



2023 Full Year Market Report

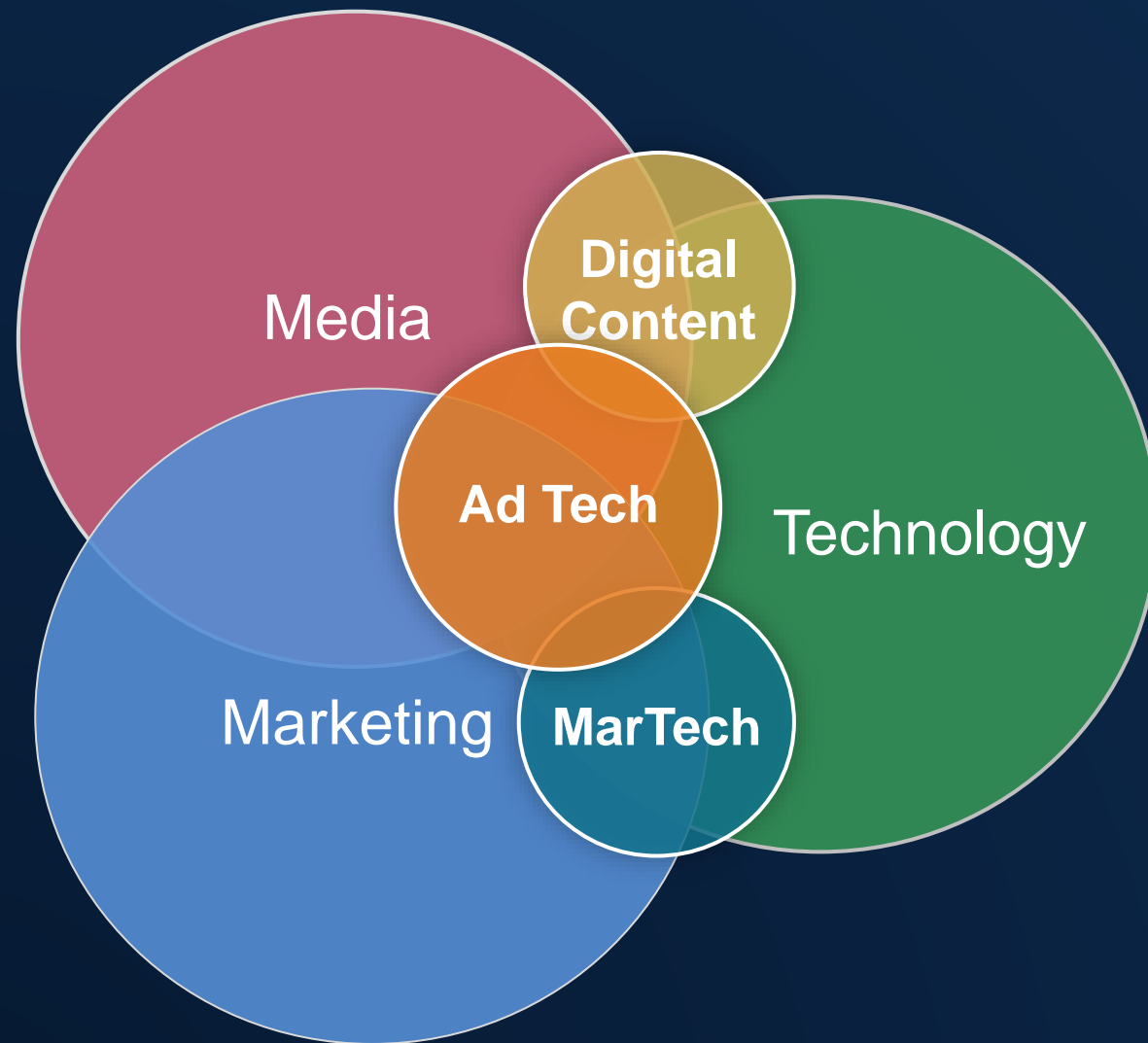
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LUMA's Focus on Digital Media & Marketing



- 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



August 2023

Scibids

has been acquired by

DoubleVerify

The undersigned acted as exclusive financial advisor to Scibids Technology SAS

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

tv squared

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

- 2023 was another challenging year for dealmaking, with total global deal value dropping below \$3tn for the first time since 2013, declining 17% from 2022, per the Financial Times. 2023 marks the first year since the 2008 financial crisis that deal value fell over 10% for consecutive years.
- Despite the headwinds in 2023, market participants in the Digital Media & Marketing Technology sector are cautiously optimistic heading into 2024 as strong digital ad spend growth (+14%)⁽¹⁾, recent GDP growth, stabilizing interest rates, and improving investor sentiment could further narrow the gap for value expectations between buyers and sellers that has deterred transactions in the past year.

M&A Activity

- In our coverage areas, 2023 deal volume was down (10%) from 2022, as declining Ad Tech (14%) and Digital Content (22%) deal activity offset stable MarTech (+4%) deal activity.
- While 2023 scaled deal activity (>\$100mm) was also down from 2022, Q4 closed out the year with 19 scaled transactions - the most in six quarters.
 - MarTech companies were responsible for 8 of the 19 scaled transactions in the quarter, as we continue to see large MarTech strategics use consolidation of high-quality supply as a tool to better position themselves for evolving market dynamics defined by a shift to slower organic growth, a focus on profitability, and changing capital dynamics.

Public Markets Activity

- 2023 was a bounce back year for the LUMA indices and broader equity markets following double-digit declines across benchmarks in 2022. LUMA.A was up +40% and LUMA.M +17% in 2023. The strong performance was spread throughout the cohorts with ~64% of each cohort trading up from the prior year.
 - Strong performance was fueled by resilient underlying business results, specifically a shift towards profitability; this shift is illustrated by the significant profitability improvement in the LUMA.M cohort, as 2023 average EBITDA margins improved to 11.2% from 3.8% in 2022.
- From an earnings perspective, the Ad Tech and MarTech sectors announced strong results in the latest quarter, as most names beat revenue and profitability consensus estimates.

Private Financing Activity

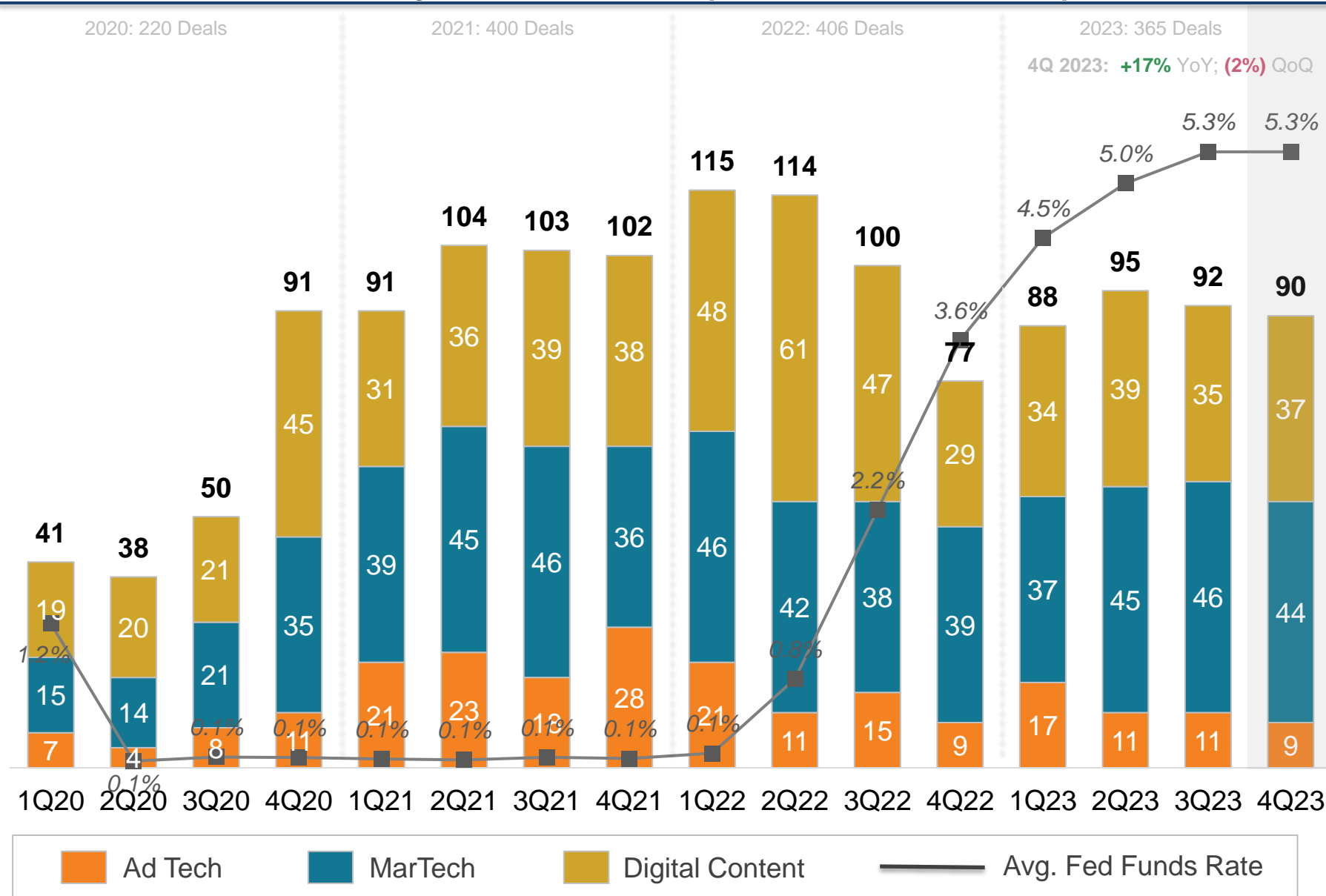
- Generative AI continues to be a bright spot in an otherwise sluggish venture market; 2023 had ~\$29bn of capital flow into this technology, including 707 deals, significantly up from ~\$8bn of capital and 493 deals in 2022⁽²⁾.
 - The multibillion-dollar partnerships between tech giants and startups are changing the VC landscape and presenting promise for strategic startup outcomes during an otherwise challenged market.
- Despite lower activity, private market investors are eager to move off the sidelines due to the abundance of dry powder existing in the market; private market investors raised more than 4,000 funds since the beginning of 2020⁽³⁾ with many still actively looking to deploy capital.

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

Quarterly Transactions (Q1 2020 – Q4 2023)



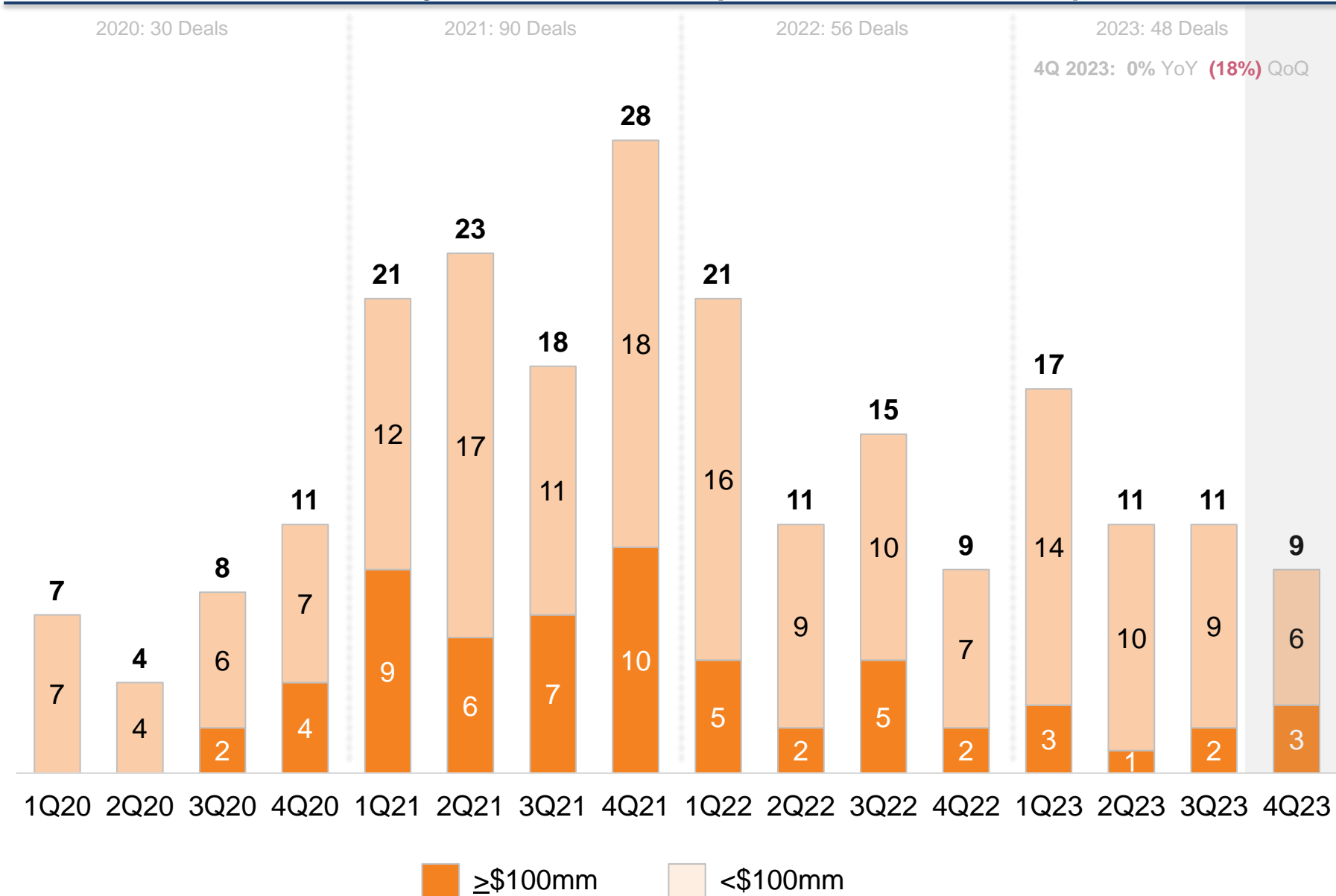
Commentary

- While the dealmaking environment continues to feel the effects of the highest fed funds rates since 2001, 2023 ended with a surge of scaled deal activity in Q4 (highest in 18 months) as deals over \$100mm were up 36% from Q3 and 46% from Q4 2022. Scaled activity was driven by both strategic and financial buyers; potentially a signal of cautious optimism heading into 2024.
- Ad Tech** M&A activity was slightly below last quarter but saw three scaled deals - highlighted by Omnicom's \$835mm acquisition of Flywheel Digital.
- MarTech** M&A activity was just below Q3, but up +4% YoY from 2022; Q4 was highlighted by 8 scaled transactions, the most since Q1 2022.
- Digital Content** M&A volume was up +6% sequentially and +28% from the same quarter a year ago as scaled activity remained high and included two scaled SPAC transactions.
- Looking ahead to 2024, buyers and sellers will be keeping an eye on stabilizing interest rates and valuation levels, as price expectations continue to converge and strategics who have normalized costs and driven capital efficient growth look for new capabilities (catalysts such as AI), and financial buyers in the sector look to move an abundant supply of dry powder off the sidelines.

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Quarterly Transactions (Q1 2020 – Q4 2023)



Commentary













- **Ad Tech** deal volumes in Q4 were down from Q3 and in line with Q4 2023, highlighted by three scaled deals - Omnicom’s \$835mm acquisition of Flywheel Digital, Bell Media’s \$300mm acquisition of OutFront Media’s Canadian Business, and Perion’s \$100mm acquisition of Hivestack.
- Strategic acquisitions in the sector were focused on increasing capabilities across multiple categories: CTV (Amagi’s acquisition of Tellyo), DOOH (Bell Media’s acquisition of OutFront Media’s Canadian Business; Perion’s acquisition of Hivestack), Programmatic (Azerion’s acquisition of Hawk), and Retail Media (Omnicom’s acquisition of Flywheel Digital).

Looking Ahead

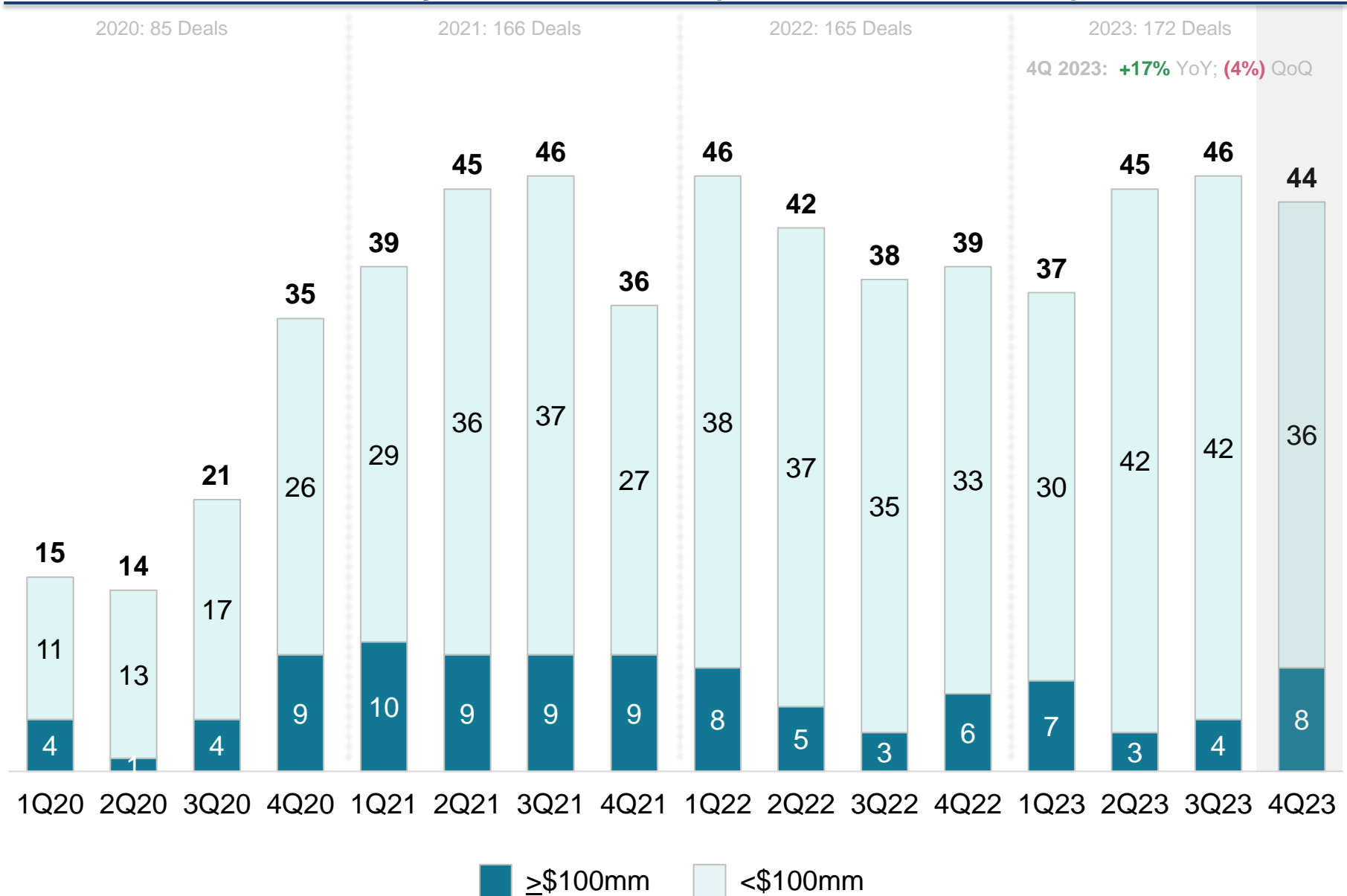
- We anticipate continued focus by advertisers on efficacy and optimization (with AI as a catalyst), to be well-positioned for growth opportunities and to keep up with the speed of innovation in CTV, Commerce Media and the broader 1st party data landscape.
- With the anticipation of the cookie going away in 2024, the evolving data landscape necessitates privacy-compliant 1st party data networks which, in turn, will support the continued growth of commerce media and horizontal strategies that connect demand with supply.

