



Q1 2023 Market Report

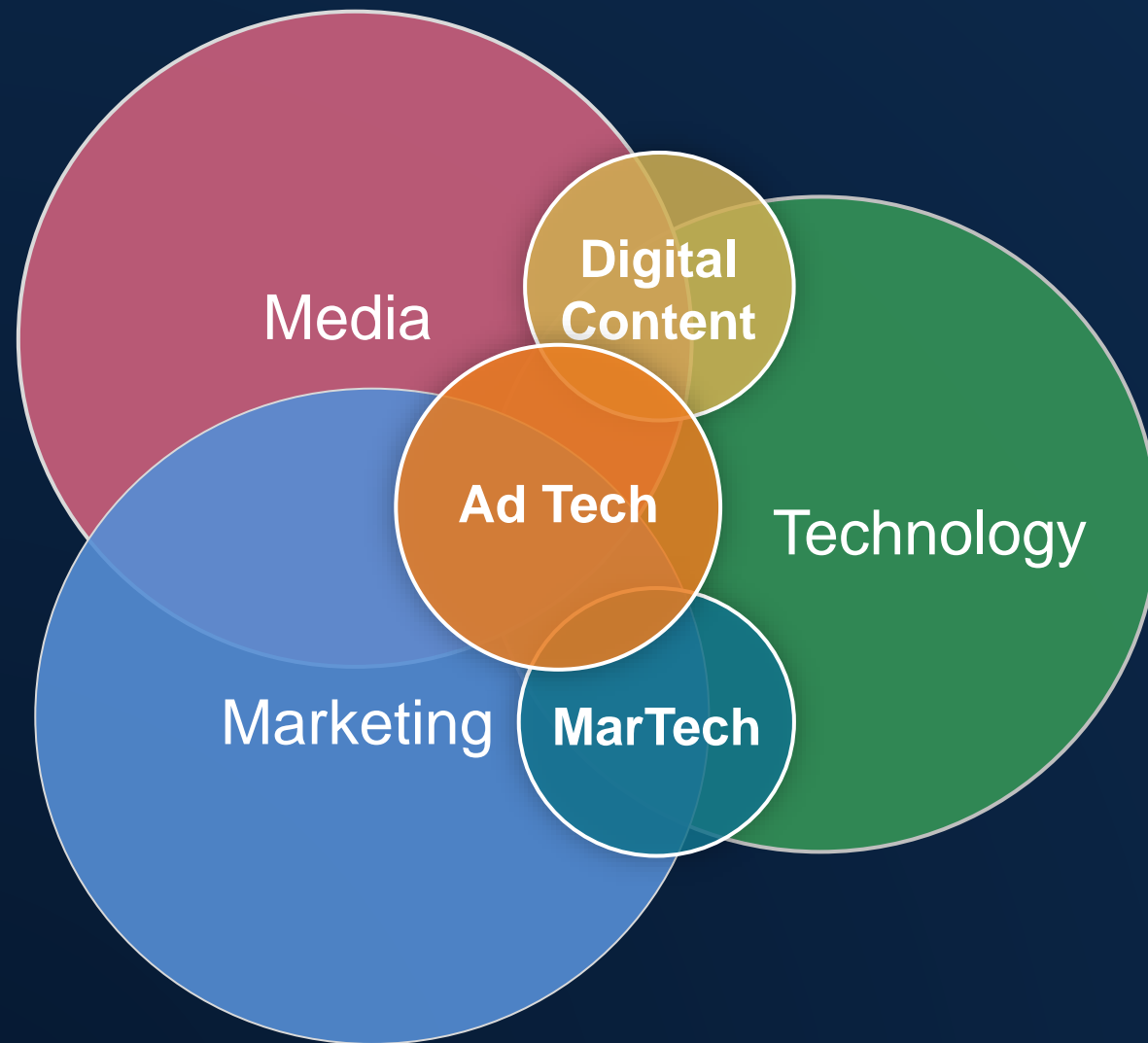
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LUMA's Focus on Digital Media & Marketing



- 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



December 2022

BC PARTNERS

has acquired

MADISON LOGIC.

The undersigned acted as exclusive financial advisor to BC Partners LLP

November 2022

yahoo!

has agreed to a partnership with

Taboola

The undersigned acted as financial advisor to Yahoo!

September 2022

martin

has agreed to be acquired by

PubMatic

The undersigned acted as exclusive financial advisor to Martin

July 2022

VERVE GROUP
A subsidiary of

Media and Games Invest Group

has acquired

DATASEAT

The undersigned acted as exclusive financial advisor to Media and Games Invest SE

June 2022

DREAMSCAPE
a GTCR portfolio company

has made a strategic investment in

Standard Media index

The undersigned acted as exclusive financial advisor to Dreamscape and GTCR

April 2022

iSpot.tv

has received a \$325 million investment from

Goldman Sachs

The undersigned acted as co-exclusive financial advisor to iSpot.tv, Inc.

April 2022

DREAMSCAPE
a GTCR portfolio company

has made a strategic investment in

SQAD

The undersigned acted as exclusive financial advisor to Dreamscape and GTCR

March 2022

tvSquared

has agreed to be acquired by

INNOVLD

The undersigned acted as exclusive financial advisor to TV Squared Limited

January 2022

APPLOVIN

has agreed to acquire

mopub

a wholly owned subsidiary of

The undersigned acted as exclusive financial advisor to AppLovin Corporation

Executive Summary

Overview

- Per Axios, “**This has been the slowest Q1 for global mergers and acquisitions since 2013.**”
- Q1 2023 was another test for the Digital Media & Marketing ecosystem, as the industry continued to feel the impact of sharp interest rate increases, ongoing pressures to re-evaluate cost structures, and the failure of Silicon Valley Bank, squeezing a venture market that was reeling from a slowdown in financing and credit.
- As a result of these challenges, companies have experienced more urgency around finding a path to profitability, and predictability. Stronger visibility into operating results will continue to offset the higher cost of capital and tighter credit standards that have reset valuation expectations in the industry.
- Despite these exogenous challenges, most companies in the **LUMA.A** and **LUMA.M** cohorts have shown maturity in their ability to drive profitability while moderating growth, plus continued sectoral tailwinds related to streaming, commerce media, and AI create significant growth opportunities for the future.

M&A Activity

- Overall deal activity across sub-sectors was up **10%** from Q4 2022, with an accompanying increase in scaled (>\$100mm) deal activity of **~31%**. While deal volume in the **MarTech** (down **8%**) sector declined from the prior quarter, **Digital Content** was up **14%** relative to the prior quarter and **Ad Tech** was up **78%**, including more scaled transactions.
- While M&A volatility is expected to persist in the short-term, as interest rate changes begin to settle and companies continue to execute with profitability, strategic consolidation opportunities will increase as those with access to cash seek to expand their scale and capabilities.

Public Markets Activity

- The **LUMA.A (+12%)** and **LUMA.M (+19%)** cohorts had strong performances in Q1 2023, marking the strongest trading performance in over a year, and outpacing the **7%** return from the S&P 500 benchmark.
- Q1 2023 marked the third straight quarter of relative valuation stabilization, helping buyers and sellers reset valuation expectations. Public market reactions to the **LUMA.A** and **LUMA.M** earnings announcements throughout the quarter were mixed; despite many names exceeding consensus expectations.
- Declining valuations have not necessarily been an indicator of declining quality among **LUMA.A** and **LUMA.M** companies; various value drivers within these organizations such as revenue growth, profitability, and predictability have not been negatively affected as market valuations suggest.

Private Financing Activity

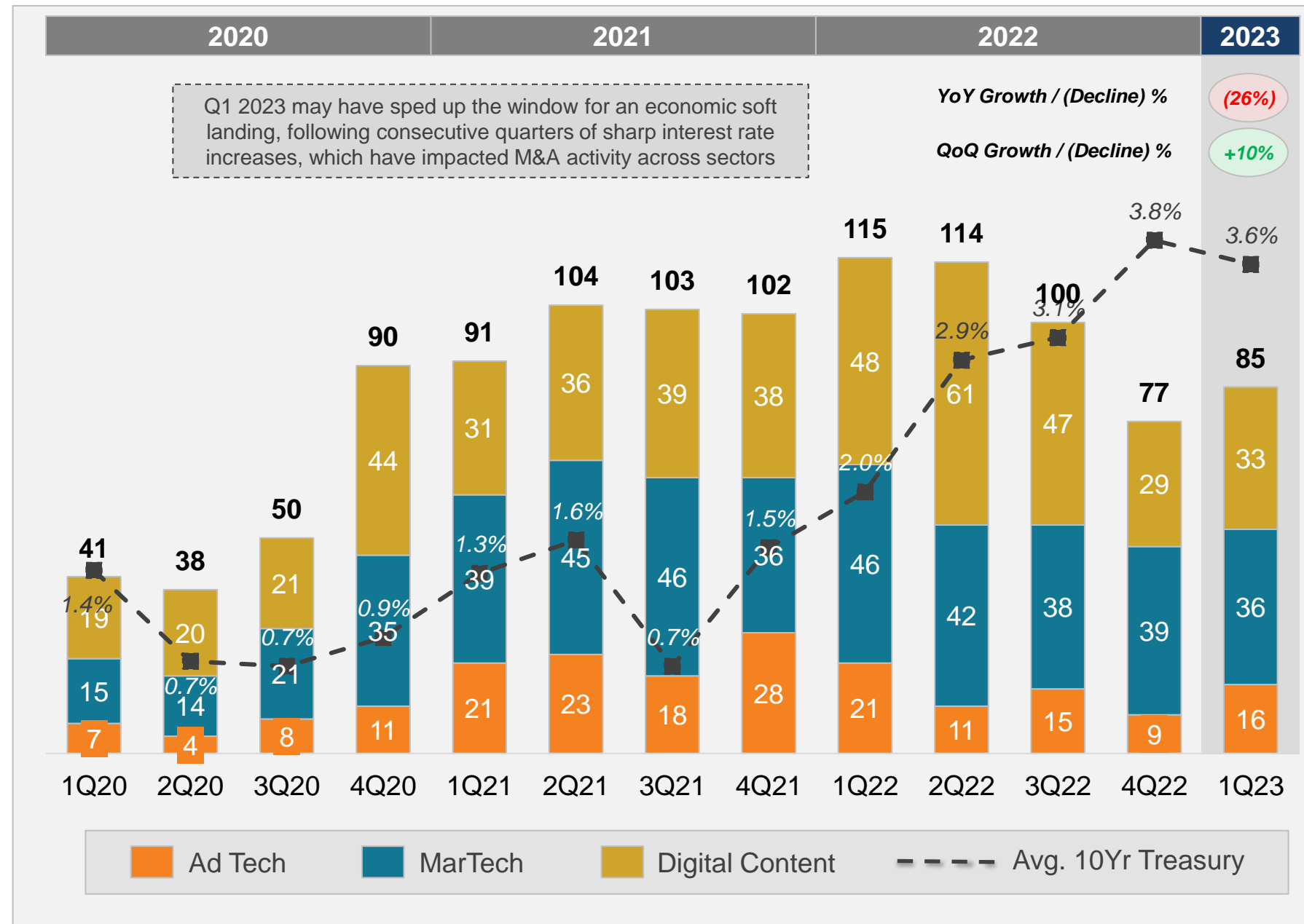
- 2023 began with an imbalance of supply and demand of capital in the venture market, specifically for late-stage VC-backed firms as 2022 ended with the lowest aggregate exit value for US-based VC-backed startups since the financial crisis.
- Despite this liquidity environment, investors in the Digital Media & Marketing ecosystem have continued to deploy capital into strategic and opportunistic areas such as Generative AI in Q1 2023.

Table of Contents

1	Q1 2023 M&A Activity
A	General Ecosystem M&A Trends
B	M&A Activity by Category
2	Q1 2023 Public Markets Activity
3	Q1 2023 Private Financing Activity
4	Appendix

Digital Media & Marketing M&A Activity by Sector – Quarterly View

Number of Transactions – Quarterly (1Q20-1Q23)



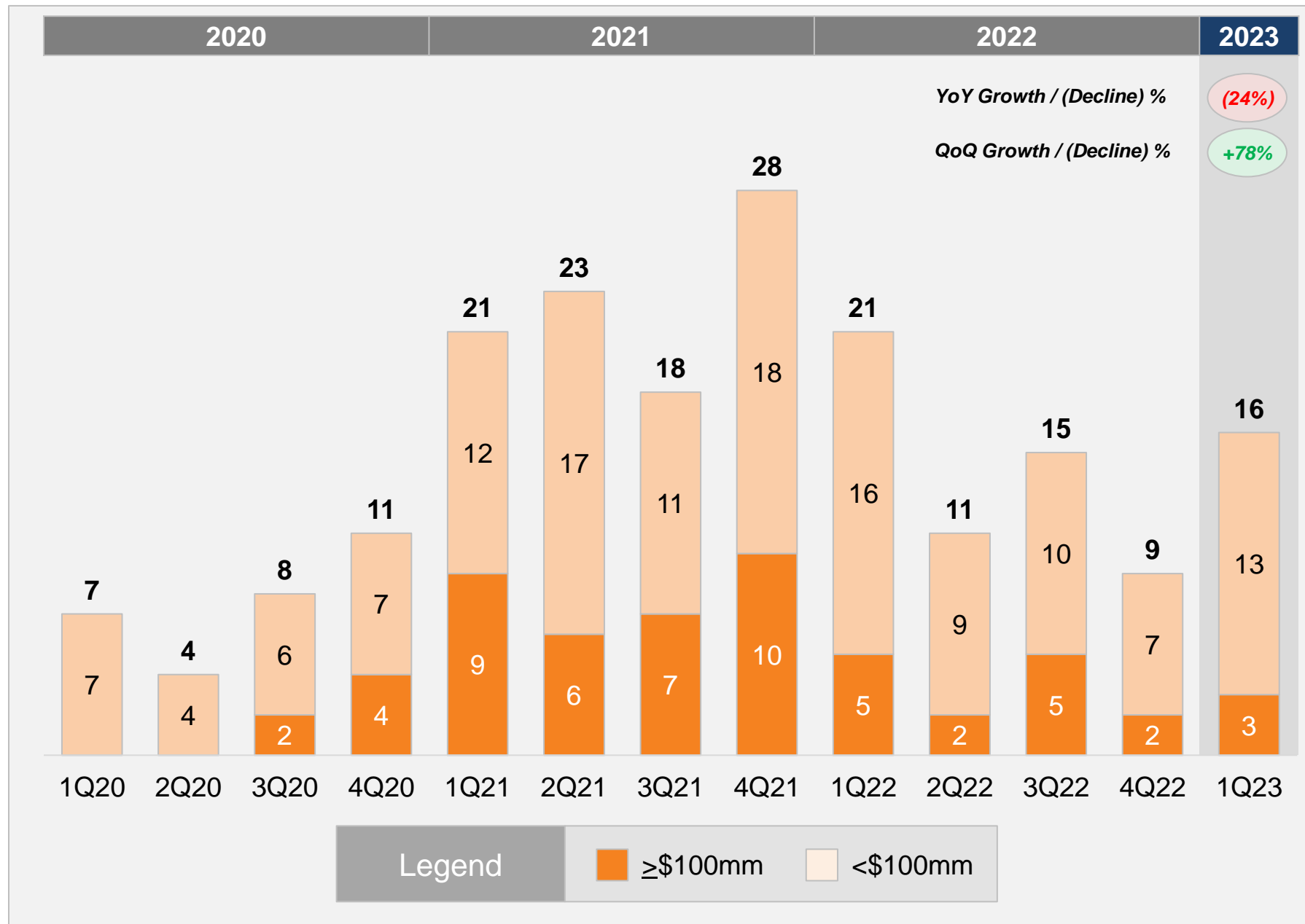
Commentary

- M&A activity in Q1 2023 remained challenged by the lagging impact of rapid rate hikes (represented by dotted line) and exogenous factors such as the scale and ripple effect of Silicon Valley Bank's collapse which has led to continued tightening of credit and liquidity conditions.
- Despite these factors, **Ad Tech** M&A activity was up **78%** from the prior quarter, as the CTV ecosystem remained active. **MarTech** M&A activity was down **8%** despite more scaled deals than the prior quarter. **Digital Content** M&A activity was up **14%** over the prior quarter.
- Scaled (\geq \$100mm) deal activity was up **~31%** from the prior quarter, with 17 scaled deals versus 13 in 4Q 2022. Furthermore, **MarTech** scaled transactions included two LUMA.M names being taken private in \$1bn+ deals (Qualtrics ~\$12.5bn and Momentive ~\$1.5bn).
- While M&A volatility is expected to persist in the short-term, as interest rate changes begin to settle and companies continue to execute with profitability, strategic consolidation opportunities will increase as those with access to cash seek to expand their scale and capabilities.

Table of Contents

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3	Q1 2023 Private Financing Activity
4	Appendix

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Commentary















- Ad Tech saw the most growth in Q1 2023 of any of the LUMA sub-sectors, increasing **78%** (16 versus 9 in Q4'22); including 3 scaled transactions versus 2 in Q4 2022.
- Despite sustained macro headwinds, The fast-growing CTV & Commerce Media ecosystems continued to attract investment as evidenced by Kargo's acquisition of VideoByte, LionTree's majority investment in Transmit.Live, Criteo's acquisition of Brandcrush, and Shell's acquisition of Volta.
- Private Equity remains active in the space, as evidenced by Bridgepoint's \$370mm acquisition of Equativ, and Blackstone-backed Simpli.fi's acquisition of Bidtellect.

Looking Ahead

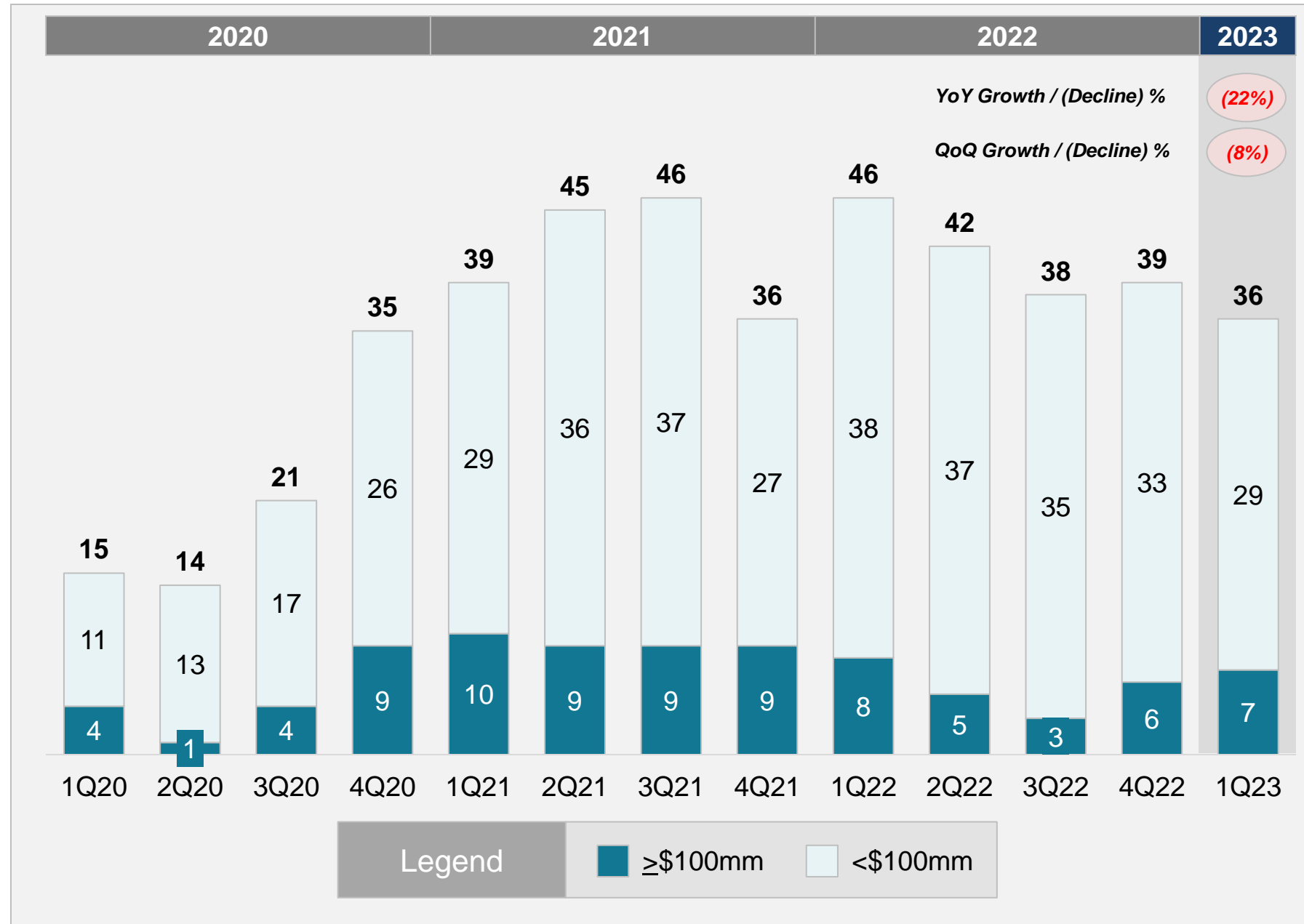
- Further pick-up in "horizontal" strategies as the evolving data landscape and rise of retail media / 1st party data networks push the ecosystem to further connect advertising supply and demand.
- Lower valuations without declining quality of earnings for Ad Tech names presents major opportunities for strategic and financial buyers looking to capitalize on continued consolidation, in addition to tailwinds in related to CTV, Commerce Media and the evolving data landscape.

Ad Tech – Q1 2023 Notable Deals

Ad Tech
MarTech
Digital Content

Announcement Date	Target	Acquirer	Capital Raised (\$mm)	Enterprise Value (\$mm)	Commentary
3/21/2023	 vibonomics	MOOD:MEDIA™	\$23	ND	<ul style="list-style-type: none"> ■ Mood:Media, an on-prem experiential-tech company, acquired Vibonomics, a digital audio OOH ad platform. ■ The Company supports 500,000 locations and reaches 150mm+ consumers in 140+ countries.
3/7/2023	 brandcrush! <small>brand activation platform</small>	CRITEO	ND	ND	<ul style="list-style-type: none"> ■ Criteo acquired Brandcrush, an omnichannel retail media platform that includes solutions for offline in-store. ■ With Brandcrush, Criteo grows its offline retail media solutions and its footprint in APAC.
3/2/2023	 zelto	GENIEE	\$2	\$70	<ul style="list-style-type: none"> ■ Geniee, a full stack programmatic ad platform, acquired Zelto, an ad revenue optimization platform. ■ Zelto (f.k.a. AdPushup), raised <\$2.5mm and has reportedly been profitable for several years.
2/28/2023	 Bidtellect <small>Native Intelligence</small>	Simpli.fi	\$40	ND	<ul style="list-style-type: none"> ■ Simpli.fi, an omnichannel DSP, acquired Bidtellect, a contextual and native DSP. ■ The acquisition accelerates Simpli.fi's ability to execute and scale performance for contextual & native campaigns.
2/23/2023	 EQUATIV	 Bridgepoint	ND	\$370	<ul style="list-style-type: none"> ■ Bridgepoint has acquired a majority stake in Equativ (f.k.a. Smart Adserver), an ad server and DSP. ■ The Company tripled revenue over the last 3 years, booking \$98mm in 2022, and grew headcount to 560 FTEs.
2/3/2023	 VideoByte	KARGO	ND	ND	<ul style="list-style-type: none"> ■ Kargo, a mobile ad marketplace for brands, acquired VideoByte a platform for CTV ad server. ■ With VideoByte, Kargo gains inroads into the streaming TV ad market.
1/24/2023	 AMPUSH	 tinuiti	\$15	ND	<ul style="list-style-type: none"> ■ Tinuiti, an independent performance marketing firm, acquired Ampush, a growth marketing company. ■ Ampush was founded in 2010, has 90 FTEs, and is Tinuiti's 3rd acquisition since 2021.
1/18/2023	 volta	 Shell	NA	\$169	<ul style="list-style-type: none"> ■ Shell USA acquired Volta, an EV charging company with a network of 3,000 charging points at destination sites. ■ The Company is monetized by DOOH ads on screens embedded into the charge points.
1/13/2023	 SAMBA TV Ad Sales Division	MIQ	NA	NA	<ul style="list-style-type: none"> ■ SambaTV will sell its ad sales division to MiQ as it looks to sidestep conflicts with its measurement efforts. ■ The two have reached a multi-year commercial agreement, upon the closure of which the assets will transition.
1/5/2023	 transmit	 LionTree	\$10	\$350	<ul style="list-style-type: none"> ■ LionTree made a majority growth investment in Transmit.Live, a CTV ad platform for livestream programming. ■ Transmit is the first platform to programmatically deliver ads using picture-in-picture formats for live programming.

