



**MEDIA
MONTHLY**

REPORT SUMMARIZING
SELECT MEDIA AND RETAIL
TECH ACTIVITY

APRIL 2018



— PJ —
SOLOMON
unrivaled wisdom

SPECIAL HIGHLIGHTS IN THIS ISSUE

- Highlights from Digital Signage Expo 2018
- Retail Technology Funding Overview
- Out of Home Media in the Data Revolution
- More Mobile with Autonomous Cars
- Impact of Subscription Services in Video Games
- Digital Advertising Trends
- Board Corner: Activism Update

RECENT PJ SOLOMON TRANSACTIONS

<p>PENDING</p> <p>\$558,000,000</p> <p>FINISH LINE</p> <p>Has agreed to be sold to</p>  <p><i>The undersigned is serving as financial advisor to the Special Committee of The Finish Line</i></p> <p>— PJ —</p> 	<p>MARCH 2018</p>  <p>Has entered purchase and sale agreement to divest Utica assets to undisclosed buyer</p> <p><i>The undersigned served as financial advisor to PDC energy</i></p> <p>— PJ —</p> 	<p>MARCH 2018</p>  <p>GROUPE ROCHER</p> <p>Has Acquired</p>  <p><i>The undersigned served as financial advisor to Groupe Rocher</i></p> <p>— PJ —</p> 	<p>FEBRUARY 2018</p> <p>FLIGHT CLUB</p> <p>Has merged with</p>  <p>GOAT</p> <p><i>The undersigned served as financial advisor to Flight Club</i></p> <p>— PJ —</p> 
--	--	--	---

MEDIA SERVICES

MARK A. BOIDMAN
 Managing Director
 212.508.1661 (w)
 917.526.1092 (m)
 mboidman@pjsolomon.com
 Twitter: @MBoidman

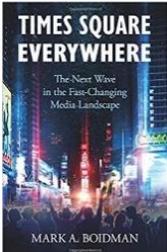
BEN ZINDER
 Director
 212.508.1621 (w)
 646.522.8353 (m)
 bzinder@pjsolomon.com

BRANDON YOSHIMURA
 Senior Associate
 212.508.1654 (w)
 610.952.0447 (m)
 byoshimura@pjsolomon.com

CHRISTIAN BERMEL
 Senior Analyst
 646.708.8478 (w)
 860.371.5882 (m)
 cbermel@pjsolomon.com

CAPITAL MARKETS

JOE STEIN
 Managing Director
 212.508.1662 (w)
 203.550.2184 (m)
 jstein@pjsolomon.com



Congratulations to PJ SOLOMON's Mark Boidman, who recently debuted his book

"Times Square Everywhere"



#1 New Release in [Media & Communications](#)

HIGHLIGHTS FROM DIGITAL SIGNAGE EXPO 2018



The world's largest tradeshow of digital display and interactive technologies was held March 26 – 28

200+

Exhibitors

75+

Seminars, Workshops and
Roundtable Discussions

200+

Industry-Leading Speakers



TRENDS FROM DSE

- Projection now accounts for nearly ~20% of the digital signage display market
- Though several direct view LED (and other screen type) manufacturers were present at DSE, the increased attendance of software providers and analytics companies shows the growing importance of efficacy measurement in digital signage
 - *“There are a lot of companies here trying to show that they can prove brand exposure”* – Mark Stross, CTO of ANC
- As the industry's offerings increase, traditional AV environments are phasing out in favor of AV over IP
 - *“It took the AV community a while to adopt AV over IP – so the industry is slow to adopt to change. Digital signage has evolved beyond retail and now enters the realm of being a major tool for communication and collaboration.”* – Alan Brawn, Brawn Consulting / Founder of Digital Signage Federation

Source: Digital Signage Expo.

OUT OF HOME MEDIA IN THE DATA REVOLUTION

How digitization and data are transforming the media landscape

By PJ SOLOMON's Mark Boidman, Susan Wang and Brandon Yoshimura

Full article was published on February 16, 2018 and can be accessed on EECatalog.com

“Actionable data and Internet of Things (“IoT”) technologies are enabling a second wave of OOH innovation centered on making displays more intelligent, efficient and impactful.”

- The Out of Home media and advertising (“OOH”) industry is undergoing a digital and data-driven transformation
 - OOH reaches consumers who are “on the go” or in transit and encompasses a variety of formats including billboards, posters, transit advertising (bus wraps, taxi tops, airport displays), street furniture, kiosks, and retail signage
 - With advancing technologies, OOH advertising formats are becoming easier to deploy, update and measure



- Digital displays are beginning to replace traditionally static installations
 - We work with a number of providers who are enabling this transition through the creation of stunning digital displays and compelling programmatic and backend offerings
 - Companies in the sector, including BrightSign, have developed cost-efficient media players which enable reliable, non-PC based digital signage solutions to be implemented nearly everywhere—from small retail displays to massive outdoor installations
 - A proprietary OS built specifically for digital signage has real advantages when considering security and ease-of-use

OUT OF HOME MEDIA IN THE DATA REVOLUTION (CONT.)

SMALL DISPLAY TO 4K INTERACTIVE

- Recent products such as the BrightSign HO523 Open Pluggable Specification (OPS) media player are adding value to the deployment of digital display solutions by bringing the end-user's TCO even lower



Capitalizing on standardized system architecture are solutions such as the BrightSign HO523 OPS media player

AHEAD FOR DOOH: MORE COMPETITIVE PRICING, DATA MANAGEMENT, RISK CONTROL

- Digital billboards offer the ability to display dynamic content with little associated production cost
- Messages can incorporate countdowns (buy now!), user-generated content (pulled from social media feeds) or be contextually customized to account for time of day or weather; further, these installations can display video, stream live events or rotate through a carousel of brand-specific content
- Leading OOH media owners have developed homegrown, cloud-based dashboards that allow agencies or brands to view available inventories in real-time with additional data on asset demographics and reach provided by Geopath, a not-for-profit audience location measurement organization
- Unlike other digital formats, however, OOH media and advertising cannot be blocked or skipped; as digitization accelerates and consumers continue to be increasingly mobile, we anticipate rapid growth in OOH media coupled with improved margins resulting from realized efficiencies in the time and information-intensive buying / selling processes
- These improved processes will allow for more competitive pricing, data management, and risk control for the industry as a whole

OUT OF HOME MEDIA IN THE DATA REVOLUTION (CONT.)

FULL STEAM AHEAD: DIGITAL GROWTH AND INVESTMENT ACCELERATING

LAMAR

- Committed to adding 150 digital screens per year for 2018 and 2019
- Existing base of 2,800 digital billboards ^(a)

OUTFRONT media

- Plans in place to materially increase digital screen count, particularly in transit
- Acquired Dynamic Outdoor, which owns a portfolio of 52 digital billboards
- Existing base of 1,916 screens, including 982 digital billboard displays and 934 digital transit and other displays ^(b)

JCDecaux

- Actively pursuing ongoing digitization of street furniture in London, NYC and Chicago
- Existing base of 59,744 digital screens in 93 countries ^(c)

Clear Channel Outdoor

- Installed 450 new digital screens last year
- Existing base of 1,180 digital billboards across Americas and more than 13,300 digital displays in international markets ^(d)

CIVIQ

- Plans to deploy 7,500 kiosks over next eight years
- Existing base of 2,000 installations in the U.S. and internationally ^(e)

DATA DRIVING THE FUTURE OF OOH

- Telecom Data as a Service (“TDaaS”) has provided OOH operators with access to critical customer insights
 - Telecom giants including AT&T, Verizon, Sprint and Telefonica have begun to collect, analyze, package and sell aggregate customer data to OOH operators and advertisers
 - Some carriers, including AT&T, have established their own in-house units to monetize data, while others have partnered with technology firms like SAP, IBM, HP, and AirSage, which take over management of the backend and marketing of the packaged data products
- The data is anonymized and sold to advertisers, who can use the information to target specific audiences and measure ad effectiveness
- While TDaaS offers actionable insights for OOH operators, it is somewhat constrained as it is controlled by third-party providers and existing telecom IT infrastructure is not optimized to handle the aggregation and distribution of massive data sets in real-time

INTERNET OF THINGS INTEGRATIONS CREATE UNIQUE OPPORTUNITIES

- To achieve more granular insights on audience demographics and engagement, OOH operators can now leverage IoT devices on their digital installations, including cameras
 - In a recent campaign in Sweden for ZPump shoes, Reebok installed street-level OOH displays with speed cameras that measured the pace of passing pedestrians
 - Runners able to achieve a pace in excess of 10.5 miles per hour were awarded free shoes



Robin Nilssen, Courtesy of Reebok.

(a) Figure as of December 31, 2017. Represents digital billboards in various markets per Lamar's 10-K filed on February 27, 2018.

(b) Figure as of December 31, 2017. Digital billboard displays include 822 in the United States and 160 in Canada. Digital transit and other displays include 871 in the United States and 63 in Canada. Source: OUTFRONT Media's 10-K filed on February 27, 2018.

(c) Source: JCDecaux's website as of April 19, 2018.

(d) Figure as of September 30, 2017. Source: Clear Channel Outdoor's Q3 Earnings Press Release filed on November 8, 2017.

(e) Figure represents installations in the United States and internationally. Source: Civiq Smartscapes' website as of April 19, 2018.

OUT OF HOME MEDIA IN THE DATA REVOLUTION (CONT.)