Ad Tech – Q4 2023 Notable Deals

Ad Tech
MarTech
Digital Content

Announcement Date	Target	Acquirer	Capital Raised (\$mm)	Enterprise Value (\$mm)	Commentary
12/12/2023	 Hivestack	 Perion	\$7	\$100	<ul style="list-style-type: none"> ■ Perion, a global multi-channel advertising company has acquired full-stack DOOH platform, Hivestack. ■ The transaction allows Perion to be at the forefront of the fast-growing DOOH channel, further diversifying its offering and expanding its global footprint.
11/9/2023	 Tellyo	 Amagi	< \$1	ND	<ul style="list-style-type: none"> ■ Amagi, a cloud-based SaaS technology company for broadcast and CTV, announced it will acquire Tellyo, a real-time live cloud remote production and social sharing platform. ■ The acquisition will further strengthen Amagi's video toolset for live sports and news broadcast, and support business expansion in Eastern Europe.
11/6/2023	 Grasp	 MiQ THINK BEYOND.	ND	ND	<ul style="list-style-type: none"> ■ French media governance and data quality company, Grasp, will be acquired by MiQ, a programmatic media partner for marketers and agencies. ■ Grasp introduces a new route to partner with MiQ across all markets and will continue to operate as an independent business under MiQ's ownership, maintaining its current brand.
11/2/2023	 VIVVIX A KANTAR COMPANY	 MEDIA Radar	NA	ND	<ul style="list-style-type: none"> ■ Vivvix, the North American advertising intelligence unit of Kantar, will be acquired by Advertising intelligence and sales enablement platform, MediaRadar. ■ The acquisition brings together highly complementary businesses that are AI-powered platforms to accelerate growth for the combined entity.
10/30/2023	 Flywheel	 Omnicom Group	ND	\$835	<ul style="list-style-type: none"> ■ Omnicom announced it has agreed to acquire Flywheel Digital, the digital commerce business of Ascential for ~\$835mm ■ The transaction allows for an end-to-end set of services, by connecting Flywheel Commerce Cloud's product and transaction data with Omnicom's audience and behavior data.
10/23/2023	 OUTFRONT (Canada Business Unit)	 Bell Media	ND	\$300	<ul style="list-style-type: none"> ■ Bell Media, a content creation company based in Canada has acquired the Canadian business of OutFront Media. ■ The acquisition will accelerate Bell Media's multi-channel marketing solutions and bolster its out of home category.

Quarterly Transactions (Q1 2020 – Q4 2023)























Commentary

- **MarTech** M&A volume in Q4 remained robust, up **+17%** YoY and slightly down **(4%)** from a strong Q3. Q4 saw a resurgence of scaled deal activity – the highest since Q1 2022.
- Large MarTech strategics made several capability-driven transactions in Q4 – highlighted by HubSpot's \$150mm acquisition of Clearbit, Snowflake's acquisition of Samooha, Salesforce's acquisition of Spiff, and Adobe's acquisition of Rephrase.ai.
- Private Equity and sponsor-backed strategic acquisitions continued in Q4, as evidenced by Vista's \$4bn acquisition of EngageSmart, Bazaarvoice (TH Lee Partners/Marlin Equity Partners) acquisitions of Affable.AI and Granify, Cendyn's (Accel-KKR) acquisition of PushTech, and SharpenCX (Lee Equity Partners) acquisition of Plum Voice.

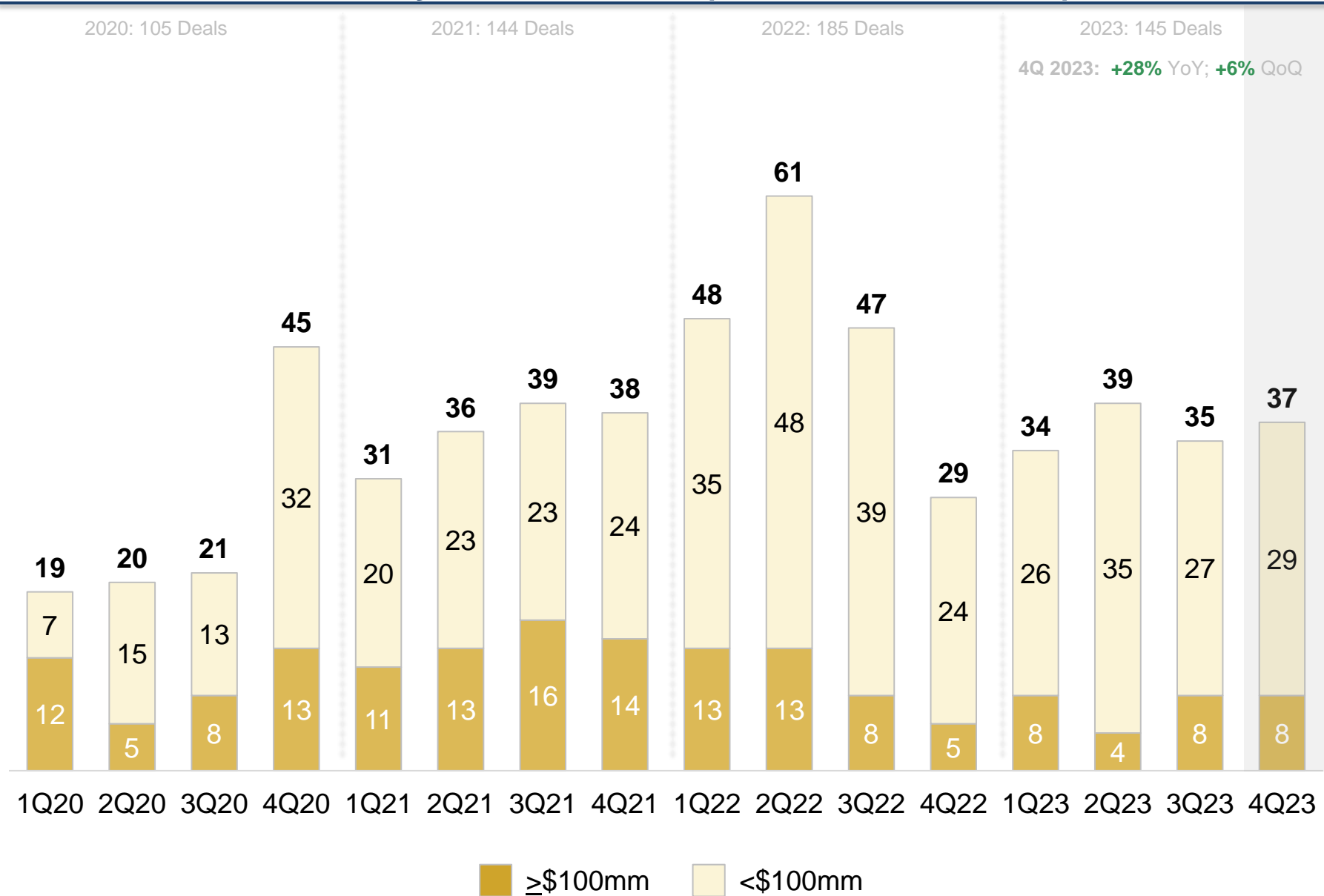
Looking Ahead

- We expect increased investment in capabilities that enable greater interoperability of data, more personalized & relevant omni-channel experiences, and messaging across 1st & 3rd party platforms.

MarTech – Q4 2023 Notable Deals

Announcement Date	Target	Acquirer	Capital Raised (\$mm)	Enterprise Value (\$mm)	Commentary
12/18/2023	 SPIFF	 salesforce	\$118	Scaled	<ul style="list-style-type: none"> ■ Salesforce announced it will acquire Spiff, a platform that automates commission management for sales teams. ■ Upon close, Spiff will join Sales Cloud, working to enhance Sales Performance Management Solutions by providing customers with a trusted platform to increase visibility and supercharge selling.
12/18/2023	 samooha	 snowflake	\$13	ND	<ul style="list-style-type: none"> ■ Samooaha, a startup that develops software to make data clean room technology accessible to marketers, has been acquired by Snowflake. ■ The acquisition will help Snowflake simplify building interoperable data clean rooms in the data cloud.
12/5/2023	 granify	 bazaarvoice	\$13	ND	<ul style="list-style-type: none"> ■ Bazaarvoice, a provider of full-funnel user-generated content solutions announced the acquisition of Granify, an e-commerce contextualization solution. ■ The acquisition further enhances Bazaarvoice's full-funnel e-commerce suite to enable brands and retailers to drive discovery and increase conversion.
11/20/2023	 SHIFT 44	 IONIK	ND	\$40	<ul style="list-style-type: none"> ■ Performance marketing technology company, Ionik, has acquired substantially all the assets of Shift44, a first-party data acquisition, lead generation, and performance marketing platform for ~\$40mm in aggregate consideration. ■ The acquisition helps Ionik amass first-party data and extends the capabilities of its performance marketing platform.
11/1/2023	 Clearbit	 HubSpot	\$17	\$150	<ul style="list-style-type: none"> ■ HubSpot, a Boston-based CRM platform announced it will acquire B2B data provider Clearbit to enhance its platform with third-party company data spanning millions of businesses. ■ The deal also brings Clearbit's over 400,0000 users and 1,500+ business customers to HubSpot.
10/23/2023	 EngageSmart	 VISTA	\$338	\$4,000	<ul style="list-style-type: none"> ■ Vista Equity Partners, a global investment firm focused on enterprise software and data and technology-enabled businesses, will acquire EngageSmart, a provider of vertically tailored customer engagement software and integrated payment solutions in an all-cash transaction valued ~\$4bn. ■ EngageSmart will become privately held upon close, General Atlantic will retain minority ownership position.
10/17/2023	 Onesend	 ActiveCampaign >	ND	ND	<ul style="list-style-type: none"> ■ ActiveCampaign, a marketing automation platform has acquired Onesend, a suite of tools empowering franchise, multi-location brands, and reseller agencies. ■ The acquisition will accelerate ActiveCampaign's global growth and partner network.
10/10/2023	 affable.ai	 bazaarvoice	\$4	ND	<ul style="list-style-type: none"> ■ Bazaarvoice, a provider of full-funnel user-generated content solutions, will acquire the affable.ai platform from Affable Technologies. ■ The acquisition allows Bazaarvoice to add creator discovery and management technology to its existing creator-managed services so clients can build a creator marketing strategy and enhance social commerce capabilities.
10/10/2023	 PUSHTech™	 CENDYN	ND	ND	<ul style="list-style-type: none"> ■ Cendyn, an integrated technology platform in the hospitality industry is acquiring PUSHTech, a cloud-based Customer Data Platform (CDP) and CRM platform that offers an integrated solution for the hospitality industry. ■ The acquisition helps Cendyn take the next step towards a next-gen CRM platform and optimization of revenue streams through advanced CRM strategies.
10/3/2023	 LIVEVOX	 NICE	\$100	\$378	<ul style="list-style-type: none"> ■ NICE, an AI-powered self-service and agent-assisted CX software for the contact center will acquire LiveVox, an AI-driven CX outreach provider. ■ The acquisition will bolster how organizations manage outreach with conversational AI at scale.

Quarterly Transactions (Q1 2020 – Q4 2023)



Commentary

- **Digital Content** M&A remained strong in Q4 from both a volume (+6% from Q3 and +28% YoY) and deal value perspective, with strategic buyers accounting for six of the eight scaled deals in the quarter.
- Q4 2023 saw two scaled SPAC transactions – Screaming Eagle Acquisition Corps. purchase of Lionsgate Studios Business (~\$4.6bn EV) and Vertex Technology Acquisition Corp’s (Temasek-backed SPAC) ~\$676mm⁽¹⁾ acquisition of 17Live.

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 uncertain 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 – Q4 2023 Notable Deals



















Announcement Date	Target	Acquirer	Capital Raised (\$mm)	Enterprise Value (\$mm)	Commentary
12/28/2023		Archetype	\$55	ND	<ul style="list-style-type: none"> Cheddar News, a news streaming platform was acquired by Archetype through its financial sponsor Regent LP. The acquisition will allow Cheddar to take advantage of Archetype's vast media reach to broaden its audience.
12/22/2023			\$175 ⁽¹⁾	\$4,600 ⁽¹⁾	<ul style="list-style-type: none"> The Studio Business of Lionsgate, which comprises its TV studio and motion picture group segments, will merge with Screaming Eagle Acquisition Corp, through a SPAC transaction. The transaction establishes one of the largest publicly traded pure-play content companies.
12/11/2023			\$2,450	\$1,500	<ul style="list-style-type: none"> TikTok is investing \$1.5bn in Tokopedia, GoTo's Indonesia-based e-commerce business. The investment represents a 75% controlling stake in the Company and will be paid over time.
11/20/2023			\$54	\$110	<ul style="list-style-type: none"> nDreams, the world's biggest VR game developer and publisher has been acquired by Aonic, a group of global gaming companies based in Sweden. The deal allows Aonic to tap into nDreams expertise in XR technologies and broaden its markets.
11/13/2023			\$4	\$70	<ul style="list-style-type: none"> The Block, a news and data provider focused on crypto has been acquired by Singapore-based Foresight Ventures. The purchase was completed at a \$70mm valuation and allows the Company to build new products and expand into Asia and the Middle East.
11/7/2023			\$124	\$108	<ul style="list-style-type: none"> GAN, a B2B technology provider of internet gaming solutions and B2C operator of internet sports betting, will be acquired by Sega Sammy Creation; a wholly-owned subsidiary of Sega Sammy Holdings; the transaction reflects a premium of ~120% over the closing price of GAN (Nasdaq:GAN). The deal will help SegaSammy expand its gaming business and wider gaming portfolio.
11/6/2023			\$10	\$188 ⁽²⁾	<ul style="list-style-type: none"> Playmaker, a digital sports media company that delivers authentic content experiences through its portfolio of sports media brands, will be acquired by Better Collective, a digital sports media group. The deal allows Better Collective to grow its audience across the Americas among generalist sports fans and secure a market leading position in South America, having acquired the most visited sports media brands in the region.
10/25/2023			\$54	ND	<ul style="list-style-type: none"> Supergreat, a livestream beauty shopping app will be acquired by Whatnot, a livestream shopping platform that connects buyers across 200+ categories. Supergreat was valued ~\$100mm following its Series B raise in December of 2021.
10/10/2023		JELLYSMACK	ND	ND	<ul style="list-style-type: none"> Jellysmack, a startup that helps creators grow their online video businesses, is acquiring Law&Crime, the true crime and legal drama media company founded by legal analyst and entrepreneur Dan Abrams. The deal gives Jellysmack access to a huge amount of professional true crime content, as well as production and distribution capabilities that it can use to bolster the work of the 150+ true crime creators it already works with.
10/2/2023			ND	\$676 ⁽³⁾	<ul style="list-style-type: none"> 17Live, a live streaming platform will be acquired by Vertex Technology Acquisition Corp, a SPAC backed by state investor Temasek. The deal will allow 17Live to grow globally and in Southeast Asia.

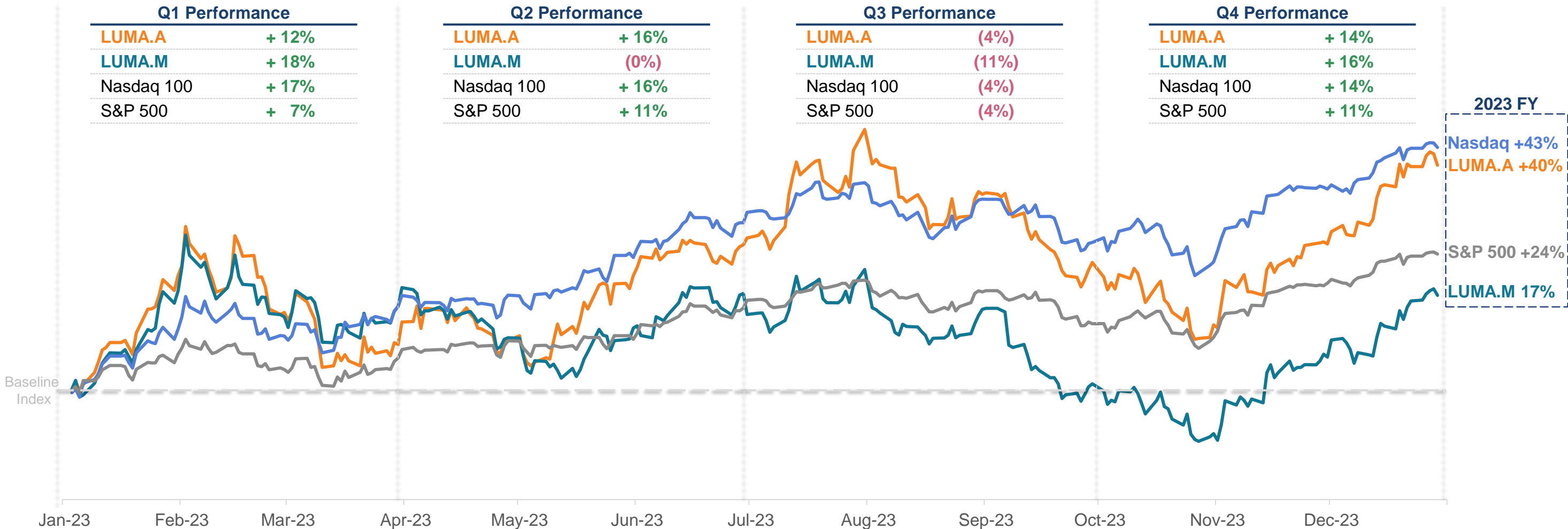
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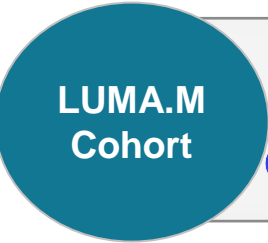
Public Markets Bounced Back in 2023

LUMA Indices 2023 Trading Performance vs. Relevant Benchmarks

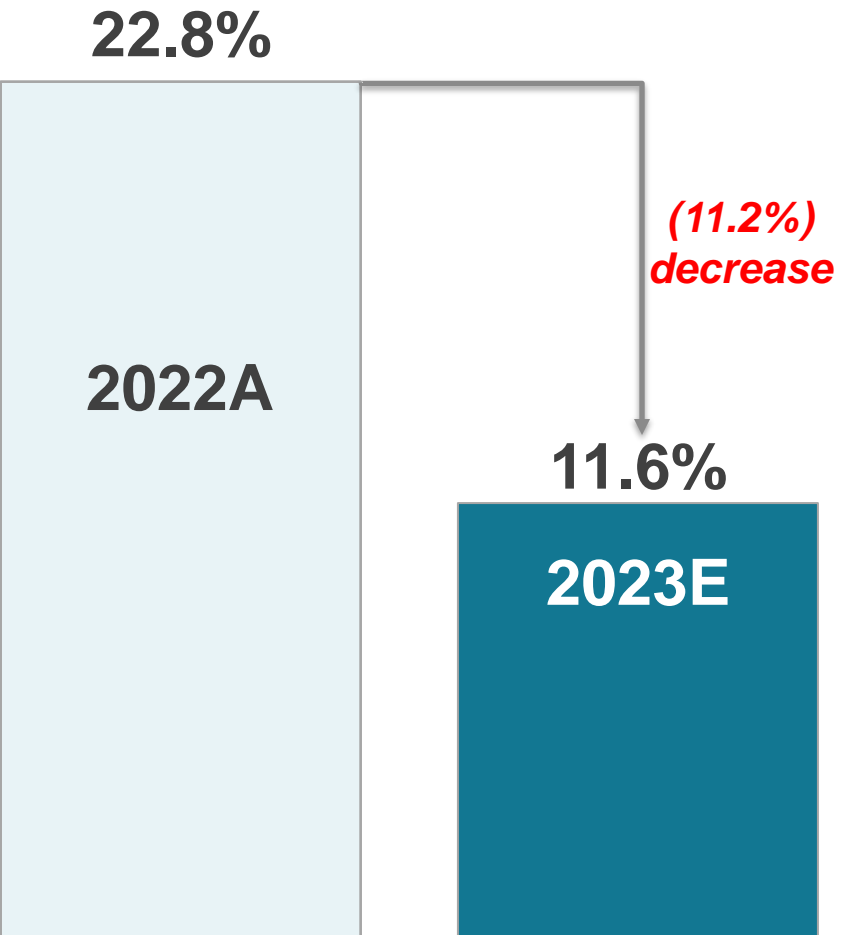
2023 was a bounce back year for the LUMA Indices and key equity market indices (S&P 500, Nasdaq 100) following the technology sell-off in 2022. Despite a challenging Q3, market indices closed out the year strong in Q4, driving momentum into 2024. Positive trading performance was largely driven by strong underlying business performance and continued optimism for a soft landing after historic interest rate hikes. Intra-cohort performance within LUMA.A and LUMA.M was largely positive with 18/28 MarTech names and 16/25 AdTech names ending the year in positive territory. A few companies had outsized performances, as HubSpot, Roku and Shopify traded up over 100%, and AppLovin over 200% from 2022. While we saw a few VC-backed technology companies have public market exits in the second half of 2023, the IPO market remained relatively muted throughout the year.