Number of Transactions – Quarterly (1Q20-1Q23)
























Commentary

- Despite two \$1bn+ transactions in the quarter and more scaled transactions (7 versus 6 in Q4'22), **MarTech** M&A volume was down **8%** from Q4 2022.
- Private Equity take-privates continued in the LUMA.M cohort, highlighted by Silver Lake and CPPIB's ~\$12.5bn acquisition of Qualtrics (NASDAQ:XM), Symphony Technology Group's \$1.5bn acquisition of Momentive (NASDAQ:MNTV), and Marlin Equity's acquisition of Meltwater (NO:MWTR) for ~\$0.6bn.



Looking Ahead

- Strong operating performance despite declining valuations present opportunity for continued scaled Private Equity investment and consolidation in MarTech businesses throughout 2023.
- Profitability has become a major focus across the board and will play an important role in software M&A evaluations.
- We expect increased investment in data / analytics capabilities that arm marketers with superior tools surrounding ID resolution, data management /activation, and measurement / attribution.

MarTech – Q1 2023 Notable Deals (1 / 2)

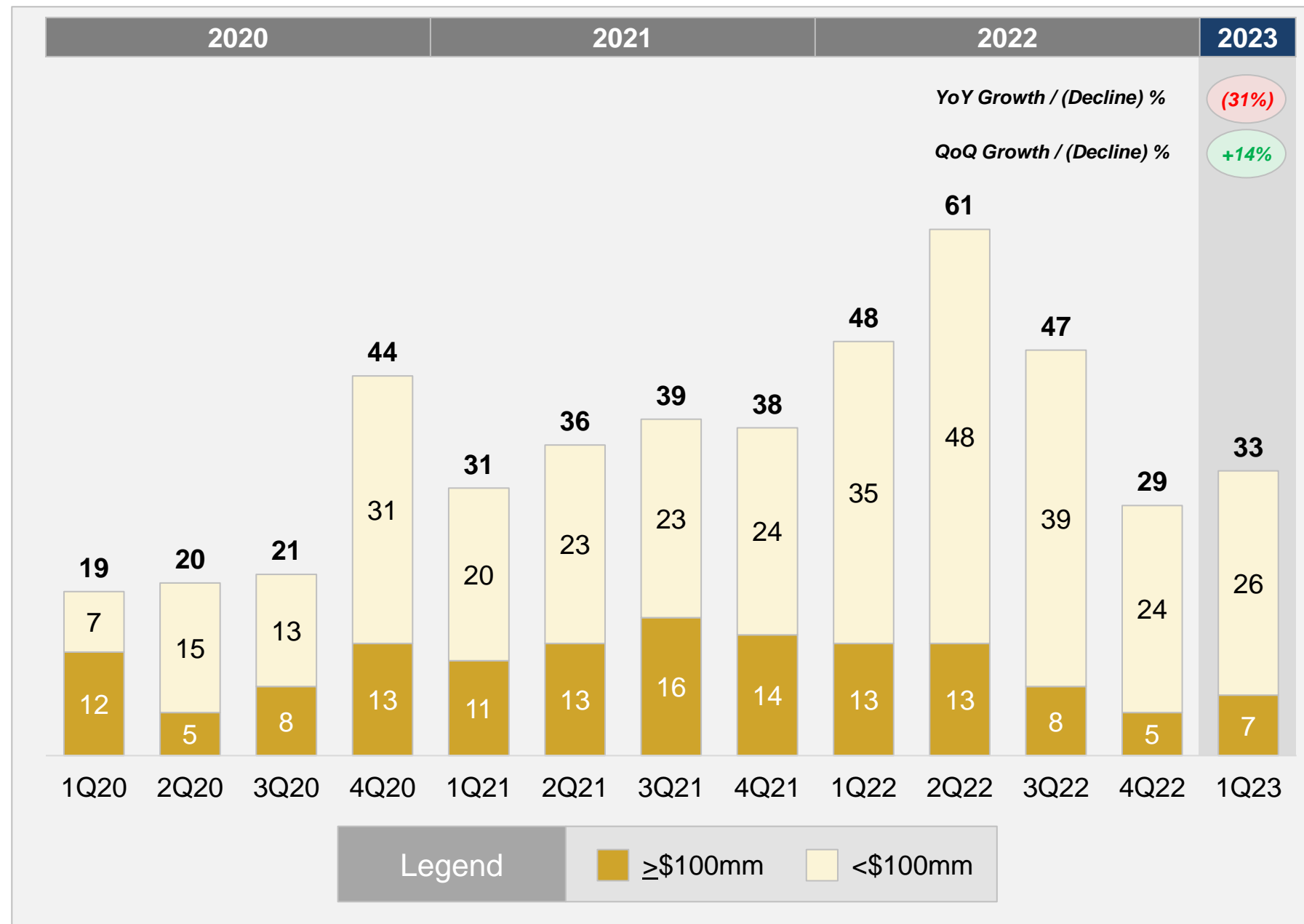
Announcement Date	Target	Acquirer	Capital Raised (\$mm)	Enterprise Value (\$mm)	Commentary
3/20/2023		Kludein I Acq.	\$100	\$675	<ul style="list-style-type: none"> Near Intelligence, a provider of location-based intelligence and data, has gone public via a \$675mm SPAC. The Company reportedly amassed 1.6bn anonymized user profiles attached to 70mm locations in 44 countries.
3/17/2023			\$17	ND	<ul style="list-style-type: none"> Vendasta, an "all-in-one marketing company", acquired Broadly, a customer engagement platform for SMBs. The deal gives Vendasta access to Broadly's customer set.
3/13/2023	qualtrics		NA	\$12,500	<ul style="list-style-type: none"> Silver Lake and CPP will take Qualtrics private in a \$12.5bn transaction (73% premium to 30-day unaffected VWAP). The Company was acquired by SAP for \$8bn in 2018, and spun-out via IPO in 2021 (SAP still holds a 71% stake).
3/13/2023			NA	\$1,500	<ul style="list-style-type: none"> STG will take Momentive private in a \$1.5bn transaction (46% premium to unaffected closing price). The deals comes after Momentive's rejection of Zendesk's \$4bn all-stock offer in 2021.
3/13/2023	tinyclues		\$31	ND	<ul style="list-style-type: none"> Splio, a CRM platform, acquired Tinyclues, an AI-powered predictive marketing platform. The Company aims to be the European leader in AI-powered CRM via its "individuation marketing" software.
3/2/2023			ND	ND	<ul style="list-style-type: none"> Chartbeat, a content analytics platform for publishers backed by Cuadrilla Capital, made two tuck-in acquisitions. Tubular Labs is a social video analytics company, and Lineup Systems is a digital revenue management company.
2/15/2023			\$136	ND	<ul style="list-style-type: none"> Augeo, an enterprise engagement platform, acquired Brand Networks, a social engagement / activation platform. Brand Network's cross-platform paid social solutions will be added to Augeo's broader platform.
2/7/2023			ND	ND	<ul style="list-style-type: none"> Conductor, a US-based SEO platform, acquired Searchmetrics, it's Europe-based competitor. Searchmetrics brings new data assets, 500 global customers and 70 new FTEs to Conductor.
1/26/2023			\$24	\$100	<ul style="list-style-type: none"> OpenWeb acquired Jeeng, an AI-powered message personalization platform for publishers. Jeeng's solutions will be added to OpenWeb's community engagement platform that serves 1,000+ publishers.
1/19/2023			ND	ND	<ul style="list-style-type: none"> Sprout Social, a social media management company, acquired Repustate, a sentiment analysis & NLP platform. Per Sprout Social's press release, sentiment analysis & AI are key to managing social media at scale.
1/19/2023			NA	\$560	<ul style="list-style-type: none"> Meltwater, a media intelligence platform, will be taken private (36% premium to unaffected closing price). The Company was founded in 2001, completed 8 acquisitions, and employs 2,200 FTEs across 50 global offices.
1/12/2023			\$80	ND	<ul style="list-style-type: none"> MessageGears, a customer engagement platform, acquired Swrve, a mobile app marketing platform. With Swrve, MessageGears can now engage customers across email, SMS, in-app, mobile push, web, and TV.

MarTech – Q1 2023 Notable Deals (2 / 2)

Announcement Date	Target	Acquirer	Capital Raised (\$mm)	Enterprise Value (\$mm)	Commentary
1/9/2023	 ClickDimensions	 VOLARIS	\$52	ND	<ul style="list-style-type: none">■ Volaris, a software holding company backed by AKKR, acquired ClickDimensions, a sales enablement platform.■ ClickDimesions will leverage Volaris' R&D resources to continue to develop their SMB-focused product suite.

Digital Content M&A Activity

Number of Transactions – Quarterly (1Q20-1Q23)



























Commentary

- **Digital Content** M&A volume was up **14%** from Q4 2022 – including 2 more scaled deals (7 versus 5) than the prior quarter.
- Q1 2023 scaled deals was highlighted by Vista Equity Partners’ \$1bn+ take-private of Cvent (NASDAQ:CVT) in March, continuing the robust private equity activity in the sector we saw in 2022.

Looking Ahead

- Market dynamics such as effective UA will continue to be a top priority for mobile digital content names, along with increased focus on expanding audience through scaled M&A or individual game acquisitions.
- The advent of advanced generative AI has captured the attention of the broader tech ecosystem and will play an important role in digital content creation.
- Despite the challenging macro-environment, we expect to see continued consolidation in the content ecosystem as platforms look to expand their scale of consumers and data.

Digital Content – Q1 2023 Notable Deals (1 / 2)

Announcement Date	Target	Acquirer	Capital Raised (\$mm)	Enterprise Value (\$mm)	Commentary
3/28/2023	 GameClub	 T2	\$3	ND	<ul style="list-style-type: none"> Take-Two acquired GameClub, a mobile multi-game subscription service. Gameclub is an independent player competing with Apple Arcade and Google Play Pass.
3/22/2023	 NIGHTDIVE STUDIOS	 ATARI	\$1	\$10	<ul style="list-style-type: none"> Atari acquired Nightdive Studios, a developer specialized in remasters of classic games. Atari plans to use the studio's tech & publishing expertise to remaster games from its extensive back catalog.
3/15/2023	 Free ^{NFT}	 LIMITBREAK	ND	ND	<ul style="list-style-type: none"> Limit Break, a blockchain-gaming company, acquired Free NFT, an NFT & web3 asset distribution platform. With FreeNFT, LimitBreak collectors and developers will have access to free NFTs and a new launch platform.
3/14/2023	 cvent	 VISTA	NA	\$1,650	<ul style="list-style-type: none"> Vista will take Cvent, a cloud-based enterprise event management company, private in a \$1.65bn transaction. Cvent serves 16,000+ enterprise clients and employs 2,000 FTEs worldwide.
3/14/2023	 FUN LABS	 MAXIMUM ENTERTAINMENT	ND	ND	<ul style="list-style-type: none"> Maximum Entertainment, a game studio and publisher, acquired FUN Labs, a developer of console & PC games. With this deal, 33 developers from FUN Labs will join Modus Studios, a subsidiary of Maxim Entertainment.
3/14/2023	 AUDIO SALAD	 SESAC	ND	ND	<ul style="list-style-type: none"> SESAC, a Blackstone-backed performance-rights company, acquired Audio Salad. Audio Salad will continue as a stand-alone metadata asset management, delivery, and distribution platform.
3/1/2023	 SVIPER	 THE SANDBOX	\$4	ND	<ul style="list-style-type: none"> The Sandbox, a blockchain gaming company and subsidiary of Animoca, acquired Sviper, a game studio. With Sviper, The Sandbox expands into Germany and adds grows its roster of metaverse game developers.
3/1/2023	 LUMINOUS PRODUCTIONS	 SQUARE ENIX	ND	ND	<ul style="list-style-type: none"> Luminous Productions, the developer of the "Forspoken" game title, will be absorbed into Square Enix. After a lack-luster release of "Forspoken", will no longer operate as an independent subsidiary.
2/25/2023	 INDI	 KRATOS STUDIOS	\$6	ND	<ul style="list-style-type: none"> Kratos Studios acquired IndiGG via a token swap and will continue operating under the IndiGG brand. Kratos is building a Web3 gaming DAO for South Asia and other developing economies.
2/23/2023	 STUDIO FIZBIN	 Thunderful	ND	ND	<ul style="list-style-type: none"> Thunderful, a mobile gaming group, acquired Fizbin, an independent game studio. Fizbin will become the 11th studio acquired by Thunderful via their subsidiary, Headup
2/23/2023	 SockMonkey	 bE HAVIOUR	\$0	ND	<ul style="list-style-type: none"> Behaviour Interactive, a independent game studio, acquired SockMonkey Studios, an independent game studio. This is the first UK / Europe investment for the Canada-based Behaviour - the 45 FTEs will form Behaviour UK.
2/17/2023	 BARSTOOL SPORTS	 PENN ENTERTAINMENT	\$15	\$606	<ul style="list-style-type: none"> PENN Entertainment completed its acquisition of Barstool Sports after acquiring a 36% stake in Feb 2020. The remaining interest in Barstool, worth \$388mm, values the media company at \$605mm.

Digital Content – Q1 2023 Notable Deals (2 / 2)























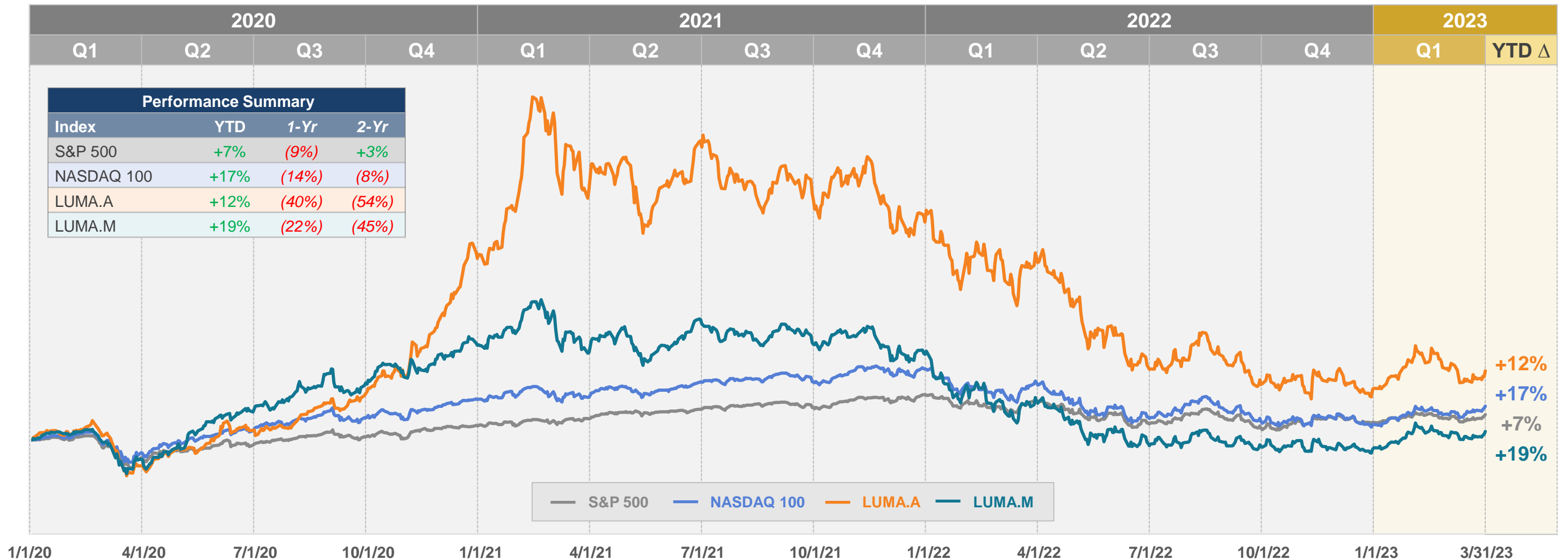
Announcement Date	Target	Acquirer	Capital Raised (\$mm)	Enterprise Value (\$mm)	Commentary
2/17/2023			\$125	ND	<ul style="list-style-type: none"> ■ EFG, an independent eSports event organizer, acquired Vindex an eSports infrastructure platform. ■ The combined EFG entity and its broader platform will continue to operate as a subsidiary of Savvy Games.
2/15/2023			\$4	ND	<ul style="list-style-type: none"> ■ Napster, a music streaming platform, acquired Mint Songs, a web3 and NFT music platform. ■ Mint's NFT marketplace helps artists build web3 communities and provide exclusive art for fans to trade and own.
2/14/2023			\$3	ND	<ul style="list-style-type: none"> ■ Tawkify, a matchmaking service provider, acquired S'More a self-described "anti-superficial" mobile dating app. ■ S'More's app blurs profile photos and faces in video chats to create matches not based on physical appearance.
2/9/2023			NA	\$34	<ul style="list-style-type: none"> ■ Songtradr, a B2B music licensing company, acquired 7digital, a B2B music licensing company. ■ 7digital provides a catalogue of 80mm+ licensed tracks and offers APIs to power music in apps.
1/3/2023			ND	ND	<ul style="list-style-type: none"> ■ Super Group, a holding company for online sports betting and gaming businesses, acquired Digital Gaming. ■ DGC will be absorbed into Betway, a subsidiary of Super Group, and grants it access to the US market.
1/31/2023			NA	\$600	<ul style="list-style-type: none"> ■ Amazon Games acquired Tomb Raider IP & Assets from Crystal Dynamics, a subsidiary of Embracer Group. ■ Amazon is reportedly developing a Tomb Raider TV show and movie which will be available via Amazon Prime.
1/30/2023			\$36	ND	<ul style="list-style-type: none"> ■ The News Movement, a social-first news platform, acquired The Recount, a video journalism platform. ■ The acquirer expands its US presence and rescues the target, which was on the verge of shuttering.
1/25/2023			\$7	ND	<ul style="list-style-type: none"> ■ Mythical, a web3 gaming company, acquired DMarket a blockchain-gaming marketplace platform. ■ DMarket is a platform to trade virtual items and technology for building metaverses, ranked top 3 per Newzoo.
1/17/2023			ND	ND	<ul style="list-style-type: none"> ■ Discord, a VoIP and IM social platform, acquired Gas, a compliments-based social media app for teens. ■ Per Sensor Tower, Gas reached 7.4mm installs and ~\$7mm in consumer spending since its summer 2022 launch.
1/17/2023			ND	ND	<ul style="list-style-type: none"> ■ Reaper Games, a developer of open-World Sandbox MMORPG games, merged with CLV, a software developer. ■ The new company, Salvay, will be a one-stop-shop for gaming and software development services
1/10/2023			\$1	ND	<ul style="list-style-type: none"> ■ Gala Games, a blockchain gaming company, acquired Ember Entertainment, a developer of mobile casual games. ■ The entire mobile portfolio of Ember becomes part of the Gala network.

Table of Contents

1	Q1 2023 M&A Activity
2	Q1 2023 Public Markets Overview
A	Public Market Overview
B	Ad Tech Performance Benchmarking
C	MarTech Performance Benchmarking
3	Q1 2023 Private Financing Activity
4	Appendix

Ad Tech & MarTech: Resilient Q1 2023 Trading Performance

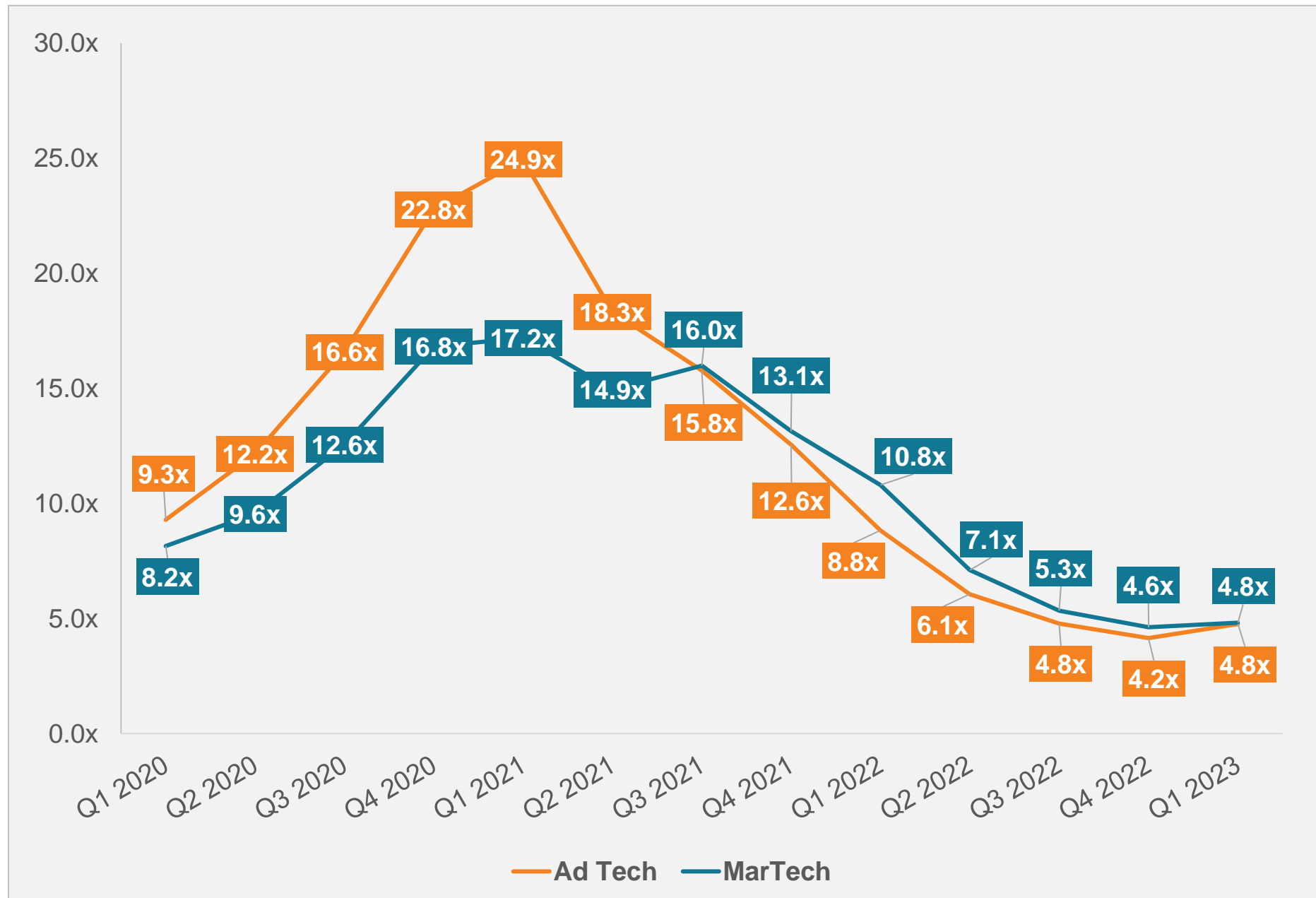
Trading Performance: LUMA Indices (*LUMA.A*, *LUMA.M*) vs. Market Indices (*S&P 500*, *NASDAQ 100*) | Q1 2020 – Q1 2023



While still down from the elevated trading levels in 2021, both the **LUMA.A** and **LUMA.M** cohorts demonstrated strong performance in Q1 2023, rising **+12%** and **+19%** respectively. This is the third straight quarter of stabilized performance, as public market investors are noticing resilient underlying business results despite sustained market volatility.