MASS MESSAGING TO SMART MESSAGING

- Facial recognition platforms, including Paris-based Quividi, measure mood, audience reactions and engagement
 - Quividi can be integrated into digital displays to scan viewers' faces and run algorithms trained on computer vision and machine learning to identify facial and voice expressions, such as furrowed eyebrows or a loud laugh, against a database of pre-programmed expressions, in real time
 - They then equate these expressions to certain emotions or social cues and provide data on an aggregate basis to give advertisers insight into how effective and appropriate their current ads are
- In 2016, Apple acquired Intel Capital-backed Emotient, a startup specializing in emotion detection and sentiment analysis based on facial expressions
 - The company offers a cloud-based service that can deliver direct measurement of a customer's unfiltered emotional response to advertisements, content, products, and customer service or sales interactions
- This emotional response data, combined with location and demographic data, is a powerful tool for OOH operators and advertisers to gain insight into and target consumers in unprecedented ways

“Telecom and IoT data combine to provide OOH operators with visibility into audiences at the most opportune time, when they are mobile and close to or at the point of sale. As digital formats proliferate and data is used and leveraged, the OOH industry will continue its transition from a mass messaging medium to a smart mass messaging medium with hyper-targeting capabilities and unparalleled scale and impact.”

Note: The full article was published on February 16, 2018 and can be accessed on EECatalog.com.

Disclaimer: The services and capabilities described herein are provided by PJ Solomon, L.P. and its affiliates, including, without limitation, PJ Solomon Securities, LLC, and references to “PJ SOLOMON” or “SOLOMON” in this article are meant to refer generally to such companies.

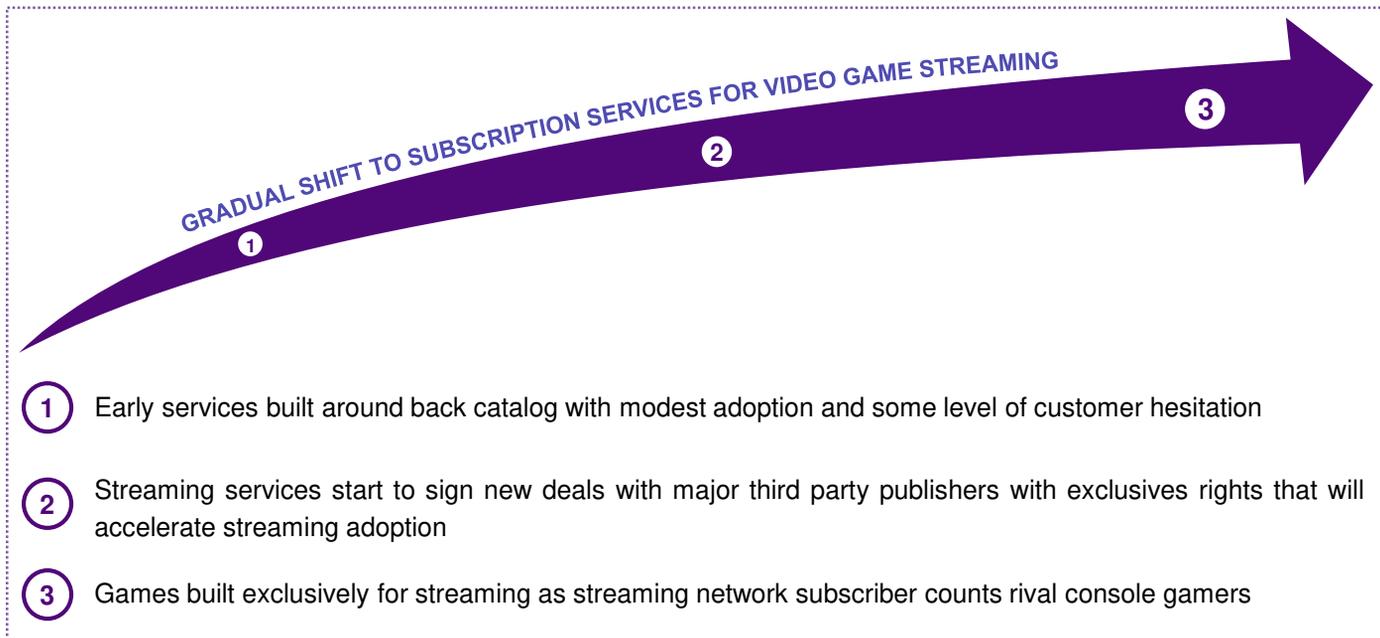
This article has been prepared solely for informational and illustrative purposes and is not to be used or considered as an offer to sell, or a solicitation of an offer to buy, any security or instrument or the provisions of an offer to provide investment services or to undertake any transaction. Certain information in this article relating to parties other than PJ SOLOMON or taken from external sources has not been subject to independent verification, and PJ SOLOMON makes no warranty as to the accuracy, fairness or completeness of the information or opinions in this article. Neither PJ SOLOMON nor its representatives shall be liable for any errors or omissions or for any harm resulting from the use of this article, the content of this article.

Nothing in this article constitutes regulatory, investment, legal, accounting or tax advice, or a representation that any investment or strategy is suitable or appropriate to your individual circumstances. Each individual or entity receiving this article and information on companies referenced in the article shall be responsible for obtaining all such advice as it thinks appropriate on such matters and shall be responsible for making its own independent investigation and appraisal of the risks, benefits and suitability of the companies as to itself. Any discussions of past performance should not be taken as an indication of future results, and no representation, expressed or implied, is made regarding future events or results. This article is for informational purposes only. It does not constitute independent investment research and has not been prepared in accordance with the legal requirements designed to promote the independence of investment research. Moreover, this article has not been prepared by the research department of Natixis, of which PJ SOLOMON is an affiliate. Natixis may trade as principal or have proprietary positions in securities or other financial instruments that are referred to herein. This article is intended only to provide observations and views as expressed herein, which may be different from, or inconsistent with, the observations and views of Natixis analysts or other Natixis sales and/or trading personnel, or the proprietary positions of Natixis. In addition, PJ SOLOMON and/or its affiliates, officers, directors and employees, including persons involved in the preparation or issuance of this article, may, from time to time, have long or short positions in, and may buy or sell the securities or other financial instruments referred to herein.

IMPACT OF SUBSCRIPTION SERVICES IN VIDEO GAMES

Game publishers could see +\$1.6 billion benefit from transition

TRANSITION OF VIDEO GAMES TO STREAMING MODEL



POTENTIAL GAME STREAMING SERVICE SCENARIOS AND PLAYERS

- Several key factors will determine the future landscape of video games:
 - How willing are publishers to license premium content to third party services? How much are subscribers willing to pay? How does game exclusivity fit in the picture?
- Nvidia**, the US-based provider of graphic processing units and system on chip units, has a cloud streaming service called 'GeForce Now' that allows users to stream video games on Nvidia's servers but play them as if they are being run locally – eliminating the need to maintain computer hardware

CONSOLE MANUFACTURER-DRIVEN STREAMING SERVICES

- ✓ Lowest friction to subscriber conversion and existing established relationships with publishers
- ✗ Streaming service take-rates likely diminish net benefit to publishers



PUBLISHER-OWNED STREAMING SERVICES

- ✓ Publishers would have direct access/control to subscribers, full control of distribution and could eliminate a considerable amount of cost
- ✗ Subscribers would need multiple service subscriptions due to content limitations



CLOUD SERVICE PROVIDER STREAMING SERVICES

- ✓ Crowded and competitive marketplace could benefit game publishers
- ✓ Demonstrated SaaS and living room device capabilities
- ✗ Most transformative scenario; significant change required



← LEAST TRANSFORMATIONAL

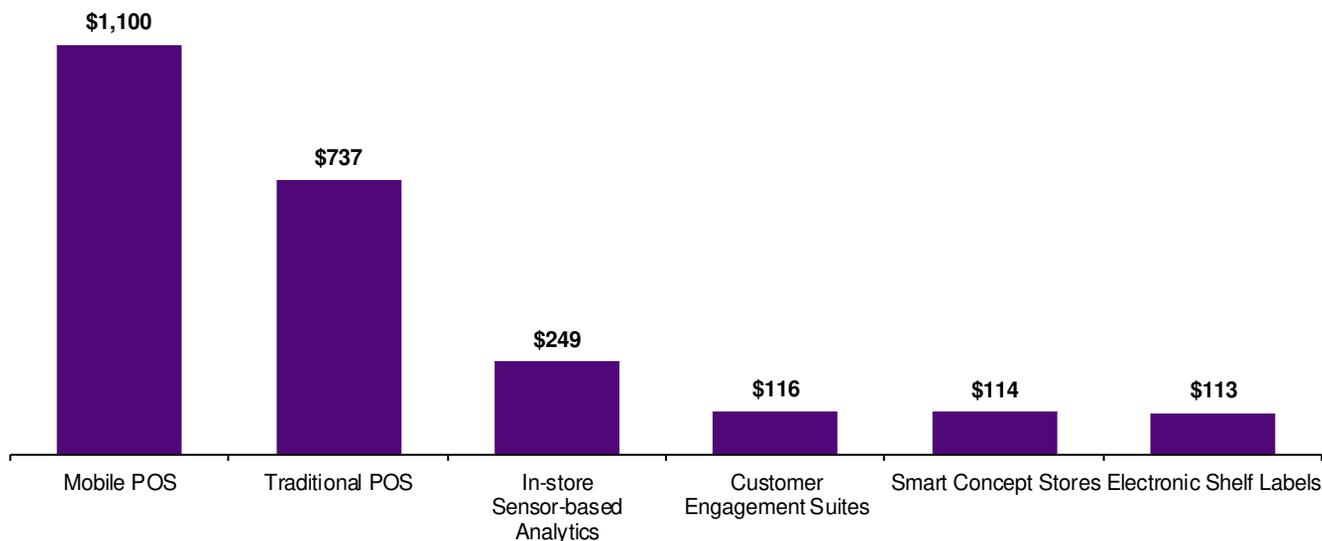
→ MOST TRANSFORMATIONAL

Source: Wall Street Research.

