



**MEDIA
MONTHLY**

REPORT SUMMARIZING
SELECT MEDIA AND RETAIL
TECH ACTIVITY

JANUARY 2018



— PJ —
SOLOMON
unrivaled wisdom

SPECIAL HIGHLIGHTS IN THIS ISSUE

- PJ SOLOMON's view of blockchain impact on advertising
- OOH and the new tax bill
- CES 2018: Las Vegas, NV (Jan. 9-12)
- London's iconic Piccadilly lights are switched back on
- The role of antitrust in the context of today's digital advertising industry
- Marketers' challenges with customer data
- The rising importance of verification and validation standards for the point-of-care media industry

PENDING	DECEMBER 2017	NOVEMBER 2017	SEPTEMBER 2017
<p>\$305,000,000</p> <p>APOLLO</p> <p>Has agreed to acquire</p> <p>QDOBA from Jack MEXICAN EATS In the Box</p> <p>The undersigned served as financial advisor to Apollo</p> <p>PJ SOLOMON</p>	<p>altran</p> <p>Has sold its U.S. Power & Industrial Engineering Services Division to</p> <p>CriticalPoint CAPITAL</p> <p>The undersigned served as financial advisor to Altran</p> <p>PJ SOLOMON</p>	<p>SUPERMERCADO EL RANCHO</p> <p>Strategic Investment by</p> <p>Albertsons</p> <p>The undersigned served as financial advisor to El Rancho</p> <p>PJ SOLOMON</p>	<p>Cobb THEATRES CINEBISTRO MOVIES WITH TASTE</p> <p>has been sold to</p> <p>Cinemex la magia del cine</p> <p>The undersigned served as financial advisor to Cobb Theatres</p> <p>PJ SOLOMON</p>

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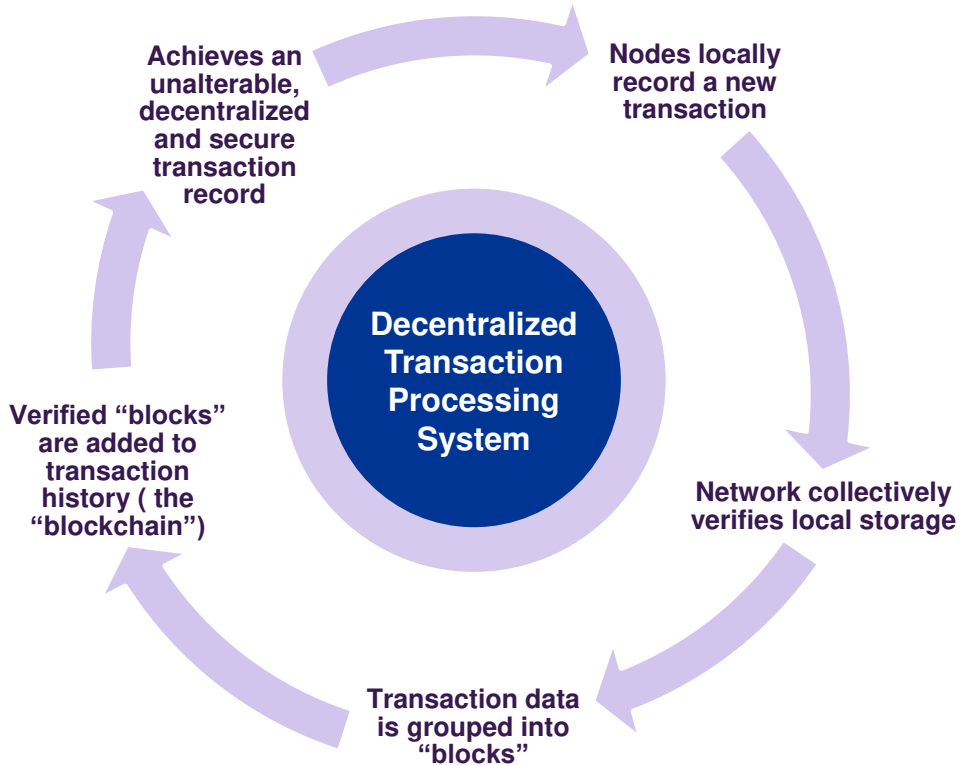
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VIEW ON BLOCKCHAIN IMPACT ON ADVERTISING

WHAT IS BLOCKCHAIN TECHNOLOGY?



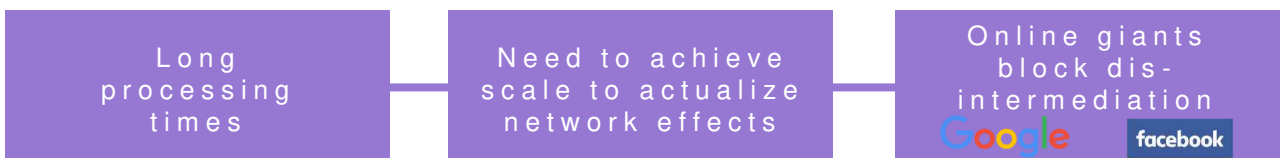
MEDIA IMPLICATIONS

- Blockchain technology will impact all media channels and drive shifts in the advertising wallet

BENEFITS:



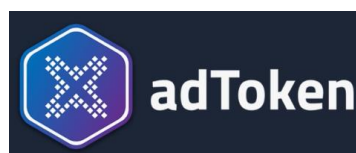
CONSIDERATIONS:



Source: PJ SOLOMON, Forbes, Ad Age, MediaPost, Forrester, Ad Ledger Consortium.

VIEW ON BLOCKCHAIN IMPACT ON ADVERTISING (CONT.)

ADVERTISING IMPACT OF EMERGING PLAYERS



Blockchain technologies will not have a significant near-term impact on advertising due to their nascency. However, long-term blockchain technology benefits could drive down online advertising costs, while providing security benefits that may increase the attractiveness of online media over OOH and other advertising channels. To keep up, OOH operators will need to adapt through integration of online into their ecosystems.

Source: PJ SOLOMON, Forbes, Ad Age, MediaPost, Forrester, Ad Ledger Consortium.

OOH AND THE NEW TAX BILL

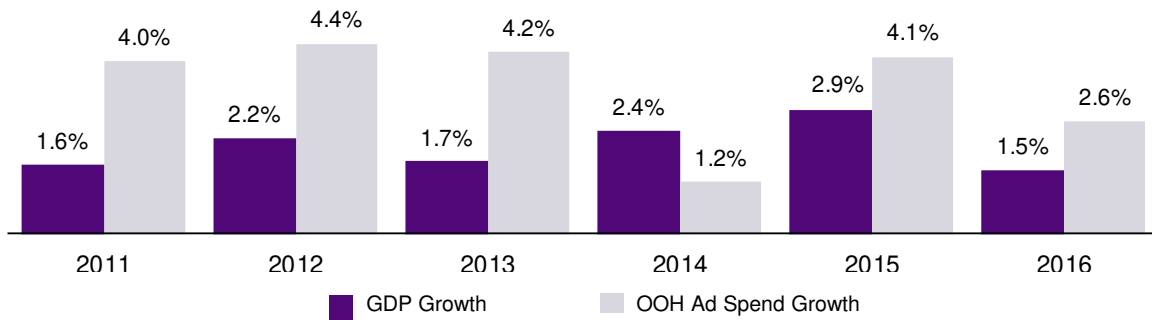
We expect OOH ad spend to accelerate together with new estimates of tax enhanced GDP growth

EFFECTS OF THE TAX BILL ON THE OOH INDUSTRY

- Non-REIT out of home media companies will experience:
 - Reduction in corporate tax rate from 35% to 21%
 - Ability to deduct full amount of capex for tax purposes for the next five years
- Advantages of REITs vs. C-Corps reduced given lower tax rate for C-Corps
- REIT dividends for shareholders continue to be treated as pass-through income at new lower rates
 - Given REIT benefits, **OUTFRONT** and **Lamar** should continue as REITs, but companies currently evaluating a possible REIT conversion may be less incentivized given reduced corporate tax rate
- While prior versions of tax bill explored possibility of eliminating tax deduction for advertising, current bill maintains it
 - Key win for out of home and not unexpected given:
 - Advertising is key job creator – **IHS** found in 2015 that 14% of US jobs are related to advertising
 - Dis-incentivizing advertising would reduce the flow of key information to consumers, likely causing consumer backlash and associated pressure on politicians

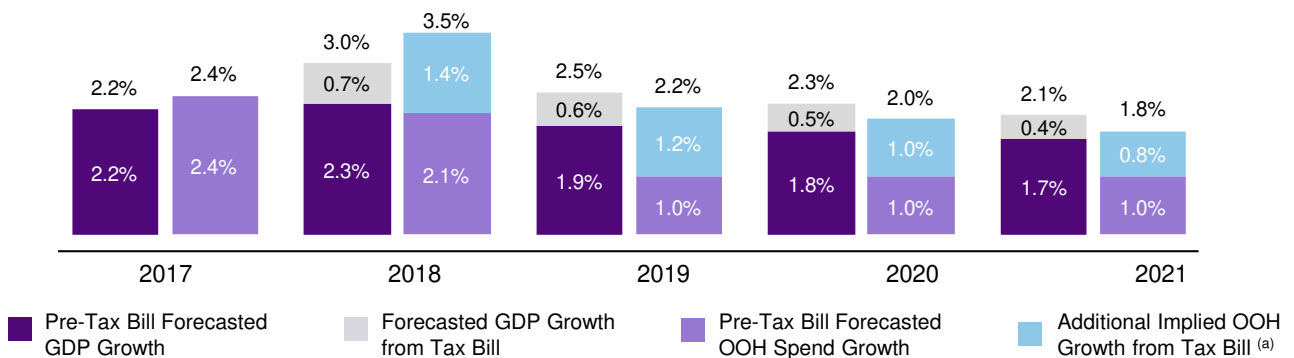
HISTORICAL OOH SPEND AND GDP GROWTH

- In the past several years, out of home ad spend has generally grown at twice the rate of GDP growth



PROJECTED BOOSTED OOH SPEND AND GDP GROWTH

- Bill is expected to boost real GDP growth during the 2018 – 2021 period



Source: IMF, TPC, eMarketer, PJ SOLOMON estimates.

a) PJ SOLOMON OOH sector forecast assuming similar OOH / GDP correlated growth.