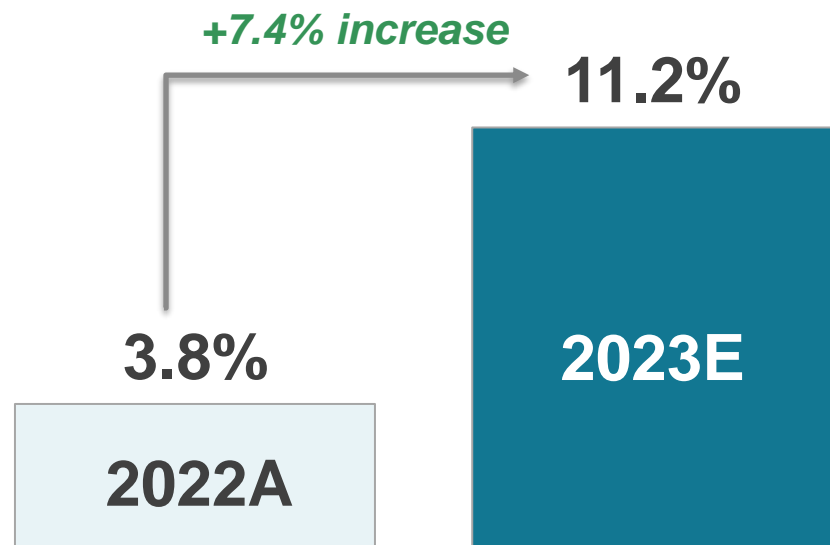
Growth and Profitability Dynamics Shifted Throughout 2023



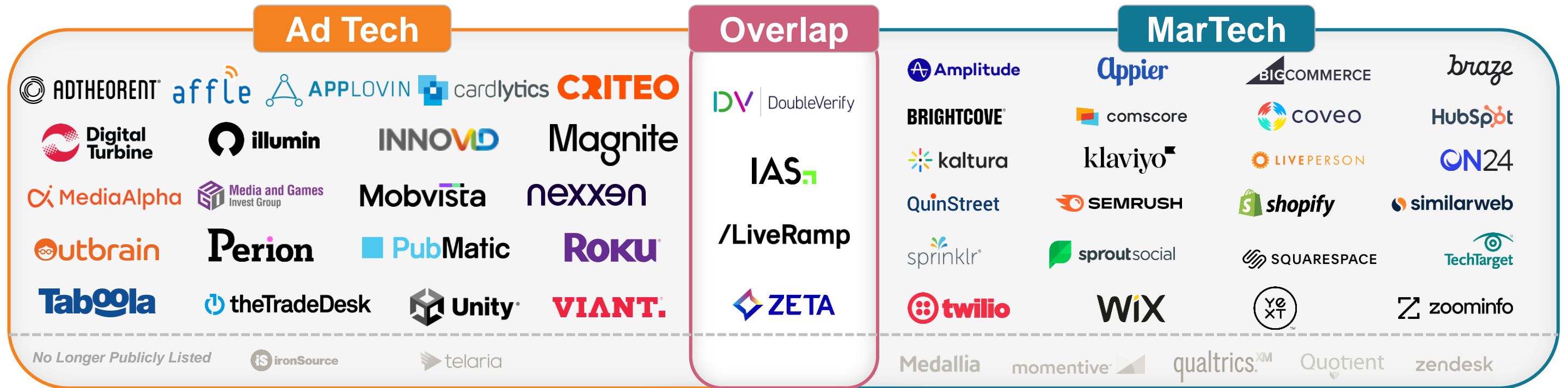
LUMA.M Cohort Est. Revenue Growth



LUMA.M Cohort Est. EBITDA Margins

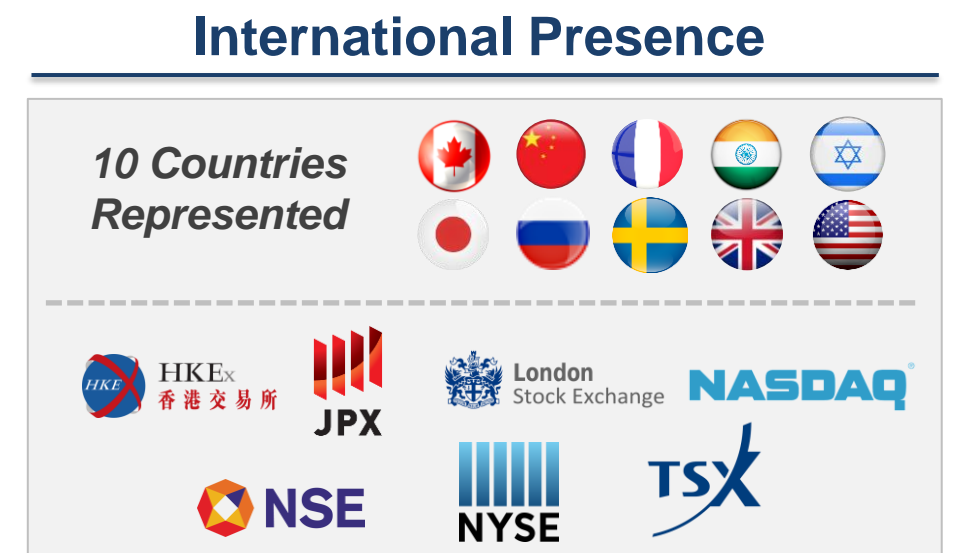
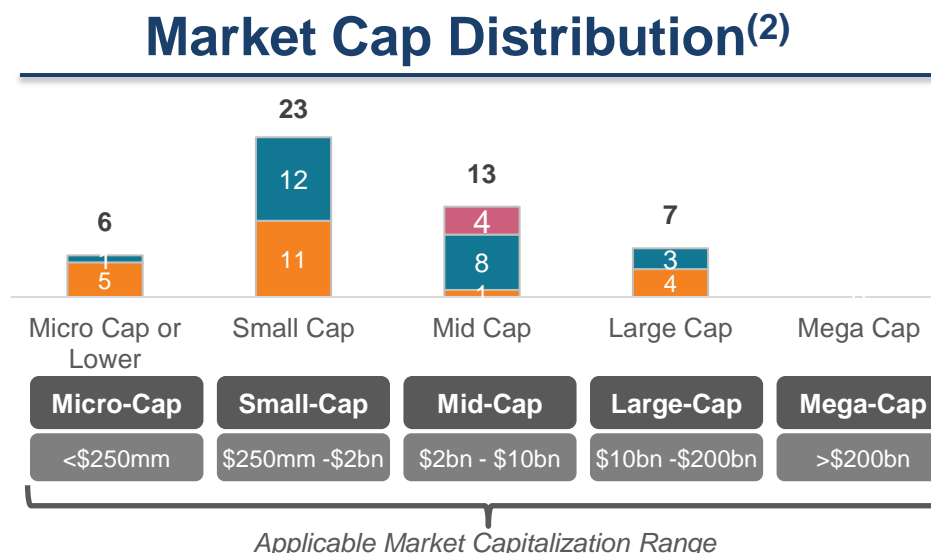


The LUMA Indices Universe at a Glance (1 / 2)

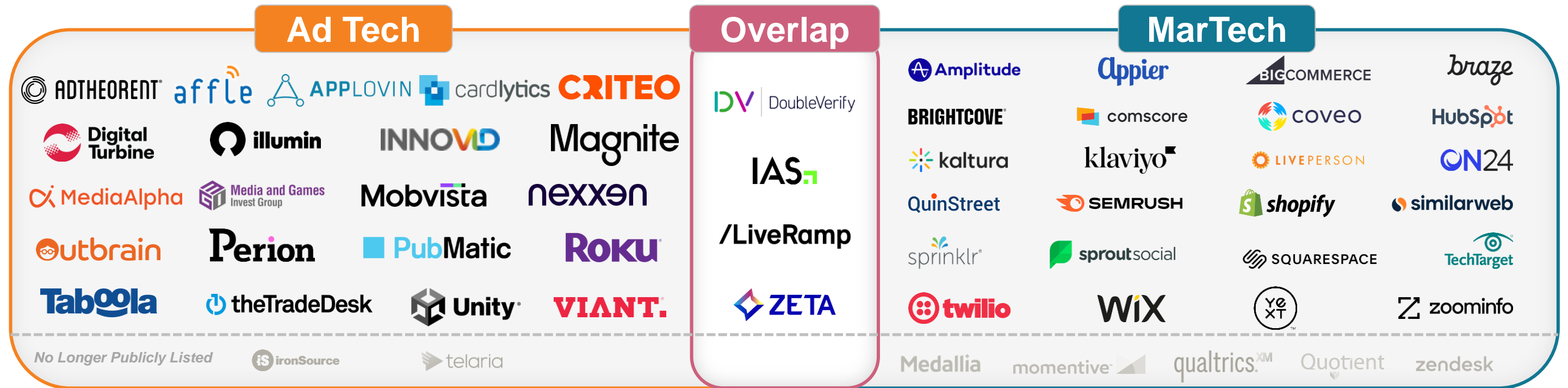


49 Actively Traded

Aggregate Mkt Cap as of 12/31/23	~\$311bn
Aggregate CY23E Revenue ⁽¹⁾	~\$41bn
Avg. CY23E Growth Rate	14.5%



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



Metric	Ad Tech ex-Overlap		Overlap		MarTech ex-Overlap	
Aggregate Mkt Cap (\$bn)	\$96		\$14		\$201	
	Ad Tech ex-Overlap ⁽¹⁾		Overlap		MarTech ex-Overlap	
	2022A	2023E	2022A	2023E	2022A	2023E
Avg. Revenue (\$mm)	\$675	\$770	\$510	\$599	\$840	\$965
Avg. EBITDA Margin (%)	21.4%	24.0%	21.8%	24.6%	0.8%	9.0%
Avg. EV / Revenue (x)	4.6x	4.1x	7.0x	5.9x	6.5x	5.4x
Avg. EV / EBITDA (x)	12.8x	16.8x	33.0x	23.2x	29.8x	29.1x

2023 was the year of efficiency for the LUMA indices cohorts

Ad Tech Earnings Reaction

Cohort continues to exceed net revenue and EBITDA targets; largely positive 2023 YTD performance

Overview		Metric	Most Recent Quarter			Trading Performance			Change in FY Guidance ⁽²⁾						
Company	Date	Defined	Net Revenue			Profitability / EBITDA ⁽¹⁾			T+1 Comp	T+1 S&P	YTD Comp	Net Revenue		EBITDA	
			Actual	Cons.	Beat/Miss	Actual	Cons.	Beat/Miss				Change	%	Change	%
ADTHEORENT	11 / 07*	Adj. GP	\$26	\$26	1%	\$5	\$4	18%	(4%)	0%	(13%)	—	--%	—	--%
APPLOVIN	11 / 08*	Revenue	\$864	\$793	9%	\$419	\$354	19%	(1%)	(1%)	278%	n/a	n/a	n/a	n/a
cardlytics	11 / 08*	Gross Profit	\$36	\$33	8%	\$4	(\$0)	NM	(54%)	(1%)	59%	n/a	n/a	n/a	n/a
CRITEO	11 / 02	Contribution ex-TAC	\$245	\$240	2%	\$68	\$60	13%	(12%)	2%	(3%)	↓	n/a	↓	n/a
Digital Turbine	11 / 08*	Adj. GP	\$67	\$69	(3%)	\$28	\$26	6%	(5%)	(1%)	(55%)	n/a	n/a	n/a	n/a
DV	11 / 09*	Revenue	\$144	\$139	4%	\$46	\$40	14%	6%	2%	67%	↑	+ 2%	↑	+ 3%
INNOVUD	11 / 08	Revenue	\$36	\$36	1%	\$7	\$4	63%	23%	0%	(12%)	↑	+ 2%	↑	Margin Increase
IAS	11 / 02*	Revenue	\$120	\$113	6%	\$41	\$36	13%	16%	1%	64%	↑	+ 2%	↑	+ 5%
/LiveRamp	11 / 08*	Revenue	\$160	\$152	5%	\$32	\$20	60%	20%	(1%)	62%	↑	+ 2%	↑	+ 8%
Magnite	11 / 08*	Contribution ex-TAC	\$133	\$130	2%	\$40	\$37	9%	(0%)	(1%)	(12%)	↑	n/a	↓	Withdrew Outlook
MediaAlpha	11 / 01*	Gross Profit	\$12	\$11	7%	\$4	\$3	38%	(5%)	2%	12%	n/a	n/a	n/a	n/a
nexxen	11 / 22	Contribution ex-TAC	\$77	\$77	--%	\$21	\$20	4%	(1%)	0%	(22%)	↓	(4%)	↓	(6%)
outbrain	11 / 07	GP ex-TAC	\$56	\$58	(4%)	\$10	\$9	21%	(14%)	0%	21%	n/a	n/a	n/a	n/a
Perion	11 / 01	Revenue ⁽³⁾	\$185	\$184	1%	\$43	\$42	2%	6%	1%	22%	—	--%	—	--%
PubMatic	11 / 08*	Revenue	\$64	\$59	7%	\$18	\$14	30%	24%	(1%)	27%	n/a	n/a	n/a	n/a
ROKU	11 / 01*	Revenue	\$912	\$859	6%	\$43	(\$29)	NM	31%	2%	125%	n/a	n/a	—	--%
Taboola	11 / 08	GP ex-TAC	\$128	\$119	8%	\$23	\$4	NM	16%	0%	41%	—	--%	↑	+ 3%
theTradeDesk	11 / 09*	Revenue	\$493	\$486	2%	\$200	\$186	7%	(17%)	2%	61%	n/a	n/a	n/a	n/a
Unity	11 / 09*	Revenue	\$544	\$549	(1%)	\$131	\$96	37%	7%	2%	43%	↓	Withdrew Outlook	↓	Withdrew Outlook
VIANT	11 / 06*	Contribution ex-TAC	\$39	\$36	9%	\$10	\$7	38%	12%	0%	71%	n/a	n/a	n/a	n/a
ZETA	11 / 01*	Revenue	\$189	\$179	6%	\$34	\$32	6%	5%	2%	8%	↑	+ 1%	↑	+ 2%

MarTech Earnings Reaction

Improving profitability and growth across cohort of MarTech PubCo's signals potential end to 2022-2023's "SaaS Recession"