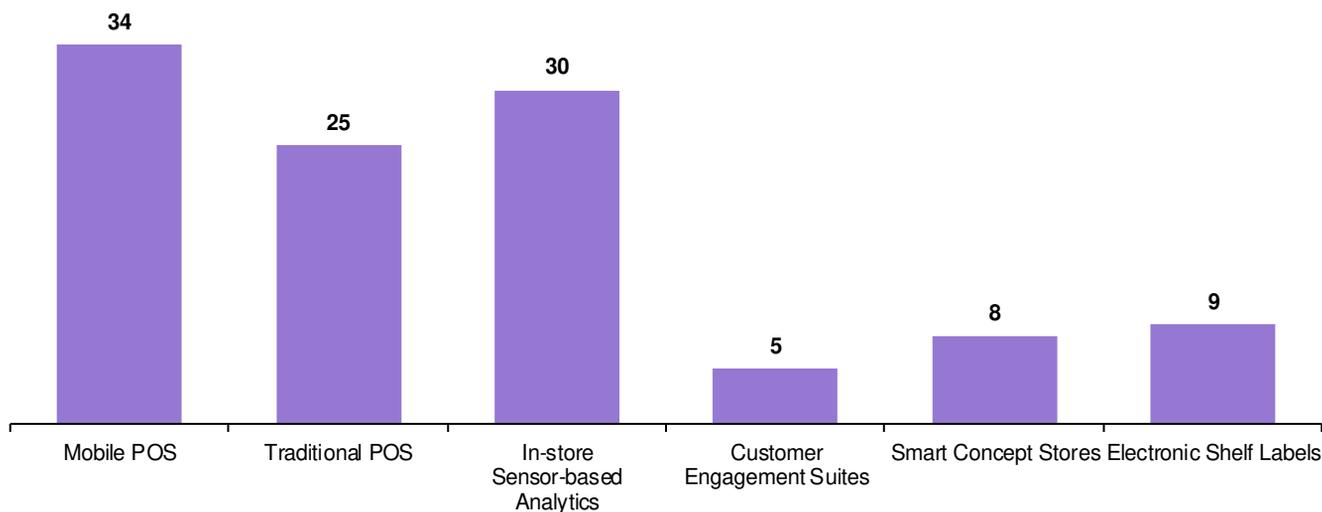
RETAIL TECHNOLOGY FUNDING OVERVIEW

Most significant investor interest in POS technologies

FUNDING BY SECTOR (\$ IN MILLIONS) – 2017



NUMBER OF COMPANIES WHO RECEIVED FUNDING – 2017



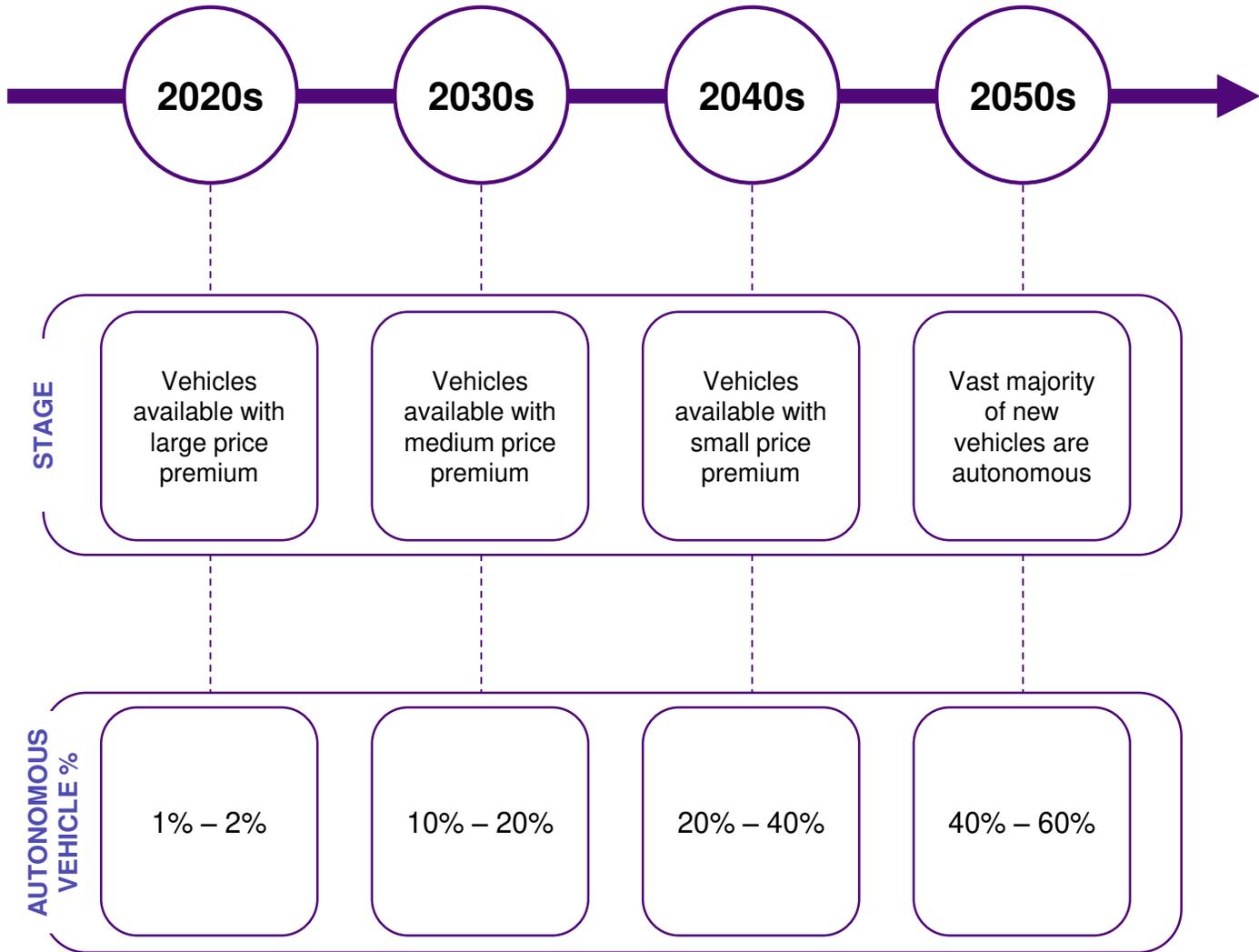
POS technologies also received the highest funding on a per company basis: \$32.4M and \$29.5M for mobile and traditional POS, respectively

Source: Tracxn.

MORE MOBILE WITH AUTONOMOUS CARS

Not an impending OOH industry headwind

HYPOTHETICAL AUTONOMOUS VEHICLE TIMELINE



Autonomous vehicles unlikely to truly gain significant traction until 25+ years from now

Source: Transport Policy Institute Study.

DIGITAL ADVERTISING TRENDS

Media Owners

- Google and Facebook continue to control over 60% of total US digital ad revenue at the end of 2017 and a combined \$34B in ad revenue on Q3 2017
 - Microsoft trailing in third place with 4% of total US revenue

Personalization

- Advertisers combining “Audiences” with keywords to ensure more personalized, targeted and effective ads

Growth of Video Traffic

- Video’s share of internet traffic expected to reach 80% by 2018
- Represents opportunity for growth in advertising as consumers likeliness to purchase a product increases 63% after watching a video

Emergence of Amazon

- Despite Amazon’s relatively small market share of just 2% in US digital advertising, it is emerging as a major operator
- WPP increasing its spending with Amazon to \$300 million in 2018
 - Pushes spending on Amazon ads by three of the world’s largest agencies to \$800 million a year

Voice Enabled Assistants

- Success of voice enabled assistants in 2017 paving way for smart hubs and visual search as a means for product searching and purchasing

Holistic Views of Measurement

- Key to understand full path to conversion and impact of digital touch points on offline sales as 90% of sales still happen in-store

Growth of Mobile

- Consumers turning to mobile for continuum of shopping experience from searching for products and stores to consulting mobile device in store
- After mobile searching and shopping, consumers are more likely to purchase

Privacy Restrictions

- New legislation and shifting attitudes towards privacy and protecting user identity and online activity have put pressure on advertising and marketing companies

Ad Blockage

- Growth in ad blockage popularity posing a threat to online ad-funded businesses

Facebook Messenger Ads

- With over 1.3 billion users and CTRs (click through rates) north of 50%, Messenger Ads presents an exciting advertising opportunity

