

AD TECH MARKET UPDATE

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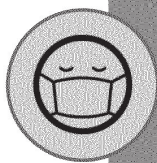


I AdTech Industry Update

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Major Factors Affecting AdTech Valuations



Ongoing impact of COVID-19 – but signs of recovery starting to show

- Sudden, protracted decline in consumer spending, particularly in hard hit sectors such as travel and hospitality
- Estimated ~9% reduction in U.S. total ad spend and ~14% reduction in global ad spend in 2020E
- U.S. ad spend in April 2020 was almost 40% below 2019, decreasing to 31% in May and 17% in June

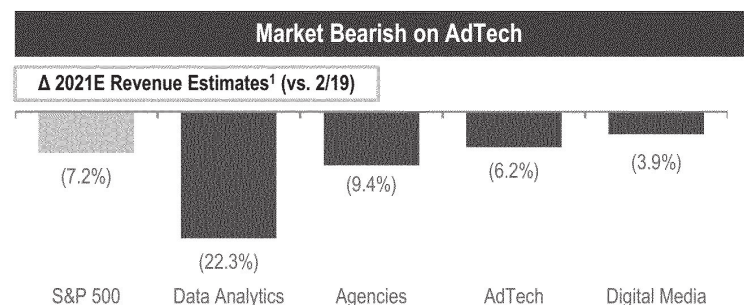
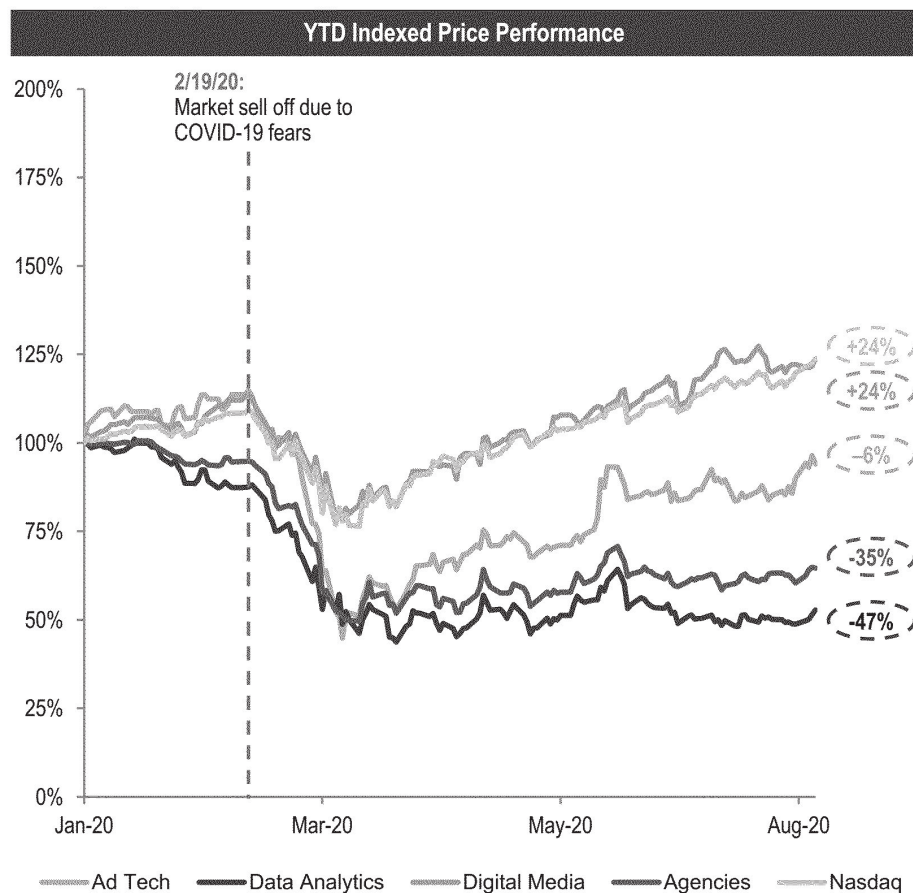


Public regulation and private company initiatives impacting ability to track consumers

- GDPR introduced requirement to gain user consent to create cookies
- Phasing out of 3P cookies in Chrome (by 2022) and blocking of 3P cookies by default in Firefox (2019) and Safari (2020)

Players Across AdTech Ecosystem Experiencing Headwinds from COVID-19

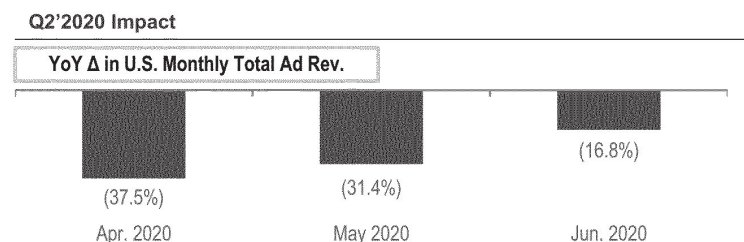
Entire ecosystem feeling flow-on effects of sudden decline in consumer activity and ad spending, with data analytics players and agencies particularly hard hit



COVID Impact on Ad Revenue

Full Year 2020 Impact

| | Original 2020 Estimates ² | Updated 2020 Estimates (COVID-Affected) ² | Delta |
|---------------------------|--------------------------------------|--|--------|
| Global Total Ad Revenue | \$627B | \$540B | -13.9% |
| Global Digital Ad Revenue | \$338B | \$302B | -10.7% |
| U.S. Total Ad Revenue | \$233B | \$213B | -8.6% |
| U.S. Digital Ad Revenue | \$139B | \$130B | -6.2% |



Source: FactSet as of 08/06/2020, Magna Global, MediaPost.

Note: Indices are equal-weighted.

"Ad Tech" peers include: Trade Desk, Criteo, Magnite and Tremor. "Data Analytics" peers include: Neilson, LiveRamp, Alliance Data and comScore. "Digital Media" peers include: Amazon, Alphabet, Facebook, Snap and Twitter. "Agencies" peers include: Omnicom, Publicis Groupe, WPP, IPG and Dentsu Group.

¹ Represents median revenue estimates of Data Analytics, AdTech, Agencies and Digital Media peers and aggregate median revenue estimate of all S&P 500 constituents.

² Original 2020 Estimates denote Magna Global's projected 2020 advertising revenues as of June 2019 (COVID-unaffected) while Updated 2020 Estimates denote Magna Global's projected 2020 advertising revenues as of June 2020 (COVID-affected).

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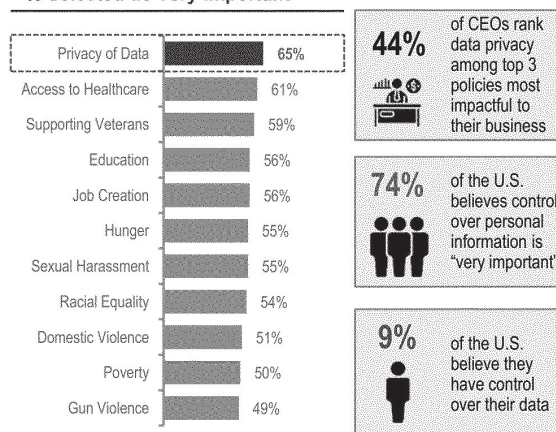
Data Privacy Remains Front of Mind for Regulators, Corporates and Consumers

Data / Privacy Remains a Key Issue...

- A variety of global privacy regulations require (or will potentially require) organizations to focus on user data and provide transparency in how they are collecting, sharing, and using such data
 - GDPR (Europe, 2018)
 - CCPA, WPA and Others (U.S., 2017-2020)
 - APPI (Japan, 2017)
 - CSL (China, 2018)

- Companies and consumers taking notice and action to address privacy concerns:

% Selected as Very Important

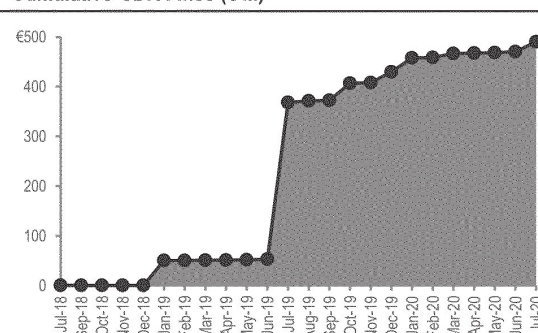


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Source: PWC, US International Trade Commission (Exec. Briefing 9/19) and GDPR Enforcement Tracker.

...With Serious Implications

Cumulative GDR Fines (€ M)



Highest Individual Fines (€ M)

| | Fine | Violation |
|-----------------|-------|---|
| BRITISH AIRWAYS | €205M | • Insufficient technical and organizational measures to ensure information security |
| Marriott | 110M | |
| Google | 50M | • Insufficient legal basis for data processing |
| TIM | 28M | |
| Post | 18M | |

Illustrative breach affecting 50 million users could result in the following fines:

- GDPR: over **\$1.63 billion**
- Brazil Data Protection Act: over **\$815 million**
- FTC: fines upward of **\$500 million** may be levied, based on FTC trends

Facebook is looking down the barrel of a \$2.2 billion fine for storing millions of passwords insecurely

April 2019

BUSINESS INSIDER

Twitter, WhatsApp in firing line as Ireland submits first draft GDPR decisions

May 2020

c|net

Apple faces third Irish privacy probe, this time over GDPR compliance

July 2019

VentureBeat

Adtech Giant Quantcast Facing GDPR Investigation into Breach of Privacy

May 2019

CPO MAGAZINE

Verizon faces GDPR probe as WhatsApp decision loom

August 2019

DecisionMarketing

Phasing Out of Third-Party Cookies Shifting Balance of Power in AdTech

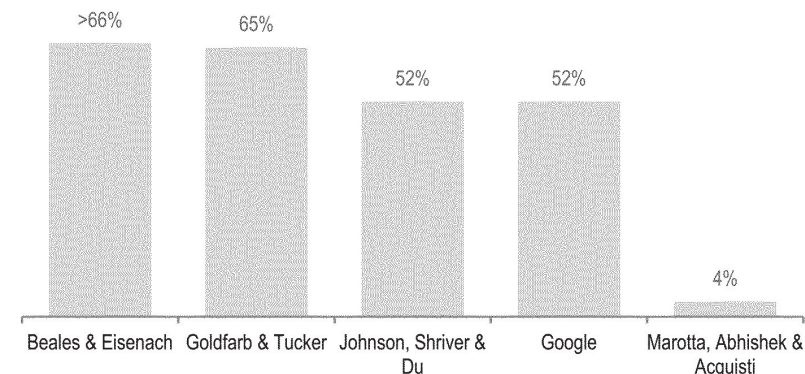
Benefits owners of 1P browsing data (e.g. Google, Facebook and Quantcast) and those with social graphs focused on long term attributes

Anti-3P Cookie Timeline

| | |
|------------|--|
| Q2'2017 | Safari ITP 1.0 - 1st implementation in OS 11 and Mac OS; limitation to 3rd party cookies tracking |
| Q3'2018 | Safari ITP 2.0 – Tracking cookies are segmented out and blocked in Safari browser |
| Q1'2019 | Safari ITP 2.2 – 1st party cookie lookback windows are shortened from 7 days to 24 hours |
| Q2'2019 | Firefox 67.0.1 – Default set to block 3rd party cookies |
| Q2'2019-20 | Chrome 76/80 – Publisher preference settings for how cookies are used |
| Q1'2020 | Chrome announces 2022 3P Cookie Phase Out |

Impact on Ad Monetization

Value of Cookie Estimates (Loss as a % of price w/out Cookies)



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Source: AdExchanger, Vovia, GLG and Equity Research.