Overview	Most Recent Quarter			Profitability / EBITDA ⁽¹⁾			Trading Performance			Change in FY Guidance ⁽²⁾						
	Company	Date	Revenue	Actual	Cons.	Beat/Miss	Actual	Cons.	Beat/Miss	T+1 Comp	T+1 S&P	YTD Comp	Revenue	Profitability		
			Actual	Cons.	Beat/Miss	Actual	Cons.	Beat/Miss				Change	%	Defined	Change	%
Amplitude	11/07	\$71	\$70	1%	\$4	\$2	97%	(6%)	0%	5%	↑	1%	Non-GAAP EBIT	↑	52%	
Copper	11/13	\$47	\$45	4%	\$6	\$4	28%	(0%)	(0%)	27%	↓	(0%)	Adjusted EBITDA	↑	8%	
eCommerce	11/08	\$78	\$78	0%	(\$0)	(\$1)	86%	(11%)	0%	11%	→	--%	Non-GAAP EBIT	↑	51%	
Braze	12/06	\$124	\$117	6%	(\$7)	(\$14)	51%	(3%)	1%	95%	↑	3%	Non-GAAP EBIT	↑	20%	
Brightcove	11/01	\$51	\$50	1%	\$6	\$4	34%	(8%)	2%	(50%)	↓	(0%)	Adjusted EBITDA	↓	(5%)	
Comscore	11/06	\$91	\$95	(4%)	\$10	\$13	(20%)	(2%)	0%	(28%)	↓	n/a	Adjusted EBITDA	→	--%	
Coveo	11/06	\$31	\$31	0%	-	(\$1)	100%	(5%)	0%	9%	↓	(2%)	Non-GAAP EBIT	↑	25%	
DV	11/09	\$144	\$139	4%	\$46	\$40	14%	6%	2%	67%	↑	2%	Adjusted EBITDA	↑	3%	
HubSpot	11/08	\$558	\$533	5%	\$111	\$88	26%	(6%)	(1%)	101%	↑	1%	Non-GAAP EBIT	↑	8%	
IAS	11/02	\$120	\$113	6%	\$41	\$36	13%	16%	1%	64%	↑	2%	Adjusted EBITDA	↑	5%	
Kaltura	11/08	\$43	\$43	1%	\$0	(\$1)	139%	3%	0%	13%	↑	0%	Adjusted EBITDA	↑	18%	
Klaviyo	11/07	\$176	\$167	5%	\$21	\$14	54%	(8%) ⁽³⁾	0%	(7%) ⁽³⁾	n/a	n/a	Non-GAAP EBIT	n/a	n/a	
LivePerson	11/07	\$101	\$99	2%	\$11	\$10	6%	2%	0%	(63%)	→	--%	Adjusted EBITDA	→	--%	
LiveRamp	11/08	\$160	\$152	5%	\$32	\$20	60%	20%	(1%)	62%	↑	2%	Non-GAAP EBIT	↑	8%	
ON24	11/07	\$39	\$38	3%	\$0	(\$2)	103%	4%	0%	(9%)	↑	2%	Non-GAAP EBIT	↑	18%	
QuinStreet	11/01	\$124	\$123	1%	\$1	\$0	166%	(4%)	2%	(11%)	n/a	n/a	Adjusted EBITDA	n/a	n/a	
SEMRush	11/02	\$79	\$79	0%	\$9	\$4	126%	1%	2%	68%	↓	(0%)	Non-GAAP Net Income	↑	233%	
Shopify	11/02	\$1,714	\$1,674	2%	\$284	\$176	61%	22%	2%	124%	↓	n/a	Free Cash Flow	↑	n/a	
Similarweb	11/08	\$55	\$54	1%	\$2	(\$2)	219%	2%	0%	(17%)	↑	0%	Non-GAAP EBIT	↑	86%	
Sprinklr	12/06	\$186	\$180	3%	\$31	\$20	57%	(33%)	1%	47%	↑	1%	Non-GAAP EBIT	↑	23%	
Sprout Social	11/02	\$86	\$84	2%	\$1	(\$2)	141%	10%	1%	9%	↑	1%	Non-GAAP EBIT	↑	152%	
SquareSpace	11/07	\$257	\$252	2%	\$66	\$63	5%	(1%)	0%	49%	↑	1%	Non-GAAP Unlevered FCF	↑	6%	
TechTarget	11/08	\$57	\$56	2%	\$17	\$17	5%	10%	(1%)	(21%)	→	--%	Adjusted EBITDA	→	--%	
Twilio	11/08	\$1,034	\$987	5%	\$209	\$156	34%	0%	(1%)	55%	n/a	n/a	Non-GAAP EBIT	↑	28%	
Wix	11/09	\$394	\$390	1%	\$62	\$43	43%	(4%)	(1%)	60%	↑	1%	Free Cash Flow	↑	16%	
Yoast	12/05	\$100	\$102	(2%)	\$14	\$12	11%	(21%)	(0%)	(10%)	↓	(1%)	Adjusted EBITDA	↑	2%	
Zeta	11/01	\$189	\$179	6%	\$34	\$32	6%	5%	2%	8%	↑	1%	Adjusted EBITDA	↑	2%	
ZoomInfo	10/30	\$314	\$311	1%	\$131	\$130	1%	(16%)	1%	(39%)	↑	0%	Non-GAAP EBIT	↓	(0%)	

Source: FactSet (Market data as of 12/31/2023) 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. *Represents earnings release after market close. Beat/ Miss higher than 100% is considered not meaningful "NM" (1) Represents EBITDA as defined by brokers. (2) Represents the mid-point of guidance range. (3) Represents share price performance since IPO and includes IPO price (\$30.00) as baseline.

Ad Tech – 2023 Market Performance

2023 Share Price Performance Ranking

Rank	Company	Share Price (\$)			Market Cap (\$mm)	EV / LTM Net Revenue ⁽¹⁾	
		End of 2022	End of 2023	% Increase / (Decrease)		End of 2022	End of 2023
1	AppLovin	\$10.53	\$39.85	+278.4%	\$14,621	2.2x	5.7x
2	Roku	\$40.70	\$91.66	+125.2%	\$14,108	1.5x	3.6x
3	Viant	\$4.02	\$6.89	+71.4%	\$467	2.1x	3.5x
4	Double Verify	\$21.96	\$36.78	+67.5%	\$6,641	8.6x	12.0x
5	Integral Ad Science	\$8.79	\$14.39	+63.7%	\$2,465	4.1x	5.6x
6	LiveRamp	\$23.44	\$37.88	+61.6%	\$2,707	2.1x	3.5x
7	theTradeDesk	\$44.83	\$71.96	+60.5%	\$36,663	15.7x	19.2x
8	Cardlytics	\$5.78	\$9.21	+59.3%	\$418	2.7x	4.2x
9	Unity Software	\$28.59	\$40.89	+43.0%	\$17,443	7.8x	9.2x
10	Taboola	\$3.08	\$4.33	+40.6%	\$1,434	1.5x	2.6x
11	PubMatic	\$12.81	\$16.31	+27.3%	\$930	2.3x	3.0x
n/a	S&P 500	\$3,839.50	\$4,769.83	+24.2%	NA	NA	NA
12	Perion Network	\$25.30	\$30.87	+22.0%	\$1,544	3.4x	3.3x
13	Outbrain	\$3.62	\$4.38	+21.0%	\$236	0.7x	0.8x
14	Affle	\$13.07	\$15.69	+20.1%	\$2,091	NA	27.3x
15	MediaAlpha	\$9.95	\$11.15	+12.1%	\$783	10.2x	13.3x
16	Zeta Global	\$8.17	\$8.82	+8.0%	\$2,377	3.2x	3.5x
17	Criteo	\$26.06	\$25.32	(2.8%)	\$1,641	1.8x	1.5x
18	Magnite	\$10.59	\$9.34	(11.8%)	\$1,403	4.0x	3.1x
19	Innovid	\$1.71	\$1.50	(12.3%)	\$234	1.8x	1.5x
20	AdTheorent	\$1.66	\$1.45	(12.7%)	\$144	0.9x	0.7x
21	Nexxen	\$3.19	\$2.60	(18.6%)	\$391	0.6x	0.9x
22	Illumin	\$1.54	\$1.21	(21.8%)	\$75	0.7x	0.8x
23	Mobvista	\$0.52	\$0.37	(28.4%)	\$574	NA	NA
24	Media and Games Invest	\$1.84	\$1.13	(38.7%)	\$180	1.4x	1.5x
25	Digital Turbine	\$15.24	\$6.86	(55.0%)	\$720	5.4x	3.8x
Average						3.7x	4.6x

MarTech – 2023 Market Performance

2023 Share Price Performance Ranking

	Company	Share Price (\$)			Market Cap (\$mm)	EV / LTM Net Revenue	
		End of 2022	End of 2023	% Increase / (Decrease)		End of 2022	End of 2023
1	Shopify	\$34.71	\$77.90	+124.4%	\$100,755	6.5x	14.5x
2	HubSpot	\$289.13	\$580.54	+100.8%	\$30,588	8.7x	14.3x
3	Braze	\$27.28	\$53.13	+94.8%	\$5,921	7.2x	12.5x
4	SEMrush	\$8.14	\$13.66	+67.8%	\$2,066	4.0x	6.3x
5	DoubleVerify	\$21.96	\$36.78	+67.5%	\$6,641	8.6x	12.0x
6	Integral Ad Science	\$8.79	\$14.39	+63.7%	\$2,465	4.1x	5.6x
7	LiveRamp	\$23.44	\$37.88	+61.6%	\$2,707	2.1x	3.5x
8	Wix	\$76.83	\$123.02	+60.1%	\$7,191	3.3x	4.5x
9	Twillio	\$48.96	\$75.87	+55.0%	\$15,413	1.7x	2.9x
10	Squarespace	\$22.17	\$33.01	+48.9%	\$4,874	4.2x	5.4x
11	Sprinklr	\$8.17	\$12.04	+47.4%	\$3,563	3.0x	4.1x
12	Appier	\$10.29	\$13.12	+27.5%	\$1,335	6.7x	7.2x
n/a	S&P 500	\$3,839.50	\$4,769.83	+24.2%	NA	NA	NA
13	Kaltura	\$1.72	\$1.95	+13.4%	\$300	1.3x	1.5x
14	BigCommerce	\$8.74	\$9.73	+11.3%	\$804	2.7x	3.0x
15	Sprout Social	\$56.46	\$61.44	+8.8%	\$3,677	13.1x	11.7x
16	Coveo	\$6.70	\$7.28	+8.6%	\$809	5.1x	5.4x
17	Zeta Global	\$8.17	\$8.82	+8.0%	\$2,377	3.2x	3.5x
18	Amplitude	\$12.08	\$12.72	+5.3%	\$1,788	5.1x	5.4x
19	Klaviyo	\$30.00 ⁽¹⁾	\$27.78	(7.4%)	\$8,578	NA	12.2x
20	ON24	\$8.63	\$7.88	(8.7%)	\$389	0.7x	1.0x
21	Yext	\$6.53	\$5.89	(9.8%)	\$799	2.0x	1.5x
22	QuinStreet	\$14.35	\$12.82	(10.7%)	\$739	1.3x	1.2x
23	Similarweb	\$6.43	\$5.33	(17.1%)	\$475	2.6x	1.9x
24	TechTarget	\$44.06	\$34.86	(20.9%)	\$1,046	4.8x	4.7x
25	comScore	\$23.20	\$16.70	(28.0%)	\$1,693	5.7x	4.9x
26	ZoomInfo	\$30.11	\$18.49	(38.6%)	\$7,451	13.1x	6.6x
27	BrightCove	\$5.23	\$2.59	(50.5%)	\$126	1.1x	0.5x
28	LivePerson	\$10.14	\$3.79	(62.6%)	\$324	3.6x	1.6x
Average						4.6x	5.7x

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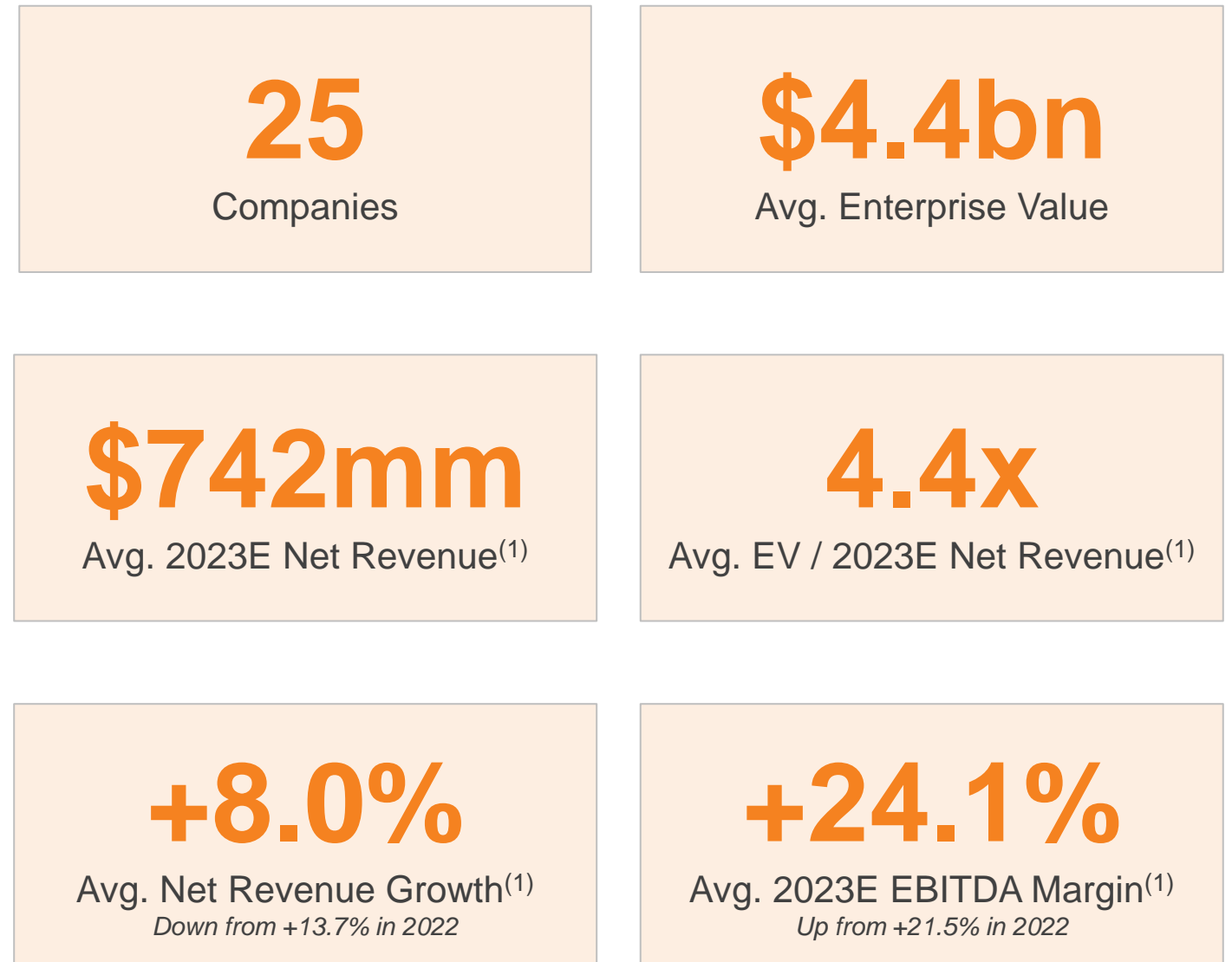
1	2023 M&A Activity
2	2023 Public Markets Overview
A	Public Market Overview
B	Ad Tech Performance Benchmarking
C	MarTech Performance Benchmarking
3	2023 Private Financing Activity
4	Appendix

LUMA.A – Benchmarking at a Glance

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 \$4.4bn, with theTradeDesk (\$35.1bn) at the high end of the range and Illumin (\$38mm) at the lower end of the EV range.
- **Net Revenue:**
 - **LUMA.A** companies have an average 2023E Net Revenue of \$742mm and trade at an average EV / 2023E Net Revenue of 4.4x. From a scale perspective, Roku is expected to have the highest Net Revenue (\$3.5bn) followed by AppLovin (\$3.3bn).
 - theTradeDesk is trading at the highest EV / 2023E Net Revenue at 18.3x, while AdTheorent is trading at the lowest EV / 2023E Net Revenue multiple at 0.6x. Growth forecast for the year of 8.0% is down from 13.7% in 2022.
- **Profitability:**
 - **LUMA.A** companies have an average 2023E EBITDA margin of 24.1%. EBITDA margins have largely held throughout the year and are slightly up from 2022 EBITDA margins of 21.5%. Perion leads the cohort with 54% 2023E EBITDA margins, followed by AppLovin at 45%. From a pure dollar perspective, AppLovin leads the cohort with expected 2023E EBITDA of \$1.5bn.

Metrics at a Glance



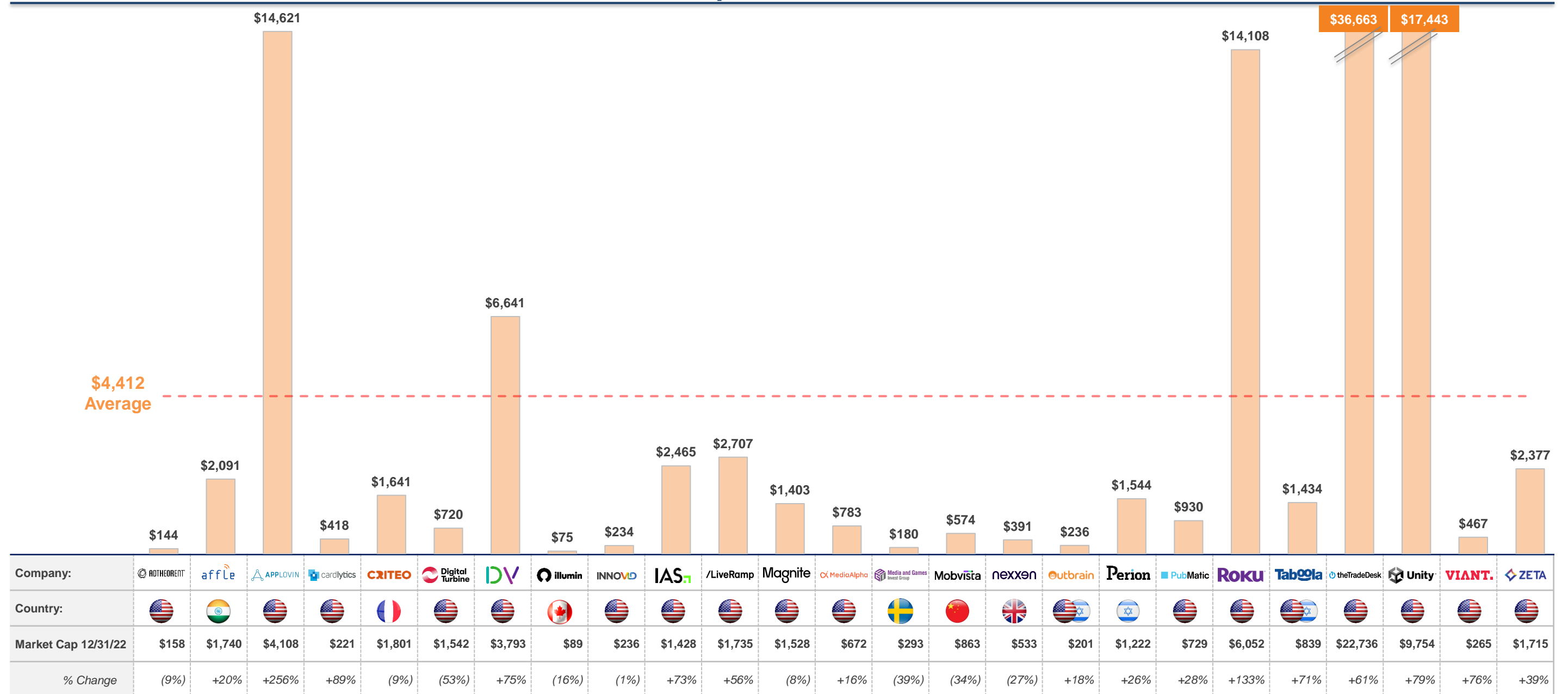
LUMA.A – Summary Valuation Statistics

Company	Ticker	Market Statistics				EV / Net Revenue ⁽¹⁾			EV / Adj. EBITDA		
		Exchange	Share Price	FD Market Cap	Enterprise Value	CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E
Affle ⁽¹⁾	AFFLE	BSE	\$15.69	\$2,091	\$2,044	30.6x	NA	NA	59.1x	50.5x	39.1x
AdTheorent	ADTH	NASDAQ	\$1.45	\$144	\$70	0.6x	0.6x	0.6x	3.1x	3.7x	3.2x
AppLovin	APP	NASDAQ	\$39.85	\$14,621	\$17,416	6.2x	5.3x	4.5x	16.4x	11.9x	9.8x
Cardlytics	CDLX	NASDAQ	\$9.21	\$418	\$522	4.6x	4.1x	3.8x	NM	NM	31.7x
Criteo	CRTO	NASDAQ	\$25.32	\$1,641	\$1,456	1.6x	1.4x	1.4x	5.5x	5.3x	4.9x
Digital Turbine	APPS	NASDAQ	\$6.86	\$720	\$1,045	2.9x	3.9x	3.7x	5.5x	9.8x	8.9x
DoubleVerify	DV	NYSE	\$36.78	\$6,641	\$6,388	14.1x	11.2x	9.0x	45.1x	35.4x	29.4x
Illumin	ILLM	NASDAQ	\$1.21	\$75	\$38	0.8x	0.8x	0.8x	7.8x	37.0x	8.1x
Innovid	CTV	NYSE	\$1.50	\$234	\$206	1.6x	1.5x	1.3x	NM	11.7x	10.4x
Integral Ad Science	IAS	NASDAQ	\$14.39	\$2,465	\$2,546	6.2x	5.4x	4.7x	20.1x	16.1x	13.8x
LiveRamp	RAMP	NYSE	\$37.88	\$2,707	\$2,183	3.7x	3.5x	3.3x	40.4x	22.0x	17.2x
Magnite	MGNI	NASDAQ	\$9.34	\$1,403	\$1,698	3.3x	3.1x	2.9x	9.5x	10.2x	9.2x
MediaAlpha	MAX	NYSE	\$11.15	\$783	\$861	12.3x	13.4x	10.7x	37.6x	34.4x	23.6x
Media and Games Invest	M8G	NASDAQ	\$1.13	\$180	\$503	1.5x	1.5x	1.4x	5.1x	4.9x	4.5x
Mobvista	1860	HKG	\$0.37	\$574	\$558	2.5x	2.6x	2.2x	15.4x	NA	NA
Nexxen	TRMR	LSE	\$2.60	\$391	\$302	1.0x	1.0x	0.9x	2.1x	3.7x	3.2x
Outbrain	OB	NASDAQ	\$4.38	\$236	\$186	0.8x	0.8x	0.8x	7.1x	6.3x	4.5x
Perion Network	PERI	NASDAQ	\$30.87	\$1,544	\$1,020	3.8x	3.3x	2.9x	7.7x	6.1x	5.5x
PubMatic	PUBM	NASDAQ	\$16.31	\$930	\$759	3.0x	2.9x	2.7x	7.7x	10.5x	8.9x
Roku	ROKU	NASDAQ	\$91.66	\$14,108	\$12,105	3.9x	3.5x	3.2x	NM	NM	NM
Taboola	TBLA	NASDAQ	\$4.33	\$1,434	\$1,378	2.4x	2.6x	2.0x	8.8x	17.3x	6.8x
theTradeDesk	TTD	NASDAQ	\$71.96	\$36,663	\$35,141	22.3x	18.3x	15.2x	52.6x	46.3x	39.1x
Unity Software	U	NYSE	\$40.89	\$17,443	\$18,653	13.4x	8.7x	7.8x	NM	48.3x	28.3x
Viant	DSP	NASDAQ	\$6.89	\$467	\$468	3.8x	3.3x	3.0x	NM	17.3x	15.1x
Zeta Global	ZETA	NYSE	\$8.82	\$2,377	\$2,441	4.1x	3.4x	2.9x	26.5x	19.3x	15.5x
Average						5.0x	4.4x	3.8x	17.1x	18.0x	13.7x
Median						3.5x	3.3x	2.9x	8.8x	11.9x	9.5x
25th Percentile						1.6x	1.5x	1.4x	6.3x	6.3x	5.9x
75th Percentile						5.0x	4.4x	4.0x	23.3x	22.0x	16.8x

