



Q3 2021 Market Report

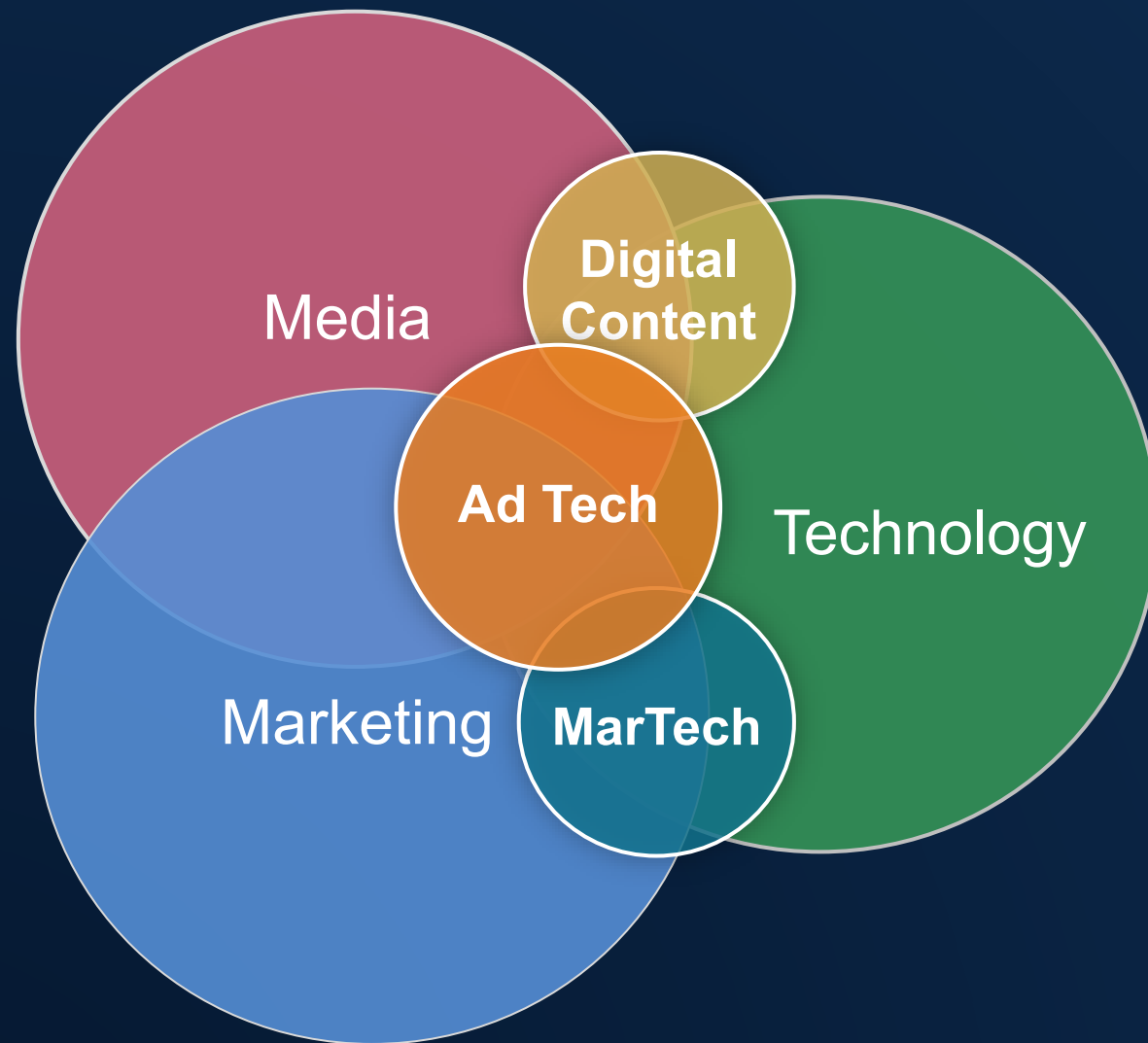
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LUMA's Focus on Digital Media & Marketing



- LUMA's expertise is at the intersection of Media, Marketing and Technology.
- At this intersection exists:
 - Ad Tech
 - MarTech
 - Digital Content
- These companies employ a variety of business models including services, media, data, commerce and software.

LUMA's Recent Deals



September 2021

Reflektion

has been acquired by

SITECORE

The undersigned acted as a financial advisor to Reflektion, Inc.

August 2021

publica

has been acquired by

IAS Integral Ad Science

The undersigned acted as the exclusive financial advisor to Publica LLC

July 2021

JetFuel

has been acquired by

Vungle

The undersigned acted as the exclusive financial advisor to JetFuel, Inc.

July 2021

Outbrain

Initial Public Offering
\$160,000,000

LUMA Securities, a wholly-owned broker-dealer of the undersigned, acted as underwriting co-manager to Outbrain, Inc.

June 2021

Simplifi

has agreed to sell an equity interest to

Blackstone

The undersigned acted as financial advisor to Simplifi Holdings, Inc.

May 2021

Chartboost

has agreed to be acquired by

Zynga

The undersigned acted as financial advisor to Chartboost, Inc.

April 2021

APPLOVIN

Initial Public Offering
\$2,000,000,000

LUMA Securities, a wholly-owned broker-dealer of the undersigned, acted as underwriting co-manager to AppLovin Corporation.

March 2021

Blackstone

majority investment in

LIFTOFF

The undersigned acted as exclusive financial advisor to Blackstone.

March 2021

Vungle

has acquired

GameRefinery

The undersigned acted as exclusive financial advisor to Vungle, Inc.

February 2021

ADCOLONY
A Wholly-Owned Business Unit of

otelio

has been acquired by

digital turbine

The undersigned acted as exclusive financial advisor to AdColony

February 2021

Parse.ly

has been acquired by

Wvip
a division of
AUTOMATTIC

The undersigned acted as exclusive financial advisor to Parsely, Inc.

February 2021

Magnite

has acquired

SPOTX

The undersigned acted as financial advisor to Magnite, Inc.

January 2021

alphonso

has received a majority investment by

LG

The undersigned acted as exclusive financial advisor to Alphonso Inc.

January 2021

BEESWAX

has been acquired by

COMCAST

The undersigned acted as exclusive financial advisor to BeeswaxIO, Inc.

Executive Summary

Overview

- Q3 2021 was yet another very strong quarter for Advertising Technology (“Ad Tech”), Marketing Technology (“MarTech”), and Digital Content with a marketplace exhibiting breadth and depth across M&A, Private Equity, and IPO activity.
- This quarter continued to exhibit the year-to-date trend of sustained levels of growth relative to 2020; this trend applied to both scaled (>\$100mm) and “sub-scale” M&A activity. Scaled deal activity grew **+11%** on a quarter-over-quarter basis and **+121%** on a year-over-year basis with 32 deals valued at over \$100mm this quarter.
- Public market valuations were mixed; Q3 was a quarter of significant volatility. While there was no market sell-off to the same degree that was observed in H1’21, there was significant variability in equity performance between the sub-sectors covered in this report. There has been a strong divergence among the “Tech” sub-sectors with MarTech (trended downward in Q3), Marketing Clouds, and Digital Giants trending upward YTD and Ad Tech, Digital Content ex-Gaming, and Gaming trending downwards YTD.
- The frenzy of IPO activity witnessed in the first half of the year for Ad Tech and MarTech companies has slowed, but there was still one Ad Tech issuance (Outbrain) and two MarTech issuances (Kaltura & Amplitude) in Q3. Similarly, the SPAC craze that began concurrently with the pandemic has also decelerated, as capital raising activity has declined dramatically from the historic Q1 (which itself outpaced 2020, the prior record year for SPAC capital raising).

M&A Activity⁽¹⁾

- Q3 2021 was another strong quarter for deal activity, with deal counts across the board for Ad Tech, MarTech, and Digital Content indicating there is sustained momentum across the sub-sectors for M&A. Overall deal count was up **+104%** on a YoY basis, as acquirers continue to be significantly more active in comparison to the mid-2020 “pause.”
- Deal activity was strong for Ad Tech (**+125%**), MarTech (**+119%**), and Digital Content (**+81%**) as all sub-sectors maintained their already robust momentum.

Public Markets Activity

- Within the “Tech” sub-sectors, there was a high degree of variability. In general, the sub-sectors that had already been up YTD made further gains in Q3; those that had negative returns heading in to Q3 likewise continued to trend downward. Within “Tech,” MarTech, up **+21%**, has been the stand-out performer in terms of aggregate market cap gains in 2021, while the Gaming sector, down **(19%)**, has withstood the most value deterioration within “Tech.”
- Within the “Traditional” sub-sectors, Agencies had an exceptional quarter in which it widely outperformed the S&P and ended the quarter at **+31%**. The Traditional TV cohort was the lowest performing sub-sector amongst the “Traditional” sub-sectors ending Q3 with a **(2%)** YTD return.



Private Financing Activity

- Private Financing Activity continued to be robust in Q3, as VCs and growth-stage investors demonstrate a steady appetite for high-growth tech ventures that are thematically aligned with media and/or marketing.
- Investors focused on Growth Equity continued to play a pivotal role in providing large rounds of financings for more mature companies on their road to IPO. Notably, Contentful, Gupshup, Impact, Jam City, MOLOCO, Mobile Premier League, Outbrain, Pendo, Reddit, Seismic, Sorare, and Tilting Point all raised rounds over \$150mm in this quarter.

Source: LUMA, FactSet (market data as of 9/30/2021). | Note: (1) The term “M&A Activity” as used here, and YoY growth calculations thereof, refer to the number of M&A transactions that occurred during the specified period (i.e., rather than transaction value).

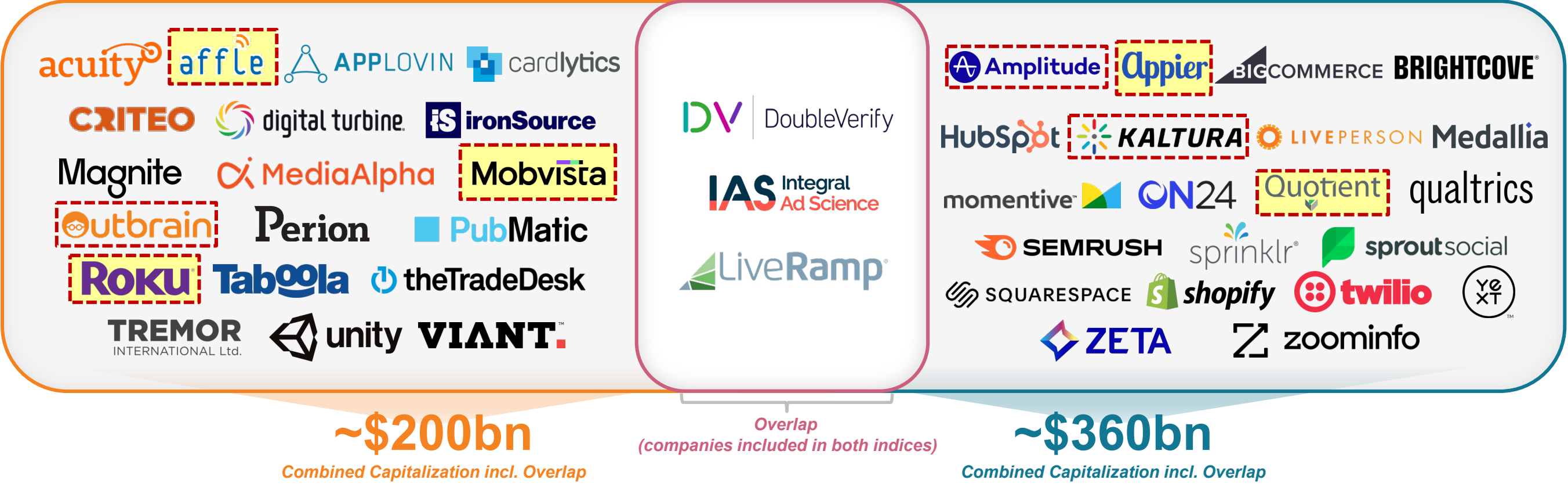
The LUMA Indices^{BETA} – Recent Updates

BETA (v2.0)

 Denotes retroactive additions
 Denotes Q3'21 issuances

LUMA.A LUMA Public Ad Tech Company Index

LUMA.M LUMA MarTech Public Company Index



- Last quarter, LUMA launched *The LUMA Indices^{BETA}* to track the performance of public companies in the Ad Tech and MarTech ecosystems
- This quarter, three new companies completed their public issuances: **Outbrain** (Ad Tech), **Kaltura** (MarTech), and **Amplitude** (MarTech). These companies will be incorporated in the indices' next semiannual rebalancing (at the end of 2021).
- Additionally, LUMA has made retroactive additions to both indices. These changes were made to (i) increase the international presence on the indices, reflecting the increasingly global nature of the sector (**Affle**, **Mobvista**, **Appier**); and (ii) include companies we believe – upon further analysis, contemplation, and market feedback – should have been included in the original launch (**Roku** and **Quotient**).

Source: FactSet (market data as of September 30, 2021), LUMA (for index methodology, including constituent selection, allocation / index rebalancing, etc.). For more details on the initiative, visit lumapartners.com/content/presentations/the-luma-indices/

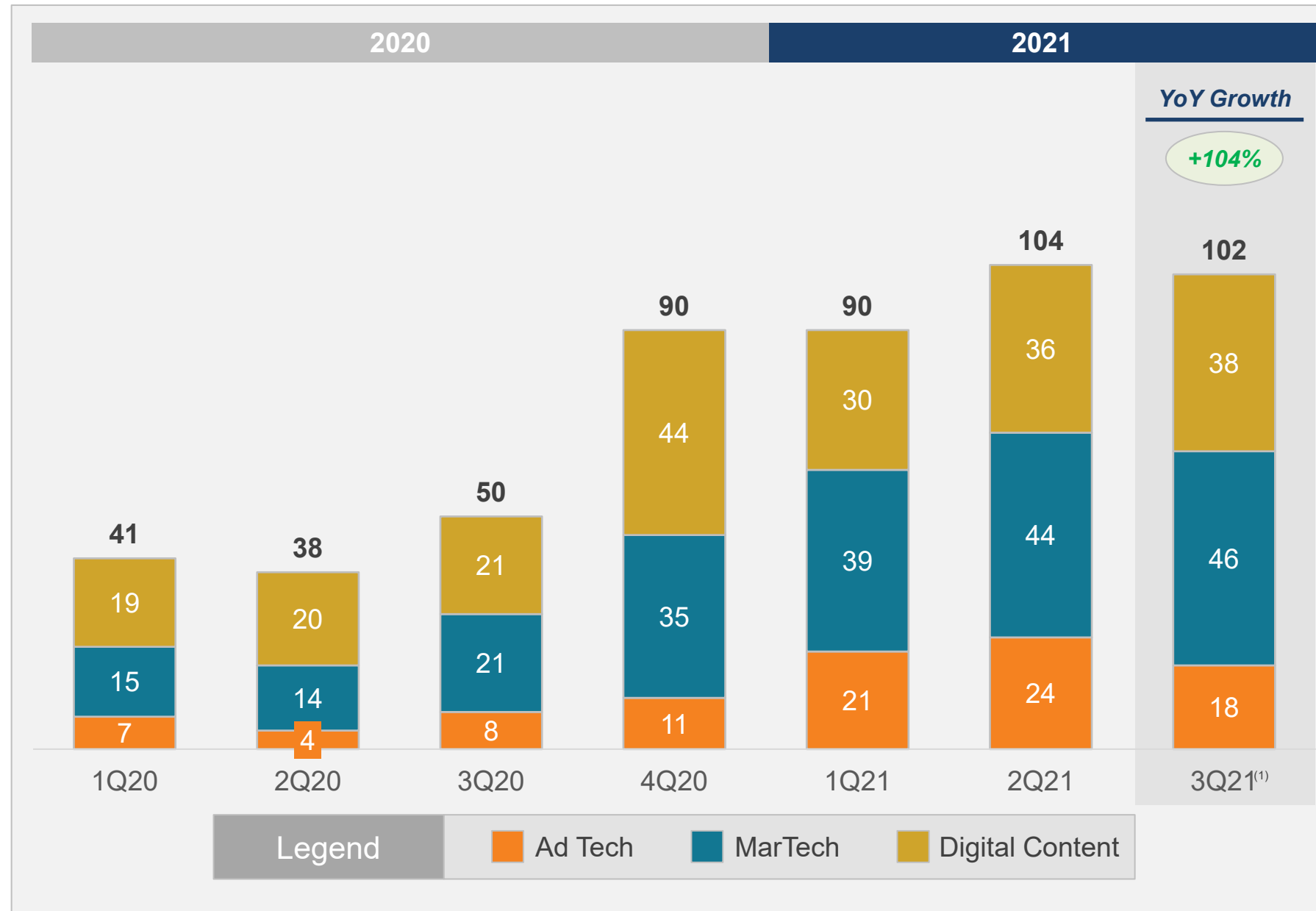
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M&A Activity by Sector – Quarterly View

Ad Tech
MarTech
Digital Content

Number of Transactions – Quarterly (1Q20 – 3Q21)



Commentary

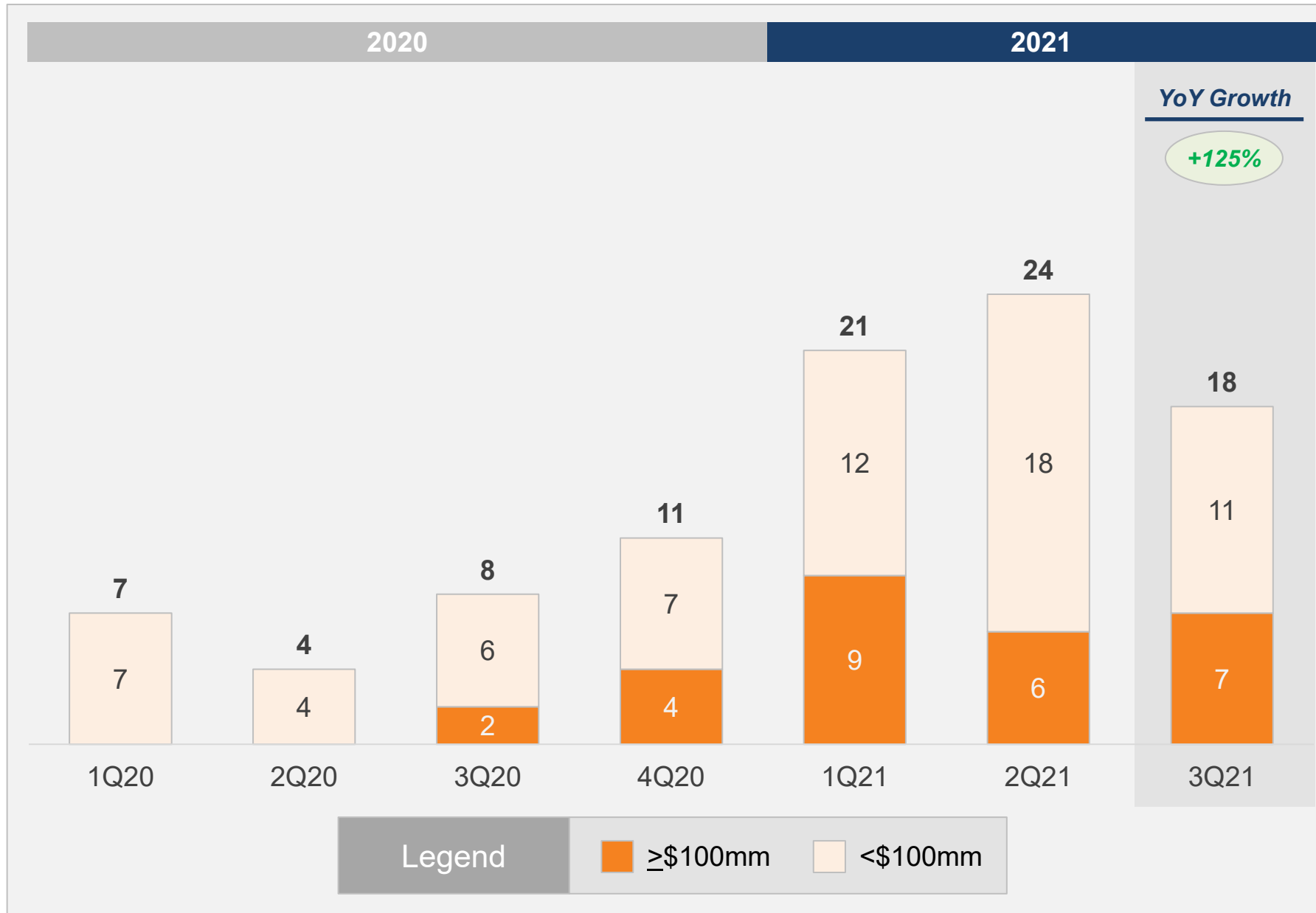
- Q3 2021 M&A deal activity was up **+104%** on year-over-year basis and approximately in line with the lofty Q2 2021 numbers; this quarter marks one year from the beginning of the recovery from COVID-induced lull across LUMA's three coverage sub-sectors.
- Despite the volatile public market valuations in Q3 and the continued slow-down in the SPAC IPO market, Ad Tech, MarTech, and Digital content achieved significant, positive YoY growth for M&A activity this quarter.
- Scaled deal activity (deals valued >\$100mm) was up significantly on a YoY basis, as 31 scaled deals were completed in the quarter (**+121%**). That figure is higher than that of the already strong Q1 and Q2 figures (28 scaled deals in both quarters).
- In Ad Tech, there was significant Private Equity involvement in the sub-sector's M&A activity; notably, CVC and TA's co-investment in Mediaocean, SFW's acquisition of Captify, and the merger between Liftoff and Vungle, a combination of two Blackstone portfolio companies.
- In MarTech, data & analytics plays were the common theme; the deals included Thoma Bravo's take-private acquisition of Medallia, TransUnion's acquisition of Neustar, and IDG's acquisition of KickFire.
- In Digital Content, the two largest deals focused on the burgeoning gambling industry with Penn National Gaming's acquisition of Score Media and Gaming, and DraftKings's acquisition of Golden Nugget Gaming.