Criteo's Response

- "We use them today" but do not rely on Cookies; captures 1P data from direct connections to 20,000+ advertisers and 4,700 publishers
- Nature of customer base means Criteo has access to large number of unique users, but relatively few web properties (e.g. vs. Quantcast's 100M sites)
- *Shopper Graph* comprises IDs for 2.5BN users (unique identifiers are hashed email or logon ID – 98% have persistent identifiers other than cookies)
- Criteo can track these users and build a profile of their interests/activities, provided they are on Criteo's existing network of advertisers and publishers
- "There are 8 to 10 ways you can source identity... and Criteo is working on all of them" – *Criteo CEO, 5/12/20*
- Increasingly emphasizing contextual targeting (rather than behavioral/activity-based targeting); "it's a great fallback for us" – *Criteo CEO, 7/29/20*

LiveRamp

- LiveRamp ATS IdentityLink IDs built largely on known-identity 1P data (e.g. email) via hooks to 550 major platforms incl. FB, Google, Snap, etc.
- Approx. half of LiveRamp's top 20 sites are PII/IdentityLink enabled today
- "It feels like the industry is rallying around ATS as the solution for a post-cookie world" – *LiveRamp CEO, 5/21/20*

Quantcast

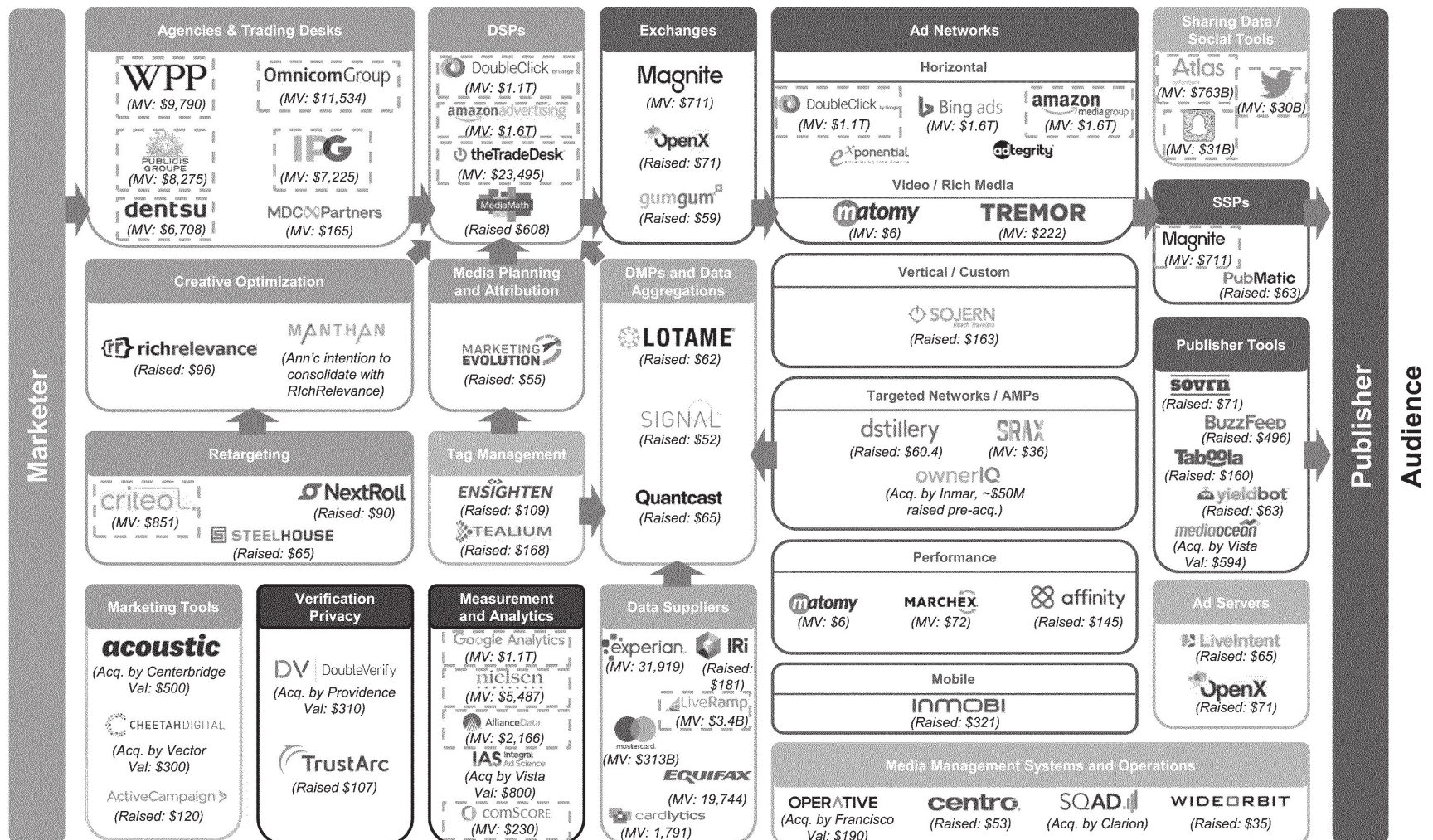
- "Quantcast has never been solely reliant on cookies ... instead using probabilistic audience modeling and contextual signals"
- Captures 1P data via Quantcast tags installed on 100M+ web properties
- Focused on long term audience attributes e.g. demographics, interests
- Opting out of Quantcast tracking in fact *requires* installation of a 3P cookie

theTradeDesk

- TTD's Unified Open ID (used by every major SSP and exchange) is based on 3P Cookie data; actively working to evolve into post-Cookie product (hashed ID, server-side/non-browser); expect beta version "soon"
- "I'm still not convinced that Google in the end will get rid of third-party cookies. And even if they do, cookies will be replaced with something else that enables targeted advertising." – *CEO, 8/7/20*

AdTech Industry Overview

(\$ in millions, except otherwise noted)



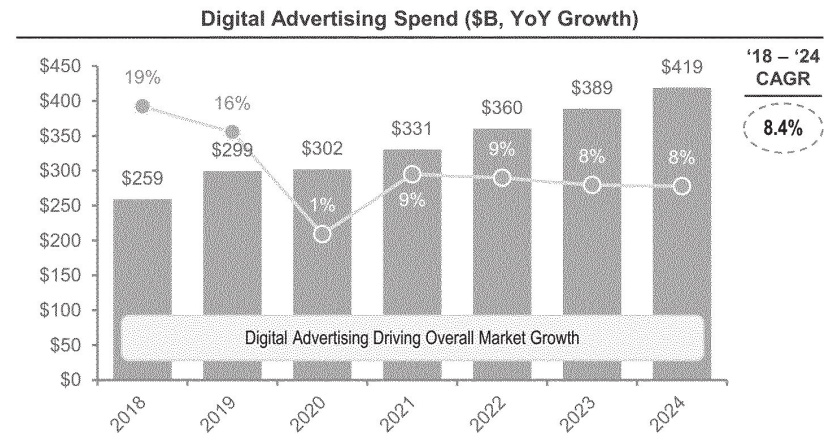
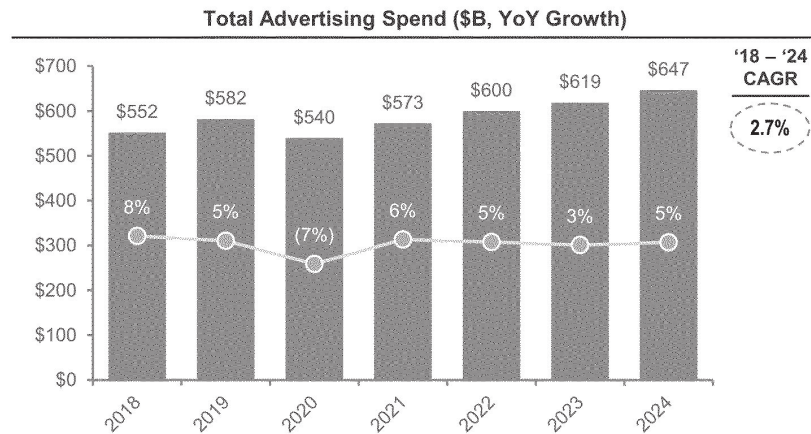
LAZARD Source: Luma Partners, Crunchbase, 451 Research and FactSet as of 08/06/2020.

Denotes prominent public companies

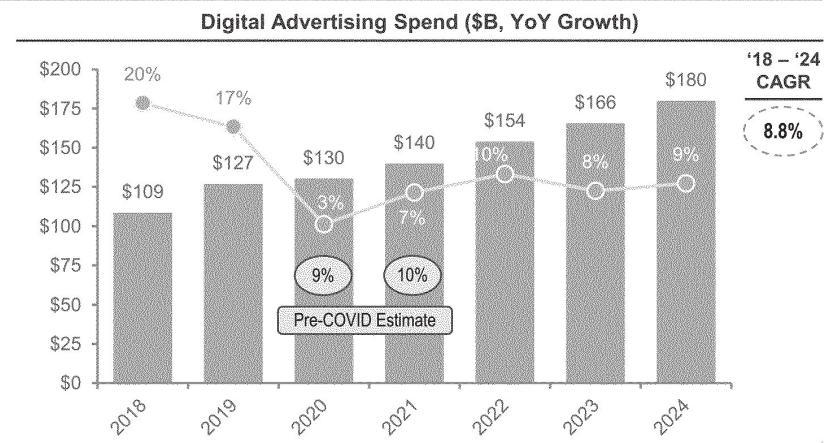
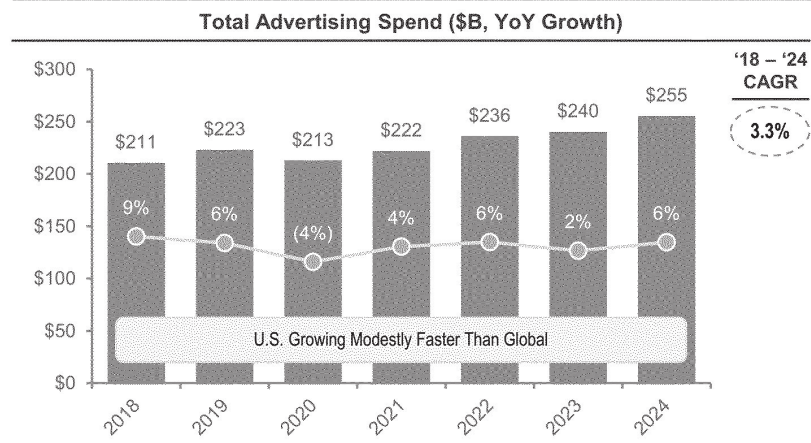
Digital Advertising Continues to Penetrate Overall Ad Spend

Global and U.S. overall ad spend to see negative impact in 2020 – but digital spend growth to remain positive vs. 2019

Global Advertising Revenue



U.S. Advertising Revenue



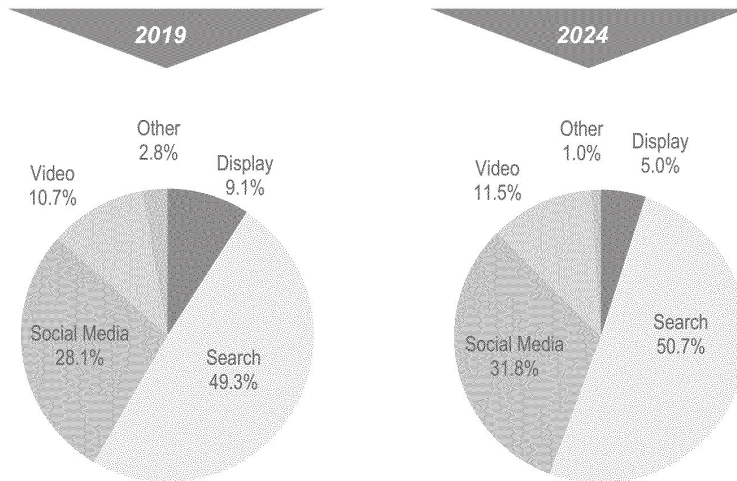
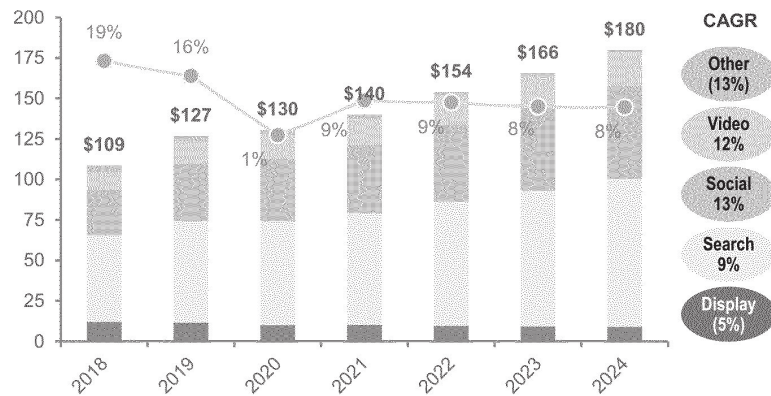
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Source: SNL Kagan as of June 2020.