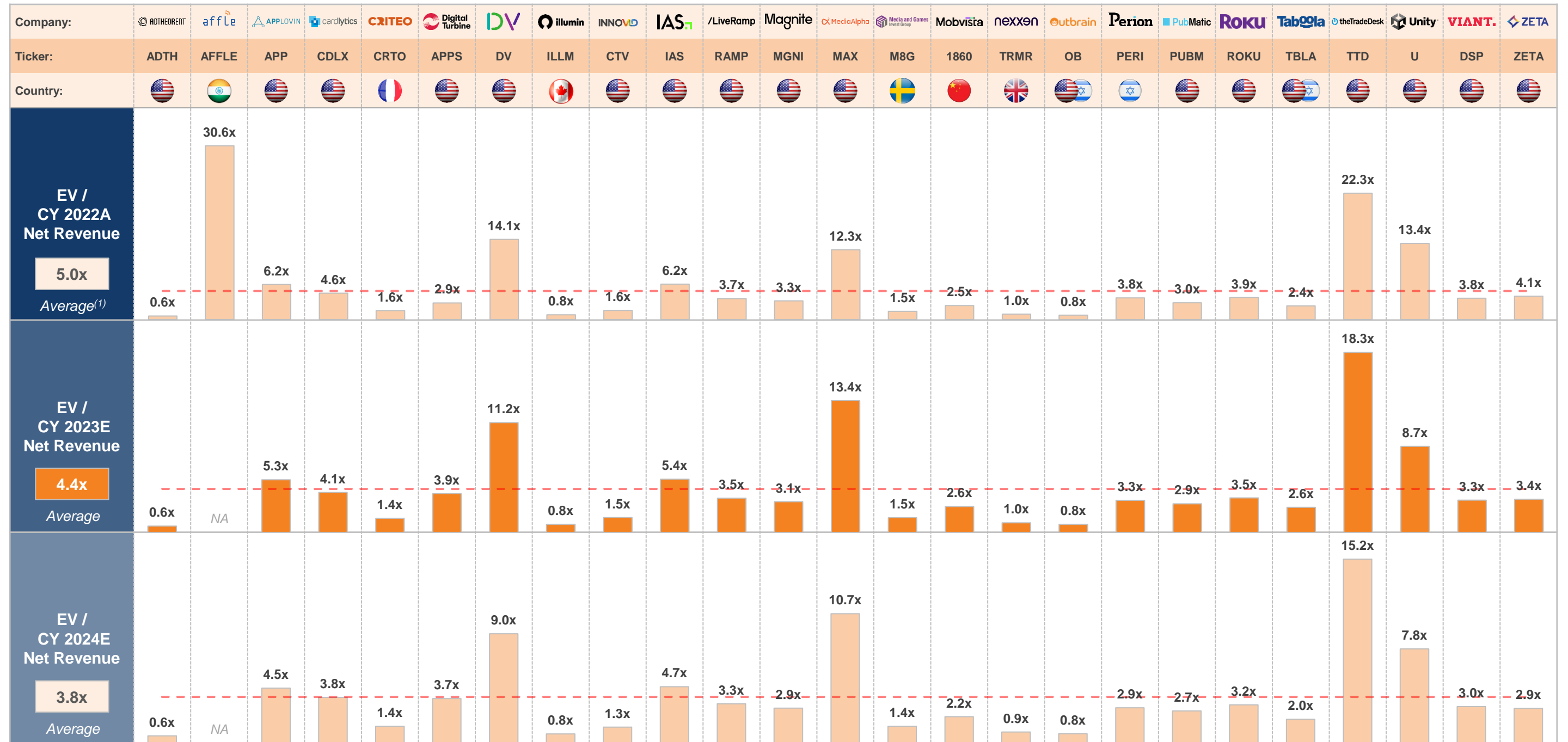
Source: LUMA Analysis, FactSet (Market data as of 12/31/2023), Company Filings. Note: Figures correspond to calendar years, or closest equivalent period, See Appendix C for detail. Forward estimates excluded for companies whose relevant net revenue or EBITDA metrics are not available on a forward basis. 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. (1) Affle excluded from summary statistics.

LUMA.A – Market Cap Distribution

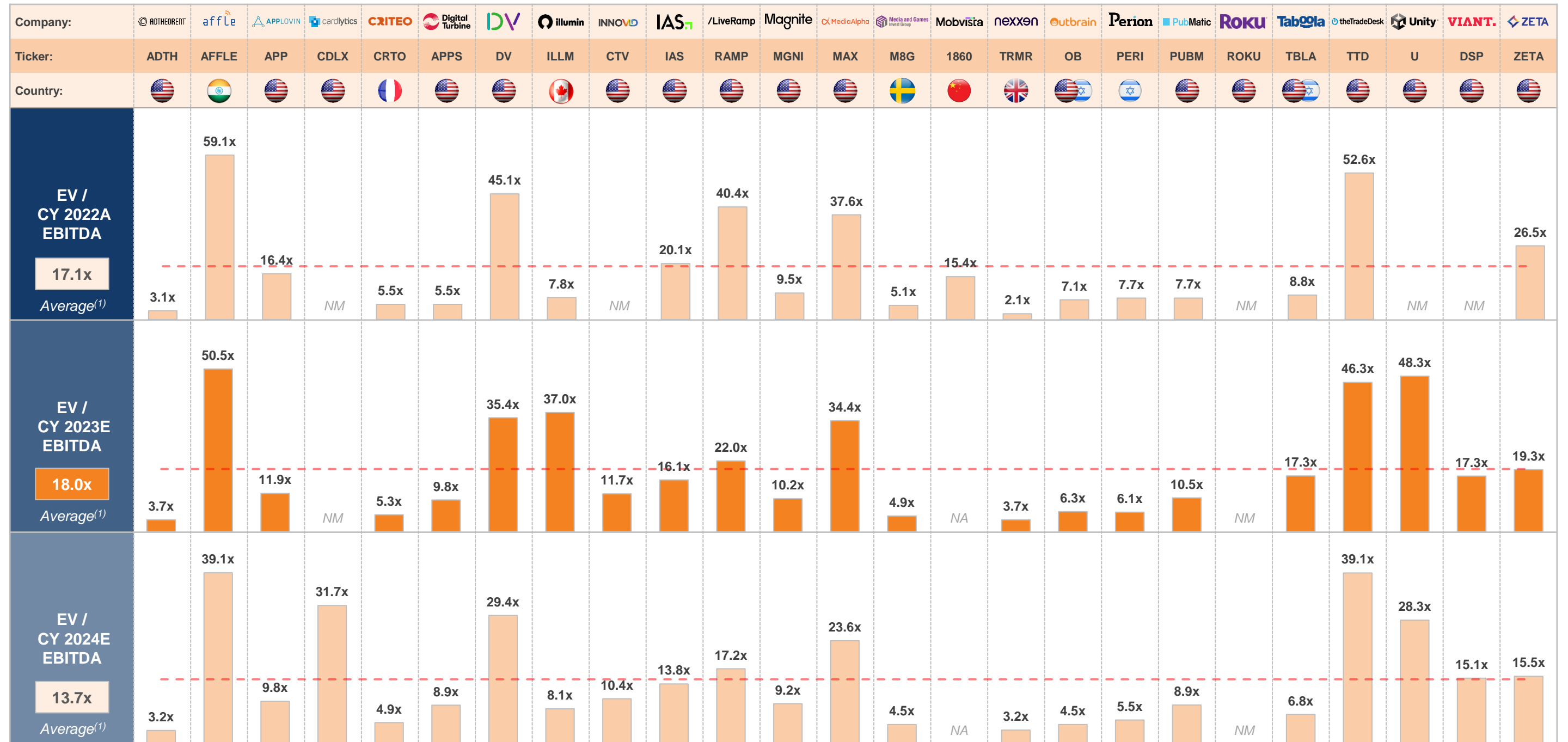
LUMA.A Market Cap Distributions at 12/31/2023



LUMA.A – EV / Net Revenue



LUMA.A – EV / EBITDA



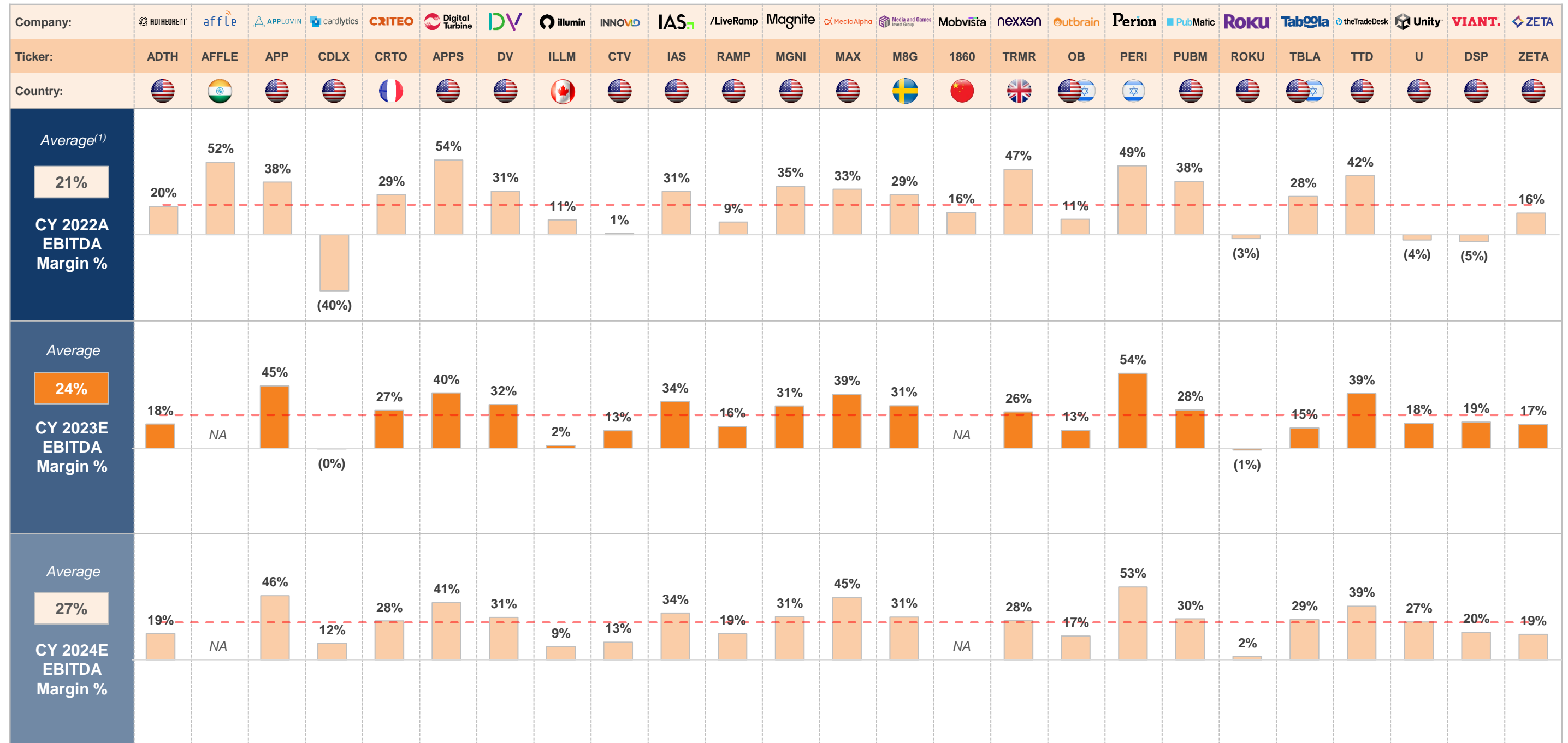
LUMA.A – Summary Financial Statistics

Company	Ticker	Net Revenue			Net Revenue Growth %			EBITDA			EBITDA Margin %		
		CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E
Affle ⁽¹⁾	AFFLE	\$67	NA	NA	42%	NA	NA	\$35	\$40	\$52	52%	NA	NA
AdTheorent	ADTH	\$110	\$107	\$117	0%	(2%)	9%	\$22	\$19	\$22	20%	18%	19%
AppLovin	APP	\$2,817	\$3,256	\$3,838	1%	16%	18%	\$1,063	\$1,461	\$1,779	38%	45%	46%
Cardlytics	CDLX	\$113	\$129	\$138	10%	14%	8%	(\$45)	(\$0)	\$17	(40%)	(0%)	12%
Criteo	CRTO	\$928	\$1,007	\$1,051	1%	8%	4%	\$267	\$275	\$296	29%	27%	28%
Digital Turbine	APPS	\$356	\$266	\$284	14%	(25%)	7%	\$191	\$106	\$117	54%	40%	41%
DoubleVerify	DV	\$452	\$572	\$708	36%	26%	24%	\$142	\$181	\$217	31%	32%	31%
Illumin	ILLM	\$45	\$46	\$50	(11%)	1%	8%	\$5	\$1	\$5	11%	2%	9%
Innovid	CTV	\$127	\$138	\$156	41%	8%	13%	\$1	\$18	\$20	1%	13%	13%
Integral Ad Science	IAS	\$408	\$471	\$546	26%	15%	16%	\$127	\$158	\$185	31%	34%	34%
LiveRamp	RAMP	\$590	\$628	\$671	17%	6%	7%	\$54	\$99	\$127	9%	16%	19%
Magnite	MGNI	\$515	\$544	\$589	12%	6%	8%	\$179	\$166	\$184	35%	31%	31%
MediaAlpha	MAX	\$70	\$64	\$81	(31%)	(8%)	25%	\$23	\$25	\$36	33%	39%	45%
Media and Games Invest	M8G	\$344	\$335	\$360	21%	(3%)	7%	\$99	\$103	\$112	29%	31%	31%
Mobvista	1860	\$225	\$212	\$256	51%	(6%)	21%	\$36	-	-	16%	NA	NA
Nexxen	TRMR	\$310	\$312	\$330	3%	1%	6%	\$145	\$82	\$94	47%	26%	28%
Outbrain	OB	\$235	\$226	\$240	(14%)	(4%)	6%	\$26	\$30	\$41	11%	13%	17%
Perion Network	PERI	\$268	\$313	\$349	41%	17%	12%	\$132	\$168	\$184	49%	54%	53%
PubMatic	PUBM	\$256	\$261	\$286	13%	2%	10%	\$98	\$72	\$85	38%	28%	30%
Roku	ROKU	\$3,127	\$3,457	\$3,825	13%	11%	11%	(\$84)	(\$32)	\$90	(3%)	(1%)	2%
Taboola	TBLA	\$570	\$540	\$699	10%	(5%)	29%	\$157	\$80	\$203	28%	15%	29%
theTradeDesk	TTD	\$1,578	\$1,922	\$2,314	32%	22%	20%	\$668	\$758	\$898	42%	39%	39%
Unity Software	U	\$1,391	\$2,134	\$2,397	25%	53%	12%	(\$51)	\$386	\$658	(4%)	18%	27%
Viant	DSP	\$125	\$143	\$155	(12%)	14%	8%	(\$6)	\$27	\$31	(5%)	19%	20%
Zeta Global	ZETA	\$591	\$726	\$849	29%	23%	17%	\$92	\$127	\$157	16%	17%	19%
Average					14%	8%	13%				21%	24%	27%
Median					13%	7%	10%				28%	26%	28%
25th Percentile					1%	(2%)	8%				10%	15%	19%
75th Percentile					27%	15%	17%				35%	33%	33%

LUMA.A – Net Revenue Growth

Company:																										
Ticker:	ADTH	AFFLE	APP	CDLX	CRTO	APPS	DV	ILLM	CTV	IAS	RAMP	MGNI	MAX	M8G	1860	TRMR	OB	PERI	PUBM	ROKU	TBLA	TTD	U	DSP	ZETA	
Country:																										
Scale (\$mm)	\$110	\$67	\$2,817	\$113	\$928	\$356	\$452	\$45	\$127	\$408	\$590	\$515	\$70	\$344	\$225	\$310	\$235	\$268	\$256	\$3,127	\$570	\$1,578	\$1,391	\$125	\$591	
CY 2022A Net Revenue Growth	0%	42%	1%	10%	1%	14%	36%	(11%)	41%	26%	17%	12%	(31%)	21%	51%	3%	(14%)	41%	13%	13%	10%	32%	25%	(12%)	29%	
14% Average ⁽¹⁾																										
Scale (\$mm)	\$107	NA	\$3,256	\$129	\$1,007	\$266	\$572	\$46	\$138	\$471	\$628	\$544	\$64	\$335	\$212	\$312	\$226	\$313	\$261	\$3,457	\$540	\$1,922	\$2,134	\$143	\$726	
CY 2023E Net Revenue Growth	(2%)	NA	16%	14%	8%	(25%)	26%	(1%)	8%	15%	6%	6%	(8%)	(3%)	(6%)	(1%)	(4%)	17%	(2%)	11%	(5%)	22%	53%	14%	23%	
8% Average																										
Scale (\$mm)	\$117	NA	\$3,838	\$138	\$1,051	\$284	\$708	\$50	\$156	\$546	\$671	\$589	\$81	\$360	\$256	\$330	\$240	\$349	\$286	\$3,825	\$699	\$2,314	\$2,397	\$155	\$849	
CY 2024E Net Revenue Growth	9%	NA	18%	8%	4%	7%	24%	8%	13%	16%	7%	8%	25%	7%	21%	6%	6%	12%	10%	11%	29%	20%	12%	8%	17%	
13% Average																										

LUMA.A – EBITDA Margin



LUMA.M – Benchmarking at a Glance

Summary Observations

- The **LUMA.M** index cohort has 28 companies, including 4 that overlap with the **LUMA.A** index cohort.
- Since the year-end 2022 Market Report, the **LUMA.M** index cohort has evolved:
 - Acquisitions of Qualtrics, Quotient Technologies, and Momentive have closed; the companies have been removed from the index.
 - Comscore (NASDAQ: SCOR) and Similarweb (NYSE: SMWB) have been retroactively added to the index.
 - Klaviyo (NYSE: KVYO) went public on September 20th and has been added to the index.
- The average Enterprise Value of **LUMA.M** constituents is \$7.3bn with Shopify at the top of the range (\$97bn) and Brightcove (\$110mm) on the low end.
- **Revenue:**
 - From a scale perspective, **LUMA.M** companies have average 2023E revenue of \$913mm. Shopify leads the cohort with ~\$7.0bn of expected revenue.
 - The cohort is trading at an average EV / 2023E revenue of 5.5x. Shopify is trading at the highest EV / 2023E revenue at 13.8x, followed by HubSpot at 13.7x. The average revenue growth rate for 2023E is 11.6% down from the 2022 average of 22.8%.
- **Profitability:**
 - **LUMA.M** companies have an average 2023E EBITDA margin of 11.2%, up significantly from 3.8% in 2022 as profitability remains a major focus of the sector. By scale, Shopify's 2023E EBITDA of \$818mm leads the cohort, while ZoomInfo has the highest 2023E EBITDA margin (+42%).