CES 2018: LAS VEGAS, NV

(JANUARY 9 – 12, 2018)



CES 2018 BY THE NUMBERS

20,000+

New products being introduced

170,000+

Attendees from around the world

900+

Speakers

FEATURED EXHIBITORS (a)

MARKETING & ADVERTISING

NBCUniversal

YuMe

Google

HEARST

ADWEEK

Spotify

BrightLine

criteo



vevo

hulu

theTradeDesk

factual

nielsen

MEDIA TRENDS

- Amazon Echo and Google Home were both on display in a battle over which device will take share as households increasingly implement the internet-of-things in devices and other automated and voice-controlled solutions
- Augmented Reality (AR) had big announcements in 2017 (Apple's AR Kit and Google's AR Core) and will continue to change the landscape for media
- Electronics continue to innovate and become increasingly portable and flexible; ~\$310 million of wearable devices were sold in 2017 and rolling-screen TVs have advanced through prototype stages
- As cities continue to get smarter, digital out of home will get more responsive, utilizing location-based and other data to transform into an increasingly advanced and impactful advertising medium
- Proximity marketing and other geo-located technologies will continue to increase in use and increase interactivity with OOH, which will drive advertising sales and ROI
- Mobile devices will offer valuable insights to marketers and media companies with means to access this data through geo-fencing (e.g., OUTFRONT Media pairing in-app mobile ads with billboards and transit advertising via Ground Truth)

Source: CES.

a) Featured exhibitors per CES 2018 website from selected categories.

LONDON'S ICONIC PICCADILLY LIGHTS ARE SWITCHED BACK ON

The world-famous Piccadilly Lights had been switched off since January for a major refurbishment

- After a nine-month renovation, the world-famous Piccadilly lights were illuminated on October 26, 2017
 - A spectacular display of colors, which were sponsored by members of the public as part of a fundraising campaign for **Barnardo's**, was the first image to appear on the new screen



Photo: © Ocean Outdoor 2017.

- Landsec**, the owner of **Piccadilly Lights**, has replaced the original patchwork of screens with a single state-of-the-art 4K LED digital screen and live technology hub, which allows the screen to react to certain external factors, such as the weather or temperature
 - The nearly 60 ft. by 150 ft. screen has greater than 4K resolution at 5,490 x 2,160 and offers 3 in 1 LED packages that generates trillions of colors and exceptional brightness
 - These capabilities enable brands to display creative and innovative content, such as weather-appropriate clothing
 - The technology does not collect or store any personal data and is unable to record images or audio

SELECTED ADVERTISERS



- Ocean Outdoor** chief executive officer Tim Bleakley said:
 - "Operationally, Piccadilly Lights will be like running six TV channels. No other screen can synchronize content from six advertisers to a precise broadcast transmission schedule which is timed to the second. This project is a terrific investment in the development of digital out of home; it demonstrates pioneering leadership and innovation in this field."

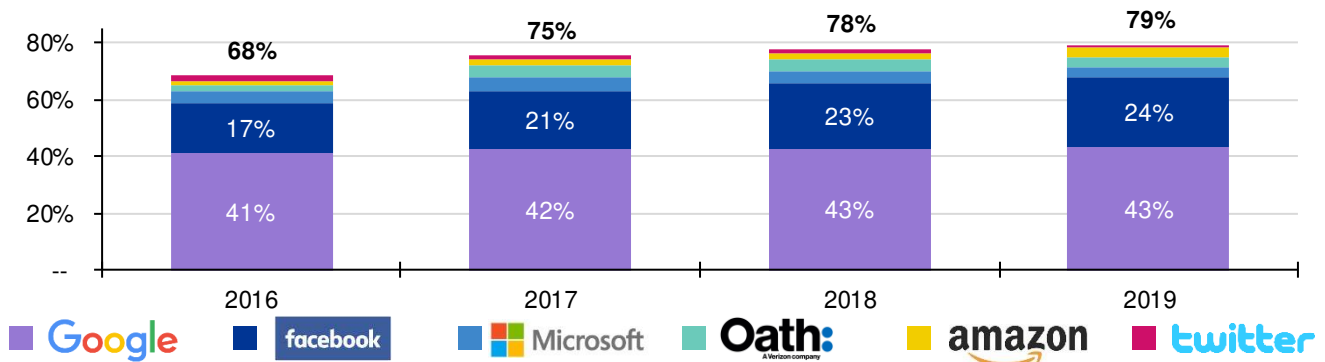
Source: Ocean Outdoor.

THE ROLE OF ANTITRUST IN THE CONTEXT OF TODAY'S DIGITAL ADVERTISING INDUSTRY

"Companies are competing against Google and Facebook for ad share, and that is something that, at Turner, we could not compete with," – Turner CEO John Martin

- According to estimates from **eMarketer**, a market research company, **Google** is set to claim ~43% share of the US digital ad market in 2018, while **Facebook** is estimated to capture ~23%
 - Comparatively, **Microsoft** and **Verizon's Oath** business – third and fourth, respectively – are expected to each claim ~4% share; **Amazon** and **Twitter** are set to garner 3% or less each

NET US DIGITAL AD REVENUES BY COMPANY



- Given **Alphabet** and **Facebook's** commanding market share in the digital advertising market, economists, antitrust experts and executives have speculated whether proposed mergers like **Time Warner** and **AT&T** should be approved in order to increase competition with the size of today's internet companies
 - In response to allegations that the AT&T / Time Warner merger is anticompetitive, Randall Stephenson, CEO of AT&T, has said that the deal "comes at a time when the communications and media industries are going through rather radical change. Massive, large scale internet companies with market caps in the hundreds of billions of dollars are creating tons of original content, and they're distributing it directly to the consumer. This is disrupting both industries ... and it's being done at a level and a pace that most of us could not of conceived of five years ago."
- Ryan Hagemann, a director of technology policy at the libertarian think tank **Niskanen Center**, took the stance that a regulatory breakup or similar action against large companies like Google or Facebook is not necessarily the best course of action for consumers:
 - "Large firms tend to be better in delivering higher levels of consumer welfare because they tend to be more efficient," he said, adding, "Ultimately, it's not the size or structure of a firm that matters, but the attendant effects on consumer welfare."
- While others have found the idea of a regulatory crackdown unlikely, there has been pressure from regulators in the past on tech companies
 - Microsoft, for example, spent over 20 years in a "monopoly war" with regulators, who claimed the company had too much control on the PC market, and was barely saved from being broken up after settling in court in 2002 by agreeing to curtail some its practices
- Given the changing landscape in the communications and media industries, as well as the surging size of today's tech companies, it remains to be seen if regulators will take action like they did with Microsoft, or if they will maintain a hands-off approach

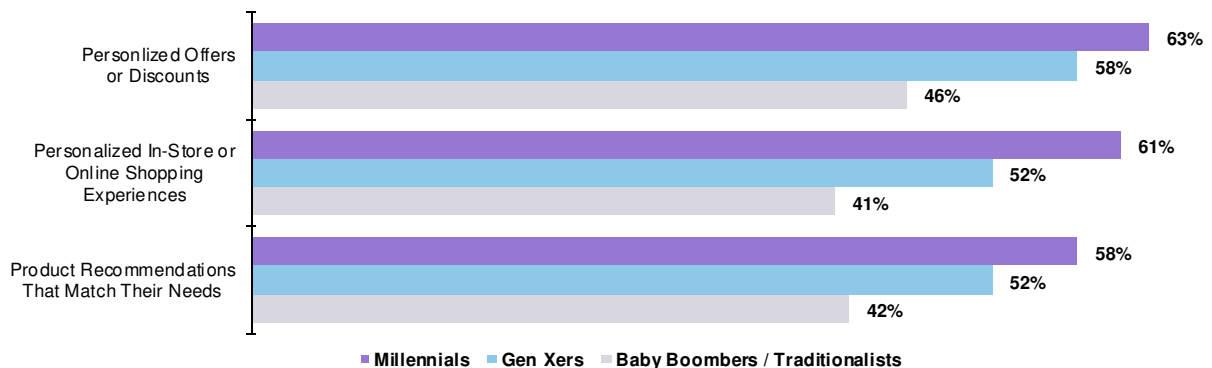
Source: S&P Global Market Intelligence; eMarketer.

MARKETERS' CHALLENGE WITH CUSTOMER DATA

Can you trust your third party marketing data?