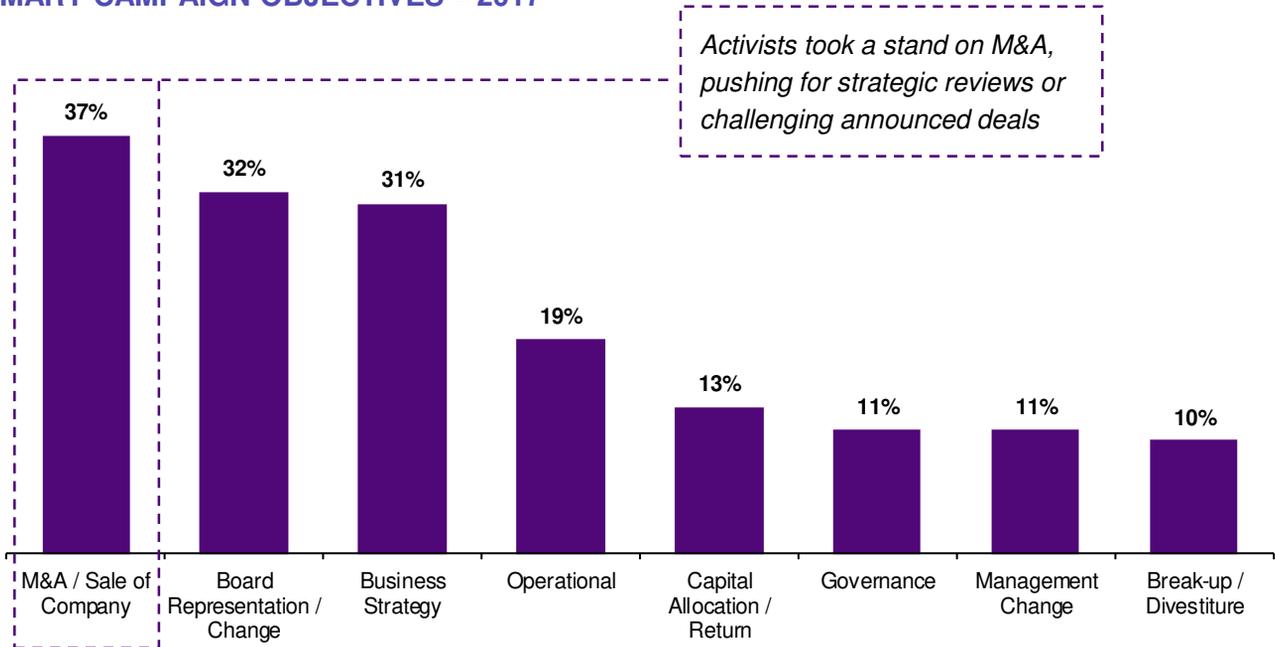
BOARD CORNER: ACTIVISM UPDATE

High profile proxy fights highlighted the increased independence and changing temperaments of large institutional investors

SELECTED ACTIVISTS & CAMPAIGNS – TECHNOLOGY, MEDIA AND TELECOMMUNICATIONS

Logos displayed include: ELLIOTT, Akamai, TELECOM ITALIA, sky, COMMVAULT, Travelport, GAMCO ASSET MANAGEMENT, LIBERTY, SCRIPPS, Cincinnati Bell, STARBOARD VALUE, Mellanox TECHNOLOGIES, cars.com, Monotype, Tribune Media, and comSCORE.

PRIMARY CAMPAIGN OBJECTIVES – 2017



Most activist campaigns revolve around voting on a proposal, gaining board representation or maximizing shareholder value

Source: FactSet, The Deal.

SECTOR NEWS

Broadcasting / Telecommunications

- **4/9: Entertainment One**, the Canada-based independent studio, acquired a 70% stake in **Whizz Kid Entertainment**, the UK-based production company, for an estimated \$10 million
- **3/28: Sony Pictures Television**, the US-based company engaged in television content, acquired an undisclosed stake in **Left Bank Pictures**, the UK-based television and film production company
- **3/28: New Media Investment Group**, the US-based company holding media assets, acquired **Palm Beach Post** and **Palm Beach Daily News** publications and websites from **Cox Media Group**, the US-based broadcasting, publishing and media business, for ~\$50 million
- **3/22: Entertainment Studios**, the US-based independent producer, acquired the **Weather Group**, the parent company of **The Weather Channel** television network, for an estimated \$300 million
- **3/27: Windstream Holdings**, the US-based provider of high-speed broadband internet, digital TV and phone services, acquired **Masscomm**, the US-based connectivity and telecom management provider, for ~\$38 million
- **3/5: News Corp**, the US-based media company, and **Telestra Corporation Limited**, the Australia-based telecommunications company, formed a joint venture by combining **Fox Sports Australia** and **Foxtel Management**, in which News Corp and Telestra will have 65% and 35% stakes, respectively
- **2/26: GTT Communications**, the US-based telecommunications company, acquired **Interoute Communications**, the UK-based telecommunications company, from the **Sandoz Family Foundation**, **Crestview Partners** and **Aleph Capital Partners**, for \$2.3 billion
- **2/16: Orient Hontai Capital**, the China-based private equity firm, acquired a 53.5% stake in **Imagina Media Audiovisual**, the Spain-based production company, from **Group Televisa** and **Mr. Gerard Romy**, in a deal valuing the company at \$2.4 billion
- **2/14: Ericsson**, the US-based telecommunications company, acquired **Placecast**, the US-based platform for data management and display advertising, from **Onset Ventures** and **Voyager Capital**, the US-based private equity firms
- **2/12: A consortium**, including **PFA**, **PKA**, **ATP** and **Macquarie Infrastructure and Real Assets**, announced a takeover of **TDC A/S**, the Denmark-based telecommunications company, for \$6.7 billion
- **2/12: Liberty Latin America**, the US-based telecommunications company, acquired an 8% stake in **Cabletica**, the Costa Rica-based cable operator, from **Televisora de Costa Rica**, the Costa Rica-based television channel operator and owner, for ~\$253 million
- **2/7: Viacom**, the US-based television company, acquired **VidCon**, the US-based producer of online video events and content
- **2/1: Billboard-Hollywood Media Group**, the US-based media house, **Media Rights Capital**, the US-based independent television and film studio, and **Dick Clark Productions**, the US-based producer, agreed to merge into a diversified media company called **Valence Media**
- **1/29: Entertainment One**, the Canada-based independent studio, acquired **Deluxe Pictures**, the US-based television and film production company, for \$209 million
- **1/30: Amdocs Limited**, the US-based provider of software and services for communications, media and entertainment industry service providers, acquired **Vubiquity**, the US-based provider of multiplatform video services, for ~\$225 million
- **1/25: Novacap Investments**, the Canada-based private equity firm, acquired **Horizon Telecom**, the US-based provider of telecommunication services
- **1/18: Education Networks of America**, the US-based portfolio company of private equity firm **ZelnickMedia Corporation**, acquired **TeleQuality Communications**, the US-based provider of telecommunications to rural healthcare facilities
- **1/11: Searchlight Capital Partners**, the US-based private equity firm, acquired a stake in **EOLO**, the Italy-based provider of broadband connections, in conjunction with EOLO's management

Source: Company press releases and Wall Street Research.

SECTOR NEWS

OOH Media

- **4/3: SCG Digital**, an affiliate of Mr. Gregory Sachs (RMG's Executive Chairman), announced it would acquire **RMG Networks**, the US-based provider of digital visual communications applications and services, for ~\$17 million
- **3/28: Stratacache**, the US-based digital signage company, acquired **X2O Media**, the Canada-based channel creation company, from **Barco N.V.**, the Belgium-based visualization solutions company
- **3/1: Ocelot Partners**, the British Virgin Islands-based special purpose acquisition company, acquired **Ocean Outdoor**, the UK-based OOH advertising company, from US-based private equity firm **Searchlight Capital Partners** for ~\$200 million
- **2/27: Standard Outdoor**, the US-based OOH advertising company, acquired 86 billboards from **Vista Outdoor Corporation**, the US-based OOH advertising company
- **2/22: Boston Omaha Corporation** will sell \$150 million of Class A Common Stock in a private placement for further acquisitions of businesses to be owned by its subsidiaries, which includes US-based OOH advertiser **Link Media Outdoor**
- **2/14: Lamar** and **Clear Channel Outdoor**, the US-based OOH advertising companies, acquired 35% and 50% stakes, respectively, in the Digital Billboard Portfolio of **Catalyst Outdoor**
- **2/5: Vector Media**, the US-based OOH advertising company, acquired **Direct Media**, the US-based provider of OOH advertising services
- **2/5: Primary Media**, the US-based OOH advertising company, acquired **Hoss Outdoor Advertising**, the US-based OOH advertising company
- **1/31: Intersection**, the US-based smart cities company, selected **Broadsign International**, the US-based marketing software company, to power Intersection's network of digital displays across the US, including LinkNYC and transit assets
- **1/19: Standard Outdoor**, the US-based OOH advertising company, acquired **Quality Outdoor**, the US-based OOH advertising company
- **1/11: Landmark Infrastructure**, the US-based lessee to outdoor advertisers, purchased 127 assets in 32 states for \$60 million

Source: Company press releases and Wall Street Research.

Radio / Music

- **4/3: Spotify**, the Sweden-based music streaming company, debuted its IPO with an initial trade at \$165.90 on the New York Stock Exchange under the ticker symbol 'SPOT'
- **3/22: Saavn**, the India-based provider of music streaming services, acquired **JioMusic**, the India-based provider of online music streaming services, for \$670 million
- **3/22: Townsquare Media**, the US-based radio network company, acquired three radio stations from **Connoisseur Media**, the US-based media company, for \$17 million
- **3/21: Pandora**, the US-based music streaming service, acquired **AdsWizz**, the digital audio advertising software platform, for \$145 million in cash and stock
- **3/15: iHeartMedia**, the US-based media and entertainment company, filed for Chapter 11 bankruptcy protection in the Southern District of Texas after reaching an agreement in principle with holders of more than \$10 billion of its outstanding debt and its financial sponsors
- **2/26: Liberty Media**, which owns ~69% of **SiriusXM** and ~34% of **Live Nation**, submitted a proposal to acquire a 40% stake in a restructured **iHeartMedia**, the US-based media and entertainment company, for \$1.2 billion
- **2/23: Emmis Communications Corp.**, the US-based media conglomerate, sold four of its St. Louis Stations to **Hubbard Radio** and **Entercom**, the US-based broadcasting companies, for \$60 million total
- **2/23: WNYC, KPCC and WAMU**, three US-based radio broadcasting companies, acquired assets of **Gothamist** and its associated sites, **Laist** and **DCist**
- **2/17: TargetSpot**, the US-based digital audio advertising platform, and **Entercom**, the US-based broadcasting company, announced an agreement through which TargetSpot will serve as Entercom's exclusive 3rd party national advertising sales representation for streaming audio
- **2/15: Townsquare Media**, the US-based radio network and media company, acquired classic-rock station **WOUR-FM 96.9** from **Galaxy Communications**, the US-based radio broadcasting company

