



Artificial Intelligence Monthly Review

For the Months of June and July 2023

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1 Summary Themes in AI

Summary Themes in AI (June & July 2023)

1

Geopolitical tensions continue to impact the race for AI development; the US Department of Commerce banned the export of chips critical for the development of AI to China, and China has responded by limiting exports of gallium and germanium, metals necessary for the manufacture of chips

2

AI Public Comps Index continues its outperformance (43% YTD vs. 20% S&P 500) largely driven by gains in Robotics / Hardware & Core AI categories⁽¹⁾

3

Publicly-traded companies that have made AI announcements / partnerships have seen median price performance increase of ~20% YTD and have seen median forward Rev. multiple expansion of ~3x YTD (as of July 31st)

4

Continued partnership activity with several new ones announced. For example ServiceNow's, NVIDIA's, and Accenture's partnership, McKinsey's partnership with Cohere, and Snowflake's partnership with Microsoft as well as with Land AI

5

AI Regulation remains at the forefront of government as European Union Artificial Intelligence Act, the World's first comprehensive AI law, is expected to pass by European Parliament and will take effect two years after approved, at the end of 2025 or early 2026

6

30 acquisitions⁽²⁾ were announced during June & July in AI & related spaces, 43% of which were in the Core AI category

7

~\$2.9B of venture funding raised during June & July across Core AI, AI Hardware, Applied AI – Horizontal, and Applied AI – Vertical companies: Inflection (Series B - \$1.3bn), Cohere (Series C - \$270mm), Typeface (Series B - \$140mm), Aleph Alpha (Early Stage VC - \$109mm)⁽³⁾

Note:

(1) See AI Public Comps Universe – 1-Year Stock Performance (page 6).

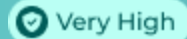
(2) See AI M&A Activity (pages 24 - 25).

(3) See AI Capital Raise Activity (pages 20 - 23).

2 AI Company Spotlight - Seekr

AI Leader in Content Evaluation

Seekr is a privately held artificial intelligence company specializing in transparent content evaluation and objective ratings. Our proprietary AI technology is designed to rate all content, empowering user choice and control by streamlining access to reliable information.







Proprietary & Patented AI Technology:



Key Scoring Factors

BYLINE | EXAGGERATION | SUBJECTIVITY | PERSONAL ATTACK | RACISM | SARCASM

Solving for Society's Information Crisis

Seekr evaluates and rates content at scale by combining cutting-edge AI with time-tested journalism standards, equipping individuals and enterprises with tools to confidently evaluate content for reliability – **consistently, accurately and quickly.**

- 1 Consumers Rely on Seekr:** to become better informed through access to reliable information from a diversity of sources representing a broad spectrum of perspectives.
- 2 Publishers Rely on Seekr:** to ensure content adheres to highest journalistic standards through use of AI in an editorial capacity to automate pre-publication process.
- 3 Advertisers Rely on Seekr:** to maximize media buying effectiveness, suitability, and responsibility as content is rated and delivered at unrivaled speed, scale, and depth.
- 4 Podcasts Rely on Seekr:** to measure the volume of personal attacks within the context of real conversations with our Civility Score™.

Powered by Advanced AI Technologies

Generative AI Powered by
Seekr Proprietary LLM

A differentiated Gen AI application using Seekr's LLM, grounded on truthful and complete responses.

Seekr Secure Web Browser

An elevated browser experience combining security, privacy, and Seekr scored content.

Private Cloud Datacenter

World class datacenter offering Seekr privacy for all first party data.

HQ: Vienna, VA

Total Funding Raised: \$83mm

Employees: 88

3

AI / Software Valuations and Equity Market Perspectives

Citi AI Investor Roadshow Themes

Unmatched AI Touch Points

60+

Meetings

40+

Investors

20+

Strategies

- AI Roadshow: April-July
- Becoming Public Company Conference (April 26 – 27, 2023)
- Private Company Growth Conference (June 21, 2023)
- GenAI Showcase: (July 13, 2023)

Selected Meetings



Level of AI Knowledge Differs Across Investors

High

Knowledge

Low

VCs / Early-Stage Growth

Strategies

Cross-Over

Family Offices

Sovereign Wealth Funds

Positive Feedback

- ▲ “AI is seen as the **next re-platforming** of tech”
- ▲ “Significant **value creation** still ahead of us”
- ▲ “Possible for **a few leaders to emerge** that will go after multiple verticals over time”
- ▲ “Need to understand how to best **partner and adopt** AI to drive next stage of value creation”
- ▲ “**Specialized AI** will be needed to improve workflow and accuracy”

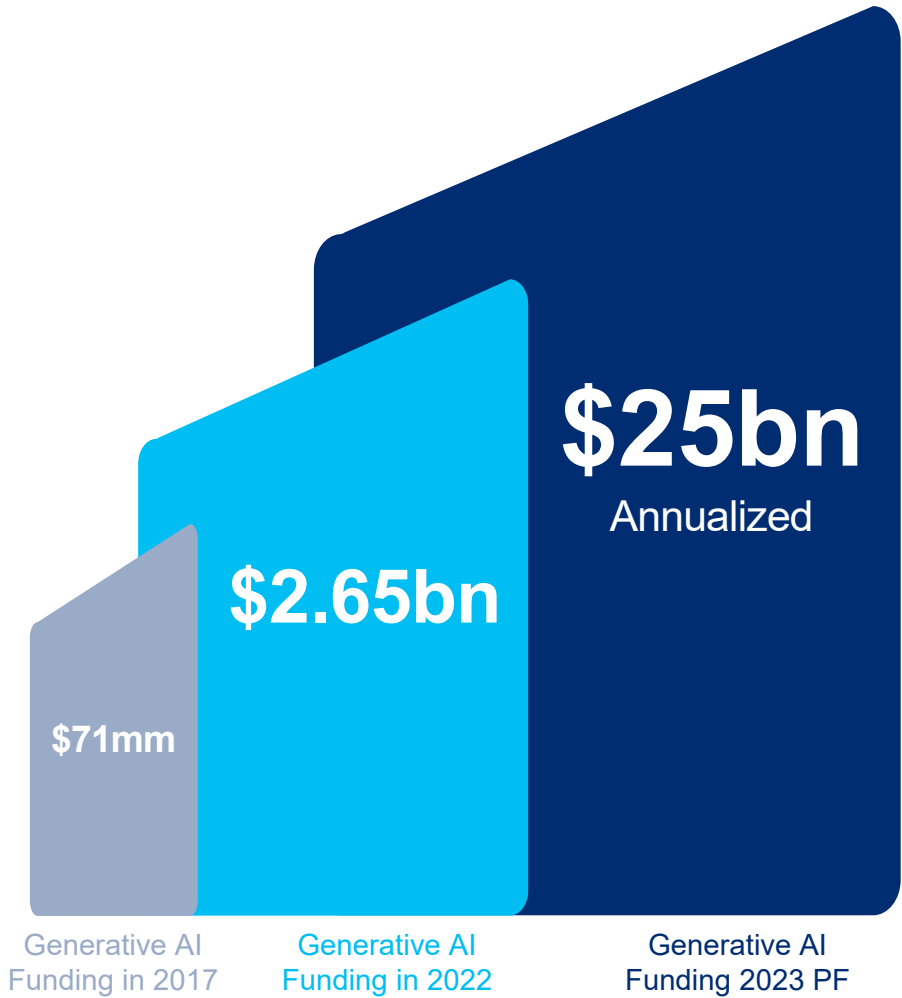
Areas of Education

- ▶ “FM Layer can **potentially be commoditized** – easy to find tune open source models”
- ▶ Enterprise **monetization** still **very early**
- ▶ “Possible that the majority of value, especially near-term, to **accrued to public companies** like MSFT and NVDA”
- ▶ “Unclear why the **incumbents** aren’t best positioned to incorporate AI to drive value creation”
- ▶ “What is **defensible moat**? Data? Compute? Engineering talent?”

AI Gold Rush Continues in Private Markets

Robust Private Capital Raising

Total Funding



Top 10 AI Investors Over the Past Two Years

By Number of Investments⁽¹⁾

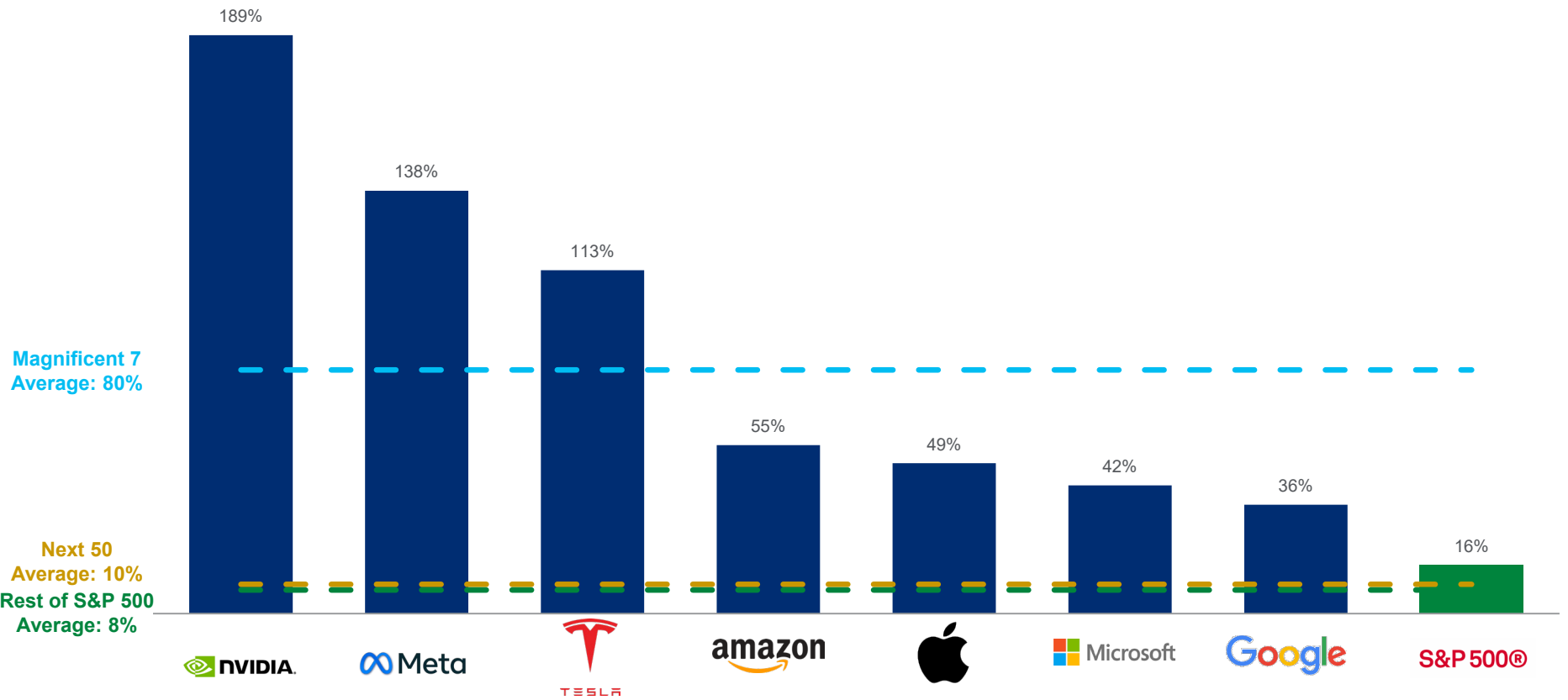
Investor	Investor Type	# of Investments
TIGERGLOBAL	Cross-Over	56
INSIGHT PARTNERS	Venture Capital	52
a16z	Venture Capital	34
COATUE	Cross-Over	31
G/	Venture Capital	26
Lightspeed	Venture Capital	25
SEQUOIA	Venture Capital	25
GENERAL CATALYST	Private Equity	24
MENLO VENTURES	Venture Capital	21
FOUNDERS FUND	Venture Capital	21

Source: Pitchbook.