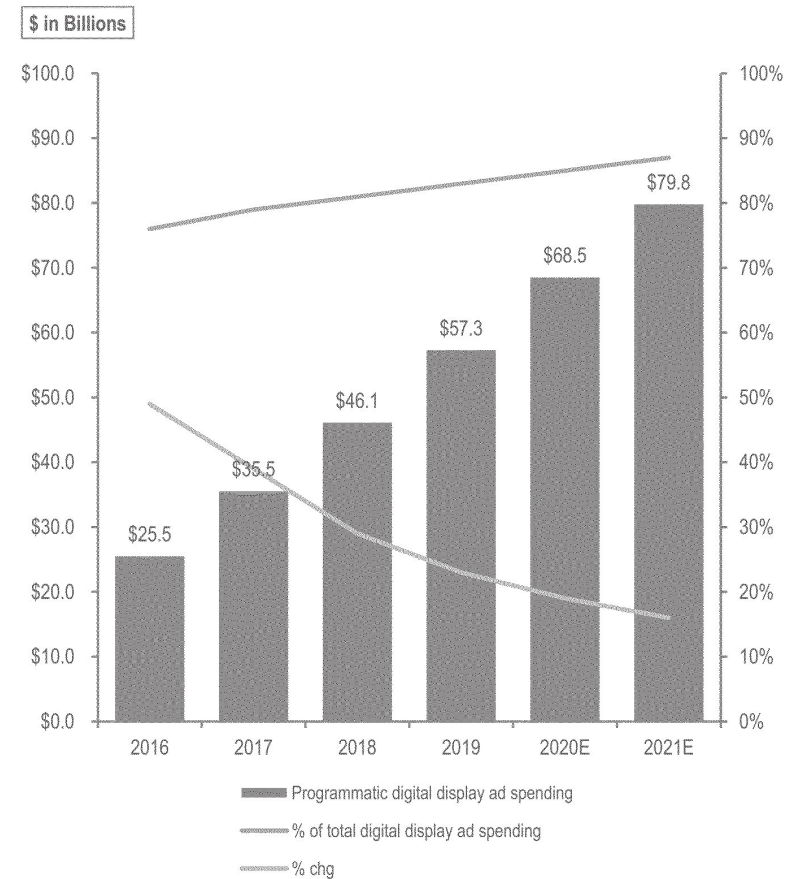
Search Advertising Remains Dominant in U.S., But Social & Video Growing Faster

Social and Video ads to make up 43% of U.S. digital ad spend by 2024, up from 39% in 2019

U.S. Digital Advertising Spend By Segment (\$BN)



U.S. Programmatic Market Size – Display Ads

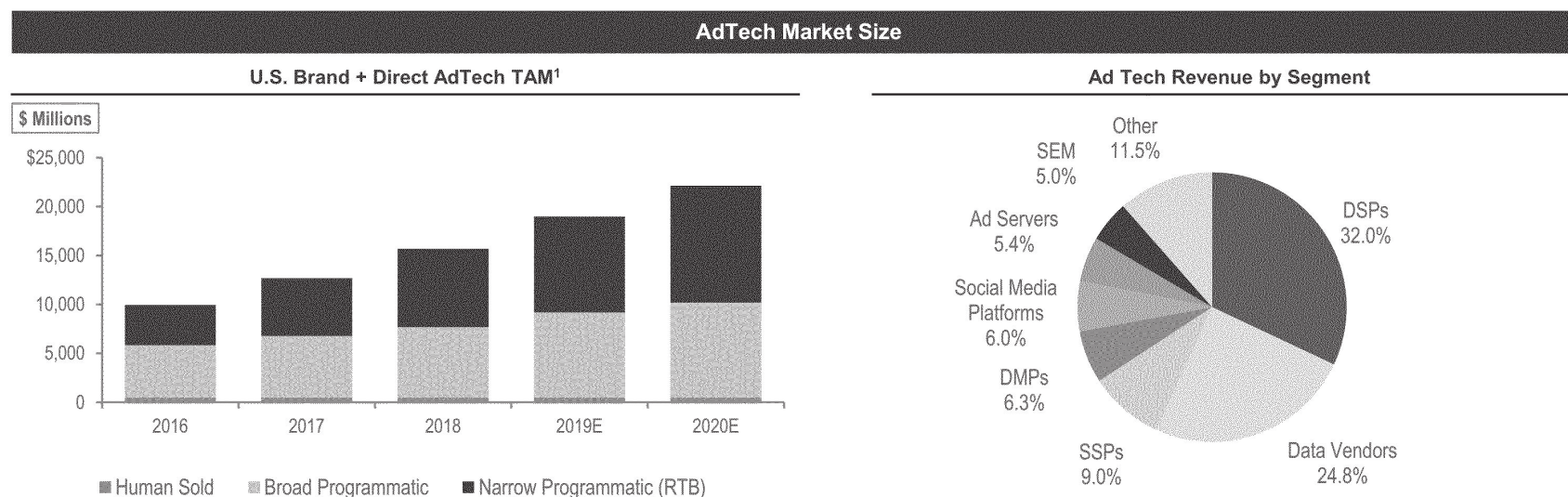


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Source: SNL Kagan as of June 2020 and JPMorgan Research citing eMarketer.

AdTech Now a \$22BN Market in U.S., of Which ~\$7BN Captured by DSPs

(\$ in millions)



| Selected TAM Disclosure | | | |
|-------------------------|-------------------|-------------------------------------|-------------------------------------|
| | criteo | theTradeDesk | Magnite |
| TAM | \$15-\$25 Billion | \$34BN (Current) \$60BN (2022E) | \$34BN (Current) \$60BN (2022E) |
| Definition | All retail media | Programmatic advertising | Programmatic advertising |
| Geography | Worldwide | Worldwide | Worldwide |
| Growth | N/A | 20% | 20% |
| Report Date | May 2020 | Aug 2019 | Aug 2019 |

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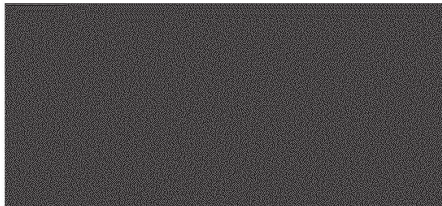
1

BMO Capital Markets research and IDC. Humans Sold: Categories of inventory (e.g. broadcast upfronts) that may always involve a large, human-sold element. Broad Programmatic: Self-serve platforms based on a budget and targeting criteria, programmatic direct campaigns automated at pre negotiated, fixed rates, offline media automation etc. Narrow Programmatic: Real-time bidding (RTB) in open auctions.

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II Equity Market Valuation Update

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Major Public Digital Advertising Companies



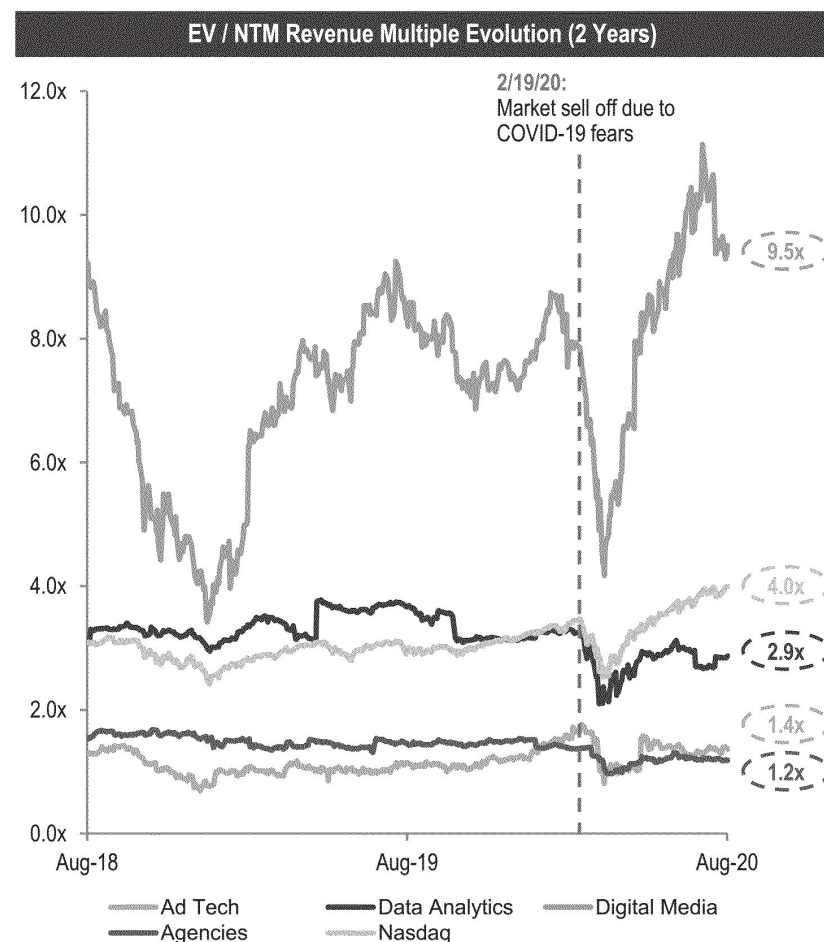
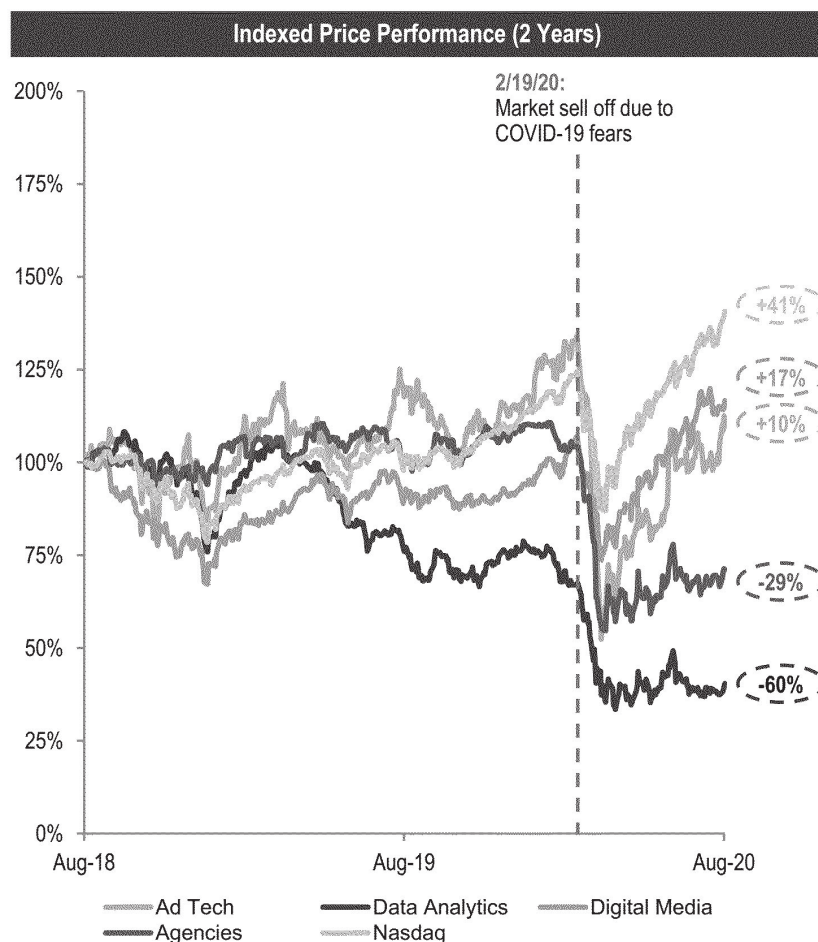
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Note: Public Ad Tech universe shown excludes Marchex (~\$100M market capitalization and limited analyst coverage), Otello (ad tech one of three segments) and Matomy (<\$10M market capitalization).