Source: LUMA, PitchBook, Company announcements. Note: (1) Deal count excludes Zoom's failed acquisition of Five9.

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Number of Transactions



Source: LUMA, PitchBook, Company announcements.

Observations

- After an extremely active H1 for Ad Tech M&A, deal activity in Q3 declined sequentially from Q2; nevertheless, YoY growth was very strong at **+125%** relative to the COVID-induced lows of mid-2020.
- While overall M&A activity was down, Scaled Ad Tech M&A deals (deals ≥\$100mm) were higher than that of Q2, up **+16%** sequentially.
- In Q3, there were several Private Equity deals including CVC and TA's co-investment in Mediaocean, SFW Capital's acquisition of Captify, and the merger between Vungle and Liftoff, two Blackstone portfolio companies.














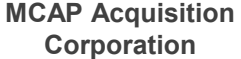










Looking Ahead

- CTV remains a core narrative for IR teams of public Ad Tech companies. As predicted in prior reports, M&A has played a key role in CTV development as companies garner both capabilities and scale, most recently evidenced by the IAS acquisition of Publica.
- We expect to see more activity on this front, as buyers leverage their currencies to accelerate their paths to market and deliver on their CTV narratives.

Ad Tech – Q3 2021 Notable Deals (1 / 1)

Highlight denotes LUMA Transactions

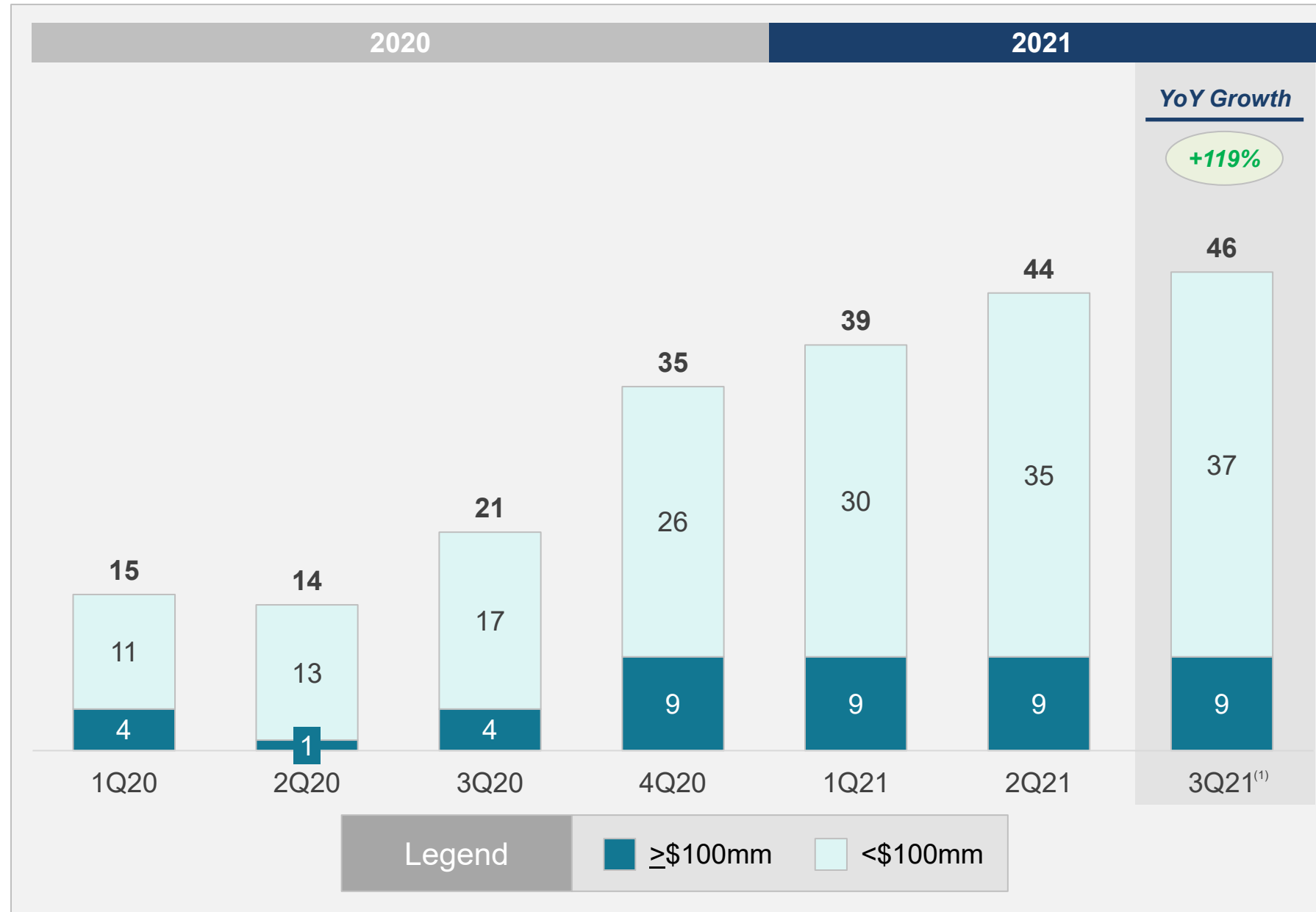
Ad Tech
MarTech
Digital Content

Announcement Date	Target	Acquirer	Cumulative Capital Raised	Enterprise Value	Commentary
9/30/2021			\$4	ND	<ul style="list-style-type: none"> Inmar has agreed to acquire Aki, a provider of retail-focused personalized advertising and digital circulars. Aki adds the ability to deliver personalization at scale to Inmar Intelligence's existing retail media offerings.
8/31/2021			\$286	ND	<ul style="list-style-type: none"> CVC & TA have partnered to acquire Vista Equity's stake in omnichannel advertising platform Mediaocean. CVC indicated that Mediaocean's acquisitions of 4C Insights & Flashtalking were key to their investment thesis.
8/24/2021	  MERGER		ND	ND	<ul style="list-style-type: none"> Liftoff & Vungle, two firms focused on mobile growth, monetization, and marketing, have agreed to merge. The two Blackstone companies create an independent platform focused on mobile game & app growth platforms.
8/10/2021			ND	\$220	<ul style="list-style-type: none"> IAS has acquired Publica, a CTV advertising platform, in a \$220mm transaction. Publica accelerates IAS' CTV strategy to help publishers monetize inventory across CTV devices.
8/10/2021			ND	ND	<ul style="list-style-type: none"> GumGum, a contextual intelligence company, acquired JustPremium, a media & video ad marketplace. The deal will help GumGum double its UK presence and expand sales into other international geographies.
8/4/2021			\$20	ND	<ul style="list-style-type: none"> Digital Envoy, an IP-based customer data company, has acquired X-Mode, a location-data broker. X-Mode will be rebranded as Outlogic and will enhance Fraud Prevention, VPN/IP Proxy, and DRM solutions.
7/27/2021			\$315	\$775	<ul style="list-style-type: none"> AdTheorent is going public via a merger with MCAP Acquisition Corporation, valuing the company at \$775mm. The company plans to use the funds to pay-down debt and expand its core markets in the US and Canada.
7/19/2021			\$10	ND	<ul style="list-style-type: none"> Snap acquired Vertebrae, a platform that renders 3D versions of product inventory, in a bet on AR shopping. Vertebrae's functionality will allow increased AR capability for shopping features within the Snapchat app.
7/15/2021			\$8	ND	<ul style="list-style-type: none"> Publicis has acquired CitrusAd, an auction-based advertising platform designed for eCommerce retailers. CitrusAd, coupled with Epsilon's CORE ID, will boost Publicis' market share and product offering for CPG firms.
7/14/2021			\$14	ND	<ul style="list-style-type: none"> SFW Capital Partners has completed a majority investment in Captify, a search retargeting platform. The investment thesis centers around Captify's "cookie-less" search intelligence in an evolving ID landscape.
7/12/2021			\$5	\$500	<ul style="list-style-type: none"> Mediaocean acquired Flashtalking, an independent global ad server, which has +\$100mm annual revenue. The combined company is positioning itself as a neutral tech platform with over \$200bn in media spend.
7/1/2021			ND	\$31	<ul style="list-style-type: none"> Magnite has acquired SpringServe, a CTV ad server & developer of a customer engagement platform. SpringServe will complement SpotX as it encompasses direct-sold and programmatic CTV inventory.

Source: PitchBook, Company Announcements, AdExchanger, BusinessInsider, WSJ, Variety, VentureBeat, The Verge.

Note: All figures in USD millions unless noted otherwise. Deals shown reflect those announced during the quarter ending September 30, 2021.

Number of Transactions



Source: LUMA, PitchBook, Company announcements. Note: (1) Deal count excludes Zoom's failed acquisition of Five9.

Observations

- In MarTech, overall deal activity remained elevated relative to the pandemic lows, as Q3 deal count was up **+119%** relative to the same period last year. Scaled deal activity was also up **+125%** YoY. Q3 had the highest number of both scaled and sub-scaled transactions since the beginning of 2020.
- Many of the scaled deals were data & analytics plays with deals such as Thoma Bravo's acquisition of Medallia, TransUnion's acquisition of Neustar, Avery Dennison's acquisition of Vestcom, and IDG's acquisition of KickFire.
- Intuit's \$12bn purchase of MailChimp was noted as the largest bootstrapped acquisition ever per Axios.




















Looking Ahead

- We've seen the emergence of customer experience and communications as core drivers of M&A in recent quarters. Expect to see more activity in this space as brands look to standardize the quality of experiences across channels.
- Marketers are faced with changes in the identity landscape, which creates an opening for software-led solutions (and M&A) to help simplify execution of identity strategies.

MarTech – Q3 2021 Notable Deals (1 / 2)
























Highlight denotes LUMA Transactions

Ad Tech
MarTech
Digital Content

Announcement Date	Target	Acquirer	Cumulative Capital Raised	Enterprise Value	Commentary
9/30/2021	 PATHWIRE	 SINCH	\$43	\$1,900	<ul style="list-style-type: none"> Sinch agreed to acquire Pathwire, the cloud-based email provider behind Mailgun, Mailjet, and Email on Acid. The \$1.9bn mixed-consideration transaction further bolsters Sinch's offerings to better compete with Twilio.
9/16/2021	 KICKFIRE	 IDG	NA	\$1,300	<ul style="list-style-type: none"> IDG acquired KickFire, a provider of first-party intent data and intelligence data for other MarTech companies. Kickfire bolsters IDG's audience identity solutions with platform and regulatory changes on the horizon.
9/13/2021	 NEUSTAR	 TRANSUNION	NA	\$3,100	<ul style="list-style-type: none"> TransUnion has acquired Neustar, a premier identity resolution company with leading solutions in marketing. Neustar will help the consumer-credit reporting giant diversify beyond its core business.
9/13/2021	 MAILCHIMP	 INTUIT	NA	\$12,000	<ul style="list-style-type: none"> Intuit has acquired Mailchimp, an SMB email marketing and automation platform, for \$12.2bn. Mailchimp will enable Intuit to further target its predominantly SMB client base with marketing solutions.
9/13/2021	 ONESPACE	ASCENTIAL	\$27	ND	<ul style="list-style-type: none"> Ascential has acquired OneSpace, a content optimization business focused on CPG eCommerce brands. The company said that it will cross-sell OneSpace's products to its current customer-base.
9/10/2021	 RINGLEAD	 ZOOMINFO	NA	ND	<ul style="list-style-type: none"> ZoomInfo has acquired RingLead, a provider of data orchestration and revenue operations automation. The acquisition tightens the connection between ZoomInfo's intelligence and engagement layers.
9/9/2021	 WIDEN	ACQUIA	NA	ND	<ul style="list-style-type: none"> Acquia has acquired Widen, a cloud-native digital asset management vendor catering to enterprise customers. Widen will further Acquia's digital experience platform to better compete with the likes of Adobe.
9/2/2021	 REFLEKTION	 SITECORE	\$55	ND	<ul style="list-style-type: none"> Sitecore has acquired Reflektion, an AI-powered search platform for improving shop-to-purchase conversion. Reflektion will be leveraged across all aspects of Sitecore's digital experience platform.
9/1/2021	DRIFT	 VISTA EQUITY PARTNERS	\$137	ND	<ul style="list-style-type: none"> Vista Equity Partners made a significant growth investment in Drift, a B2B conversational commerce company. Drift has not reached profitability but has 50,000 customers and achieved 70% ARR growth in 2020.
9/1/2021	 USERCENTRICS	 COOKIEBOT	NA	ND	<ul style="list-style-type: none"> Usercentrics & Cybot have merged and are combining their consent management solutions. Growth Equity firm Full In Partners owns a stake in both companies and orchestrated the transaction.
8/11/2021	 GOMOXIE	NICE	\$141	ND	<ul style="list-style-type: none"> NICE has acquired GoMoxie, a customer engagement platform focused on digital customer experience. GoMoxie will complement the existing digital CX offerings, including CXone Expert and CXoneSmartReach.
8/10/2021	 CONVERSOCIAL	VERINT	\$24	\$50	<ul style="list-style-type: none"> Verint has acquired Conversocial, a conversational AI platform, in a \$50mm all-cash transaction. The deal adds AI conversation and messaging capabilities to Verint, which supports cross-channel engagement.

Source: PitchBook, Company Announcements, BusinessofApps, City Biz, destinationCRM, Geekwire, Reuters, TechCrunch, WSJ.
 Note: All figures in USD millions unless noted otherwise. Deals shown reflect those announced during the quarter ending September 30, 2021.

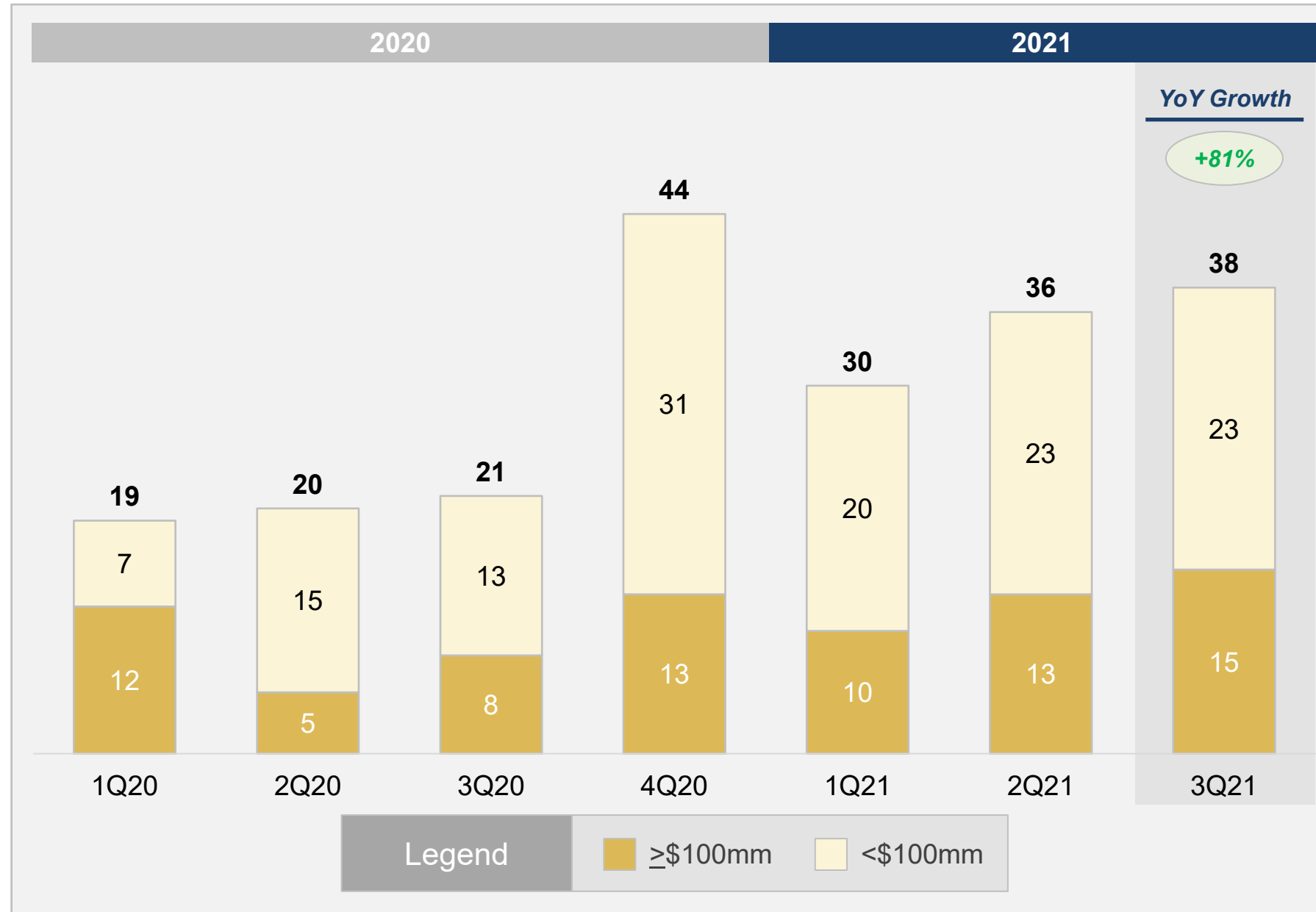
MarTech – Q3 2021 Notable Deals (2 / 2)

Announcement Date	Target	Acquirer	Cumulative Capital Raised	Enterprise Value	Commentary
8/3/2021	 Heyday	 Hootsuite™	\$7	\$48	<ul style="list-style-type: none"> Hootsuite has acquired Heyday, an AI chatbot company that offers customer service automation support. Heyday will enable Hootsuite's clients to leverage conversational AI and create better customer experiences.
8/2/2021	 XANT	 Aurea	\$299	ND	<ul style="list-style-type: none"> Aurea has acquired XANT (fka InsideSales.com), an AI-powered guided sales engagement software. XANT will be integrated into Aurea's commerce solutions and again be called InsideSales.com.
7/29/2021	 CLARABRIDGE	 qualtrics	\$204	\$1,125	<ul style="list-style-type: none"> Qualtrics has acquired Clarabridge, an AI-powered conversation analytics platform, in a \$1.1bn all-stock deal. The deal is being positioned as the combination of the leaders in structured and unstructured data for CX.
7/28/2021	 Vestcom	 AVERY DENNISON	\$255	\$1,450	<ul style="list-style-type: none"> Avery Dennison acquired Vestcom, provider of tech-driven shelf-edge media-solutions for retailers and CPGs. Vestcom will add channel access and data-management capabilities to Avery Dennison's offerings.
7/27/2021	A P P R L	 Klarna.	\$9	ND	<ul style="list-style-type: none"> Klarna has acquired APPRL, an influencer marketing software enabling creators and retailers to collaborate. The deal is indicative of a trend towards social commerce as the combination of retail & influencer marketing.
7/26/2021	 Medallia	 THOMABRAVO	\$652	\$6,400	<ul style="list-style-type: none"> Thoma Bravo acquired Medallia, a customer and employee experience SaaS platform, in a \$6.4bn deal. The \$34.00 deal share price represents a 20% premium to Medallia's unaffected closing stock price⁽¹⁾.
7/23/2021	 connexity	 Taboola	\$152	\$800	<ul style="list-style-type: none"> Taboola acquired Connexity, a retail and eCommerce focused media platform, in a mixed consideration deal. This acquisition comes shortly after Taboola's SPAC-merger and is expected to boost its profitability.
7/20/2021	 usermind	 qualtrics	\$60	ND	<ul style="list-style-type: none"> Qualtrics has acquired Usermind, a provider of customer journey orchestration and analytics. Usermind will augment Qualtrics' database of customer and employee profiles with contextual data.
7/18/2021	 Five9	 zoom	\$192	\$14,700	<ul style="list-style-type: none"> Zoom agreed to acquire Five9, a provider of omnichannel cloud software solutions for contact centers. Five9's shareholders rejected the acquisition on October 1st and struck-down the all-stock agreement.
7/14/2021	 kitewheel <small>orchestrate great experiences</small>	 CSG INTERNATIONAL	NA	ND	<ul style="list-style-type: none"> CSG Systems has acquired Kitewheel, a journey orchestration and analytics SaaS technology company. The acquisition will expand CSG's customer engagement portfolio and unlock new industry verticals.
7/13/2021	 CHORUS	 zoominfo	\$100	\$575	<ul style="list-style-type: none"> ZoomInfo has acquired Chorus.ai, a conversational sales intelligence tool, in a \$575mm deal. The deal represents a combination of ZoomInfo's top-of-funnel strengths with Chorus.ai's mid-funnel insights.
7/7/2021	 attendify	 hopin	NA	ND	<ul style="list-style-type: none"> Hopin acquired Attendify, an event marketing platform, to bolster the company's event marketing offerings. The two companies will combine technologies to cater to the end-to-end needs of event professionals.

Source: PitchBook, Company Announcements, BusinessofApps, City Biz, destinationCRM, Geekwire, Reuters, TechCrunch, WSJ.

Note: All figures in USD millions unless noted otherwise. Deals shown reflect those announced during the quarter ending September 30, 2021. (1) Medallia's unaffected closing stock price was June 10, 2021, the last full trading day prior to media reports regarding a possible transaction.

Number of Transactions



Source: LUMA, PitchBook, Company announcements.


