Ad Tech & MarTech Valuations Continue Stabilization

EV / LTM Revenue⁽¹⁾ Average⁽²⁾ Multiples (Q1 2020 – Q1 2023)



Observations

Looking back (2020 – 2022):

- Coming off an unprecedented back half of 2020 and 2021, public market valuations slowed momentum and eventually halted into a rapid decline in the first half of 2022 largely driven by challenges impacting the broader economy.



Q1 2023:

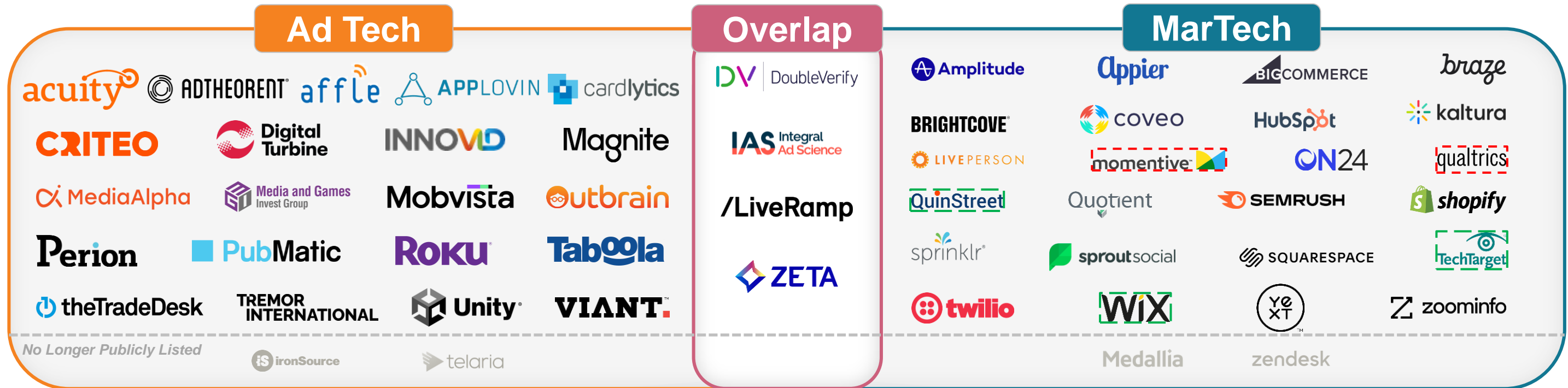
- Q1 2023 marked the third consecutive quarter of stabilized valuations despite turbulence in the broader public markets.
- Quarterly earnings from Q4 2022 remained predictable, as most companies beat expectations and guided towards maintaining profitability despite lower growth on a relative basis.

Looking Ahead

- Stabilizing valuations help reset expectations and paves the way for value creation opportunities from both large-scale take-privates, and for strategics with the structural capability to leverage balance sheets for inorganic growth.

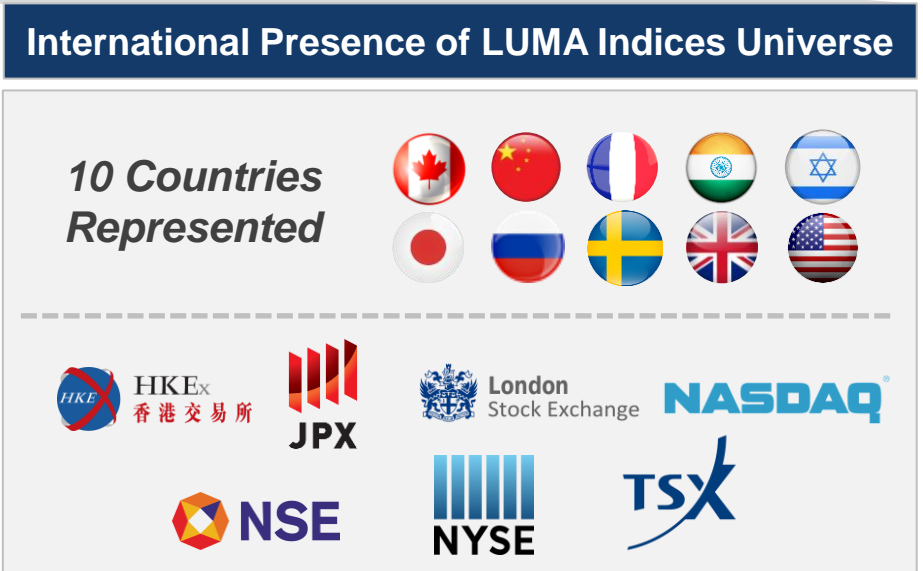
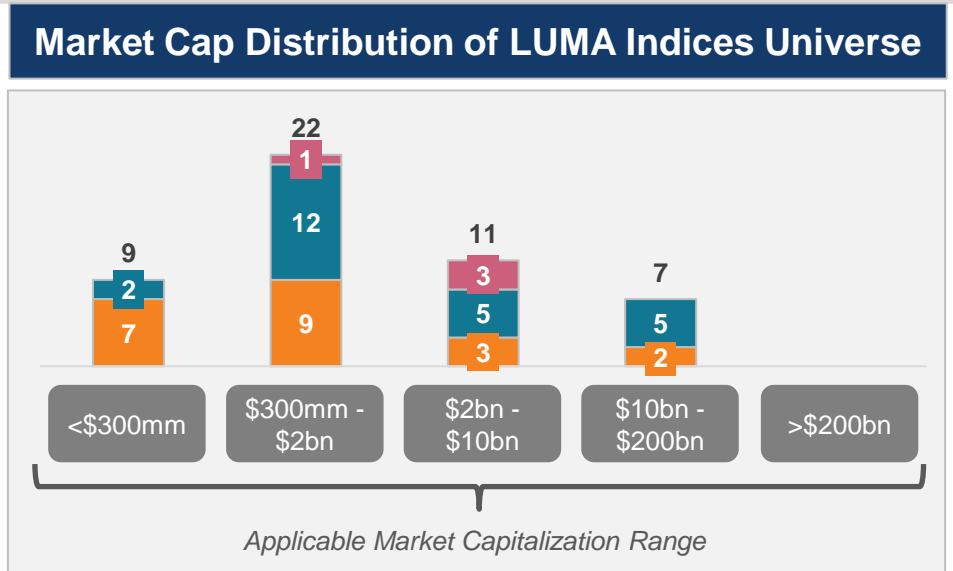
The LUMA Indices Universe at a Glance (1 / 2)

 Denotes Active PubCos that have definitively agreed to be acquired
 Denotes retroactive additions to LUMA Indices cohorts





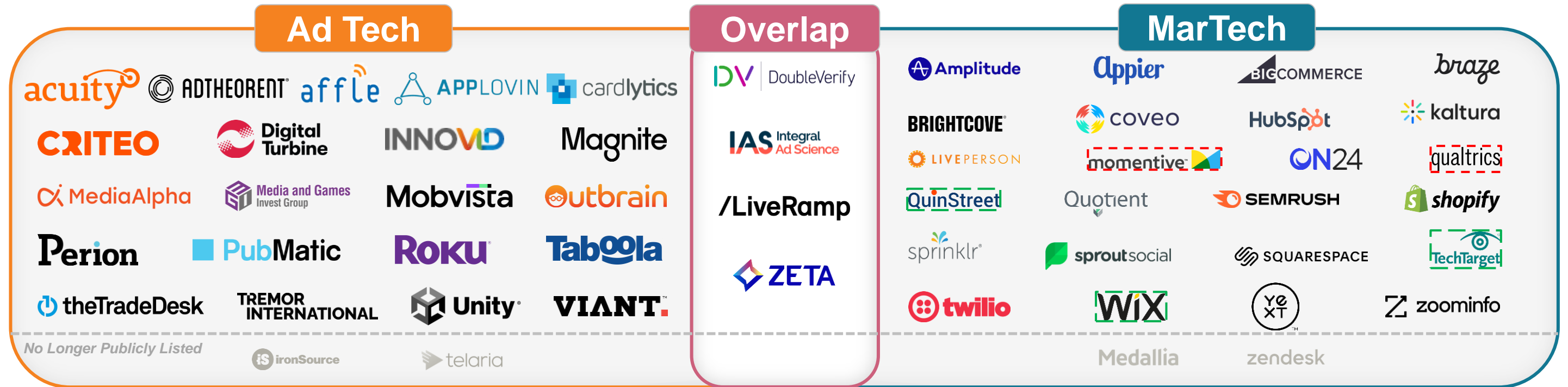
Total: 53 Companies⁽¹⁾

Aggregate Mkt Cap as of 3/31/23	~\$239bn
Aggregate CY23E Revenue ⁽²⁾	~\$42bn
Avg. CY23E Growth Rate	12.5%



The LUMA Indices Universe at a Glance (2 / 2)

 Denotes Active PubCos that have definitively agreed to be acquired
 Denotes retroactive additions to LUMA Indices cohorts



Metric	Ad Tech ex-Overlap		Overlap		MarTech ex-Overlap	
Aggregate Mkt Cap (\$bn)	\$74		\$12		\$153	
	Ad Tech ex-Overlap		Overlap		MarTech ex-Overlap	
	2022A	2023E	2022A	2023E	2022A	2023E
Avg. Revenue ⁽¹⁾ (\$mm)	\$641	\$745	\$510	\$579	\$890	\$1,010
Avg. EBITDA Margin ⁽²⁾⁽³⁾ (%)	24.1%	21.7%	21.8%	23.1%	3.7%	6.6%
Avg. EV / Revenue ⁽¹⁾ (x)	5.3x	3.8x	6.0x	5.1x	5.2x	4.5x
Avg. EV / EBITDA ⁽³⁾⁽⁴⁾ (x)	14.9x	16.0x	27.0x	21.4x	30.7x	30.1x

Ad Tech Earnings

Generally met revenue guidance with some EBITDA outperformance; market reaction appears heavily influenced by guidance

Overview		Reported Metric		TTM					Most Recent Quarter					Trading Performance				
				Net Revenue			Consensus EBITDA			Net Revenue			Consensus EBITDA					
Company	Date	NR	EBITDA	Actual	Cons.	Beat/Miss	Actual	Cons.	Beat/Miss	Actual	Cons.	Beat/Miss	Actual	Cons.	Beat/Miss	T+1 Comp	T+1 S&P	YTD Comp
ADTHEORENT	3 / 02*	Adj. GP	EBITDA	\$110	\$106	+4%	\$22	\$18	+23%	\$34	\$30	+13%	\$10	\$6	+68%	+4%	+2%	+4%
APPLOVIN	2 / 08*	Revenue	EBITDA	\$2,817	\$2,804	+0%	\$1,063	\$1,060	+0%	\$702	\$690	+2%	\$260	\$257	+1%	+27%	(1%)	+47%
cardlytics	3 / 01*	GP	EBITDA	\$113	\$111	+2%	(\$45)	(\$46)	+1%	\$33	\$31	+8%	(\$6)	(\$7)	+15%	(9%)	+1%	(37%)
CRITEO	2 / 08	Contribution ex-TAC	EBITDA	\$928	\$922	+1%	\$267	\$256	+5%	\$283	\$278	+2%	\$104	\$93	+13%	+3%	(1%)	+22%
Digital Turbine	2 / 08*	Adj. GP	EBITDA	\$356	\$371	(4%)	\$191	\$205	(7%)	\$81	\$97	(16%)	\$40	\$55	(27%)	(24%)	(1%)	(18%)
DV	3 / 01*	Revenue	EBITDA	\$452	\$452	+0%	\$142	\$139	+2%	\$134	\$133	+0%	\$49	\$46	+6%	+5%	+1%	+38%
INNOVD	2 / 24	Revenue	EBITDA	\$127	\$129	(1%)	\$1	\$0	n/m	\$34	\$36	(5%)	\$3	\$2	+51%	(11%)	(1%)	(22%)
IAS	3 / 02	Revenue	EBITDA	\$408	\$402	+2%	\$127	\$123	+3%	\$117	\$112	+5%	\$40	\$37	+8%	+2%	+1%	+59%
/LiveRamp	2 / 07*	Revenue	EBITDA	\$590	\$589	+0%	\$54	\$51	+7%	\$159	\$158	+0%	\$27	\$23	+14%	(9%)	(1%)	(7%)
Magnite	2 / 22*	Revenue ex-TAC	EBITDA	\$515	\$512	+1%	\$179	\$180	(0%)	\$157	\$154	+2%	\$64	\$65	(1%)	(16%)	+1%	(7%)
MediaAlpha	2 / 23	GP	EBITDA	\$70	\$67	+5%	\$23	\$20	+15%	\$20	\$16	+26%	\$9	\$6	+51%	+0%	+1%	+46%
Outbrain	3 / 02	GP ex-TAC	EBITDA	\$235	\$234	+0%	\$26	\$24	+8%	\$59	\$58	+2%	\$7	\$5	+37%	+16%	+1%	+7%
Perion	2 / 08	Revenue ex-TAC	EBITDA	\$268	\$269 ⁽¹⁾	(1%)	\$132	\$122	+8%	\$88	\$89 ⁽¹⁾	(2%)	\$48	\$38	+27%	(8%)	(1%)	+58%
PubMatic	2 / 28*	Revenue	EBITDA	\$256	\$259	(1%)	\$98	\$99	(1%)	\$74	\$77	(3%)	\$33	\$34	(5%)	(8%)	(0%)	+5%
Roku	2 / 15*	Revenue	EBITDA	\$3,127	\$3,060	+2%	(\$84)	(\$121)	+30%	\$867	\$800	+8%	(\$95)	(\$132)	+28%	+11%	(1%)	+62%
Taboola	2 / 24	GP ex-TAC	EBITDA	\$570	\$570	(0%)	\$157	\$156	+0%	\$159	\$160	(0%)	\$64	\$63	+1%	(19%)	(1%)	(12%)
theTradeDesk	2 / 15	Revenue	EBITDA	\$1,578	\$1,578	(0%)	\$668	\$652	+2%	\$491	\$491	+0%	\$245	\$229	+7%	+33%	+0%	+38%
TREMOR INTERNATIONAL	3 / 07	Contribution ex-TAC	EBITDA	\$310	\$310	(0%)	\$145	\$140	+4%	\$103	\$103	(0%)	\$37	\$37	(0%)	(17%)	(2%)	(20%)
Unity	2 / 22*	Revenue	EBITDA	\$1,391	\$1,378	+1%	(\$51)	(\$48)	(7%)	\$451	\$438	+3%	\$24	\$23	+3%	(16%)	+1%	+21%
VIANT	3 / 02*	Contribution ex-TAC	EBITDA	\$125	\$125	(0%)	(\$6)	(\$9)	+32%	\$33	\$34	(2%)	\$3	(\$0)	n/m	+16%	+2%	+13%
ZETA	2 / 23*	Revenue	EBITDA	\$591	\$576	+3%	\$92	\$89	+3%	\$175	\$160	+9%	\$32	\$29	+10%	+18%	(1%)	+30%

Ad Tech Guidance Summary

Many withheld Annual guidance; those that did provide guidance tended indicate flat-to-lower growth expectations and improving margins

Overview		Guided Metric		Upcoming Fiscal Year ⁽¹⁾						Upcoming Fiscal Quarter ⁽¹⁾						Trading Performance		
Company	Date	Revenue	Profit	Revenue Growth %			Profit Margin %			Revenue Growth %			Profit Margin %			T+1 Comp	T+1 S&P	YTD Comp
				Guidance	Cons.	Surprise	Guidance	Cons.	Surprise	Guidance	Cons.	Surprise	Guidance	Cons.	Surprise			
ADTHEORENT	3 / 02*	Adjusted GP	Adj. EBITDA	1%	3%	▼	18%	17%	▬	(10%)	(6%)	▼	-	(3%)	▲	+4%	+2%	+4%
APPROVIN	2 / 08*	Total Revenue	Adj. EBITDA	n/a	0%	n/a	n/a	38%	n/a	11%	9%	▲	37%	38%	▬	+27%	(1%)	+47%
cardlytics	3 / 01*	Revenue	Adj. EBITDA	n/a	7%	n/a	n/a	0%	n/a	(14%)	(0%)	▼	(23%)	(6%)	▼	(9%)	+1%	(37%)
CRITEO	2 / 08	Contribution ex-TAC	Adj. EBITDA	10%	9%	▬	28%	28%	▬	(2%)	(0%)	▼	15%	23%	▼	+3%	(1%)	+22%
Digital Turbine	2 / 08*	Revenue	Adj. EBITDA	(11%)	(3%)	▼	25%	28%	▼	n/a	(5%)	n/a	n/a	27%	n/a	(24%)	(1%)	(18%)
DV	3 / 01*	Revenue	Adj. EBITDA	23%	24%	▬	30%	30%	▬	22%	22%	▬	25%	25%	▬	+5%	+1%	+38%
INNOVD	2 / 24	Revenue	Adj. EBITDA	-	17%	▼	n/a	4%	n/a	8%	15%	▼	(7%)	(10%)	▲	(11%)	(1%)	(22%)
IAS	3 / 02	Revenue	Adj. EBITDA	12%	15%	▼	32%	31%	▬	15%	10%	▲	29%	29%	▬	+2%	+1%	+59%
/LiveRamp	2 / 07*	Revenue	Adj. EBIT	1%	1%	▬	10%	10%	▬	5%	6%	▬	10%	11%	▬	(9%)	(1%)	(7%)
Magnite	2 / 22*	Revenue ex-TAC	Adj. EBITDA	n/a	7%	n/a	n/a	33%	n/a	4%	1%	▲	16%	23%	▼	(16%)	+1%	(7%)
MediaAlpha	2 / 23	Revenue	Adj. EBITDA	n/a	20%	n/a	n/a	6%	n/a	(22%)	1%	▼	6%	4%	▲	+0%	+1%	+46%
Outbrain	3 / 02	GP ex-TAC	Adj. EBITDA	1%	1%	▬	12%	11%	▬	(20%)	(16%)	▼	(2%)	9%	▼	+16%	+1%	+7%
Perion	2 / 08	Revenue	Adj. EBITDA	14%	15%	▬	21%	19%	▲	n/a	11%	n/a	n/a	16%	n/a	(8%)	(1%)	+58%
PubMatic	2 / 28*	Revenue	Adj. EBITDA	n/a	8%	n/a	30%	32%	▼	(7%)	1%	▼	10%	15%	▼	(8%)	(0%)	+5%
ROKU	2 / 15*	Net Revenue	Adj. EBITDA	n/a	6%	n/a	n/a	(6%)	n/a	(5%)	(3%)	▼	(16%)	(11%)	▼	+11%	(1%)	+62%
Taboola	2 / 24	GP ex-TAC	Adj. EBITDA	(6%)	4%	▼	13%	25%	▼	(21%)	(7%)	▼	-	21%	▼	(19%)	(1%)	(12%)
theTradeDesk	2 / 15	Revenue	Adj. EBITDA	n/a	21%	n/a	n/a	38%	n/a	15%	15%	▬	21%	20%	▬	+33%	+0%	+38%
TREMOR INTERNATIONAL	3 / 07	Contribution ex-TAC	Adj. EBITDA	29%	47%	▼	36%	39%	▼	n/a	25%	n/a	n/a	25%	n/a	(17%)	(2%)	(20%)
Unity	2 / 22*	Total Revenue	Adj. EBITDA	53%	55%	▬	12%	10%	▲	48%	61%	▼	2%	6%	▼	(16%)	+1%	+21%
VIANT	3 / 02*	Contribution ex-TAC	Adj. EBITDA	n/a	1%	n/a	n/a	1%	n/a	(4%)	(13%)	▲	(13%)	(24%)	▲	+16%	+2%	+13%
ZETA	2 / 23*	Revenue	Adj. EBITDA	17%	17%	▬	17%	17%	▬	19%	19%	▬	15%	15%	▬	+18%	(1%)	+30%

Source: FactSet (Market data as of 03/31/2023) Note: \$ in millions, unless otherwise noted. Broker consensus represents median broker estimates. T+1 trading performance is defined as the close of the first trading day following earnings announcement. EBITDA actuals and estimates represent broker consensus median figures. *Represents earnings release after market close. (1) All companies except for Digital Turbine and LiveRamp report on a Fiscal Year Ending that was reported within the past quarter. For those two companies, Upcoming Fiscal Year and Fiscal Quarter Guidance and Consensus are aligned to their Fiscal Year End (both ending Mar-31-23).