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Public AdTech Players Have Not Shared in the Market Rebound

AdTech players continuing to trade at depressed levels with median NTM revenue multiple at 1.4x, vs. pre-COVID high of 1.8x



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Source: FactSet as of 08/06/2020.

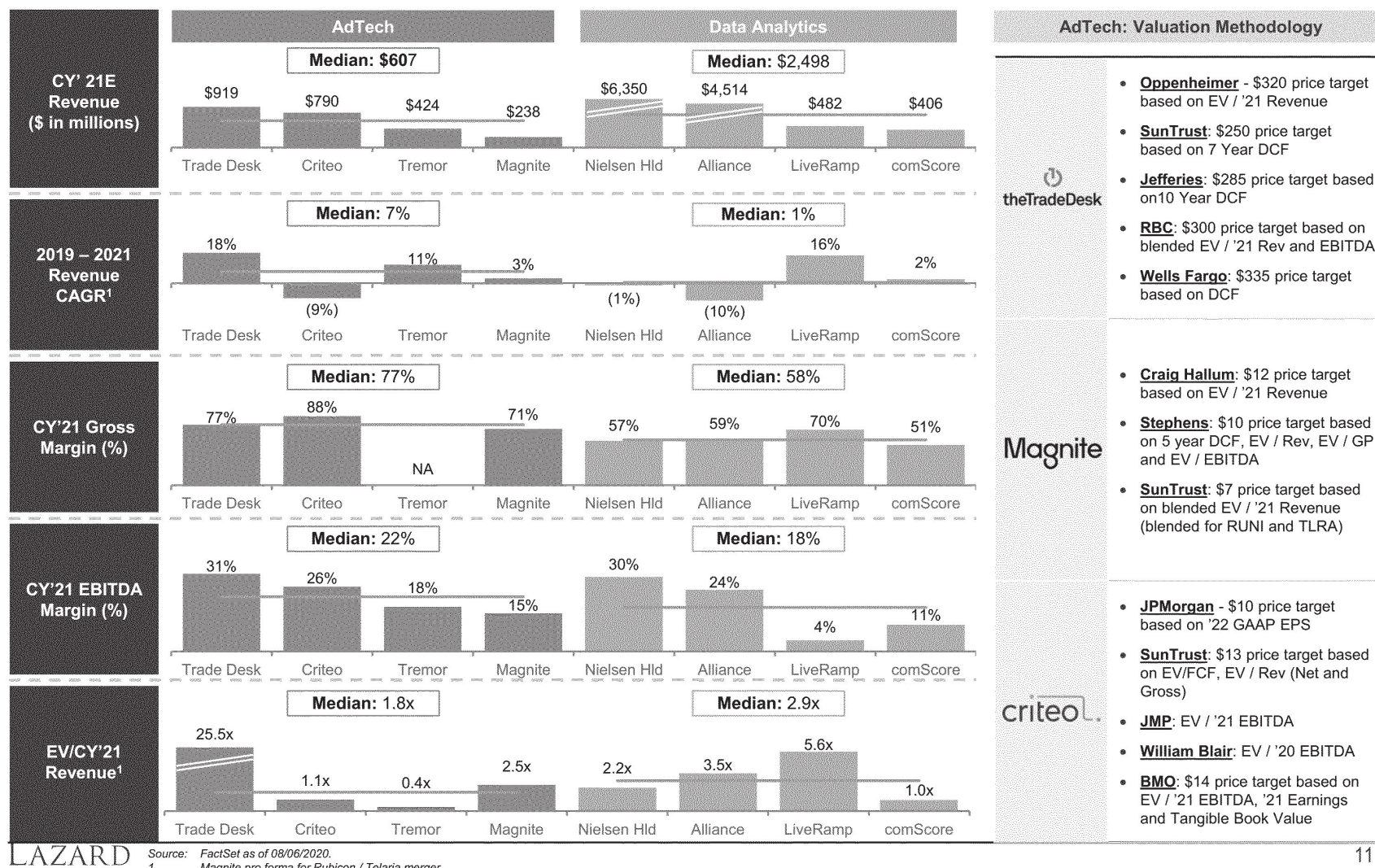
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Comparable Company Benchmarking

Valuation methodologies vary – DCF and EV/Sales more common for fast grower TTD; profitability multiples common for slow grower Criteo



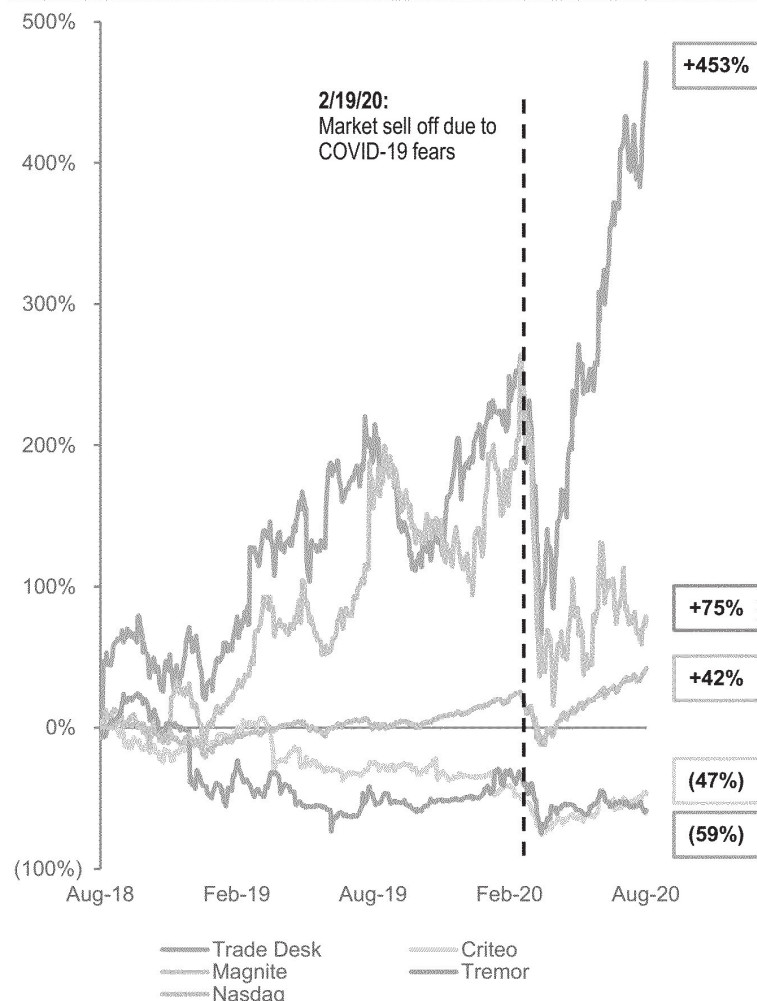
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Update on Major Public Assets

(\$ in millions)

Indexed Share Price Performance (2 Years)



Company

Summary

theTradeDesk

M.V. \$23,495
'21 Rev: 25.5x

- Provides a DSP used by digital advertisers in the programmatic advertising supply chain with ~10% market share (per Magna Global)
- Shares have recovered from COVID fears after a strong Q1 beat
- Bull:** Increasing TAM via high growth in programmatic ad spend; massive international opportunities, heavily entrenched in the CTV market
- Bear:** Trading at historical highs and unrealistic valuation, COVID impact on advertising spend, non-CTV business showing little growth, GDPR/regulation

Magnite

M.V. \$711
'21 Rev: 2.5x

- Formed via the merger of Rubicon Project (global advertising exchange) and Telaria (solutions for video publishers) and recently relaunched as Magnite
- GTM as the world's largest independent omnichannel SSP with robust CTV capabilities – alternative to traditional Walled Gardens
- Bull:** Focus on CTV, well positioned as an SSP, strength via consolidation
- Bear:** Take-rate pressure, risk of an independent Google adtech stack (via spin)

criteo

M.V. \$851
'21 Rev: 1.1x

- Engages in converting customers cost-effectively and making display perform like search; dynamic remarketing product uses ML/AI to target webpage viewers who did not convert to sales
- Recent Q2 results showed less COVID impact than expected by the Street
- Bull:** Technology and scale advantage in programmatic buying, strong cash generation, ability to reposition as needed
- Bear:** Subdued 2020 outlook, regulatory headwinds, challenged retargeting business (annual declines in revenue), ongoing business transformation (new CEO)

TREMOR

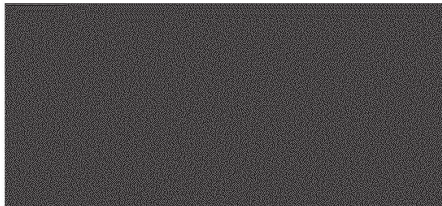
M.V. \$222
'21 Rev: 0.4x

- Operates a programmatic advertising platform focused on digital video and Connected TV advertising
- Signaled that it is well positioned for a rapid recovery in ad spend, post-COVID, despite weaker Q2 earnings
- Bull:** Differentiated position in CTV market, strong net cash position, Branding division well positioned in programmatic, likely beneficiary from M&A
- Bear:** Limited visibility on recovery

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Source: Company filings, broker research, and FactSet as of 08/06/2020.
Note: Magnite pro forma for Rubicon / Telaria merger.