Observations

- Digital Content sustained its strong momentum with the greatest number of scaled deals since the start of 2020 and overall YoY growth of **+81%**.
- Two of the largest scaled M&A deals in the sub-sector focused on the burgeoning online gambling industry with Penn National Gaming's acquisition of Score Media and Gaming and DraftKings's acquisition of Golden Nugget Gaming.
- Several notable scaled Gaming Transactions occurred this quarter including Netmarble's acquisition of SpinX Games and Tencent's acquisition of Sumo Group.

Looking Ahead











- Companies like Penn National Gaming have leveraged media assets (Barstool Sports) to grow their core gaming businesses, and we've even seen traditional broadcasters enter the space (e.g., FOX Bet). We see this as a trend that will continue and beget further M&A activity as legalization expands.
- With the Apollo-Yahoo transaction closing this quarter, the market will keep a close eye to see what they do with its scaled Ad Tech business.

Digital Content – Q3 2021 Notable Deals (1 / 2)

Announcement Date	Target	Acquirer	Cumulative Capital Raised	Enterprise Value	Commentary
9/30/2021		Voodoo	\$3	ND	<ul style="list-style-type: none"> Voodoo is acquiring Beach Bum, a game studio based in Israel and specialized in tabletop and card games. It was reported that Beach Bum has generated \$70 million in revenue over the past 12 months.
9/30/2021		SONY	ND	ND	<ul style="list-style-type: none"> Sony has acquired longtime partner Bluepoint Games, developer of Uncharted: The Nathan Drake Collection. The studio built its name on revisiting other developers' work, but the next project is rumored to be an original.
9/29/2021		NETFLIX	ND	ND	<ul style="list-style-type: none"> Night School Studio, the game developer known for titles like Oxenfree, has been acquired by Netflix. The acquisition is part of Netflix's larger initiative to add exclusive games to its subscription platform.
9/27/2021			ND	ND	<ul style="list-style-type: none"> MediaLab has acquired Imgur, a social image-sharing platform with 300 million monthly users. MediaLab, a self-described holding company of consumer internet brands, will invest further in engineering.
9/7/2021		shutterstock	\$41	\$110	<ul style="list-style-type: none"> Shutterstock acquired PicMonkey, a provider of online photo editing and graphic design tools, in a cash deal. PicMonkey will enable Shutterstock customers to create effective content regardless of skill level or expertise.
9/10/2021		STILLFRONT GROUP	ND	\$205	<ul style="list-style-type: none"> Stillfront announced that it has acquired mobile game developer Jawaker for \$205mm. With the acquisition, the publisher aims to expand its games portfolio and grow its presence in the MENA region.
8/31/2021	reworks		\$15	\$600	<ul style="list-style-type: none"> Playtika has acquired Reworks, a developer best known for their mobile home design entertainment app Redecor. Reworks will allow Playtika to establish a presence in a growing category.
8/16/2021		ROBLOX	ND	\$90	<ul style="list-style-type: none"> Roblox acquired Guilded, provider of a platform for online gaming communities, for \$90mm. Following the acquisition by Roblox, Guilded will continue to operate as an independent product.
8/10/2021			\$33	\$320	<ul style="list-style-type: none"> Unity acquired Parsec, a remote desktop tool for game developers and creatives to collaborate from anywhere. This is Unity's largest acquisition to-date and aims to capitalize on the trend towards remote-work for creators.
8/9/2021			ND	\$1,560	<ul style="list-style-type: none"> DraftKings has agreed to acquire Golden Nugget Online Gaming, an online casino gaming platform. Golden Nugget's brand is DraftKings entry into the growing online casino market.
8/5/2021			\$103	\$2,000	<ul style="list-style-type: none"> Penn National Gaming has acquired Score Media and Gaming, an app-based sports betting & media platform. The acquisition will allow Penn to leverage both Barstool & Score's consumer appeal in the sports betting market.
8/5/2021			ND	\$525	<ul style="list-style-type: none"> Zynga has agreed to acquire StarLark, a Chinese game developer, for \$525mm in a mixed consideration deal. The deal includes the mobile golf title Golf Rival from Betta Games, the second-largest mobile golf game.

Source: PitchBook, Company Announcements, DigiDay, Gambling Insider, MarketWatch, Reuters, TechCrunch, Verge, WSJ
 Note: All figures in USD millions unless noted otherwise. Deals shown reflect those announced during the quarter ending September 30, 2021.

Digital Content – Q3 2021 Notable Deals (2 / 2)

Announcement Date	Target	Acquirer	Cumulative Capital Raised	Enterprise Value	Commentary
8/5/2021			ND	\$545	<ul style="list-style-type: none"> Embracer Group has acquired 8 gaming studios for \$313mm in initial consideration and up to \$232mm in earnout. The acquisitions are expected to contribute between \$232mm to \$348mm in revenue in the next fiscal year.
8/3/2021			ND	\$2,200	<ul style="list-style-type: none"> Netmarble agreed to acquire Hong Kong-based social casino game company SpinX for \$2.2bn. The acquisition is an effort to diversify its game portfolios and strengthen global business competitiveness.
8/2/2021			ND	\$900	<ul style="list-style-type: none"> Next Generation Media acquired Hello Sunshine, a media company founded by Reese Witherspoon. This is the first acquisition by Blackstone-backed NGM which is run by former Walt Disney executives.
7/19/2021			ND	\$1,300	<ul style="list-style-type: none"> Tencent acquired Sumo Group, a British video game company, for \$1.27bn at a 43% premium to its valuation. Tencent intends to bring its expertise and resources to accelerate the growth of Sumo Group.
7/2/2021			ND	\$360	<ul style="list-style-type: none"> Modern Times Group (MTG) has acquired Indian startup game developer PlaySimple for more than \$360mm. The deal was financed with mixed consideration and there is up to \$150 available in potential earnout.
7/2/2021			ND	\$27	<ul style="list-style-type: none"> Team17 acquired TouchPress, the parent company of educational games developer / publisher StoryToys. This is TouchPress' first foray into educational games, an area which they noted was accelerated by COVID.

Source: PitchBook, Company Announcements, DigiDay, Gambling Insider, MarketWatch, Reuters, TechCrunch, Verge, WSJ
 Note: All figures in USD millions unless noted otherwise. Deals shown reflect those announced during the quarter ending September 30, 2021.

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YTD "Tech" Sub-Sectors Public Market Performance

Ecosystem Sub-Sectors (Tech)

Ad Tech	
MarTech	
Digital Content ex-Gaming	
Digital Giants	
Gaming	
Marketing Clouds	

YTD 2021 Aggregate Market Cap Evolution by Sub-Sector



- **MarTech** – The MarTech cohort held on to its top position this quarter continuing to outperform the S&P 500 and the other tech sub-sectors at **+21%** YTD.
- **Marketing Clouds** – Continuing upon an impressive Q2 performance, Marketing Clouds made significant gains ending Q3 at **+19%** YTD.
- **Digital Giants** – One of the less volatile sub-sectors due to its size (almost \$10 trillion in aggregate market cap), managed to build to a **+18%** increase YTD.
- **Ad Tech** – Despite Q2's upward momentum, Ad Tech trended downward this quarter ending the period down **(6%)** YTD.
- **Digital Content ex-Gaming** – Ending Q2 at +15% YTD, the sub-sector significantly underperformed the S&P during Q3 and has since fallen to **(11%)** YTD.
- **Gaming** – Outperforming all other tech sub-sectors at the end of Q1, Gaming has since fell to **(19%)** YTD as the worst performing sub-sector thus far.

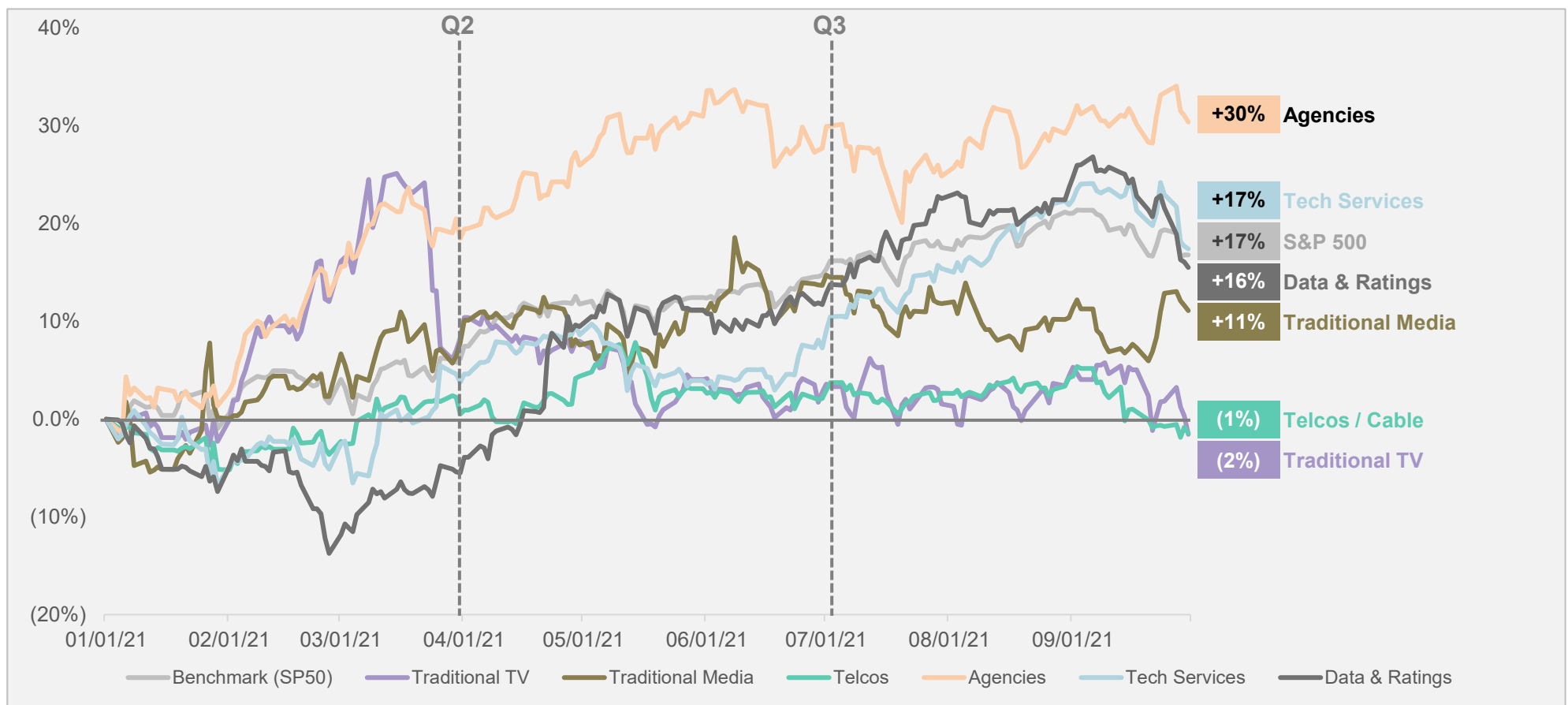
Source: FactSet (market data as of 9/30/2021), LUMA (analysis and categorizations).

Note: [] Denotes exclusion from analysis (indicated company became publicly-listed during calendar 2021). Market performance figures for companies that became publicly-listed during Q3 2021 are calculated relative to its closing price at the end of the first trading day (rather than versus offering price). For all public companies evaluated in this analysis (including non-US companies), all share prices, financial metrics, and percentage changes thereof are calculated on a USD basis. Thus, figures may be impacted by currency fluctuations.

YTD “Traditional” Sub-Sectors Public Market Performance

Ecosystem Sub-Sectors (Traditional)	
Traditional TV	
Telcos / Cable	
Traditional Media	
Data & Ratings	
Agencies	
Tech Services	

YTD 2021 Aggregate Market Cap Evolution by Sub-Sector



- **Agencies** – Agencies maintained a strong YTD performance as advertising budgets beat pandemic expectations and top the traditional sub-sectors thus far.
- **Tech Services** – On par with the S&P in the same timeframe, Tech Services is up +17% uplifted by Accenture, the largest constituent, which is up +24%.
- **Data & Ratings** – Data & Ratings slightly underperformed the S&P 500’s performance through Q3 with a +16% YTD increase.
- **Traditional Media** – iHeartMedia and Meredith both have seen triple digit gains in market capitalization YTD buoying the sub-sector which is up +11% YTD.
- **Telcos / Cable** – The sub-sector has been weighed down by the largest Mobile Carriers, AT&T and Verizon, which are (6%) and (8%) YTD, respectively.
- **Traditional TV** – The largest constituent Disney, down (5%) YTD, continued to weigh down the sub-sector and thus lead to a (2%) YTD return.

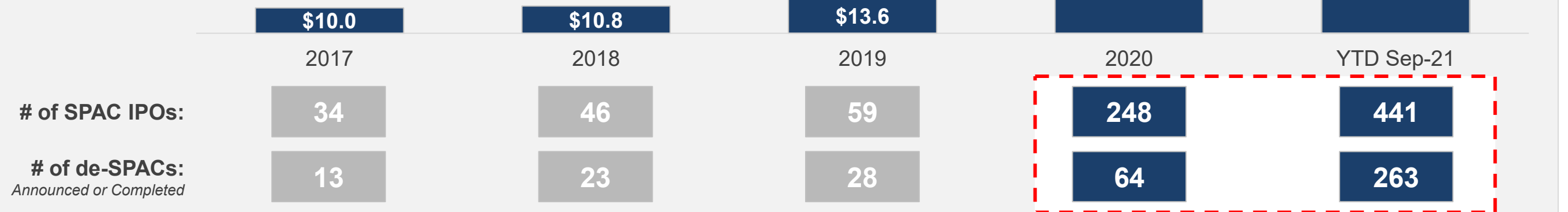
Source: FactSet (market data as of 9/30/2020), LUMA (analysis and categorizations). For all public companies evaluated in this analysis (including non-US companies), all market capitalization, financial metrics, and percentage changes thereof are calculated on a USD basis. Thus, figures may be impacted by currency fluctuations.

SPAC Capital Raising Continues Deceleration

SPAC Capital Raising & Deal Count (IPOs + De-SPACs): 2017 - YTD 2021 (\$ in billions)

Active SPAC Summary


Group	# of SPACs	Amount in Trust
Total Active	584	\$170
Announced de-SPACs	128	\$339
Seeking target	456	\$134
Pre-IPO	309	\$69

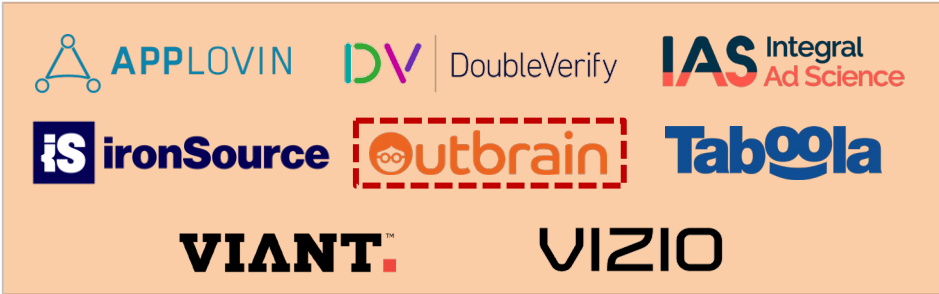

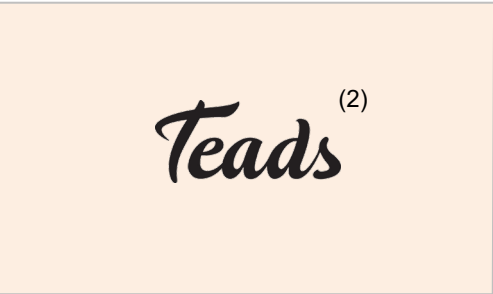







Source: SPACAlpha.com, SPACInsider.com, SPACResearch.com

Notes: SPAC IPOs and capital raised as of September 27, 2021; de-SPAC transactions as of September 27, 2021; Active SPAC Summary as of September 27, 2021.

TMT IPO Pipeline as of 3Q21

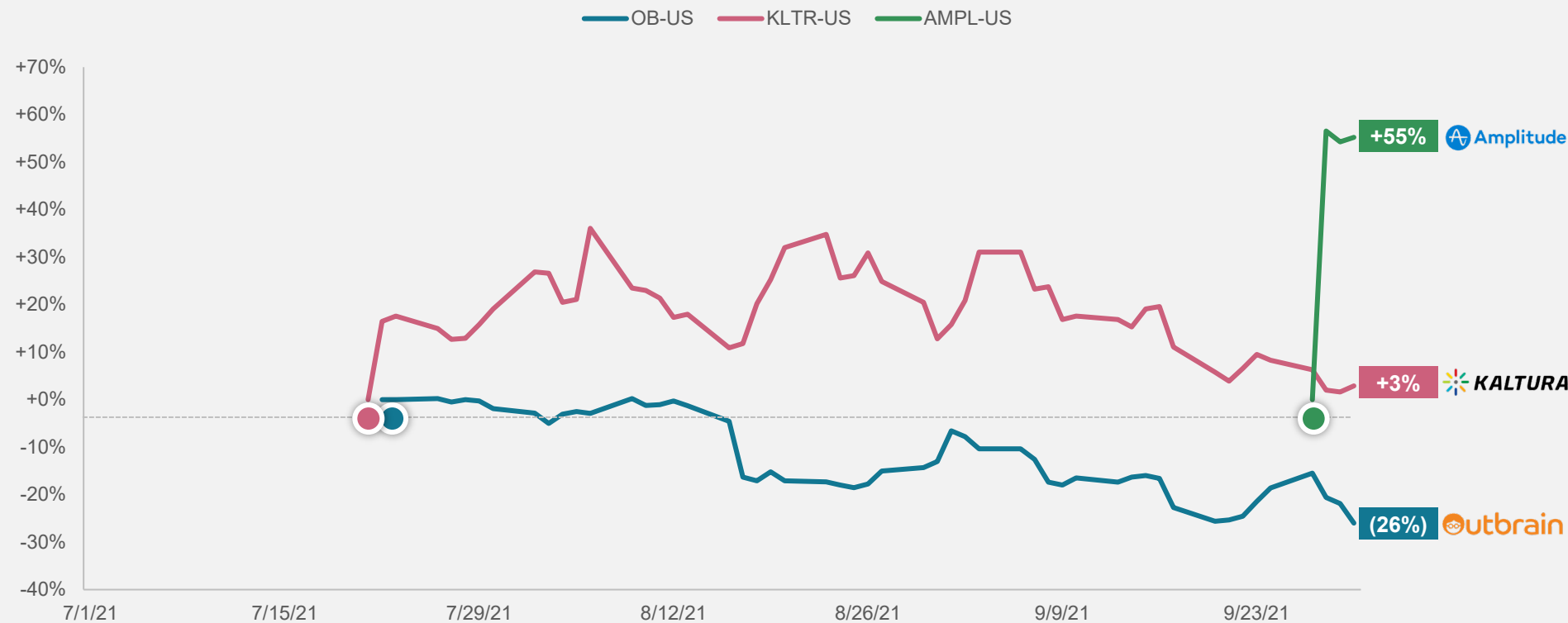
 Denotes Q3'21 issuances

	2021 Completed IPOs and De-SPACs ⁽¹⁾	Pending (De-SPACs only)	Anticipated IPOs	
			Filed	Speculated / Not Yet Filed
Ad Tech				
MarTech				
Digital Content (Gaming)				
Digital Content (Non-Gaming)				

Sources: Public Company Filings, Company Announcements. Note: (1) Transactions shown correspond to IPOs unless explicitly indicated as a de-SPAC transaction. (2) Per company announcement, Tead's IPO is currently delayed.

Recent IPO/SPAC Share Price Performance

Share Price Performance since IPO Pricing⁽¹⁾ / SPAC Closing



Company	IPO / De-SPAC Date	Initial Price	First Day		Current (9/30/2021)	
			Closing Share Price	% Incr. / (Dec.) (vs. Initial Price) ⁽¹⁾	Closing Share Price	% Incr. / (Dec.) (vs. Initial Price) ⁽¹⁾
KALTURA	7/21/2021	\$10.00	\$12.00	+20.0%	\$10.29	2.9%
Outbrain	7/22/2021	\$20.00	\$20.00	+0.0%	\$14.80	(26.0%)
Amplitude	7/28/2021	\$35.00	\$54.80	+56.6%	\$54.33	+55.2%

Commentary

- Kaltura (KLTR):** Video-cloud company popped more than +20% intraday on the company's trading debut that valued the Intel-backed firm at about \$1.2bn. The company priced at the midpoint of the expected \$9 to \$11 range at \$10. The firm originally filed in March to sell 23.5mm shares to the public at an expected \$14 to \$16 per share but postponed the IPO in April – apparently amid lackluster demand. Kaltura then narrowed both the offering's size and expected price range. Since the IPO Kaltura shares have increased **+3%** in value.
- Outbrain (OB):** Outbrain, which provides recommended web links at the bottom of news stories, raised \$160 million at a \$1.3bn valuation in its IPO. The company sold 8mm shares at a valuation of \$1.1bn but priced below its expected \$24 to \$26 range at \$20. The company closed at its exact IPO price on the first day of trading but has since declined **(26%)** in the market.
- Amplitude (AMPL):** Amplitude, provider of customer behavior analytics for digital business optimization, had its IPO via a direct listing valuing the company at over \$4.6bn. Shares opened at \$50, 43% above the \$35 price set by Nasdaq, and closed at 57% on its trading debut. Amplitude shares closed the quarter at \$54.33, **+55%** above the company's reference price making it the strongest IPO of the three new issuances this quarter.