MarTech Earnings

Significant portion of cohort delivered in-line estimate annual revenues and outperformed on FY profitability

Overview		Guided Metric		TTM					Most Recent Quarter					Trading Performance				
Company	Date	Revenue	Profit	Actual	Cons.	Beat/Miss	Actual	Cons.	Beat/Miss	Actual	Cons.	Beat/Miss	Actual	Cons.	Beat/Miss	T+1 Comp	T+1 S&P	YTD Comp
Amplitude	2 / 15	Revenue	EBITDA	\$238	\$236	+1%	(\$22)	(\$24)	+9%	\$65	\$64	+3%	(\$4)	(\$4)	+3%	(14%)	(1%)	+3%
E-commerce	2 / 23	Revenue	EBITDA	\$279	\$280	(0%)	(\$44)	(\$47)	+8%	\$72	\$73	(1%)	(\$9)	(\$13)	+32%	(19%)	(1%)	+7%
Braze	3 / 30	Revenue	EBITDA	\$355	\$353	+1%	(\$65)	(\$66)	+1%	\$99	\$96	+3%	(\$12)	(\$18)	+32%	+9%	+1%	+34%
Brightcove	2 / 23	Revenue	EBITDA	\$211	\$212	(0%)	\$18	\$19	(3%)	\$49	\$50	(1%)	\$1	\$2	(33%)	(16%)	(1%)	(15%)
DV	3 / 01	Revenue	EBITDA	\$452	\$452	+0%	\$142	\$139	+2%	\$134	\$133	+0%	\$49	\$46	+6%	+5%	+1%	+38%
HubSpot	2 / 16	Revenue	EBITDA	\$1,731	\$1,706	+1%	\$227	\$211	+7%	\$470	\$445	+6%	\$79	\$65	+23%	+12%	(0%)	+48%
IAS	3 / 02	Revenue	EBITDA	\$408	\$402	+2%	\$127	\$123	+3%	\$117	\$112	+5%	\$40	\$37	+8%	+11%	+2%	+59%
Kaltura	2 / 22	Revenue	EBITDA	\$169	\$168	+0%	(\$28)	(\$30)	+6%	\$44	\$43	+2%	(\$4)	(\$6)	+30%	(2%)	(0%)	+7%
LivePerson	3 / 15	Revenue	EBITDA	\$515	\$519	(1%)	(\$16)	\$5	n/m	\$123	\$127	(4%)	(\$5)	\$19	(127%)	(58%)	+2%	(57%)
LiveRamp	2 / 07	Revenue	EBITDA	\$590	\$589	+0%	\$54	\$51	+7%	\$159	\$158	+0%	\$27	\$23	+14%	(0%)	+1%	(7%)
Momentive	2 / 16	Revenue	EBITDA	\$481	\$480	+0%	\$61	\$54	+13%	\$122	\$121	+1%	\$28	\$22	+31%	(8%)	(0%)	+32%
ON24	2 / 28	Revenue	EBITDA	\$191	\$191	+0%	(\$15)	(\$16)	+6%	\$47	\$46	+1%	(\$2)	(\$3)	+30%	(19%)	(0%)	+3%
Qualtrics	1 / 25	Revenue	EBITDA	\$1,459	\$1,451	+1%	\$142	\$124	+15%	\$389	\$381	+2%	\$36	\$36	(2%)	+33%	+1%	+75%
Quotient	2 / 28	Revenue	EBITDA	\$289	\$302	(4%)	\$15	\$19	(21%)	\$71	\$84	(16%)	\$13	\$17	(20%)	(12%)	(0%)	(4%)
SEMrush	3 / 14	Revenue	EBITDA	\$254	\$253	+1%	(\$22)	(\$21)	(8%)	\$69	\$68	+2%	(\$13)	(\$11)	(17%)	+10%	(1%)	+23%
Shopify	2 / 15	Revenue	EBITDA	\$5,600	\$5,526	+1%	\$82	(\$33)	n/m	\$1,735	\$1,655	+5%	\$91	(\$26)	(251%)	(16%)	(1%)	+34%
Sprinklr	3 / 29	Revenue	EBITDA	\$618	\$616	+0%	\$18	\$10	+80%	\$165	\$163	+2%	\$18	\$10	+78%	+18%	+1%	+61%
Sprout Social	2 / 21	Revenue	EBITDA	\$254	\$254	(0%)	(\$1)	(\$1)	+33%	\$70	\$70	(0%)	\$1	(\$0)	n/m	+8%	(0%)	+5%
Squarespace	3 / 07	Revenue	EBITDA	\$867	\$860	+1%	\$148	\$130	+13%	\$229	\$222	+3%	\$63	\$47	+35%	+15%	(2%)	+39%
Twilio	2 / 15	Revenue	EBITDA	\$3,826	\$3,802	+1%	\$275	\$232	+18%	\$1,025	\$1,000	+2%	\$104	\$61	+70%	+14%	(1%)	+32%
Yieldify	3 / 07	Revenue	EBITDA	\$401	\$400	+0%	\$16	\$13	+23%	\$102	\$101	+1%	\$11	\$8	+38%	+10%	+0%	+52%
Zeta	2 / 23	Revenue	EBITDA	\$591	\$576	+3%	\$92	\$89	+3%	\$175	\$160	+9%	\$32	\$29	+10%	+18%	(1%)	+30%
ZoomInfo	2 / 06	Revenue	EBITDA	\$1,098	\$1,097	+0%	\$465	\$461	+1%	\$302	\$299	+1%	\$132	\$127	+4%	+5%	+1%	(16%)

MarTech Guidance Summary

Majority of companies guided for less growth than analysts expected; anticipate flat-to-higher margins for the upcoming year

Overview		Guided Metric		Upcoming Fiscal Year ⁽¹⁾						Upcoming Fiscal Quarter ⁽¹⁾						Trading Performance		
Company	Date	Revenue	Profit	Revenue Growth %			Profit Margin %			Revenue Growth %			Profit Margin %			T+1 Comp	T+1 S&P	YTD Comp
				Guidance	Cons.	Surprise	Guidance	Cons.	Surprise	Guidance	Cons.	Surprise	Guidance	Cons.	Surprise			
Amplitude	2 / 15	Revenue	Adj. EBIT	21%	24%	▼	(7%)	(9%)	▲	22%	25%	▼	(14%)	(12%)	▼	(14%)	(1%)	+3%
BICE	2 / 23	Revenue	Adj. EBIT	10%	13%	▼	(6%)	(7%)	▬	8%	12%	▼	(14%)	(12%)	▼	(19%)	(1%)	+7%
braze	3 / 30	Revenue	Adj. EBIT	23%	27%	▼	(14%)	(14%)	▬	28%	30%	▼	(20%)	(17%)	▼	+9%	+1%	+34%
BRIGHTCOVE	2 / 23	Revenue	Adj. EBITDA	1%	1%	▬	8%	9%	▬	(7%)	(7%)	▬	1%	6%	▼	(16%)	(1%)	(15%)
DV	3 / 01	Revenue	Adj. EBITDA	23%	24%	▬	30%	30%	▬	22%	22%	▬	25%	25%	▬	+5%	+1%	+38%
HubSpot	2 / 16	Revenue	Adj. EBIT	19%	20%	▬	12%	8%	▲	20%	19%	▬	10%	8%	▲	+12%	(0%)	+48%
IAS	3 / 02	Revenue	Adj. EBITDA	12%	15%	▼	32%	31%	▬	15%	10%	▲	29%	29%	▬	+11%	+2%	+59%
kaltura	2 / 22	Revenue	Adj. EBITDA	1%	5%	▼	(4%)	(5%)	▬	3%	3%	▬	(8%)	(8%)	▬	(2%)	(0%)	+7%
LIVEPERSON	3 / 15	Revenue	Adj. EBITDA	(17%)	8%	▼	5%	14%	▼	(17%)	2%	▼	(6%)	12%	▼	(58%)	+2%	(57%)
/LiveRamp	2 / 07	Revenue	Adj. EBIT	1%	1%	▬	10%	10%	▬	5%	6%	▬	10%	11%	▬	(0%)	+1%	(7%)
momentive	2 / 16	Revenue	Adj. EBIT	n/a	8%	n/a	n/a	12%	n/a	1%	5%	▼	7%	12%	▼	(8%)	(0%)	+32%
ON24	2 / 28	Revenue	Adj. EBIT	(12%)	1%	▼	(6%)	(3%)	▼	(12%)	(5%)	▼	(12%)	(8%)	▼	(19%)	(0%)	+3%
qualtrics	1 / 25	Revenue	Adj. EBIT	14%	17%	▼	11%	5%	▲	17%	18%	▬	5%	3%	▲	+33%	+1%	+75%
Quotent	2 / 28	Revenue	Adj. EBITDA	0%	4%	▼	13%	13%	▬	(24%)	(15%)	▼	5%	10%	▼	(12%)	(0%)	(4%)
SEMRUSH	3 / 14	Revenue	Adj. Net Income	21%	22%	▬	0%	(8%)	▲	23%	24%	▬	(11%)	(13%)	▲	+10%	(1%)	+23%
shopify	2 / 15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	(16%)	(1%)	+34%
sprinklr	3 / 29	Revenue	Adj. EBIT	15%	15%	▬	6%	4%	▲	17%	17%	▬	2%	4%	▼	+18%	+1%	+61%
sproutsocial	2 / 21	Revenue	Adj. EBIT	31%	31%	▬	1%	0%	▬	31%	31%	▬	(1%)	(1%)	▬	+8%	(0%)	+5%
SQUARESPACE	3 / 07	Revenue	Unlevered FCF	11%	10%	▲	20%	20%	▬	12%	10%	▲	27%	20%	▲	+15%	(2%)	+39%
twilio	2 / 15	Revenue	Adj. EBIT	n/a	16%	n/a	n/a	1%	n/a	14%	17%	▼	5%	0%	▲	+14%	(1%)	+32%
YXT	3 / 07	Revenue	Adj. EBITDA	1%	5%	▼	11%	8%	▲	(0%)	3%	▼	11%	7%	▲	+10%	+0%	+52%
ZETA	2 / 23	Revenue	Adj. EBITDA	17%	17%	▬	17%	17%	▬	19%	19%	▬	15%	15%	▬	+18%	(1%)	+30%
zoominfo	2 / 06	Revenue	Unlevered FCF	17%	19%	▼	40%	39%	▬	24%	27%	▼	n/a	42%	n/a	+5%	+1%	(16%)

Source: FactSet (Market data as of 03/31/2023) Note: \$ in millions, unless otherwise noted. Broker consensus represents median broker estimates. T+1 trading performance is defined as the close of the first trading day following earnings announcement. EBITDA actuals and estimates represent broker consensus median figures. *Represents earnings release after market close. (1) All companies except for Yext and LiveRamp report on a Fiscal Year Ending that was reported within the past quarter. For those two companies, Upcoming Fiscal Year and Fiscal Quarter Guidance and Consensus are aligned to their Fiscal Year End (3/31/23 for RAMP; 1/31/24 for Yext).

Ad Tech – Q1 2023 Market Performance

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

Rank	Company	Share Price (\$USD)		% Increase / (Decrease)	Market Cap (US\$mm) End of Q1 2023	EV / LTM Net Revenue	
		Beginning of Q1 2023	End of Q1 2023			Beginning of Q1 2023	End of Q1 2023
1	Roku	\$40.56	\$65.82	+62.3%	\$9,862	1.3x	2.6x
2	Integral Ad Science	\$8.98	\$14.27	+58.9%	\$2,359	4.2x	6.1x
3	Perion Network	\$25.10	\$39.58	+57.7%	\$1,975	3.4x	5.8x
4	AppLovin	\$10.73	\$15.75	+46.8%	\$6,293	2.3x	3.0x
5	MediaAlpha	\$10.28	\$14.98	+45.7%	\$1,019	11.7x	16.4x
6	Double Verify	\$21.78	\$30.15	+38.4%	\$5,284	8.5x	11.1x
7	theTradeDesk	\$44.02	\$60.91	+38.4%	\$31,061	14.1x	18.8x
8	Zeta Global	\$8.34	\$10.83	+29.9%	\$2,938	3.5x	5.0x
9	Criteo	\$25.87	\$31.51	+21.8%	\$2,055	0.9x	1.9x
10	Unity Software	\$26.92	\$32.44	+20.5%	\$13,532	9.9x	11.8x
11	Viant	\$3.84	\$4.35	+13.3%	\$286	2.0x	2.0x
12	S&P 500	\$3,824	\$4,109	+7.5%	NA	NA	NA
13	Outbrain	\$3.87	\$4.13	+6.7%	\$244	0.7x	0.9x
14	PubMatic	\$13.17	\$13.82	+4.9%	\$794	2.4x	2.4x
15	AdTheorent	\$1.63	\$1.69	+3.7%	\$160	0.9x	0.8x
16	Mobvista	\$0.51	\$0.53	+3.5%	\$881	NA	NA
17	Acuity Ads	\$1.59	\$1.59	+0.3%	\$98	0.8x	0.9x
18	Magnite	\$9.93	\$9.26	(6.7%)	\$1,346	3.6x	3.4x
19	Affle	\$12.93	\$12.00	(7.2%)	\$1,599	36.9x	23.5x
20	LiveRamp	\$23.64	\$21.93	(7.2%)	\$1,567	2.2x	1.9x
21	Taboola	\$3.08	\$2.72	(11.7%)	\$868	1.4x	1.5x
22	Digital Turbine	\$15.03	\$12.36	(17.8%)	\$1,247	5.2x	4.5x
23	Tremor International	\$3.23	\$2.59	(20.0%)	\$393	1.4x	0.9x
24	Innovid	\$1.80	\$1.41	(21.7%)	\$206	1.7x	1.4x
25	Media and Games Invest	\$1.87	\$1.37	(26.8%)	\$218	1.5x	1.5x
26	Cardlytics	\$5.39	\$3.40	(37.0%)	\$134	2.5x	1.9x
Average						5.1x	5.4x

MarTech – Q1 2023 Market Performance

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

	Company	Share Price (\$USD)		% Increase % Increase / (Decrease)	Market Cap (US\$mm) End of Q1 2023	EV / LTM Revenue	
		Beginning of Q1 2023	End of Q1 2023			Beginning of Q1 2023	End of Q1 2023
1	Qualtrics	\$10.18	\$17.83	+75.1%	\$12,128	4.6x	7.8x
2	Sprinklr	\$8.07	\$12.96	+60.6%	\$3,829	3.0x	5.3x
3	Integral Ad Science	\$8.98	\$14.27	+58.9%	\$2,359	4.2x	6.1x
4	Yext	\$6.33	\$9.61	+51.8%	\$1,299	2.0x	2.8x
5	HubSpot	\$289.89	\$428.75	+47.9%	\$21,971	8.5x	12.1x
6	Squarespace	\$22.78	\$31.77	+39.5%	\$4,597	4.3x	5.7x
7	DoubleVerify	\$21.78	\$30.15	+38.4%	\$5,284	8.5x	11.1x
8	Shopify	\$35.68	\$47.94	+34.4%	\$61,289	7.9x	10.2x
9	Braze	\$25.76	\$34.57	+34.2%	\$3,653	6.7x	9.0x
10	Momentive	\$7.04	\$9.32	+32.4%	\$1,478	2.4x	3.0x
11	Wix	\$75.51	\$99.80	+32.2%	\$5,956	3.2x	4.2x
12	Twillio	\$50.42	\$66.63	+32.1%	\$13,505	1.7x	2.5x
13	Zeta Global	\$8.34	\$10.83	+29.9%	\$2,938	3.5x	5.0x
14	SEMrush	\$8.14	\$10.05	+23.5%	\$1,236	4.0x	3.9x
15	Appier	\$10.29	\$12.61	+22.5%	\$1,280	6.7x	8.2x
16	QuinStreet	\$14.37	\$15.87	+10.4%	\$907	1.2x	1.4x
17	S&P 500	\$3,824	\$4,109	+7.5%	NA	NA	NA
18	Kaltura	\$1.80	\$1.92	+6.7%	\$273	1.3x	1.3x
19	BigCommerce	\$8.39	\$8.94	+6.6%	\$718	2.6x	2.7x
20	Sprout Social	\$57.93	\$60.88	+5.1%	\$3,520	13.4x	13.2x
21	ON24	\$8.48	\$8.76	+3.3%	\$474	0.6x	0.8x
22	Amplitude	\$12.06	\$12.44	+3.2%	\$1,663	6.2x	6.0x
23	Quotient	\$3.42	\$3.28	(4.1%)	\$344	1.0x	0.9x
24	Coveo	\$6.15	\$5.76	(6.2%)	\$648	4.5x	7.8x
25	LiveRamp	\$23.64	\$21.93	(7.2%)	\$1,567	2.2x	1.9x
26	BrightCove	\$5.22	\$4.45	(14.8%)	\$212	1.1x	0.9x
27	ZoomInfo	\$29.44	\$24.71	(16.1%)	\$10,269	12.7x	10.8x
28	TechTarget	\$44.49	\$36.12	(18.8%)	\$1,095	5.4x	4.0x
29	LivePerson	\$10.28	\$4.41	(57.1%)	\$358	3.6x	1.4x
	Average					4.5x	5.3x

Table of Contents

1	Q1 2023 M&A Activity
2	Q1 2023 Public Markets Overview
A	Public Market Overview
B	Ad Tech Performance Benchmarking
C	MarTech Performance Benchmarking
3	Q1 2023 Private Financing Activity
4	Appendix

LUMA.A – Financial Benchmarking Overview

Summary Observations

- The **LUMA.A** index cohort has 25 companies, including 4 that overlap with the **LUMA.M** index cohort.
- The average Enterprise Value of **LUMA.A** constituents is \$3.4bn with the largest company being theTradeDesk (\$29.6bn) and the smallest company being AcuityAds (\$43mm).
- **LUMA.A** companies have an average '23E Net Revenue⁽¹⁾ of \$719mm and trade at an average EV / '23E Net Revenue of 4.0x. Of the **LUMA.A** companies, Roku is expected to have the highest Net Revenue in '23E (\$3.3bn) followed by AppLovin (\$2.8bn).
- theTradeDesk is trading at the highest EV / '23E Net Revenue at 15.6x. Tremor International is trading at the lowest EV / '23E Net Revenue multiple at 0.7x. The average Net Revenue Growth Rate for '23E is 10.7%, down from the average '22A Net Revenue Growth Rate of 12.2%.
- **LUMA.A** companies have an average expected '23E EBITDA⁽²⁾ Margin of 21.9%. EBITDA Margins are expected to slightly deteriorate, with the average '22A EBITDA Margin at 23.7%. AppLovin has the highest '23E EBITDA at \$1.1bn.

Number of Companies

25

4 overlap with LUMA.M

Average Enterprise Value

\$3.4bn

Average '23E Net Revenue⁽¹⁾

\$719mm

Average EV / '23E Net Revenue⁽¹⁾

4.0x

Average '23E Net Rev⁽¹⁾. Growth %

+10.7%

Down from +12.8% in 2022A

Average '23E EBITDA Margin⁽²⁾ %

+21.9%

Down from +23.7% in 2022A

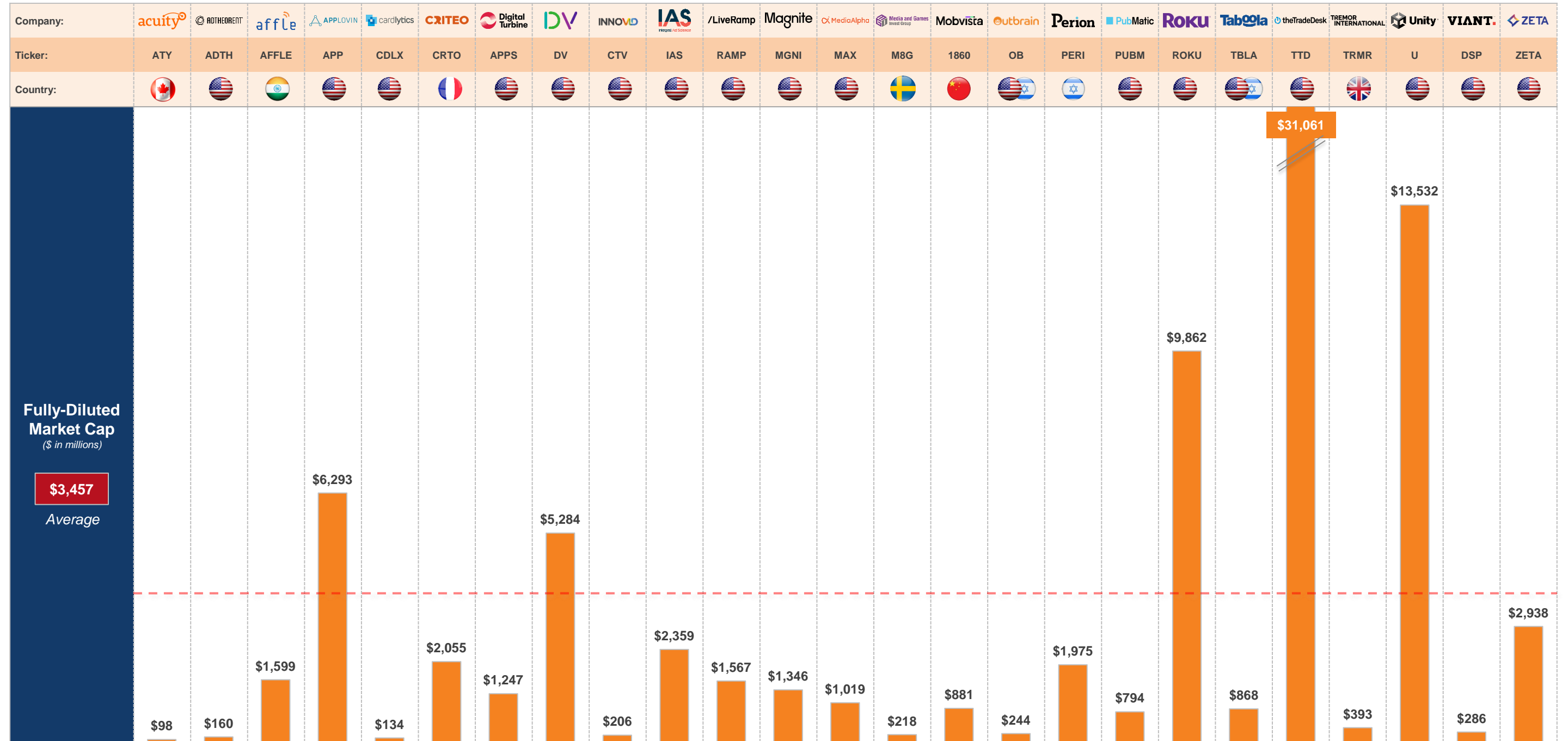
LUMA.A – Summary Valuation Statistics

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

Company	Ticker	Exchange	Share Price (\$)	FD Market Cap (\$mm)	Enterprise Value (\$mm)	EV / Net Revenue			EV / EBITDA		
						CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E
Acuity Ads	ATY	NASDAQ	\$1.59	\$98	\$43	0.9x	0.9x	0.8x	8.8x	9.8x	6.4x
AdTheorent	ADTH	NASDAQ	\$1.69	\$160	\$88	0.8x	0.8x	0.7x	3.9x	4.6x	3.6x
Affle	AFFLE	BSE	\$12.00	\$1,599	\$1,571	23.5x	NA	NA	45.4x	33.0x	NA
AppLovin	APP	NASDAQ	\$15.75	\$6,293	\$8,425	3.0x	3.0x	2.7x	7.9x	7.9x	7.0x
Cardlytics	CDLX	NASDAQ	\$3.40	\$134	\$238	1.9x	2.0x	1.7x	NM	NM	69.6x
Criteo	CRTO	NASDAQ	\$31.51	\$2,055	\$1,766	1.9x	1.8x	1.6x	6.6x	6.3x	5.6x
Digital Turbine	APPS	NASDAQ	\$12.36	\$1,247	\$1,593	4.5x	4.9x	NA	8.4x	10.4x	NA
DoubleVerify	DV	NYSE	\$30.15	\$5,284	\$5,019	11.1x	9.0x	7.3x	35.4x	29.8x	23.0x
Innovid	CTV	NYSE	\$1.41	\$206	\$179	1.4x	1.4x	1.2x	NM	NM	15.4x
Integral Ad Science	IAS	NASDAQ	\$14.27	\$2,359	\$2,495	6.1x	5.4x	4.6x	19.7x	17.3x	14.0x
LiveRamp	RAMP	NYSE	\$21.93	\$1,567	\$1,114	1.9x	1.8x	1.6x	20.6x	13.3x	8.8x
Magnite	MGNI	NASDAQ	\$9.26	\$1,346	\$1,746	3.4x	3.2x	2.8x	9.8x	9.8x	8.3x
MediaAlpha	MAX	NYSE	\$14.98	\$1,019	\$1,147	16.4x	14.0x	11.0x	50.2x	31.9x	22.6x
Media and Games Invest	M8G	NASDAQ	\$1.37	\$218	\$509	1.5x	1.4x	1.2x	5.1x	4.9x	4.1x
Mobvista	1860	HKG	\$0.53	\$881	\$829	4.7x	3.7x	3.1x	NA	NA	NA
Outbrain	OB	NASDAQ	\$4.13	\$244	\$207	0.9x	0.9x	0.8x	7.9x	7.4x	5.5x
Perion Network	PERI	NASDAQ	\$39.58	\$1,975	\$1,545	7.4x	5.1x	NA	11.7x	10.2x	9.1x
PubMatic	PUBM	NASDAQ	\$13.82	\$794	\$619	2.4x	2.4x	2.1x	6.3x	7.9x	6.4x
Roku	ROKU	NASDAQ	\$65.82	\$9,862	\$7,980	2.6x	2.4x	2.1x	NM	NM	NM
Taboola	TBLA	NASDAQ	\$2.72	\$868	\$831	1.5x	1.6x	1.5x	5.3x	11.6x	4.2x
theTradeDesk	TTD	NASDAQ	\$60.91	\$31,061	\$29,614	18.8x	15.6x	12.6x	44.4x	41.5x	32.4x
Tremor International	TRMR	LSE	\$2.59	\$393	\$275	0.9x	0.7x	0.6x	1.9x	2.0x	1.7x
Unity Software	U	NYSE	\$32.44	\$13,532	\$14,872	10.7x	7.1x	5.9x	NM	56.7x	26.1x
Viant	DSP	NASDAQ	\$4.35	\$286	\$286	2.3x	2.2x	2.0x	NM	NM	34.6x
Zeta Global	ZETA	NYSE	\$10.83	\$2,901	\$2,963	5.0x	4.3x	3.6x	32.1x	25.3x	19.2x
Average						5.4x	4.0x	3.2x	17.4x	17.1x	15.6x
Median						2.6x	2.4x	2.0x	8.8x	10.3x	8.8x
25th Percentile						1.5x	1.5x	1.3x	6.5x	7.8x	5.6x
75th Percentile						6.1x	5.0x	3.5x	26.4x	26.4x	22.6x