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III M&A Activity Overview

Potential Ad Tech Buyers

(\$ in billions)

✓ AdTech Acquisition

✓ MarTech Acquisition

| | Tier I | Tier II | Rationale |
|------------------------------------|--|---|---|
| Digital Media |  ✓✓✓  ✓✓✓ |  Microsoft  Roku   | <ul style="list-style-type: none"> Historically larger deals focused on publisher side AdTech Most AdTech deals smaller acquires |
| AdTech |  ✓ |    | <ul style="list-style-type: none"> Consolidation natural, however few independent scaled AdTech targets remain TradeDesk hugely capable acquiror due to stock currency – could play role of consolidator |
| E-Commerce |  ✓✓ |       | <ul style="list-style-type: none"> Amazon has made 1 acquisition (Sizmek – ad server & DCO) and has large properties in Twitch, Prime Video AdTech platforms low priority generally due to channel conflict |
| Software / Marketing / Sales Cloud |  ✓✓✓✓✓ ✓✓✓✓✓  ✓✓✓✓✓✓✓✓ ✓✓✓✓✓✓✓✓  ✓✓✓✓✓ ✓✓✓✓✓✓  ✓✓✓✓ |  Former IBM Marketing Business sold to Centerbridge | <ul style="list-style-type: none"> Limited historical interest in AdTech but highly active in MarTech M&A Generally prefer subscription rather than transactional revenue streams |
| Data | |      | <ul style="list-style-type: none"> Likely focused on consolidating data vs buying AdTech |
| Traditional Media / Telco | No Tier 1 acquirors |         | <ul style="list-style-type: none"> Historically very active buyers but very unlikely to have interest at present (potential sellers?) |
| Ad Agencies | |       | <ul style="list-style-type: none"> Historically interested in investing rather than owning AdTech businesses Acquisition activity has been focused on Data businesses |
| Private Equity |           |    | <ul style="list-style-type: none"> Significant interest (e.g. Francisco/Sintec & Operative; Vista/MediaOcean & 4C) |

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Note: Excludes content properties.

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(\$ in USD billions)



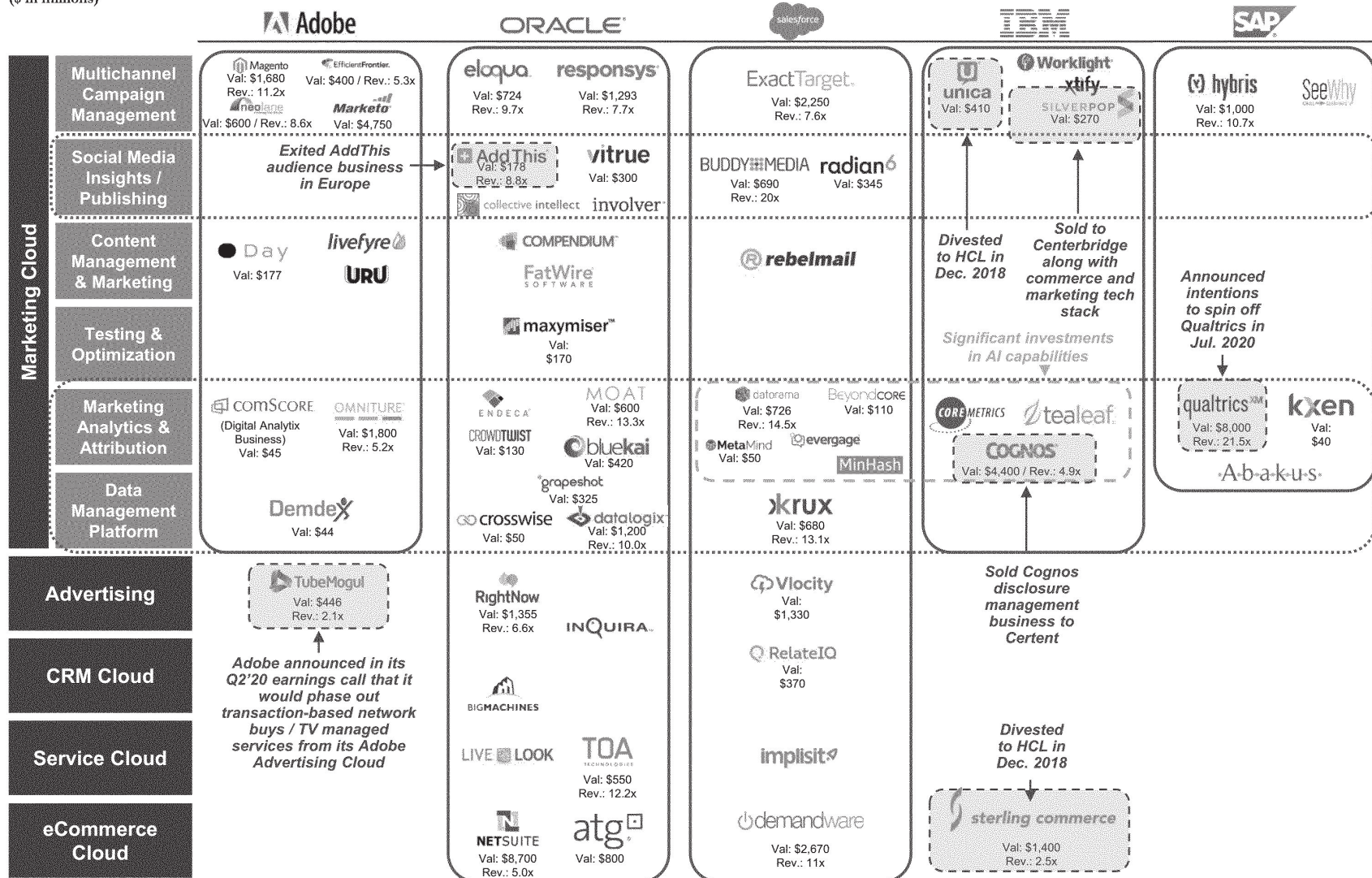
Source: FactSet as of 8/3/2020.

1 Calculated as debt / CY'2020E EBITDA (Pre-SBC).

Figures denote private equity firm's latest fund size.

Enterprise Software Majors Aggressive Adding Capabilities

(\$ in millions)



LAZARD Source: FactSet, 451 Group, Company filings, and other publicly available news sources and articles.

Digital Media Majors Have Been Investing in Ad and MarTech

(\$ in millions)

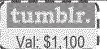






















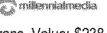





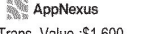



| | | Google | f | twitter | amazon |
|--------------------------|-------------------------------------|--|--|--|---|
| Major Content Properties | | <div>YouTube</div> <div>Trans. Value: \$1,650</div> <div>Rev.: 110x</div> | <div><div>Instagram</div><div>Trans. Value: \$1,000</div></div> <div><div>WhatsApp</div><div>Trans. Value: \$19,000</div><div>Rev.: 1,857x</div></div> | <div>twitter</div> | <div><div>firetv</div><div>prime video</div><div>twitch</div></div> |
| Marketing Automation | Social Media Insights / Publishing | <div><div>WILDFIRE</div><div>Trans. Value: \$350</div></div> <div>Google discontinued Wildfire social media monitoring service (focused on Facebook) and integrated the firm into its general ad tech platform</div> | <div><div>crowdtangle</div><div>thruvibe / SWAYLO</div></div> | <div><div>mesagraph</div></div> | |
| | Content Management & Marketing | | | | <div><div>GOOD GAME</div></div> |
| | Marketing Analytics & Attribution | <div><div>adometry</div><div>Trans. Value \$150</div></div> | | | |
| | Data Management Platform & Reseller | | <div><div>Shut down video-ad exchange in 2016</div></div> | <div><div>GNIP</div><div>Trans. Value: \$107</div></div> | |
| Ad Tech | Video | <div>FameBit</div> | <div><div>LiveRail</div><div>Trans. Value: \$382</div></div> | <div><div>Characterized as a "headwind" that it would no longer invest in (Q1'17)</div></div> | |
| | Direct Response | | | <div><div>Tellapart</div><div>Trans. Value: \$533</div></div> | |
| | Mobile | <div><div>VPN app shut down in 2019 and pulled from app stores following spyware backlash</div></div> | <div><div>onavo</div><div>(\$120 – 2013)</div></div> | <div><div>mopub</div><div>Trans. Value: \$350</div></div> <div><div>CROSSINSTALL</div></div> <div><div>Commerce</div><div>Trans. Value: \$80</div></div> | |
| | Ad Server Platform | <div><div>"FB is shutting down the part of Atlas that didn't have a direct impact on ad sales but keeping the part that does"</div></div> | <div><div>Microsoft</div><div>atlas</div><div>(2013)</div></div> | | <div><div>Sizmek</div><div>by amazon</div><div>(Ad Server and DCO)</div><div>Trans. Value: \$45</div></div> |

LAZARD Source: 451 Research and Company websites.

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Traditional Media Majors Have Been Investing in Ad and MarTech

(\$ in millions)

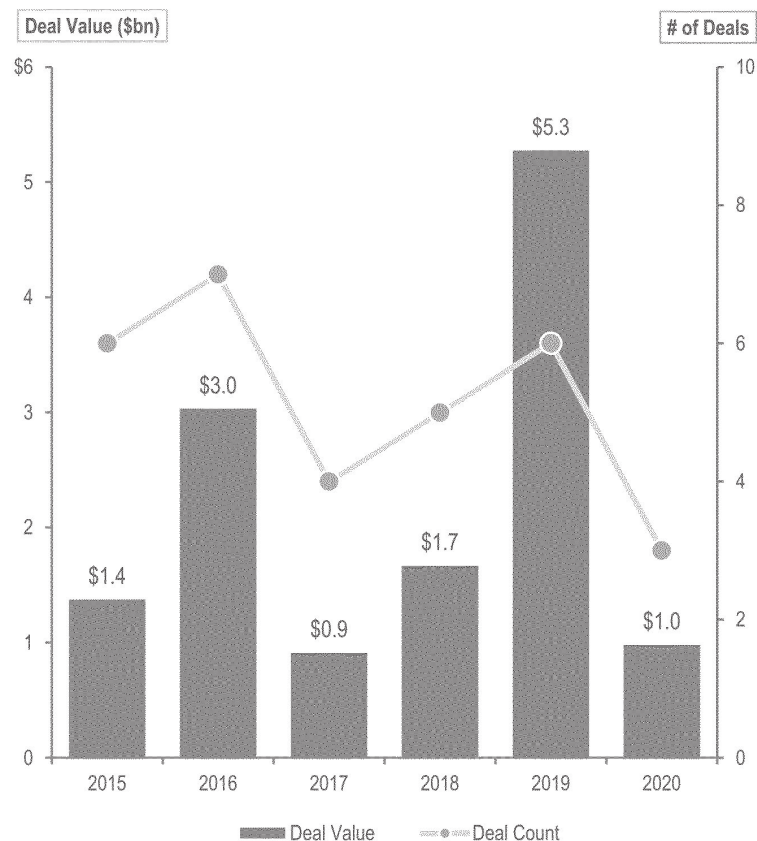
| | | verizon [✓] | COMCAST | AT&T | Singtel |
|--------------------------|-------------------------------------|--|--|--|---|
| Major Content Properties | |  Val: \$1,100  Val: \$3,911 / Rev: 1.5x  Val: \$4,800 / Rev: 1.0x <p>Sold to Automattic</p> <p>Verizon says some of its media assets are so useless it won't try to sell them</p> <p>Sold Yahoo property, Flickr, to SmugMug</p> |  Trans. Value: \$6,500 |  Trans. Value: \$48,500 Rev.: 2.1x  Trans. Value: \$106,262 |  |
| Marketing Automation | Social Media Insights / Publishing | | | |  Trans. Value: \$150 |
| | Content Management & Marketing |  |  |  | |
| | Marketing Analytics & Attribution |  Trans. Value: \$101 | |  LEGENDARY (Applied Analytics Division) |  Trans. Value: \$209 |
| | Data Management Platform & Reseller | <p>↑ Announced it was phasing out in 2018</p> | | | |
| Ad Tech | Video |  Trans. Value: \$70  Trans. Value: \$405  Trans. Value: \$640 Rev.: 2.6x  |  TECHNOLOGY  WATCHWITH  visibleworld |  |  Trans. Value: \$101 |
| | Direct Response | | | | |
| | Mobile |  Trans. Value: \$238  Trans. Value: \$270  | | |  AMOBEE Trans. Value: \$321 |
| | Ad Server Platform | |  Trans. Value: \$360  Trans. Value: \$115 |  Trans. Value: \$1,600 Rev.: 5.3x  (AdTech business) Trans. Value: \$8  |  Trans. Value: \$310 |

LAZARD Source: 451 Research and Company websites.