(1) Includes U.S. VC & Growth Equity deals > \$25 MM. 2023 YTD Pro forma figure assumes \$13.2 BN of generative AI funding 2023 YTD.

Investors Rally Behind AI-Opportunity in Mega Cap Tech

Clear Outperformance from “Magnificent 7” Relative to Broad Market
Price Performance 2023 YTD (%)



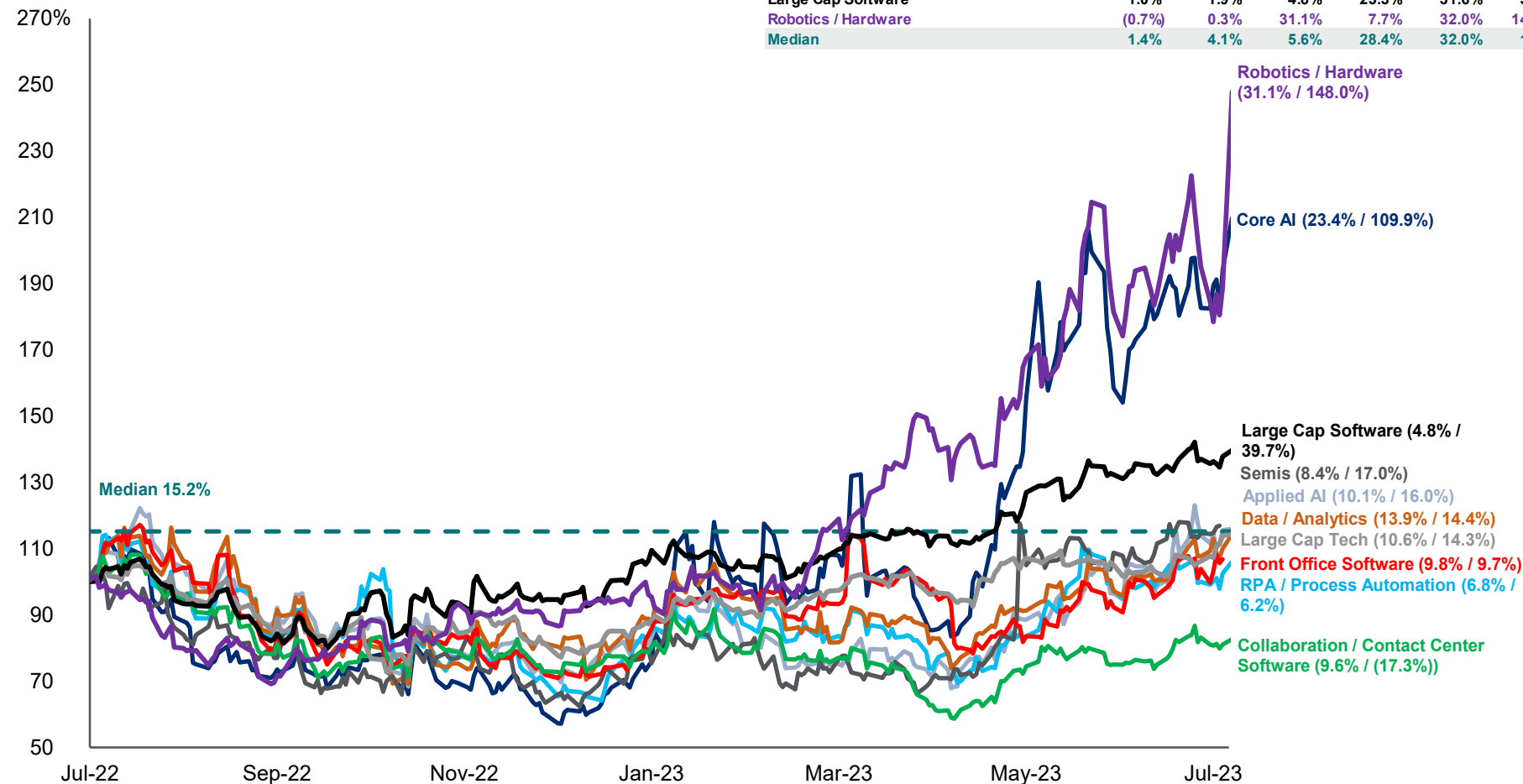
Key Metric	P/E	EV/EBITDA	EV/EBITDA	P/E	P/E	P/E	P/E	P/E
As of Jan 1	34x	15x	16x	11x	21x	23x	17x	17x
As of Jun 30	49x	21x	43x	15x	30x	31x	20x	19x
YTD Change	14x (+42%)	6x (+46%)	27x (+170%)	4x (+34%)	10x (+46%)	8x (+34%)	3x (+21%)	2x (+15%)

AI Public Comps Universe – 1-Year Stock Performance (as of 07/31/23)

LTM Trading Performance

(Price as a Percent of Base Period as of July 31, 2022)

	1-Day (7/28/23)	1-Week (7/24/23)	1-Month (6/30/23)	3-Months (4/28/23)	6-Months (1/31/23)	1-Year (7/31/22)
Core AI	8.5%	15.8%	23.4%	145.8%	133.3%	109.9%
Collaboration / Contact Center Software	5.1%	9.0%	9.6%	65.2%	0.6%	(17.3%)
Semis	0.6%	3.2%	8.4%	34.6%	50.9%	17.0%
Applied AI	1.3%	4.7%	10.1%	48.5%	43.2%	16.0%
Data / Analytics	3.1%	4.4%	13.9%	25.6%	13.6%	14.4%
RPA / Process Automation	3.5%	7.0%	6.8%	37.2%	24.5%	6.2%
Front Office Software	2.6%	11.0%	9.8%	16.0%	(10.7%)	9.7%
Large Cap Tech	0.3%	3.8%	10.6%	23.6%	35.6%	14.3%
Large Cap Software	1.0%	1.9%	4.8%	25.3%	31.6%	39.7%
Robotics / Hardware	(0.7%)	0.3%	31.1%	7.7%	32.0%	148.0%
Median	1.4%	4.1%	5.6%	28.4%	32.0%	15.2%



Category (% Change in last month / % Change in LTM)

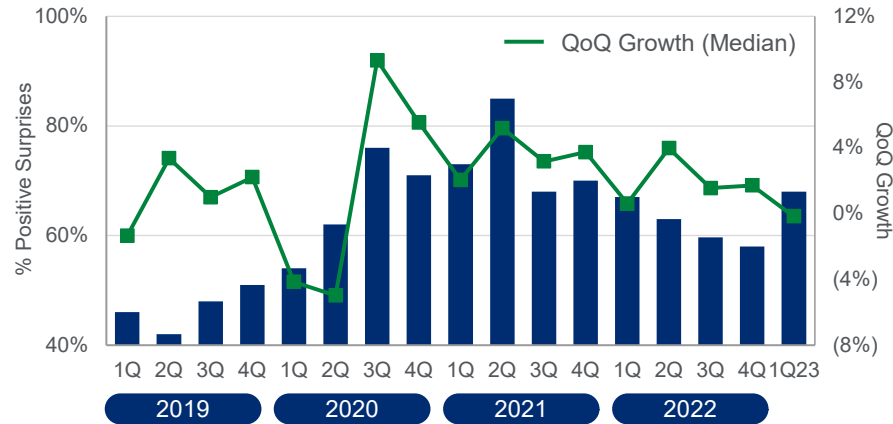
Source: FactSet as of July 31, 2023. For company composition by category, please refer to pages 28 – 30.

Note: Indices are comprised of the following companies – (Core AI: PLTR, AI), (Applied AI: CRWD, U, NCNO, CERT, ABCL, UPST, RXRX, SDGR, DRKTF, IOT, CVO-CA, SOUN-US), (RPA / Process Automation: PATH, APPN), (Data / Analytics: SNOW, DDOG, SPLK, MDB, CFLT, ESTC, AXX), (Semis: TER, AMBA, AMD, AVGO, MRVL), (Front Office Software: HUBS, VEEV, BRZE, CRM, SPT), (Collaboration / Contact Center: ZM, NICE, TWLO, MNDY, FIVN, RNG, VRNT, EIGHT), (Large Cap Tech: AAPL, MSFT, BABA, GOOGL, AMZN, NVDA, TSLA, META, IBM), (Large Cap Software: ORCL, ADBE, CRM, SAP, NOW, WDAY), (Robotics / Hardware: FANUY, SYM, ISRG).

Investors Shift Focus on Expected Rebound in Growth in 2024

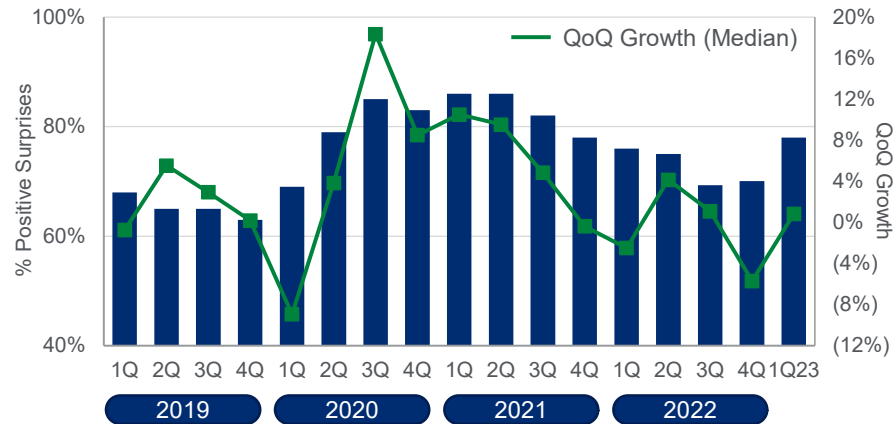
Q1 Top-Line Results Improved vs. Prior Quarters...

Revenue – S&P 500 % Positive Surprises & QoQ Growth



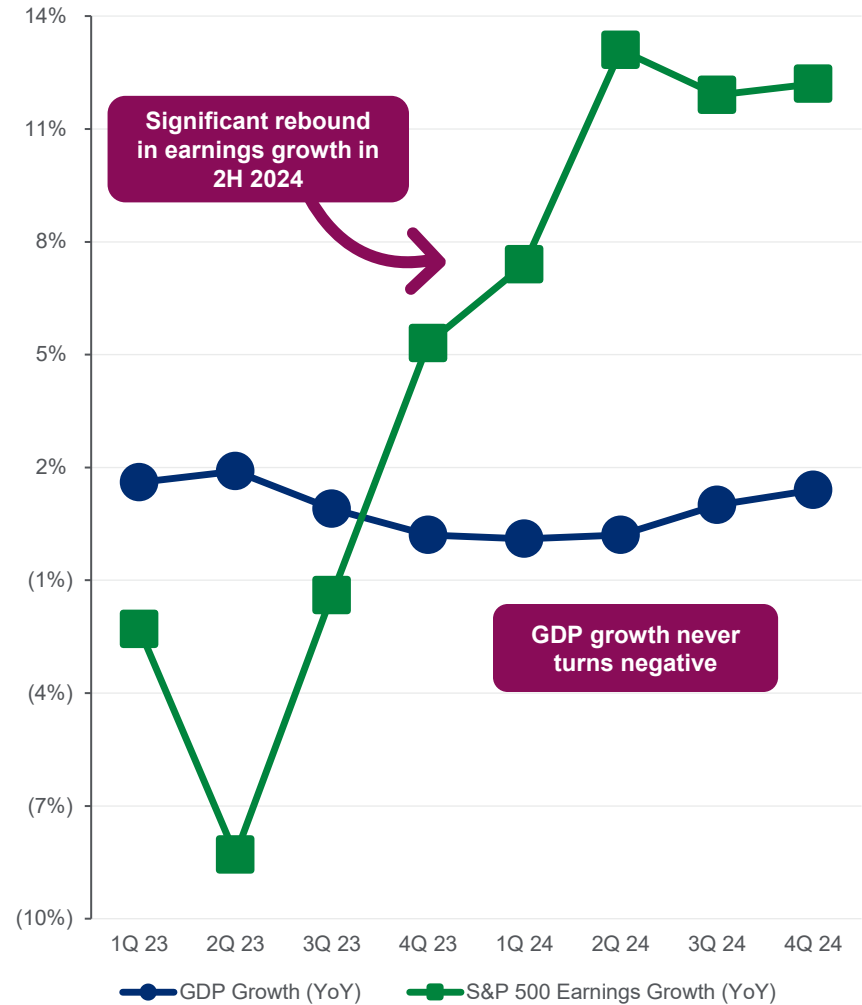
... With Earnings Beats at Their Highest Levels in Six Quarters