- While 78% of marketers believe that data-driven marketing is integral to their organizations, 70% believe that they have poor quality or inconsistent customer data, according to Richard Joyce, a senior analyst with the research and advisory firm **Forrester**
 - Accurate data determines whether the right audience sees ads at the appropriate time and whether that effort leads to effective conversions
 - Given that marketers believe a majority of their data is poor quality or inconsistent, marketing campaigns are likely missing the mark when they select the audience they hope to reach
- To further complicate issues with data, marketers have to reach outside of their existing customer data to third-party solutions to reach broader audiences, which is important to expanding targeting to new customers
 - Third party data is often built on consumer inferences rather than through consumer records, such as store register data
 - This difference was highlighted in a **SmartBrief** update, which found that **Facebook** – one of the largest third party data sources – told advertisers that its network reaches 41 million Americans between the ages of 18 and 24; in reality, however, US census data found that there are only 31 million people in this demographic
 - Reaching niche customers through third-party data has become even harder since **Apple** changed the settings of its web browser Safari in September, which does not allow third parties to track users for more than 24 hours after visiting a website
- A challenge in determining the quality of data is the absence of an agency or company that rates or grades marketing data, according to SmartBrief; instead, marketers rely on service providers to assess their own data, with little independent information on the accuracy of that assessment
 - **SafeGraph** CEO Auren Hoffman estimates that the accuracy of marketing data is between 10% and 20%
 - In addition, nearly half of all brands report that they do not trust one-fifth of the data used to make media buying decisions, according to a 2017 survey by research firm **Industry Index**
- In order to address the shortcomings of third party marketing data, organizations could increase incentives to customers to share personal data, leading to the availability of more primary data
 - According to **Salesforce**, customers are more willing than not to share personal data if organizations offer discounts, personalized experiences or accurate product recommendations

% OF CUSTOMERS WILLING TO SHARE PERSONAL DATA FOR THE FOLLOWING:



Source: MediaPost, SmartBrief and Salesforce.

THE RISING IMPORTANCE OF VERIFICATION AND VALIDATION STANDARDS FOR THE POINT-OF-CARE MEDIA INDUSTRY

- Point-of-Care Media (POC) is one of the fastest growing sectors in healthcare education and media today
 - With the rapid proliferation of technology and digital screens across physician offices, pharmacies and hospitals, the \$500 million POC market has grown more than 10% annually over the last few years

KEY FACTORS PROPELLING POC'S GROWTH

- Sponsor-advertised educational content is the main thrust behind POC's rise to prominence as a media channel
 - The mutual benefit to patients receiving timely, relevant, healthcare information and to advertisers targeting consumers when healthcare is acutely top of mind is central to POC's appeal
- POC media provides educational content to consumers in physician offices, pharmacies and hospital settings
 - Because the majority of treatment decisions are made in these authoritative and trusted environments, this form of advertising and content is uniquely positioned to reach a target audience, while facilitating more effective patient and healthcare practitioner dialogue
 - A direct correlation between patient education and related healthcare follow-up action is already apparent, with multiple POC companies reporting material increases in vaccinations and other forms of preventive screenings, treatment and procedures
- POC will also continue to benefit from the ongoing fragmentation of media channels by modern technology
 - Advertisements for drug companies broadcasted on television today are no longer as effective in reaching audiences as they were years ago, with audiences moving away from traditional television programming and gravitating towards more targeted media platforms, including on-demand, mobile and online video
 - Because of its relevance and strategic placement before captive audiences, POC is even beginning to show dominance over "newer" media channels as online advertising platforms contend with blocking software, fraud and poor engagement by online audiences

THE NEED FOR STANDARDIZATION

- Although POC introduces unique and high-value opportunities for advertising agencies and media buyers, potential growing pains within the industry are currently being addressed
 - Specifically, marketers and healthcare professionals are concerned about the verification, standardization and auditing of network content and scale
 - The most influential party in this debate is the Point-of-Care Communications Council (PoC3), a consortium of POC industry leaders whose goal is to advocate utilization of the POC channel and scale the industry through the efforts of its member companies in order to improve patient health outcomes
 - The organization's initiatives call for verified auditing and increased transparency of performance standards to credentialize POC to healthcare brands and agencies that are allocating larger portions of their advertising budgets to the channel
- Credibility in the platform is more important than ever as providers in the industry continue to promote POC as a valuable tool and effective media channel
 - A significant feature working in POC's favor is that various elements of the channel are measureable, including the number of locations in a POC network, as well as the resulting "script lift" (increase in number of prescriptions written) or ROI of a particular campaign
- Since POC companies sell their platforms to healthcare buyers based on their network sizes (i.e., number of physician offices, hospitals, screens, patient impressions, etc.), media providers need to follow consistent practices and standards when making claims about the number of health-related offices or hospitals in their network
 - Buyers should be ensured that the facts and figures stated by a POC media owner are 100% legitimate and consistent across the industry

THE RISING IMPORTANCE OF VERIFICATION AND VALIDATION STANDARDS FOR THE POINT-OF-CARE MEDIA INDUSTRY (CONT.)

- Similarly, there is no industry standard in place regarding the ROI that POC companies provide healthcare brands and media buyers
 - As mentioned, a differentiating feature of POC is that it can quantitatively measure ROI on advertising spend; however, this critical advantage could be negated by inconsistent reporting of these statistics across POC providers
 - Some POC providers, for example, may claim the ability to generate ROIs as high as 20x, but results may not be measured the same way by other POC providers
- To address this issue, PoC3 media partners currently use established data providers (e.g., Crossix, IMS, Symphony) to validate results
 - Legitimate standardization, though, for ROIs and other metrics will need to be established across the entire industry in order for POC to reach its full potential as an advertising medium

WHAT'S BEING DONE TO MOVE POC FORWARD

- Steps are being taken to tackle POC's underlying growth challenges; PoC3 is in the process of officially releasing a set of guidelines that will speak to verification, standardization and auditing (i.e., "Buyers' Guide")
 - The Buyers' Guide includes key physical audit metrics, such as reach verification, as well as specific protocols to follow, i.e., developing an approved methodology to ensure the integrity of physician network lists
 - The guidelines also feature a set of FAQs to help potential buyers of POC media understand the most important questions to ask POC media providers
 - Buyers could ask "How does the POC media owner verify campaign presence and functionality of digital devices?" or "Does the POC media partner physically audit their locations?"
 - A draft of the Buyers' Guide has been released to a select group of media providers and is expected to be finalized in the coming weeks
- In order to continue driving momentum in the industry, the next step would be for these ethical guidelines to gain significant traction among all POC media providers and for the auditing standards to be universally approved and embraced by the industry
 - Once finalized, the auditing standards will need to fully encompass network definition and validation, minimum standard metrics for performance, completion of audit by approved third-party auditing firms, compliance with updated ethics guidelines and annual ethics compliance certification
 - These developments, which are already in motion, will provide a firm framework on verification, standardization and auditing in order to maximize the value of POC channels and the education that this platform provides for its patients and healthcare providers nationwide
- Though still a niche channel, POC continues to grow as an attractive advertising platform with the ability to demonstrate attribution for its brands
 - Reaching patients at the point-of-care, where drug prescribing decisions are the most important, remains a key selling point for this channel
- There remains significant whitespace potential for the industry, and effective standardization and auditing will position POC to meaningfully compete as the premier healthcare media channel in the foreseeable future

Disclosure: On September 13, 2017, PJ SOLOMON hosted a PoC3 Town Hall to discuss the importance of establishing industry standards for verification and validation in the POC industry. PJ SOLOMON was the strategic advisor to PatientPoint on its \$140 million capital raise. The transaction was announced on June 28, 2017

SECTOR NEWS

Broadcasting / Telecommunications

- **12/27: Turner Broadcasting System**, the US-based television and media company, acquired **Canal de Futbol**, the Chile-based company that operates a TV channel showing soccer matches, from **Asociacion Nacional de Futbol**, the Chile-based national soccer association, and Mr. Jorge Claro, for undisclosed consideration
- **12/27: 3i Infrastructure**, a Europe-based private equity firm, acquired a 55% stake in **Wireless Infrastructure Group Limited (WIG)**, the UK-based telecommunications tower operator, from **Barings** for ~\$250 million
- **12/21: T-Mobile Austria**, the Austria-based mobile telecommunications carrier and a subsidiary of Deutsche Telekom AG, acquired **UPC Austria**, the Austria-based company that provides broadband internet, cable television, and telephone services, from **Liberty Global Plc** for \$2.2 billion
- **12/20: A consortium led by NJJ Telecom Europe**, the private investment firm of telecoms investor and operator **Xavier Niel**, and **Iliad**, a fully integrated operator in France, acquired a majority stake of **Eir**, the Ireland-based telecommunications and broadband business, for ~\$4.1 billion
- **12/18: TEGNA**, the US-based international media and marketing solutions company, acquired **KFMB-TV**, the US-based TV station, from **Midwest Television** for ~\$300 million
- **12/15: The Walt Disney Company** agreed to acquire **Twenty-First Century Fox**, which includes the Twentieth Century Fox Film and Television studios, along with cable and international TV businesses, for total transaction value of ~\$66 billion
- **12/13: T-Mobile USA**, the US-based provider of wireless voice, messaging and data communication services, acquired **Layer3 TV**, the US-based company that provides cable television services, from **North Bridge Venture Partners** and **Evolution Media Capital** for undisclosed consideration
- **12/12: Warburg Pincus**, the US-based private equity firm, acquired a 20% stake in **Bharti Telemedia Limited**, the India-based direct-to-home paid TV service provider, from **Bharti Airtel Limited** for \$350 million
- **12/11: Corning Incorporated**, the US-based manufacturer of specialty glass and ceramics, has acquired the Communication Markets Division of **3M Company**, the US-based conglomerate, for ~\$900 million
- **12/7: Webedia SAS**, the France-based company engaged in providing website publishing services, acquired a majority stake in **Creators Media**, the US-based social publisher and video production company, from **Deutsche Telekom Strategic Investments** and **Grazia Equity** and **Draper Esprit** for undisclosed consideration
- **12/7: Nexstar Media Group**, the US-based TV broadcasting company, acquired **LKQD Technologies**, the US-based company providing video advertising software, for ~\$90 million
- **12/4: Discovery Communications**, the US-based media and entertainment company, acquired a ~25% stake of **OWN: Oprah Winfrey Network**, the US-based television channel, for \$70 million, increasing Discovery's stake to more than 70%
- **12/4: Prysmian SpA**, the Italy-based manufacturer of cables used to transmit energy and telecommunications signals, acquired **General Cable Corporation**, the US-based wire and cable manufacturing company, for ~\$3 billion
- **12/1: Studio 100 N.V.**, a Belgium-based provider of children and youth entertainment, acquired **Little Airplane Productions**, a US-based producer of animated pre-school television programs, for undisclosed consideration
- **11/27: Zayo Group**, the US-based provider of bandwidth infrastructure, acquired **Spread Networks**, the US-based telecommunications provider, for \$127 million
- **11/9: B. Riley Financial**, the US-based financial services company, acquired **magicJack VocalTec**, the Israel-based Voice over Internet Protocol (VOIP) cloud telecommunications provider, for ~\$143 million