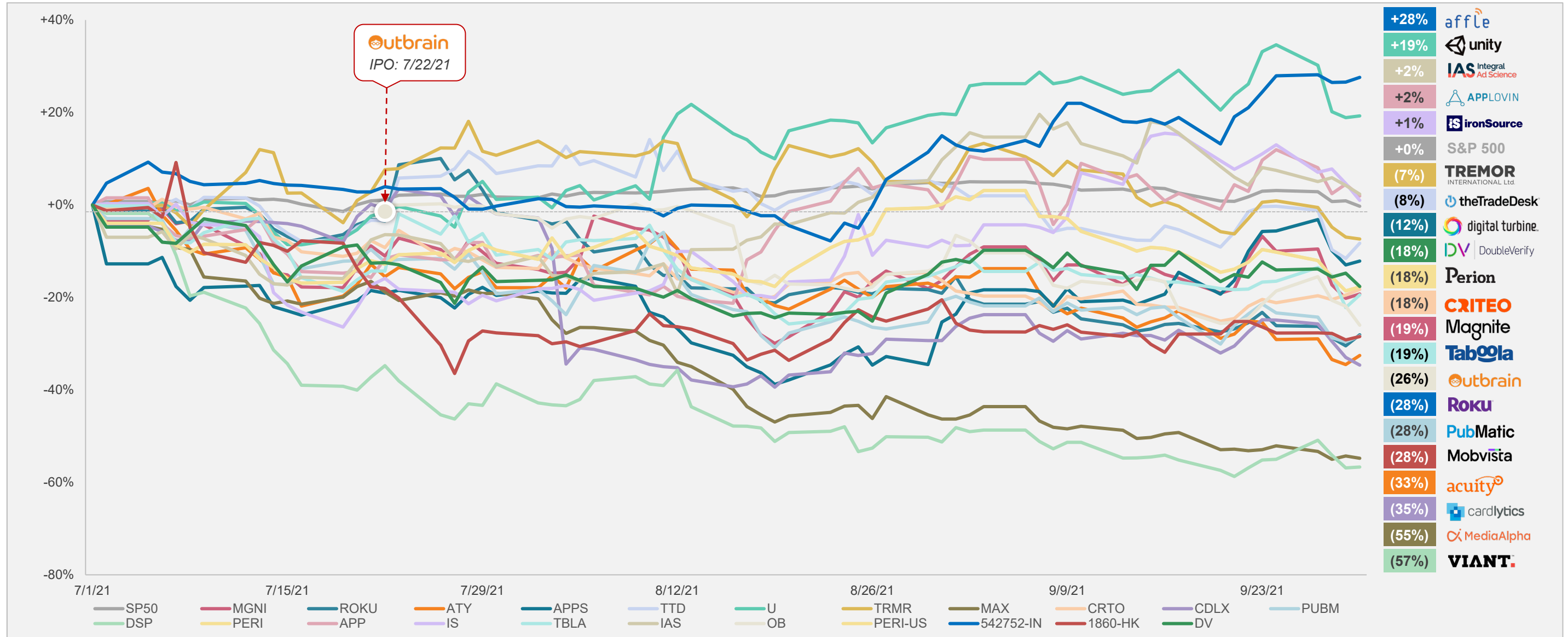
Source: FactSet (market data as of 9/30/2021), Company Filings, Renaissance Capital. Notes: For Direct Listings, Initial Price refers to a given issuance's Reference Price. (1) Represents % increase from IPO Offering price as of IPO date.

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Ad Tech – Q3 2021 Market Performance (1 / 2)

Q3 2021 Share Price Evolution by Ad Tech Company



Source: FactSet (market data as of 9/30/2021), LUMA (analysis and categorizations).

Note: Includes only public companies that were listed prior to 7/1/2021. For all public companies evaluated in this analysis (including non-US companies), all share prices, financial metrics, and percentage changes thereof are calculated on a USD basis. Thus, figures may be impacted by currency fluctuations.

Ad Tech – Q3 2021 Market Performance (2 / 2)

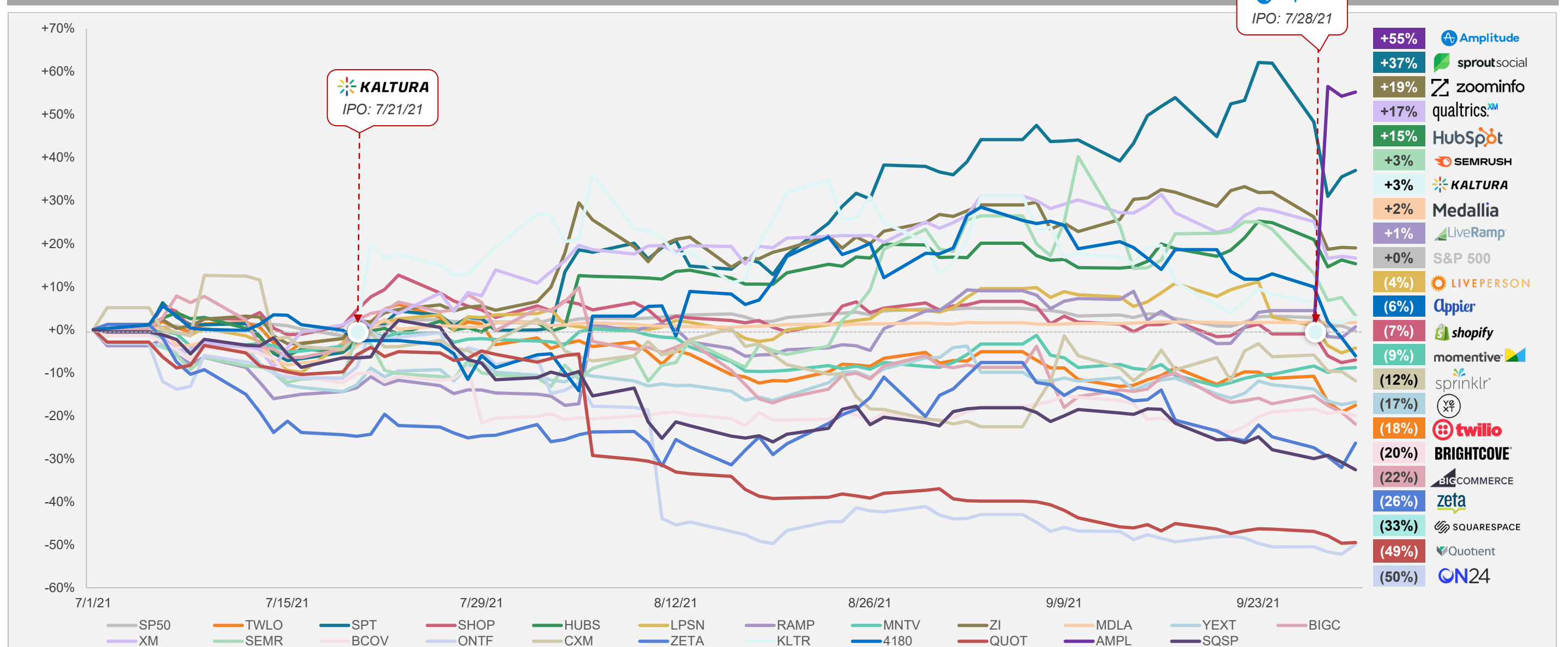
Ranking – Highest to Lowest Share Price Increase / (Decrease) in %

Rank	Company	Share Price (\$USD)		% Increase	Market Cap (US\$bn)	EV / LTM Net Revenue	
		Starting ⁽¹⁾	End of Q3	Q3 % Increase / (Decrease)	End of Q3	End of Q3 2020	End of Q3 2021
1	affle	\$56.45	\$72.02	+27.6%	\$1.9	N/A	N/A
2	unity	\$105.84	\$126.25	+19.3%	\$35.7	N/A	36.8x
3	IAS Integral Ad Science	\$20.16	\$20.63	+2.3%	\$3.2	N/A	N/A
4	APPROVIN	\$70.98	\$72.37	+2.0%	\$26.9	N/A	12.7x
5	ironSource	\$10.76	\$10.87	+1.0%	\$11.0	N/A	23.0x
6	S&P 500	N/A	N/A	(0.3%)	N/A	N/A	N/A
7	TREMOR [†] INTERNATIONAL LTD.	\$9.87	\$9.14	(7.3%)	\$1.4	N/A	N/A
8	theTradeDesk	\$76.68	\$70.35	(8.3%)	\$33.7	35.5x	32.1x
9	digital turbine ⁽²⁾	\$78.25	\$68.75	(12.1%)	\$6.6	14.2x	N/A
10	DV DoubleVerify	\$41.46	\$34.16	(17.6%)	\$5.4	N/A	17.9x
11	Perion [†]	\$21.07	\$17.33	(17.8%)	\$0.6	1.4x	3.1x
12	CRITEO	\$44.85	\$36.65	(18.3%)	\$2.2	0.6x	2.1x
13	Magnite	\$34.68	\$28.00	(19.3%)	\$3.7	N/A	11.2x
14	Taboola [†]	\$10.50	\$8.46	(19.4%)	\$1.9	N/A	3.2x
15	outbrain [†]	\$20.00	\$14.80	(26.0%)	\$0.8	N/A	3.6x
16	ROKU	\$435.67	\$313.35	(28.1%)	\$41.8	17.4x	17.3x
17	PubMatic	\$36.78	\$26.35	(28.4%)	\$1.3	N/A	6.4x
18	Mobvista	\$1.29	\$0.92	(28.5%)	\$1.5	N/A	N/A
19	acuity [*]	\$9.93	\$6.70	(32.5%)	\$0.4	3.6x	6.9x
20	cardlytics [*]	\$128.44	\$83.94	(34.6%)	\$2.8	25.5x	32.6x
21	MediaAlpha [*]	\$41.29	\$18.68	(54.8%)	\$0.7	N/A	8.5x
22	VIANT [†]	\$28.20	\$12.22	(56.7%)	\$0.7	N/A	5.4x
Average				(16.3%)		14.0x	13.9x

Source: FactSet (market data as of 7/1/21 and 9/30/21), Company filings and websites, Equity research. **Notes:** Company Market Cap and Enterprise Value figures via FactSet. For all public companies evaluated in this analysis (including non-US companies), all share prices, market capitalization, financial metrics, and percentage changes thereof are calculated on a USD basis. Thus, figures may be impacted by currency fluctuations. * Denotes usage of Gross Profit as proxy for Net Revenue † Denotes usage of Revenue ex-TAC as proxy for Net Revenue. (1) For companies who have been publicly listed prior to Q3 2021, starting values are the latest market closing prices as of July 1, 2021. For companies that listed during Q3 2021, Starting Prices reflect IPO Offering price as of IPO date: **Outbrain** – 7/22/21. (1) Magnite Figures presented on a pro forma basis inclusive of SpotX acquisition (Craig-Hallum equity research utilized for estimates of SpotX's contribution). (2) Digital Turbine figures presented on a pro forma basis inclusive of recent material acquisitions (Fyber, AdColony, Mobile Posse). Source data for analysis compiled by LUMA from public filings and equity research reports of the respective target companies.

MarTech – Q3 2021 Market Performance (1 / 2)

Q3 2021 Share Price Evolution by MarTech Company



Source: FactSet (market data as of 9/30/2021), LUMA (analysis and categorizations).

Note: Includes only public companies that were listed prior to 7/1/2021. For all public companies evaluated in this analysis (including non-US companies), all share prices, financial metrics, and percentage changes thereof are calculated on a USD basis. Thus, figures may be impacted by currency fluctuations.

MarTech – Q3 2021 Market Performance (2 / 2)

Ranking – Highest to Lowest Share Price Increase / (Decrease) in %

Company	Share Price (\$USD)		% Increase	Market Cap (US\$bn)	EV / LTM Net Revenue	
	Starting ⁽¹⁾	End of Q3	Q3 % Increase / (Decrease)	End of Q3	End of Q3 2020	End of Q3 2021
1 Amplitude	\$35.00	\$54.34	+55.3%	\$5.6	N/A	43.9x
2 sproutsocial	\$88.97	\$121.95	+37.1%	\$6.6	16.6x	41.0x
3 zoominfo	\$51.41	\$61.19	+19.0%	\$16.0	N/A	28.2x
4 qualtrics ^{XM}	\$36.63	\$42.74	+16.7%	\$22.0	N/A	24.7x
5 HubSpot	\$586.09	\$676.09	+15.4%	\$31.8	17.0x	29.2x
6 SEMRUSH	\$22.33	\$23.06	+3.3%	\$3.1	N/A	19.2x
7 KALTURA	\$10.00	\$10.29	+2.9%	\$1.3	N/A	10.3x
8 Medallia	\$33.31	\$33.87	+1.7%	\$5.5	8.6x	11.3x
9 LiveRamp	\$46.90	\$47.23	+0.7%	\$3.2	6.7x	5.5x
10 S&P 500	N/A	N/A	(0.3%)	N/A	N/A	N/A
11 LIVEPERSON	\$61.58	\$58.95	(4.3%)	\$4.1	10.8x	9.5x
12 Oppier	\$13.79	\$12.95	(6.1%)	\$1.3	N/A	2.3x
13 shopify	\$1,458.00	\$1,355.78	(7.0%)	\$169.2	58.1x	42.2x
14 momentive	\$21.49	\$19.60	(8.8%)	\$2.9	9.5x	7.1x
15 sprinklr	\$19.86	\$17.50	(11.9%)	\$4.5	N/A	11.6x
16 xt	\$14.46	\$12.03	(16.8%)	\$1.5	5.4x	4.0x
17 twilio	\$387.00	\$319.05	(17.6%)	\$56.7	25.9x	23.1x
18 BRIGHTCOVE	\$14.43	\$11.54	(20.0%)	\$0.5	2.1x	2.1x
19 BIGCOMMERCE	\$64.93	\$50.68	(21.9%)	\$3.6	N/A	19.1x
20 ZETA	\$7.99	\$5.89	(26.3%)	\$1.0	N/A	2.9x
21 SQUARESPACE	\$57.28	\$38.64	(32.5%)	\$5.4	N/A	8.0x
22 Quotient	\$11.52	\$5.82	(49.5%)	\$0.5	1.6x	1.0x
23 ON24	\$39.74	\$19.92	(49.9%)	\$0.9	N/A	2.7x
Average			(5.3%)		14.8x	15.8x

























Source: FactSet (market data as of 7/1/21 and 9/30/21), Company filings and websites. Notes: Company Market Cap and Enterprise Value figures via FactSet. For all public companies evaluated in this analysis (including non-US companies), all share prices, market capitalization, financial metrics, and percentage changes thereof are calculated on a USD basis. Thus, figures may be impacted by currency fluctuations. (1) For companies who have been publicly listed prior to Q1 2021, starting values are the latest market closing prices as of January 1, 2021. For companies that listed during Q1 2021, Starting Prices reflect IPO Offering price as of IPO date: Kaltura – 7/21/21.

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Ad Tech & MarTech – Q3 2021 Key Financings (1 / 4)



















Ad Tech
MarTech
Digital Content

Announcement Date	Company	Selected / Key Investor(s)	Capital Raised in Transaction	Valuation	Commentary
9/29/2021	 TOTANGO	 Great Hill PARTNERS	\$100	ND	<ul style="list-style-type: none"> Totango, a SaaS platform for tracking customer engagement, raised \$100mm led by Great Hill Partners. The funding will go towards product-led-growth, go-to-market, and product development.
9/27/2021	 optimove	 SUMMIT PARTNERS	\$75	ND	<ul style="list-style-type: none"> Optimove, an AI-powered CRM provider, raised a \$75mm growth investment led by Summit Partners. The company will use the new funding for strategic hiring and to explore M&A opportunities.
9/21/2021	 tact.ai	 NOVARTIS Lilly McKesson Ventures	\$33	ND	<ul style="list-style-type: none"> Novartis Capital, Lilly, & McKesson Ventures invested in Tact.ai, a life sciences customer engagement company. The new funding looks to capitalize on the increased focus on the life sciences sector amid the global pandemic.
9/14/2021	 CreatorIQ	 Kayne Anderson Capital Advisors, L.P.	\$40	ND	<ul style="list-style-type: none"> Kayne Anderson Capital Advisors invested in CreatorIQ, an influencer marketing platform targeting enterprises. The new capital will be used to expand its eCommerce capabilities and improve attribution tracking.
9/13/2021	 commercetools	 Accel	\$140	\$1,900	<ul style="list-style-type: none"> Accel has invested in commercetools, a provider of eCommerce APIs used to customize payment & checkout. This is a significant jump from the \$140mm Series C valuation; funds will be used to grow sales & headcount.
9/10/2021	 amagi	 NORWEST Accel AVATAAR VENTURES	\$100	ND	<ul style="list-style-type: none"> Accel, Avataar, & Norwest have invested in Amagi, an Indian cloud broadcast & targeted ad software company. The company reported 136% revenue increases and 44% year-over-year growth in new customers.
9/9/2021	 YOTPO.	 shopify	\$30	ND	<ul style="list-style-type: none"> Shopify made a strategic investment in Yotpo, an eCommerce marketing platform focused on D2C channels. The investment marks the start of a multi-year platform partnership that brings cross-selling potential for both.
9/9/2021	 affinity	 MENLO VENTURES	\$80	ND	<ul style="list-style-type: none"> Menlo Ventures has invested in Affinity, a CRM geared towards financial services and consulting firms. The funds will be used to expand sales, marketing, & engineering to support new products & customers.
9/8/2021	 ZEOTAP	 LIBERTY GLOBAL	\$11	ND	<ul style="list-style-type: none"> Zeotap, a customer data platform provider raised, closed an \$11mm extension to its \$90mm Series C. It will support Zeotap as it invests in product R&D and workforce expansion.
9/2/2021	 pixalate	 JAVELIN VENTURE PARTNERS WTI	\$18	ND	<ul style="list-style-type: none"> WTI & Javelin invested in Pixalate, a data analytics platform that provides programmatic inventory ratings. The funds will go to improving capabilities in fraud protection, privacy, & compliance analytics within the platform.
8/31/2021	 Walnut.	 8 ^{oo} EIGHT ROADS™	\$15	ND	<ul style="list-style-type: none"> Eight Roads led the Series A of Walnut, a sales experience platform that optimizes product demos. Funds will be used to grow headcount in Europe, the US, & Israel and to develop its technology and platform.
8/30/2021	 DISQO	 SAGEVIEW CAPITAL™	\$85	ND	<ul style="list-style-type: none"> Sageview has invested in DISQO, a provider of cloud-based APIs for measurement & research. The new capital will be used to scale its operations and accelerate its existing product roadmap.

Source: Pitchbook, Company Announcements, Bloomberg, Crunchbase News, Forbes, IrishTimes, NYT, PE Wire, Reuters, SaaS Industry, TechCrunch, VentureBeat, WSJ, Yahoo
 Note: All figures in USD millions unless noted otherwise.

Ad Tech & MarTech – Q3 2021 Key Financings (2 / 4)










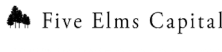














Ad Tech
MarTech
Digital Content

Announcement Date	Company	Selected / Key Investor(s)	Capital Raised in Transaction	Valuation	Commentary
8/26/2021	 #paid		\$15	ND	<ul style="list-style-type: none"> Sands has invested in #Paid, a creator marketing platform that connects brands with content creators. Funds will aide in scaling the current business model and adding new offerings leveraging AI & ML functionality.
8/19/2021	 Nacelle	TIGERGLOBAL	\$50	ND	<ul style="list-style-type: none"> Tiger Global has invested in Nacelle, a headless eCommerce infrastructure platform. This funding will go towards building the customer success team & improving its go-to-market strategy.
8/17/2021	 INFOSUM		\$65	ND	<ul style="list-style-type: none"> Chrysalis invested in Infosum, a data collaboration platform designed to enable better customer experiences. Funds will accelerate hiring, expansion into new geographies, and product development.
8/17/2021	 MOLOCO	TIGERGLOBAL	\$150	\$1,500	<ul style="list-style-type: none"> Tiger Global has invested in MOLOCO, an Ad Tech startup using ML to build mobile campaigns. The new funding will be used towards R&D to upgrade their ML engine ahead of a potential IPO.
8/16/2021	 SEISMIC		\$170	\$3,000	<ul style="list-style-type: none"> JMI, Permira, and JSV invested in Seismic, a developer of customized sales materials automation software. This Series E round nearly doubles its September 2020 valuation; funds will be used to grow global headcount.
8/16/2021	 adverity		\$120	ND	<ul style="list-style-type: none"> Softbank's Vision Fund has invested in Adverity, a cross-channel marketing campaign synchronizing platform. The proceeds will be used to further develop Adverity's predictive technology stack for marketers.
8/5/2021	 Bluecore	Georgian	\$125	\$1,000	<ul style="list-style-type: none"> Georgian has invested in BlueCore, a decision-making platform for marketers that leverages Big Data. The funding will be used to accelerate eCommerce product development & investment in AI & analytics.
8/5/2021	 Wildfire		\$15	ND	<ul style="list-style-type: none"> Wildfire Systems, a consumer rewards platform, has raised \$15mm co-led by TTV Capital and QED Investors. The company enables customers to offer consumer rewards and loyalty programs like cashback for purchases.
8/4/2021	 fullstory	PERMIRA	\$103	\$1,800	<ul style="list-style-type: none"> Permira invested in FullStory, a mobile & web platform offering customer experience analytics data. The growth capital will be used to expand product capabilities & to accelerate international expansion.
7/30/2021	 moengage	MULTIPLES	\$33	ND	<ul style="list-style-type: none"> Multiples Asset Management invested in MoEngage, a data-insights-led customer engagement platform. The funds will be used to open new offices in the US, fuel product innovation, and to sell internationally.
7/28/2021	 gupshup	TIGERGLOBAL	\$240	\$1,400	<ul style="list-style-type: none"> Tiger Global invested primary and secondary capital in Gupshup, a cloud-based messaging platform. The primary capital will be used to broaden product offerings and fund potential acquisition opportunities.
7/28/2021	 SUZY		\$50	ND	<ul style="list-style-type: none"> HIG invested in Suzy, a real-time market research platform designed to enhance understanding of consumers. Suzy tripled headcount since the beginning of the pandemic and will continue hiring into sales and marketing.