Earnings – S&P 500 % Positive Surprises & QoQ Growth



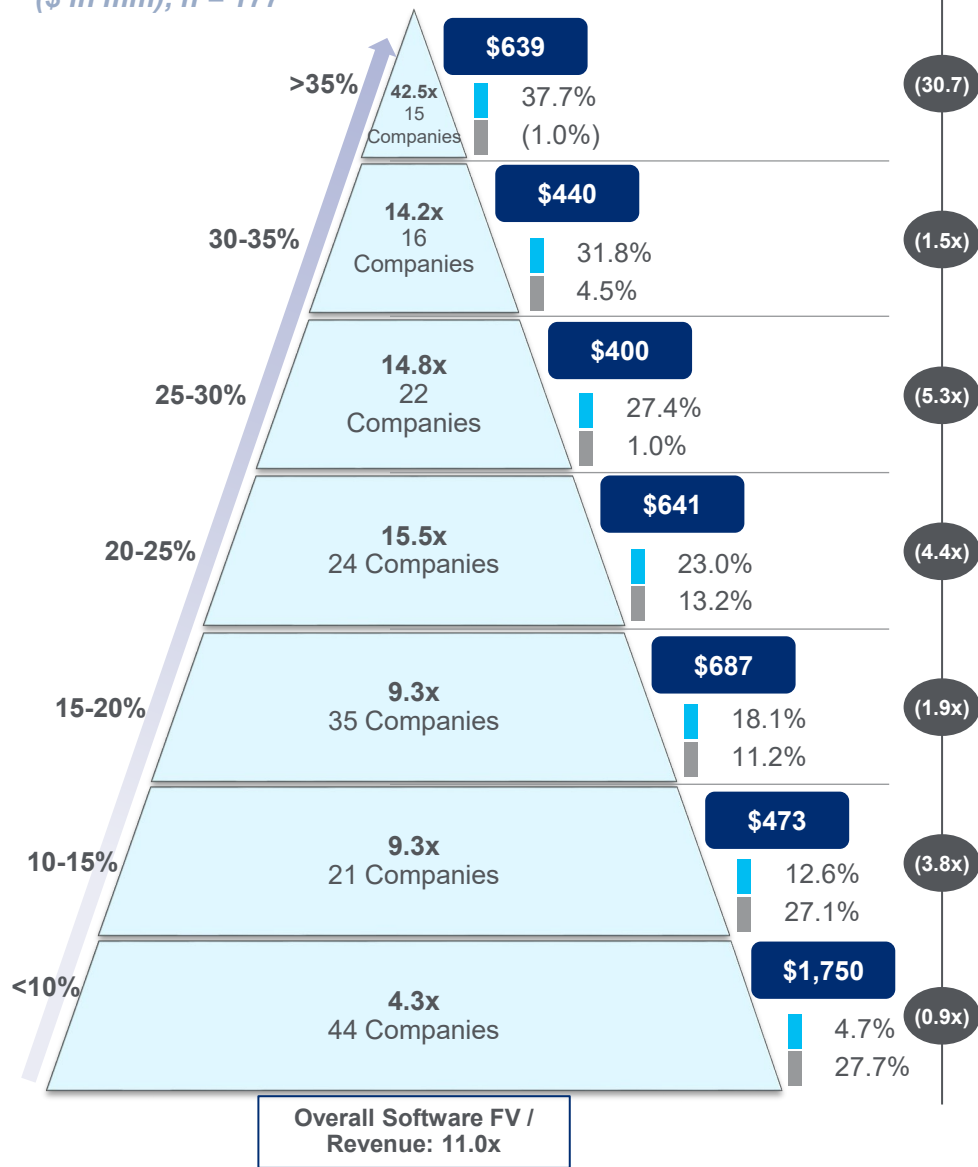
Growth Outlook Constructive Through the "Slowdown" Period

U.S. Quarterly Earnings & GDP (%)

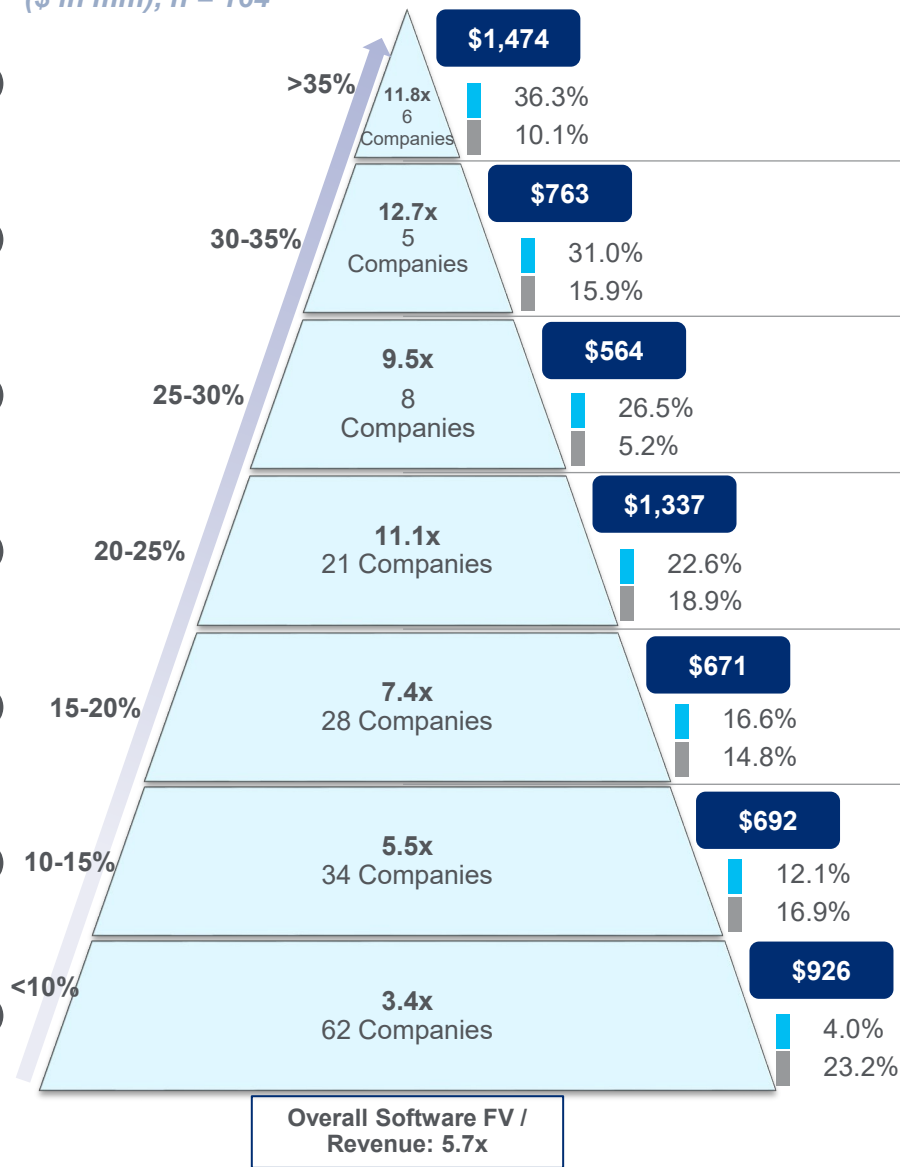


Software Valuation Comparison (11/17/21 peak vs 07/31/23)

All Software Nov 2021 Revenue Growth Categorization
(\$ in mm), n = 177



All Software July 2023 Revenue Growth Categorization
(\$ in mm), n = 164



Source: Company filings, FactSet. Market data as of July 31, 2023.

Note: Historical data as of November 17, 2021.

Multiples > 75.0x FV / EBITDA are deemed "NM." Financials based on CY24E.

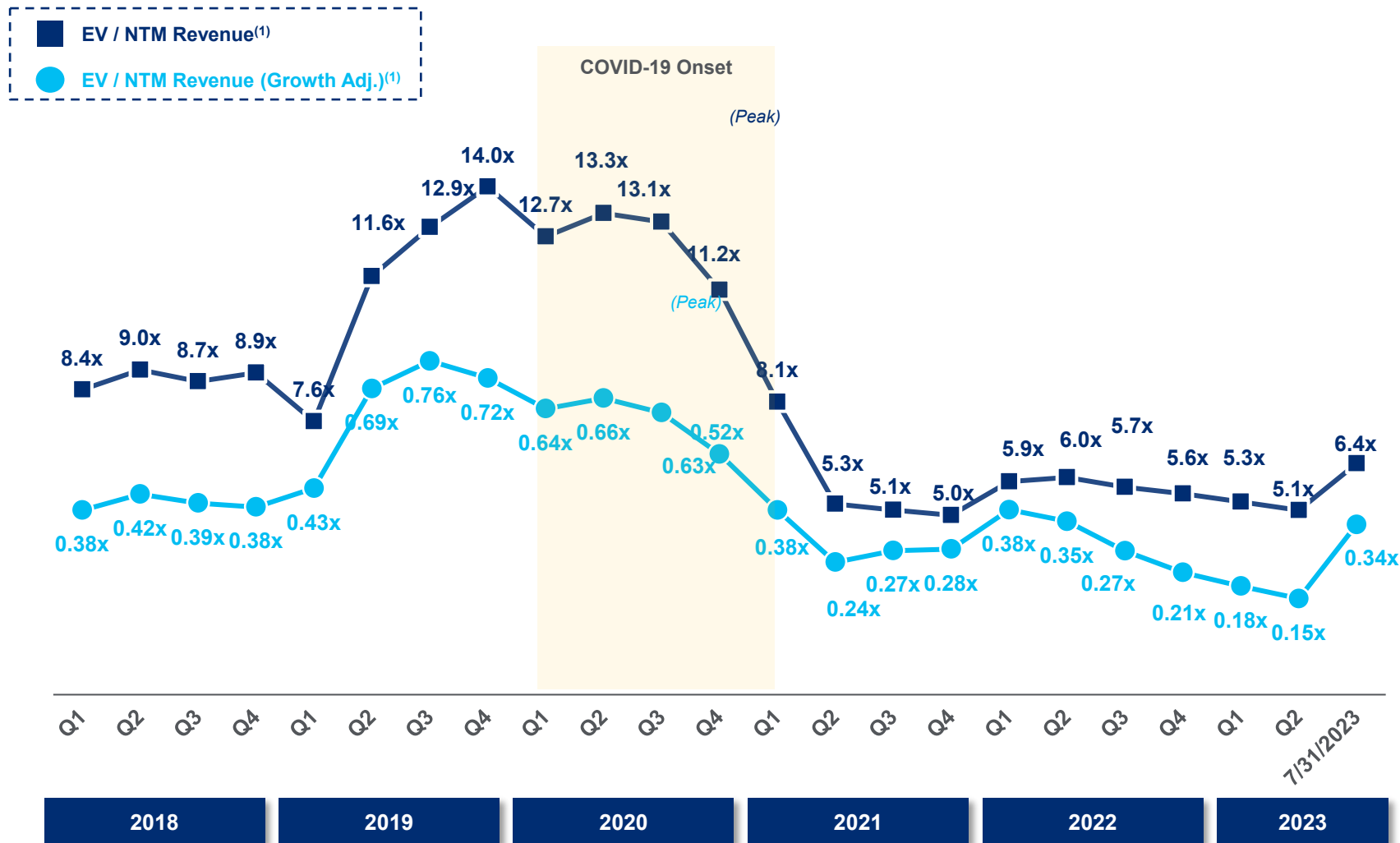
Pyramids include negative EBITDA margins.