Metrics at a Glance

28
Companies

\$7.3bn
Avg. Enterprise Value

\$913mm
Avg. 2023E Revenue

5.5x
Avg. EV / 2023E Revenue

+11.6%
Avg. Revenue Growth
Down from +22.8% in 2022A

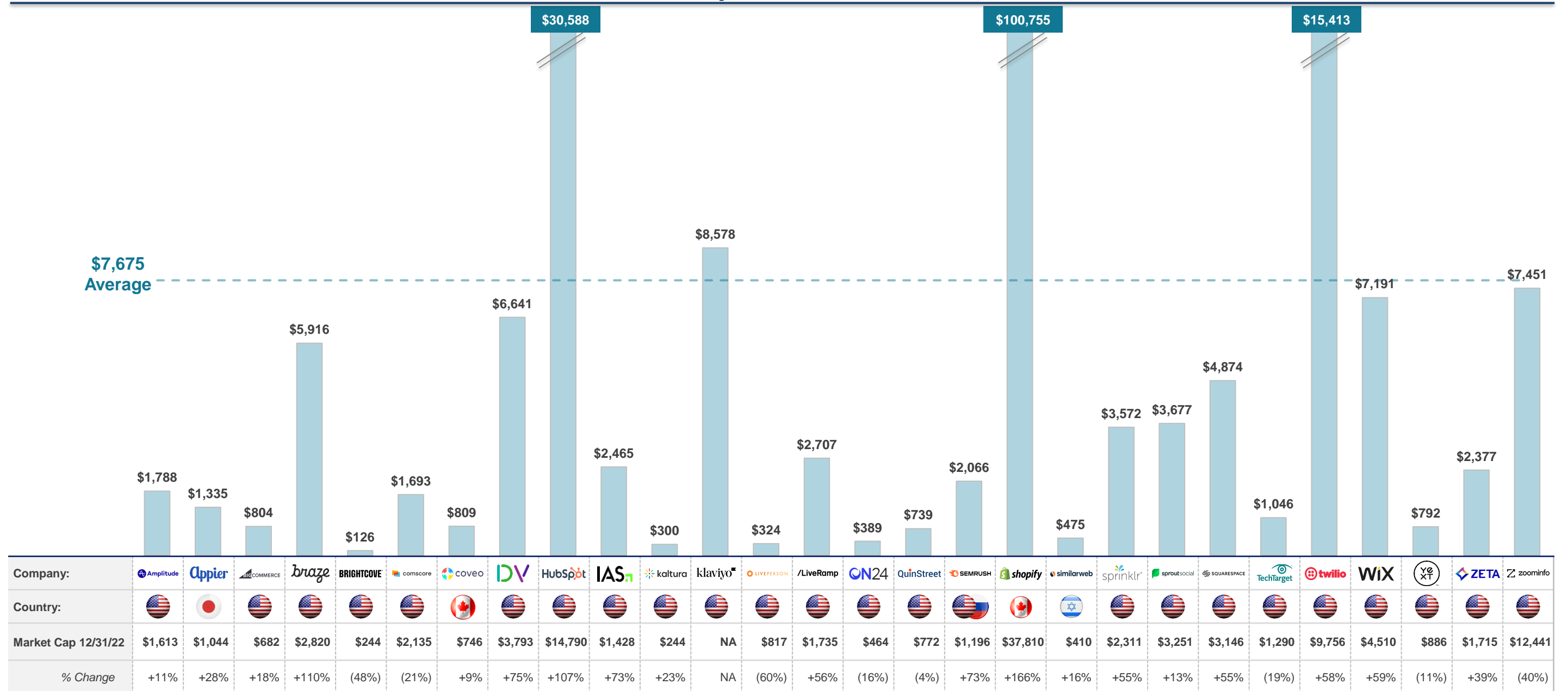
+11.2%
Avg. 2023E EBITDA Margin
Up from +3.8% in 2022A

LUMA.M – Summary Valuation Statistics

Company	Ticker	Market Statistics				EV / Revenue			EV / Adj. EBITDA		
		Exchange	Share Price	FD Market Cap	Enterprise Value	CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E
Amplitude	AMPL	NASDAQ	\$12.72	\$1,788	\$1,466	6.2x	5.3x	4.9x	NM	NM	NM
Appier	4180	TYO	\$13.12	\$1,335	\$1,257	8.6x	6.7x	5.1x	NM	66.1x	37.8x
BigCommerce	BIGC	NASDAQ	\$9.73	\$804	\$878	3.1x	2.9x	2.6x	NM	NM	45.4x
Braze	BRZE	NASDAQ	\$53.13	\$5,916	\$5,448	15.5x	11.7x	9.5x	NM	NM	NM
Brightcove	BCOV	NASDAQ	\$2.59	\$126	\$110	0.5x	0.5x	0.5x	6.1x	9.6x	6.1x
ComScore	SCOR	NASDAQ	\$16.70	\$1,693	\$1,851	4.9x	5.0x	4.8x	50.0x	42.8x	33.8x
Coveo	CVO	TSE	\$7.28	\$809	\$651	5.9x	5.2x	4.4x	NM	NM	NM
Double Verify	DV	NYSE	\$36.78	\$6,641	\$6,388	14.1x	11.2x	9.0x	45.1x	35.4x	29.4x
Hubspot	HUBS	NYSE	\$580.54	\$30,588	\$29,447	17.0x	13.7x	11.7x	NM	NM	61.3x
Integral Ad Science	IAS	NASDAQ	\$14.39	\$2,465	\$2,546	6.2x	5.4x	4.7x	20.1x	16.1x	13.8x
Kaltura	KLTR	NASDAQ	\$1.95	\$300	\$262	1.6x	1.5x	1.5x	NM	NM	NM
Klaviyo	KVYO	NYSE	\$27.78	\$8,578	\$7,855	16.6x	11.3x	8.8x	NM	NM	73.8x
LivePerson	LPSN	NASDAQ	\$3.79	\$324	\$695	1.3x	1.7x	1.7x	NM	26.2x	18.6x
LiveRamp	RAMP	NYSE	\$37.88	\$2,707	\$2,183	3.7x	3.5x	3.3x	40.4x	22.0x	17.2x
ON24	ONTF	NYSE	\$7.88	\$389	\$176	0.9x	1.1x	1.2x	NM	NM	NM
QuinStreet	QNST	NASDAQ	\$12.82	\$739	\$683	1.2x	1.3x	1.0x	38.3x	57.9x	17.1x
SEMrush	SEMR	NYSE	\$13.66	\$2,066	\$1,836	7.2x	6.0x	5.0x	NM	NM	NM
Shopify	SHOP	TSE	\$77.90	\$100,755	\$96,752	17.3x	13.8x	11.6x	NM	NM	70.5x
SimilarWeb	SMWB	NYSE	\$5.33	\$475	\$398	2.1x	1.8x	1.7x	NM	NM	NM
Sprinklr	CXM	NYSE	\$12.04	\$3,572	\$2,915	4.7x	4.0x	3.6x	NM	37.7x	26.8x
SproutSocial	SPT	NASDAQ	\$61.44	\$3,677	\$3,639	14.3x	11.0x	8.5x	NM	NM	NM
Squarespace	SQSP	NYSE	\$33.01	\$4,874	\$5,238	6.0x	5.2x	4.6x	35.5x	22.0x	19.0x
TechTarget	TTGT	NASDAQ	\$34.86	\$1,046	\$1,147	3.9x	5.0x	4.9x	9.4x	16.5x	16.1x
Twilio	TWLO	NYSE	\$75.87	\$15,413	\$11,932	3.1x	2.9x	2.7x	43.4x	15.4x	13.9x
Wix	WIX	NASDAQ	\$123.02	\$7,191	\$6,843	4.9x	4.4x	3.9x	NM	27.4x	20.1x
Yext	YEXT	NYSE	\$5.89	\$792	\$610	1.5x	1.5x	1.5x	38.5x	11.6x	11.4x
Zeta Global	ZETA	NYSE	\$8.82	\$2,377	\$2,441	4.1x	3.4x	2.9x	26.5x	19.3x	15.5x
ZoomInfo	ZI	NASDAQ	\$18.49	\$7,451	\$8,116	7.4x	6.6x	6.4x	17.4x	15.8x	15.3x
Average						6.6x	5.5x	4.7x	30.9x	27.6x	28.1x
Median						4.9x	5.0x	4.5x	36.9x	22.0x	18.8x
25th Percentile						2.9x	2.6x	2.4x	19.4x	16.0x	15.5x
75th Percentile						7.7x	6.6x	5.4x	41.2x	35.9x	34.8x

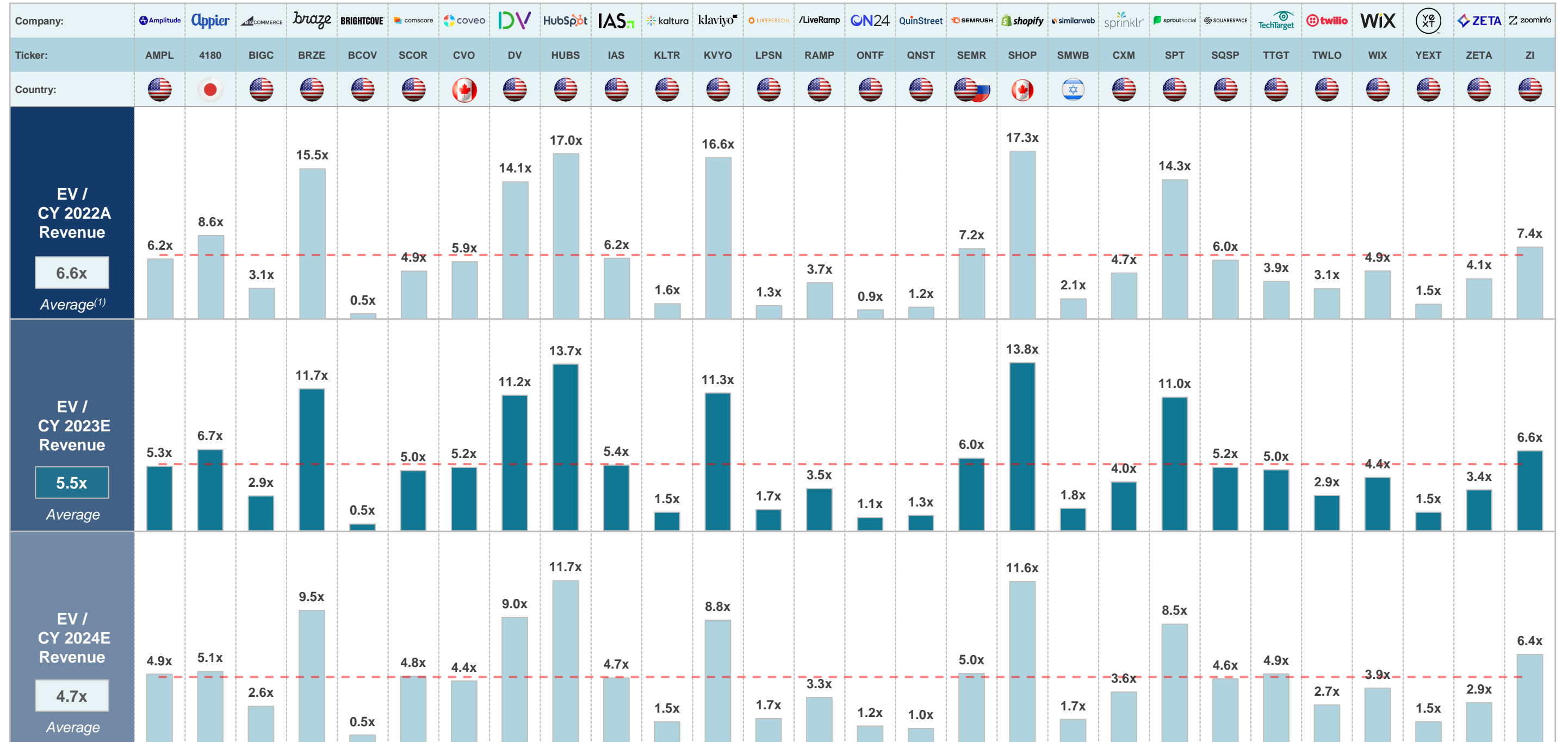
LUMA.M – Market Cap Distribution

LUMA.M Market Cap Distributions at 12/31/2023

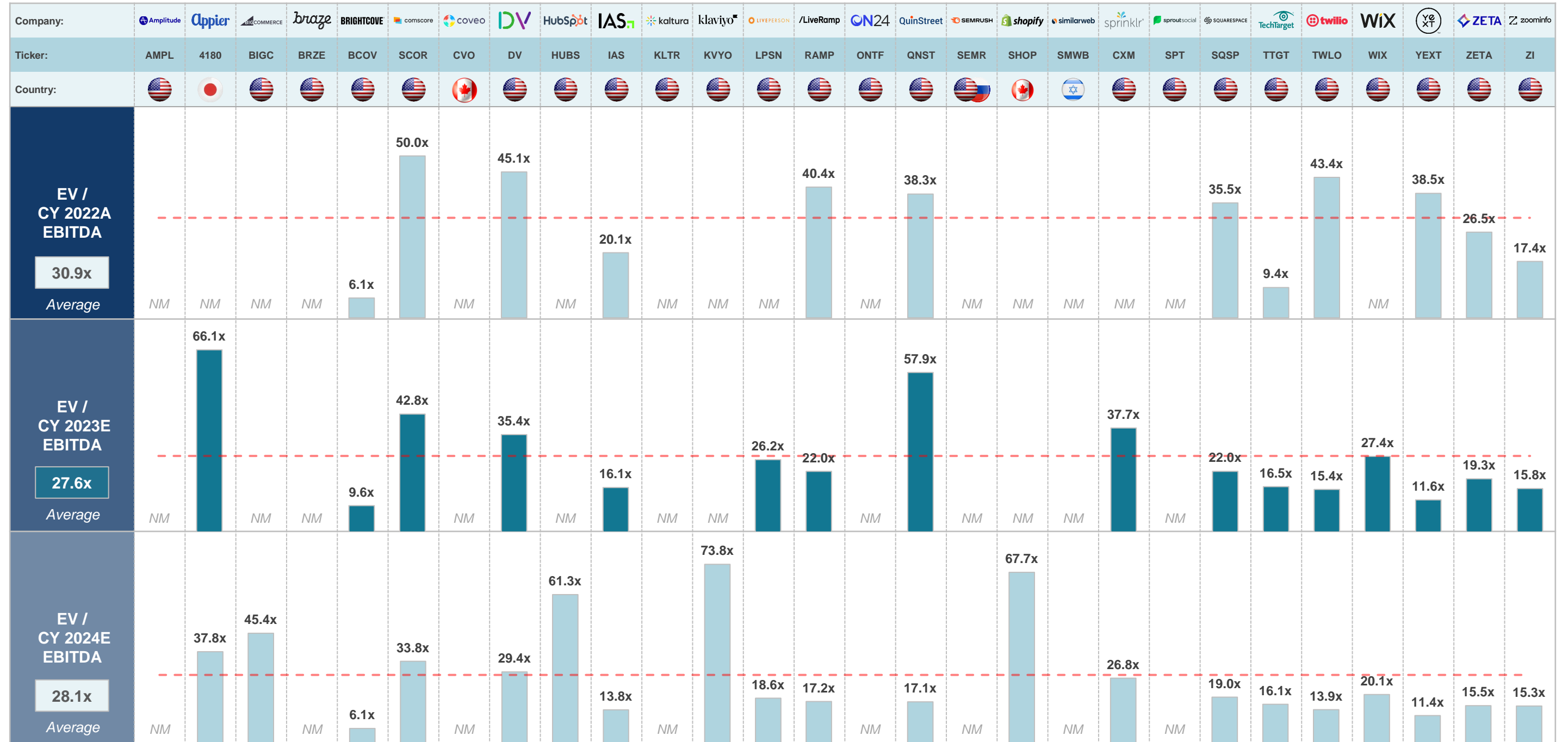


Company:																												
Country:																												
Market Cap 12/31/22	\$1,613	\$1,044	\$682	\$2,820	\$244	\$2,135	\$746	\$3,793	\$14,790	\$1,428	\$244	NA	\$817	\$1,735	\$464	\$772	\$1,196	\$37,810	\$410	\$2,311	\$3,251	\$3,146	\$1,290	\$9,756	\$4,510	\$886	\$1,715	\$12,441
% Change	+11%	+28%	+18%	+110%	(48%)	(21%)	+9%	+75%	+107%	+73%	+23%	NA	(60%)	+56%	(16%)	(4%)	+73%	+166%	+16%	+55%	+13%	+55%	(19%)	+58%	+59%	(11%)	+39%	(40%)