SECTOR NEWS

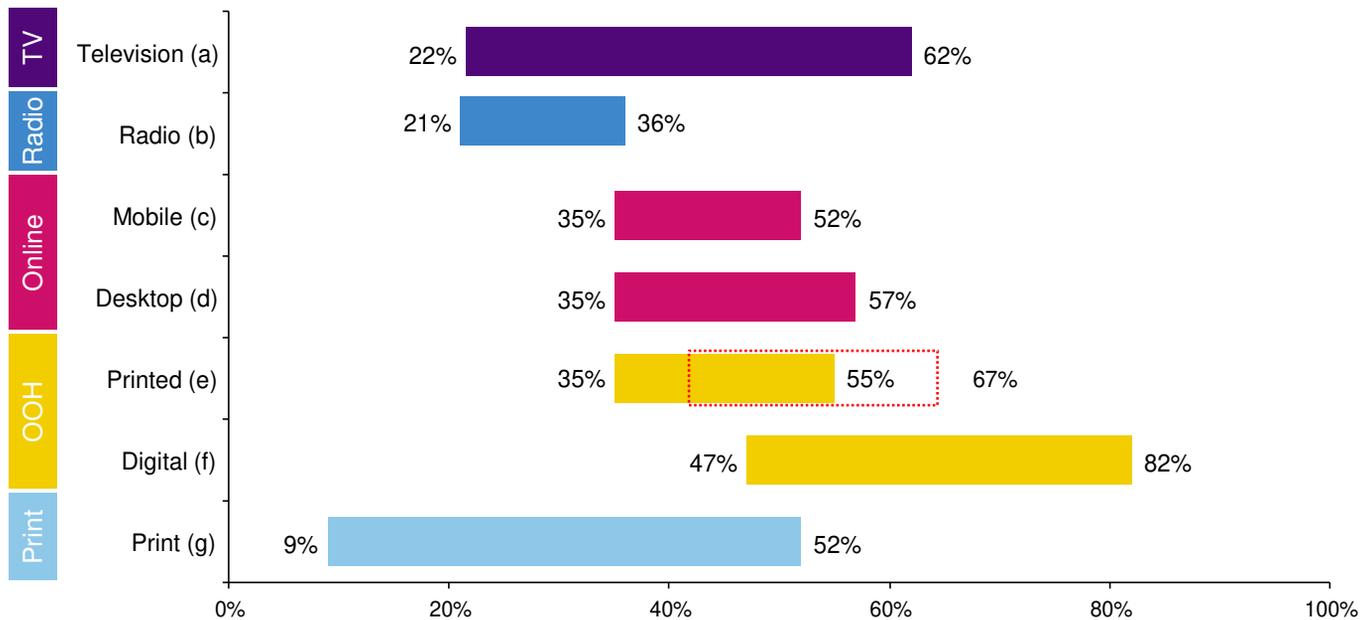
Other Key Digital Media and Tech Headlines

- **4/9: Francisco Partners**, the US-based private equity firm, and **British Columbia Investment Management**, the Canada-based investment firm, acquired **VeriFone Systems**, the US-based electronic payment equipment market, for \$3.4 billion
- **4/3: Francisco Partners**, the US-based private equity firm, acquired **Bomgar**, the US-based secure access solutions company, from **Thomas Bravo**
- **4/2: Johnson Controls**, the US-based technology and industrial product manufacturer, acquired **Smartvue Corporation**, the US-based cloud-based security camera platform, from **Fortress Investment Group**, **Centerview Capital Holdings** and **Knoll Ventures**
- **3/28: Oath**, the US-based digital content company and a subsidiary of **Verizon Wireless**, acquired a 50% stake in **Yahoo7**, an Australia-based web portal, from **Seven West Media**
- **3/22: Dropbox**, the US-based data-storage company, priced its IPO at \$21 per share, raising \$756 million
- **3/21: Google**, the US-based technology company, acquired **Lytro**, the US-based imaging startup, for \$40 million
- **3/20: Salesforce**, the US-based CRM technology company, acquired **MuleSoft**, the US-based cloud software company, for ~\$6.5 billion
- **3/13: Shamrock Capital**, the US-based private equity firm, made an investment in **Wpromote**, the US-based independent digital marketing agency
- **3/12: Apple**, the US-based technology firm, acquired **Next Issue Media**, the US-based multi-title magazine subscription service (Texture), from **KKR**, the US-based private equity firm
- **3/9: Searchlight Capital Partners**, the US-based private equity firm, made a \$150 million investment in **Global Eagle**, the US-based provider of inflight entertainment
- **3/6: Penske Media Corporation**, the US-based digital media company, acquired **SheKnows**, the US-based online media company providing womens lifestyle products, from **Great Hill Partners**, the US-based private equity firm
- **3/5: Amazon**, the US-based online retailer, acquired **GameSparks**, the Ireland-based videogame software developer
- **3/5: The Infatuation**, the US-based restaurant review website, acquired **Zagat**, the **Google**-owned restaurant review company
- **3/1: DoorDash**, the US-based food delivery service, raised \$535 million in a Series D funding in a round led by Japan's **SoftBank Group**
- **3/2: Bell Media**, the US-based digital marketing agency, acquired **Carted**, the US-based online shopping and digital marketing platform for grocers
- **2/28: US-based Caymus Equity Partners** announced the sale of its portfolio company, **Direct Marketing Solutions** to **Main Street Capital Corporation**
- **2/28: AcuityAds**, the Canada-based digital media company, acquired **Adman Interactive SL**, the Spain-based online advertising company, for \$17 million
- **2/27: Amazon**, the US-based online retailer, acquired **Ring**, the US-based developer of video doorbells for homes, for more than \$1 billion
- **2/26: Epiris**, the UK-based private equity firm, and **Mr. Bernard Gray**, the UK-based private investor, acquired **Time (UK)**, the publisher of print and digital media magazine content, from **Meredith Corporation**, the US-based media and marketing company
- **2/13: Nielsen**, the US-based market research company, acquired the advertising intelligence division of **Ebiquity**, the UK-based marketing analytics company, for \$36 million
- **2/7: Dr. Patrick Soon-Shiong**, the US-based entrepreneur, acquired **Los Angeles Times**, **San Diego Tribune** and other newspaper titles of **California News Group** from **tronc**, the US-based diversified media company, for \$500 million in cash in addition to the assumption of \$90 million of pension liabilities
- **1/25: Tencent Holdings**, the China-based provider of internet value-added services, acquired a 7% stake in **Skydance Media**, the US-based media company, for \$100 million

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

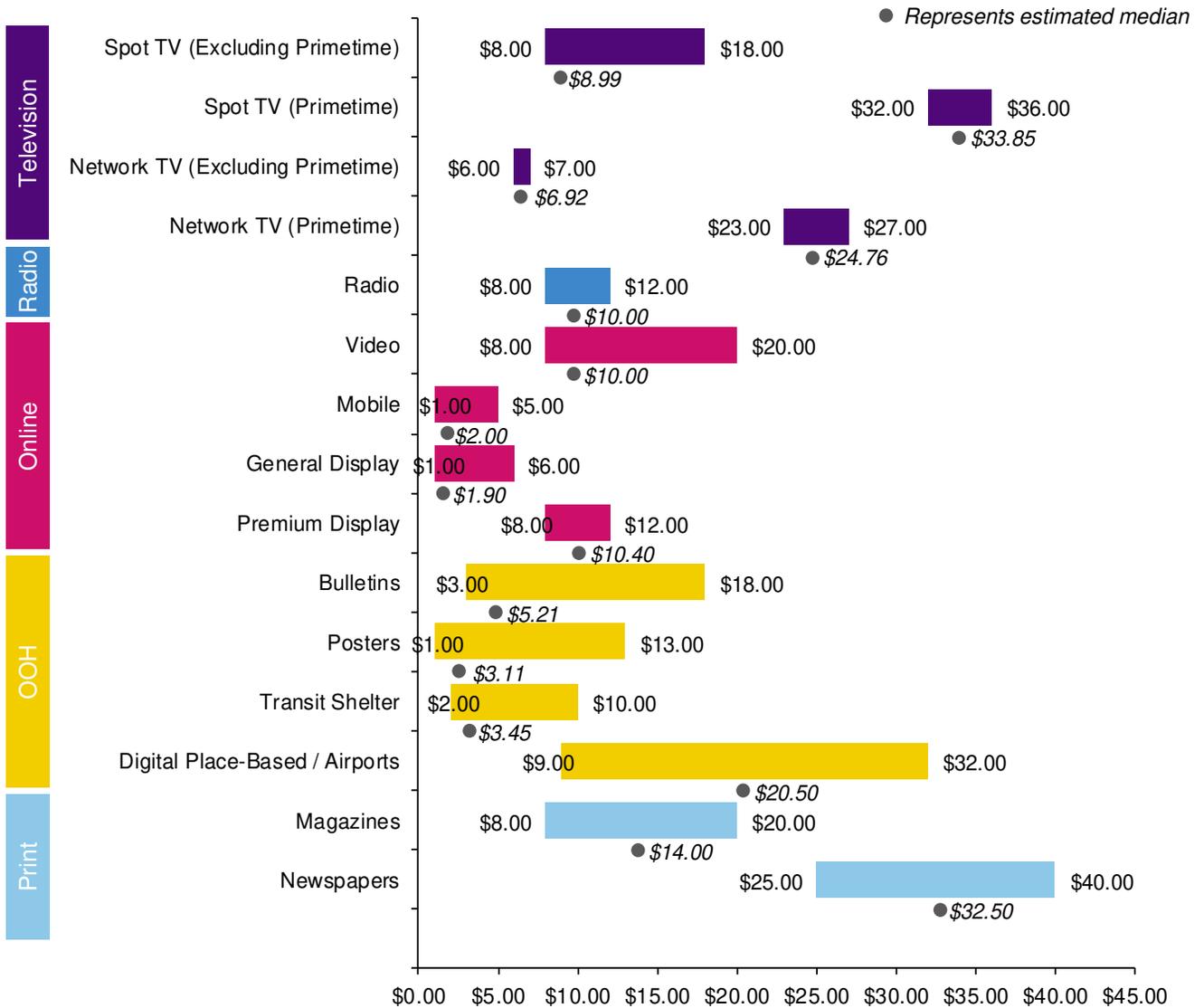


Source: PJ SOLOMON Study as of March 2017 and Wall Street research.