Median Revenue Growth Median EBITDA Margin

Median Revenue

5-Year SaaS Multiples Trend (as of 07/31/23)

Median	2018	2019	2020	2021	2022	Current	Peak	Peak / Current	
								(x)	(%)
Revenue Multiple	8.0x	8.8x	12.2x	12.9x	5.2x	6.4x	14.0x	(7.7x)	(54%)
Growth Adj. Multiple	0.37x	0.39x	0.70x	0.63x	0.27x	0.34x	0.76x	(0.42x)	(55%)



Source: FactSet.

Note: Median multiples calculated as of the final trading day of each quarter. Market data as of July 31, 2023.

(1) Includes 106 U.S.-listed publicly traded SaaS companies.

4 Selected AI Industry News

AI News Summary – June and July 2023

“Google is expanding digital skills training, offering new AI training for everyone in the UK. Google’s new AI-focused New Fundamentals free training series offers people and businesses practical skills and knowledge to capture the benefits of AI, whether it’s to save time, get a new job or grow their businesses.” (July 28, 2023)

“Samsung Electronics continues to cut back its memory chip production, including NAND flash used in smartphones and PCs, after reporting a \$3.4 billion (4.36 trillion won) operating loss in the second quarter of this year in its memory chip unit. The world’s biggest memory chip maker posted a roughly \$7 billion operating loss in its semiconductor business in the first half of 2023. Two main memory chips — DRAM and NAND — ..., DRAM memory enables large language models, including OpenAI’s ChatGPT, to perform more advanced functions. DRAM also helps speed up process data for multitasking... NAND helps store data.” (July 27, 2023)

“Google recently introduced Secure AI Framework (SAIF) to help organizations secure AI systems, and expanded the bug hunters programs (including Vulnerability Rewards Program) to incentivize research around AI safety and security.” (July 27, 2023)

“Democratic and Republican senators voiced some concern this week about artificial intelligence’s potential use to create a biological weapon...the Senate Homeland Security and Governmental Affairs Committee voted to send to the full Senate a bill that would put a chief AI officer into each federal agency and create a council for these AI officers to coordinate how the federal government uses the emerging technology.” (July 27, 2023)

“How AI is powering the future of clean energy. Artificial Intelligence can help optimize solar and wind farms, simulate climate and weather, enhance power grid reliability and resilience, advance carbon capture and power fusion breakthroughs. “...NVIDIA and its energy-conscious partners...[have developed] technology breakthroughs [in clean energy] for a cleaner, safer, more sustainable future. Artificial Intelligence can help optimize solar and wind farms, simulate climate and weather, enhance power grid reliability and resilience and advance carbon capture and power fusion breakthroughs....” (July 27, 2023)

“Anthropic advocated for and joined in commitments announced at the White House on July 21 that included “internal and external security testing of AI systems” to guard against “some of the most significant sources of AI risks, such as biosecurity and cybersecurity.” (July 26, 2023)

“Anthropic, Google, Microsoft and OpenAI announced the formation of the Frontier Model Forum, a new industry body focused on ensuring safe and responsible development of frontier AI models. The Frontier Model Forum will draw on the technical and operational expertise of its member companies to benefit the entire AI ecosystem, such as through advancing technical evaluations and benchmarks, and developing a public library of solutions to support industry best practices and standards.” (July 26, 2023)

“KPMG and ServiceNow, announced an expanded commitment to reimagine finance, supply chain, and procurement operations. The expanded partnership is part of a decade-long relationship that spans IT, HR, risk, cybersecurity, and environmental, social and governance (ESG), includes investment from both organizations to create new offerings that bring together AI, low-code capabilities, and deep industry knowledge and expertise.” (July 26, 2023)

“Leaders from the AI research world Dario Amodei (Co-Founder of Anthropic), Stuart Russell (UC Berkeley Professor), and Yoshua Bengio (AI researcher) appeared before the Senate Judiciary Committee to discuss and answer questions about the nascent technology. They voiced concerns about moving too slow and moving too fast.” (July 25, 2023)

“Worldcoin, a cryptocurrency project founded by OpenAI CEO Sam Altman, has launched...The project’s core offering is its World ID, which the company describes as a ‘digital passport’ to prove that its holder is a real human, not an AI bot. To get a World ID, a customer signs up to do an in-person iris scan using Worldcoin’s ‘orb’, a silver ball approximately the size of a bowling ball.” (July 24, 2023)

“The Biden administration has collected “voluntary commitments” from seven of the biggest AI developers to pursue shared safety and transparency goals ahead of a planned executive order. OpenAI, Anthropic, Google, Inflection, Microsoft, Meta and Amazon are the companies taking part in this non-binding agreement, and will send representatives to the White House to meet with President Biden...” (July 21, 2023)

“Databricks announced it has completed its acquisition of MosaicML, a leading generative AI platform known for its state-of-the-art MPT large language models (LLMs). In the coming months, the Databricks and MosaicML teams will work to make training custom models even more seamless for Databricks Lakehouse customers.” (July 19, 2023)

AI News Summary – June and July 2023 (cont'd)

“SAP invested in three major generative AI players: Anthropic, Cohere and Aleph Alpha. The terms of the direct investments, which weren’t disclosed, build on SAP’s \$1 billion-plus commitment to back AI-powered enterprise tech startups from Sapphire Ventures.”
(July 19, 2023)

“Using NVIDIA BioNeMo models, Amgen, a global leader in biotechnology, has reduced the time it takes to customize models for molecule screening and optimization from three months to just a few weeks. This type of trainable foundation model enables scientists to create variants for research into specific diseases, allowing them to develop target treatments for rare conditions.”
(July 13, 2023)

“Oracle announced plans to develop generative AI capabilities within its suite of applications by partnering with Cohere AI and using its foundation models. Cohere will train its models on Oracle Cloud Infrastructure — Oracle claims OCI has the highest-performance and lowest-cost graphics processing unit (GPU) cluster technology around — with what it calls an OCI Supercluster scaling up to more than 16,000 NVIDIA Corp.”
(July 13, 2023)

“Google is rolling out its artificial intelligence chatbot Bard in the European Union it announced, after resolving concerns raised by the bloc’s key privacy regulator, the Irish Data Protection Commission... The Irish watchdog is Google’s main data regulator in the EU because the U.S. firm has its European headquarters there.”
(July 13, 2023)

“Elon Musk launched his artificial intelligence startup xAI, unveiling a team comprised of engineers from the same big U.S. technology firms that he hopes to challenge in his bid to build an alternative to ChatGPT.”
(July 13, 2023)

“Coveo, a leader in AI platforms that transform digital experiences with intelligent search, recommendations, 1:1 personalization, and merchandising, announced it was selected in the AI Breakthrough Awards program as the recipient of the “Best LLM Application” award.”
(July 12, 2023)

“KPMG and Microsoft have announced an expansion of their global relationship with the aim to provide workforce modernization, safe and secure development, and use of Artificial Intelligence (AI) solutions for clients, industries and society more broadly.”
(July 11, 2023)

“Google was accused in a proposed class action lawsuit on Tuesday of misusing vast amounts of personal information and copyrighted material to train its artificial intelligence systems. The complaint, filed in San Francisco federal court by eight individuals seeking to represent millions of internet users and copyright holders, said Google’s unauthorized scraping of data from websites violated their privacy and property rights.”
(July 11, 2023)

“Alteryx announced decision intelligence and intelligent automation capabilities on AWS intended to help CFOs and finance leaders to embrace cloud and data analytics as strategic tools for their modernization goals.”
(July 10, 2023)

“DroneDeploy’s AI software platform — used in its navigation system — is operating in more than 200 countries and handling more than 1 million flights a year. The company raised \$35 million in Series D funding.”
(July 6, 2023)

“New York City will mandate the disclosure of whether — and how — artificial intelligence is being used to make hiring decisions. The city’s automated employment decision tools law, enacted in 2021 and scheduled to be enforced beginning July 5, positions New York City as a leader in regulating the use of AI in hiring. Other cities and states expected to follow suit.”
(July 5, 2023)

“The increased frequency and severity of extreme weather and climate events could take a million lives and cost \$1.7 trillion annually by 2050, according to the Munich Reinsurance Company. This underscores a critical need for accurate weather forecasting, especially with the rise in severe weather occurrences such as blizzards, hurricanes and heatwaves. AI and accelerated computing are poised to help.”
(July 5, 2023)

“Microsoft announced new Microsoft Shopping tools in Bing and Edge that help users shop and save...using AI to make it easier to discover, research, and complete your purchase, all in one place with information you need from expert sources.”
(June 29, 2023)

AI News Summary – June and July 2023 (cont'd)

“Wall Street Journal reported Tuesday that the U.S. Department of Commerce could prohibit shipments of chips from manufacturers including Nvidia to customers in China as soon as early next month. The latest move is part of the U.S.’s broader strategy to limit China’s progress in AI, particularly in the military sphere.”

(June 28, 2023)

“Oracle announced new generative AI features for its Fusion Cloud Human Capital Management (HCM) offering, making it easier for enterprises to automate time-consuming HR workflows and drive productivity.”

(June 28, 2023)

“RelationalAI, a Berkeley, California-based artificial intelligence (AI) startup, announced the release of a product it’s calling an AI “coprocessor” built for Snowflake, the cloud data warehouse provider. The coprocessor integrates relational knowledge graphs and composite AI capabilities into Snowflake’s data management platform.”

(June 27, 2023)

“Databricks announced it has entered into a definitive agreement to acquire MosaicML, a leading generative AI platform. Together, Databricks and MosaicML will make generative AI accessible for every organization, enabling them to build, own and secure generative AI models with their own data. The transaction is valued at approximately \$1.3 billion, inclusive of retention packages.”

(June 26, 2023)

“Snowflake announced an expanded partnership with Microsoft, enabling new product integrations across AI, low code/no code application development, data governance, and more. The two companies will also implement new programs to enhance joint go-to-market strategies and improve field collaboration.”

(June 26, 2023)

“Snowflake and NVIDIA announced at Snowflake Summit 2023 that they are partnering to provide businesses with an accelerated path to create customized generative AI applications using their own proprietary data, all securely within the Snowflake Data Cloud.”

(June 26, 2023)

“Hyperscience, a provider of enterprise infrastructure for artificial intelligence solutions, announced that its platform is fully deployed in a secure ‘DDIL’ (Denied, Disrupted, Intermittent, and Limited bandwidth) environment.”

(June 25, 2023)

“Dataiku, the platform for Everyday AI, announced breakthroughs in Generative AI enterprise applications, safety, and tooling. Developed from the experience working with over 500 customers, these developments push beyond the boundaries of traditional chatbot functions and present the potential for meaningful, real-world enterprise applications.”

(June 22, 2023)

“IBM announced a new collaboration with will.i.am and FYI (Focus Your Ideas) to integrate watsonx, a new AI and data platform for business, to scale AI and embed responsibility, transparency and explainability into the creative process.”

(June 20, 2023)

“IBM announced plans to expand its longstanding partnership with Adobe to help brands accelerate their content supply chains through the implementation of next-generation AI including Adobe Sensei GenAI services and Adobe Firefly (currently in beta), Adobe’s family of creative generative AI models.”

