advisory firm, provides strategic advice to owners, chief executives, senior management and board of directors of companies and institutions worldwide.

PJ SOLOMON advises clients on mergers and acquisitions, divestitures, financings, recapitalizations, restructurings, and activism defense. To date, the firm has successfully completed more than 500 strategic and financial advisory assignments.

In June 2016, PJ SOLOMON sold a 51% stake in the firm to Natixis, a French financial services firm owned by Groupe BPCE, France's second largest financial institution. The remaining 49% of PJ SOLOMON's ownership continues to be held by existing partners, resulting in an entrepreneurially-spirited company with a global M&A and financing platform and an increased breadth of product offerings.

Throughout our nearly thirty-year history, PJ SOLOMON has served as a trusted advisor to our corporate clients. With this latest development, our tradition of providing unbiased advice, grounded in intellectual integrity, will continue. Our goal is to bring the collective experience and knowledge of our senior bankers and the capabilities of Natixis to each assignment, advising our clients on how to achieve the optimum value and outcome for each transaction.



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