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, wallsapes, 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 July 2016 based on SEC filings, news, research and other industry sources.

MARKET INDICATORS

	4/19/18	Performance		
		% off 52	1-Month	YTD
		Week	%	%
		High	Change	Change
Nasdaq Composite	7,238	(4.6%)	(1.4%)	4.8%
Dow Jones Industrial	24,665	(7.3%)	0.2%	(0.2%)
S&P 500	2,693	(6.3%)	(0.7%)	0.7%

	Bloomberg Economic Forecast				
	2Q18E	3Q18E	4Q18E	1Q19E	2Q19E
Real GDP	2.80 %	2.80 %	2.70 %	2.70 %	2.50 %
Core CPI	2.60	2.60	2.30	2.20	2.30
Fed Funds	1.95	2.20	2.35	2.60	2.75
3 Mo. LIBOR	2.26	2.42	2.55	2.71	2.87
10 Yr Treasury	2.96	3.07	3.16	3.25	3.33
Unemployment	4.00	3.90	3.80	3.80	3.70

Share Price Performance

	Stock Price	1-Week %	1 - Month %	YTD%
	4/19/18	Change	Change	Change
Out of Home Media				
AirMedia Group	\$0.74	(3%)	(34%)	(36%)
APG SGA	416.35	1%	0%	(11%)
Clear Channel Outdoor	4.95	--	1%	8%
JCDecaux	36.31	4%	2%	(12%)
Lamar	63.59	1%	(3%)	(14%)
National CineMedia	5.77	5%	(1%)	(16%)
OUTFRONT Media	18.77	2%	(3%)	(19%)
Ströer	74.69	2%	7%	(1%)

Out of Home Median		1%	(0%)	(13%)
Out of Home Mean		1%	(4%)	(13%)

Broadcasting

Entravision	\$5.05	4%	9%	(29%)
Gray Television	12.20	7%	(6%)	(27%)
Nexstar Broadcasting	67.05	7%	(4%)	(14%)
Sinclair Broadcast Group	30.60	4%	(4%)	(19%)
TEGNA	11.20	4%	(9%)	(20%)

Broadcasting Median		4%	(4%)	(20%)
Broadcasting Mean		5%	(3%)	(22%)

Diversified Media

CBS	\$50.95	2%	0%	(14%)
Discovery	23.38	1%	2%	4%
Disney	100.89	0%	(1%)	(6%)
Hemisphere Media Group	11.15	1%	(4%)	(3%)
News Corp.	16.19	2%	(1%)	(0%)
Time Warner	96.58	0%	2%	6%
Viacom	30.76	1%	(2%)	(0%)

Diversified Media Median		1%	(1%)	(0%)
Diversified Media Mean		1%	(1%)	(2%)

Advertising Technology

Criteo	\$27.88	1%	(7%)	7%
HubSpot	115.70	3%	(1%)	31%
Telaria	4.34	16%	16%	8%
The Trade Desk	53.98	4%	(3%)	18%

Advertising Technology Median		3%	(2%)	13%
Advertising Technology Mean		6%	1%	16%

Radio

	Stock Price	1-Week %	1 - Month %	YTD%
	4/19/18	Change	Change	Change
Radio				
Beasley Broadcast Group	\$11.40	11%	9%	(15%)
Emmis Communications	4.67	3%	2%	33%
Entercom Communications	10.20	7%	3%	(6%)
Saga Communications	39.45	5%	4%	(2%)
Salem Communications	3.40	1%	(11%)	(24%)
Sirius XM Radio	6.34	2%	--	18%

Radio Median		4%	2%	(4%)
Radio Mean		5%	1%	1%

Advertising/Marketing

BlueFocus Communication	\$1.24	2%	5%	41%
Cheil Worldwide	17.49	1%	2%	(12%)
Dentsu Inc.	46.76	3%	9%	5%
Huntsworth	1.37	1%	2%	21%
M&C Saatchi	5.26	(3%)	(6%)	1%
MDC Partners	7.95	4%	12%	(18%)
Next Fifteen Communications	6.31	1%	(3%)	2%
Omnicom Group	75.03	5%	2%	3%
Publicis Groupe	73.99	9%	2%	6%
The Interpublic Group	24.65	6%	5%	22%
Viad	55.05	3%	2%	(1%)
WPP	16.22	(3%)	(1%)	(14%)

Advertising/Marketing Median		3%	2%	3%
Advertising/Marketing Mean		2%	3%	5%

New Media

Alphabet	\$1,089.45	5%	(1%)	3%
Amazon	1,556.91	7%	1%	33%
eBay	42.11	4%	0%	12%
Facebook	168.10	3%	(3%)	(5%)
Netflix	332.70	8%	6%	73%
PayPal	79.68	3%	(1%)	8%
Snap	14.84	(1%)	(10%)	2%
Twitter	31.54	9%	(10%)	31%

New Media Median		4%	(1%)	10%
New Media Mean		5%	(2%)	20%

Advertising Research

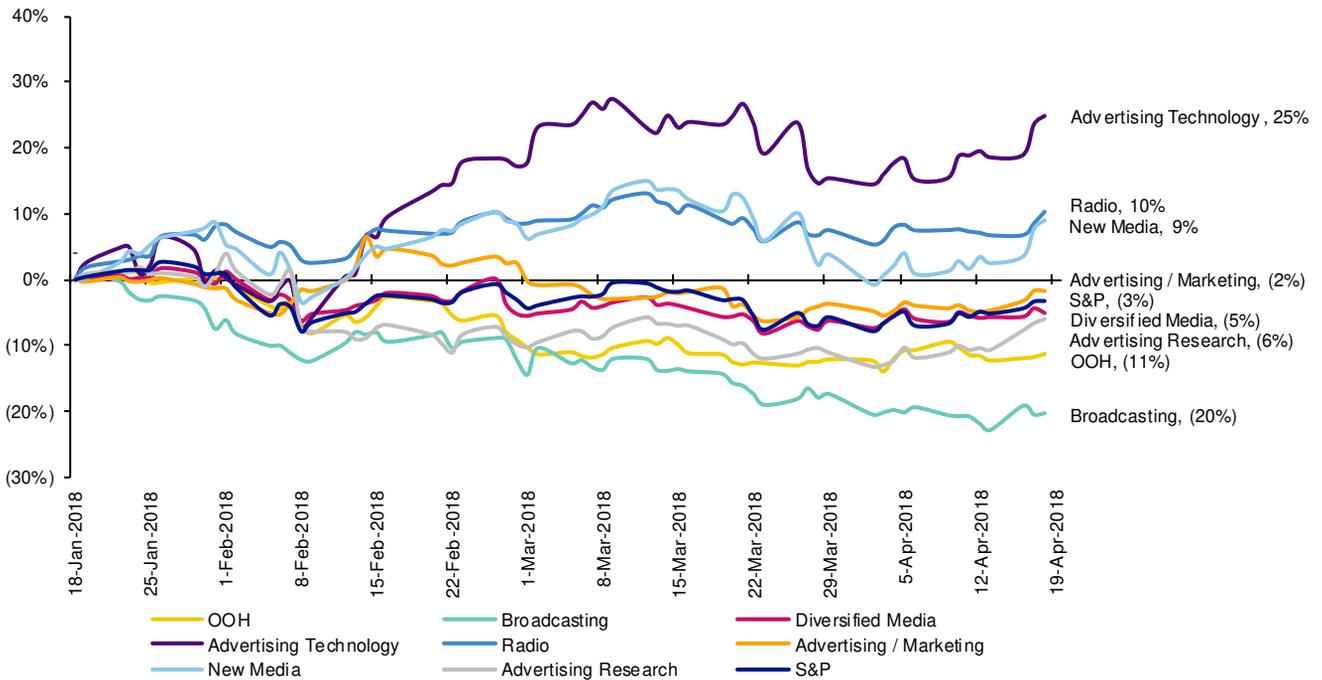
comScore	\$21.02	(6%)	(19%)	(26%)
Nielson	34.70	7%	6%	(5%)
Ipsos	38.59	3%	(1%)	2%

Advertising Research Median		3%	(1%)	(5%)
Advertising Research Mean		1%	(5%)	(10%)