Source: Company press releases and Wall Street Research.

SECTOR NEWS

OOH Media

- **12/27: AirMedia Group**, the China-based operator of OOH advertising, terminated its going private transaction because the transaction would not be completed before December 31, 2017
- **12/22: Tamedia AG**, the Switzerland-based media company, acquired **Goldbach Group AG**, the Switzerland-based marketing and advertising company, for ~\$220 million
- **12/12: AdMobilize**, the US-based artificial intelligence and physical-world analytics company, announced a partnership with **Media Mea**, the US-based customer interactive display manufacturer, to equip its digital signage solutions with audience analytics functionality
- **12/12: iHeartMedia**, the US-based mass media company, announced it is exploring a possible private capital-raising transaction by selling some or all of its 100 million shares of Class B common stock of **Clear Channel Outdoor**, the US-based OOH advertising company
- **11/28: JCDecaux**, the France-based OOH media company, announced a partnership with **Neustar's** customer intelligence and activation solutions for the purposes of providing OOH media analysis based on consumer attributes and behaviors
- **11/20: The Madison Square Garden Company**, the US-based sports and entertainment company, acquired **Obscura Digital**, the US-based developer of interactive digital art installations and experiences, for undisclosed consideration
- **11/9: Intersection**, the US-based smart cities technology and media company, closed a \$150 million funding round led by **Graham Holdings Company** to help bring the Link product and other smart city technologies to cities around the world
- **11/8: OUTFRONT Media**, the US-based OOH advertising company, announced an agreement with **Envision Solar International** to market and sell the naming rights for Envision Solar's network of solar powered electric vehicle charging stations
- **10/27: Barco**, the Belgium-based visualization solutions company, introduced "Unisee", a single uniform LCD video wall product that offers faster installation, easier servicing and higher reliability

Radio / Music

- **12/18: TEGNA**, the US-based international media and marketing solutions company, acquired KFMB-AM and KFMB-FM, the US-based radio stations, from **Midwest Television** for ~\$22 million
- **12/11: Apple**, the US-based technology company, acquired **Shazam**, the UK-based music and image recognition company, from **DN Capital Limited, Acacia Capital Partners Limited, Kleiner Perkins Caufield & Byers** and **Institutional Venture Partners** for an estimated \$400 million
- **12/7: Sirius XM**, the US-based satellite radio and online radio company, announced that its 200+ channels of audio entertainment are now available on **Apple TV**
- **11/30: Cumulus Media**, the US-based owner and operator of AM and FM radio stations, announced that it entered into a Restructuring Support Agreement and filed for reorganization under Chapter 11 of the Bankruptcy Code in the US Bankruptcy Court for the Southern District of New York
- **11/21: Entercom Communication Corp.**, the US-based radio broadcasting company, announced that it completed its merger with **CBS Radio**, the US-based radio broadcasting company and subsidiary of **CBS Corporation**, creating a radio broadcaster with 235 stations that engages over 100 million people per week
- **11/10: Beijing Beating Technology (Bytedance)**, the China-based owner and operator of individualized information recommendation engine for news, pictures and essays, acquired **Musical.ly**, the China-based video and music social network app, for an estimated ~\$800 million
- **11/1: Beasley Broadcast Group**, the US-based radio broadcasting company, acquired one radio station in Boston (WBZ-FM) from **Entercom Communications Corporation**, the US-based company engaged in radio broadcasting, for \$12 million and its WMJX-FM radio station

Source: Company press releases and Wall Street Research.

SECTOR NEWS

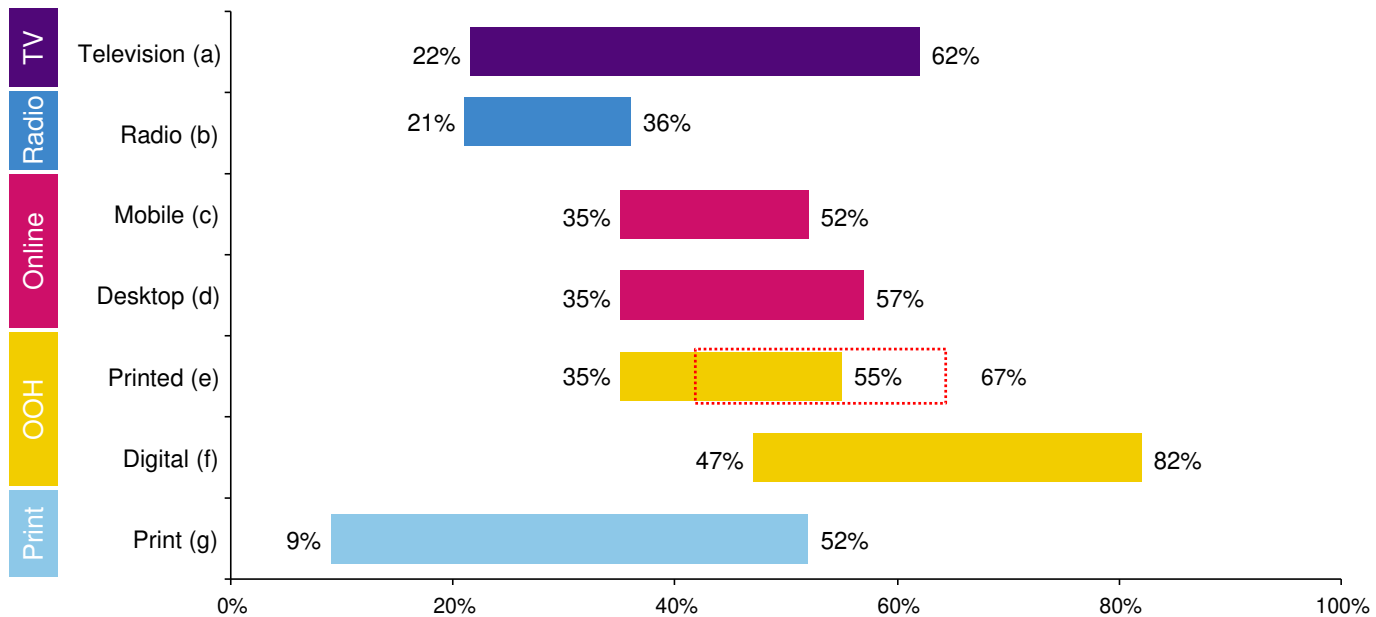
Other Key Digital Media and Tech Headlines