(June 19, 2023)

“An MIT-based startup, Ikigai Labs, has created an AI Apps platform based on the cofounders’ research at MIT with large graphical models (LGMs) and expert-in-the-loop (EiTL), a feature by which the system can gather real-time inputs from experts and continuously learn to maximize AI-driven insights and expert knowledge, intuition and expertise.”

(June 15, 2023)

“At its WWDC event, Apple made it clear that AI was behind many of the features in both its forthcoming hardware and software. iOS 17 will feature an upgraded autocorrect powered by an AI model that can more accurately predict the next words and phrases that a user might use.”

(June 15, 2023)

AI News Summary – June and July 2023 (cont'd)

“Europe’s A.I. Act—which will probably be the world’s first comprehensive regulation of the technology if passed, will take effect two years after approved (at the end of 2025 or early 2026). Which would have major impacts on the likes of ChatGPT.”
(June 14, 2023)

“Google launched a new shopping feature that shows clothes on a lineup of real-life fashion models. A part of a wide range of updates to Google Shopping rolling out in the coming weeks, Google’s virtual try-on tool for apparel takes an image of clothing and attempts to predict how it would drape, fold, cling, stretch and form wrinkles and shadows on a set of real models in different poses.”
(June 14, 2023)

“Google announced new capabilities, some of which it previously previewed at its I/O conference, heading to Search Generative Experience (SGE) — the moniker for its experimental search experience — focused on travel and shopping.”
(June 14, 2023)

“Google’s enhancing Google Lens, its computer vision-powered app that brings up information related to the objects it identifies, with new features. Lens can surface skin conditions similar to what you might see on your own skin, like moles and rashes.”
(June 14, 2023)

“AMD has made a series of announcements showcasing its AI Platform strategy, giving customers a cloud, to edge, to endpoint portfolio of hardware products, with deep industry software collaboration, to develop scalable and pervasive AI solutions.”
(June 13, 2023)

“Accenture announced it will invest \$3 billion in AI over the next three years in building out its team of AI professionals and AI-focused solutions for its clients.”
(June 13, 2023)

“Mistral AI, a French start-up founded four weeks ago by a trio of former Meta and Google artificial intelligence researchers, has raised €105mn in Europe’s largest-ever seed round.”
(June 13, 2023)

“Hugging Face submitted a response to the US Department of Commerce NTIA request for information on AI Accountability policy which stressed the role of documentation and transparency norms in driving AI accountability processes.”
(June 12, 2023)

“U.S. senators wrote letters to Meta CEO Mark Zuckerberg, which questioned the leak in March of Meta’s popular open-source large language model LLaMA, sending a threat to the open-source AI community. It is notable because it comes at a key moment when Congress has prioritized regulating artificial intelligence, while open-source AI is seeing a wave of new LLMs.”
(June 8, 2023)

“Google DeepMind’s published in Nature, introducing AlphaDev, an artificial intelligence (AI) system that uses reinforcement learning to discover enhanced computer science algorithms – surpassing those honed by scientists and engineers over decades. AlphaDev uncovered a faster algorithm for sorting, a method for ordering data.”
(June 7, 2023)

“Instabase, a leader in Applied AI for the enterprise, announced its Series C funding round and the launch of AI Hub, a repository of AI apps focused on content understanding and a set of generative AI-based tools. The \$45M Series C funding round, which concluded at the end of 2022, doubled Instabase’s valuation to \$2B.”
(June 7, 2023)

“Researchers at NYU Langone Health, their academic medical center of New York University, have collaborated with NVIDIA experts to develop a large language model (LLM) that predicts a patient’s risk of 30-day readmission, as well as other clinical outcomes.”
(June 7, 2023)

Recent AI Product Releases – June and July 2023

“Google introduces a new advancement in ‘helpful robotics’ with Robotics Transformer 2, or RT-2, a vision-language-action (VLA) model. A Transformer-based model trained on text and images from the web, RT-2 can directly output robotic actions. Just like language models are trained on text from the web to learn general ideas and concepts, RT-2 transfers knowledge from web data to inform robot behavior.” (July 28, 2023)

“Stable Diffusion XL on MAC with advanced core ML quantization was released. Hugging Face has been working at both Apple and Hugging Face to explore this space. Hugging Face has been working alongside Apple to explore this space. Hugging Face has demonstrated how to run Stable Diffusion on Apple silicon and how to leverage the latest advancements in core ML to improve size and performance with 6-bit palettization.” (July 27, 2023)

“Adobe has made advancements on Firefly, its family of generative AI models, with a feature in Photoshop that expands images beyond their original bounds. The capability, called Generative Expand, is available in the beta version of Photoshop, lets users expand and resize images by clicking and dragging the Crop tool.” (July 27, 2023)

“Universe, the no-code mobile website builder, announced that it’s launching an AI-powered website designer, GUS (Generative Universe Sites), in open beta.” (July 27, 2023)

“OpenUSD, originally developed by Pixar for large-scale feature film pipelines for animation and visual effects, is a powerful engine for high-fidelity 3D worlds. It is a powerful tool for creating expansive ecosystem for the era of AI and the metaverse. It is currently being adopted for several applications across several industries, such as automotive, healthcare, manufacturing and more.” (July 27, 2023)

“ServiceNow expanded generative AI capabilities, case summarization and text-to-code, to increase speed, productivity, and value for customers. Powered by proprietary ServiceNow large language models (LLMs), both capabilities are purpose-built for the ServiceNow platform and are designed to alleviate repetitive work and significantly improve productivity.” (July 26, 2023)

“Amazon QuickSight, Amazon’s business intelligence service, has been updated with generative AI capabilities. Announced at AWS Summit New York, QuickSight will soon be able to generate visuals, fine-tune and format those visuals when given instructions in natural language, and create calculations from commands without specific syntax.” (July 26, 2023)

“Egnyte introduced a ChatGPT-like interface where customers can interact with the content stored in Egnyte to do things like create summaries of documents or review transcripts of video and audio to generate a list of key points or summaries. This is a potential indicator of Egnyte’s future AI roadmap. The company also pointed out that it has been incorporating AI into the platform for over a decade, as opposed to recently beginning their initiatives.” (July 26, 2023)

“Stability AI launched Stable Diffusion XL 1.0, a text-to-image model that the company describes as its “most advanced” release to date. Available in open source on GitHub in addition to Stability’s API and consumer apps, ClipDrop and DreamStudio, Stable Diffusion XL 1.0 delivers “more vibrant” and “accurate” colors and better contrast, shadows and lighting compared to its predecessor, Stability claims.” (July 26, 2023)

“AWS announced AWS HealthScribe, a new HIPAA-eligible service that empowers healthcare software providers to build clinical applications that use speech recognition and generative AI to save clinicians time by generating clinical documentation.” (July 26, 2023)

“AWS expands its fully managed foundation model (FM) service Amazon Bedrock to include the addition of Cohere as an FM provider and the latest FMs from Anthropic and Stability AI, as well as a new capability for creating fully managed agents.” (July 26, 2023)

“Codeium, an AI-powered code acceleration toolkit, improves developer workflow. It has three core features: autocomplete, chat and search. Autocomplete can suggest code segments, saving developers time by minimizing the need for writing boilerplate code or unit tests. At the same time the chat function empowers developers to rework or even create code with natural language queries. This improvement also creates a searchable context on the entire code base.” (July 26, 2023)

Recent AI Product Releases – June and July 2023 (cont'd)

“ServiceNow, NVIDIA, and Accenture launched AI Lighthouse, a program designed to fast-track the development and adoption of enterprise generative AI capabilities. This expands on existing strategic partnerships among ServiceNow, NVIDIA, and Accenture. AI Lighthouse will aims to assist customers across industries in the design, development, and implementation of new generative AI use cases.” (July 26, 2023)

“NVIDIA DGX Cloud launched. It is an AI-training-as-a-service solution equipped with thousands of NVIDIA GPUs online on Oracle Cloud Infrastructure, as well as NVIDIA infrastructure located in the U.S. and U.K.” (July 25, 2023)

“Wayfair launched a new app, Decorify, that lets customers create “shoppable,” “photorealistic” images of rooms in their homes or apartments in new styles. After uploading a picture of the space they want to redesign, the app enables them to transform the space with different design themes.” (July 25, 2023)

“McKinsey and Cohere will collaborate to use generative AI to create tailored end-to-end solutions to improve clients’ business performance. The collaboration will be led by QuantumBlack, AI by McKinsey, the firm’s AI arm.” (July 18, 2023)

“Meta introduces Llama 2, their next generation open source large language model. Llama 2 is free for research and commercial use. Microsoft and Meta are expanding their longstanding partnership, with Microsoft as the preferred partner for Llama 2.” (July 18, 2023)

“Seekr and Oxford Road launched Civility Score™ for podcasts, which uses proprietary AI to offer brand marketers a way to measure brand suitability and maximize brand affinity in podcast advertising” (July 13, 2023)

“Google is beginning to roll out Project Tailwind under a new name: NotebookLM. It is a notebook designed to help people learn faster. The updated offering uses AI to generate summaries and ideas, as well as allow users to ask the notebook application questions.” (July 12, 2023)

“Shutterstock expands its existing deal with OpenAI to provide the startup with more training data for its AI models. ‘The renewal and significant expansion of our strategic partnership with OpenAI reinforces Shutterstock’s commitment to driving Core AI innovation and positions us as the data and distribution partner of choice for industry leaders in generative AI’, Shutterstock CEO Paul Hennessy said in a press release.” (July 11, 2023)

“IBM released IBM watsonx – an enterprise-ready AI and data platform. Watsonx comprises three products for organizations to scale AI – the watsonx.ai studio for new foundation models, generative AI and machine learning; the watsonx.data fit-for-purpose data store; and the watsonx.governance toolkit which will be released later this year.” (July 11, 2023)

“Anthropic, co-founded by ex-OpenAI execs, announced the release of a new text-generating AI model, Claude 2. It is available in beta in the U.S. and U.K. via the web and a paid API (in limited access). The API pricing hasn’t changed (~\$0.0465 to generate 1,000 words), and several businesses have begun piloting Claude 2, including Jasper and Sourcegraph.” (July 11, 2023)

“Alibaba and Huawei Technologies showcased new products, including an artificial intelligence (AI) image generator and an AI model upgrade.” (July 7, 2023)

“Meta Platforms’ artificial intelligence research arm introduced Voicebox, a machine learning model that can generate speech from text. Unlike previous text-to-speech models, Voicebox can perform tasks that it has not been trained for, including editing, noise removal and style transfer.” (June 30, 2023)

Recent AI Product Releases – June and July 2023 (cont'd)

“Researchers from MIT’s Computer Science and Artificial Intelligence Laboratory (CSAIL) have announced a framework that can handle both image recognition and image generation tasks with high accuracy.”
(June 29, 2023)

“Salesforce introduced new generative AI workflow tools for Sales Cloud and Service Cloud during its presentation at World Tour London. The new capabilities — Sales GPT and Service GPT respectively — are designed to simplify workflow and customer engagement for sales and service teams. The company said the tools will enable teams to accelerate deal closures, anticipate customer needs and enhance productivity.”
(June 29, 2023)

“Databricks announced LakehouseIQ, a generative AI tool for data insights. Databricks also announced new Lakehouse AI innovations aimed at making it easier for its customers to build and govern their own LLMs on the lakehouse.”
(June 28, 2023)

“Toyota Research Institute (TRI) unveiled a generative AI tool that aims to enhance the creative process of vehicle designers. The tool enables designers to generate design sketches through text prompts, incorporating precise stylistic attributes such as ‘sleek,’ ‘SUV-like’ and ‘modern.’ Additionally, designers can optimize quantitative performance metrics to create an initial prototype sketch.”
(June 28, 2023)