LUMA.M – EV / Revenue



LUMA.M – EV / EBITDA



LUMA.M – Summary Financial Statistics

Company	Ticker	Revenue			Revenue Growth %			EBITDA			EBITDA Margin %		
		CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E	CY2022A	CY2023E	CY2024E
Amplitude	AMPL	\$238	\$276	\$298	42%	16%	8%	(\$24)	(\$0)	\$14	(10%)	(0%)	5%
Appier	4180	\$146	\$188	\$245	34%	29%	30%	\$10	NA	NA	7%	10%	14%
BigCommerce	BIGC	\$279	\$307	\$336	27%	10%	10%	(\$44)	(\$4)	\$19	(16%)	(1%)	6%
Braze	BRZE	\$353	\$466	\$572	NA	32%	23%	(\$66)	(\$36)	(\$12)	(19%)	(8%)	(2%)
Brightcove	BCOV	\$211	\$201	\$206	(0%)	(5%)	2%	\$18	\$11	\$18	8%	6%	9%
ComScore	SCOR	\$376	\$374	\$387	3%	(1%)	3%	\$37	\$43	\$55	10%	12%	14%
Coveo	CVO	\$111	\$125	\$146	28%	13%	17%	(\$19)	(\$9)	\$2	(17%)	(7%)	1%
Double Verify	DV	\$452	\$572	\$708	36%	26%	24%	\$142	\$181	\$217	31%	32%	31%
Hubspot	HUBS	\$1,731	\$2,146	\$2,522	33%	24%	18%	\$227	\$390	\$480	13%	18%	19%
Integral Ad Science	IAS	\$408	\$471	\$546	26%	15%	16%	\$127	\$158	\$185	31%	34%	34%
Kaltura	KLTR	\$169	\$173	\$176	2%	2%	2%	(\$28)	(\$4)	\$0	(17%)	(2%)	0%
Klaviyo	KVYO	\$473	\$693	\$890	63%	46%	28%	(\$31)	\$91	\$106	(6%)	13%	12%
LivePerson	LPSN	\$515	\$401	\$401	10%	(22%)	0%	(\$16)	\$27	\$37	(3%)	7%	9%
LiveRamp	RAMP	\$590	\$628	\$671	17%	6%	7%	\$54	\$99	\$127	9%	16%	19%
ON24	ONTF	\$191	\$162	\$148	(6%)	(15%)	(9%)	(\$16)	(\$5)	\$1	(8%)	(3%)	0%
QuinStreet	QNST	\$575	\$543	\$674	(2%)	(6%)	24%	\$18	\$12	\$40	3%	2%	6%
SEMrush	SEMR	\$254	\$308	\$368	35%	21%	20%	(\$22)	\$11	\$23	(9%)	4%	6%
Shopify	SHOP	\$5,600	\$6,987	\$8,335	21%	25%	19%	\$97	\$818	\$1,373	2%	12%	16%
SimilarWeb	SMWB	\$193	\$217	\$239	40%	12%	10%	(\$56)	(\$4)	\$5	(29%)	(2%)	2%
Sprinklr	CXM	\$618	\$727	\$800	26%	18%	10%	\$0	\$77	\$109	0%	11%	14%
SproutSocial	SPT	\$254	\$331	\$426	35%	30%	29%	(\$1)	\$8	\$17	(0%)	3%	4%
Squarespace	SQSP	\$867	\$1,005	\$1,139	11%	16%	13%	\$147	\$238	\$275	17%	24%	24%
TechTarget	TTGT	\$297	\$229	\$232	13%	(23%)	1%	\$122	\$70	\$71	41%	30%	31%
Twilio	TWLO	\$3,826	\$4,115	\$4,404	35%	8%	7%	\$275	\$774	\$860	7%	19%	20%
Wix	WIX	\$1,388	\$1,561	\$1,745	9%	12%	12%	(\$20)	\$250	\$340	(1%)	16%	19%
Yext	YEXT	\$407	\$402	\$407	4%	(1%)	1%	\$16	\$52	\$54	4%	13%	13%
Zeta Global	ZETA	\$591	\$726	\$849	29%	23%	17%	\$92	\$127	\$157	16%	17%	19%
ZoomInfo	ZI	\$1,098	\$1,234	\$1,278	47%	12%	4%	\$465	\$515	\$529	42%	42%	41%
Average					23%	12%	12%				4%	11%	14%
Median					26%	13%	11%				2%	11%	13%
25th Percentile					9%	1%	4%				(8%)	2%	6%
75th Percentile					35%	23%	19%				11%	18%	19%

LUMA.M – Revenue Growth

Company:																												
Ticker:	AMPL	4180	BIGC	BRZE	BCOV	SCOR	CVO	DV	HUBS	IAS	KLTR	KVYO	LPSN	RAMP	ONTF	QNST	SEMR	SHOP	SMWB	CXM	SPT	SQSP	TTGT	TWLO	WIX	YEXT	ZETA	ZI
Country:																												
Scale (\$mm)	\$238	\$146	\$279	\$353	\$211	\$376	\$111	\$452	\$1,731	\$408	\$169	\$473	\$515	\$590	\$191	\$575	\$254	\$5,600	\$193	\$618	\$254	\$867	\$297	\$3,826	\$1,388	\$407	\$591	\$1,098
CY 2022A Revenue Growth	42%	34%	27%	NA	(0%)	3%	28%	36%	33%	26%	2%	63%	10%	17%	(6%)	(2%)	35%	21%	40%	26%	35%	11%	13%	35%	9%	4%	29%	47%
Average	23%																											
Scale (\$mm)	\$276	\$188	\$307	\$466	\$201	\$374	\$125	\$572	\$2,146	\$471	\$173	\$693	\$401	\$628	\$162	\$543	\$308	\$6,987	\$217	\$727	\$331	\$1,005	\$229	\$4,115	\$1,561	\$402	\$726	\$1,234
CY 2023A Revenue Growth	16%	29%	10%	32%	(5%)	(1%)	13%	26%	24%	15%	2%	46%	(22%)	6%	(15%)	(6%)	21%	25%	12%	18%	30%	16%	(23%)	8%	12%	(1%)	23%	12%
Average	12%																											
Scale (\$mm)	\$298	\$245	\$336	\$572	\$206	\$387	\$146	\$708	\$2,522	\$546	\$176	\$890	\$401	\$671	\$148	\$674	\$368	\$8,335	\$239	\$800	\$426	\$1,139	\$232	\$4,404	\$1,745	\$407	\$849	\$1,278
CY 2024A Revenue Growth	8%	30%	10%	23%	2%	3%	17%	24%	18%	16%	2%	28%	0%	7%	(9%)	24%	20%	19%	10%	10%	29%	13%	1%	7%	12%	1%	17%	4%
Average	12%																											

LUMA.M – EBITDA Margin

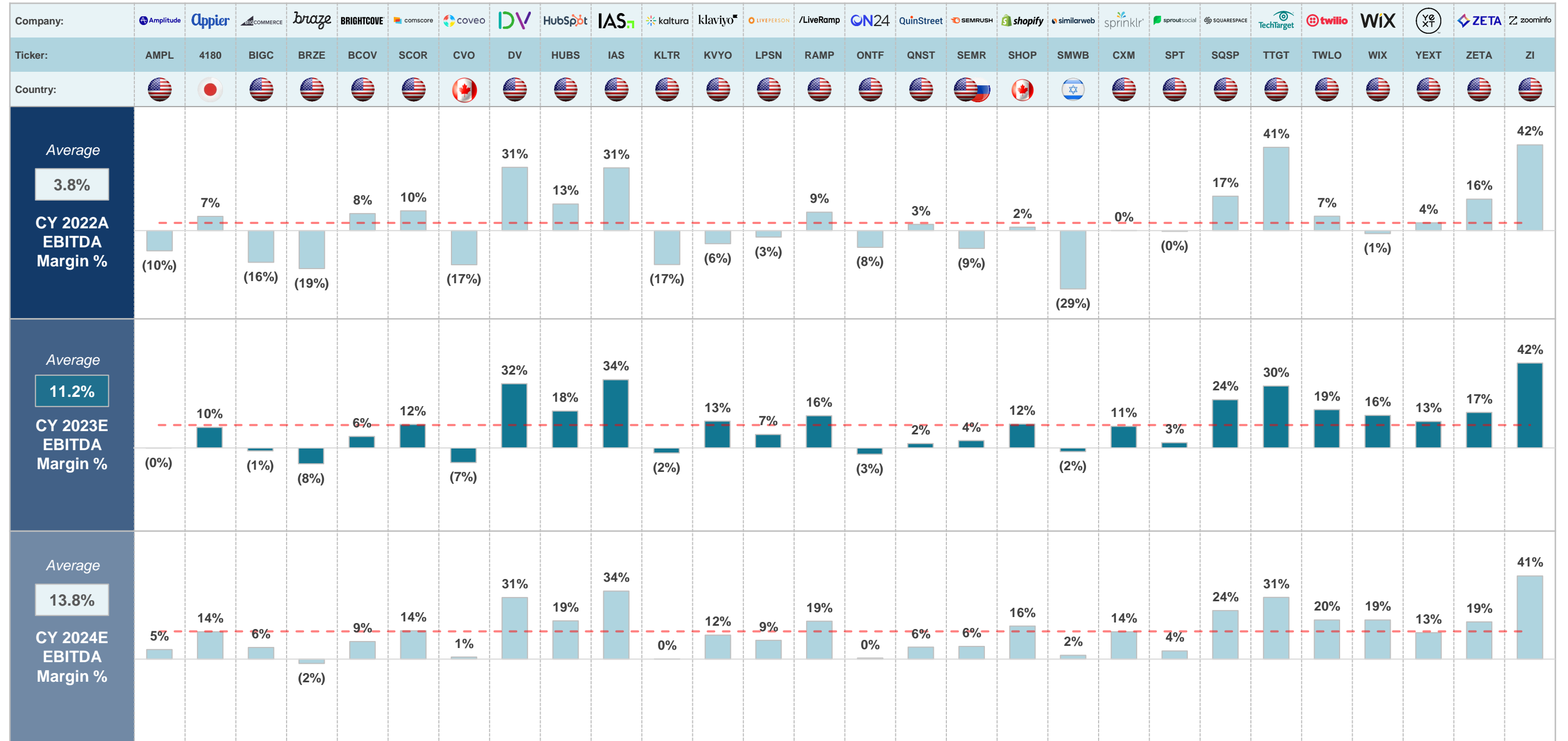
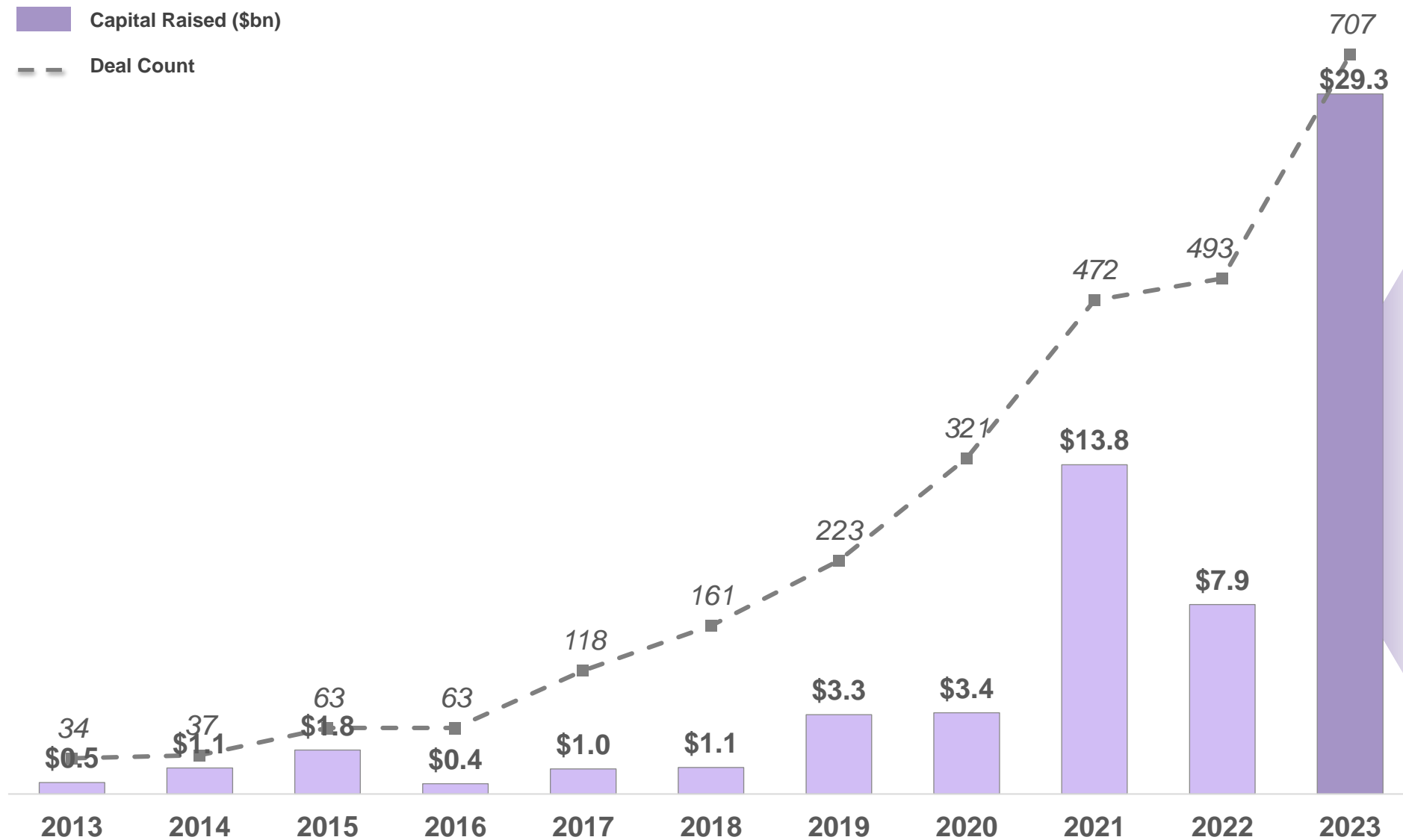


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4	Appendix

Generative AI Investments Fueled Private Markets in 2023







Generative AI Capital Raised and Private Market Deal Activity



2023 Gen AI Select Financing (\$bn)			
Company	2023 Raised	Raised To Date	Valuation
Open AI	\$10.3	\$10.3	~\$100bn ⁽¹⁾
Anthropic	\$6.6	\$7.3	~\$18bn ⁽¹⁾
Inflection	\$1.3	\$1.6	\$4bn
CoreWeave	\$1.1	\$2.8	\$7bn
Databricks	\$0.7	\$4.2	~\$43bn
Mistral AI	\$0.5	\$0.5	\$2bn
Aleph Alpha	\$0.5	\$0.5	n/a
Adept	\$0.4	\$0.4	\$1bn
Lambda	\$0.3	\$0.4	~\$2bn
Hugging Face	\$0.2	\$0.4	~\$5bn

Ad Tech & MarTech – Q4 2023 Key Financings

Ad Tech
MarTech
Digital Content

Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
12/26/2023	 Lily.ai	Undisclosed Investors	\$12	ND	<ul style="list-style-type: none"> ■ Lily.AI, an e-commerce product discovery platform that improves on-site search and personalized product discovery, raised ~\$12mm of venture funding from undisclosed investors. ■ The Company has raised ~\$52mm to date through four VC rounds.
12/7/2023	 ContactMonkey	 update PARTNERS	\$55	ND	<ul style="list-style-type: none"> ■ ContactMonkey, an internal email communications platform, announced it has raised \$55mm in a Series A round led by Update Partners. ■ This investment will help ContactMonkey increase its workforce and expand internationally.
11/29/2023	 CallMiner	Undisclosed Investors	\$10	~\$195	<ul style="list-style-type: none"> ■ CallMiner, a conversation intelligence platform for customer services, raised \$10mm of Series F funding. ■ The Company has now raised ~\$159mm of venture funding to date.
11/24/2023	 AssemblyAI	 Accel  INSIGHT PARTNERS  SMITH POINT	\$50	\$300	<ul style="list-style-type: none"> ■ AssemblyAI, a speech recognition system that allows developers to build customized chat interfaces, raised \$50mm in a Series C funding led by Accel with participation from Insight Partners and Smith Point. ■ The Company has raised ~\$115M to date - 90% of which has been raised in the last 22 months.
11/13/2023	 ADENTRO	Undisclosed Investors	~\$13	ND	<ul style="list-style-type: none"> ■ Adentro, a marketing platform designed to help brick-and-mortar businesses create stronger connections with in-store customers, raised \$12.7mm of Series C funding. ■ The Company has raised ~\$107mm to date.
11/6/2023	 allganize	 InterVest capital partners  MUREX	\$20	ND	<ul style="list-style-type: none"> ■ Allganize, an AI-powered work automation and efficiency platform raised \$20mm of Series B venture funding in a deal led by InterVest and Murex Partners. ■ The funds will be used to expand the distribution of the corporate LLM app market.
11/3/2023	 Yogi	 blueprint equity	\$10	~\$35	<ul style="list-style-type: none"> ■ Yogi, a customer insights platform, raised \$10mm in Series A funding led by Blueprint equity. ■ RTP Global, Scop Venture Capital, Data Point Capital, Remarkable Ventures and Jaffray Woodruff also participated in the Series A round.
11/16/2023	 Workshop	 McCarthy Capital	\$12	~\$60	<ul style="list-style-type: none"> ■ Workshop, an email platform for internal communications, announced it has raised \$12mm in Series A funding led by McCarthy Capital, with support from Ludlow Ventures and M25. ■ The funds will be used to accelerate a solution for internal email, recruiting additional engineering talent and scaling go-to-market efforts.
10/31/2023	 guidde.	NORWEST	~\$12	~\$30	<ul style="list-style-type: none"> ■ Guidde, a video documentation platform harnessing generative AI, announced \$11.6mm in Series A funding led by Norwest Venture Partners. ■ The funds will be used to expand its engineering and data science teams, as well as grow its go-to-market team as it looks to develop its international presence.
10/5/2023	 creatopy	 3VC  Point Nine	\$10	ND	<ul style="list-style-type: none"> ■ Creatopy, an AI-driven creative automation platform, has raised a \$10mm in Series A funding from 3VC and Point Nine. ■ The investment will be used to bring new AI capabilities to the product.