- **12/30: Target Corporation**, the US-based retail company, acquired **Shipt**, the US-based operator of an online same-day delivery platform, from **e.ventures**, **Greycroft Partners** and **Harbert Management Corporation** for \$550 million
- **12/28:** A consortium of investors led by **SoftBank**, acquired a 17.5% stake in **Uber Technologies**, the US-based provider of ride sharing services, for an estimated consideration of ~\$9 billion
- **12/20: Penske Media Corporation**, the US-based company engaged in digital media and information services, has acquired an undisclosed controlling stake in **Wenner Media**, the US-based publisher of periodical and magazines, for \$100 million
- **12/19: Merkle**, the US-based marketing company and subsidiary of **Dentsu**, acquired **David Wood & Associates**, the US-based digital marketing services provider, for undisclosed sum
- **12/18: Total System Services**, the US-based payment processing company, acquired **Cayan**, the US-based provider of credit card processing solutions, from **Parthenon Capital Partners** for ~\$1 billion
- **12/18: ModusLink Global Solutions**, the US-based provider of supply chain management services and business management solutions, acquired **IWCO Direct**, the US-based provider of data-driven direct marketing solutions, from **Court Square Capital Partners** for \$476 million
- **12/14: Innocean Worldwide**, the South Korea-based marketing and communication company, acquired **David&Goliath**, a US-based advertising agency, for a consideration of ~\$70 million
- **12/11: Iron Mountain Incorporated**, the US-based information management services company, acquired the US operations of **IO Data Centers**, the US-based colocation data center services provider, for ~\$1.3 billion
- **12/6: Dentsu Aegis Network Limited**, the UK-based branding, media and marketing services company and subsidiary of **Dentsu**, acquired **Swirl**, the US-based digital marketing agency, for undisclosed consideration
- **12/5: Intuit**, the US-based provider of business and financial management solutions, acquired **Tsheets.com**, the US-based developer of cloud-based time tracking technology for organizations, from **Summit Partners** for ~\$340 million
- **12/5: Cineworld Group**, the UK-based cinema operator, acquired **Regal Entertainment Group**, the US-based cinema operator, for \$3.6 billion
- **12/5: Zeta Global**, the US-based data-driven technology company, acquired **Disqus**, the US-based online discussion platform, from a group of sellers for \$90 million
- **11/29: Aristocrat Leisure Limited**, the Australia-based manufacturer of slot and video gaming machines, acquired **Big Fish Games**, the US-based developer and distributor of casual games for PCs and mobile devices, from **Churchill Downs Incorporated** for \$990 million
- **11/28: Appen Limited**, the Australia-based developer of human-annotated datasets for machine learning and AI, acquired **Leapforce**, the US-based provider of search relevance services, for \$80 million
- **11/27: Thoma Bravo**, the US-based private equity firm, acquired **Barracuda Networks**, the US-based company engaged in security, data storage, protection and storage solutions, for \$1.6 billion
- **11/22: Dentsu Aegis Network Limited**, the UK-based branding, media and marketing services company and subsidiary of **Dentsu**, acquired **Oxyma Group B.V.**, the Netherlands-based marketing services and solutions company, from **Nordian Capital Partners** for undisclosed consideration
- **11/27: Marlin Equity Partners**, the US-based private equity firm, acquired **Bazaarvoice**, the US-based provider of various social commerce solutions, for \$5.50 per share for a total value of ~\$520 million
- **11/26: Meredith Corporation**, the US-based company engaged in media and marketing, acquired **Time**, a US-based company engaged in magazine publishing, for a total enterprise value of \$2.8 billion

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

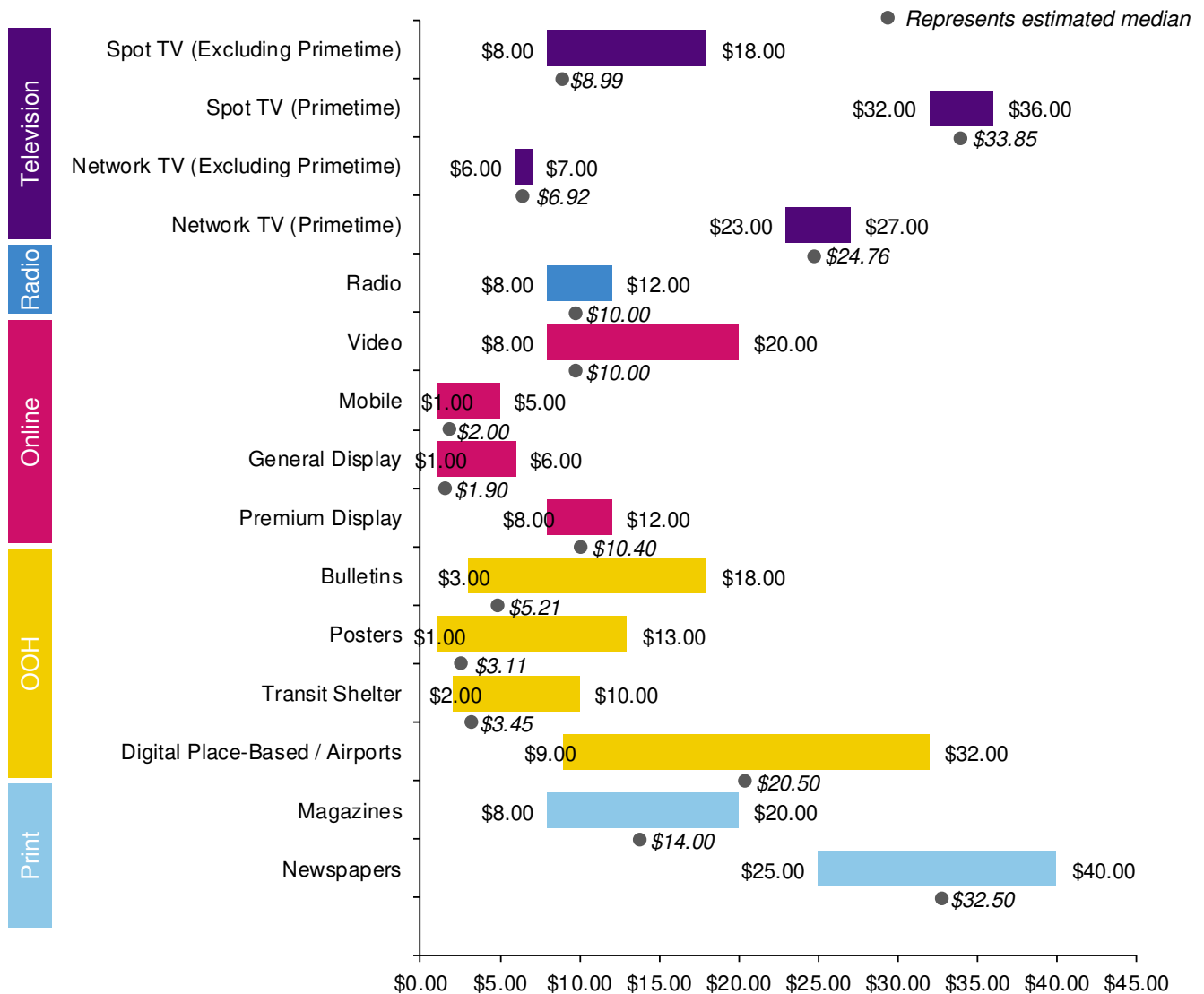


Source: PJ SOLOMON Study as of March 2017 and Wall Street research.

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

- a) Includes linear and non-linear television.
- b) 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).
- c) 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).
- d) Includes all forms of desktop display advertising on websites, including text, image, flash, video and audio.
- e) 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.
- f) Includes digital media used for marketing outside of the home and includes digital billboards, digital placed based networks and digital signage.
- g) 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 July 2016 based on SEC filings, news, research and other industry sources.

MARKET INDICATORS

Performance					Bloomberg Economic Forecast										
		% off 52 Week High	1-Month Change	YTD %		1Q18E	%	2Q18E	%	3Q18E	%	4Q18E	%	1Q19E	%
Nasdaq Composite	7,154	(0.1%)	4.6%	3.6%	Real GDP	2.80		2.70		2.50		2.40		2.20	
Dow Jones Industrial	25,369	(0.1%)	4.3%	2.6%	Core CPI	1.90		2.30		2.30		2.10		2.20	
S&P 500	2,748	(0.1%)	3.6%	2.8%	Fed Funds	1.65		1.85		2.00		2.20		2.30	
					3 Mo. LIBOR	1.70		1.90		2.06		2.23		2.37	
					10 Yr Treasury	2.56		2.69		2.79		2.88		2.98	
					Unemployment	4.00		4.00		3.90		3.90		3.90	