“Snowflake extends data programmability. This aims to enable data scientists, data engineers, and application developers to build faster and more efficiently in the Data Cloud. Snowflake also made new advancements to its single, unified platform.”
(June 27, 2023)

“AWS has introduced AWS AppFabric: a no-code service that facilitates the integration of multiple software-as-a-service (SaaS) applications. The unveiling took place during the AWS Applications Innovation Day event.”
(June 27, 2023)

“Merlyn Mind, an AI-powered digital assistant platform, launched a suite of large language models (LLMs) specifically tailored for the education sector under an open-source license.”
(June 26, 2023)

“MosaicML released its new language model: MPT-30B. The new model, which had a lower training cost than comparable models, will be used in enterprise applications.”
(June 22, 2023)

“Industrial Canvas, an intuitive, composable, visual workspace from Cognite uses AI for data exploration and visualization.” Industrial Canvas delivers a no-code experience to derive cross-data-source insights and provide high-quality production optimization, maintenance, safety, and sustainability decisions.”
(June 22, 2023)

“Vianai launches the VIANOPS monitoring platform. It monitors for critical risks that can affect an AI model’s reliability and performance. It is designed to meet the new demands of AI-driven enterprises. The VIANOPS monitoring platform was created to help data scientists, ML engineers, ML managers, and MLOps teams manage complex ML models.”
(June 21, 2023)

“Automatic transcription service, Otter, launched a new AI-powered chatbot that will let participants ask questions during and after a meeting to help them collaborate with teammates. The new chatbot helps users get contextual answers based on what was discussed in the meeting.”
(June 21, 2023)

Recent AI Product Releases – June and July 2023 (cont'd)

“Dropbox created a suite of AI-powered productivity products. The company’s latest offerings, Dropbox Dash and Dropbox AI, aim use AI to streamline workflows and simplify data storage and retrieval.” (June 21, 2023)

“Meltwater has added AI-powered product innovations across its suite of solutions that allow customers to save time, unlock insights, and take action. The first is a PR Assistant which helps PR professionals draft press releases and personalize pitches to journalists in record time. The second is the AI Writing Assistant, powered by the ChatGPT API, which drafts highly engaging social content, saving teams time and increasing social engagement at scale.” (June 21, 2023)

“Algolia, an end-to-end AI Search platform, unveiled AI-powered Query Categorization, which automatically associates a query with the appropriate category (or categories).” (June 20, 2023)

“JustCall by SaaS Labs, a contact center software provider backed by Sequoia Capital has launched JustCall iQ, an AI-driven conversational intelligence platform for small and medium-sized businesses (SMBs). The solution is designed to enhance the performance of call center sales teams, operations and customer support.” (June 15, 2023)

“Movable Ink launched a new feature called “Generation Model” that uses OpenAI’s GPT-4 large language model (LLM) to automatically reference a brand’s available online content and create compelling email subject lines that will get target audiences clicking through.” (June 15, 2023)

“Dremio, the open data lakehouse vendor, announced two new generative AI capabilities for its platform: a text-to-SQL tool for conversational querying of data, and an autonomous semantic layer to help with data cataloging and processing.” (June 15, 2023)

“Cognite, a leader in industrial software, launched Cognite AI, Industrial Data Management and Value Realization. Cognite Data Fusion® with Cognite AI improves operations by accelerating cloud adoption and increasing the efficiency of industrial workflows.” (June 15, 2023)

“OpenAI announced the release of new versions of GPT-3.5-turbo and GPT-4, the latter being its latest text-generating AI, with a capability called function calling. As OpenAI explains in a blog post, function calling allows developers to describe programming functions to GPT-3.5-turbo and GPT-4 and have the models create code to execute those functions.” (June 13, 2023)

“Oracle added powerful, generative AI services for organizations. Oracle will provide native generative AI services to help organizations automate end-to-end business processes, improve decision-making, and enhance customer experiences, in collaboration with Cohere. Built on Oracle Cloud Infrastructure (OCI) and leveraging Oracle’s unique Supercluster capabilities, Oracle generative AI services will span applications to infrastructure and aim to provide the highest levels of security, performance, and value in the industry.” (June 9, 2023)

“Coveo, a leader in AI platforms that transform digital experiences with intelligent search, recommendations, 1:1 personalization, and merchandising, announced the official field launch of the Coveo Relevance Generative Answering™ Design Partner Program with 18 large global customers, giving them access to the beta solution for testing at enterprise scale.” (June 9, 2023)

“Google introduces the Secure AI Framework (SAIF), a conceptual framework for secure AI systems. SAIF is inspired by the security best practices — like reviewing, testing and controlling the supply chain — that were applied to software development, while incorporating the understanding of security mega-trends and risks specific to AI systems.” (June 8, 2023)

“Domino Data Lab, provider of a leading Enterprise AI platform, added new capabilities and improvements on building and operating enterprise AI.” (June 1, 2023)

5 Quarterly Earnings of Selected AI Companies

Selected AI Quarterly Earnings – July 2023

	Company	Latest Earnings Date/Period	Revenue Growth / Beat (Miss)	EBITDA Margin / Beat (Miss)	T + 1 Share Performance	Themes / Commentary
Large-Cap Tech	Google	7/26/23 2Q23	7% / +2%	42% / +6%	6%	<ul style="list-style-type: none"> Focus on AI and co-founder Brin working on Generative AI Cloud growth decelerated 10bps, potential tailwinds from new Workspace AI tools Accelerating Search and YouTube revenue, Ad demand stabilized during the quarter +9% op income beat, margin expansion driven by Search acceleration combined with cost discipline
	IBM	7/20/23 2Q23	(0%) / (1%)	20% / +1%	2%	<ul style="list-style-type: none"> Modest revenue miss largely driven by a drop in Infrastructure growth Weakness at Red Hat in Q2 was offset by strength in Transaction Processing Strong signings in Consulting drives management's CY23 guidance of 6-8% consulting revenue growth
	Meta	7/27/23 2Q23	11% / +3%	53% / +7%	4%	<ul style="list-style-type: none"> Q3 guide well ahead of the street indicating cost initiatives are taking hold Management highlights early efforts made in AI and privacy-preserving measurement/targeting are paying off AI recommended content fueling 7% higher Reels engagement y/y Reality Lab losses expected to increase y/y on continued VR/AR tech development
	Microsoft	7/26/23 4Q23	8% / +1%	50% / +2%	(4%)	<ul style="list-style-type: none"> Management highlights stabilisation of Azure with revenue growth of +26% y/y AI top line contribution ramping up Average price target increased +1.2% to \$385.67, implying 9.9% upside to T+1 stock price
	TESLA	7/20/23 2Q23	47% / +1%	19% / +9%	(10%)	<ul style="list-style-type: none"> Management guided Q3 production lower on planned factory shutdown and upgrades, while reaffirming FY23 delivery target of 1.8M units Management prioritization of volumes over margin indicates possibility of further price cuts in H2 Optimistic long-term given the introduction of next-gen platform (slated for end of next year), which is expected to save 50% in costs through manufacturing and design efficiencies
Large-Cap Software	SAP	7/20/23 2Q23	10% / +1%	27% / (13%)	(6%)	<ul style="list-style-type: none"> Q2 cloud revenue missed consensus estimates and SAP downgraded its FY23 cloud revenue outlook, despite raising FY25 target in May SAP highlighted a number of AI initiatives and commented that AI gives the opportunity for a 30% pricing uplift Pursuing a partnership model: e.g., deals with Microsoft and minority investments in Cohere
	servicenow	7/27/23 2Q23	23% / +1%	32% / +10%	(3%)	<ul style="list-style-type: none"> Launching Gen AI solutions in September, but won't see it in the market until Q4 Generative AI adoption driven by demand from large companies; monetization strategy focused on delivering high value for customers and capturing a fraction of that value Strong Q3 cRPO guidance, reflecting lower level of early renewals; potential upside from generative AI adoption not yet reflected in guidance
	⁽¹⁾ DARKTRACE	7/18/23 4Q23	N/A	22% / +3%	+3%	<ul style="list-style-type: none"> 16-18% uplift to FY'23E-FY'24E EBITDA estimates reflecting better marketing intensity Value proposition of an AI-based cyber security solutions with a faster adoption of product trails thereby reducing marketing expenditure Management expects +18% FY23 customer growth y/y
Applied AI	TERADYNE	7/27/23 2Q23	(19%) / +5%	26% / +15%	(4%)	<ul style="list-style-type: none"> Increased SOC TAM by \$300M, primarily driven by the compute market Storage expected to remain soft in Q4, with potential recovery in 2024 3-nanometer devices expected to increase in volume in 2024, with smartphone unit volume increasing by 3-5%
Semis	FANUC	7/31/23 2Q23	(10%) / (5%)	N/A	(8%)	<ul style="list-style-type: none"> Reported significant drop in new orders, primarily from China and the US while margins were squeezed by a combination of low utilization and increased costs of goods sold Slump in demand felt across all business segments with robotic sales (48% of sales), CNC (25% of sales), and Robomachine sales all seeing declines Slowing business environment due to a slowdown in Electric Vehicle and battery investment in China
Robotics	INTUITIVE	7/21/23 2Q23	(15%) / +2%	41% / +5%	(3%)	<ul style="list-style-type: none"> Applying AI in imaging, robot movement, and training, with a focus on improving patient outcomes, surgeon experience, and lowering treatment costs Management expects backlog of deferred procedures to take several quarters to fully recover, with bariatrics growth potentially slowing down

Source: Company filings, FactSet, market data as of July 31, 2023.

Note: EBITDA margins below (50%) are marked as "NA".

18 (1) Darktrace figures are compared to guidance as consensus estimates are unavailable.

Selected AI Quarterly Earnings – June 2023

	Company	Latest Earnings Date/Period	Revenue Growth / Beat (Miss)	EBITDA Margin / Beat (Miss)	T + 1 Share Performance	Themes / Commentary
Large-Cap Software	ORACLE	6/13/23 4Q23	17% / +1%	54% / 11%	0%	<ul style="list-style-type: none"> Revenue beat driven by strength in Cloud services & license support and hardware revenue, while Cloud license and on-premise license revenue lagged Large enterprise in infancy of transition to OCI and SaaS solutions from on-premise technologies Cerner synergies and cloud economies of scale contributed to margin expansion
	Adobe	6/16/23 2Q23	10% / +1%	49% / +3%	1%	<ul style="list-style-type: none"> Net new Digital Media ARR +11.8% above consensus while total Digital Media ARR +0.4% above consensus Management points to data-driven platform and product-led growth for their belief in ADBE's opportunity in AI which in turn, they think will also strengthen its competitive moat Management displayed tempered tone around Firefly AI monetization, but believes next-gen AI be a positive
Data / Analytics	MongoDB	6/2/23 1Q24	36% / +6%	11% / +200%	+28%	<ul style="list-style-type: none"> Better consumption and stronger workload acquisition highlighted as the driving force behind the strong quarter Atlas consumption grew above expectations, although slowed q/q fueled by underlying application usage AI use cases seeing high customer engagement, with trend expected to continue
	elastic	6/2/23 4Q23	17% / +1%	10% / +37%	1%	<ul style="list-style-type: none"> In-line revenue and profitability outperformed while Cloud revenue missed expectations due to sluggish consumption trends as customers optimize cloud usage Management noted strong early customer interest in GenAI capabilities including the recently launched Elasticsearch Relevance Engine (ESRE) powered by built-in Vector Search and transformer model
Applied AI	samsara	6/2/23 1Q24	48% / +7%	(6%) / 35%	28%	<ul style="list-style-type: none"> The company's momentum moving upmarket continued with a record number of large customer adds Seeing good upsell and cross-sell within its existing base, which accounted for 60% of net new ARR Non-fleet products are showing good traction with Equipment Monitoring reaching \$100 million in ARR
CRM	sprinklr	6/6/23 1Q24	22% / 3%	11% / +82%	9%	<ul style="list-style-type: none"> FCF above consensus (\$14.3M vs \$5.5M) driven by layoff savings, GTM efficiency benefits, operational rigor, and top-line outperformance Raised full year operating margin target by 140 bps driven by recent GTM changes, including verticalizing salesforce and leveraging its partner network Sprinklr launched Sprinklr AI+, which incorporates generative AI throughout all four products
	braze	6/9/23 1Q24	40% / +3%	(15%) / +47%	16%	<ul style="list-style-type: none"> Beat consensus on the bottom line driven by credits expansions and new client adds Increasing significance of first party data platform as use of third party data sees continuity of limitations on larger platforms Management views AI driving further demand for the platform given existing generative AI capability
Contact Center	VERINT	6/8/23 1Q24	0% / +1%	29% / 6%	0%	<ul style="list-style-type: none"> Completion of SaaS transition expected to result in incremental growth and increased customer base shifting to Verint cloud AI adoption expected to drive strong ROI, with more than half of Q1 deals including AI elements Management abstained from typical quarterly guidance, but expects revenue and gross margin to increase "slightly" sequential
Semis	BROADCOM	6/2/23 2Q23	21% / 0%	64% / +2%	3%	<ul style="list-style-type: none"> Management did not dismiss the moderation they are seeing in some areas of the semi business and they think this will continue to play out in portions of Broadband, Storage, and Networking through 1H24 AVGO is broadening design engagements in the Networking portfolio that address AI deployments leading to expected growth in AI exposure for AVGO from 10% of semi sales in FY22 to 15% in FY23 and 25% in FY24

Source: Company filings, FactSet, market data as of June 30, 2023.