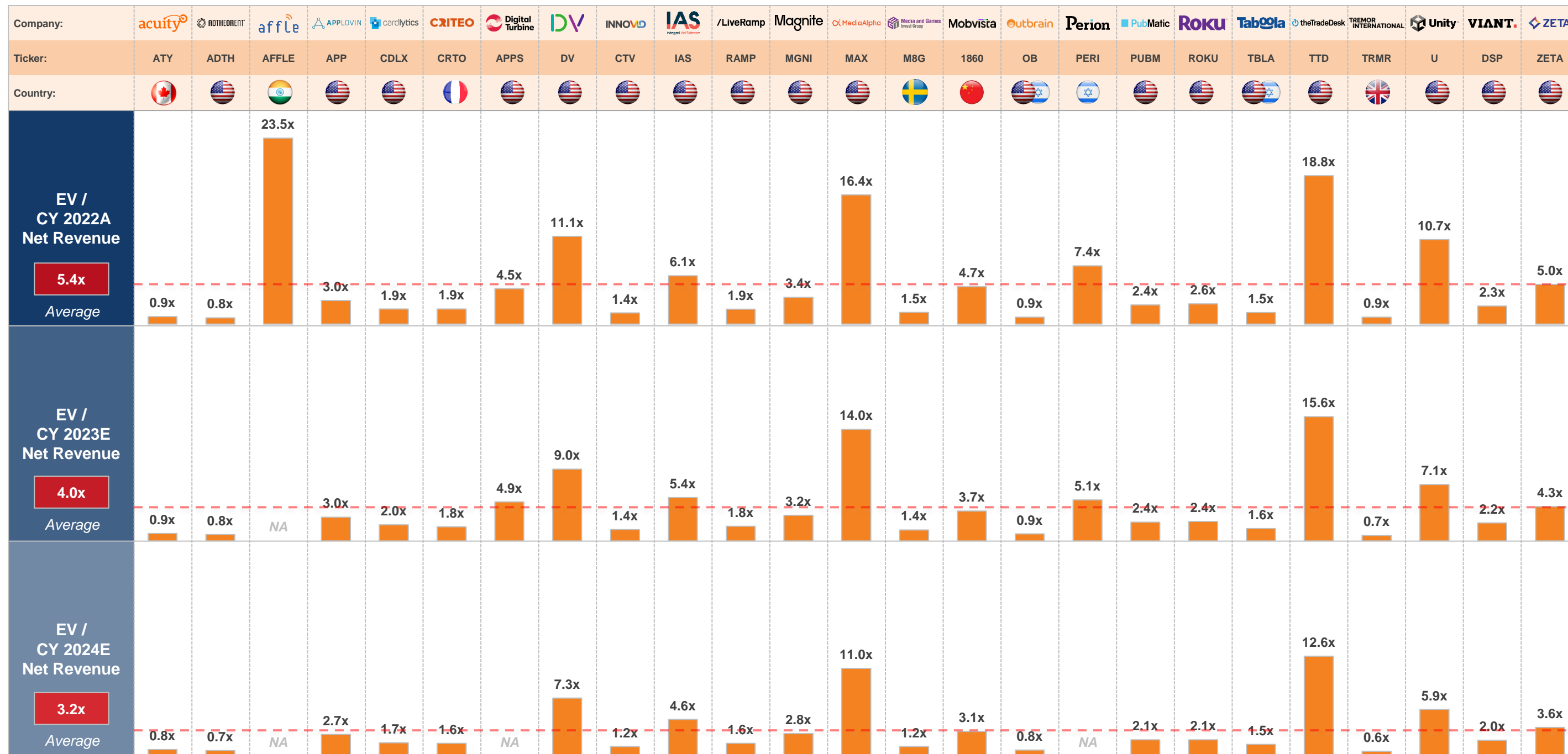
Source: LUMA Analysis, FactSet (market data as of 03/31/2023), Company Filings. Note: Figures correspond to calendar years, or closest equivalent period, See Appendix C for detail. Forward estimates excluded for companies whose relevant metrics are not available on a forward basis (i.e., excluded if brokers do not forecast the specific metric such as "Ex-TAC Gross Profit" or similar such top-line metric). EBITDA multiples less than zero or greater than 75.0x are considered not meaningful ("NM"). Please refer to Appendices A & B for detail on methodology and definitions.

LUMA.A – Valuation Statistics

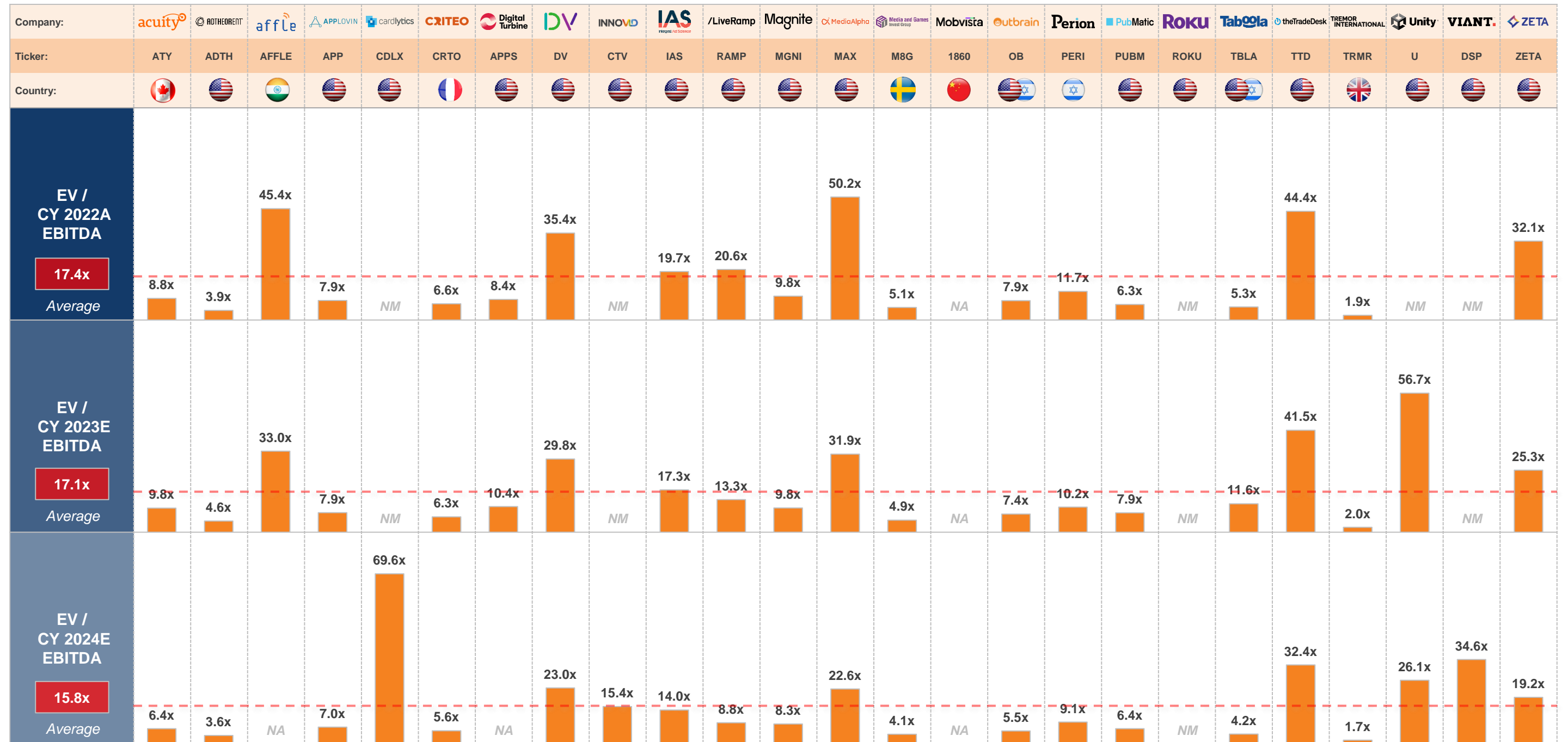


LUMA.A – EV / Net Revenue

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



LUMA.A – EV / EBITDA



LUMA.A – Summary Financial Statistics

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

Company	Ticker	Net Revenue (\$mm)			Net Revenue Growth %			EBITDA (\$mm)			EBITDA Margin %		
		CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E
Acuity Ads	ATY	\$45	\$46	\$51	(11%)	1%	11%	\$5	\$4	\$7	11%	10%	13%
AdTheorent	ADTH	\$110	\$110	\$124	0%	0%	13%	\$22	\$19	\$24	20%	17%	20%
Affle	AFFLE	\$67	NA	NA	42%	NA	NA	\$35	\$48	NA	52%	NA	NA
AppLovin	APP	\$2,817	\$2,840	\$3,101	1%	1%	9%	\$1,063	\$1,064	\$1,197	38%	37%	39%
Cardlytics	CDLX	\$126	\$118	\$143	23%	(6%)	21%	(\$45)	(\$20)	\$3	(36%)	(17%)	2%
Criteo	CRTO	\$928	\$1,000	\$1,101	1%	8%	10%	\$267	\$282	\$317	29%	28%	29%
Digital Turbine	APPS	\$356	\$326	NA	14%	(8%)	NA	\$191	\$153	NA	54%	47%	NA
DoubleVerify	DV	\$452	\$557	\$688	36%	23%	23%	\$142	\$168	\$218	31%	30%	32%
Innovid	CTV	\$127	\$128	\$150	41%	0%	17%	\$1	\$1	\$12	1%	1%	8%
Integral Ad Science	IAS	\$408	\$459	\$541	26%	12%	18%	\$127	\$144	\$178	31%	31%	33%
LiveRamp	RAMP	\$590	\$610	\$690	17%	4%	13%	\$54	\$84	\$127	9%	14%	18%
Magnite	MGNI	\$515	\$544	\$619	12%	6%	14%	\$179	\$177	\$210	35%	33%	34%
MediaAlpha	MAX	\$70	\$82	\$104	(31%)	17%	27%	\$23	\$36	\$51	33%	44%	49%
Media and Games Invest	M8G	\$344	\$370	\$425	21%	7%	15%	\$99	\$103	\$124	29%	28%	29%
Mobvista	1860	\$175	\$222	\$268	18%	27%	21%	NA	NA	NA	NA	NA	NA
Outbrain	OB	\$235	\$237	\$269	(14%)	1%	14%	\$26	\$28	\$38	11%	12%	14%
Perion Network	PERI	\$210	\$300	NA	10%	43%	NA	\$132	\$151	\$170	63%	50%	NA
PubMatic	PUBM	\$256	\$263	\$301	13%	3%	14%	\$98	\$79	\$97	38%	30%	32%
Roku	ROKU	\$3,127	\$3,288	\$3,882	13%	5%	18%	(\$84)	(\$295)	\$21	(3%)	(9%)	1%
Taboola	TBLA	\$570	\$536	\$559	10%	(6%)	4%	\$157	\$72	\$199	28%	13%	36%
theTradeDesk	TTD	\$1,578	\$1,898	\$2,359	32%	20%	24%	\$668	\$713	\$915	42%	38%	39%
Tremor International	TRMR	\$310	\$400	\$448	3%	29%	12%	\$145	\$140	\$164	47%	35%	37%
Unity Software	U	\$1,391	\$2,106	\$2,537	25%	51%	20%	(\$51)	\$263	\$569	(4%)	12%	22%
Viant	DSP	\$125	\$127	\$143	(12%)	2%	12%	(\$6)	\$3	\$8	(5%)	3%	6%
Zeta Global	ZETA	\$591	\$691	\$821	29%	17%	19%	\$92	\$117	\$155	16%	17%	19%
Average					13%	11%	16%				24%	22%	24%
Median					13%	5%	15%				29%	28%	29%
25th Percentile					1%	1%	13%				10%	12%	14%
75th Percentile					25%	18%	20%				38%	34%	34%

Source: LUMA Analysis, FactSet (market data as of 03/31/2023), Company Filings. **Note:** Figures correspond to calendar years, or closest equivalent period, See Appendix C for detail. EBITDA margins calculated with "Net Revenue" as denominator, and therefore may not correspond to a given company's reported EBITDA margin. "NC" denotes not calculated for instances where EBITDA detail is available, but not Net Revenue detail. Please refer to Appendices A & B for detail on methodology and definitions.

LUMA.A – Net Revenue

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

Company:	acuity ⁹	ADTHEORENT	affle	APPROVIN	cardlytics	CRITEO	Digital Turbine	DV	INNOVD	IAS	/LiveRamp	Magnite	MediaAlpha	Media and Games Invest Group	Mobvista	Outbrain	Perion	PubMatic	ROKU	Taboola	theTradeDesk	TREMOR INTERNATIONAL	Unity	VIANT	ZETA
Ticker:	ATY	ADTH	AFFLE	APP	CDLX	CRTO	APPS	DV	CTV	IAS	RAMP	MGNI	MAX	M8G	1860	OB	PERI	PUBM	ROKU	TBLA	TTD	TRMR	U	DSP	ZETA
Country:																									
YoY Growth %	(11%)	0%	42%	1%	23%	1%	14%	36%	41%	26%	17%	12%	(31%)	21%	18%	(14%)	10%	13%	13%	10%	32%	3%	25%	(12%)	29%
CY 2022A Net Revenue (\$ in millions)	\$621			\$2,817															\$3,127						
Average	\$45	\$110	\$67		\$126	\$928	\$356	\$452	\$127	\$408	\$590	\$515	\$70	\$344	\$175	\$235	\$210	\$256		\$570	\$1,578	\$310	\$1,391	\$125	\$591
YoY Growth %	1%	0%	NA	1%	(6%)	8%	(8%)	23%	0%	12%	4%	6%	17%	7%	27%	1%	43%	3%	5%	(6%)	20%	29%	51%	2%	17%
EV / CY 2023E Net Revenue	\$719			\$2,840															\$3,288						
Average	\$46	\$110	NA		\$118	\$1,000	\$326	\$557	\$128	\$459	\$610	\$544	\$82	\$370	\$222	\$237	\$300	\$263		\$536	\$1,898	\$400	\$2,106	\$127	\$691
YoY Growth %	11%	13%	NA	9%	21%	10%	NA	23%	17%	18%	13%	14%	27%	15%	21%	14%	NA	14%	18%	4%	24%	12%	20%	12%	19%
EV / CY 2024E Net Revenue	\$878			\$3,101															\$3,882						
Average	\$51	\$124	NA		\$143	\$1,101	NA	\$688	\$150	\$541	\$690	\$619	\$104	\$425	NA	\$269	NA	\$301		\$559	\$2,359	\$448	\$2,537	\$143	\$821

LUMA.A – EBITDA Margin⁽¹⁾

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

Company:	acuity ⁹	ADTHEORENT	affle	APPROVIN	cardlytics	CRITEO	Digital Turbine	DV	INNOVLD	IAS	/LiveRamp	Magnite	MediaAlpha	Media and Games Invest Group	Mobvista	Outbrain	Perion	PubMatic	ROKUU	Taboola	theTradeDesk	TREMOR INTERNATIONAL	Unity	VIANT	ZETA	
Ticker:	ATY	ADTH	AFFLE	APP	CDLX	CRTO	APPS	DV	CTV	IAS	RAMP	MGNI	MAX	M8G	1860	OB	PERI	PUBM	ROKU	TBLA	TTD	TRMR	U	DSP	ZETA	
Country:																										
Average 23.7%																										
CY 2022A EBITDA Margin % (NR – Basis)	11%	20%	52%	38%	(40%)	29%	54%	31%	1%	31%	9%	35%	33%	29%	NA	11%	63%	38%	(3%)	28%	42%	47%	(4%)	(5%)	16%	
YoY bps Δ	(205)	(190)	(27)	+117	(240)	(62)	+69	(17)	(51)	(09)	-	+15	(247)	+05	NA	(215)	+265	(42)	(195)	(71)	+03	(66)	(19)	(310)	+18	
Average 21.9%																										
CY 2023E EBITDA Margin % (NR – Basis)	10%	17%	NC	37%	(17%)	28%	47%	30%	1%	31%	14%	33%	44%	28%	NA	15%	50%	30%	(9%)	13%	38%	35%	12%	3%	17%	
YoY bps Δ	(11)	(29)	NA	(03)	+187	(06)	(67)	(11)	+02	+05	+46	(21)	+113	(08)	NA	+06	(128)	(84)	(63)	(141)	(48)	(117)	+161	+74	+14	
Average 24.3%																										
CY 2024E EBITDA Margin % (NR – Basis)	13%	20%	NA	39%	2%	29%	NA	32%	8%	33%	18%	34%	49%	29%	NA	17%	NC	32%	1%	36%	39%	37%	22%	6%	19%	
YoY bps Δ	+37	+22	NA	+12	+196	+07	NA	+15	+66	+14	+46	+14	+49	+13	NA	+23	NA	+25	+95	+222	+12	+16	+100	+33	+19	

Table of Contents

1	Q1 2023 M&A Activity
2	Q1 2023 Public Markets Overview
A	Public Market Overview
B	Ad Tech Performance Benchmarking
C	MarTech Performance Benchmarking
3	Q1 2023 Private Financing Activity
4	Appendix

LUMA.M – Financial Benchmarking Overview

Summary Observations

- The **LUMA.M** index cohort has 28 companies, including 4 that overlap with the **LUMA.A** index cohort. We retroactively added 3 new companies since our last report – QuinStreet, TechTarget and Wix.
- The average Enterprise Value of **LUMA.M** constituents is \$5.5bn with the largest company being Shopify (\$57.1bn) and the smallest company being ON24 (\$148mm).
- **LUMA.M** companies have an average '23E Revenue of \$949mm and trade at average EV / '23E Revenue of 4.7x. Of the **LUMA.M** companies, Shopify is expected to have the highest Revenue in '23E (\$6.7bn).
- Hubspot is trading at the highest EV / '23E Revenue at 10.2x, followed by Sprout Social at 10.1x. Brightcove is trading at the lowest EV / '23E Revenue multiple at 0.8x. The average Revenue Growth Rate for '23E is 10.9% down from the average '22A Revenue Growth Rate of 18.9%.
- **LUMA.M** companies have an average '23E EBITDA Margin of 9.1%, up from 6.3% for '22A. Twillio has the highest '23E EBITDA (\$578mm) of the cohort, while Zoominfo has the highest '23E EBITDA Margin (+43.6%).