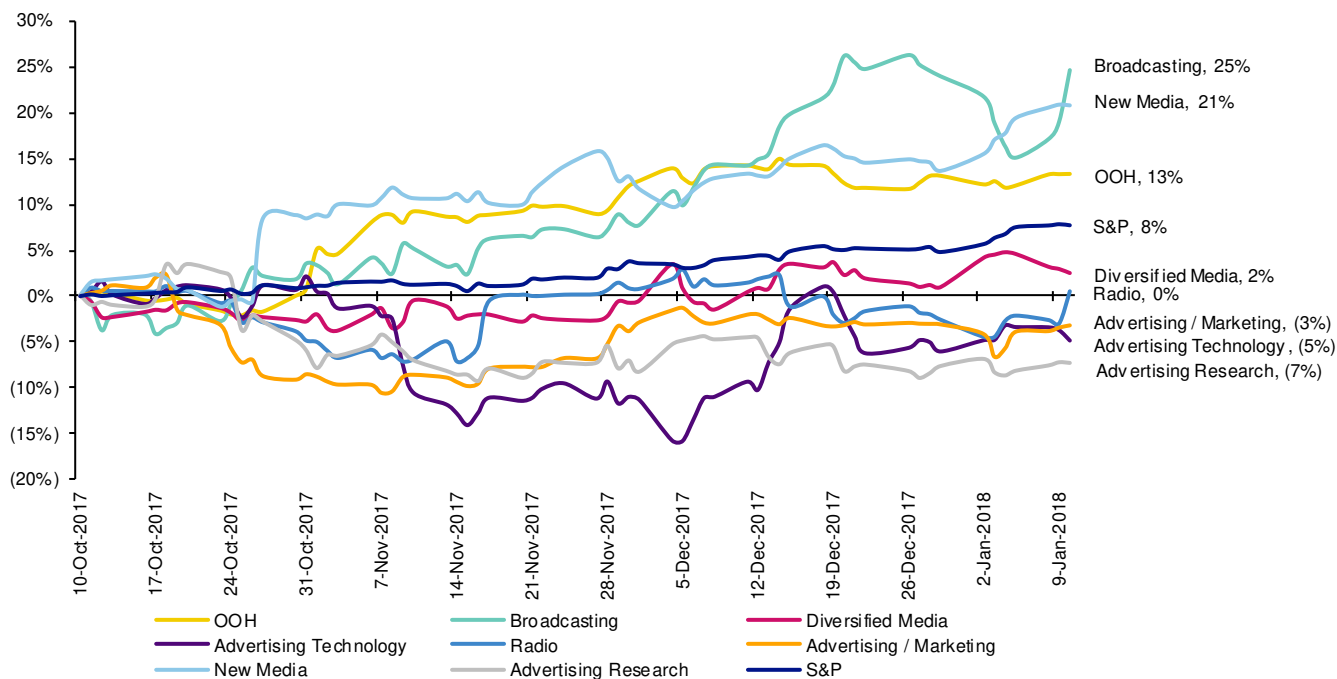
Share Price Performance

Out of Home Media					Radio				
Stock Price	1-Week %	1 - Month %	YTD%		Stock Price	1-Week %	1 - Month %	YTD%	
1/10/18	Change	Change	Change		1/10/18	Change	Change	Change	
AirMedia Group	\$1.21	10%	(40%)	5%	Beasley Broadcast Group	\$12.80	(3%)	13%	(4%)
APG/SGA	467.76	(1%)	1%	0%	Emmis Communications	3.51	2%	(2%)	(0%)
Clear Channel Outdoor	4.75	(2%)	9%	3%	Entercom Communications	11.15	3%	2%	3%
JCDecaux	42.36	4%	5%	5%	iHeartMedia	0.55	10%	(27%)	10%
Lamar	71.86	(1%)	(6%)	(3%)	Saga Communications	41.75	3%	(3%)	3%
National CineMedia	6.19	(9%)	(6%)	(10%)	Salem Communications	4.55	10%	8%	1%
OUTFRONT Media	21.71	(5%)	(7%)	(6%)	Sirius XM Radio	5.56	7%	(2%)	4%
Ströer	76.20	3%	(0%)	3%					
Out of Home Median		(1%)	(3%)	2%	Radio Median		3%	(2%)	3%
Out of Home Mean		(0%)	(6%)	(0%)	Radio Mean		4%	(1%)	2%
Broadcasting					Advertising/Marketing				
Entertainment	\$7.15	1%	(8%)	--	BlueFocus Communication	\$0.89	1%	(10%)	5%
Gray Television	16.60	(0%)	13%	(1%)	Cheil Worldwide	19.09	1%	2%	(4%)
Nexstar Broadcasting	78.40	4%	9%	0%	Dentsu Inc.	44.11	4%	0%	4%
Sinclair Broadcast Group	38.75	8%	9%	2%	Huntsworth	1.09	(1%)	(0%)	(1%)
TEGNA	14.88	5%	9%	6%	M&C Saatchi	5.27	(1%)	15%	5%
Broadcasting Median		4%	9%	0%	MDC Partners	9.45	(5%)	(13%)	(3%)
Broadcasting Mean		3%	6%	1%	Next Fifteen Communications	5.80	(2%)	16%	(3%)
Diversified Media					Omnicom Group	72.70	3%	(1%)	(0%)
CBS	\$56.66	(4%)	(1%)	(4%)	Publicis Groupe	66.75	3%	(0%)	(2%)
Discovery	22.83	1%	16%	2%	The Interpublic Group	20.90	6%	3%	4%
Disney	109.47	(3%)	5%	2%	Viad	54.50	(4%)	(3%)	(2%)
Hemisphere Media Group	10.75	(5%)	(8%)	(7%)	WPP	17.94	2%	(0%)	(1%)
News Corp.	16.85	2%	2%	4%	Advertising/Marketing Median		1%	(0%)	(1%)
Scripps Networks	86.85	0%	6%	2%	Advertising/Marketing Mean		1%	1%	0%
Time Warner	92.09	1%	2%	1%	New Media				
Viacom	29.16	(3%)	(0%)	(5%)	Alphabet	\$1,110.14	2%	6%	5%
Diversified Media Median		(1%)	2%	1%	Amazon	1,254.33	4%	8%	7%
Diversified Media Mean		(1%)	3%	(1%)	eBay	37.70	(4%)	0%	(0%)
Advertising Technology					Facebook	187.84	2%	5%	6%
Criteo	\$25.01	(3%)	(20%)	(4%)	Netflix	212.52	4%	13%	11%
HubSpot	89.15	--	8%	1%	PayPal	79.37	3%	9%	8%
Telaria	4.63	3%	17%	15%	Snap	14.65	(4%)	(3%)	0%
The Trade Desk	47.90	(0%)	6%	5%	Twitter	24.25	(1%)	15%	1%
YuMe	4.80	5%	27%	0%	New Media Median		2%	7%	6%
Advertising Technology Median		--	8%	1%	New Media Mean		1%	7%	5%
Advertising Technology Mean		1%	8%	3%	Advertising Research				
					comScore	\$28.50	0%	2%	0%
					Nielsen	36.26	1%	(4%)	(0%)
					Ipsos	39.20	4%	10%	6%
					Advertising Research Median		1%	2%	0%
					Advertising Research Mean		2%	3%	2%

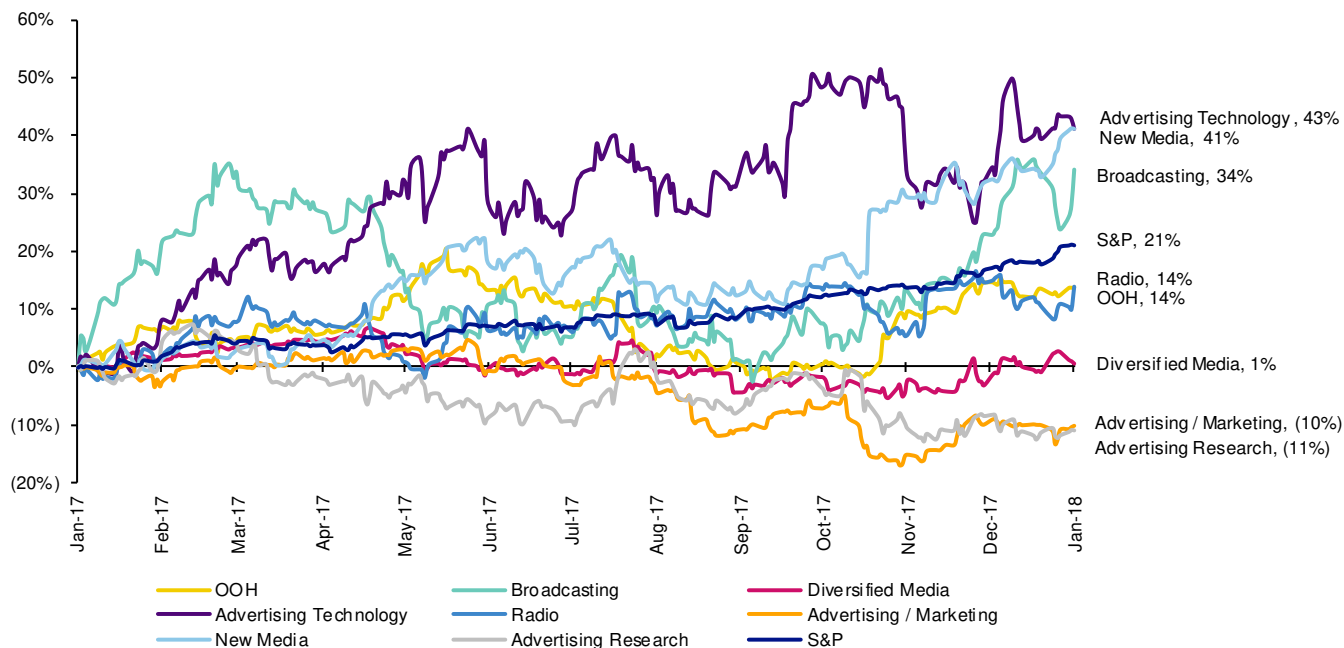
Source: Capital IQ, Bloomberg and Wall Street Research.

INDUSTRY SHARE PRICE PERFORMANCE

Last Three Months



Last Twelve Months (LTM)

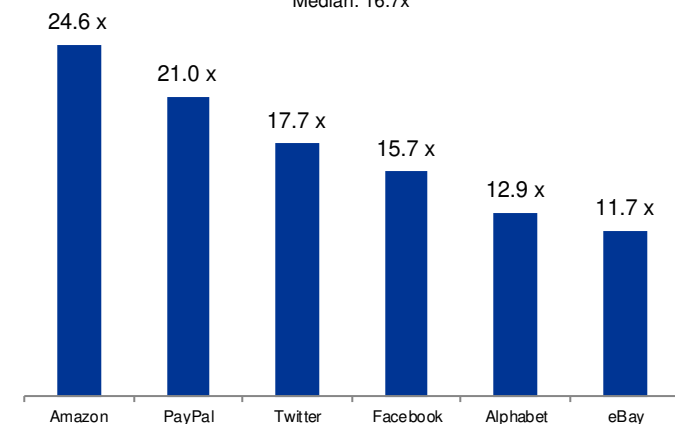


Source: Capital IQ as of January 10, 2018 and Wall Street Research.