Digital Content – Q4 2023 Key Financings

Date	Company	Lead / Key Investor(s)	Round Size (\$mm)	Post-Valuation (\$mm)	Commentary
12/20/2023	FRONT OFFICE SPORTS	REDBIRD CAPITAL PARTNERS	\$13	\$40	<ul style="list-style-type: none"> ■ Front Office Sports, a NYC-based multi-platform media and news organization covering the business of sports, received ~\$13mm of venture funding from RedBird IMI. ■ The Company intends to use the funds to expand operations and business reach.
12/11/2023	DAZN	Undisclosed Investors	\$1,000	ND	<ul style="list-style-type: none"> ■ DAZN, a provider of global sports streaming services, raised ~\$1bn of venture funding from undisclosed investors. ■ DAZN has raised ~\$8.4bn to date through various venture and debt financings.
12/12/2023	ALLSTAR	Drive Capital	~\$15	ND	<ul style="list-style-type: none"> ■ Cloud-focused content creation platform, Allstar.gg, raised ~\$15mm in Series A funding led by venture capital firm Drive Capital. ■ The funds will be used to accelerate product development and increase the adoption of its proprietary technology across new partnerships.
12/7/2023	Leonardo.AI	BLACKBIRD	\$31	ND	<ul style="list-style-type: none"> ■ AI art production platform for consumers and enterprise users, Leonardo.AI, raised \$31mm led by Blackbird, and included Side Stage Ventures, Smash Capital, TIRTA Ventures, Gaorong Capital and Samsung Next. ■ Founded last year, Leonardo.AI has hit 7 million users, who have generated more than 700 million images; it recently launched its enterprise version, which includes collaboration tools and hosting on a private cloud.
12/5/2023	FutConnect	The Kicher Group	\$12	ND	<ul style="list-style-type: none"> ■ Fan engagement platform and app, FutConnect, raised \$12mm of Series A funding led by the Kicher Group. ■ The funding will be used to amplify FutConnect's momentum in the sports technology industry and be used to innovate and build global scale.
11/21/2023	GLIF ALPHA	Undisclosed Investors	\$15	~\$60	<ul style="list-style-type: none"> ■ Glif, an AI-driven platform to build easily promptable images, raised \$15mm from undisclosed investors at a pre-money valuation of \$45mm ■ The company specializes in creating, remixing, and running AI divination, generators, and selfies, enabling developers and programmers to generate infinite comic characters in any style and theme.
11/9/2023	Noice	BITKRAFT TEAM BUILDER VENTURES Sedona	\$21	ND	<ul style="list-style-type: none"> ■ Noice, a developer of a live streaming platform for gamers, has raised \$21mm from a group of investors including Sedona Holdings, Team Builder Ventures, Bitkraft and F4 Fund. ■ The Company will use the funding for promoting the platform and growing its team.
11/6/2023	TapNation NEXT LEVEL INSPIRATION	PALUEL-MARMONT CAPITAL RE-SOURCES capital d'entreprises	\$16	ND	<ul style="list-style-type: none"> ■ French mobile publisher, TapNation, received €15 million (\$16.1mm) of capital from Paluel-Maront Capital, Re-Resources Capital, and other undisclosed investors. ■ The funds will allow the Company to diversify its portfolio and bolster its growth strategy.
10/20/2023	NOODLE CAT	HIRO CAPITAL	\$12	\$48	<ul style="list-style-type: none"> ■ Noodle Cat Games, an independent game development studio, received \$12mm of Series A funding led by Hiro Capital with additional participation from Makers Fund, KRAFTON, and Sony Innovation Fund. ■ The funds will be used to accelerate development and scale up the team.
10/18/2023	FORGE	animoca BRANDS MAKERS FUND BITKRAFT	\$11	ND	<ul style="list-style-type: none"> ■ Forge, a platform that connects and rewards gamers for their achievements, raised ~\$11mm of seed investment led by Animoca Brands, Bitkraft Ventures, and the Makers Fund. ■ With the investment, Forge is now open to the public in beta format.

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Appendix A: Net Revenue Methodology & Definitions

LUMA Defined Net Revenue by Company Filing Metric

Reporting "Revenue / Contribution Ex-TAC"				Reporting "Adjusted Gross Profit"				Reporting "Gross Profit Ex-TAC"			
(\$mm)	2021A	2022A	LTM 9/30	(\$mm)	2021A	2022A	LTM 9/30	(\$mm)	2021A	2022A	LTM 9/30
Criteo				AdTheorent				Outbrain			
Gross Revenue	\$2,254	\$2,017	\$1,948	Gross Revenue	\$165	\$166	\$163	Gross Revenue	\$1,016	\$992	\$946
(-) TAC	(\$1,334)	(\$1,089)	(\$958)	(+) Platform Ops	(\$78)	(\$83)	(\$86)	(-) TAC	(\$744)	(\$757)	(\$723)
(=) Contribution ex-TAC	\$921	\$928	\$990	(=) Gross Profit (as reported)	\$88	\$83	\$77	(-) Other cost of revenues ⁽⁴⁾	(\$32)	(\$42)	(\$43)
Magnite				(+) Other Platform Ops ⁽²⁾	\$22	\$27	\$29	(=) Gross Profit	\$240	\$193	\$180
Gross Revenue	\$468	\$577	\$608	(=) Adj. Gross Profit	\$109	\$110	\$105	(+) Other cost of revenues ⁽⁴⁾	\$32	\$42	\$43
(-) Cost of Revenue	(\$202)	(\$307)	(\$451)	Cardlytics				(=) Gross Profit ex-TAC	\$272	\$235	\$223
(=) Gross Profit (as reported)	\$267	\$270	\$157	Gross Revenue	\$267	\$299	\$303	Taboola			
(+) Cost of Revenue, excluding TAC	\$151	\$245	\$383	(-) Adj. Partner Share & Other 3P	(\$140)	(\$156)	(\$151)	Gross Revenue	\$1,379	\$1,401	\$1,391
(=) Revenue ex-TAC	\$417	\$515	\$540	(-) Delivery Costs	(\$23)	(\$30)	(\$27)	(-) TAC	(\$860)	(\$832)	(\$865)
Nexxen				(=) Gross Profit	\$105	\$113	\$124	(-) Other cost of revenues ⁽⁵⁾	(\$78)	(\$105)	(\$106)
Revenue	\$342	\$335	\$344	Digital Turbine				(=) Gross Profit (as reported)	\$441	\$464	\$420
(-) Performance Media Cost	(\$40)	(\$26)	(\$17)	Gross Revenue	\$748	\$710	\$592	(+) Other cost of revenues ⁽⁵⁾	\$78	\$105	\$106
(=) Contribution ex-TAC	\$302	\$310	\$327	(-) License fees and rev-share ⁽³⁾	(\$371)	(\$324)	(\$283)	(=) Gross Profit ex-TAC	\$519	\$570	\$526
Perion Networks⁽¹⁾				(-) Other direct costs of revenue ⁽³⁾	(\$30)	(\$36)	(\$37)				
Gross Revenue	\$478	\$640	\$719	(=) Gross Profit (as reported)	\$347	\$350	\$272				
(-) TAC	(\$288)	(\$373)	(\$411)	(+) S/W depr. & other direct CoR	\$3	\$5	\$7				
(=) Revenue ex-TAC	\$190	\$268	\$308	(=) Adj. Gross Profit	\$350	\$356	\$278				
Viant				Illumin							
Gross Revenue	\$224	\$197	\$213	Gross Revenue	\$98	\$92	\$96				
(-) Platform Ops	(\$130)	(\$117)	(\$120)	(-) Media Costs	(\$47)	(\$46)	(\$50)				
(=) Gross Profit (as reported)	\$95	\$80	\$93	(=) Gross Profit	\$51	\$46	\$46				
(+) Other platform ops	\$48	\$44	\$41	MediaAlpha							
(=) Contribution ex-TAC	\$142	\$125	\$134	Gross Revenue	\$645	\$459	\$395				
				(-) Platform Ops	(\$544)	(\$389)	(\$330)				
				(=) Gross Profit	\$102	\$70	\$65				

Sources & Notes

Source: Company Filings **Note:** (1) 2023E and 2024E Forward Revenue ex-TAC projections from Oppenheimer Equity research as of November 1, 2023. (2) 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. (3) 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. (4) Outbrain other cost of revenue includes the amortization of capitalized software that is developed or obtained for internal use associated with revenue-generating technologies. (5) 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 Recent Quarter EBITDA Detail (1 / 4)

\$ in USDmm	ADTHEORENT	APPLOVIN	cardlytics	CRITEO	Digital Turbine	DV	INNOVUD	IAS	/LiveRamp	Magnite	MediaAlpha
Net Income	(\$4)	\$109	(\$24)	\$7	(\$161)	\$13	(\$3)	(\$14)	\$4	(\$17)	(\$19)
(+) Interest (income) expense, net	(\$1)	\$78	\$1	\$3	\$8	\$0	(\$0)	\$3	(\$6)	\$8	\$4
(+) Income tax provision (benefit)	\$6	\$1	–	\$2	(\$1)	\$6	(\$1)	\$20	\$10	(\$1)	–
(+) D&A	\$2	\$122	\$6	\$25	\$21	\$11	\$5	\$14	\$2	\$39	\$2
EBITDA	\$4	\$309	(\$17)	\$36	(\$134)	\$31	\$0	\$23	\$10	\$28	(\$13)
(+) SBC (excl. assoc. payroll tax)	\$3	\$111	\$10	\$24	\$9	\$16	\$6	\$14	\$16	\$17	\$14
(+) Transaction costs	–	–	–	–	\$0	\$0	–	–	–	–	\$0
(+) Restructuring / acquisition costs	–	\$0	\$0	\$8	–	\$1	–	\$1	\$7	–	–
(+) FX gains (losses)	–	(\$1)	\$2	–	\$2	(\$2)	–	\$2	–	(\$1)	–
(+) Other (income) expense, net	–	–	–	–	–	–	–	–	–	–	–
(+) Other adjustments	(\$2)	–	\$8	\$0	\$150	(\$0)	\$0	\$0	–	(\$4)	\$2
Adjusted EBITDA	\$5	\$419	\$4	\$68	\$28	\$46	\$6	\$41	\$32	\$40	\$4
Broker Estimates (Median)	\$4	\$354	(\$0)	\$60	\$26	\$40	\$4	\$36	\$20	\$37	\$3

Other Adjustments Detail

- **AdTheorent:** includes ~(\$2mm) of change in FV items
- **Cardlytics:** includes ~\$8mm from loss in FV of contingent consideration
- **Digital Turbine:** includes ~\$147mm impairment of goodwill, ~\$3mm in business transformation costs and ~\$1mm in employee / severance costs and less than (\$1mm) of change in FV of contingent consideration
- **Magnite:** includes ~(\$4mm) gain on extinguishment of debt
- **MediaAlpha:** includes ~\$2mm of litigation matters

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

\$ in USDmm	 Media and Games Invest Group	 nexxen	 outbrain	 Perion	 PubMatic	 Roku	 Taboola	 theTradeDesk	 Unity	 VIANT	 ZETA
Net Income	\$43	(\$3)	\$1	\$33	\$2	(\$330)	(\$23)	\$39	(\$125)	(\$1)	(\$43)
(+) Interest (income) expense, net	\$14	\$1	\$1	(\$6)	(\$2)	(\$23)	\$4	(\$18)	(\$10)	(\$2)	\$3
(+) Income tax provision (benefit)	\$4	(\$3)	\$1	\$6	\$0	\$3	–	\$18	\$8	\$0	\$1
(+) D&A	\$9	\$20	\$5	\$3	\$11	\$19	\$25	\$21	\$111	\$4	\$13
EBITDA	\$69	\$16	\$8	\$36	\$11	(\$331)	\$7	\$60	(\$16)	\$1	(\$26)
(+) SBC (excl. assoc. payroll tax)	–	\$4	\$3	\$4	\$7	\$91	\$14	\$140	\$147	\$9	\$58
(+) Transaction costs	–	–	–	–	–	–	–	–	–	–	–
(+) Restructuring / acquisition costs	–	\$0	–	\$0	–	\$283	–	–	–	(\$0)	–
(+) FX gains (losses)	–	\$1	–	–	–	–	–	–	–	–	–
(+) Other (income) expense, net	(\$68)	–	–	–	–	–	–	–	–	–	–
(+) Other adjustments	\$24	–	(\$0)	\$2	–	–	\$3	–	–	–	\$2
Adjusted EBITDA	\$25	\$21	\$10	\$43	\$18	\$43	\$23	\$200	\$131	\$10	\$34
Broker Estimates (Median)	\$23	\$20	\$9	\$42	\$14	(\$29)	\$4	\$186	\$96	\$7	\$32

Other Adjustments Detail

- **Media & Games Invest:** includes ~\$15mm of expenses related to litigation matters, \$5mm of employee costs and \$4mm of various other expenses
- **Outbrain:** includes less than (\$1mm) of regulatory matter costs
- **Perion:** includes ~\$2mm of FV items related to contingent considerations
- **Taboola:** includes ~\$3mm of holdback compensation expenses
- **Zeta:** includes \$2mm of other expenses, consisting of changes in FV of acquisition-related liabilities, gains and losses on sales of assets and foreign exchange gains and losses

Appendix B: MarTech Recent Quarter EBITDA Detail (3 / 4)

Ad Tech

MarTech

\$ in USDmm	Amplitude	Copper	BIGCOMMERCE	braze	BRIGHTCOVE	comscore	COVEO™	HubSpot	kaltura	klaviyo™	LIVEPERSON	ON24
Net Income	(\$18)	\$2	(\$20)	(\$31)	(\$2)	\$3	(\$6)	(\$5)	(\$11)	(\$297)	(\$53)	(\$11)
(+) Interest (income) expense, net	(\$3)	(\$0)	(\$2)	(\$5)	(\$0)	\$0	(\$2)	(\$14)	(\$0)	(\$6)	(\$1)	\$0
(+) Income tax provision (benefit)	\$0	\$0	\$0	\$0	\$0	\$1	(\$1)	(\$1)	\$3	\$1	\$1	\$0
(+) D&A	\$1	\$4	\$1	\$2	\$4	\$6	\$5	\$21	\$1	\$3	\$13	\$1
EBITDA	(\$19)	\$6	(\$21)	(\$33)	\$2	\$10	(\$4)	\$0	(\$7)	(\$299)	(\$41)	(\$10)
(+) SBC (excl. assoc. payroll tax)	\$23	–	\$12	\$24	\$3	\$1	\$5	\$108	\$7	\$300	\$8	\$12
(+) Transaction costs	–	–	–	–	–	–	–	–	–	–	–	–
(+) Restructuring / acquisition costs	–	–	\$7	–	\$0	\$1	–	\$1	\$0	–	\$2	\$1
(+) FX gains (losses)	–	–	–	–	–	–	(\$1)	–	–	–	–	–
(+) Other (income) expense, net	–	–	\$0	–	–	(\$1)	–	–	–	\$0	\$3	(\$3)
(+) Other adjustments	–	–	\$2	\$2	–	\$2	–	\$3	–	\$20	\$38	\$0
Adjusted EBITDA	\$4	\$6	(\$0)	(\$7)	\$6	\$13	\$0	\$111	\$0	\$21	\$11	\$0
Broker Estimates (Median)	\$2	\$5	(\$1)	(\$14)	\$4	\$13	(\$1)	\$88	(\$1)	\$14	\$10	(\$2)

Other Adjustments Detail

- **Amplitude:** includes ~\$1mm of non-cash operating lease and other non-cash expenses
- **Braze:** includes ~\$1mm payroll tax related to SBC and ~\$1mm related to charitable contributions
- **comScore:** includes \$2mm impairment of right-of-use assets and less than \$1mm of change in FV of contingent consideration
- **HubSpot:** includes ~\$2mm amortization of acquired intangibles, less than \$1mm in amortization of debt offering costs and less than (\$1mm) in gains on strategic investments.
- **Klaviyo:** includes ~\$13mm amortization of prepaid marketing expense and ~\$7mm payroll taxes related to SBC
- **LivePerson:** includes ~\$12mm goodwill impairment, ~\$9mm litigation costs, ~\$7mm leadership transition costs, ~\$7mm change in FV of contingent consideration and ~\$3mm impairment of intangibles

Appendix B: MarTech Recent Quarter EBITDA Detail (4 / 4)

\$ in USDmm	QuinStreet	SEMRUSH	shopify	similarweb	sprinklr	sproutsocial	SQUARESPACE	TechTarget	twilio	WIX	yoxt	zoominfo
Net Income	(\$11)	\$4	\$718	(\$5)	\$17	(\$23)	(\$16)	\$2	(\$142)	\$7	(\$0)	\$30
(+) Interest (income) expense, net	(\$0)	(\$2)	(\$606)	(\$1)	(\$6)	(\$1)	\$9	(\$3)	–	(\$15)	(\$2)	\$12
(+) Income tax provision (benefit)	\$1	\$1	\$10	(\$1)	\$3	\$1	\$41	\$7	\$2	\$1	\$0	\$29
(+) D&A	\$5	\$2	\$13	\$3	\$4	\$1	\$10	\$5	\$73	\$6	\$4	\$5
EBITDA	(\$5)	\$4	\$135	(\$4)	\$17	(\$22)	\$44	\$11	(\$67)	(\$0)	\$2	\$76
(+) SBC (excl. assoc. payroll tax)	\$5	\$4	\$102	\$5	\$14	\$19	\$28	\$12	\$185	\$58	\$12	\$43
(+) Transaction costs	–	–	–	–	–	–	–	–	–	–	–	–
(+) Restructuring / acquisition costs	\$0	–	–	–	–	\$4	–	–	\$4	\$4	–	\$5
(+) FX gains (losses)	–	–	–	–	–	–	–	–	–	–	–	–
(+) Other (income) expense, net	–	–	–	–	–	–	(\$6)	–	–	–	\$0	(\$8)
(+) Other adjustments	–	–	\$47	\$0	–	(\$0)	–	(\$5)	\$88	\$0	–	\$15
Adjusted EBITDA	\$1	\$9	\$284	\$2	\$31	\$1	\$66	\$17	\$209	\$62	\$14	\$131
Broker Estimates (Median)	\$0	\$3	\$176	(\$2)	\$20	(\$2)	\$63	\$17	\$156	\$43	\$12	\$130

Other Adjustments Detail

- **Shopify:** includes \$38mm impairment of right-of-use assets, \$8mm provision for transaction and loan losses and \$1mm tax impact of non-GAAP adjustments
- **SproutSocial:** includes ~\$1mm amortization of acquired intangibles
- **TechTarget:** includes (\$5mm) gain on early extinguishment of debt
- **Twilio:** includes \$31mm share of losses from equity method investment, (~\$28mm) tax impact of non-GAAP adjustments, ~\$18mm amortization of deferred CAC, ~\$6mm impairment of right-of-use assets, ~\$3mm payroll taxes related to SBC, ~\$3mm impairment of long-lived asset, ~\$1mm of charitable contributions and less than \$1mm in amortization of debt offering costs,
- **ZoomInfo:** includes \$15mm amortization of acquired intangibles and less than \$1mm related to the impact of FV adjustment to acquire unearned revenue

Appendix C: Select Capitalization and Calendarization Detail

Select Capitalization Detail – Ad Tech & MarTech

Company	Ticker	Exchange	Notes
Affle	AFFLE	NSE	Market Capitalization contemplates ordinary shares outstanding. Figures from latest available disclosure.
Appier	4180	TYO	Market Capitalization contemplates ordinary shares outstanding; inputs for net diluted shares outstanding could not be located in public disclosures.
Mobvista	1860	HKG	Market Capitalization represents ordinary shares outstanding and restricted stock units in public disclosures. Latest financial interim report as of 06/30/2023.
Nexxen	TRMR	LSE; NASDAQ	Market Capitalization contemplates the product of (i) FDSO and (ii) Nexxen's local U.K. share price denominated in GBP. Market Capitalization is converted to USD at the daily spot rate.

Calendar Year Reconciliation

Company	Fiscal Year End	Applicable Fiscal Quarters			
		CY 2021	CY 2022	CY 2023	CY 2024
FYE January 31st					
Braze	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
Sprinklr	January 31 st				
Yext	January 31 st				
FYE March 31st					
		CY 2021	CY 2022	CY 2023	CY 2024
Affle	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
Digital Turbine	March 31 st				
Coveo	March 31 st				
LiveRamp	March 31 st				
FYE June 31st					
		CY 2021	CY 2022	CY 2023	CY 2024
QuinStreet	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



August 2023

Scibids

has been acquired by

DoubleVerify

The undersigned acted as exclusive financial advisor to Scibids Technology SAS

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

tvssquared

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



Strategic Advisory for the Digital Age