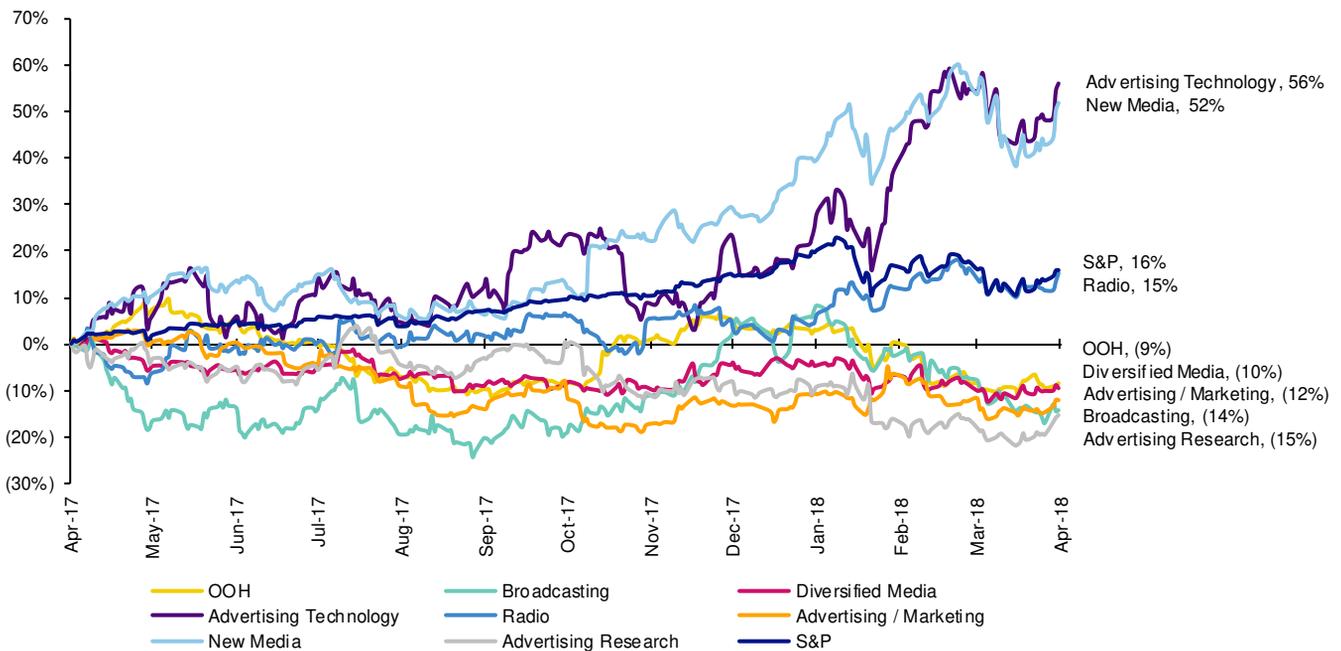
Source: Capital IQ, Bloomberg and Wall Street Research.

INDUSTRY SHARE PRICE PERFORMANCE

Last Three Months



Last Twelve Months (LTM)

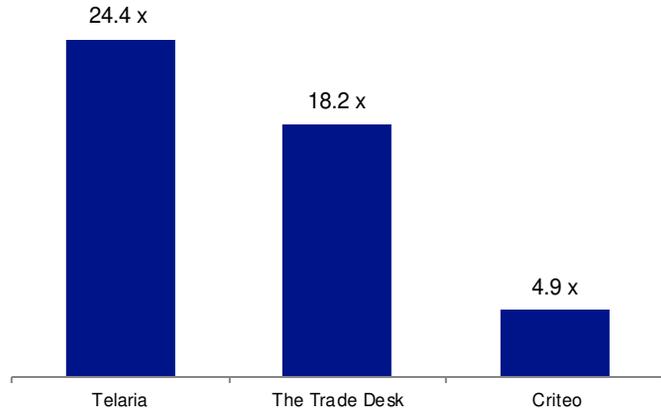


Source: Capital IQ as of April 19, 2018 and Wall Street Research.

EV / 2018E EBITDA

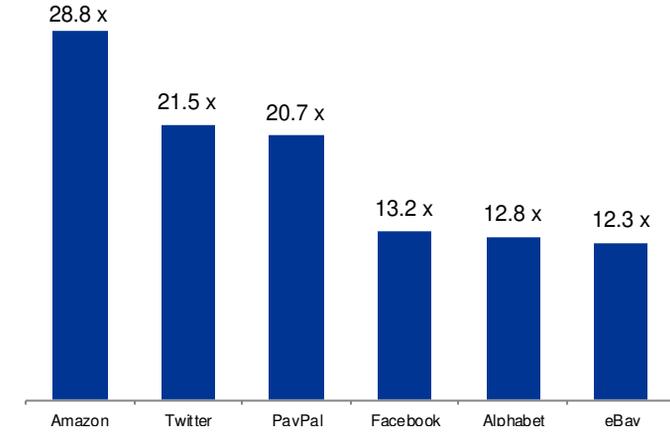
Advertising Tech

Median: 18.2x



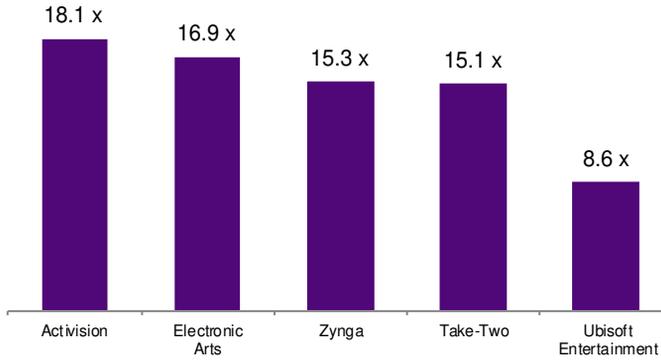
New Media

Median: 16.9x



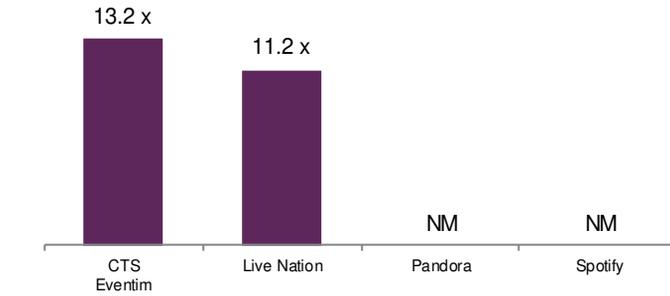
Video Games

Median: 15.3x



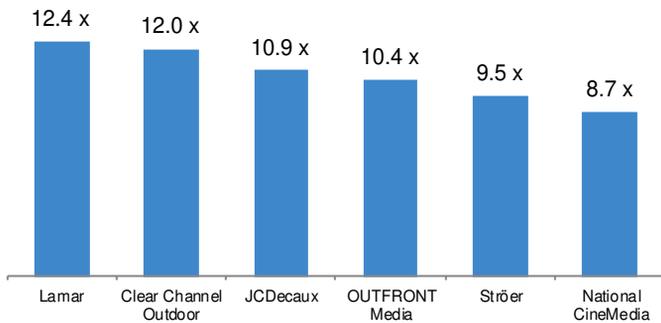
Music / Events

Median: 12.2x



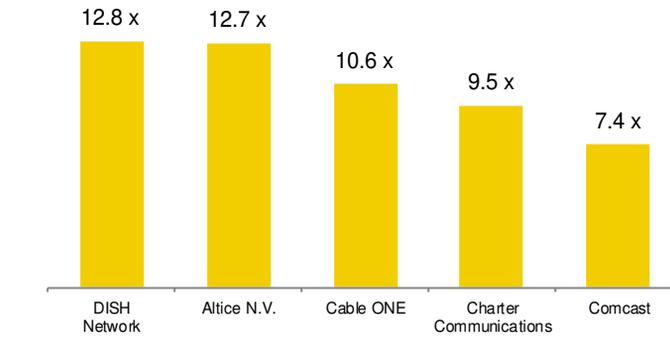
Out-of-Home Advertising

Median: 10.6x



Cable

Median: 10.6x

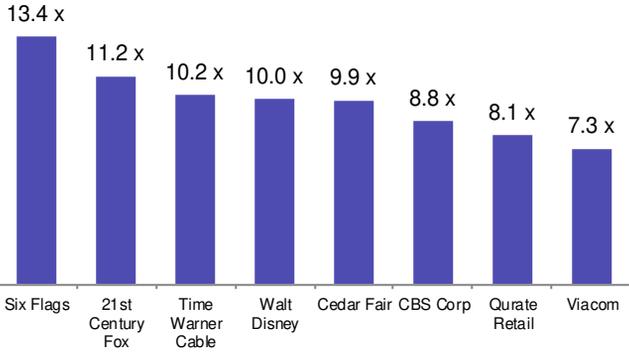


Source: Capital IQ as of April 19, 2018 and Wall Street Research.