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Update on Financial Sponsor Activity

Financial Sponsor Activity - AdTech & MarTech



Median EV / LTM Revenue

| | | | | | |
|------|------|------|------|------|------|
| 3.2x | 3.0x | 2.3x | 5.8x | 2.5x | 4.0x |
|------|------|------|------|------|------|

Top Tier PE Assets

| Media / Agency Management | Marketing |
|---|---|
| mediaocean Vista (Jun. 2015) Val: \$594M EV / LTM Rev: 3.5x | acoustic Centerbridge (Apr. 2016) Val: \$500M EV / LTM Rev: 1.8x |
| OPERATIVE Francisco (Nov. 2016) Val: \$190M EV / LTM Rev: 3.8x | ActiveCampaign > Silversmith / SIG (Jan. 2020) Total Raised: \$120M |
| SQAD Clarion (Nov. 2013) | aprimo Marlin (Apr. 2016) Val: \$90M EV / LTM Rev: 0.6x |
| telestream Genstar (Jan. 2015) Val: \$190M EV / LTM Rev: 3.2x | CHEETAHDIGITAL Vector (Apr. 2017) Val: \$300M |
| Mobile | DSP |
| Vungle Blackstone (Jul. 2015) Val: \$750M EV / LTM Rev: 2.0x | MediaMath Searchlight (Jul. 2018) Total Raised: \$608M |
| Identity / Verification | |
| DV DoubleVerify Providence (Aug. 2017) Val: \$310M EV / LTM Rev: 4.4x | IAS Integral Ad Science Vista (Jun. 2018) Val: \$800M EV / LTM Rev: 5.3x |

Notable Themes

- Financial sponsors have used ad/martech assets as platforms for industry roll-ups
 - Francisco: Operative + Sintec Media
 - Vista: Mediaocean + 4C Insights
- General activity around creating / supporting independent platforms that provide an alternative to walled gardens
 - Acoustic, Operative, etc.
- Privacy and automation also have shown ability to attract investment / M&A
 - DoubleVerify, ActiveCampaign

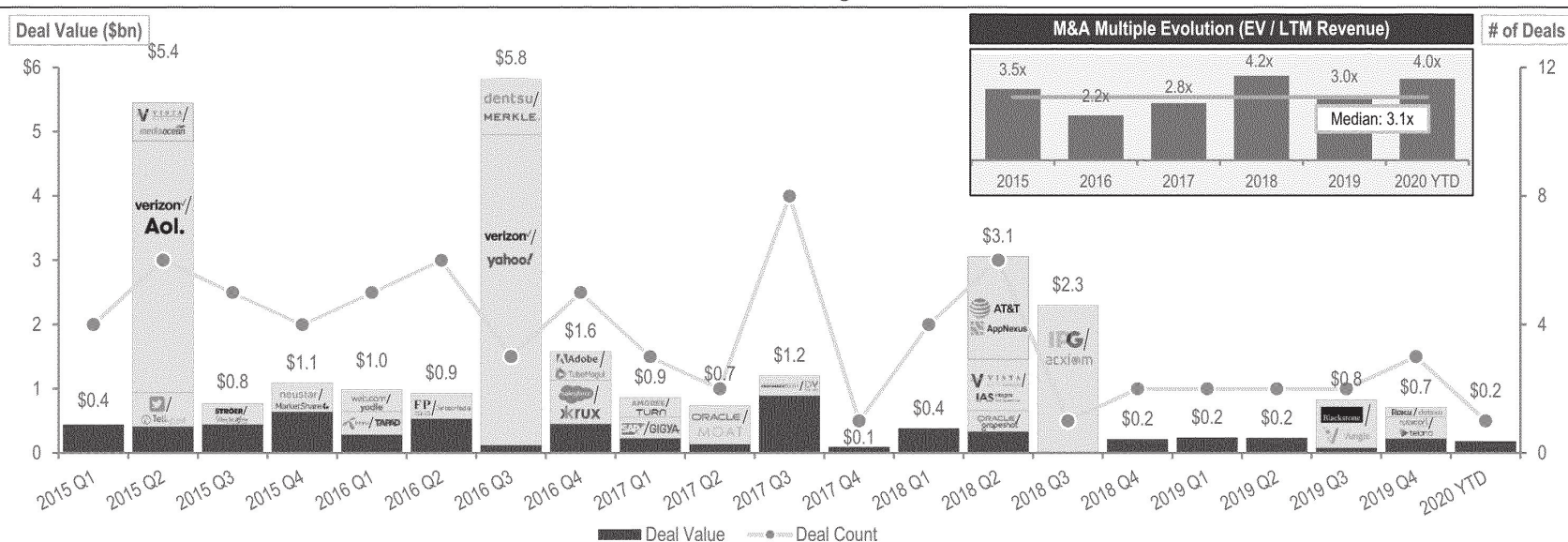
"Advertising is no longer the oasis it was in the past, with the flow of dollars in the space dropping dramatically in recent years...data from Crunchbase, adtech deal flow has fallen at a roughly 10% compounded annual growth rate over the last five years...the amount of high-growth opportunities in the adtech space seems to grow narrower by the week."

TC

JAN 2020

2015–2020 Announced AdTech M&A (>\$50M)

2017 - 2020 Announced Digital Media M&A¹



Notable 2015 - 2020 YTD M&A Transactions

| Date | Acquirer | Target | Enterprise Value | | | NTM |
|----------|-------------------|---------------------|------------------|-----------|-----------|-----|
| | | | (\$M) | / LTM Rev | / NTM Rev | |
| 12/19/19 | Rubicon Project | Telaria | \$336 | 4.9x | 4.2x | 18% |
| 10/22/19 | Roku | Dataxu | 150 | 3.3x | -- | -- |
| 07/15/19 | Blackstone | Vungle | 750 | 2.0x | 1.9x | 7% |
| 07/02/18 | Interpublic Group | Acxiom | 2,300 | 3.3x | -- | -- |
| 06/25/18 | AT&T | AppNexus | 1,600 | 5.3x | -- | -- |
| 06/04/18 | Vista Equity | Integral Ad Science | 800 | 5.3x | 4.4x | 20% |
| 04/24/18 | Oracle | Grapeshot | 325 | 9.3x | -- | -- |
| 08/23/17 | Providence | DoubleVerify | 310 | 4.4x | -- | -- |
| 04/18/17 | Oracle | Moat | 600 | 13.3x | -- | -- |
| 02/23/17 | Amobee (Singtel) | Turn | 310 | 2.8x | -- | -- |
| 01/24/17 | SAP | Gigya | 325 | 5.9x | -- | -- |
| 11/10/16 | Adobe | TubeMogul | 446 | 2.1x | 1.7x | 20% |
| 10/04/16 | Salesforce | Krux | 680 | 13.1x | -- | -- |
| 08/08/16 | Dentsu Aegis | Merkle | \$879 | -- | -- | -- |
| 07/25/16 | Verizon | Yahoo | 4,830 | 1.0x | -- | -- |
| 04/19/16 | Francisco | Sintec Media | 400 | 4.0x | -- | -- |
| 02/11/16 | Web.com | Yodle | 342 | 1.6x | -- | -- |
| 02/01/16 | Telenor ASA | Tapad | 360 | 6.6x | 4.2x | 58% |
| 11/05/15 | Neustar | MarketShare | 450 | 7.9x | 7.5x | 5% |
| 08/13/15 | Stroer SE | InteractiveMedia | 331 | -- | -- | -- |
| 06/29/15 | Vista Equity | Mediaocean | 594 | 3.5x | -- | -- |
| 05/12/15 | Verizon | AOL | 3,911 | 1.5x | 1.4x | 6% |
| 04/28/15 | Twitter | TellApart | 533 | -- | -- | -- |

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Source: Company filings, FactSet, PitchBook, 451 Research.

1. Includes completed and pending M&A transactions with deal size greater than or equal to \$50m.

Notable M&A Trends

(\$ in millions, unless otherwise noted)

| Theme | Recent Transactions | Proof Point | | | | | | | | | | | | | | | | |
|--|---|---|-------------|------|------|------|---------|------|------|------|-------------|------|------|------|---------------|-------------|-------------|-------------|
| <div>Growth of CTV Market Driving Deal Activity</div> | <div><div>Roku / dataxu</div><div>Oct. 2019 Val: \$150 Rev.: 3.3x</div></div> <div><div>Adobe / TubeMogul</div><div>Nov. 2016 Val: \$446 Rev.: 2.1x (LTM) / 1.7x (NTM)</div></div> <div><div>GTCT / Simplifi</div><div>Aug. 2017</div></div> <div><div>AMOBEE / videology</div><div>(Singtel) May 2018 Val: \$101 Rev.: 0.7x</div></div> | <div>US CTV Users — % of Population</div> <div></div> | | | | | | | | | | | | | | | | |
| <div>Identity / Verification / Privacy Assets Have Been Heavily Pursued</div> | <div><div>ORACLE / MOAT</div><div>Apr. 2017 Val: \$600 Rev.: 13.3x</div></div> <div><div>PROVIDENCE EQUITY / DV</div><div>Aug. 2017 Val: \$310 Rev.: 4.4x</div></div> <div><div>IPG / axciom.</div><div>Jul. 2018 Val: \$2,300 Rev.: 3.3x</div></div> | <div>ID / Verification / Privacy assets trade for higher EV / LTM Rev. multiples than broader AdTech universe</div> <div></div> | | | | | | | | | | | | | | | | |
| <div>Increased Focus On Mobile / App Advertising and Monetization Technologies</div> | <div><div>Blackstone / Vungle</div><div>Jul. 2019 Val: \$750 Rev.: 2.0x</div></div> <div><div>Tapjoy / tapdaq</div><div>Nov. 2018</div></div> | <div>Mobile usage continues to accelerate, dominated by in-application usage (~90% of time)</div> <div><table><tr><th></th><th>2018</th><th>2019</th><th>2020</th></tr><tr><td>In-App*</td><td>2:03</td><td>2:14</td><td>2:22</td></tr><tr><td>Mobile Web*</td><td>0:13</td><td>0:13</td><td>0:12</td></tr><tr><td>Total*</td><td>2:16</td><td>2:27</td><td>2:34</td></tr></table></div> <div><small>*Avg. time spent per day with smartphone internet (in hrs: mins)</small></div> | | 2018 | 2019 | 2020 | In-App* | 2:03 | 2:14 | 2:22 | Mobile Web* | 0:13 | 0:13 | 0:12 | Total* | 2:16 | 2:27 | 2:34 |
| | 2018 | 2019 | 2020 | | | | | | | | | | | | | | | |
| In-App* | 2:03 | 2:14 | 2:22 | | | | | | | | | | | | | | | |
| Mobile Web* | 0:13 | 0:13 | 0:12 | | | | | | | | | | | | | | | |
| Total* | 2:16 | 2:27 | 2:34 | | | | | | | | | | | | | | | |
| <div>Large caps acquiring ad tech to improve their offering</div> | <div><div>amazon / Sizmek</div><div>May 2019 Val: \$45 Rev.: 0.6x</div></div> <div><div>Adobe / TubeMogul</div><div>Nov. 2016 Val: \$446 Rev.: 2.1x (LTM) / 1.7x (NTM)</div></div> <div><div>Roku / dataxu.</div><div>Oct. 2019 Val: \$150 Rev.: 3.3x</div></div> <div><div>AT&T / AppNexus</div><div>Jun. 2018 Val: \$1,600 Rev.: 5.3x</div></div> <div><div>Twitter / CROSSINSTALL</div><div>May 2020</div></div> <div><div>xandr / clypā</div><div>Oct. 2019</div></div> | <div>However, consolidation hasn't worked for all</div> <div><div>[Adobe] will not continue to offer its Advertising Cloud transaction services...Adobe advertising cloud is based to a significant extent on Tube Mogul</div><div>WHICH-50</div><div>AT&T's Ad Exchange is Overrun With Data Stealing Malware</div><div>Xandr/AppNexus is serving up infected ads across major websites</div><div>Medium</div></div> | | | | | | | | | | | | | | | | |