Source: Pitchbook, Company Announcements, Bloomberg, Crunchbase News, Forbes, IrishTimes, NYT, PE Wire, Reuters, SaaS Industry, TechCrunch, VentureBeat, WSJ, Yahoo
 Note: All figures in USD millions unless noted otherwise.

Ad Tech & MarTech – Q3 2021 Key Financings (3 / 4)


Ad Tech
MarTech
Digital Content

Announcement Date	Company	Selected / Key Investor(s)	Capital Raised in Transaction	Valuation	Commentary
7/28/2021	 contentful	 TIGERGLOBAL	\$175	~\$3,000	<ul style="list-style-type: none"> Tiger Global invested in Contentful, a content platform to manage digital experiences across any channel. The new funds will be invested product development for better content experiences.
7/28/2021	 dixia	 GENERAL ATLANTIC	\$105	ND	<ul style="list-style-type: none"> General Atlantic lead the Series C round of Dixa, a platform that accelerates successful product adoption. The new funds will be used towards product development and acquisitions.
7/27/2021	 pendo	 B Capital Group	\$356	\$2,600	<ul style="list-style-type: none"> B Capital has invested in Pendo, a customer engagement analytics platform that optimizes trial conversions. The Series F will fund global sales expansion, strategic M&A, and headcount growth.
7/22/2021	 oktopost	 expedition GROWTH CAPITAL	\$20	ND	<ul style="list-style-type: none"> Expedition invested in Oktopost, an enterprise-grade platform for B2B marketers to manage social media. The new funds will be used to increase headcount, advance its product roadmap, and explore acquisitions.
7/22/2021	 sendlane	 Five Elms Capital	\$20	ND	<ul style="list-style-type: none"> Five Elms Capital has invested in Sendlane, a multichannel marketing automation platform. The company noted they have grown 100% year-over-year and reached \$7mm in ARR.
7/20/2021	 fabric	 stripes	\$100	\$850	<ul style="list-style-type: none"> Stripes led the new funding of Fabric, a platform that augments digital storefronts with POS technology. The new funds will support international expansion aimed at mid-sized & enterprise B2B & B2C brands.
7/13/2021	 xtremepush	 Grafton Capital	\$33	ND	<ul style="list-style-type: none"> Grafton Capital has invested in Xtremepush, a multi-channel customer engagement platform provider. They will use the funds to double headcount to 140 people and accelerate global expansion of sales.
7/13/2021	 impact	 QIA QATAR INVESTMENT AUTHORITY Building the Future with Global Vision	\$150	\$1,500	<ul style="list-style-type: none"> The QIA sovereign fund has invested in Impact, a partnership management & optimization platform. The funding will go towards expanding its partnership network as well as the tools available to customers.
7/13/2021	 TREASURE DATA	 SoftBank	ND	ND	<ul style="list-style-type: none"> Softbank Vision Fund has made a significant minority investment in Treasure Data, a customer data platform. The size of the investment was not disclosed, but SoftBank said funding will support further rapid growth.
7/13/2021	 Amperity &	 HIGHSAGE VENTURES	\$100	>\$1,000	<ul style="list-style-type: none"> HighSage invested in customer data platform Amperity at a >\$1bn valuation. The new capital will be used to grow sales & marketing, expand internationally, & support R&D efforts.
7/12/2021	 VISTAR MEDIA	 LAMAR	\$30	ND	<ul style="list-style-type: none"> Lamar has made a strategic investment in Vistar, an end-to-end DOOH programmatic platform. The funding will strengthen Vistar's balance sheet, expand its R&D, and extend its reach into new markets.
7/9/2021	 DIDOMI	 breega ELEPHANT	\$40	ND	<ul style="list-style-type: none"> Didomi, a customer management platform, raised \$40mm in a round led by Breega and Elephant. The investment will support efforts to develop open APIs and open-source SDKs for its customers.

Source: Pitchbook, Company Announcements, Bloomberg, Crunchbase News, Forbes, IrishTimes, NYT, PE Wire, Reuters, SaaS Industry, TechCrunch, VentureBeat, WSJ, Yahoo
 Note: All figures in USD millions unless noted otherwise.































Ad Tech & MarTech – Q3 2021 Key Financings (4 / 4)

Ad Tech
MarTech
Digital Content

Announcement Date	Company	Selected / Key Investor(s)	Capital Raised in Transaction	Valuation	Commentary
7/7/2021	 Outbrain	THE BAUPOST GROUP	\$200	ND	<ul style="list-style-type: none">■ Baupost invested in Outbrain, an open-web platform matching audiences with content recommendations.■ The investment from the hedge fund was the last private financing round before its IPO this quarter.














Source: Pitchbook, Company Announcements, Bloomberg, Crunchbase News, Forbes, IrishTimes, NYT, PE Wire, Reuters, SaaS Industry, TechCrunch, VentureBeat, WSJ, Yahoo
Note: All figures in USD millions unless noted otherwise.

Digital Content – Q3 2021 Key Financings (1 / 2)

Announcement Date	Company	Selected / Key Investor(s)	Capital Raised in Transaction	Valuation	Commentary
9/24/2021			\$35	ND	<ul style="list-style-type: none"> Misfits Gaming Group has raised \$35mm in funding in a round led by The E.W. Scripps Company. Scripps itself will invest \$10mm into Misfits' esports organization, which includes its two esports franchises.
9/23/2021		 	\$50	ND	<ul style="list-style-type: none"> NTWRK, a livestream video shopping app, raised \$50mm led by Goldman Sachs Asset Management & Kering. NTWRK and the investors are looking to capitalize on the growing video shopping market spurred by COVID.
9/21/2021			\$680	\$4,300	<ul style="list-style-type: none"> Sorare, an NFT-based fantasy soccer platform, has raised a \$680mm Series B round led by Softbank. Sorare plans to expand to new sports, open a US office, hire more people and invest in marketing campaigns.
9/16/2021		 	\$33	ND	<ul style="list-style-type: none"> Games studio Elodie raised a \$32.5mm Series A led by Andreessen Horowitz and Galaxy Interactive. Founded by two Riot Games industry veterans the company has ample expectations for its first game.
9/16/2021			\$40	ND	<ul style="list-style-type: none"> Sleeper, a fantasy sports app with 3mm active users, raised a \$40mm Series C led by Andreessen Horowitz. Sleeper plans to expand the platforms game offerings and further bolster its payment systems.
9/14/2021		 	\$60	ND	<ul style="list-style-type: none"> Blockchain gaming outfit Immutable has raised \$60 million for its NFT platform Immutable X. The investment was led by Bitkraft Ventures and King River Capital and will be used for engineering and sales.
9/15/2021			\$150	\$2,300	<ul style="list-style-type: none"> Mobile Premier League, a mobile eSports platform, raised \$95mm in a Series D round led by Composite Capital. The two-year-and-a-half-year-old unicorn looks to expand internationally with the new funding.
9/10/2021		  	\$85	ND	<ul style="list-style-type: none"> Post a scuttled \$1.2bn SPAC-merger, Jam City raised \$350mm in a combination of equity and debt financing. Jam City leveraged the new funding in in the closing of its \$165mm acquisition of mobile game publisher Ludia.
8/31/2021		 	\$85	ND	<ul style="list-style-type: none"> After a failed merger with the 7GC & Co. sponsored SPAC, Vice Media raised \$135mm from existing investors. It will fund new growth vectors such as DTC offerings and content licensing in a attempt to achieve profitability.
8/31/2021			\$38	ND	<ul style="list-style-type: none"> Nifty Games, a mobile game developer, raised \$38mm in an investment led by Vulcan Capital. Nifty Games has partnered with the NBA and NFL to publish officially licensed titles NBA Clash and NFL Clash.
8/12/2021			\$410	\$10,000	<ul style="list-style-type: none"> Fidelity Investments has invested funds in Reddit, a forum / discussion-based news & social media platform. Reddit will invest in improved UI & UX for new users and will help build out its self-service ad system for SMBs.
8/2/2021			\$50	ND	<ul style="list-style-type: none"> Skillz invested \$50mm to take a minority stake in Exit Games, a multiplayer gaming technology firm. Skillz will have access to the Exit Games's multiplayer technology to exclusively power its platform.

Source: PitchBook, Company Announcements, Bloomberg, dot.LA, Forbes, New York Times, Reuters, TechCrunch, VentureBeat.
Note: All figures in USD millions unless noted otherwise.

Digital Content – Q3 2021 Key Financings (2 / 2)

Announcement Date	Company	Selected / Key Investor(s)	Capital Raised in Transaction	Valuation	Commentary
7/20/2021	 TILTINGPOINT RAISE YOUR GAME	 GENERAL ATLANTIC	\$235	ND	<ul style="list-style-type: none"> ■ Tilting Point, a free-to-play games publisher, has raised \$235 million in the company's first-ever equity financing. ■ The funding, led by General Atlantic, will be used to accelerate its live and co-developing publishing models.
7/19/2021	 SCOPELY	 tag games  OMNIDROME  PIXEL TOYS	\$50	ND	<ul style="list-style-type: none"> ■ Scopely has invested over \$50mm across three game studios: Omnidrome, Pixel Toys, & Tag Games. ■ These game studio partners are working with Scopely on a in-development games across multiple genres.
7/15/2021	 genvid	 VALOR EQUITY PARTNERS  ATREIDES MANAGEMENT	\$113	ND	<ul style="list-style-type: none"> ■ Genvid Holdings has raised \$113mm in a Series B round led by Galaxy Interactive. ■ The company organizes "massive interactive live events" (MILEs) such as the upcoming Project Raven.
7/1/2021	 animoca BRANDS	 BLUE POOL CAPITAL  coinbase Ventures  G O B I PARTNERS	\$50	\$1,050	<ul style="list-style-type: none"> ■ Animoca Brands raised \$50mm in the second tranche of a \$138mm investment from multiple investors. ■ It will fund strategic acquisitions, product development, and licenses for popular intellectual properties.



Source: PitchBook, Company Announcements, Bloomberg, dot.LA, Forbes, New York Times, Reuters, TechCrunch, VentureBeat.
Note: All figures in USD millions unless noted otherwise.

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1	Q3 2021 M&A Activity
2	Q3 2021 Public Markets Activity
3	Q3 2021 Private Financing Activity
4	The LUMA Indices

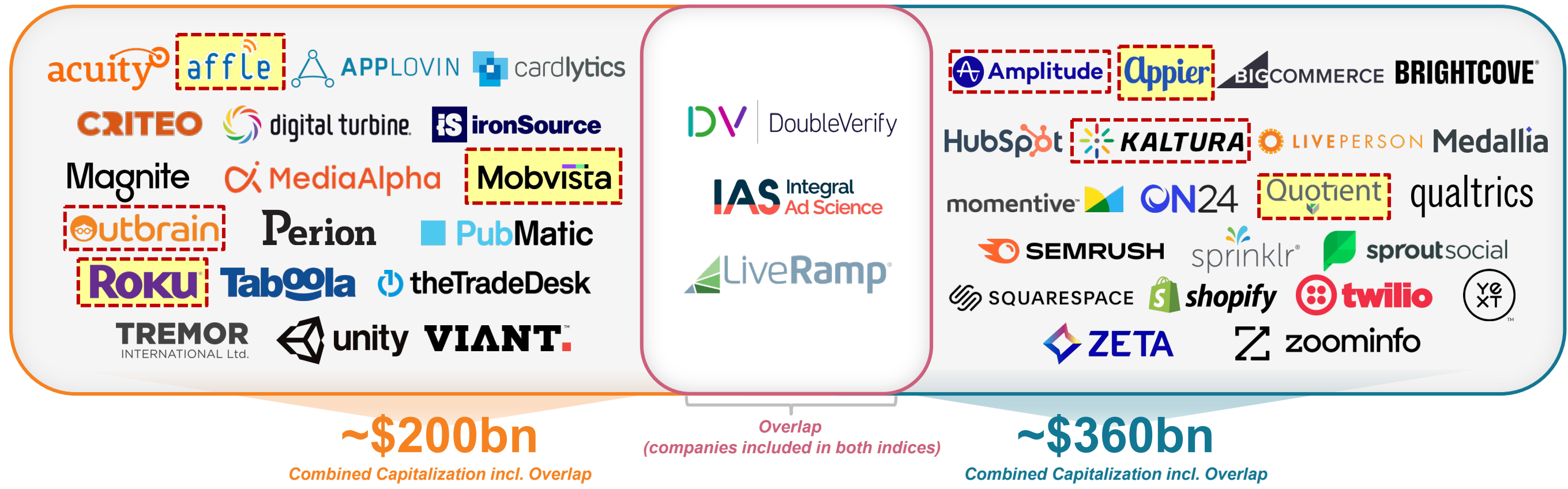
The LUMA Indices^{BETA} – Recent Updates

BETA (v2.0)

 Denotes retroactive additions
 Denotes Q3'21 issuances

LUMA.A LUMA Public Ad Tech Company Index

LUMA.M LUMA MarTech Public Company Index



- Last quarter, LUMA launched *The LUMA Indices^{BETA}* to track the performance of public companies in the Ad Tech and MarTech ecosystems
- This quarter, three new companies completed their public issuances: **Outbrain** (Ad Tech), **Kaltura** (MarTech), and **Amplitude** (MarTech). These companies will be incorporated in the indices' next semiannual rebalancing (at the end of 2021).
- Additionally, LUMA has made retroactive additions to both indices. These changes were made to (i) increase the international presence on the indices, reflecting the increasingly global nature of the sector (**Affle**, **Mobvista**, **Appier**); and (ii) include companies we believe – upon further analysis, contemplation, and market feedback – should have been included in the original launch (**Roku** and **Quotient**).

Source: FactSet (market data as of September 30, 2021), LUMA (for index methodology, including constituent selection, allocation / index rebalancing, etc.). For more details on the initiative, visit lumapartners.com/content/presentations/the-luma-indices/

LUMA.A – High Level Summary



7 Countries Represented

LUMA.A

The LUMA Ad Tech Public Company Index

acuity

affle

APPLOVIN

cardlytics

CRITEO

digital turbine.

DoubleVerify

IAS Integral Ad Science

ironSource

LiveRamp

ROKU

Magnite

MediaAlpha

Mobvista

Outbrain

Perion

PubMatic

Taboola

theTradeDesk

TREMOR INTERNATIONAL Ltd.

unity

VIANT.



6 Stock Exchanges Represented

Total: 22 Companies

Aggregate Enterprise Value as of Market Date

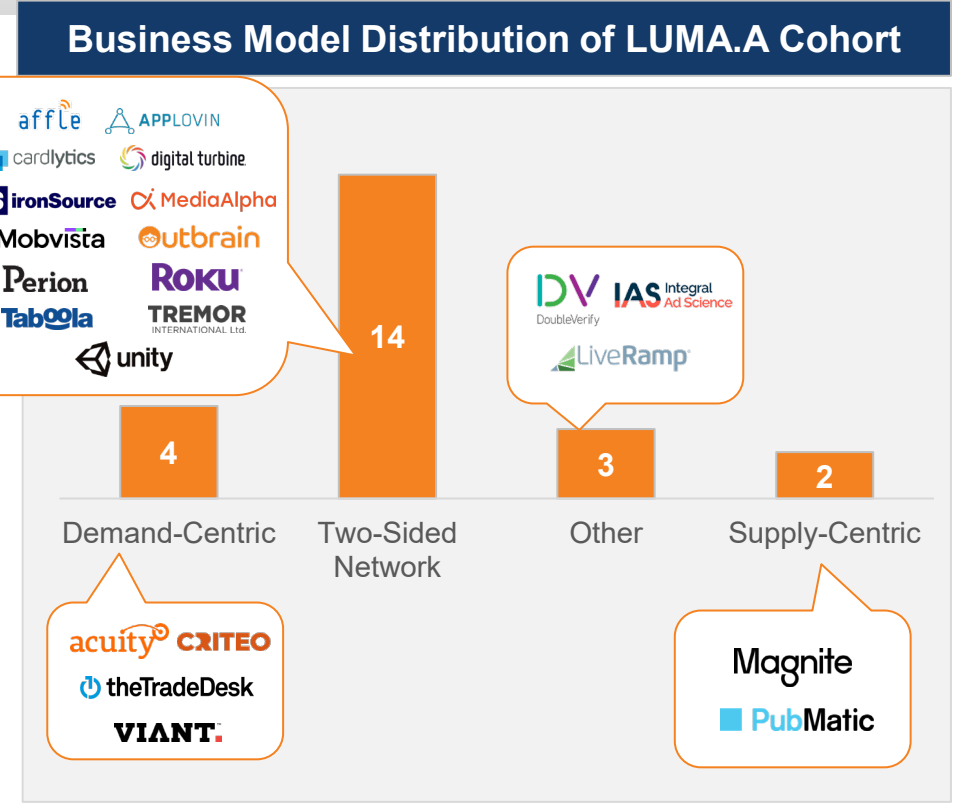
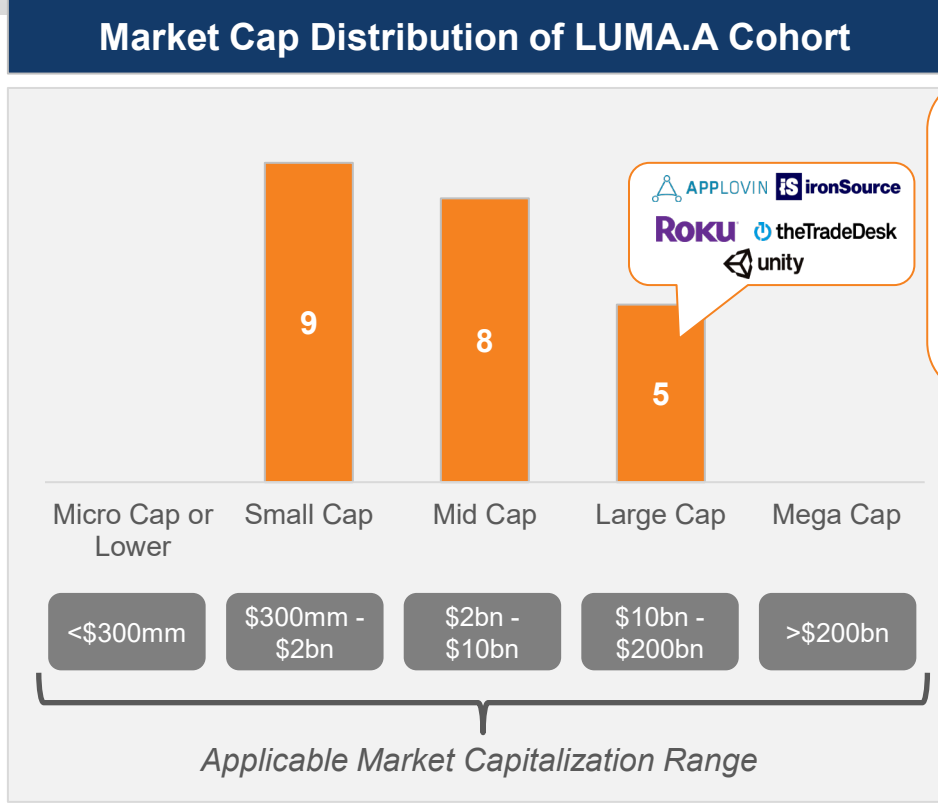
\$193bn

Aggregate Net Revenue, CY 2021E (Approximate)

\$13bn

Aggregate EV / CY2021E Net Revenue

14.8x



Source: FactSet (market data as of September 30, 2021)