19 Note: EBITDA margins below (50%) are marked as "NA".

6 AI Capital Raise Activity

Recent AI Financings – June and July 2023

Core AI

(US \$ in millions) Company Name	Last Funding Round			Total Funding	Post-Money Valuation	Employees	Latest Round Key Investors
	Date	Stage	Size				
HiddenLayer	7/26/2023	Series A	\$32	\$38	\$182	35	Undisclosed
Protect AI	7/26/2023	Series A	35	49	110	25	Acrew Capital, Boldstart Ventures, Evolution Equity Partners, Knollwood Capital, Pelion Venture Partners, Salesforce Ventures
Furiosa	7/25/2023	Series C	62	136	219	80	DSC Investment, Envestra, Game Changer Investment, Industrial Bank of Korea, KDB Industrial Bank, Korea Investment Partners, Kyobo Life Insurance
Tractable	7/18/2023	Series E	65	185	1,000	300	Georgian, Insight Partners, SoftBank Group
Optalysys	7/17/2023	Series A	27	41	47	20	imec.xpand, Lingotto, Northern Gritstone
AGII	7/14/2023	Early Stage VC	15	15	-	1,000	Undisclosed
Replicate	7/12/2023	Series B	32	50	-	20	Undisclosed
Nami	7/6/2023	Series A	11	15	36	25	Aconterra Capital Partners, AMAVI Capital, Caerus Investment Management, Inspire Corp, Verizon Ventures
Aleph Alpha	7/3/2023	Early Stage VC	109	142	489	50	Intel, Nvidia, SAP
Typeface	6/29/2023	Series B	140	167	-	40	A&E Investments, GV, Lightspeed Venture Partners, M12, Madrona Venture Group, Menlo Ventures, Microsoft, Salesforce Ventures
Reka AI	6/27/2023	Series A	58	65	315	-	DST Global, Nat Friedman, Radical Ventures, Snowflake Ventures
Zenarate	6/27/2023	Series A	15	15	115	100	Volition Capital
Fero Labs	6/21/2023	Series A	15	28	55	30	Blackhorn Ventures, Climate Investment, Deutsche Invest Capital Partners, Innovation Endeavors
Wrtm Technologies	6/16/2023	Series A	11	15	-	40	Capstone Partners, Hana Bank, Hana Securities, KB Securities, KDB Industrial Bank, Woori Venture Partners, Z Venture Capital
PrimerAI	6/12/2023	Series D	69	237	269	140	Addition, US Innovative Technology Fund
Cohere	6/8/2023	Series C	270	440	2,020	270	Alphabet, Deutsche Telekom, DTCP, Index Ventures, Inovia Capital, Mirae Asset Wealth Management, Nvidia, Oracle, Salesforce, Schroders, SentinelOne, Thomvest
Slang.ai	6/2/2023	Series A	20	21	50	20	Active Capital, Collide Capital, Deck Point Capital, Homebrew, Path Ventures, Scott Belsky, Stage 2 Capital, StartX, Tom Colicchio, Underscore VC, Wing Venture
Mean			\$58	\$98	\$377	137	
Median			32	49	182	40	

Source: Citi, Pitchbook, and publicly available sources.

20 Note: Employee count rounded to nearest 5. Dollars in millions.

Recent AI Financings – June and July 2023 (cont'd)

AI Hardware

Company Name	Last Funding Round			Total Funding	Post-Money Valuation	Employees	Latest Round Key Investors
	Date	Stage	Size				
Aventurier	7/19/2023	Seed	\$10	\$10	-	-	China Creation Ventures, Jinqiu Capital
SQ4.0	6/23/2023	Early Stage VC	17	20	\$53	-	Innovation Endeavors, Two Sigma Ventures, Xora Innovation
Covariant	6/14/2023	Later Stage VC	23	245	625	160	Undisclosed
Mean			\$17	\$92	\$339	160	
Median			17	20	339	160	

Source: Citi, Pitchbook, and publicly available sources.

21 Note: Employee count rounded to nearest 5. Dollars in millions.

Recent AI Financings – June and July 2023 (cont'd)

AI Semis

Company Name	Last Funding Round			Total Funding	Post-Money Valuation	Employees	Latest Round Key Investors
	Date	Stage	Size				
Enfabrica	7/28/2023	Series B	\$110	\$160	\$250	990	General Catalyst, Google Ventures, SV Angel, Greylock and Factory
Aspinity	7/25/2023	Series B	\$11	\$20	28	30	TechNexus Venture Collaborative, Mountain State Capital and Bantam Group
Cosmos Innovation	6/23/2023	Series A	\$17	\$20	\$53	-	Two Sigma Ventures, Western Technology Investment, Innovation Endeavors, and Shinrai Investments
oneNav	6/7/2023	Series B	\$16	\$49	\$206	40	Norwest Venture Partners, Yaletown Partners
Mean			\$39	\$62	\$134	353	
Median			17	35	130	40	

Source: Citi, Pitchbook, and publicly available sources.

22 Note: Employee count rounded to nearest 5. Dollars in millions.

Recent AI Financings – June and July 2023 (cont'd)

Applied AI - Horizontal

Company Name	Last Funding Round			Total Funding	Post-Money Valuation	Employees	Latest Round Key Investors
	Date	Stage	Size				
Moreh	7/23/2023	Early Stage VC	\$12	\$16	\$90	55	KT Corp, KT Cloud
Terminal Industries	7/20/2023	Seed	17	17	-	-	8VC, 9Yards Capital, Amplifier, Lineage Logistics Holdings, MS&AD Ventures, NFI Ventures, Northstar.VC, Prologis Ventures, Ryder Ventures, Schneider
FedML	7/19/2023	Seed	12	20	50	15	AimTop Ventures, DHVC, Finality Capital Partners, LDV Partners, Modular Capital, Prime Set, Road Capital, Robot Ventures, Sparkle Ventures, USC
Cognaize	7/18/2023	Series A	25	27	12	280	Argonautic Ventures, Granatus Ventures, Metaplanet Holdings
DataExa	7/4/2023	Series B1	14	43	-	-	CCBT Private Equity, CICC Capital
AI4Bharat	7/1/2023	Seed	12	12	-	70	Lightspeed Venture Partners, Peak XV Partners
Inflection	6/29/2023	Series B	1,300	265	4,000	35	Microsoft, Reid Hoffman, Bill Gates, Eric Schmidt, Nvidia
Runway	6/29/2023	Series C	191	337	1,500	90	Alphabet, Amjad Masad, Amplify Partners, Coatue Mgmt, Compound, Felicis, Guillermo Rauch, Howie Liu, Lux Capital, Madrona Venture Group, Nvidia, CRM
CalypsoAI	6/27/2023	Series A1	23	36	58	50	Anne Wojcicki, Auren Hoffman, Expeditions Fund, Hakluyt Capital, Lockheed Martin Ventures, Paladin Capital Group, Susan Wojcicki
SiMa.ai	6/13/2023	Later Stage VC	13	201	400	160	Navin Chaddha, VentureTech Alliance
Gensyn	6/12/2023	Series A	43	52	-	5	Andreessen Horowitz, Canonical Crypto, CoinFund, Eden Block, Id4 Ventures, M31 Capital, Maven 11, PEER Venture, Protocol Labs, Zee Prime Capital
Granica	6/8/2023	Series A	45	45	-	-	Abstract Ventures, Bain Capital Ventures, Deepak Ahuja, Frederic Kerrest, K9 Ventures, Kevin Hartz, New Enterprise Associates, Original Capital
Mean			\$142	\$89	\$873	84	
Median			20	40	90	55	

Source: Citi, Pitchbook, and publicly available sources.

23 Note: Employee count rounded to nearest 5. Dollars in millions.

Recent AI Financings – June and July 2023 (cont'd)

Applied AI - Vertical

Company Name	Last Funding Round			Total Funding	Post-Money Valuation	Employees	Latest Round Key Investors
	Date	Stage	Size				
Motion G	7/23/2023	Early Stage VC	\$16	\$31	-	-	Episteme Capital
SPIRITT	7/20/2023	Seed	14	18	-	15	Disruptive AI, Izhar Shay, Square Peg Capital, SVB Financial Group
HoloMatic	7/18/2023	Series C3	42	152	\$600	30	GAC Capital, Guangdong Technology Financial Group
Kolena	7/17/2023	Series A	18	18	48	30	11.2 Capital, AIX Ventures, Bloomberg Beta, Octave, Palumni VC, Robert Yan, SaxeCap, Scale Asia Ventures, Shivani Torres, SignalFire, Vu Pham, Zero Prime
Ampcontrol	6/20/2023	Series A	10	14	48	20	The Westly Group
Turbine	6/20/2023	Series A	27	52	64	80	Accel, Day One Capital, Delin Ventures, MassMutual Ventures, Mercia Asset Management, Merck Global Health Innovation Fund
Shengshu Technology	6/18/2023	Seed	14	14	101	-	Ant Group, Baidu Ventures, Z&Y Capital
Gleamer	6/9/2023	Series B	29	39	-	70	Bpifrance, Crista Galli Ventures, Elaia Partners, F3A Ventures, Groupe MACSF, Heal Capital, Supernova Invest, UI Investissement, XAnge
Mean			\$21	\$42	\$172	41	
Median			17	25	64	30	

Source: Citi, Pitchbook, and publicly available sources.