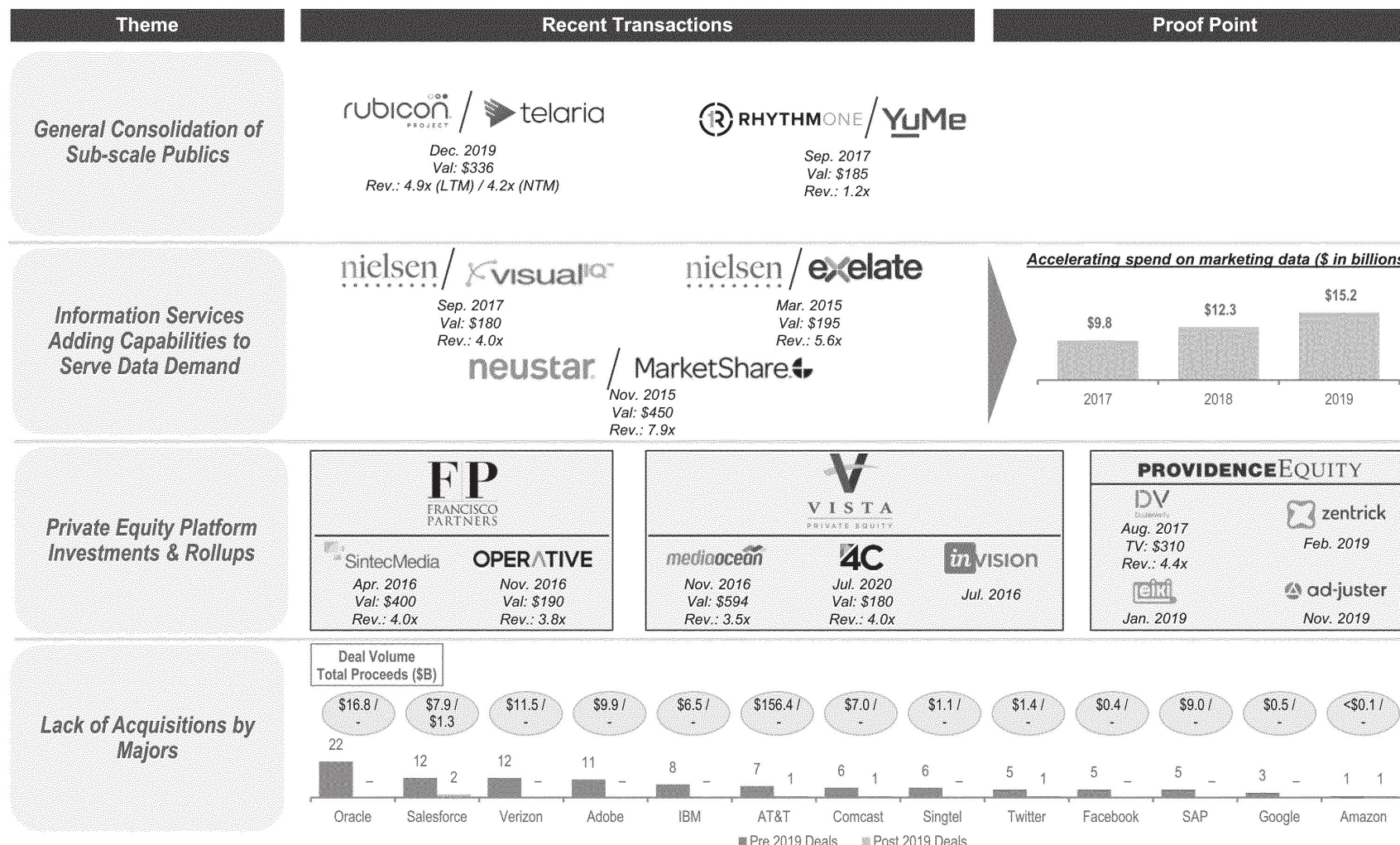
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Source: FactSet, 451 Research, Statista, eMarketer and news releases.

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Notable M&A Trends (cont'd)

(\$ in millions)



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Source: FactSet, 451 Research, eMarketer and news releases.

21

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Google



Appendix

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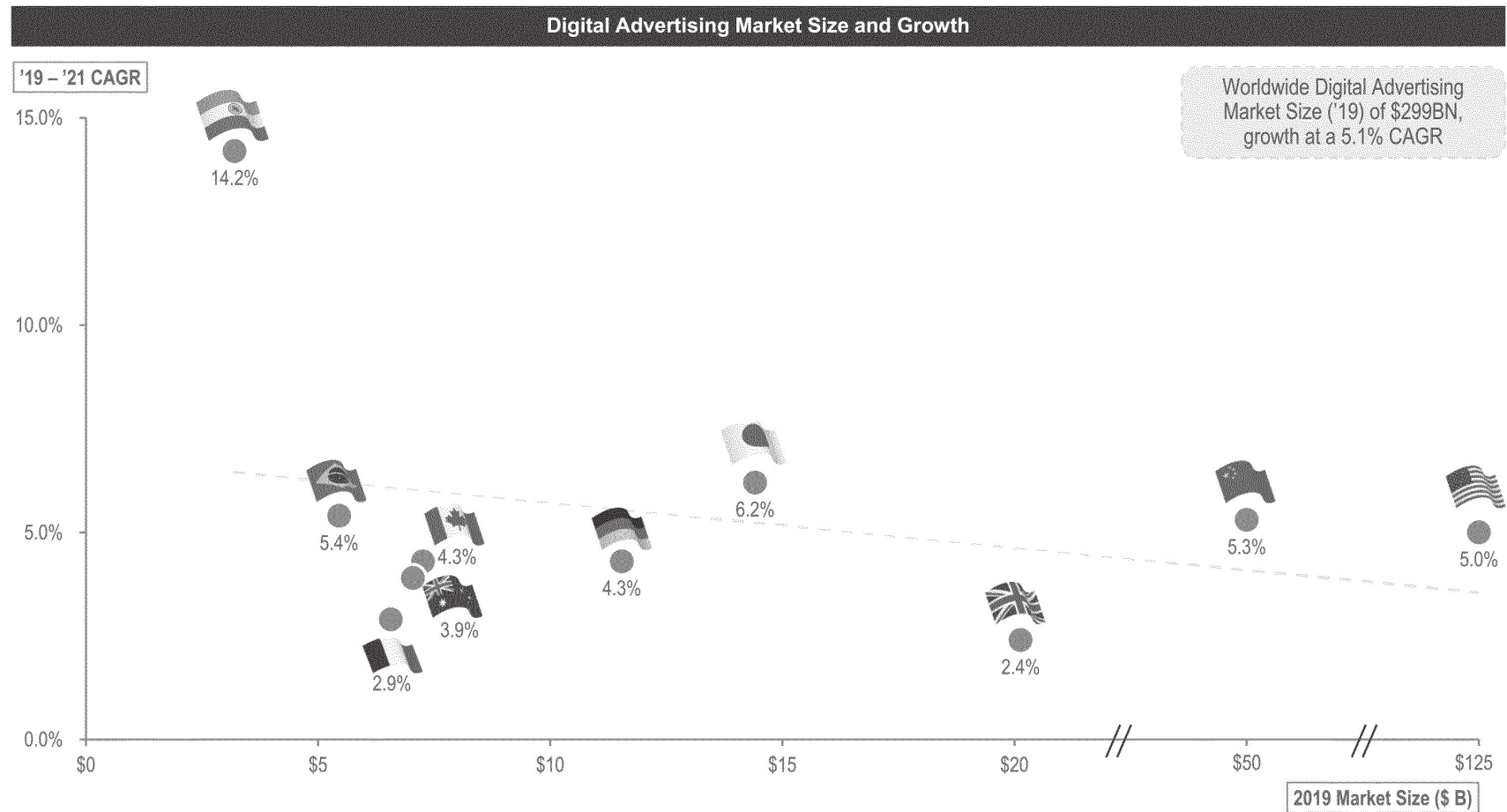
Highly Confidential

LAZARD-DOJ-00000029

U.S. and China Largest Digital Ad Markets, and Remain Relatively Fast Growing

(\$ in millions)

India is clearest growth opportunity, as Jio's mobile data revolution rapidly brings 1.4BN potential consumers online; the country has "only" ~500M internet users currently

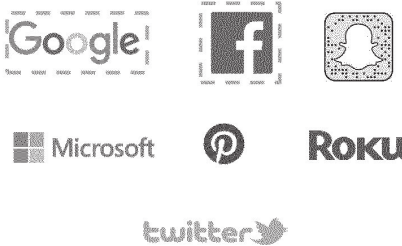


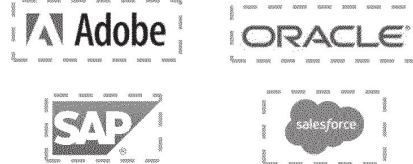


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Source: SNL Kagan as of June 2020.
Note: Market size reflects USD.

AdTech Buyers

(\$ in billions)

| | Potential Buyers | Metrics | | | | | | | | | |
|------------------------------------|---|--------------------|-----------------|-------|------|------------------|-----------------|--------|---------------|--------|------------------|
| Digital Media |  | Company | Equity Value | Cash | Debt | Enterprise Value | 2021E Multiples | | 2021E Margins | | Rev. Gr. '20-'21 |
| | | | | | | | Rev. | EBITDA | Gross | EBITDA | |
| | | Microsoft | \$1,652 | \$137 | \$82 | \$1,598 | 9.66x | 20.5 | 68% | 47% | 10% |
| | | Alphabet | 1,059 | 121 | 4 | 929 | 4.48 | 10.6 | 54% | 42% | 20% |
| | | Facebook | 763 | 59 | 11 | 716 | 7.28 | 14.6 | 81% | 50% | 23% |
| | | Snap | 31 | 3 | 2 | 30 | 10.01 | NM | 58% | 9% | 40% |
| | | Twitter | 30 | 8 | 4 | 26 | 6.52 | 21.7 | 65% | 30% | 22% |
| | | Pinterest | 22 | 2 | 0 | 20 | 10.24 | NM | 70% | 9% | 34% |
| | | Roku | 19 | 1 | 0 | 18 | 8.59 | NM | 44% | 2% | 33% |
| | | | | | | | | | | | |
| AdTech |  | Company | Equity Value | Cash | Debt | Enterprise Value | 2021E Multiples | | 2021E Margins | | Rev. Gr. '20-'21 |
| | | | | | | | Rev. | EBITDA | Gross | EBITDA | |
| | | Trade Desk | \$23 | \$0 | \$0 | \$23 | 25.48x | NM | 77% | 31% | 34% |
| E-Commerce |  | Company | Equity Value | Cash | Debt | Enterprise Value | 2021E Multiples | | 2021E Margins | | Rev. Gr. '20-'21 |
| | | | | | | | Rev. | EBITDA | Gross | EBITDA | |
| | | Amazon.com | \$1,644 | \$72 | \$91 | \$1,663 | 3.85x | 25.5x | 41% | 15% | 18% |
| | | Alibaba Group Hldg | 724 | 53 | 21 | 682 | 5.98 | 19.6 | 46% | 31% | 27% |
| | | Walmart | 369 | 15 | 75 | 435 | 0.78 | 12.7 | 24% | 6% | 2% |
| | | Booking Hldg | 72 | 7 | 9 | 73 | 6.66 | 18.3 | 98% | 36% | 55% |
| | | eBay | 39 | 5 | 9 | 42 | 3.70 | 10.1 | 77% | 37% | 7% |
| | | Rakuten | 13 | 16 | 18 | 14 | 0.86 | 9.7 | 95% | 9% | 13% |
| | | Wish | 11 ¹ | | | | | | | | |
| | | | | | | | | | | | |
| Software / Marketing / Sales Cloud |  | Company | Equity Value | Cash | Debt | Enterprise Value | 2021E Multiples | | 2021E Margins | | Rev. Gr. '20-'21 |
| | | | | | | | Rev. | EBITDA | Gross | EBITDA | |
| | | Adobe | \$224 | \$4 | \$5 | \$225 | 15.10x | 31.2x | 88% | 48% | 15% |
| | | Oracle | 174 | 43 | 74 | 205 | 5.17 | 10.6 | 80% | 49% | 1% |
| | | SAP | 189 | 7 | 20 | 202 | 5.60 | 16.1 | 73% | 35% | 8% |
| | | salesforce.com | 190 | 10 | 6 | 187 | 8.04 | 27.1 | 79% | 30% | 17% |

LAZARD

Source: FactSet and Pitchbook as of 08/06/2020.




