LUMA.M – High Level Summary



3 Countries Represented

LUMA.M

The LUMA MarTech Public Company Index

Amplitude
 Appier
 BIGCOMMERCE
 BRIGHTCOVE
 DV DoubleVerify

HubSpot
 KALTURA
 LiveRamp
 LIVEPERSON

IAS Integral Ad Science
 Medallia
 momentive
 ON24
 qualtrics

Quotient
 SEMRUSH
 shopify
 sprinklr
 sproutsocial

SQUARESPACE
 twilio
 ye xt
 ZETA
 zoominfo

JPX

NASDAQ

NYSE

TSX

4 Stock Exchanges Represented

Total: 24 Companies

Aggregate Enterprise Value as of Market Date

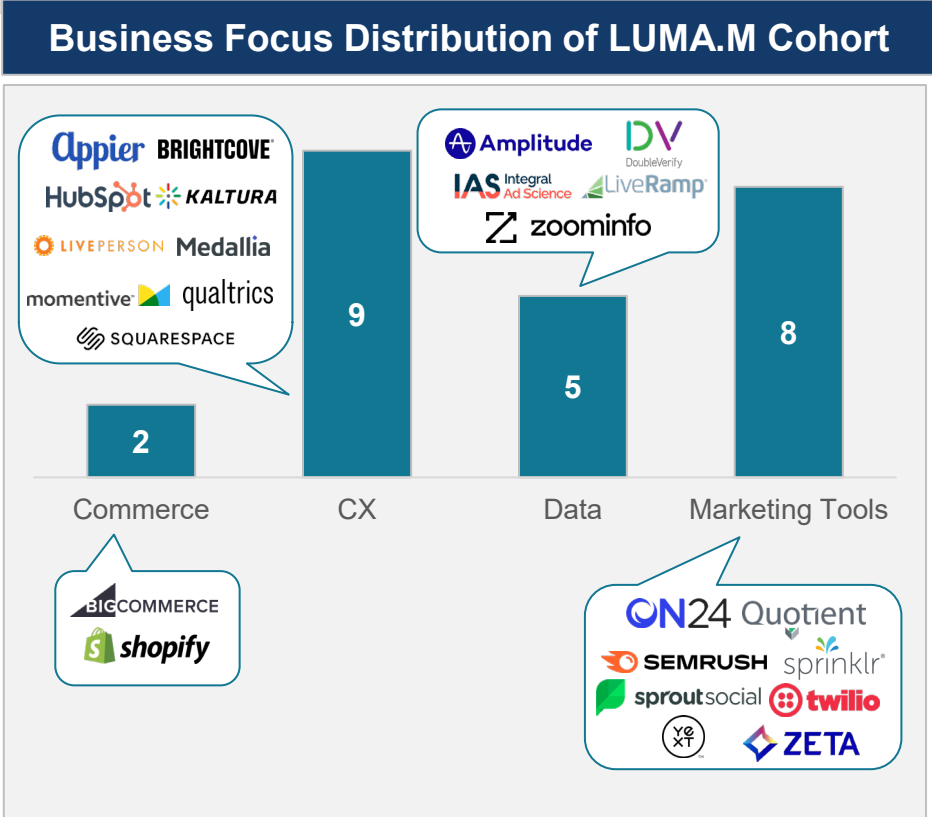
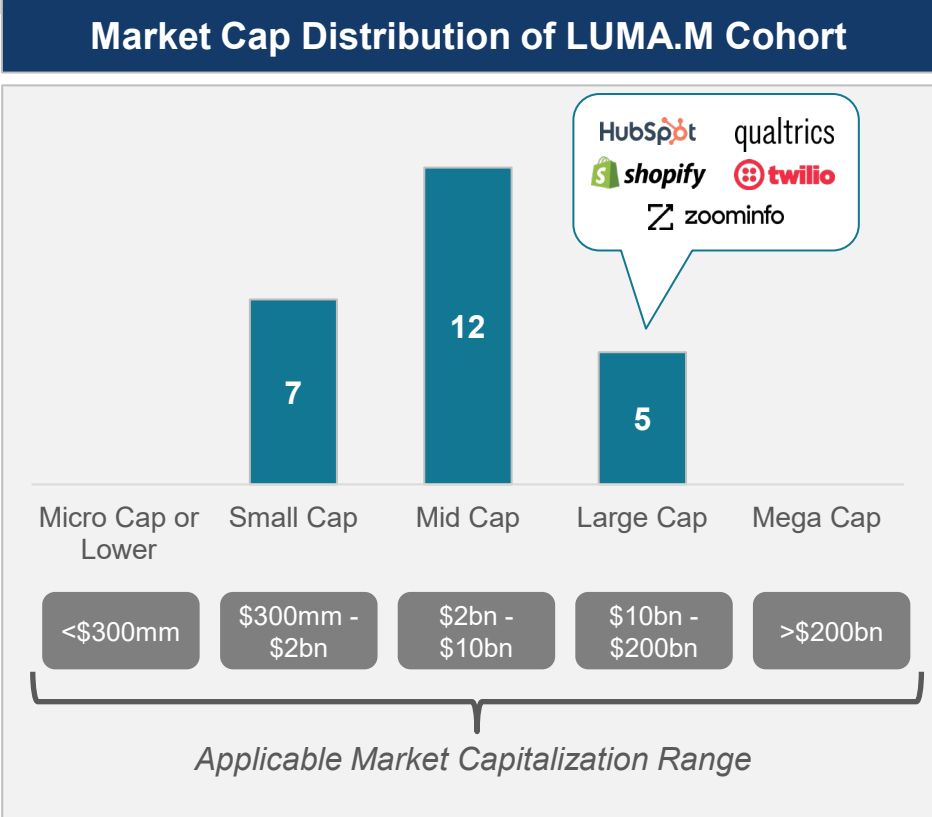
\$364bn

Aggregate Net Revenue, CY 2021E (Approximate)

\$17bn

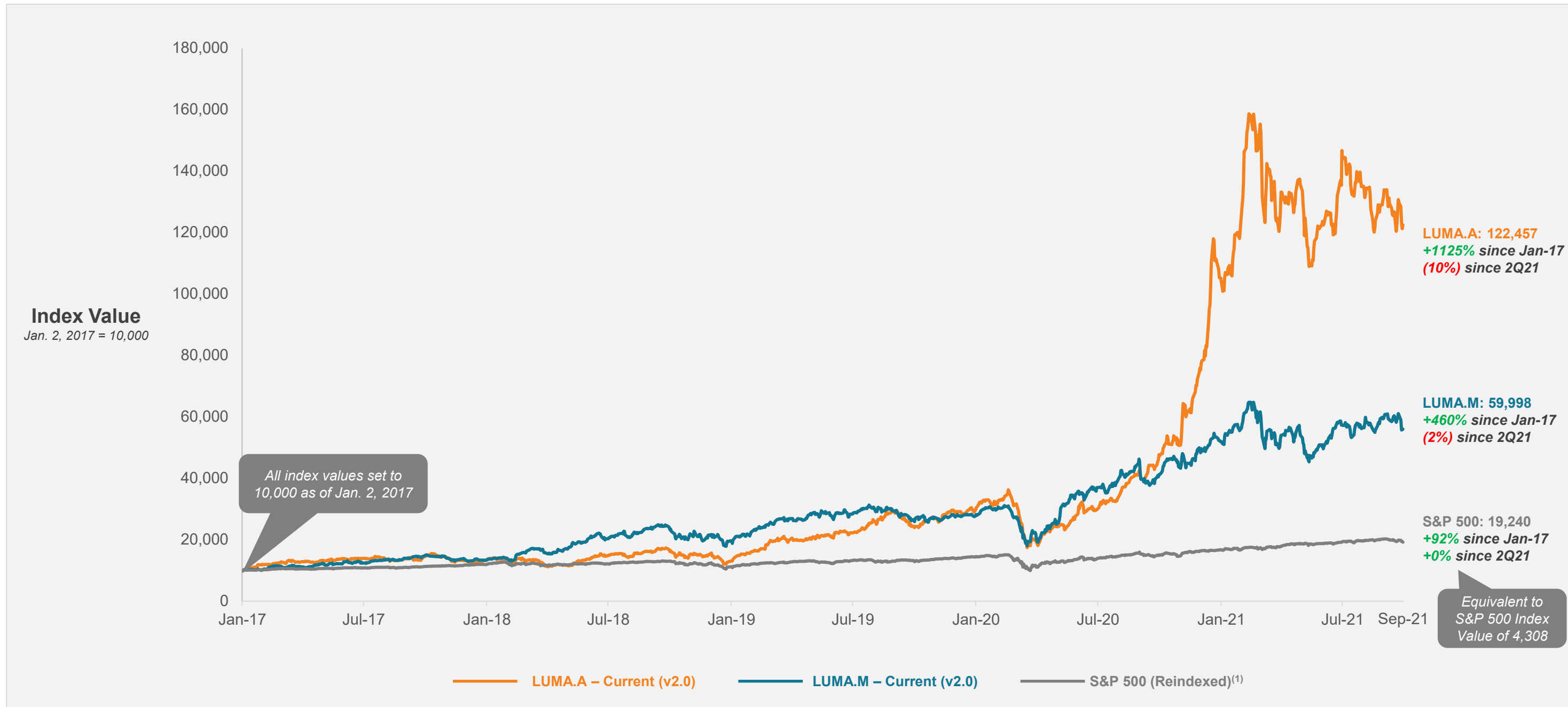
Aggregate EV / CY2021E Net Revenue

21.4x



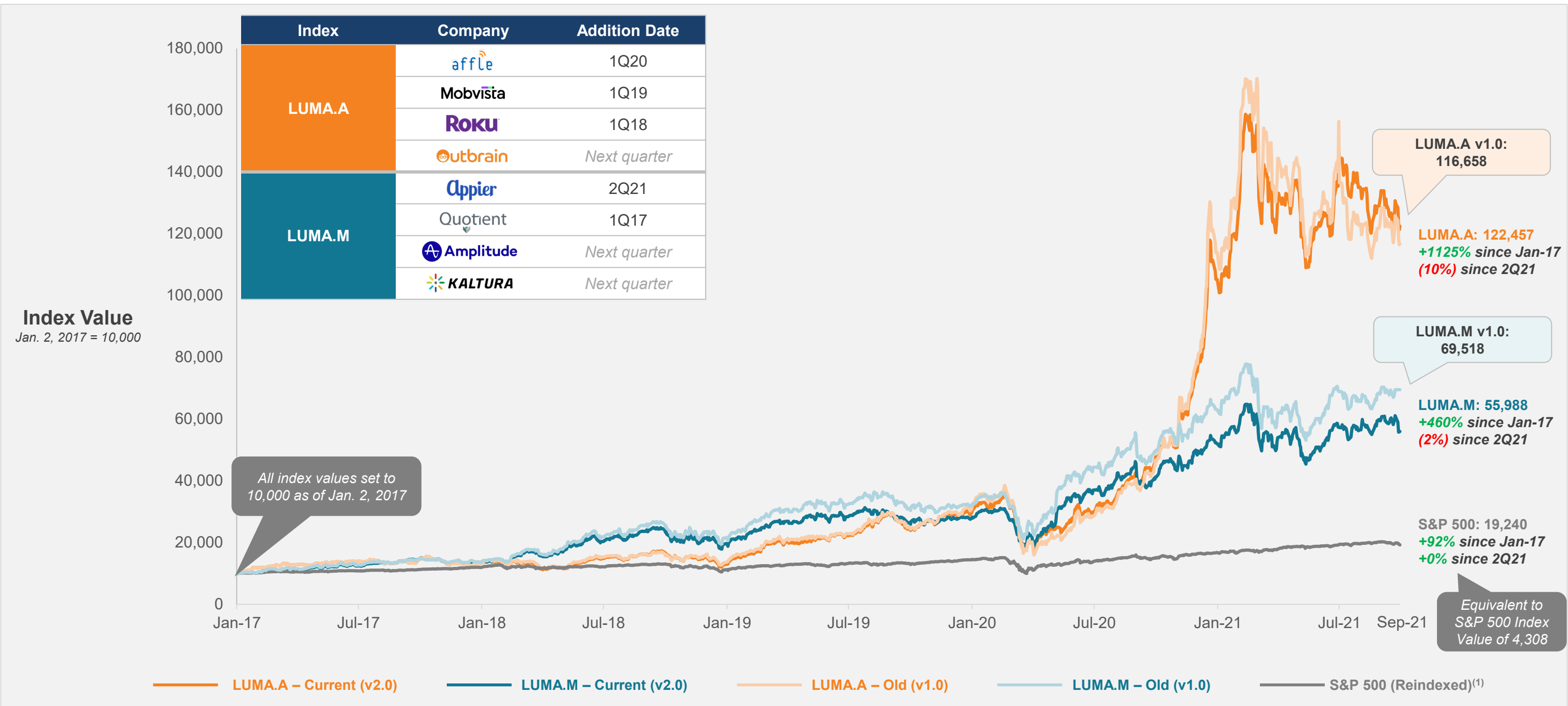
Source: FactSet (market data as of September 30, 2021)

LUMA.A & LUMA.M – Outperforming Key Benchmarks Over Time



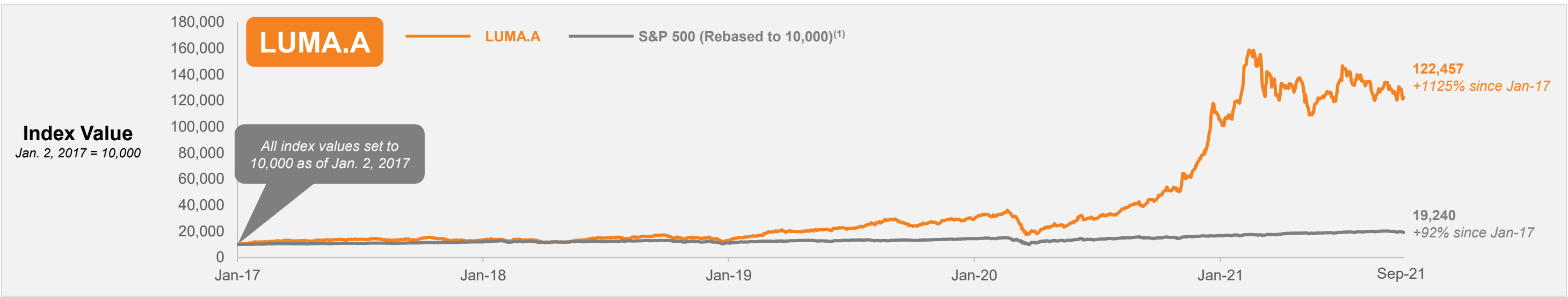
Source: FactSet (market data as of September 30, 2021), LUMA (for index methodology, including constituent selection, allocation / index rebalancing, etc.). For more details on methodology, visit lumapartners.com/content/presentations/the-luma-indices/. Note: (1) S&P 500 value re-indexed to 10,000 as of Jan 2, 2017 to be on comparable basis with LUMA.A and LUMA.M.

LUMA.A & LUMA.M – Updated to Include Latest Additions



Source: FactSet (market data as of September 30, 2021), LUMA (for index methodology, including constituent selection, allocation / index rebalancing, etc.). For more details on methodology, visit lumapartners.com/content/presentations/the-luma-indices/. Note: (1) S&P 500 value re-indexed to 10,000 as of Jan 2, 2017 to be on comparable basis with LUMA.A and LUMA.M.

LUMA.A All-Time Overview (since Jan-17)

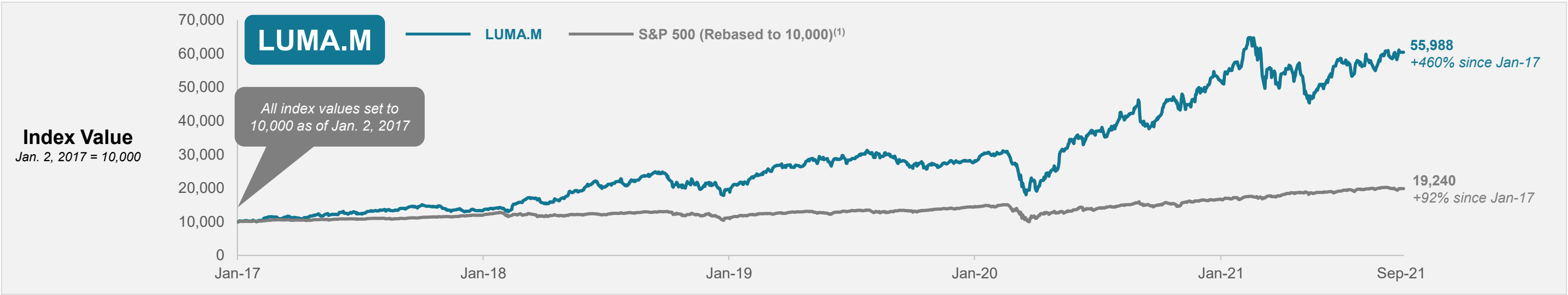


Index Inclusion Overview
(Arrow = included as of given date)



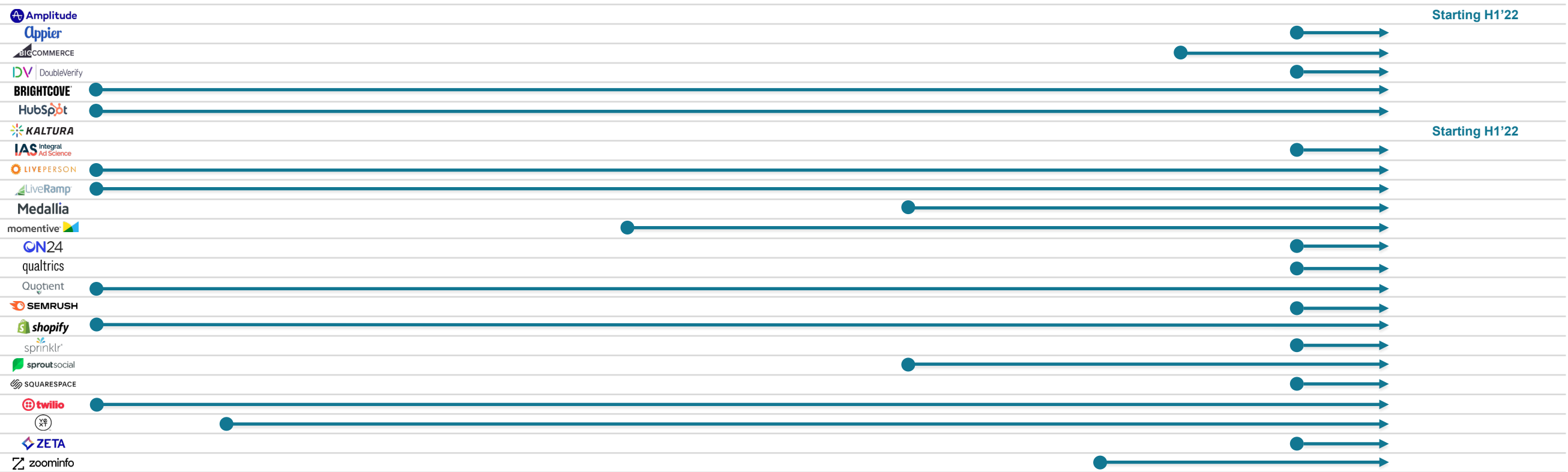
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LUMA.M All-Time Overview (since Jan-17)



Index Inclusion Overview

(Arrow = included as of given date)



Source: FactSet (market data as of September 30, 2021), LUMA (for index methodology, including constituent selection, allocation / index rebalancing, etc.). For more details on methodology, visit lumapartners.com/content/presentations/the-luma-indices/. Note: (1) S&P 500 value re-indexed to 10,000 as of Jan 2, 2017 to be on comparable basis with LUMA.A and LUMA.M.

LUMA.A – Summary Valuation Statistics

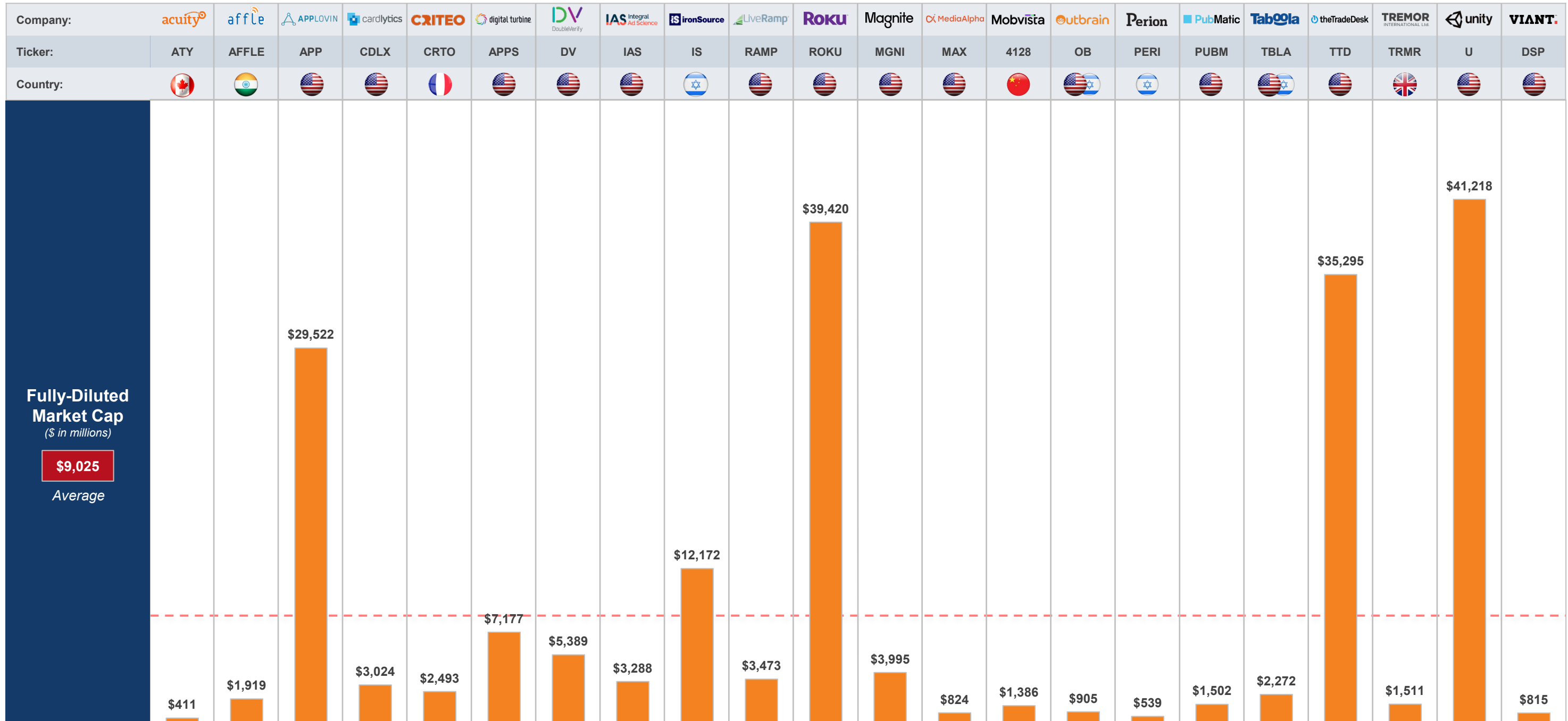
IMPORTANT: FIGURES REFLECT DEFINITIONAL ADJUSTMENTS TO CONFORM TO CUSTOMARY FINANCIAL DEFINITIONS UTILIZED IN THE ADVERTISING TECHNOLOGY SUB-SECTOR. SEE PAGE 53 FOR DETAIL ON METHODOLOGY & DEFINITIONS.