Number of Companies

28

4 overlap with LUMA.M

Average Enterprise Value

\$5.5bn

Average '23E Revenue

\$949mm

Average EV / '23E Revenue

4.6x

Average '23E Rev. Growth %

+10.9%

Down from +18.9% in 2022A

Average '23E EBITDA Margin %⁽¹⁾

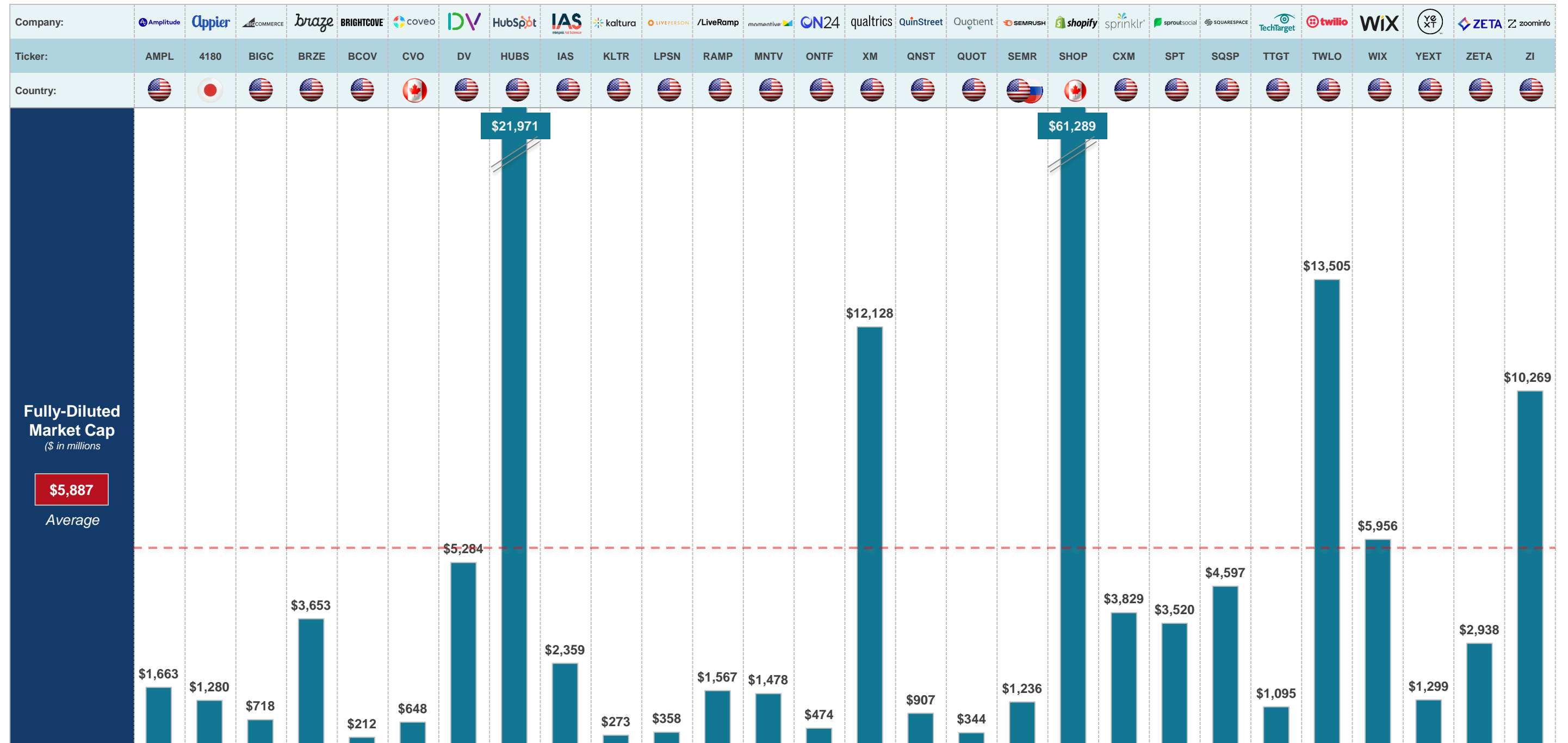
+9.1%

Up from +6.3% in 2022A

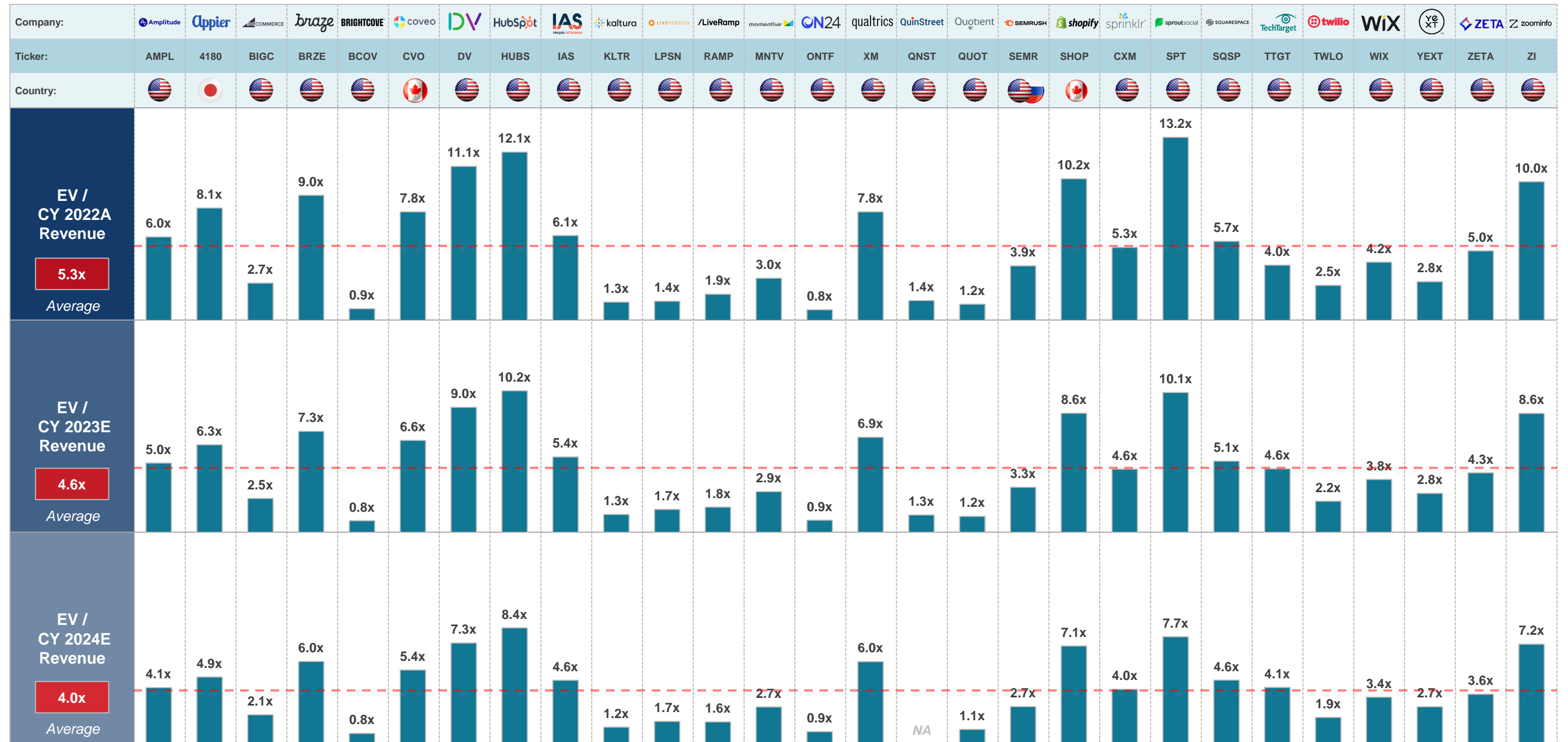
LUMA.M – Summary Valuation Statistics

Company	Ticker	Exchange	Share Price (\$)	FD Market Cap (\$mm)	Enterprise Value (\$mm)	EV / Revenue			EV / EBITDA		
						CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E
Amplitude	AMPL	NASDAQ	\$12.44	\$1,663	\$1,432	6.0x	5.0x	4.1x	NM	NM	NA
Appier	4180	TYO	\$12.61	\$1,280	\$1,184	8.1x	6.3x	4.9x	NM	NA	NA
BigCommerce	BIGC	NASDAQ	\$8.94	\$718	\$752	2.7x	2.5x	2.1x	NM	NM	NM
Braze	BRZE	NASDAQ	\$34.57	\$3,653	\$3,175	9.0x	7.3x	6.0x	NM	NM	NM
Brightcove	BCOV	NASDAQ	\$4.45	\$212	\$180	0.9x	0.8x	0.8x	10.1x	10.3x	7.4x
Coveo	CVO	TSE	\$5.76	\$648	\$867	7.8x	6.6x	5.4x	NM	NM	NM
Double Verify	DV	NYSE	\$30.15	\$5,284	\$5,019	11.1x	9.0x	7.3x	35.4x	29.8x	23.0x
Hubspot	HUBS	NYSE	\$428.75	\$21,971	\$20,969	12.1x	10.2x	8.4x	NM	65.3x	50.7x
Integral Ad Science	IAS	NASDAQ	\$14.27	\$2,359	\$2,495	6.1x	5.4x	4.6x	19.7x	17.3x	14.0x
Kaltura	KLTR	NASDAQ	\$1.92	\$273	\$223	1.3x	1.3x	1.2x	NM	NM	NM
LivePerson	LPSN	NASDAQ	\$4.41	\$358	\$711	1.4x	1.7x	1.7x	NM	30.7x	14.8x
LiveRamp	RAMP	NYSE	\$21.93	\$1,567	\$1,114	1.9x	1.8x	1.6x	20.6x	13.3x	8.8x
Momentive	MNTV	NASDAQ	\$9.32	\$1,478	\$1,460	3.0x	2.9x	2.7x	23.8x	16.1x	13.4x
ON24	ONTF	NYSE	\$8.76	\$474	\$148	0.8x	0.9x	0.9x	NM	NM	28.7x
Qualtrics	XM	NASDAQ	\$17.83	\$12,128	\$11,408	7.8x	6.9x	6.0x	NM	50.1x	36.5x
QuinStreet	QNST	NASDAQ	\$15.87	\$907	\$828	1.4x	1.3x	NA	46.4x	19.3x	NA
Quotient	QUOT	NYSE	\$3.28	\$344	\$337	1.2x	1.2x	1.1x	22.7x	8.6x	6.7x
SEMrush	SEMR	NYSE	\$10.05	\$1,236	\$999	3.9x	3.3x	2.7x	NM	NM	67.7x
Shopify	SHOP	TSE	\$47.94	\$61,289	\$57,150	10.2x	8.6x	7.1x	NM	NM	NM
Sprinklr	CXM	NYSE	\$12.96	\$3,829	\$3,250	5.3x	4.6x	4.0x	NM	54.2x	37.7x
SproutSocial	SPT	NASDAQ	\$60.88	\$3,520	\$3,347	13.2x	10.1x	7.7x	NM	NM	NM
Squarespace	SQSP	NYSE	\$31.77	\$4,597	\$4,945	5.7x	5.1x	4.6x	33.5x	28.4x	22.8x
TechTarget	TTGT	NASDAQ	\$36.12	\$1,095	\$1,186	4.0x	4.6x	4.1x	9.7x	NM	NM
Twilio	TWLO	NYSE	\$66.63	\$13,505	\$9,659	2.5x	2.2x	1.9x	35.1x	16.7x	13.0x
Wix	WIX	NASDAQ	\$99.80	\$5,956	\$5,820	4.2x	3.8x	3.4x	NM	47.4x	28.7x
Yext	YEXT	NYSE	\$9.61	\$1,299	\$1,137	2.8x	2.8x	2.7x	71.7x	25.2x	20.1x
Zeta Global	ZETA	NYSE	\$10.83	\$2,901	\$2,963	5.0x	4.3x	3.6x	32.1x	25.3x	19.2x
ZoomInfo	ZI	NASDAQ	\$24.71	\$10,269	\$10,965	10.0x	8.6x	7.2x	23.6x	19.7x	16.8x
Average						5.3x	4.6x	4.0x	29.6x	28.1x	23.9x
Median						4.6x	4.4x	4.0x	23.8x	25.2x	19.6x
25th Percentile						2.4x	2.1x	2.0x	20.6x	16.7x	13.5x
75th Percentile						7.9x	6.7x	5.7x	35.1x	30.7x	28.7x

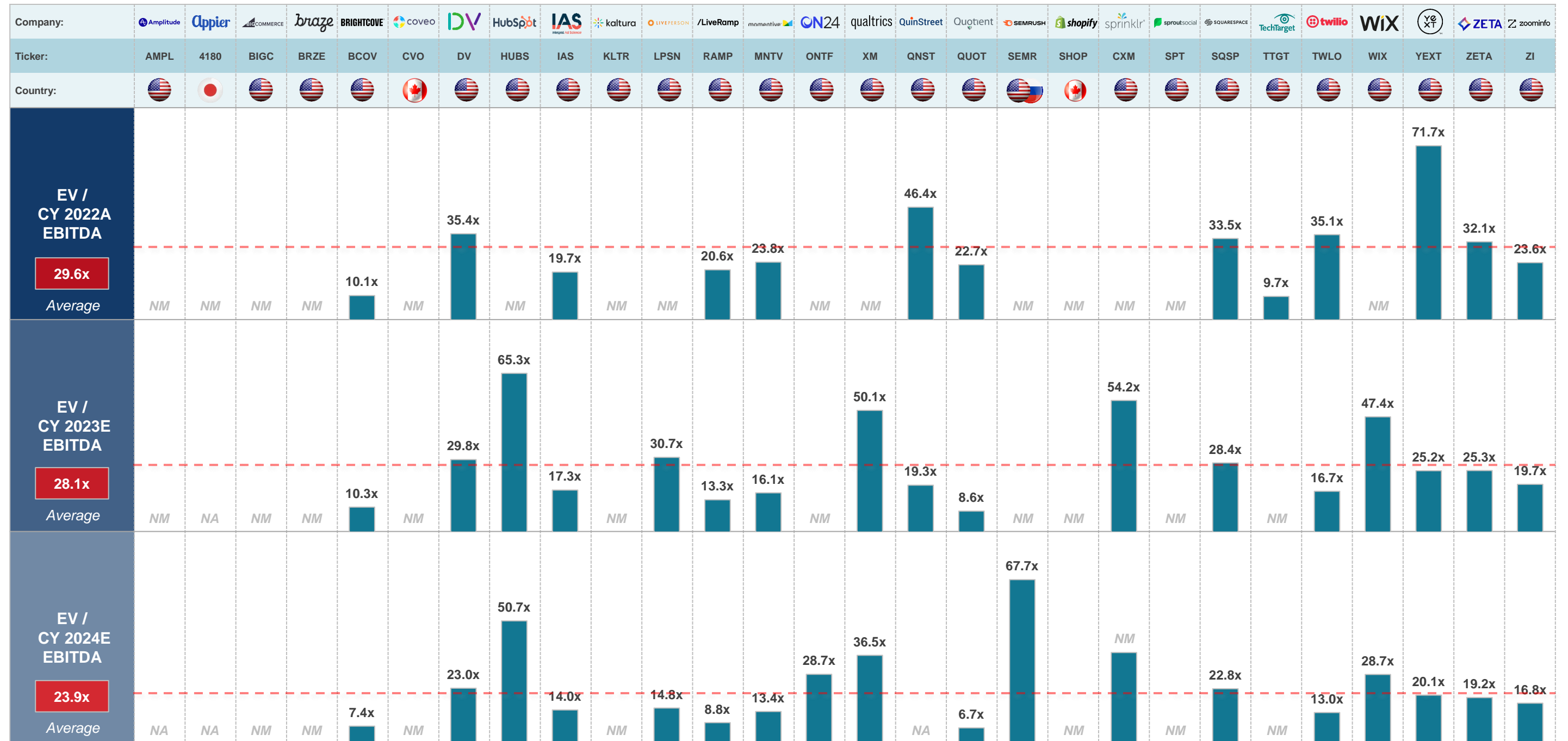
LUMA.M – Valuation Statistics



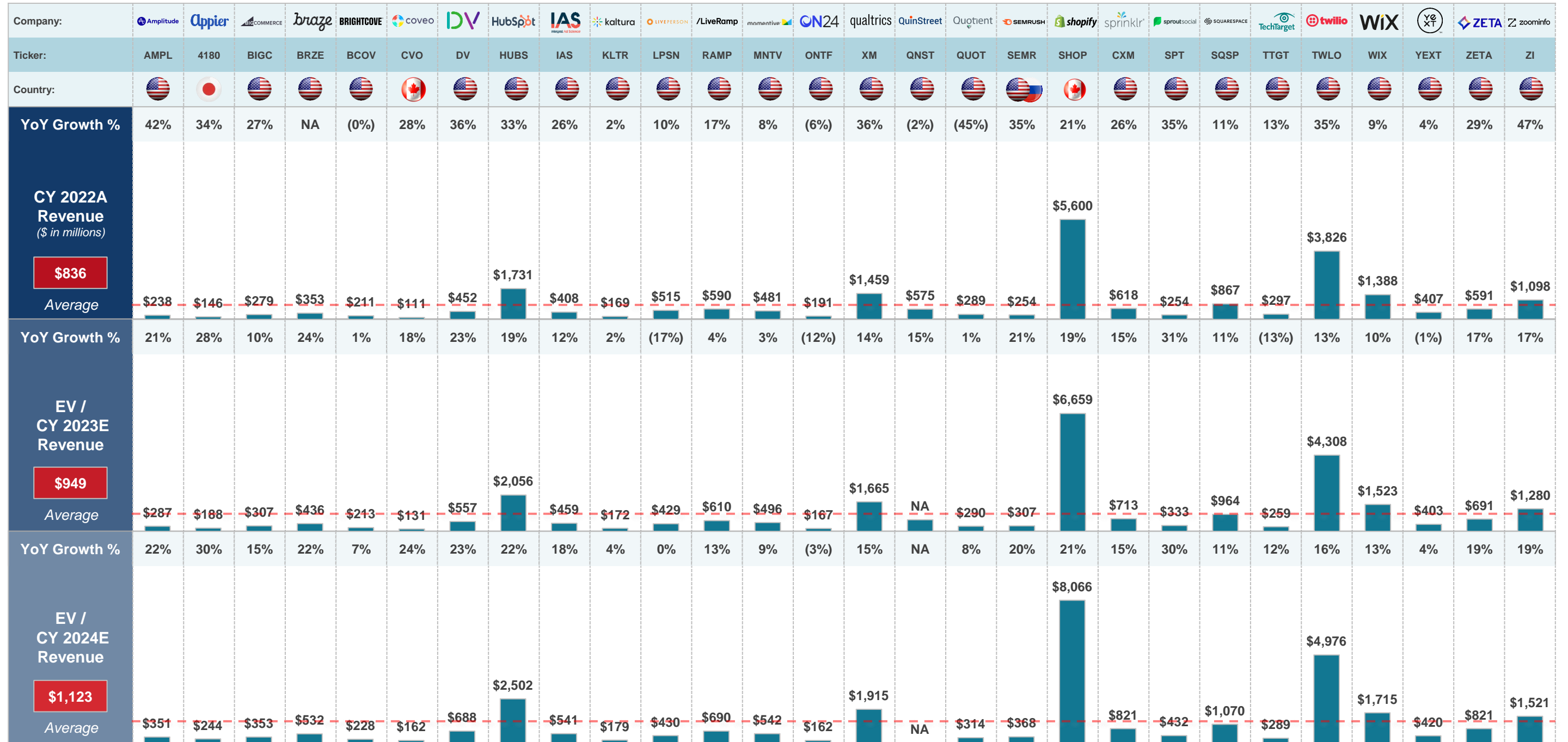
LUMA.M – EV / Revenue



LUMA.M – EV / EBITDA



LUMA.M – Revenue



LUMA.M – EBITDA Margin

Company:																												
Ticker:	AMPL	4180	BIGC	BRZE	BCOV	CVO	DV	HUBS	IAS	KLTR	LPSN	RAMP	MNTV	ONTF	XM	QNST	QUOT	SEMR	SHOP	CXM	SPT	SQSP	TTGT	TWLO	WIX	YEXT	ZETA	ZI
Country:																												
Average 6.3%																												
CY 2022A EBITDA Margin %	8%	7%	(16%)	(19%)	8%	(17%)	31%	13%	31%	(17%)	(3%)	9%	13%	(8%)	7%	3%	5%	(9%)	2%	0%	(0%)	17%	41%	7%	(1%)	4%	16%	42%
YoY bps Δ	+381	+68	(65)	NA	(30)	+94	(17)	+06	(09)	(93)	(93)	+00	+35	(115)	+11	(52)	(26)	(108)	(148)	+82	+08	+11	+11	(20)	(68)	+38	+18	(02)
Average 9.1%																												
CY 2023E EBITDA Margin %	(6%)	NA	(5%)	(13%)	8%	(10%)	30%	16%	31%	(4%)	5%	14%	18%	(4%)	14%	7%	14%	2%	1%	6%	1%	18%	5%	13%	8%	11%	17%	44%
YoY bps Δ	(133)	NA	+107	+70	(02)	+67	(11)	+25	+05	+127	+85	+46	+55	+44	+67	+34	+84	+105	(06)	+84	+18	+10	(364)	+62	+95	+73	+14	+12
Average 12.9%																												
CY 2024E EBITDA Margin %	NA	NA	2%	(6%)	11%	(3%)	32%	17%	33%	(0%)	11%	18%	20%	3%	16%	NA	16%	4%	5%	NA	3%	20%	4%	15%	12%	13%	19%	43%
YoY bps Δ	NA	NA	+69	+95	+25	+67	+15	+09	+14	+38	+58	+46	+19	+70	+26	NA	+25	+23	+35	+21	+15	+22	(07)	+16	+38	+23	+19	(07)

LUMA.M – Summary Financial Statistics


























Company	Ticker	Revenue (\$mm)			Revenue Growth %			EBITDA (\$mm)			EBITDA Margin %		
		CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E
Amplitude	AMPL	\$238	\$287	\$351	42%	21%	22%	\$18	(\$16)	NA	8%	(6%)	NA
Appier	4180	\$146	\$188	\$244	34%	28%	30%	\$10	NA	NA	7%	NA	NA
BigCommerce	BIGC	\$279	\$307	\$353	27%	10%	15%	(\$44)	(\$15)	\$7	(16%)	(5%)	2%
Braze	BRZE	\$353	\$436	\$532	NA	24%	22%	(\$66)	(\$51)	(\$12)	(19%)	(12%)	(2%)
Brightcove	BCOV	\$211	\$213	\$228	(0%)	1%	7%	\$18	\$18	\$24	8%	8%	11%
Coveo	CVO	\$111	\$131	\$162	28%	18%	24%	(\$19)	(\$13)	(\$5)	(17%)	(10%)	(3%)
Double Verify	DV	\$452	\$557	\$688	36%	23%	23%	\$142	\$168	\$218	31%	30%	32%
Hubspot	HUBS	\$1,731	\$2,056	\$2,502	33%	19%	22%	\$227	\$321	\$414	13%	16%	17%
Integral Ad Science	IAS	\$408	\$459	\$541	26%	12%	18%	\$127	\$144	\$178	31%	31%	33%
Kaltura	KLTR	\$169	\$172	\$179	2%	2%	4%	(\$28)	(\$7)	(\$1)	(17%)	(4%)	(0%)
LivePerson	LPSN	\$515	\$429	\$430	10%	(17%)	0%	(\$16)	\$23	\$48	(3%)	5%	11%
LiveRamp	RAMP	\$590	\$610	\$690	17%	4%	13%	\$54	\$84	\$127	9%	14%	18%
Momentive	MNTV	\$481	\$496	\$542	8%	3%	9%	\$61	\$91	\$109	13%	18%	20%
ON24	ONTF	\$191	\$167	\$162	(6%)	(12%)	(3%)	(\$16)	(\$6)	\$5	(8%)	(4%)	3%
Qualtrics	XM	\$1,459	\$1,665	\$1,915	36%	14%	15%	\$102	\$228	\$313	7%	14%	16%
QuinStreet	QNST	\$575	\$659	NA	(2%)	15%	NA	\$18	\$43	NA	3%	7%	NA
Quotient	QUOT	\$289	\$290	\$314	(45%)	1%	8%	\$15	\$39	\$51	5%	14%	16%
SEMrush	SEMR	\$254	\$307	\$368	35%	21%	20%	(\$22)	\$5	\$15	(9%)	2%	4%
Shopify	SHOP	\$5,600	\$6,659	\$8,066	21%	19%	21%	\$97	\$73	\$372	2%	1%	5%
Sprinklr	CXM	\$618	\$713	\$821	26%	15%	15%	\$0	\$60	\$86	0%	8%	11%
SproutSocial	SPT	\$254	\$333	\$432	35%	31%	30%	(\$1)	\$5	\$12	(0%)	1%	3%
Squarespace	SQSP	\$867	\$964	\$1,070	11%	11%	11%	\$147	\$174	\$217	17%	18%	20%
TechTarget	TTGT	\$297	\$259	\$289	13%	(13%)	12%	\$122	\$12	\$12	41%	5%	4%
Twilio	TWLO	\$3,826	\$4,308	\$4,976	35%	13%	16%	\$275	\$578	\$745	7%	13%	15%
Wix	WIX	\$1,388	\$1,523	\$1,715	9%	10%	13%	(\$20)	\$123	\$203	(1%)	8%	12%
Yext	YEXT	\$407	\$403	\$420	4%	(1%)	4%	\$16	\$45	\$57	4%	11%	13%
Zeta Global	ZETA	\$591	\$691	\$821	29%	17%	19%	\$92	\$117	\$155	16%	17%	19%
ZoomInfo	ZI	\$1,098	\$1,280	\$1,521	47%	17%	19%	\$465	\$558	\$652	42%	44%	43%
Average					19%	11%	15%				6%	9%	13%
Median					26%	13%	15%				6%	8%	12%
25th Percentile					9%	3%	10%				(2%)	1%	4%
75th Percentile					34%	19%	21%				13%	15%	18%

Table of Contents

1	Q1 2023 M&A Activity
2	Q1 2023 Public Markets Activity
3	Q1 2023 Private Financing Activity
4	Appendix




























Ad Tech & MarTech – Q1 2023 Key Financings (1 / 4)

Ad Tech
MarTech
Digital Content

Announcement Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
3/30/2023	 P97	 Portage Ventures	\$40	ND	<ul style="list-style-type: none"> ■ P97, a mobile commerce platform for gas stations, raised \$40mm in a round led by Portage Ventures. ■ The platform integrates with several major gasoline brands, covering ~53% of the 60k gas stations in N. America.
3/29/2023	 hygraph	 ONE PEAK PARTNERS	\$30	ND	<ul style="list-style-type: none"> ■ Hygraph (f.k.a GraphCMS), a CMS, raised \$30mm in a Series B round led by One Peak Partners. ■ The Company previously raised \$13mm in its Series A and launched an API last September.
3/28/2023	 EDITED	 Delta-v Capital	\$15	ND	<ul style="list-style-type: none"> ■ EDITED, an AI-powered merchandising experience platform, received a \$15mm investment from Delta-v Capital. ■ The Company will use the funds towards product development, partnerships, and opportunistic M&A.
3/27/2023	 bink	 BARCLAYS 	\$20	\$46	<ul style="list-style-type: none"> ■ Bink, a loyalty management platform that links payment cards to loyalty plans raised \$20mm in a new round. ■ The new funds will reportedly provide runway through Q1'24, following a difficult period of cost-cutting measures.
3/22/2023	 PURE SPECTRUM	 arthur ventures	\$37	ND	<ul style="list-style-type: none"> ■ PureSpectrum, a consumer insights automation platform, raised \$37mm in a round led by Arthur Ventures. ■ The funds will reportedly support product innovation around data quality and drive strategic growth initiatives.
3/20/2023	 SKUPOS	 INSIGHT PARTNERS	\$26	ND	<ul style="list-style-type: none"> ■ Skupos, a data platform for convenience retail raised \$26mm in a Series B round led by Insight Partners. ■ The new funds will be used to expand the Company's footprint of independent convenience stores.
3/14/2023	 XGEN Ai	Undisclosed Investors	\$17	ND	<ul style="list-style-type: none"> ■ Xgen, an AI-powered cloud-based customer experience optimization platform, raised \$17mm in a new round. ■ The Company was founded in 2019 and previously raised \$7.5mm in its 2021 Seed Round.
3/8/2023	 consensus	 Sumeru	\$110	ND	<ul style="list-style-type: none"> ■ Consensus, a demo automation platform, raised \$110mm from Sumeru Equity Partners. ■ Per Businesswire, the Company's customers reportedly include 15 of the 30 largest software companies.
3/7/2023	 SOCi	 JMI EQUITY	\$120	ND	<ul style="list-style-type: none"> ■ SOCi, a self-described all-in-one marketing automation platform, raised \$120mm in a round led by JMI Equity. ■ The funds will help develop a line of AI marketing tools, finance M&A opportunities and fuel international expansion.
3/1/2023	 Hexa	 POINT72 VENTURES	\$21	ND	<ul style="list-style-type: none"> ■ Hexa, a 3D asset visualization and management platform for eCommerce, raised \$21mm in a Series A round. ■ The Company reportedly conducted an early round due to tripling their customer base going into 2023.
3/6/2023	 Threecolts	 GG GENERAL GLOBAL CAPITAL 	\$90	ND	<ul style="list-style-type: none"> ■ Threecolts, a sales management platform for retailers on Amazon, raised \$90mm in a Series A round. ■ The Company is reportedly already profitable, has 150 FTEs, and serves 22,000 customers.
3/2/2023	 Wunderkind	 NEUBERGER BERMAN	\$76	\$576	<ul style="list-style-type: none"> ■ Wunderkind, a behavioral marketing platform, raised \$76mm in a Series C round led by Neuberger Berman. ■ The Company reported that it reached \$100mm ARR in 2020, has raised \$150mm date, and has 700 FTEs.
