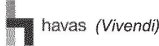
Note: "NM" multiples are negative or greater than 50x.

1 Wish valued at \$11.2B in its Aug. 2019 Series H.

Tier I Ad Tech Buyer 23

AdTech Buyers (cont'd)

(\$ in billions)

| | Potential Buyers | | | | Metrics | | | | | | | | | |
|---|--|---|---|--|-------------------|--------------|--------------|-------|------------------|------------------|-----------------|---------------|---------------|------------------|
| Data |  |  | | | Company | Equity Value | Cash | Debt | Enterprise Value | 2021E Multiples | | 2021E Margins | | Rev. Gr. '20-'21 |
| |  |  | | | Experian | \$33 | \$0 | \$5 | \$37 | 6.87x | 19.7x | 42% | 35% | 3% |
| | | | | | Alliance | 2 | 6 | 20 | 16 | 3.52 | 14.4 | 59% | 24% | (0%) |
| | | | | | Nielsen Hld | 5 | 0 | 9 | 14 | 2.21 | 7.5 | 57% | 30% | 2% |
| |  | | | | Neustar | | | | 3 ¹ | | | | | |
| | | | | | LiveRamp | 3 | 1 | 0 | 3 | 5.55 | NM | 70% | 4% | 18% |
| | | | | | | | | | | | | | | |
| Traditional Media / Teleco |  |  |  | | Company | Equity Value | Cash | Debt | Enterprise Value | 2021E Multiples | | 2021E Margins | | Rev. Gr. '20-'21 |
| | | | | | AT&T | \$213 | \$17 | \$191 | \$401 | 2.34x | 7.1x | NA | 33% | 1% |
| | | | | | Verizon | 239 | 9 | 134 | 366 | 2.77 | 7.6 | 58% | 36% | 3% |
| | | | | | Comcast | 197 | 14 | 110 | 296 | 2.67 | 8.8 | NA | 30% | 9% |
| |  |  |  | | Walt Disney | 236 | 23 | 68 | 292 | 3.89 | 22.7 | NA | 17% | 12% |
| | | | | | Telstra | 29 | 1 | 15 | 43 | 2.42 | 7.3 | NA | 33% | (1%) |
| | | | | | Telenor | 22 | 2 | 18 | 38 | 2.69 | 5.9 | 97% | 46% | 2% |
| | | | | | SingTel | 29 | 1 | 10 | 28 | 2.46 | 9.4 | 28% | 26% | (0%) |
| |  |  |  | | Liberty Global | 13 | 7 | 13 | 15 | 1.31 | 3.2 | NA | 41% | 0% |
| | | | | | News Corp. | 8 | 1 | 3 | 10 | 1.12 | 9.6 | NA | 12% | (1%) |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | Agencies |  |  | | | Company | Equity Value | Cash | Debt | Enterprise Value | 2021E Multiples | | 2021E Margins | |
|  | |  | | | Vivendi | \$32 | \$3 | \$8 | \$34 | 1.69x | 11.0x | NA | 15% | 6% |
| | | | | | Omnicom | 12 | 3 | 7 | 16 | 1.14 | 7.5 | NA | 15% | 7% |
| | | | | | Publicis Groupe | 8 | 4 | 11 | 14 | 1.20 | 5.4 | 104% | 22% | 4% |
| | | | | | WPP | 10 | 4 | 9 | 14 | 1.07 | 6.1 | 23% | 17% | 6% |
|  | |  | | | Interpublic Group | 7 | 1 | 6 | 12 | 1.45 | 8.9 | NA | 16% | 4% |
| | | | | | Dentsu Group | 7 | 2 | 6 | 10 | 1.04 | 6.2 | 91% | 17% | 7% |
| | | | | | | | | | | | | | | |

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Source: FactSet and Pitchbook as of 08/06/2020.

Note: "NM" multiples are negative or greater than 50x.

1 Neustar was acquired by Golden Gate Capital for \$2.9B EV in Dec. 2016.

Tier I Ad Tech Buyer 24

Select Public Companies Analysis

| Company | Stock Price 8/6/20 | % Change 52 Wk. Low High | | Equity Value | Enterprise Value | Enterprise Value / | | | | Gross Margin | | EBITDA Margin | | Revenue Growth | |
|-----------------------|-----------------------|----------------------------------|-------|-----------------|---------------------|--------------------|--------|------------------|-------|--------------|-------|---------------|-------|----------------|---------|
| | | | | | | Revenue | | EBITDA (Pre-SBC) | | (Pre-SBC) | | (Pre-SBC) | | | |
| | | | | | | 2020E | 2021E | 2020E | 2021E | 2020E | 2021E | 2020E | 2021E | '19-'20 | '20-'21 |
| Digital Media | | | | | | | | | | | | | | | |
| Amazon.com | \$3,225.00 | 92% | 0% | \$1,644,395 | \$1,663,297 | 4.53x | 3.85x | 31.3x | 25.5x | 40% | 41% | 14% | 15% | 31% | 18% |
| Alphabet | \$1,504.95 | 43% | (4%) | 1,058,594 | 928,571 | 5.37 | 4.48 | 13.1 | 10.6 | 53% | 54% | 41% | 42% | 7% | 20% |
| Facebook | \$265.28 | 82% | 0% | 763,285 | 715,741 | 8.93 | 7.28 | 17.8 | 14.6 | 81% | 81% | 50% | 50% | 13% | 23% |
| Snap | \$21.35 | 155% | (19%) | 31,368 | 30,430 | 13.98 | 10.01 | NM | NM | 51% | 58% | (7%) | 9% | 27% | 40% |
| Twitter | \$37.69 | 71% | (17%) | 29,811 | 26,175 | 7.97 | 6.52 | 31.5 | 21.7 | 63% | 65% | 25% | 30% | (5%) | 22% |
| Mean | | | | | | 8.16x | 6.43x | 23.4x | 18.1x | 58% | 60% | 25% | 29% | 15% | 24% |
| Median | | | | | | 7.97 | 6.52 | 24.6 | 18.2 | 53% | 58% | 25% | 30% | 13% | 22% |
| Agencies | | | | | | | | | | | | | | | |
| Omnicom | \$53.68 | 11% | (35%) | \$11,534 | \$15,662 | 1.21x | 1.14x | 8.3x | 7.5x | NA | NA | 15% | 15% | (14%) | 7% |
| Publicis Groupe | €29.21 | 34% | (37%) | 8,275 | 14,345 | 1.24 | 1.20 | 6.0 | 5.4 | 102% | 104% | 21% | 22% | (1%) | 4% |
| WPP | £6.10 | 26% | (43%) | 9,790 | 14,190 | 1.13 | 1.07 | 7.6 | 6.1 | 22% | 23% | 15% | 17% | (12%) | 6% |
| Interpublic Group | \$18.53 | 48% | (26%) | 7,225 | 11,909 | 1.51 | 1.45 | 11.2 | 8.9 | NA | NA | 13% | 16% | (9%) | 4% |
| Dentsu Group | ¥2,582.00 | 38% | (38%) | 6,708 | 10,398 | 1.11 | 1.04 | 7.1 | 6.2 | 90% | 91% | 16% | 17% | (6%) | 7% |
| Mean | | | | | | 1.24x | 1.18x | 8.0x | 6.9x | 71% | 73% | 16% | 17% | (8%) | 5% |
| Median | | | | | | 1.21 | 1.14 | 7.6 | 6.2 | 90% | 91% | 15% | 17% | (9%) | 6% |
| AdTech | | | | | | | | | | | | | | | |
| Trade Desk | \$480.75 | 233% | (3%) | \$23,495 | \$23,419 | 34.04x | 25.48x | NM | NM | 76% | 77% | 26% | 31% | 4% | 34% |
| Criteo | \$13.95 | 119% | (32%) | 851 | 851 | 1.10 | 1.08 | 4.4 | 4.2 | 84% | 88% | 25% | 26% | (18%) | 2% |
| Magnite | \$6.27 | 51% | (52%) | 711 | 586 | 2.82 | 2.46 | NM | 16.2 | 60% | 71% | 4% | 15% | (7%) | 14% |
| Tremor International | £1.24 | 46% | (43%) | 222 | 168 | 0.55 | 0.40 | 10.6 | 2.2 | NA | NA | 5% | 18% | (12%) | 40% |
| Mean | | | | | | 9.63x | 7.35x | 7.5x | 7.5x | 73% | 79% | 15% | 22% | (8%) | 22% |
| Median | | | | | | 1.96 | 1.77 | 7.5 | 4.2 | 76% | 77% | 15% | 22% | (10%) | 24% |
| Data Analytics | | | | | | | | | | | | | | | |
| Alliance Data Systems | \$45.30 | 100% | (71%) | \$2,166 | \$15,879 | 3.50x | 3.52x | 27.7x | 14.4x | 58% | 59% | 13% | 24% | (19%) | (0%) |
| Nielsen Hld | \$15.38 | 30% | (33%) | 5,487 | 14,028 | 2.26 | 2.21 | 7.7 | 7.5 | 56% | 57% | 29% | 30% | (4%) | 2% |
| LiveRamp Holdings | \$51.69 | 97% | 0% | 3,391 | 2,679 | 6.54 | 5.55 | NM | NM | 69% | 70% | (5%) | 4% | 15% | 18% |
| comScore | \$3.27 | 121% | (40%) | 230 | 419 | 1.12 | 1.03 | 13.6 | 9.7 | 50% | 51% | 8% | 11% | (4%) | 8% |
| Mean | | | | | | 3.36x | 3.08x | 16.4x | 10.5x | 58% | 59% | 11% | 17% | (3%) | 7% |
| Median | | | | | | 2.88 | 2.86 | 13.6 | 9.7 | 57% | 58% | 10% | 18% | (4%) | 5% |
| Global Mean | | | | | | 5.50x | 4.43x | 14.1x | 10.7x | 64% | 66% | 17% | 22% | (1%) | 15% |
| Global Median | | | | | | 2.54 | 2.34 | 10.9 | 8.9 | 60% | 65% | 15% | 18% | (5%) | 11% |

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Source: Company filings, FactSet as of 08/06/2020.