Company	Ticker	Exchange	Share Price	FD Market Cap	Enterprise Value	EV / Net Revenue			EV / EBITDA		
						CY2020A	CY2021E	CY2022E	CY2020A	CY2021E	CY2022E
Acuity Ads*	ATY	Multiple	\$6.69	\$410.7	\$347.3	8.1x	6.4x	5.4x	27.7x	18.5x	14.6x
Affle ⁽¹⁾	542752	India NSE	\$72.02	\$1,919.3	\$1,928.6	92.3x	64.1x	45.6x	NM	NM	53.5x
AppLovin	APP	NASDAQ	\$72.88	\$29,522.0	\$30,220.2	20.8x	11.1x	8.8x	NM	42.4x	29.8x
Cardlytics*	CDLX	NASDAQ	\$83.96	\$3,024.1	\$2,919.3	45.7x	28.8x	21.6x	NM	NM	NM
Criteo [†]	CRTO	NASDAQ	\$36.72	\$2,493.3	\$2,148.5	2.6x	2.4x	2.2x	8.6x	7.4x	6.9x
Digital Turbine ^{(2)‡}	APPS	NASDAQ	\$69.14	\$7,176.6	\$7,389.6	32.1x	23.1x	15.5x	NM	52.9x	30.4x
DoubleVerify	DV	NYSE	\$34.14	\$5,389.1	\$5,064.4	20.8x	15.5x	11.9x	69.2x	48.7x	37.1x
Integral Ad Science	IAS	NASDAQ	\$20.51	\$3,288.1	\$3,567.1	14.8x	11.5x	9.0x	63.3x	39.9x	32.6x
ironSource	IS	NYSE	\$10.97	\$12,172.4	\$11,502.9	34.9x	22.2x	16.7x	NM	65.2x	50.7x
LiveRamp	RAMP	NYSE	\$47.43	\$3,473.3	\$2,923.3	6.6x	5.6x	4.7x	NM	NM	62.4x
Roku	ROKU	NASDAQ	\$312.26	\$39,419.6	\$37,765.6	21.2x	13.3x	9.7x	NM	NM	70.2x
Magnite ^{(3)‡}	MGNI	NASDAQ	\$28.13	\$3,995.2	\$4,579.5	12.9x	10.1x	8.6x	60.5x	33.3x	26.0x
MediaAlpha*	MAX	NYSE	\$18.71	\$824.1	\$992.4	11.6x	9.1x	6.9x	17.1x	15.0x	10.6x
Mobvista	1860	HKG	\$0.92	\$1,386.4	\$1,415.2	2.7x	2.2x	1.9x	NM	NM	44.2x
Outbrain	OB	NASDAQ	\$14.89	\$905.2	\$662.8	3.4x	2.5x	2.0x	16.2x	8.3x	6.2x
Perion Network [†]	PERI	NASDAQ	\$17.37	\$538.9	\$521.8	4.0x	NA	NA	15.9x	10.3x	8.7x
PubMatic	PUBM	NASDAQ	\$26.39	\$1,501.8	\$1,379.9	9.3x	6.6x	5.3x	27.4x	20.4x	17.2x
Taboola ^{†(4)}	TBLA	NASDAQ	\$8.46	\$2,271.5	\$1,806.7	4.7x	3.8x	NA	17.0x	11.0x	9.8x
The Trade Desk	TTD	NASDAQ	\$70.35	\$35,295.3	\$34,882.8	41.7x	29.8x	23.1x	NM	NM	61.2x
Tremor International ⁽⁵⁾	TRMR	Multiple	\$9.14	\$1,511.0	\$1,253.2	6.8x	4.7x	4.1x	20.7x	9.1x	8.6x
Unity Software	U	NYSE	\$126.62	\$41,217.9	\$39,759.2	51.5x	37.5x	29.6x	NM	NM	NM
Viant [†]	DSP	NASDAQ	\$12.26	\$814.5	\$579.8	5.2x	4.1x	3.3x	18.2x	18.9x	15.5x
Average						20.6x	15.0x	11.8x	30.1x	26.8x	29.8x
Median						12.2x	10.1x	8.7x	19.5x	18.9x	27.9x
25th Percentile						5.6x	4.7x	4.5x	16.8x	10.6x	10.4x
75th Percentile						29.4x	22.2x	15.8x	35.9x	41.1x	45.8x

Source: FactSet (market data as of 9/30/2021), Company Filings. **Note:** Figures correspond to calendar years, or closest equivalent period. Forward estimates excluded for companies whose relevant metrics are not available on a forward basis (i.e., excluded if brokers do not forecast the specific metric such as "Ex-TAC Gross Profit" or similar such top-line metric) * Denotes usage of Gross Profit as proxy for Net Revenue † Denotes usage of Revenue ex-TAC as proxy for Net Revenue. ‡ Denotes pro forma / combined figure adjusted by LUMA to include material acquisitions. (1) Affle figures contemplate Revenue less Inventory and Data Costs (2) Digital Turbine figures presented on a pro forma basis inclusive of recent material acquisitions (Fyber, AdColony, Mobile Posse). Source data for analysis compiled by LUMA from public filings and equity research reports of the respective target companies. (3) Magnite Figures presented on a pro forma basis inclusive of Telaria and SpotX acquisitions for all presented periods. Latest Pro Forma figures available are utilized for each respective period (i.e., CY 2021 Net Revenue figures are per Craig Hallum's May 3, 2021 equity research report; CY 2022 Net Revenue figures are per Craig Hallum's July 3, 2021 report). (4) Taboola CY21 Revenue ex-TAC and Adjusted EBITDA figures representative of mid-point Company guidance as of 8/10/21 (5) Tremor International per RBC equity research as of August 18, 2021.

LUMA.A – Valuation Statistics

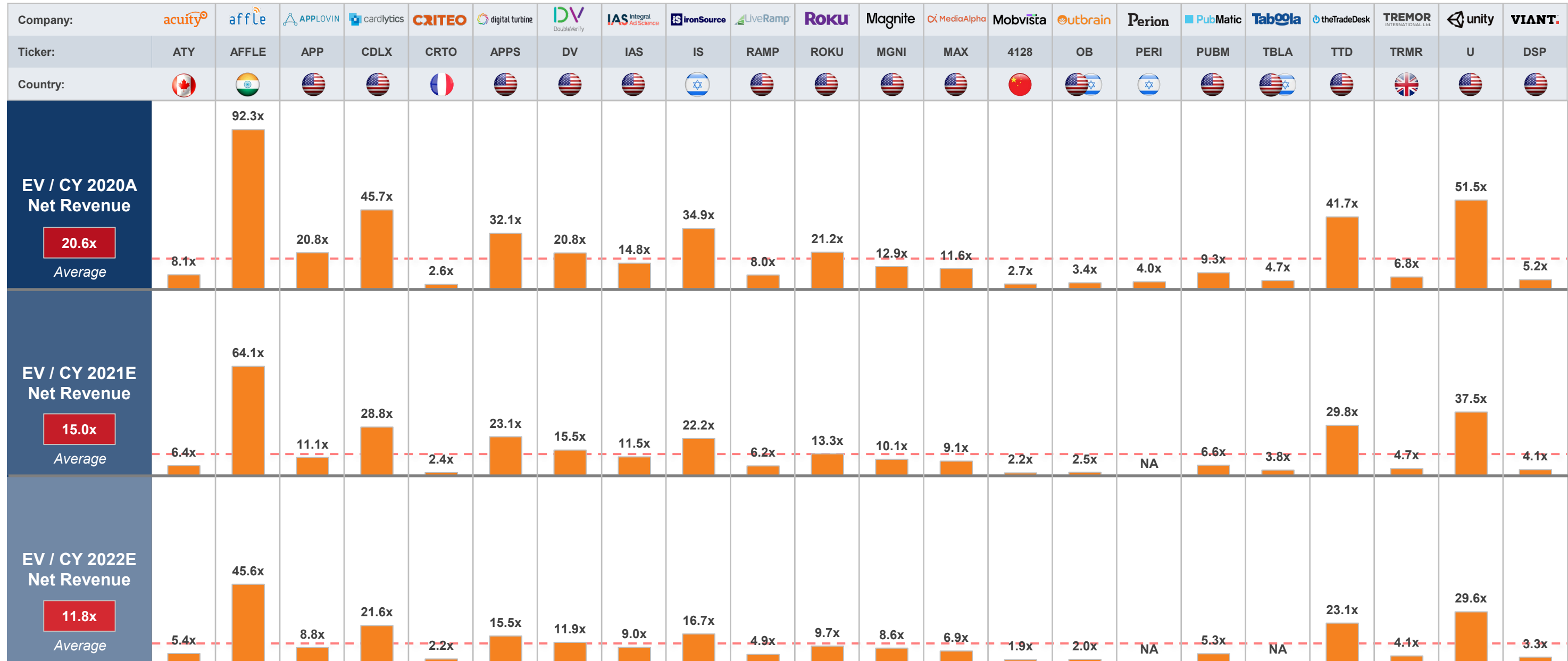
IMPORTANT: FIGURES REFLECT DEFINITIONAL ADJUSTMENTS TO CONFORM TO CUSTOMARY FINANCIAL DEFINITIONS UTILIZED IN THE ADVERTISING TECHNOLOGY SUB-SECTOR. SEE PAGE 53 FOR DETAIL ON METHODOLOGY & DEFINITIONS.



Source: FactSet (market data as of 9/30/2021), Company Filings.

LUMA.A – EV / Net Revenue

IMPORTANT: FIGURES REFLECT DEFINITIONAL ADJUSTMENTS TO CONFORM TO CUSTOMARY FINANCIAL DEFINITIONS UTILIZED IN THE ADVERTISING TECHNOLOGY SUB-SECTOR. SEE PAGE 53 FOR DETAIL ON METHODOLOGY & DEFINITIONS.



Source: FactSet (market data as of 9/30/2021), Company Filings.

LUMA.A – EV / EBITDA

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Company:	acuity	affle	APPROVIN	cardlytics	CRITEO	digital turbine	DV DoubleVerify	IAS Integral Ad Science	ironSource	LiveRamp	Roku	Magnite	MediaAlpha	Mobvista	Outbrain	Perion	PubMatic	Taboola	theTradeDesk	TREMOR INTERNATIONAL LTD.	unity	VIANT	
Ticker:	ATY	AFFLE	APP	CDLX	CRTO	APPS	DV	IAS	IS	RAMP	ROKU	MGNI	MAX	4128	OB	PERI	PUBM	TBLA	TTD	TRMR	U	DSP	
Country:																							
EV / CY 2020A EBITDA	27.7x	NA	NA	NA	8.6x	NA	69.2x	63.3x	NA	NA	NA	60.5x	17.1x	NA	16.2x	15.9x	27.4x	17.0x	NA	20.7x	NA	18.2x	
31.4x Average																							
EV / CY 2021E EBITDA	18.5x	NA	42.4x	NA	7.4x	52.9x	48.7x	39.9x	65.2x	NA	NA	33.3x	15.0x	NA	8.3x	10.3x	20.4x	11.0x	NA	9.1x	NA	18.9x	
26.8x Average																							
EV / CY 2022E EBITDA	14.6x	53.5x	29.8x	NA	6.9x	30.4x	37.1x	32.6x	50.7x	NA	70.2x	26.0x	10.6x	44.2x	6.2x	8.7x	17.2x	9.8x	61.2x	8.6x	NA	15.5x	
29.8x Average																							

Source: FactSet (market data as of 9/30/2021), Company Filings. Note: EBITDA multiples over 75.0x are considered not meaningful and are marked as "NA" and excluded from the analysis.

LUMA.A – Net Revenue

IMPORTANT: FIGURES REFLECT DEFINITIONAL ADJUSTMENTS TO CONFORM TO CUSTOMARY FINANCIAL DEFINITIONS UTILIZED IN THE ADVERTISING TECHNOLOGY SUB-SECTOR. SEE PAGE 53 FOR DETAIL ON METHODOLOGY & DEFINITIONS.

Company:																						
Ticker:	ATY	AFFLE	APP	CDLX	CRTO	APPS	DV	IAS	IS	RAMP	ROKU	MGNI	MAX	4128	OB	PERI	PUBM	TBLA	TTD	TRMR	U	DSP
Country:																						
CY 2020A Net Revenue (\$ in millions)			\$1,451		\$825	\$230	\$244	\$241	\$329	\$443	\$1,778	\$356	\$85	\$516	\$194	\$130	\$149	\$382	\$836	\$184	\$772	\$111
Average	\$43	\$21		\$64																		
CY 2021E Net Revenue (\$ in millions)			\$2,721		\$902	\$319	\$327	\$311	\$518	\$522	\$2,847	\$454	\$110	\$640	\$266	NA	\$208	\$470	\$1,170	\$267	\$1,061	\$141
Average	\$54	\$30		\$102																		
CY 2022E Net Revenue (\$ in millions)			\$3,429		\$975	\$476	\$427	\$398	\$687	\$627	\$3,885	\$535	\$145	\$759	\$334	NA	\$260	NA	\$1,513	\$309	\$1,341	\$176
Average	\$64	\$42		\$135																		
'21E Growth % YoY	27%	44%	88%	59%	9%	39%	34%	29%	57%	18%	60%	28%	28%	24%	37%	NA	40%	23%	40%	45%	37%	28%
'22E Growth % YoY	18%	41%	26%	33%	8%	49%	30%	28%	33%	20%	36%	18%	32%	19%	25%	NA	25%	NA	29%	16%	26%	25%
'20A - '22E CAGR %	22%	42%	54%	45%	9%	44%	32%	29%	44%	19%	48%	23%	30%	21%	31%	NA	32%	NA	35%	30%	32%	26%

Source: FactSet (market data as of 9/30/2021), Company Filings.

LUMA.A – EBITDA Margin (NR Basis)⁽¹⁾

IMPORTANT: FIGURES REFLECT DEFINITIONAL ADJUSTMENTS TO CONFORM TO CUSTOMARY FINANCIAL DEFINITIONS UTILIZED IN THE ADVERTISING TECHNOLOGY SUB-SECTOR. SEE PAGE 53 FOR DETAIL ON METHODOLOGY & DEFINITIONS.

Company:	acuity	affle	APPROVIN	cardlytics	CRITEO	digital turbine	DV DoubleVerify	IAS Integral Ad Science	ironSource	LiveRamp	Roku	Magnite	MediaAlpha	Mobvista	outbrain	Perion	PubMatic	Taboola	theTradeDesk	TREMOR INTERNATIONAL LTD.	unity	VIANT
Ticker:	ATY	AFFLE	APP	CDLX	CRTO	APPS	DV	IAS	IS	RAMP	ROKU	MGNI	MAX	4128	OB	PERI	PUBM	TBLA	TTD	TRMR	U	DSP
Country:																						
CY 2020A EBITDA Margin Net Revenue Basis 26.2% Average	29.2%	NA	23.8%	(12.2%)	30.4%	32.3%	30.0%	23.4%	31.6%	10.3%	8.4%	21.3%	NA	(1.5%)	21.1%	25.1%	33.8%	27.8%	33.9%	32.8%	(3.3%)	28.8%
	34.6%	NA	26.2%	(14.5%)	32.1%	43.8%	31.8%	28.7%	34.0%	4.2%	14.3%	30.3%	NA	2.7%	29.9%	NA	32.5%	35.0%	38.6%	51.5%	(1.9%)	21.7%
	37.0%	NA	29.6%	(0.2%)	31.9%	51.0%	32.0%	27.5%	33.0%	1.7%	13.8%	32.9%	NA	4.2%	32.0%	NA	30.8%	NA	37.7%	46.9%	2.0%	21.3%
'20A Change (bps)	1201	NA	NA	(1976)	(116)	NA	NA	NA	NA	1905	527	NA	NA	NA	NA	(65)	NA	NA	158	312	NA	NA
'21E Change (bps)	547	(284)	241	(231)	164	1143	174	528	NA	(142)	582	901	(787)	423	NA	NA	(130)	724	469	1866	136	(709)
'22E Change (bps)	241	136	338	1427	(15)	723	26	(121)	(101)	314	(41)	260	446	150	211	NA	(173)	NA	(95)	(458)	393	(38)

Source: FactSet (market data as of 9/30/2021), Company Filings. Note: EBITDA margins calculated with "Net Revenue" as denominator, and therefore may not correspond to a given company's reported EBITDA margin. See page 53 for details on methodology.

LUMA.A – Summary Financial Statistics

IMPORTANT: FIGURES REFLECT DEFINITIONAL ADJUSTMENTS TO CONFORM TO CUSTOMARY FINANCIAL DEFINITIONS UTILIZED IN THE ADVERTISING TECHNOLOGY SUB-SECTOR. SEE PAGE 53 FOR DETAIL ON METHODOLOGY & DEFINITIONS.

Company	Ticker	Net Revenue			Net Revenue Growth %			EBITDA			EBITDA Margin %		
		CY2020A	CY2021E	CY2022E	CY2020A	CY2021E	CY2022E	CY2020A	CY2021E	CY2022E	CY2020A	CY2021E	CY2022E
Acuity Ads*	ATY	\$43	\$54	\$64	(0.4%)	26.8%	18.3%	\$13	\$19	\$24	29.2%	34.6%	37.0%
Affle ⁽¹⁾	542752	\$21	\$30	\$42	NA	44.0%	40.5%	\$18	\$25	\$36	85.5%	82.2%	85.1%
AppLovin	APP	\$1,451	\$2,721	\$3,429	NA	87.5%	26.0%	\$346	\$713	\$1,015	23.8%	26.2%	29.6%
Cardlytics*	CDLX	\$64	\$102	\$135	(20.0%)	59.0%	33.0%	(\$8)	(\$15)	(\$0)	(12.2%)	(14.5%)	(0.2%)
Criteo [†]	CRTO	\$825	\$902	\$975	(12.8%)	9.3%	8.2%	\$251	\$289	\$311	30.4%	32.1%	31.9%
Digital Turbine ^{(2)‡}	APPS	\$230	\$319	\$476	NA	38.7%	49.1%	\$74	\$140	\$243	32.3%	43.8%	51.0%
DoubleVerify	DV	\$244	\$327	\$427	NA	34.2%	30.4%	\$73	\$104	\$137	30.0%	31.8%	32.0%
Integral Ad Science	IAS	\$241	\$311	\$398	12.7%	29.4%	27.8%	\$56	\$89	\$109	23.4%	28.7%	27.5%
ironSource	IS	\$329	\$518	\$687	NA	57.5%	32.5%	\$104	\$176	\$227	31.6%	34.0%	33.0%
LiveRamp	RAMP	\$443	\$522	\$627	16.4%	17.8%	20.1%	\$26	\$23	\$47	5.8%	4.3%	7.5%
Roku	ROKU	\$1,778	\$2,847	\$3,885	57.5%	60.1%	36.5%	\$150	\$406	\$538	8.4%	14.3%	13.8%
Magnite ^{(3)‡}	MGNI	\$356	\$454	\$535	NA	27.5%	17.8%	\$76	\$137	\$176	21.3%	30.3%	32.9%
MediaAlpha*	MAX	\$85	\$110	\$145	NA	28.4%	32.0%	\$58	\$66	\$94	68.0%	60.2%	64.6%
Mobvista	1860	\$516	\$640	\$759	3.2%	24.0%	18.5%	(\$8)	\$17	\$32	(1.5%)	2.7%	4.2%
Outbrain	OB	\$194	\$266	\$334	NA	37.1%	25.2%	41	\$80	\$107	25.1%	29.9%	32.0%
Perion Network [†]	PERI	\$130	NA	NA	3.8%	NA	NA	\$33	\$51	\$60	25.1%	NA	NA
PubMatic	PUBM	\$149	\$208	\$260	NA	39.9%	25.1%	\$50	\$68	\$80	33.8%	32.5%	30.8%
Taboola ^{†(4)}	TBLA	\$382	\$470	NA	25.5%	22.9%	NA	\$106	\$165	\$184	27.8%	35.0%	NA
The Trade Desk	TTD	\$836	\$1,170	\$1,513	26.5%	40.0%	29.3%	\$284	\$452	\$570	33.9%	38.6%	37.7%
Tremor International ⁽⁵⁾	TRMR	\$184	\$267	\$309	12.4%	44.9%	15.8%	\$61	\$137	\$145	32.8%	51.5%	46.9%
Unity Software	U	\$772	\$1,061	\$1,341	NA	37.4%	26.4%	(\$25)	(\$20)	\$27	(3.3%)	(1.9%)	2.0%
Viant [†]	DSP	\$111	\$141	\$176	NA	27.8%	24.6%	\$32	\$31	\$38	28.8%	21.7%	21.3%
Average					11.3%	37.8%	26.9%				26.2%	29.4%	31.0%
Median					12.4%	37.1%	26.2%				28.3%	31.8%	32.0%
25th Percentile					1.4%	27.5%	19.7%				21.1%	21.7%	19.4%
75th Percentile					20.9%	44.0%	32.1%				32.1%	35.0%	37.2%

Source: FactSet (market data as of 9/30/2021), Company Filings. **Note:** Figures correspond to calendar years, or closest equivalent period. Forward estimates excluded for companies whose relevant metrics are not available on a forward basis (i.e., excluded if brokers do not forecast the specific metric such as "Ex-TAC Gross Profit" or similar such top-line metric) * Denotes usage of Gross Profit as proxy for Net Revenue † Denotes usage of Revenue ex-TAC as proxy for Net Revenue. ‡ Denotes pro forma / combined figure adjusted by LUMA to include material acquisitions. (1) Affle figures contemplate Revenue less Inventory and Data Costs (2) Digital Turbine figures presented on a pro forma basis inclusive of recent material acquisitions (Fyber, AdColony, Mobile Posse). Source data for analysis compiled by LUMA from public filings and equity research reports of the respective target companies. (3) Magnite Figures presented on a pro forma basis inclusive of Telaria and SpotX acquisitions for all presented periods. Latest Pro Forma figures available are utilized for each respective period (i.e., CY 2021 Net Revenue figures are per Craig Hallum's May 3, 2021 equity research report; CY 2022 Net Revenue figures are per Craig Hallum's July 3, 2021 report). (4) Taboola CY21 Revenue ex-TAC and Adjusted EBITDA figures representative of mid-point Company guidance as of 8/10/21 (5) Tremor International per RBC equity research as of August 18, 2021.