EV / 2018E EBITDA

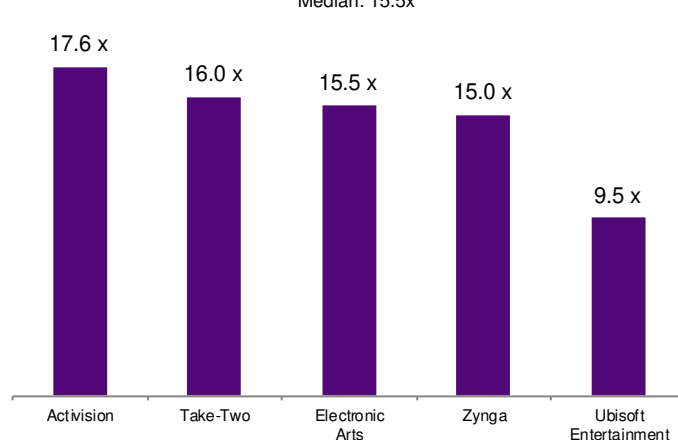
New Media

Median: 16.7x



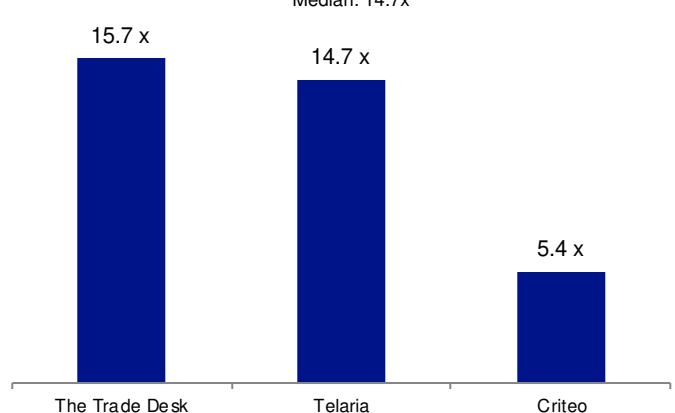
Video Games

Median: 15.5x



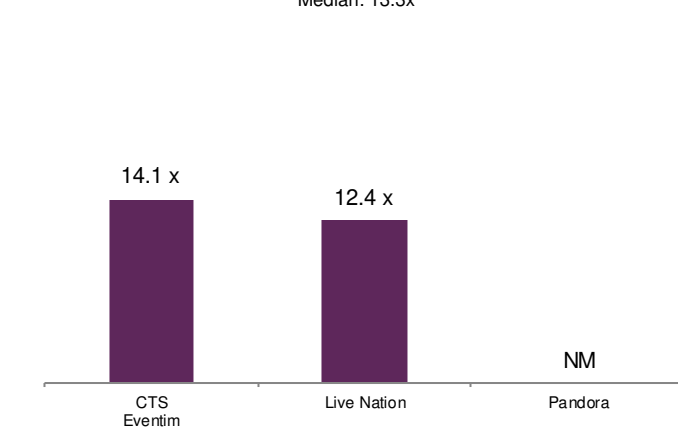
Advertising Tech

Median: 14.7x



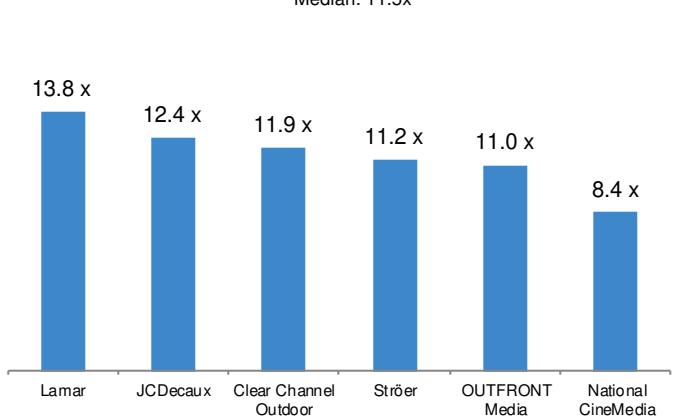
Music / Events

Median: 13.3x



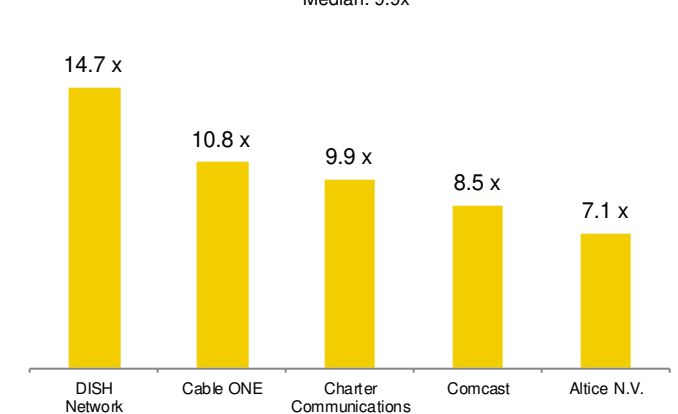
Out-of-Home Advertising

Median: 11.5x



Cable

Median: 9.9x

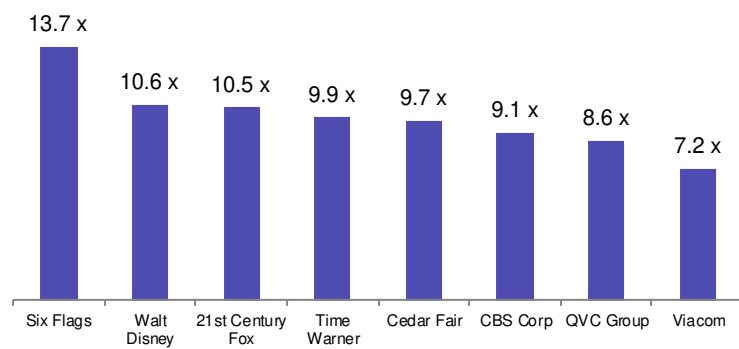


Source: Capital IQ as of January 10, 2018 and Wall Street Research.

EV / 2018E EBITDA

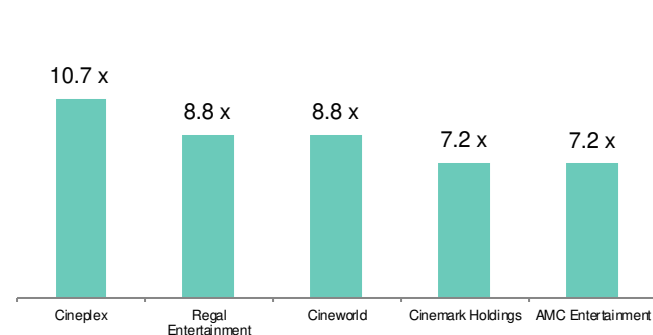
Cable / Content

Median: 9.8x



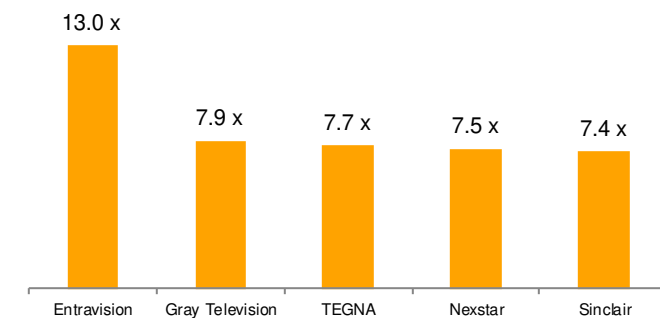
Theaters

Median: 8.8x



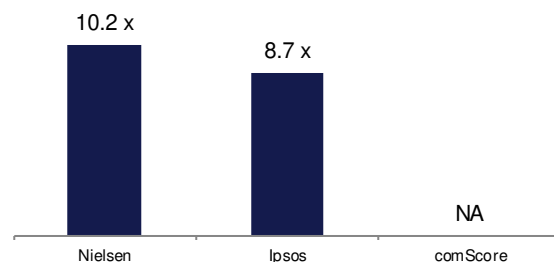
Broadcasting

Median: 7.7x



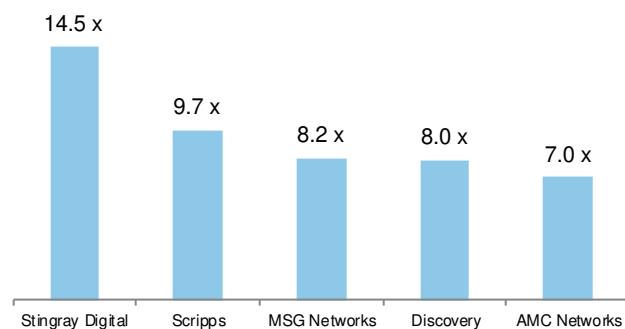
Advertising Research

Median: 9.4x



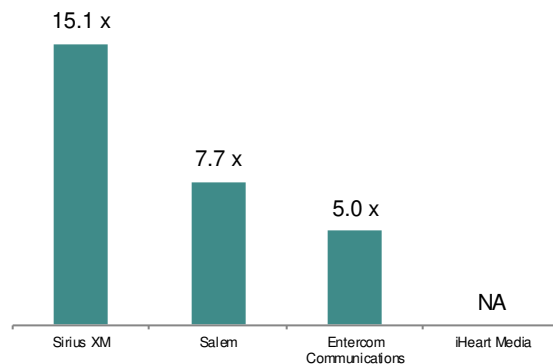
Cable Content

Median: 8.2x



Radio

Median: 7.7x



Source: Capital IQ as of January 10, 2018 and Wall Street Research.