Ad Tech & MarTech – Q1 2023 Key Financings (2 / 4)

Ad Tech
MarTech
Digital Content





Announcement Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
3/2/2023	 attio	 Redpoint	\$24	ND	<ul style="list-style-type: none"> Attio, a CRM platform, raised \$23.5mm in a Series A round led by Redpoint Ventures. The Company reportedly has \$1mm in ARR as of Dec 2022, has raised \$31mm to date, and has 25 FTEs.
3/1/2023	 anonym	Undisclosed Investors	\$8	ND	<ul style="list-style-type: none"> Anonym, an ad measurement startup, raised \$8mm in a Seed round. The Company was founded by former Meta ads execs, Graham Mudd and Brad Smallwood.
2/27/2023	 Typeface	 Lightspeed	\$65	ND	<ul style="list-style-type: none"> Typeface, a gen-AI application for enterprise content creation, raised \$65mm. The platform reportedly connects generative AI with a brand's tone, audiences, and workflows.
2/27/2023	 nosto	 MAM <small>MANDATUM ASSET MANAGEMENT</small>	\$16	ND	<ul style="list-style-type: none"> Nosto, a commerce experience platform, raised \$16mm in a round led by MAM GE. The Company recently launched on-platform site search & will reportedly use the proceeds to fund global expansion.
2/24/2023	 REBUY	 M13	\$17	\$77	<ul style="list-style-type: none"> Rebuy, a personalization platform for online retailers, raised \$17mm in a Series A round led by M13. The Company reportedly tripled its revenue in the last year and is used by 10% of all Shopify merchants.
2/16/2023	 Spreatail	 McCarthy Capital	\$208	ND	<ul style="list-style-type: none"> Spreatail, an eCommerce accelerator for manufacturers, raised \$208mm in a round led by McCarthy Capital. The new funds will reportedly support enhancements to technology efficiency and support brand partner growth.
2/15/2023	 Hippo Video	 DVC <small>DALLAS VENTURE CAPITAL</small>	\$8	\$45	<ul style="list-style-type: none"> Hippo Video, a gen-AI sales video personalization platform, raised \$8mm in a Series B round led by DVC. The new funds will support the Company's expansion across the U.S.
2/9/2023	 regie.ai	 khosla ventures	\$16	\$66	<ul style="list-style-type: none"> Regie, a gen-AI sales video personalization platform, closed its \$16mm Series A round. The Company has raised \$21mm to date, reportedly grew 365% YoY in 2022, and has 40 FTEs.
2/8/2023	 entropik	 Bessemer Venture Partners  SIG <small>SUSQUEHANNA</small>	\$25	ND	<ul style="list-style-type: none"> Entropik, an AI-powered "emotional intelligence" platform, raised \$25mm in a Series B round led by BVP & SIG. The Company has 17 global patents on multi-modal emotional AI used to optimize brand experience journeys.
2/7/2023	 REMBRAND	 GREYCROFT  UTA	\$8	\$33	<ul style="list-style-type: none"> Rembrand, an AI-powered programmatic product placement platform for digital video, closed a \$8mm Seed round. The platform allows for static ads that insert alongside uninterrupted video content.
2/3/2023	 samooha	 ALTIMETER  SNOWFLAKE VENTURES	\$13	\$40	<ul style="list-style-type: none"> Samooha, a privacy tool for data clean rooms, raised \$13mm in a Series A round led by Altimeter & Snowflake. The new funds will reportedly support penetration and expansion across Samooha's target customer industries.
2/2/2023	 ziflow	 Riverside Acceleration Capital  Companyon VENTURES	\$20	ND	<ul style="list-style-type: none"> Ziflow, an enterprise creative workflow platform, raised \$20mm in a Series A round led by RAC & Companyon. The new funds will support headcount growth, product development, new features, and integrations.

Ad Tech & MarTech – Q1 2023 Key Financings (3 / 4)

























Ad Tech
MarTech
Digital Content

Announcement Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
2/2/2023	 LAVENDER	NORWEST	\$13	ND	<ul style="list-style-type: none"> ■ Lavender, a gen-AI sales email platform, raised \$13mm across its Seed and Series A rounds led by Norwest. ■ The Company will reportedly use the proceeds to fund headcount growth and new product development.
2/2/2023	 Triple Whale	ELEPHANT NFX  shopify	\$25	\$350	<ul style="list-style-type: none"> ■ Triple Whale, an eCommerce analytics platform for selling on Shopify, raised \$25mm in a Series B round. ■ The Company raised \$24mm in a Series A around this time last year and has reportedly grown 1,400% since.
2/1/2023	 CONSTELLATION	Newlight  PARTNERS	\$15	ND	<ul style="list-style-type: none"> ■ Constellation, an enterprise creative workflow platform, received \$15mm of development capital from Newlight. ■ The Company continues to grow its presence in its core automotive & retail sectors, while expanding into others.
1/31/2023	 nexus	GRIFFIN GAMING PARTNERS 	\$10	ND	<ul style="list-style-type: none"> ■ Nexus, a "Support-a-Creator" implementation software for live games, raised \$10mm in a Series A round. ■ These programs reward content creators via revenue share upon using their promo code at checkout.
1/23/2023	 Zift solutions.	INVESTCORP TECHNOLOGY PARTNERS 	\$70	ND	<ul style="list-style-type: none"> ■ Zift Solutions, a PRM and TCMA software, raised \$70mm in a round led by ITP. ■ The investment will help accelerate Zift's go-to-market strategy, and continued international expansion.
1/19/2023	 ORO	ZUBR  CAPITAL	\$13	\$65	<ul style="list-style-type: none"> ■ Oro, a B2B eCommerce management platform, raised \$13mm in a Series B round led by Zubr Capital. ■ The Company's founders previously founded and sold Magento (now Adobe Commerce).
1/18/2023	 chord	BrightPixel Capital  SONAE ECLIPSE	\$33	ND	<ul style="list-style-type: none"> ■ Chord, a headless commerce platform, raised \$33mm in a round led by Bright Pixel Capital and Eclipse Ventures. ■ The Company will reportedly use the proceeds to fund management hires, marketing, and product development.
1/17/2023	 Authenticx	Blue Heron CAPITAL 	\$22	ND	<ul style="list-style-type: none"> ■ Authenticx, a conversational intelligence platform for healthcare, raised \$22mm in a Series B round. ■ The Company focuses on the healthcare sector and plans to spend the new funds on R&D and S&M.
1/17/2023	 Impel	SILVERSMITH 	\$104	ND	<ul style="list-style-type: none"> ■ Impel, an AI-powered customer engagement platform, raised \$104mm in a round led by Silversmith. ■ The Company reportedly grew revenue 200% over the past 2 years, completed 2 acquisitions, and has 200 FTEs.
1/17/2023	 Closefactor	vertex VENTURES  SEQUOIA	\$15	\$51	<ul style="list-style-type: none"> ■ CloseFactor, a GTM enablement platform, raised \$20mm in a Series A round led by Vertex & Sequoia. ■ The Company will direct the new funds towards product development and accelerating its GTM roadmap.
1/17/2023	 beaconstac	telescope B2B. Thematic. Bespoke. 	\$25	ND	<ul style="list-style-type: none"> ■ Beaconstac, a QR code management platform, raised \$25mm in a Series A round led by Telescope. ■ The Company intends to use the funds to support product development and headcount growth.
1/12/2023	 CE CONSUMER EDGE	Coventure 	\$60	ND	<ul style="list-style-type: none"> ■ Consumer Edge, a consumer intelligence platform, raised \$60mm in funding from CoVenture. ■ The funds are intended to accelerate the Company's organic growth and support execution of tuck-in acquisitions.

































Ad Tech & MarTech – Q1 2023 Key Financings (4 / 4)

Announcement Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
1/12/2023		8 ^{oo} EIGHT ROADS™ 	\$8	\$24	<ul style="list-style-type: none"> ■ Coho, a user behavior data platform supporting PLG-oriented GTM teams, raised \$8.5mm in Seed financing. ■ The Company's CEO, Itamar Falcon, conveyed the capital will fund product R&D and headcount expansion.
1/11/2023			\$40	ND	<ul style="list-style-type: none"> ■ Inbenta, a provider of a platform for B2B conversational AI tools, announced a \$40mm financing round. ■ The proceeds will reportedly be used to fund product development and market expansion.




























Digital Content – Q1 2023 Key Financings (1 / 5)

Announcement Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
3/28/2023	 Perplexity		\$26	\$126	<ul style="list-style-type: none"> ■ Perplexity, an AI-powered search engine platform, raised \$26mm in a Series A round led by NEA. ■ There is reportedly an outsized presence of Google staffers among the startup's investors.
3/23/2023	 HADEAN <small>BRIDGING PHYSICAL AND VIRTUAL WORLDS</small>		\$5	ND	<ul style="list-style-type: none"> ■ Hadean, a metaverse infrastructure platform, raised an additional \$5mm, on top of its ~\$30mm Series A round. ■ The Company will use the new funds to invest in platform improvements to support larger, more immersive worlds.
3/23/2023			\$20	\$100	<ul style="list-style-type: none"> ■ Axios HQ, a communications software company, raised \$20mm in a Series A round led by Glade Brook. ■ Axios HQ split off from Axios in 2022, after Axios Media was acquired by Cox Enterprises for \$525mm.
3/22/2023			\$4	ND	<ul style="list-style-type: none"> ■ Bandai Namco invested in SuperGaming, a game publisher, via their 021 Fund metaverse project. ■ The funds will reportedly support the Company's upcoming battle royale tile, "Indus".
3/22/2023			\$18	\$78	<ul style="list-style-type: none"> ■ Illumix, a low-code infrastructure solution for AR / VR experiences, raised \$18mm in a Series A round. ■ The Company has reportedly powered 300mm+ physical-digital interactions across web and mobile since 2021.
3/21/2023			\$40	ND	<ul style="list-style-type: none"> ■ CCP Games, best known for their "EVE Online" MMORPG game, raised \$40mm in a round led by a16z. ■ The funds will be used to develop a new AAA title utilizing blockchain technology, set within the EVE Universe.
3/21/2023			\$1	ND	<ul style="list-style-type: none"> ■ Mystic Games, a developer of web3 mobile games, raised \$1.3mm in a Seed round led by Shima Capital. ■ The funds will go towards headcount expansion and the development of the "Call of the VoYd" mobile game.
3/21/2023			ND	ND	<ul style="list-style-type: none"> ■ Bandai Namco invested in DeepMotion, an motion intelligence platform, via its 021 Fund metaverse project. ■ Bandai Namco aims to incorporate DeepMotion's AI-powered platform, and expertise into its upcoming projects.
3/19/2023			\$1	ND	<ul style="list-style-type: none"> ■ Flying Sheep Studios, a developer of social MMO metaverse games, raised \$1.2mm from the German government. ■ The funds will support the development of its "Star Life" title, and headcount growth.
3/16/2023			\$100	\$220bn	<ul style="list-style-type: none"> ■ G42, an AI & cloud computing company, acquired a stake in Bytedance, the parent company of TikTok. ■ The \$100mm+ investment values the unlisted China-based company at \$220bn.
3/14/2023			\$15	ND	<ul style="list-style-type: none"> ■ DressX, a digital fashion store, raised \$15mm in a Series A round led by Greenfield Capital. ■ The funds will support improvements to its app, NFT marketplace, and interoperability of digital fashion assets.
3/14/2023			\$22	ND	<ul style="list-style-type: none"> ■ Tilia, a digital economy and metaverse payments platform has raised \$22mm after spinning out of Linden Labs. ■ Tilia began at Linden Lab's "Second Life", where it fueled transactions for the virtual world.











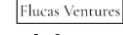



















Digital Content – Q1 2023 Key Financings (2 / 5)

Announcement Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
3/13/2023	 JUNGLE	 BITKRAFT  framework venture partners	\$6	ND	<ul style="list-style-type: none"> Jungle, a developer of web3 mobile shooter games, raised \$6mm in a round led by BITKRAFT & Framework. The new funds will go towards the development of the studio's first game.
3/8/2023	 MATCHDAY	 PRICORN  greylock  Hack VC  Horizons Ventures	\$21	ND	<ul style="list-style-type: none"> Matchday, a web3-based app for casual soccer fans, raised \$21mm in a Seed Round. Play Time, a venture capital firm founded by Lionel Messi, notably participated in the financing round.
3/7/2023	 Kresus	 LIBERTY CITY VENTURES	\$25	ND	<ul style="list-style-type: none"> Kresus, a self-described "web3 super app", raised \$25mm in a Series A round led by Liberty City Ventures. The app gained prominence as a platform to trade and store NFTs and other digital assets.
3/7/2023	 BELIEVER	 Lightspeed	\$55	ND	<ul style="list-style-type: none"> Believer Entertainment, a game studio, raised \$55mm in a Series A round led by Lightspeed. The Company's management team came from Riot Games, the studio behind League of Legends.
3/7/2023	 Tangle	 Qualcomm ventures	\$4	ND	<ul style="list-style-type: none"> Absurd:Joy, the developer of virtual workspace Tangle, raised \$4mm from Qualcomm Ventures. The Company has raised \$10mm to date and is planning a commercial launch later this year.
3/7/2023	 Redemption GAMES	 PLAY VENTURES	\$7	ND	<ul style="list-style-type: none"> Mobile game studio Redemption Games spun out of AppLovin and raised \$7mm. The founders were behind the success of "Cookie Jam", which generated \$500mm+ revenue for Jam City.
3/2/2023	 VitalXP	 streamlined ventures  MARBRUCK	\$3	ND	<ul style="list-style-type: none"> VitalXP, a developer of Web3 shooter games, raised \$3mm from Streamlined Ventures & Marbruck Investments. The Company has raised \$8mm to date for its gameverse platform and its first game, "Lowlife Forms".
2/28/2023	 Avalon	 BITKRAFT  #HASHED  DELPHI DIGITAL MECHANISM CAPITAL	\$13	ND	<ul style="list-style-type: none"> Avalon, a developer of metaverse games, raised \$13mm to build an "interoperable digital universe". The Company was founded by leaders from games including EverQuest, Diablo, GoW, CoD, AC and Elden Ring.
2/25/2023	 KRATOS STUDIOS	 Accel	\$20	\$170	<ul style="list-style-type: none"> Kratos Studios, a web3 gaming company, raised \$20mm in a Seed round led by Accel. The Company is building a Web3 DAO under the IndiGG brand that they acquired via token swap.
2/22/2023	 tome	 Lightspeed	\$43	\$300	<ul style="list-style-type: none"> Tome, a gen-AI storytelling platform, raised \$43mm in a Series B round led by Lightspeed. The Company intends to use the proceeds to fund new integrations and expand headcount.
2/21/2023	 AZRA GAMES	 andreessen horowitz	\$25	ND	<ul style="list-style-type: none"> Azra Games, a developer of web3 RTS RPG games, raised \$25mm from Andreessen Horowitz. The Company is run by Mark Otero, former dev lead of "SW: Galaxy of Heroes", which generated \$1bn+ for EA.
2/21/2023	 STRIDER	 MAKERS FUND  FABRIC VENTURES	\$6	ND	<ul style="list-style-type: none"> Strider, a toolkit for web3 collaborative story-driven games, raised \$5.5mm in a Seed round. The Company was founded by a former a16z partner and execs from EA, Rockstar and Jam City.

Digital Content – Q1 2023 Key Financings (3 / 5)

Announcement Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
2/20/2023	 QUELL	 Tencent 腾讯	\$10	ND	<ul style="list-style-type: none"> ■ Quell, a mobile fitness gaming platform, raised \$10mm in a Series A round led by Tencent. ■ This deal marks the latest in Tencent's revenue stream diversification efforts outside its China home market.
2/18/2023	 CAPSULE	Bloomberg BETA [ARRAY VC]	\$5	ND	<ul style="list-style-type: none"> ■ Capsule, an AI-powered post-production tool for video, raised \$4.75mm in a Seed Round. ■ The Company's AI-powered video editor reportedly summarizes text & generates images and more.
2/16/2023	 telltale	 HIRO CAPITAL  SKYBOUND	\$8	ND	<ul style="list-style-type: none"> ■ Telltale, a narrative game development studio, raised \$8mm in a Series A round led by Skybound and Hiro. ■ The new funds will go towards "The Expanse" series, "The Wolf Among Us 2," and an unannounced game.
2/16/2023	 VSPO!	 SAVVY GAMES GROUP	\$265	ND	<ul style="list-style-type: none"> ■ VSPO, a China-based eSports broadcasting and promotion company, raised \$265mm from Savvy Games. ■ Savvy, owned by Saudi Arabia's Public Investment Fund, is now the single largest equity holder in VSPO.
2/15/2023	 SUPERPLASTIC	 alexa fund	\$20	ND	<ul style="list-style-type: none"> ■ Superplastic, a creator of 'synthetic influencers', raised \$20mm in a round led by Amazon's Alexa Fund. ■ The Company and its characters are set to collaborate on an animated comedy series with Amazon Studios.
2/14/2023	 Beatclub	 HIPGNOSIS  CA	\$18	\$68	<ul style="list-style-type: none"> ■ Beatclub, a marketplace for music creators founded by Timbaland, raised \$18mm in a Series A-2 round. ■ With this partnership, Beatclub's roster of artists can now sample music from Hipgnosis Songs' catalogue.
2/14/2023	 Betty	 KARLANI CAPITAL	\$5	ND	<ul style="list-style-type: none"> ■ Betty, a portfolio of mobile casual casino games, raised \$5mm in a Seed round led by Karlani Capital. ■ The Company targets the reportedly underserved niche of female slots players.
2/13/2023	 NS Gaming	 nCORE games	\$1	ND	<ul style="list-style-type: none"> ■ Newgen Gaming, an India-focused eSports platform, received a \$1mm investment from nCore Games. ■ The funding will be used to accelerate Newgen's growth and operations in South Asia & MENA.
2/10/2023	 TOWER POP	 agnitio/capital  PLAY VENTURES	\$2	ND	<ul style="list-style-type: none"> ■ Tower Pop, a developer of web3 battle royale and tower defense games, raised \$2mm in a Seed round. ■ The Company intends to use a novel 'play-to-mint' model in its upcoming 'Omega Royale' game.
2/9/2023	 MINO	 STANDARD CRYPTO	\$15	ND	<ul style="list-style-type: none"> ■ Mino Games, a developer of character-driven games, raised \$15mm in a Series B round led by Standard Crypto. ■ The proceeds will reportedly fund development of the upcoming 'Dimensionals' web3 game.
2/8/2023	 LOOKING GLASS FACTORY	 ACCENTURE VENTURES	\$25	\$108	<ul style="list-style-type: none"> ■ Looking Glass Factory, a 3D hologram company, received a strategic investment from Accenture Ventures. ■ The Company's software suite allows 3D models to be shown in traditionally 2D spaces (most notably eCommerce).
2/8/2023	 MAWARFI	 BLOCKCHANGE  DECASONIC	\$7	ND	<ul style="list-style-type: none"> ■ Mawari, a cloud rendering and XR streaming platform, raised \$6.5mm in an oversubscribed Seed round. ■ The Company aims to speed 3D content delivery for digital assets in the metaverse.

Digital Content – Q1 2023 Key Financings (4 / 5)

Announcement Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
2/7/2023	 ATMOSPHERE	 S3 VENTURES  VALOR EQUITY PARTNERS  SAGEVIEW CAPITAL	\$65	\$1,065	<ul style="list-style-type: none"> ■ Atmosphere, an audio-optional TV streaming platform, raised \$65mm in a Series D round, at a ~\$1bn valuation. ■ The Company reportedly doubled its customer count in the last year and continues to expand internationally.
2/6/2023	 LATENT	 SPARK CAPITAL  ROOT VENTURES	\$2	ND	<ul style="list-style-type: none"> ■ Latent Technology, an AI-powered game animation company, raised \$2mm in a pre-Seed round. ■ The Company will use the new funds to scale its team and develop the first version of its product.
2/6/2023	 OVERWORLD	 xterio	\$3	ND	<ul style="list-style-type: none"> ■ Overworld, a multiplayer RPG studio, received an investment from Xterio, a blockchain gaming publisher. ■ The Company will develop cross-platform f2p games featuring player ownership and digital collectibles.
2/1/2023	 tawkify	 Flucas Ventures  SideCar Angels	\$50	\$180	<ul style="list-style-type: none"> ■ Tawkify, an online dating platform, raised \$50mm through a combination of Series B funding rounds. ■ The platform uses human matchmakers instead of computer algorithms in its matchmaking process.
1/30/2023	 prisms	 andreessen horowitz	\$13	ND	<ul style="list-style-type: none"> ■ Prisms VR, a VR math content delivery platform, raised \$12.5mm in a Series A round led by a16z. ■ The Company's app on the VR metaquest platform is used by 100k+ students across 110 school districts.
1/26/2023	 Spatial Labs	 BLOCKCHAIN CAPITAL	\$10	ND	<ul style="list-style-type: none"> ■ Spatial Labs, a metaverse infrastructure company, raised \$10mm in a Seed round led by Blockchain Capital. ■ The Company intends to use the proceeds on product development and its go-to-market roadmap.
1/25/2023	 fever	 Goldman Sachs	\$110	\$1,800	<ul style="list-style-type: none"> ■ Fever, a social event information platform, raised \$110mm in a round lead by Goldman Sachs. ■ The Company claimed it was the largest single investment in a live-entertainment tech startup.
1/20/2023	 THE TINY DIGITAL FACTORY	 SANDSOFT GAMES	\$3	ND	<ul style="list-style-type: none"> ■ TDF, a mobile racing and motorsport game developer received an investment from Sandsoft Games. ■ Through the partnership, Sandsoft will publish TDF's games throughout the MENA region.
1/19/2023	 DREAMSCAPE IMMERSIVE	 BOLD CAPITAL PARTNERS  Cengage  Verizon Ventures	\$20	ND	<ul style="list-style-type: none"> ■ Dreamscape Immersive, a VR-enabled class coursework platform, raised \$20mm in a Series A round. ■ The Company ran its pilot at ASU and plans to expand to other campuses.
1/17/2023	 Carry1st	 BITKRAFT	\$27	ND	<ul style="list-style-type: none"> ■ Mobile game company Carry1st raised \$27mm in a round led by BITKRAFT Ventures. ■ The Company intends to use the funds to develop and publish mobile games in Africa.
1/17/2023	 SLEEPAGOTCHI	 6MV	\$4	ND	<ul style="list-style-type: none"> ■ Sleepagotchi, a gamified mobile app to improve sleeping habits, raised \$4mm in a round led by 6th Man Ventures. ■ The app, which was launched in 2022, rewards users who meet consistent sleep goals with digital collectibles.
1/16/2023	 BLUEBERRY	 MAKERS FUND	\$6	ND	<ul style="list-style-type: none"> ■ House of Blueberry, a digital fashion house for the metaverse, raised \$6mm in a Seed round led by Makers Fund. ■ The Company intends to use the funds to expand reach via partnerships with new games and online worlds.