LUMA.A – Summary Financial Statistics

IMPORTANT: FIGURES REFLECT DEFINITIONAL ADJUSTMENTS TO CONFORM TO CUSTOMARY FINANCIAL DEFINITIONS UTILIZED IN THE ADVERTISING TECHNOLOGY SUB-SECTOR. SEE PAGE 53 FOR DETAIL ON METHODOLOGY & DEFINITIONS.

Company	Ticker	R&D Expense % of Net Revenue			G&A Expense % of Net Revenue			S&M Expense % of Net Revenue		
		CY2020A	CY2021E	CY2022E	CY2020A	CY2021E	CY2022E	CY2020A	CY2021E	CY2022E
Acuity Ads*	ATY	24.5%	22.3%	22.1%	11.0%	10.5%	10.1%	33.7%	32.2%	31.4%
Affle ⁽¹⁾	542752	NA	NA	NA	NA	NA	NA	NA	NA	NA
AppLovin	APP	11.3%	9.3%	9.9%	4.1%	4.3%	4.5%	42.5%	40.3%	38.7%
Cardlytics*	CDLX	20.1%	27.4%	24.0%	46.8%	48.6%	40.9%	55.5%	56.0%	50.0%
Criteo [†]	CRTO	14.6%	15.1%	14.9%	12.7%	14.4%	13.8%	37.8%	34.9%	35.0%
Digital Turbine ^{(2)‡}	APPS	8.7%	22.0%	17.2%	14.7%	28.1%	22.1%	8.4%	20.8%	17.0%
DoubleVerify	DV	19.0%	18.7%	18.3%	13.8%	14.5%	11.7%	22.6%	21.2%	19.8%
Integral Ad Science	IAS	NA	18.5%	18.1%	NA	17.2%	14.7%	NA	25.1%	24.5%
ironSource	IS	NA	15.0%	13.9%	NA	11.1%	9.0%	NA	36.9%	35.9%
LiveRamp	RAMP	21.7%	25.3%	24.2%	16.5%	17.3%	16.4%	31.0%	33.0%	32.2%
Roku	ROKU	20.0%	17.0%	17.8%	9.7%	9.3%	9.1%	16.8%	15.3%	16.0%
Magnite ^{(3)‡}	MGNI	13.4%	16.8%	17.2%	13.9%	13.8%	13.9%	20.3%	26.7%	26.5%
MediaAlpha*	MAX	14.5%	12.2%	10.3%	38.5%	45.2%	35.1%	24.0%	20.4%	19.4%
Mobvista	1860	6.2%	NA	NA	0.8%	NA	NA	3.3%	NA	NA
Outbrain	OB	NA	13.6%	13.5%	NA	19.1%	17.3%	NA	35.1%	32.8%
Perion Network [†]	PERI	23.7%	NA	NA	12.1%	NA	NA	30.0%	NA	NA
PubMatic	PUBM	8.3%	8.4%	9.1%	13.6%	16.3%	15.6%	29.1%	29.3%	30.7%
Taboola ⁽⁴⁾	TBLA	NA	23.8%	NA	NA	19.4%	NA	NA	38.3%	NA
The Trade Desk	TTD	15.5%	16.4%	16.2%	16.2%	15.7%	15.3%	17.3%	18.7%	17.7%
Tremor International ⁽⁵⁾	TRMR	NA	6.5%	9.4%	NA	13.5%	12.8%	NA	30.1%	31.6%
Unity Software	U	41.4%	49.4%	44.7%	19.8%	22.5%	20.5%	24.1%	25.4%	25.7%
Viant [†]	DSP	7.9%	11.3%	9.3%	15.9%	22.9%	17.6%	26.2%	32.9%	30.9%
Average		16.9%	18.4%	17.2%	16.3%	19.1%	16.7%	26.4%	30.1%	28.7%
Median		15.1%	16.8%	16.7%	13.9%	16.3%	15.0%	25.1%	30.1%	30.8%
25th Percentile		10.7%	12.9%	11.1%	11.9%	13.7%	12.0%	19.5%	23.1%	21.0%
75th Percentile		20.5%	22.1%	18.2%	16.3%	20.9%	17.5%	31.6%	35.0%	32.7%

Source: FactSet (market data as of 9/30/2021), Company Filings. **Note:** Figures correspond to calendar years, or closest equivalent period. Forward estimates excluded for companies whose relevant metrics are not available on a forward basis (i.e., excluded if brokers do not forecast the specific metric such as "Ex-TAC Gross Profit" or similar such top-line metric) * Denotes usage of Gross Profit as proxy for Net Revenue † Denotes usage of Revenue ex-TAC as proxy for Net Revenue ‡ Denotes pro forma / combined figure adjusted by LUMA to include material acquisitions. (1) Affle figures contemplate Revenue less Inventory and Data Costs (2) Digital Turbine figures presented on a pro forma basis inclusive of recent material acquisitions (Fyber, AdColony, Mobile Posse). Source data for analysis compiled by LUMA from public filings and equity research reports of the respective target companies. (3) Magnite Figures presented on a pro forma basis inclusive of Telaria and SpotX acquisitions for all presented periods. Latest Pro Forma figures available are utilized for each respective period (i.e., CY 2021 Net Revenue figures are per Craig Hallum's May 3, 2021 equity research report; CY 2022 Net Revenue figures are per Craig Hallum's July 3, 2021 report). (4) Taboola CY21 Revenue ex-TAC and Adjusted EBITDA figures representative of mid-point Company guidance as of 8/10/21 (5) Tremor International per RBC equity research as of August 18, 2021.

Visit Our Website to Track LUMA.A and LUMA.M

[Click Here](#) to Access the Regularly-Updated Index Values & Supporting Data

Regularly-Updated Dashboard available via Google Sheets...

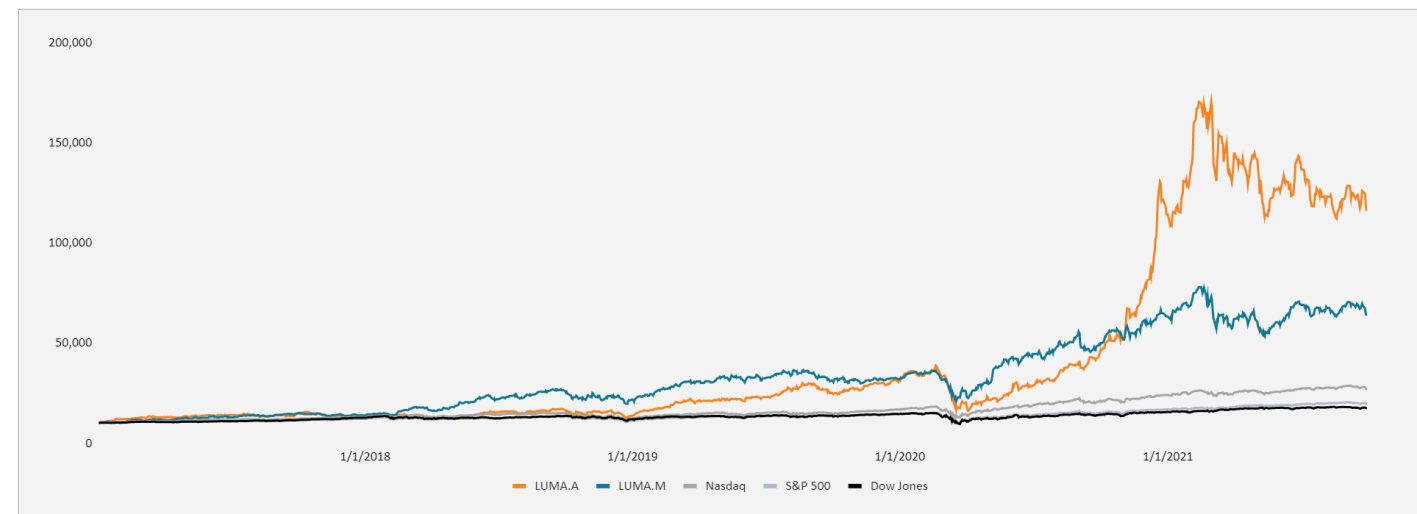


LUMA's Advertising and Marketing Technology PubCo Indices

BETA (v1.0)

Effective Date of Data:	Index Value					% Change Since			
	9/30/21	1 Week Ago	1 Month Ago	1 Year Ago	Jan-17	1 Week Ago	1 Month Ago	1 Year Ago	Jan-17
9/30/2021	116,662	125,826	117,867	46,722	10,000	(7.3%)	(1.0%)	149.7%	1066.6%
9/23/2021	116,662	125,826	117,867	46,722	10,000	(7.3%)	(1.0%)	149.7%	1066.6%
8/26/2021	116,662	125,826	117,867	46,722	10,000	(7.3%)	(1.0%)	149.7%	1066.6%
10/1/2020	116,662	125,826	117,867	46,722	10,000	(7.3%)	(1.0%)	149.7%	1066.6%
1/2/2017	116,662	125,826	117,867	46,722	10,000	(7.3%)	(1.0%)	149.7%	1066.6%

Reference Benchmarks Re-Based to 10,000 As of January 2, 2017 (for comparison purposes)									
NASDAQ	26,841	27,962	27,764	21,041	10,000	(4.0%)	(3.3%)	27.6%	168.4%
DOW JONES	17,402	17,591	17,915	14,076	10,000	(1.1%)	(2.9%)	23.6%	74.0%
S&P 500	19,240	19,872	19,966	15,101	10,000	(3.2%)	(3.6%)	27.4%	92.4%



The information set forth herein has been obtained or derived from sources believed by LUMA Partners LLC or its affiliates ("LUMA") to be reliable. However, LUMA does not make any representation or warranty, express or implied, as to the information's accuracy or completeness, nor does LUMA recommend that the attached information serve as the basis of any investment decision.

...Including Supporting Share Price and Index Allocation Data

Category	LUMA Index Raw Market Data			Index Value (based to 10,000 at Jan 2, 2017)			Share Price						
	LUMA.A	LUMA.M	Nasdaq	S&P 500	Dow Jones	Nasdaq	S&P 500	Dow Jones	LUMA.A	LUMA.A	LUMA.A	LUMA.A	LUMA.A
Company									Criteo SA Sponsored ADR	Trade Desk, Inc. Class A	Magnite, Inc.	Telaria Inc	Viant Technology, Inc. Class A
Ticker									CRTO-US	TTD-US	MGNI-US	TLRA-USA	DSP-US
Date	LUMA.A	LUMA.M	00000129	SP50	DJIAK	00000129	SP50	DJIAK	CRTO-US	TTD-US	MGNI-US	TLRA-USA	DSP-US
6/8/2021	133,595	61,956	25,868	18,882	17,508	13,925	4,227	34,800	\$43.96	\$604.87	\$33.01		\$34.00
6/9/2021	131,686	61,282	25,843	18,847	17,430	13,912	4,220	34,447	\$41.20	\$586.30	\$33.87		\$29.06
6/10/2021	129,777	62,206	26,045	18,935	17,440	14,020	4,239	34,466	\$39.92	\$590.27	\$32.54		\$28.37
6/11/2021	130,823	63,328	26,136	18,972	17,447	14,069	4,247	34,480	\$40.45	\$599.81	\$32.85		\$29.21
6/14/2021	130,057	64,518	26,331	19,006	17,403	14,174	4,255	34,394	\$39.64	\$601.56	\$31.83		\$30.85
6/15/2021	126,740	63,387	26,143	18,968	17,356	14,073	4,247	34,299	\$39.39	\$585.76	\$31.01		\$28.69
6/16/2021	126,910	64,781	26,081	18,866	17,221	14,040	4,224	34,034	\$39.61	\$590.20	\$30.98		\$28.21
6/17/2021	127,980	66,578	26,307	18,857	17,115	14,161	4,222	33,823	\$39.25	\$621.40	\$31.63		\$28.78
6/18/2021	123,256	67,695	26,064	18,610	16,845	14,030	4,166	33,290	\$38.56	\$608.80	\$29.49		\$29.41
6/21/2021	124,089	67,646	26,270	18,871	16,845	14,141	4,225	33,290	\$38.32	\$612.60	\$30.21		\$28.64
6/22/2021	128,367	68,609	26,478	18,967	17,177	14,253	4,246	33,946	\$39.13	\$645.00	\$31.52		\$28.75
6/23/2021	131,943	69,177	26,512	18,947	17,141	14,272	4,242	33,874	\$38.76	\$653.90	\$32.74		\$29.49

Category	LUMA Index Portfolio Weighting																	
	LUMA.A	LUMA.M	Nasdaq	S&P 500	Dow Jones	LUMA.A	LUMA.A	LUMA.A	LUMA.A	LUMA.A	LUMA.A	LUMA.A	LUMA.A					
Company						AppLovin Corp. Class A	Digital Turbine, Inc.	DoubleVerify Holdings, Inc.	LiveRamp Holdings, Inc.	AcuityAds Holdings Inc	Cardlytics, Inc.	MediaAlpha Inc Class A	ironSource Ltd Class A	#N/A	Perion Network Ltd	Shopify, Inc. Class A	BigCommerce Holdings Inc	Twilio, Inc. Class A
Ticker						APP-US	APPS-US	DV-US	RAMP-US	AT-CA	CDLX-US	MAX-US	IS-US	TBLA-US	PERI-US	SHOP-US	BIGC-US	TWLO-US
Date	APP-US	APPS-US	DV-US	RAMP-US	AT-CA	CDLX-US	MAX-US	IS-US	TBLA-US	PERI-US	SHOP-US	BIGC-US	TWLO-US					
1/2/2017	\$0.88	\$28.80	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75	\$1.75
7/3/2017	\$0.99	\$25.91	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	\$3.16
1/1/2018	\$1.79	\$27.56	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32	\$1.32
7/2/2018	\$1.48	\$34.21	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90	\$0.90
1/1/2019	\$1.93	\$38.63	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84	\$0.84
7/1/2019	\$5.15	\$47.36	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21	\$1.21
1/1/2020	\$7.13	\$48.07	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06	\$1.06
7/1/2020	\$12.68	\$43.69	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80	\$0.80
1/1/2021	\$58.58	\$73.19	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22
7/1/2021	\$58.58	\$73.19	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22	\$11.22

Source: FactSet (market data as of September 30, 2021), LUMA (for index methodology, including constituent selection, allocation / index rebalancing, etc.). For more details on methodology, visit lumapartners.com/content/presentations/the-luma-indices/

LUMA.A – Methodology & Definitions Utilized in this Report

Company	Ticker	Net Revenue		EBITDA		EBITDA Margin %	
		Definition / Metric Used	Source	Definition / Metric Used	Source	Definition	Source
Acuity Ads*	ATY	Gross Profit	FactSet	"EBITDA" as defined and forecasted by Brokers ⁽⁶⁾	FactSet	EBITDA ÷ Gross Profit	Calculation
Affle ⁽¹⁾	542752	See footnote (1)	Filings		FactSet	Not calculated	NA
AppLovin	APP	Reported Revenue	FactSet		FactSet	EBITDA ÷ Reported Revenue	Calculation
Cardlytics*	CDLX	Gross Profit	FactSet		FactSet	EBITDA ÷ Gross Profit	Calculation
Criteo [†]	CRTO	Revenue ex-TAC	FactSet / Filings		FactSet	EBITDA ÷ Revenue ex-TAC	Calculation
Digital Turbine ^{(2)‡}	APPS	Gross Profit	See footnote (2)		FactSet	EBITDA ÷ Gross Profit	See footnote (2)
DoubleVerify	DV	Reported Revenue	FactSet		FactSet	EBITDA ÷ Reported Revenue	Calculation
Integral Ad Science	IAS	Reported Revenue	FactSet		FactSet	EBITDA ÷ Reported Revenue	Calculation
ironSource	IS	Reported Revenue	FactSet		FactSet	EBITDA ÷ Reported Revenue	Calculation
LiveRamp	RAMP	Reported Revenue	FactSet		FactSet	EBITDA ÷ Reported Revenue	Calculation
Roku	ROKU	Reported Revenue	FactSet		FactSet	EBITDA ÷ Reported Revenue	Calculation
Magnite ^{(3)‡}	MGNI	Reported Revenue	See footnote (3)		FactSet	EBITDA ÷ Reported Revenue	See footnote (3)
MediaAlpha*	MAX	Gross Profit	FactSet		FactSet	Not calculated	NA
Mobvista	1860	Reported Revenue	FactSet		FactSet	EBITDA ÷ Reported Revenue	Calculation
Outbrain	OB	Gross Profit ex-TAC	FactSet		FactSet	EBITDA ÷ Gross Profit ex-TAC	Calculation
Perion Network [†]	PERI	Revenue ex-TAC	Filings		FactSet	EBITDA ÷ Revenue ex-TAC	Calculation
PubMatic	PUBM	Reported Revenue	FactSet		FactSet	EBITDA ÷ Reported Revenue	Calculation
Taboola ^{†(4)}	TBLA	Gross Profit ex-TAC	FactSet		FactSet	EBITDA ÷ Gross Profit ex-TAC	Calculation
The Trade Desk	TTD	Reported Revenue	FactSet		FactSet	EBITDA ÷ Reported Revenue	Calculation
Tremor International ⁽⁵⁾	TRMR	Reported Revenue	Broker (RBC)		FactSet	EBITDA ÷ Reported Revenue	Broker (RBC)
Unity Software	U	Reported Revenue	FactSet	FactSet	EBITDA ÷ Reported Revenue	Calculation	
Viant [†]	DSP	Revenue ex-TAC	Filings	FactSet	EBITDA ÷ Revenue ex-TAC	Calculation	

Source: FactSet (market data as of 9/30/2021), Company Filings. **Note:** Figures correspond to calendar years, or closest equivalent period. Forward estimates excluded for companies whose relevant metrics are not available on a forward basis (i.e., excluded if brokers do not forecast the specific metric such as "Ex-TAC Gross Profit" or similar such top-line metric) * Denotes usage of Gross Profit as proxy for Net Revenue † Denotes usage of Revenue ex-TAC as proxy for Net Revenue. ‡ Denotes pro forma / combined figure adjusted by LUMA to include material acquisitions. (1) Affle figures contemplate Revenue less Inventory and Data Costs (2) Digital Turbine figures presented on a pro forma basis inclusive of recent material acquisitions (Fyber, AdColony, Mobile Posse). Source data for analysis compiled by LUMA from public filings and equity research reports of the respective target companies. (3) Magnite Figures presented on a pro forma basis inclusive of Telaria and SpotX acquisitions for all presented periods. Latest Pro Forma figures available are utilized for each respective period (i.e., CY 2021 Net Revenue figures are per Craig Hallum's May 3, 2021 equity research report; CY 2022 Net Revenue figures are per Craig Hallum's July 3, 2021 report). (4) Taboola CY21 Revenue ex-TAC and Adjusted EBITDA figures representative of mid-point Company guidance as of 8/10/21 (5) Tremor International per RBC equity research as of August 18, 2021. (6) EBITDA contemplated for each company is on the same basis that is forecasted by each company's respective Equity Research firms / brokers. Thus, the definition for EBITDA utilized above [i] contemplates any non-GAAP adjustments that are likewise contemplated by such Equity Research firms / Brokers, and [ii] maps to same definition as what is used in calculation of "consensus" estimates.

LUMA's Recent Deals



September 2021

Reflektion

has been acquired by

SITECORE

The undersigned acted as a financial advisor to Reflektion, Inc.

August 2021

publica

has been acquired by

IAS Integral Ad Science

The undersigned acted as the exclusive financial advisor to Publica LLC

July 2021

JetFuel

has been acquired by

Vungle

The undersigned acted as the exclusive financial advisor to JetFuel, Inc.

July 2021

Outbrain

Initial Public Offering
\$160,000,000

LUMA Securities, a wholly-owned broker-dealer of the undersigned, acted as underwriting co-manager to Outbrain, Inc.

June 2021

Simplifi

has agreed to sell an equity interest to

Blackstone

The undersigned acted as financial advisor to Simplifi Holdings, Inc.

May 2021

Chartboost

has agreed to be acquired by

Zynga

The undersigned acted as financial advisor to Chartboost, Inc.

April 2021

APPLOVIN

Initial Public Offering
\$2,000,000,000

LUMA Securities, a wholly-owned broker-dealer of the undersigned, acted as underwriting co-manager to AppLovin Corporation.

March 2021

Blackstone

majority investment in

LIFTOFF

The undersigned acted as exclusive financial advisor to Blackstone.

March 2021

Vungle

has acquired

GameRefinery

The undersigned acted as exclusive financial advisor to Vungle, Inc.

February 2021

ADCOLONY
A Wholly-Owned Business Unit of

otelio

has been acquired by

digital turbine

The undersigned acted as exclusive financial advisor to AdColony

February 2021

Parse.ly

has been acquired by

Wvip
a division of

AUTOMATTIC

The undersigned acted as exclusive financial advisor to Parsely, Inc.

February 2021

Magnite

has acquired

SPOTX

The undersigned acted as financial advisor to Magnite, Inc.

January 2021

alphonso

has received a majority investment by

LG

The undersigned acted as exclusive financial advisor to Alphonso Inc.

January 2021

BEESWAX

has been acquired by

COMCAST

The undersigned acted as exclusive financial advisor to BeeswaxIO, Inc.



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