VALUATION METRICS

	Stock Price 1/10/18	52-Week Low	52-Week High	Equity Value	Enterprise Value	Valuation Multiples		Growth	
						EV / Revenue	EV / EBITDA	'16A - '18E CAGR	
Out of Home Media						2018E	2018E	Revenue	EBITDA
Clear Channel Outdoor	\$4.75	\$3.55	\$6.20	\$1,709	\$6,904	2.6 x	11.9 x	(1%)	(5%)
JCDecaux	42.36	29.83	42.80	9,003	9,694	2.2 x	12.4 x	17%	10%
Lamar	71.86	63.14	79.05	7,073	9,493	6.0 x	13.8 x	3%	2%
National CineMedia	6.19	5.15	15.04	954	1,815	4.1 x	8.4 x	(1%)	2%
OUTFRONT Media	21.71	20.88	27.65	3,010	5,231	3.3 x	11.0 x	2%	3%
Global / U.S. Median						3.3 x	11.9 x	2%	2%
Global / U.S. Mean						3.7 x	11.5 x	4%	2%
APG SGA	\$467.76	\$394.21	\$517.73	\$1,403	\$1,362	4.3 x	17.0 x	1%	(0%)
Ströer	76.20	43.77	77.07	4,213	4,987	2.8 x	11.2 x	23%	14%
Europe Median						3.5 x	14.1 x	12%	7%
Europe Mean						3.5 x	14.1 x	12%	7%
AirMedia Group	\$1.21	\$1.10	\$3.17	\$76	\$6	NA	NA	NA	NM
Clear Media	1.04	0.99	1.21	565	493	NA	NA	NA	NM
China Median						NA	NA	NA	NA
China Mean						NA	NA	NA	NA
Total Out of Home Advertising Median						3.3 x	11.9 x	2%	2%
Total Out of Home Advertising Mean						3.6 x	12.2 x	6%	4%
Radio									
Beasley Broadcast Group	\$12.80	\$6.00	\$16.55	\$368	\$560	NA	NA	NA	NA
Emmis Communications	3.51	2.23	3.69	45	214	NA	NA	NA	NA
Entercom Communications	11.15	9.50	16.15	1,565	2,062	1.3 x	5.0 x	87%	96%
iHeartMedia	0.55	0.45	3.84	50	20,493	3.2 x	NA	1%	NM
Salem Media Group	4.55	4.08	8.15	119	375	1.4 x	7.7 x	0%	0%
Sirius XM Holdings	5.56	4.57	5.86	25,530	32,189	5.6 x	15.1 x	7%	11%
Radio Median						2.3 x	7.7 x	4%	11%
Radio Mean						2.9 x	9.3 x	24%	36%
Broadcasting									
Entravision Communications	\$7.15	\$5.10	\$7.75	644	878	3.0 x	13.0 x	7%	2%
Gray Television	16.60	10.05	17.35	1,457	3,122	3.0 x	7.9 x	13%	14%
Nexstar Broadcasting Group	78.40	56.45	79.80	3,572	7,836	2.8 x	7.5 x	59%	61%
Sinclair Broadcast Group	38.75	27.20	42.90	3,942	7,362	2.4 x	7.4 x	6%	6%
TEGNA	14.88	11.78	26.41	3,202	6,135	2.8 x	7.7 x	(19%)	(19%)
Broadcasting Median						2.8 x	7.7 x	7%	6%
Broadcasting Mean						2.8 x	8.7 x	13%	13%
Advertising/Marketing									
BlueFocus Communication Group	\$0.89	\$0.83	\$1.48	\$1,976	\$2,477	0.8 x	12.5 x	33%	45%
Cheil Worldwide	19.09	13.46	20.21	2,065	1,686	0.5 x	8.0 x	11%	16%
Dentsu	66.75	62.01	77.83	15,088	17,606	1.5 x	8.3 x	7%	8%
Huntsworth	1.09	0.45	1.11	358	395	1.3 x	9.0 x	18%	28%
M&C Saatchi	5.27	3.80	5.45	425	443	1.2 x	9.8 x	14%	39%
MDC Partners	9.45	6.20	12.10	552	1,660	1.0 x	7.3 x	8%	23%
Next Fifteen Communications Group	5.80	3.71	5.98	439	468	1.6 x	8.6 x	17%	25%
Omnicom Group	20.90	18.45	25.57	8,122	9,780	1.2 x	8.2 x	2%	4%
Publicis	72.70	65.52	87.39	16,760	20,613	1.3 x	8.5 x	1%	3%
The Interpublic Group	17.94	16.50	23.77	22,439	29,343	1.4 x	8.2 x	9%	7%
WPP	44.11	41.10	57.92	12,434	15,651	1.8 x	9.1 x	11%	7%
Advertising/Marketing Median						1.3 x	8.5 x	11%	16%
Advertising/Marketing Mean						1.2 x	8.9 x	12%	19%
Advertising Technology / New Media									
Alphabet	\$1,110.14	\$815.24	\$1,114.21	\$768,696	\$672,517	5.1 x	12.9 x	21%	32%
Amazon	1,254.33	799.02	1,252.70	604,427	623,303	2.7 x	24.6 x	30%	47%
Criteo	25.01	22.49	55.39	1,650	1,319	1.4 x	5.4 x	(29%)	17%
Facebook	187.84	126.09	188.28	545,827	507,538	9.4 x	15.7 x	39%	47%
HubSpot	89.15	50.00	92.95	3,332	3,133	6.6 x	NM	32%	NM
Netflix	212.52	129.18	212.05	91,964	95,106	6.3 x	NM	30%	111%
PayPal	79.37	39.31	79.19	95,396	84,790	5.6 x	21.0 x	19%	39%
Telaria	4.63	1.90	5.00	237	160	2.7 x	14.7 x	(40%)	NM
The Trade Desk	47.90	28.34	66.51	1,967	1,862	4.7 x	15.7 x	39%	41%
Twitter	24.25	14.29	25.20	17,936	15,451	6.1 x	17.7 x	0%	276%
Advertising Technology / New Media Median						5.3 x	15.7 x	25%	44%
Advertising Technology / New Media Mean						5.1 x	16.0 x	14%	76%
Advertising Research									
Ipsos	\$39.20	\$30.17	\$39.46	\$1,634	\$2,250	1.0 x	8.7 x	8%	11%
Nielsen	36.26	35.67	45.50	12,915	20,901	3.1 x	10.2 x	4%	13%
comScore	28.50	21.14	33.55	1,633	NA	NA	NA	NA	NA
Advertising Research						2.1 x	9.4 x	6%	12%
Advertising Research						2.1 x	9.4 x	6%	12%

Source: Capital IQ as of January 10, 2018 and Wall Street Research.

UPCOMING EVENTS

DATES	NAME	LOCATION	DESCRIPTION
January 9-12, 2018	International Consumer Electronics Show	Las Vegas, NV	<ul style="list-style-type: none"> Event that showcases more than 4,000 exhibitors, including manufacturers, developers and suppliers of consumer technology hardware, content, technology delivery systems and more The conference has 300 sessions with more than 170,000 attendees from 158 countries PJ SOLOMON's Mark Boidman and Ben Zinder attended
February 12-13, 2018	Code Media	Huntington Beach, CA	<ul style="list-style-type: none"> Conference bringing together 350 of the most influential minds in media and technology for two days of intimate gatherings and game-changing discussions.
March 25-29, 2018	Adobe Summit	Las Vegas, NV	<ul style="list-style-type: none"> 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
March 26, 2018	Advanced Advertising 2018	New York, NY	<ul style="list-style-type: none"> Explores the advertising world's hot-button issues through one-on-one networking with tech leaders, brands, agencies and other C-suite leaders Learn the latest trends in data automation, television, big data, measurement, new technology and more
March 27-29, 2018	Digital Signage Expo 2018	Las Vegas, NV	<ul style="list-style-type: none"> 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 PJ SOLOMON's Mark Boidman and Ben Zinder to attend
April 10-11, 2018	MMA Mobile Marketing Leadership Forum	New York, NY	<ul style="list-style-type: none"> Conference includes sessions on understanding the impact of ad blocking, viewability and developing mobile talent Discussions on how to formulate effective strategies that drive successful re-allocation of budgets to mobile
April 30-May 4, 2018	London Digital Signage Week	London, UK	<ul style="list-style-type: none"> Like its counterpart in NY, the week includes events for retail, employee communications, digital out of home and digital signage PJ SOLOMON's Mark Boidman, Ben Zinder and Brandon Yoshimura to attend
May 7-9, 2018	Geopath / OAAA OOH Media Conference & Expo	Austin, TX	<ul style="list-style-type: none"> Attracts the best and brightest in the industry who gather each year to discuss the challenges & opportunities in the industry PJ SOLOMON's Mark Boidman, Ben Zinder, Brandon Yoshimura and Christian Bermel to attend
June 2-8, 2018	InfoComm 2018	Las Vegas, NV	<ul style="list-style-type: none"> 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 PJ SOLOMON's Ben Zinder to attend

UPCOMING EVENTS (CONT.)

DATES	NAME	LOCATION	DESCRIPTION
June 6-8, 2018	FEPE Annual Congress	Sorrento, Italy	<ul style="list-style-type: none"> Annual global outdoor advertising conference that explores the broader and fast changing media and technological environment PJ SOLOMON's Mark Boidman to attend
June 18-22, 2018	Cannes Lions	Cannes, France	<ul style="list-style-type: none"> Annual festival that brings the creative communications industry together at its one-of-a-kind event in Cannes to learn, network and celebrate PJ SOLOMON's Mark Boidman to attend

Prior issues available online: http://www.pjsolomon.com/insights/tag/Media_Monthly/

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2018

HAPPY NEW YEAR

ALL OUR BEST WISHES
FOR THE NEW YEAR



PJ
SOLOMON
unrivalled wisdom



NATIXIS
BEYOND BANKING

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.



UTES
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to be made