Digital Content – Q1 2023 Key Financings (5 / 5)













Announcement Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
1/10/2023	 GIGA FUN GAMES THAT TELL A STORY	 Lumikai  firesideventures	\$2	ND	<ul style="list-style-type: none"> ■ Giga Fun Studios, a developer of casual games, raised \$2.4mm in a Seed round led by Lumikai & Fireside. ■ The Company intends to use the funds to develop games for the Indian market.
1/10/2023	 PLAYSTREAM.GG	 vgames	\$2	ND	<ul style="list-style-type: none"> ■ Playstream, a gen-AI live-streaming viewer engagement software, raised \$2mm from Vgames. ■ The Company has 14 FTEs and noted that 14,000+ creators have already used the platform.
1/10/2023	 MULTISCRPTION	 SSU GAME VENTURES	\$2	ND	<ul style="list-style-type: none"> ■ Multiscription, a mobile-game subscription implementation platform, raised \$2mm in a Seed round lead by Sisu. ■ Consumers can pay these subscriptions to avoid ads in-app.
1/9/2023	 Jackpot.com	 ACCOMPLICE  COURTSIDE VC	\$42	ND	<ul style="list-style-type: none"> ■ Jackpot.com, a mobile lottery ticket buying platform, raised \$42mm in its Series A round after an extension. ■ The Platform concurrently launched in Texas and intends to deepen its presence in the state.
1/6/2023	 FORJ	 PLYMOUTH GROWTH	\$15	ND	<ul style="list-style-type: none"> ■ Forj, a member experience (MX) platform, raised \$15mm in a Series A round led by Plymouth Growth. ■ The Company simultaneously announced a merger with Web Courseworks, a learning management platform.

Table of Contents

1	Q1 2023 M&A Activity
2	Q1 2023 Public Markets Activity
3	Q1 2023 Private Financing Activity
4	Appendix

Appendix A: Net Revenue Methodology & Definitions

Ad Tech

MarTech

LUMA Defined Net Revenue by Company Filing Metric

Reporting "Revenue / Contribution Ex-TAC"			Reporting "Adjusted Gross Profit"			Reporting "Gross Profit Ex-TAC"		
\$ in mm	2021A	2022A	\$ in mm	2021A	2022A	\$ in mm	2021A	2022A
Criteo			Acuity Ads			Outbrain		
Gross Revenue	\$2,254	\$2,017	Gross Revenue	\$98	\$92	Gross Revenue	\$1,016	\$992
(-) TAC	(\$1,334)	(\$1,089)	(-) Media Costs	(\$47)	(\$46)	(-) TAC	(\$744)	(\$757)
(=) Contribution ex-TAC	\$921	\$928	(=) Gross Profit	\$51	\$46	(-) Other cost of revenues ⁽³⁾	(\$32)	(\$42)
Magnite			AdTheorent			(=) Gross Profit		
Gross Revenue	\$468	\$577	Gross Revenue	\$165	\$166	(+) Other cost of revenues ⁽³⁾	\$32	\$42
(-) Cost of Revenue	(\$202)	(\$307)	(+) Platform Ops	(\$78)	(\$83)	(=) Gross Profit ex-TAC	\$272	\$235
(=) Gross Profit (as reported)	\$267	\$270	(=) Gross Profit (as reported)	\$88	\$83	Taboola		
(+) Cost of Revenue, excluding TAC	\$151	\$245	(+) Other Platform Ops ⁽¹⁾	\$22	\$27	Gross Revenue	\$1,379	\$1,401
(=) Revenue ex-TAC	\$417	\$515	(=) Adj. Gross Profit	\$109	\$110	(-) TAC	(\$860)	(\$832)
Perion Networks			Cardlytics			(+) Other cost of revenues ⁽⁴⁾		
Gross Revenue	\$478	\$640	Gross Revenue	\$267	\$299	(=) Gross Profit (as reported)	\$441	\$464
(-) TAC	(\$288)	(\$373)	(-) Adj. Partner Share & Other 3P	(\$140)	(\$156)	(+) Other cost of revenues ⁽⁴⁾	\$78	\$105
(=) Revenue ex-TAC	\$190	\$268	(-) Delivery Costs	(\$23)	(\$24)	(=) Gross Profit ex-TAC	\$519	\$570
Viant			Digital Turbine					
Gross Revenue	\$224	\$197	Gross Revenue	\$748	\$710			
(-) Platform Ops	(\$130)	(\$117)	(-) License fees and rev-share ⁽²⁾	(\$371)	(\$324)			
(=) Gross Profit (as reported)	\$95	\$80	(-) Other direct costs of revenue ⁽²⁾	(\$30)	(\$36)			
(+) Other platform ops	\$48	\$44	(=) Gross Profit (as reported)	\$347	\$350			
(=) Contribution ex-TAC	\$142	\$125	(+) Software depr. & other direct CoR	\$3	\$5			
			(=) Adj. Gross Profit					
			\$350					
			\$356					
			MediaAlpha					
			Gross Revenue					
			\$645					
			\$459					
			(-) Platform Ops					
			(\$544)					
			(\$389)					
			(=) Gross Profit					
			\$102					
			\$70					

Sources & Notes

Source: Company Filings **Note:** (1) AdTheorent other platform operations consist of amortization expense related to capitalized software, depreciation expense, allocated costs of personnel which set up and monitor campaign performance and platform hosting, license and maintenance costs. (2) Digital Turbine license fees & revenue share are reflective of amounts paid to carrier and OEM partners, as well as app publishers and developers (recorded as a cost of revenue). Other direct cost of revenue are comprised primarily of hosting expenses directly related to the generation of revenue and depreciation expense. (3) Outbrain other cost of revenue includes the amortization of capitalized software that is developed or obtained for internal use associated with revenue-generating technologies. (4) Taboola other cost of revenue includes data center and related costs, depreciation expense related to hardware supporting the platform, amortization expense related to capitalized internal-use software and acquired technology, personnel costs and allocated facilities costs.

Appendix B: Ad Tech EBITDA Detail (1 / 4)

IMPORTANT: The Adjusted EBITDA reconciliation depicts LUMA's assessment of Adjusted EBITDA by company. Assessments vary by broker, and forward projections contemplate median of broker estimates. To keep a like-for-like comparison, historicals in this report contemplate median of broker actuals.

Ad Tech
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\$ in mm	2022A											
	ADTHEORENT	APPLOVIN	cardlytics	CRITEO	Digital Turbine	DV	INNOVID	IAS	/LiveRamp	Magnite	MediaAlpha	Outbrain
Net Income	\$29	(\$193)	(\$465)	\$11	\$51	\$43	(\$18)	\$15	(\$117)	(\$130)	(\$72)	(\$25)
(+) Interest (income) expense, net	(\$0)	\$172	\$3	(\$17)	\$19	\$1	–	\$9	–	\$29	\$9	\$5
(+) Other (income) expense, net	–	(\$19)	–	–	(\$0)	(\$1)	–	–	(\$2)	–	–	–
(+) Provision for (benefit from) income tax	\$1	(\$12)	(\$1)	\$31	\$12	\$16	\$2	(\$2)	\$13	(\$5)	\$103	\$6
(+) D&A (excl. amortized intangibles)	\$8	\$547	\$38	\$89	\$77	\$34	\$6	\$50	\$23	\$32	\$0	\$27
EBITDA	\$38	\$495	(\$427)	\$114	\$158	\$93	(\$10)	\$73	(\$83)	(\$75)	\$40	\$13
(+/-) SBC (excl. assoc. payroll tax)	\$11	\$192	\$45	\$65	\$24	\$42	\$14	\$45	\$107	\$64	\$58	\$12
(+/-) Transaction costs	\$1	\$7	(\$3)	–	\$6	\$1	\$0	–	–	–	\$1	–
(+/-) Restructuring / acquisition costs	\$0	\$32	\$8	\$23	\$1	\$1	\$5	\$10	\$31	\$5	–	\$3
(+/-) FX gains (losses)	–	(\$0)	–	–	\$0	–	–	\$5	–	(\$1)	–	–
(+/-) Other adjustments	(\$28)	\$338	\$331	\$65	\$1	\$3	(\$8)	(\$6)	(\$1)	\$185	(\$76)	(\$2)
Adjusted EBITDA	\$22	\$1,063	(\$45)	\$267	\$191	\$142	\$1	\$127	\$54	\$179	\$23	\$26
Broker Actuals (Median)	\$22	\$1,063	(\$45)	\$267	\$191	\$142	\$1	\$127	\$54	\$179	\$23	\$26
Broker Estimates (Median)	\$18	\$1,060	(\$46)	\$256	\$205	\$139	\$0	\$123	\$51	\$180	\$20	\$24

“Other Adjustments” Notes

- **AdTheorent:** incl. (\$28.3mm) of change in FV items and \$0.4mm of non-core operations
- **AppLovin:** incl. \$209mm of publisher costs and \$128mm due to impairment and loss on dispositions
- **Criteo:** incl. \$63mm of loss contingency on a regulatory matter and \$1.8mm of pension service costs
- **Innovid:** incl. (\$13.4mm) of finance income, \$3.2mm of retention bonuses \$1.5mm of legal claims, and \$0.9mm of other expenses
- **LiveRamp:** incl. \$0.8mm of discontinued operations
- **Magnite:** incl. \$184mm of amortized acquired intangibles and \$0.6mm of non-operational real estate expenses
- **MediaAlpha:** incl. \$5.8mm of amortized acquired intangibles, (\$83.8mm) of changes in TRA-related liabilities, and \$1.7mm of other one-time adjustments
- **Outbrain:** incl. (\$1.9mm) of regulatory matter costs

Appendix B: Ad Tech EBITDA Detail (2 / 4)

IMPORTANT: The Adjusted EBITDA reconciliation depicts LUMA's assessment of Adjusted EBITDA by company. Assessments vary by broker, and forward projections contemplate median of broker estimates. To keep a like-for-like comparison, historicals in this report contemplate median of broker actuals.

Ad Tech
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\$ in mm	2022A								
	Perion	PubMatic	ROKU	Taboola	theTradeDesk	TREMOR INTERNATIONAL Ltd.	Unity	VIANT.	ZETA
Net Income	\$99	\$29	(\$498)	(\$12)	\$53	\$23	(\$919)	(\$48)	(\$279)
(+) Interest (income) expense, net	(\$4)	(\$2)	–	–	(\$13)	–	\$0	(\$1)	\$7
(+) Other (income) expense, net	–	–	(\$39)	(\$9)	–	\$3	–	–	\$14
(+) Provision for (benefit from) income tax	\$15	\$9	\$6	\$8	\$74	\$20	\$37	–	(\$1)
(+) D&A (excl. amortized intangibles)	\$2	\$34	\$49	\$91	\$54	\$43	\$39	\$13	\$52
EBITDA	\$112	\$70	(\$482)	\$78	\$169	\$88	(\$843)	(\$36)	(\$208)
(+/-) SBC (excl. assoc. payroll tax)	\$12	\$21	\$360	\$64	\$499	\$51	\$538	\$29	\$299
(+/-) Transaction costs	–	–	–	–	–	–	–	–	–
(+/-) Restructuring / acquisition costs	–	\$2	\$38	\$3	–	\$6	\$52	\$1	\$0
(+/-) FX gains (losses)	(\$1)	–	–	–	–	–	–	–	–
(+/-) Other adjustments	\$10	\$6	–	\$12	–	–	\$202	–	\$0
Adjusted EBITDA	\$132	\$98	(\$84)	\$157	\$668	\$145	(\$51)	(\$6)	\$92
Broker Actuals (Median)	\$132	\$98	(\$84)	\$157	\$668	\$145	(\$51)	(\$6)	\$92
Broker Estimates (Median)	\$122	\$99	(\$121)	\$156	\$652	\$140	(\$48)	(\$9)	\$89

“Other Adjustments” Notes

- **Perion:** incl. \$11.9mm of amortized acquired intangibles, \$1.6mm of M&A-related expenses (\$3.8mm) of changes in FV of contingent consideration, and \$0.1mm net of other one-time adjustments
- **PubMatic:** incl. \$6mm impairment charge
- **Roku:** incl. employee-related costs due to ~\$30.6mm of severance related charges in 4Q'22.
- **Taboola:** incl. \$11.1mm of holdback compensation expense and \$0.8mm of other M&A-related costs
- **Unity:** incl. \$172.6mm of amortized acquired intangibles, \$6.1mm of costs incurred in connection with the formation of Unity China, \$3.3mm of legal settlement costs, and \$19.6mm of SBC-related payroll taxes

Appendix B: MarTech EBITDA Detail (3 / 4)

IMPORTANT: The Adjusted EBITDA reconciliation depicts LUMA's assessment of Adjusted EBITDA by company. Assessments vary by broker, and forward projections contemplate median of broker estimates. To keep a like-for-like comparison, historicals in this report contemplate median of broker actuals.

\$ in mm	2022A											
	Amplitude	BIGCOMMERCE	braze	BRIGHTCOVE	DV	HubSpot	IAS	kaltura	LIVEPERSON	/LiveRamp	momentive	ON24
Net Income	(\$93)	(\$140)	(\$141)	(\$9)	\$43	(\$113)	\$15	(\$68)	(\$226)	(\$117)	(\$90)	(\$58)
(+) Interest (income) expense, net	–	(\$1)	–	–	\$1	(\$11)	\$9	–	\$0	–	\$11	\$0
(+) Other (income) expense, net	–	\$0	(\$8)	\$1	(\$1)	\$7	–	–	\$10	(\$2)	(\$5)	(\$3)
(+) Provision for (benefit from) income tax	\$1	\$0	\$1	(\$0)	\$16	\$8	(\$2)	\$8	\$2	\$13	\$2	\$1
(+) D&A (excl. amortized intangibles)	\$3	\$3	\$5	\$11	\$34	\$56	\$50	\$3	\$32	\$23	\$29	\$5
EBITDA	(\$90)	(\$137)	(\$144)	\$3	\$93	(\$54)	\$73	(\$58)	(\$181)	(\$83)	(\$53)	(\$55)
(+/-) SBC (excl. assoc. payroll tax)	\$68	\$42	\$72	\$13	\$42	\$276	\$45	\$24	\$110	\$107	\$93	\$39
(+/-) Transaction costs	–	–	–	\$1	\$1	–	–	–	(\$9)	–	\$12	–
(+/-) Restructuring / acquisition costs	–	\$43	\$1	–	\$1	–	\$10	\$1	\$24	\$31	\$3	\$2
(+/-) FX gains (losses)	–	–	–	–	–	–	\$5	–	–	–	–	–
(+/-) Other adjustments	–	\$9	\$6	\$1	\$3	\$5	(\$6)	\$5	\$39	(\$1)	\$6	\$0
Adjusted EBITDA	(\$22)	(\$44)	(\$65)	\$18	\$142	\$227	\$127	(\$28)	(\$16)	\$54	\$61	(\$14)
Broker Actuals (Median)	(\$22)	(\$44)	(\$65)	\$18	\$142	\$227	\$127	(\$28)	(\$16)	\$54	\$61	(\$15)
Broker Estimates (Median)	(\$24)	(\$47)	(\$66)	\$19	\$139	\$211	\$123	(\$30)	\$5	\$51	\$54	(\$16)

“Other Adjustments” Notes

- **Amplitude:** incl. \$2mm of amortized acquired intangibles and \$1.7mm of SBC-related payroll taxes
- **BigCommerce:** incl. \$8mm of amortized acquired intangibles and \$0.7mm of SBC-related payroll taxes
- **Braze:** incl. \$1.3mm of SBC-related payroll taxes and \$4.3mm of charitable contributions
- **DoubleVerify:** incl. \$3.4mm related to severance costs and impairments to office space
- **HubSpot:** incl. \$2.6mm of amortized acquired intangibles and \$2mm of non-cash interest expense
- **IAS:** incl. \$1mm of impaired assets and (\$6.9mm) of employee retention tax credits
- **Kaltura:** incl. \$4.2mm of “Financial Expenses” and ~\$0.5mm of “Facility exit and transition costs”
- **LivePerson:** incl. \$22.1mm of amort. acq. intangibles and \$17.2mm of Other litigation, consulting, FTE costs
- **Momentive:** incl. \$5.6mm of amortized acquired intangibles
- **ON24:** incl. \$0.4mm of amortized acquired intangibles

Appendix B: MarTech EBITDA Detail (4 / 4)

IMPORTANT: The Adjusted EBITDA reconciliation depicts LUMA's assessment of Adjusted EBITDA by company. Assessments vary by broker, and forward projections contemplate median of broker estimates. To keep a like-for-like comparison, historicals in this report contemplate median of broker actuals.

Ad Tech
MarTech

\$ in mm	2022A										
	qualtrics	Quotient THE RESULT OF KNOWING	SEMURSH	shopify	sprinklr	sproutsocial	SQUARESPACE	twilio	YE XT	ZETA	zoominfo
Net Income	(\$1,061)	(\$77)	(\$34)	(\$3,460)	(\$56)	(\$50)	(\$252)	(\$1,256)	(\$66)	(\$279)	\$63
(+) Interest (income) expense, net	–	\$6	–	–	–	(\$2)	\$18	–	(\$1)	\$7	\$48
(+) Other (income) expense, net	(\$8)	(\$1)	(\$3)	\$2,874	(\$4)	\$1	(\$5)	\$3	\$0	\$14	(\$66)
(+) Provision for (benefit from) income tax	\$21	\$1	\$1	(\$195)	\$8	\$0	\$27	\$13	\$2	(\$1)	\$131
(+) D&A (excl. amortized intangibles)	\$44	\$18	\$7	\$37	\$12	\$3	\$32	\$279	\$18	\$52	\$18
EBITDA	(\$1,005)	(\$53)	(\$30)	(\$744)	(\$39)	(\$48)	(\$180)	(\$961)	(\$47)	(\$208)	\$193
(+/-) SBC (excl. assoc. payroll tax)	\$1,034	\$32	\$7	\$549	\$56	\$48	\$103	\$784	\$63	\$299	\$192
(+/-) Transaction costs	–	–	–	–	–	–	–	–	–	–	–
(+/-) Restructuring / acquisition costs	\$1	–	–	\$30	–	–	–	\$77	–	\$0	\$7
(+/-) FX gains (losses)	–	–	–	–	–	–	–	–	–	–	–
(+/-) Other adjustments	\$118	\$36	–	\$249	\$2	–	\$225	\$369	–	\$0	\$72
Adjusted EBITDA	\$149	\$15	(\$22)	\$84	\$18	(\$1)	\$147	\$268	\$16	\$92	\$465
Broker Actuals (Median)	\$142	\$15	(\$22)	\$82	\$18	(\$1)	\$148	\$275	\$16	\$92	\$465
Broker Estimates (Median)	\$124	\$19	(\$21)	(\$33)	\$10	(\$1)	\$130	\$232	\$13	\$89	\$461

“Other Adjustments” Notes

- **Qualtrics:** incl. \$53.3mm of amortized acquired intangibles, \$18.4mm of SBC-related payroll taxes, \$71.6mm of amortized deferred CAC, and (\$20.3mm) of tax-related adjustments
- **Quotient:** incl. \$35.9mm of “Other expenses” relating to impairment of assets, litigation, restructuring, and other one-time costs
- **Shopify:** incl. \$53.7mm of amortized acquired intangibles, \$13.7mm of SBC-related payroll taxes
- **Sprinklr:** incl. \$1mm of amortized acquired intangibles
- **SquareSpace:** incl. \$225mm impairment charge
- **Twilio:** incl. \$35mm share of losses from equity method investment, \$206mm of acquired intangibles, \$2.6mm of acquisition-related expenses, \$23.8mm of SBC-related payroll taxes, and \$98mm of impaired assets
- **ZoomInfo:** incl. \$70mm of acquired intangibles and \$2mm of FV adjustment to acquire unearned revenue

Appendix C: Select Other Notes and Calendarization

Select Other Notes – Ad Tech & MarTech

Company	Ticker	Exchange	Notes
Affle	AFFLE	NSE	Market Capitalization contemplates ordinary shares outstanding; net diluted shares outstanding could not be located in public disclosures. Figures correspond to the closest applicable quarter.
Appier	4180	TYO	Market Capitalization contemplates ordinary shares outstanding; inputs for net diluted shares outstanding could not be located in public disclosures.
Digital Turbine	APPS	NASDAQ	CY 2021 figures are presented on an estimated pro forma basis contemplating figures from a compilation of publicly-available information obtained via equity research reports and company guidance at the time of deal announcements for recent material acquisitions of AdColony and Fyber. The estimates for CY 2021 are adjusted to account for (i) interim reported performance versus prior consensus estimates (e.g., Q2/Q3 actuals versus consensus for corresponding periods), and (ii) revisions to consensus estimates of future performance. Growth rates calculated relative to CY 2021 are therefore stated on a pro forma basis, fully inclusive of recent acquisitions (on an estimated basis). CY 2022, CY 2023 and CY 2024 figures represent consensus estimates.
Magnite	MGNI	NASDAQ	CY 2021 figures are presented on an estimated pro forma basis inclusive of estimates for Telaria and SpotX acquisitions for all presented periods. Pro forma figures are estimated by adjusting initial pro forma forecast published by Craig Hallum (as of May 3 rd , 2021) with figures derived from (i) interim reported financial performance versus prior consensus estimates (e.g., Q2/Q3 actuals versus consensus for corresponding periods), and (ii) revisions to consensus estimates of future performance. Current 2021 actuals for Magnite contemplate Craig Hallum equity research as of March 4, 2022. CY 2022, CY 2023 and CY 2024 figures represent consensus estimates.
Mobvista	1860	HKG	Market Capitalization represents ordinary shares outstanding; net diluted shares outstanding could not be located in public disclosures. Latest financial interim report as of 06/30/2022.
Perion	PERI	NASDAQ	2024E Forward Revenue ex-TAC projections from Oppenheimer Equity research as of Feb 8, 2023.
Tremor Int'l	TRMR	LSE; NASDAQ	Market Capitalization contemplates the product of (i) FDSO and (ii) Tremor's local U.K. share price denominated in GBP. Market Capitalization is converted to USD at the daily spot rate.

Fiscal Year – to – Calendar Year Reconciliation

Company	Ticker	Fiscal Year End	Applicable Fiscal Quarters			
			CY 2021	CY 2022	CY 2023	CY 2024
FYE January 31st						
Braze	BRZE	January 31 st				
Sprinklr	CXM	January 31 st	Q1 FY'22 – Q4 FY'22	Q1 FY'23 – Q4 FY'23	Q1 FY'24 – 4Q FY'24	Q1 FY'22 – 4Q FY'22
Yext	YEXT	January 31 st				
FYE March 31st						
Affle	AFFLE	March 31 st				
Digital Turbine	APPS	March 31 st	Q4 FY'20 – Q3 FY'21	Q4 FY'21 – Q3 FY'22	Q4 FY'22 – Q3 FY'23	Q4 FY'23 – Q3 FY'24
Coveo	CVO	March 31 st				
LiveRamp	RAMP	March 31 st				
FYE June 31st						
QuinStreet	QNST	June 31 st	Q3 FY'21 – Q2 FY'22	Q3 FY'22 – Q2 FY'23	Q3 FY'23 – Q2 FY'24	Q3 FY'24 – Q2 FY'25

LUMA's Recent Deals



December 2022

BC PARTNERS

has acquired

MADISON LOGIC.

The undersigned acted as exclusive financial advisor to BC Partners LLP

November 2022

yahoo!

has agreed to a partnership with

Taboola

The undersigned acted as financial advisor to Yahoo!

September 2022

martin

has agreed to be acquired by

PubMatic

The undersigned acted as exclusive financial advisor to Martin

July 2022

VERVE GROUP
A subsidiary of

Media and Games Invest Group

has acquired

DATASEAT

The undersigned acted as exclusive financial advisor to Media and Games Invest SE

June 2022

DREAMSCAPE
a GTCR portfolio company

has made a strategic investment in

Standard Media index

The undersigned acted as exclusive financial advisor to Dreamscape and GTCR

April 2022

iSpot.tv

has received a \$325 million investment from

Goldman Sachs

The undersigned acted as co-exclusive financial advisor to iSpot.tv, Inc.

April 2022

DREAMSCAPE
a GTCR portfolio company

has made a strategic investment in

SQAD

The undersigned acted as exclusive financial advisor to Dreamscape and GTCR

March 2022

tvSquared

has agreed to be acquired by

INNOVLD

The undersigned acted as exclusive financial advisor to TV Squared Limited

January 2022

APPLOVIN

has agreed to acquire

mopub

a wholly owned subsidiary of

The undersigned acted as exclusive financial advisor to AppLovin Corporation



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