EV / 2018E EBITDA

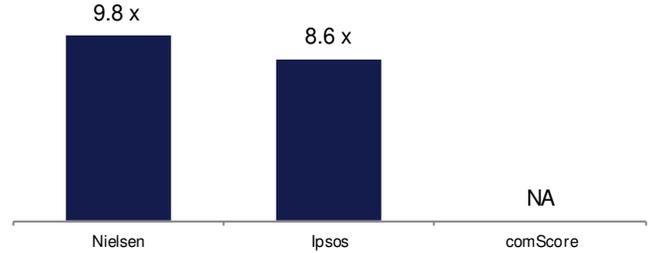
Cable / Content

Median: 10.0x



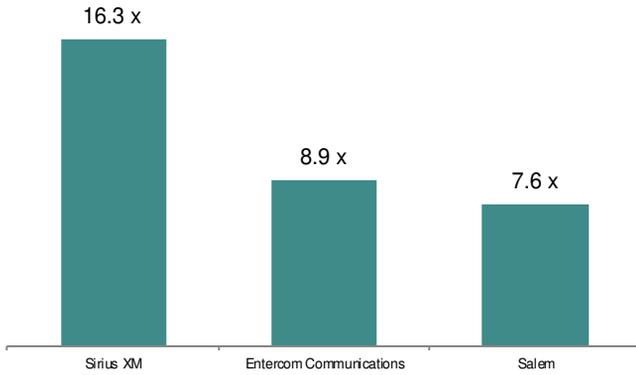
Advertising Research

Median: 9.2x



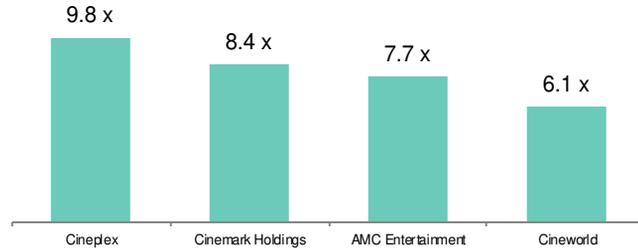
Radio

Median: 8.9x



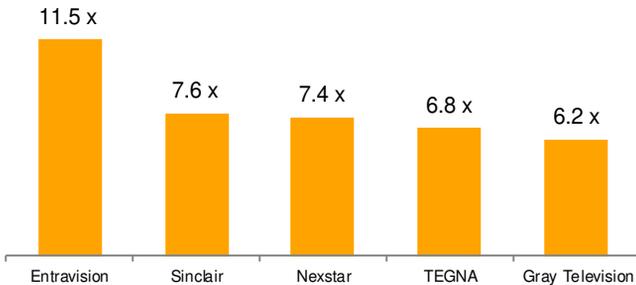
Theaters

Median 8.1x



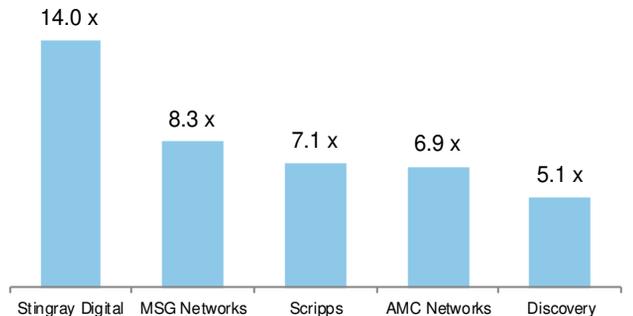
Broadcasting

Median: 7.4x



Cable Content

Median: 7.1x



Source: Capital IQ as of April 19, 2018 and Wall Street Research.

VALUATION METRICS

	Stock Price 4/19/18	52-Week Low	52-Week High	Equity Value	Enterprise Value	Valuation Multiples		Growth	
						EV / Revenue 2018E	EV / EBITDA 2018E	'16A - '18E CAGR Revenue	'16A - '18E CAGR EBITDA
Out of Home Media									
Clear Channel Outdoor	\$4.95	\$3.55	\$5.90	\$1,789	\$6,984	2.6 x	12.0 x	(1%)	(5%)
JCDecaux	36.31	33.53	44.80	7,722	8,305	1.9 x	10.9 x	9%	7%
Lamar	63.59	62.10	78.39	6,257	8,698	5.4 x	12.4 x	4%	3%
National CineMedia	5.77	5.15	12.61	905	1,769	4.1 x	8.7 x	(2%)	(1%)
OUTFRONT Media	18.77	18.00	26.76	2,611	4,834	3.1 x	10.4 x	1%	2%
Global / U.S. Median						3.1 x	10.9 x	1%	2%
Global / U.S. Mean						3.4 x	10.9 x	2%	1%
APG SGA	\$416.35	\$396.33	\$523.65	\$1,249	\$1,156	3.7 x	15.0 x	(2%)	(4%)
Ströer	74.69	61.42	81.01	4,150	4,846	2.4 x	9.5 x	20%	21%
Europe Median						3.1 x	12.3 x	9%	8%
Europe Mean						3.1 x	12.3 x	9%	8%
AirMedia Group	\$0.74	\$0.73	\$2.83	\$46	NM	NA	NA	NA	NA
Clear Media	0.76	0.76	1.20	414	380	NA	NA	NA	NA
China Median						NA	NA	NA	NA
China Mean						NA	NA	NA	NA
Total Out of Home Advertising Median						3.1 x	10.9 x	1%	2%
Total Out of Home Advertising Mean						3.3 x	11.3 x	4%	3%
Radio									
Beasley Broadcast Group	\$11.40	\$8.40	\$16.55	\$314	\$514	NA	NA	NA	NA
Emmis Communications	4.67	2.48	4.80	60	227	NA	NA	NA	NA
Entercom Communications	10.20	9.25	13.30	1,410	3,248	2.1 x	8.9 x	82%	85%
Salem Media Group	3.40	3.35	8.15	89	348	1.3 x	7.6 x	(1%)	(3%)
Sirius XM Holdings	6.34	4.73	6.60	28,478	35,156	6.1 x	16.3 x	7%	11%
Radio Median						2.1 x	8.9 x	7%	11%
Radio Mean						3.2 x	10.9 x	29%	31%
Broadcasting									
Entravision Communications	\$5.05	\$4.35	\$7.75	455	711	2.4 x	11.5 x	6%	(2%)
Gray Television	12.20	11.40	17.80	1,087	2,462	2.4 x	6.2 x	13%	14%
Nexstar Broadcasting Group	67.05	56.45	81.75	3,092	7,349	2.7 x	7.4 x	58%	55%
Sinclair Broadcast Group	30.60	27.20	40.35	3,127	6,460	2.2 x	7.6 x	4%	(2%)
TEGNA	11.20	10.57	26.11	2,415	5,324	2.4 x	6.8 x	4%	(2%)
Broadcasting Median						2.4 x	7.4 x	6%	(2%)
Broadcasting Mean						2.4 x	7.9 x	17%	13%
Advertising/Marketing									
BlueFocus Communication Group	\$1.24	\$0.87	\$1.32	\$2,700	\$3,218	1.0 x	19.1 x	27%	28%
Cheil Worldwide	17.49	16.60	20.33	1,892	1,565	0.5 x	7.7 x	4%	8%
Dentsu	73.99	64.51	84.50	16,736	17,626	1.5 x	8.6 x	(1%)	(1%)
Huntsworth	1.37	0.66	1.38	451	502	1.7 x	10.8 x	8%	24%
M&C Saatchi	5.26	4.10	5.78	435	434	1.2 x	9.3 x	9%	32%
MDC Partners	7.95	6.65	12.10	473	1,521	0.9 x	7.0 x	8%	20%
Next Fifteen Communications Group	6.31	5.19	6.52	494	510	1.7 x	8.9 x	13%	23%
Omnicom Group	24.65	18.45	25.57	9,519	10,387	1.3 x	8.7 x	2%	4%
Publicis	75.03	65.52	85.26	17,054	20,206	1.3 x	8.3 x	1%	3%
The Interpublic Group	16.22	15.35	24.61	20,535	27,482	1.3 x	7.9 x	2%	(1%)
WPP	46.76	40.95	60.70	13,180	15,148	1.6 x	9.0 x	10%	2%
Advertising/Marketing Median						1.3 x	8.7 x	8%	8%
Advertising/Marketing Mean						1.3 x	9.6 x	8%	13%
Advertising Technology / New Media									
Alphabet	\$1,089.45	\$858.95	\$1,187.56	\$756.880	\$658,978	4.9 x	12.8 x	22%	31%
Amazon	1,556.91	898.53	1,598.39	755,054	768,215	3.3 x	28.8 x	31%	51%
Criteo	27.88	22.12	55.39	1,844	1,450	1.4 x	4.9 x	(25%)	29%
Facebook	168.10	143.68	193.09	487,383	445,672	8.0 x	13.2 x	42%	51%
HubSpot	115.70	63.60	120.50	4,380	4,174	8.6 x	NM	34%	NM
Netflix	332.70	141.18	336.06	144,610	148,559	9.2 x	NM	35%	118%
PayPal	79.68	43.69	85.45	94,595	83,969	5.5 x	20.7 x	19%	39%
Telaria	4.34	2.05	5.27	226	150	2.5 x	24.4 x	44%	NM
The Trade Desk	53.98	35.98	66.51	2,269	2,140	5.3 x	18.2 x	41%	41%
Twitter	31.54	14.63	36.60	23,651	21,042	7.8 x	21.5 x	4%	298%
Advertising Technology / New Media Median						5.4 x	19.4 x	32%	46%
Advertising Technology / New Media Mean						5.7 x	18.1 x	24%	82%
Advertising Research									
Ipsos	\$38.59	\$31.70	\$43.10	\$1,608	\$2,199	1.0 x	8.6 x	0%	2%
Nielsen	34.70	30.83	43.25	12,364	20,347	3.0 x	9.8 x	4%	13%
comScore	21.02	21.00	30.14	1,156	1,127	2.8 x	NM	NM	NM
Advertising Research						2.8 x	9.2 x	2%	8%
Advertising Research						2.2 x	9.2 x	2%	8%

Source: Capital IQ as of April 19, 2018 and Wall Street Research.

UPCOMING EVENTS

DATES	NAME	LOCATION	DESCRIPTION
April 30-May 4, 2018	London Digital Signage Week	London, UK	<ul style="list-style-type: none"> Like its counterpart in NYC, the week includes events for retail, employee communications, digital out of home and digital signage PJ SOLOMON's Mark Boidman and Ben Zinder 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 Bernel to attend
May 10, 2018	PoC3 Summit	New York, NY	<ul style="list-style-type: none"> The PoC3 Summit is a unique opportunity to discover how the changing climate of healthcare means a fundamental shift in how we participate in health-related communications. The patient / healthcare provider dialogue continues to become a more complex and crucial element - one that this event will help you to best understand and impact PJ SOLOMON's Mark Boidman to present
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
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 present
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
July 25-28, 2018	2018 ANA Digital & Social Media Conference	Rancho Palos Verdes, CA	<ul style="list-style-type: none"> The 9th annual ANA Digital & Social Media Conference will feature CMOs and leaders who will cover important topics such as AI, augmented reality, influencer marketing, voice, virtual reality, social media, chatbots, content marketing, measurement and more
July 18-19, 2018	Innovation Congress by Social Fresh	New York, NY	<ul style="list-style-type: none"> Social media conference focusing on quality content with actionable insights

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.



———— PJ ————
SOLOMON
unrivaled wisdom