24 Note: Employee count rounded to nearest 5. Dollars in millions.

7 AI M&A Activity

Latest AI Acquisitions – June and July 2023

	Date Announced	Target	Acquiror	Deal Type	Status	Transaction Value	Employees	Latest Funding Round		Total Funding	Post-Money Valuation
								Stage	Size		
Core AI	7/26/2023	Crossplag	Inspira	Strategic	Completed	Undisclosed	5	Accelerator	-	-	-
	7/14/2023	Haller.AI	Anonymous Intelligence	Strategic	Completed	\$20	-	-	-	-	-
	7/13/2023	Thankful	Gladly	Strategic	Completed	Undisclosed	60	Series A	\$12	\$15	-
	6/30/2023	OmniML	NVIDIA	Strategic	Complete	Undisclosed	-	Seed	\$8	-	-
	6/28/2023	Codec	Pentad	Strategic	Complete	Undisclosed	55	Seed	\$3	\$12	\$20
	6/26/2023	Mosaic ML	Databricks	Strategic	Pending	\$1,300	80	Early Stage VC	-	\$34	\$1,300
	6/22/2023	Firmnav	Valu8	Strategic	Complete	Undisclosed	15	Seed	-	-	-
	6/21/2023	Machine2Learn	Silo AI	LBO	Complete	Undisclosed	15	-	-	-	-
	6/20/2023	Pixelz.AI	StoryTEQ	Strategic	Complete	Undisclosed	-	-	-	-	-
	6/14/2023	Braight	Kings Entertainment	Strategic	Pending	Undisclosed	15	Seed	\$1	-	\$5
	6/14/2023	Praemo	Stream Systems	Strategic	Complete	Undisclosed	10	Series A	\$6	\$6	-
	6/14/2023	StoryAI	ZEAL	Strategic	Complete	Undisclosed	-	-	-	-	-
	6/9/2023	Scribs Ventures	International Endeavors	Strategic	Pending	Undisclosed	-	-	-	-	-
Applied AI – Horizontal	7/4/2023	Routrek Networks	Kubota	Strategic	Completed	Undisclosed	-	Series C	\$3	\$12	\$21
	7/14/2023	QHP	ID Global	Strategic	Completed	Undisclosed	-	-	-	-	-
	6/29/2023	DevScope	Agência Nacional de Inovação	LBO	Complete	Undisclosed	150	-	-	-	-
	6/27/2023	Geotrend	ChapsVision	LBO	Complete	Undisclosed	25	Early Stage VC	\$1	\$1	\$4
	6/15/2023	Start-up.AI	Verix	Strategic	Complete	Undisclosed	10	-	-	-	-
	6/13/2023	Rubicon	Databricks	Strategic	Complete	Undisclosed	-	-	-	-	-
	6/7/2023	BrightBid	Speqta	Strategic	Pending	Undisclosed	70	Seed	\$2	\$2	-
	6/1/2023	Incivus	360 ONE	LBO	Complete	Undisclosed	15	-	-	-	-

Source: Pitchbook, Mergermarket and Citi Deal Intelligence.

25 Note: Dollars in millions. Employee count rounded to nearest 5. Dollars in millions.

Latest AI Acquisitions – June and July 2023 (cont'd)

Applied AI – Vertical

Date Announced	Target	Acquiror	Deal Type	Status	Transaction Value	Employees	Latest Funding Round		Total Funding	Post-Money Valuation
							Stage	Size		
7/17/2023	Voikers	LLYC	Strategic	Completed	Undisclosed	-	-	-	-	-
7/7/2023	Polaris Health	Aya Healthcare	Strategic	Completed	Undisclosed	10	Seed	-	-	-
7/7/2023	Veritone Energy Business	GridBeyond	Strategic	Completed	Undisclosed	-	-	-	-	-
6/26/2023	Casetext	Thomson Reuters	Strategic	Pending	\$650	115	Series C	\$25	\$68	-
6/16/2023	Project Z Technologies	X Machina	Strategic	Pending	Undisclosed	20	-	-	-	-
6/13/2023	LeddarTech	Prospector Capital	SPAC	Pending	\$348	190	Series D	\$140	\$364	\$348
6/13/2023	PulseAI	Generative AI Solutions	Strategic	Pending	Undisclosed	-	Seed	-	-	-
6/12/2023	Edugo.AI	Docebo	Strategic	Complete	Undisclosed	-	Early Stage VC	\$0	-	-
6/7/2023	LifeGraph Intelligence	BurstIQ	Strategic	Complete	Undisclosed	-	-	-	-	-
Mean					\$579	51		\$17	\$34	\$121
Median					499	20		3	2	0

Source: Pitchbook, Mergermarket and Citi Deal Intelligence.

26 Note: Dollars in millions. Employee count rounded to nearest 5. Dollars in millions.

8 Citi Publications on AI

AI – General

[TMT Content Sunday: Digital Twins and AI](#)

[TMT Content Sunday: Edge Computing and AI](#)

[AI Time: AI Assistants Are Coming For You](#)

AI and Regulations

[AI Time: Future AI regulation scenarios & implications for corporates](#)

[AI Time: What you need to know about AI regulation](#)

AI and Finance

[Artificial Intelligence in Finance: Opportunities and Risks](#)

AI and Healthcare

[Smart Thinking on AI in Healthcare: Part 4 - Biopharma: AI is likely to disrupt Biopharma, moving it away from “drug discovery” and toward “drug design”](#)

[Smart Thinking on AI in Healthcare: Part 5 - The role of clinicians](#)

9 AI Public Comparables

Select AI Public Comps (as of 07/31/23)

Company Name	Enterprise Value	Operating Metrics										Valuation Metrics							
		Revenue		Revenue Growth		Gross Margin		EBITDA Margin		UFCF Margin		EV / Revenue		EV / EBITDA		EV / uFCF		EV / Revenue / Growth	
		CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E
Large Cap Tech																			
Apple	\$3,077,222	\$390,757	\$417,334	(0%)	7%	44%	44%	33%	33%	27%	28%	7.9x	7.4x	24.2x	22.5x	29.0x	26.6x	NM	1.08x
Microsoft	2,486,339	223,304	251,064	9	12	69	68	49	50	29	30	11.1	9.9	22.6	19.6	38.8	32.9	1.26	0.80
Alibaba Group Holding	1,989,880	130,232	142,482	5	9	37	37	20	20	16	16	15.3	14.0	NM	70.5	NM	NM	3.22	1.48
Alphabet	1,612,005	304,715	339,186	8	11	56	57	40	41	24	26	5.3	4.8	13.2	11.6	22.3	18.2	0.68	0.42
Amazon.com	1,508,219	561,473	627,230	9	12	45	46	16	17	4	6	2.7	2.4	17.2	14.5	70.2	39.7	0.29	0.21
NVIDIA	\$1,168,027	42,001	54,975	56	31	68	70	47	52	38	42	27.8	21.2	59.0	40.7	73.2	50.5	0.50	0.69
Tesla	939,023	100,066	126,295	23	26	19	21	17	19	7	8	9.4	7.4	56.0	40.1	NM	NM	0.41	0.28
Meta Platforms	854,529	132,604	149,514	14	13	80	79	53	54	24	24	6.4	5.7	12.2	10.5	26.8	24.0	0.47	0.45
IBM	178,992	62,213	64,873	3	4	56	56	24	24	19	20	2.9	2.8	11.9	11.4	15.0	14.1	1.03	0.65
Median		\$132,604	\$149,514	9%	12%	56%	56%	33%	33%	24%	24%	7.9x	7.4x	19.9x	19.6x	29.0x	26.6x	0.59x	0.65x
Large-Cap Software																			
Oracle	\$424,477	\$52,234	\$56,731	12%	9%	74%	74%	53%	53%	24%	27%	8.1x	7.5x	15.4x	14.2x	33.6x	28.0x	0.71x	0.87x
Adobe	251,863	19,503	21,783	10	12	90	89	50	49	41	42	12.9	11.6	25.9	23.5	31.6	27.5	1.31	0.99
Salesforce	218,776	34,367	38,118	11	11	78	78	40	39	21	25	6.4	5.7	15.9	14.8	29.8	22.7	0.57	0.53
SAP	163,668	34,557	37,569	3	9	73	73	31	32	18	20	4.7	4.4	15.2	13.7	25.6	21.7	1.51	0.50
ServiceNow	118,065	8,905	10,822	23	22	82	81	33	33	30	31	13.3	10.9	40.7	32.7	43.5	34.7	0.58	0.51
Workday	62,799	7,123	8,319	16	17	79	80	27	28	23	26	8.8	7.5	32.7	27.0	37.7	29.1	0.54	0.45
Median		\$26,935	\$29,676	11%	11%	79%	79%	36%	36%	24%	26%	8.5x	7.5x	20.9x	19.2x	32.6x	27.7x	0.64x	0.52x
Data / Analytics																			
Snowflake	\$62,119	\$2,696	\$3,560	35%	32%	72%	72%	8%	11%	27%	28%	23.0x	17.5x	NM	NM	NM	62.8x	0.65x	0.55x
Datadog	40,721	2,091	2,650	25	27	80	79	19	20	19	20	19.5	15.4	NM	NM	NM	NM	0.78	0.57
MongoDB	34,030	1,516	1,845	21	22	76	75	9	11	5	9	22.4	18.4	NM	NM	NM	NM	1.05	0.85
Splunk	20,835	3,880	4,361	9	12	81	80	21	21	21	23	5.4	4.8	26.1	22.5	25.7	20.6	0.62	0.39
Confluent	11,566	763	981	30	29	72	73	(12)	2	(15)	4	15.2	11.8	NM	NM	NM	NM	0.50	0.41
Elastic	6,752	1,184	1,405	18	19	75	75	9	12	10	13	5.7	4.8	60.2	39.5	58.0	35.9	0.31	0.26
Alteryx	3,840	985	1,136	15	15	89	89	12	14	3	9	3.9	3.4	32.0	24.2	NM	39.4	0.26	0.22
Median		\$1,516	\$1,845	21%	22%	76%	75%	9%	12%	10%	13%	\$15	\$12	32.0x	24.2x	41.8x	37.7x	0.62x	0.41x

Source: Factset. Market data as of July 31, 2023.

28 Note: "NM" defined as values that are greater than 75.0x or less than 0.0x. Metrics unburdened by stock-based compensation.

Select AI Public Comps (as of 07/31/23 cont'd)

Company Name	Enterprise Value	Operating Metrics										Valuation Metrics							
		Revenue		Revenue Growth		Gross Margin		EBITDA Margin		UFCF Margin		EV / Revenue		EV / EBITDA		EV / uFCF		EV / Revenue / Growth	
		CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E
Core AI																			
Palantir Tchnlg	\$45,313	\$2,210	\$2,618	16%	18%	81%	82%	25%	27%	21%	22%	20.5x	17.3x	NM	63.7x	NM	NM	1.28x	0.94x
C3.ai	6,707	294	348	12	19	75	76	(19)	(8)	(37)	(8)	22.8	19.2	NM	NM	NM	NM	1.89	1.04
Median		\$1,252	\$1,483	14%	19%	78%	79%	3%	10%	(8%)	7%	21.7x	18.3x	#NUM!	63.7x	NM	#NUM!	1.59x	0.99x
Applied AI																			
CrowdStrike Holdings	\$38,324	\$2,956	\$3,806	36%	29%	77%	78%	21%	22%	31%	32%	13.0x	10.1x	62.7x	45.7x	42.1x	31.8x	0.36x	0.35x
Unity Software	21,336	2,151	2,575	55	20	77	75	13	24	6	13	9.9	8.3	NM	34.3	NM	64.3	0.18	0.42
Samsara	15,597	854	1,090	35	28	73	73	(4)	0	(0)	2	18.3	14.3	NM	NM	NM	NM	0.52	0.52
Upstart Holdings	7,539	559	751	(34)	34	71	72	(0)	11	50	14	13.5	10.0	NM	NM	26.8	71.8	NM	0.29
nCino	3,745	471	549	19	17	66	66	11	14	9	11	8.0	6.8	71.5	47.1	NM	60.1	0.43	0.41
Darktrace	3,517	607	742	26	22	90	90	22	22	15	19	5.8	4.7	26.3	21.4	37.9	25.4	0.22	0.21
Schrodinger	3,375	236	318	31	34	62	59	(70)	(46)	(52)	(40)	14.3	10.6	NM	NM	NM	NM	0.47	0.31
Certara	3,200	377	430	12	14	65	63	36	36	27	27	8.5	7.4	23.8	20.8	31.8	27.3	0.69	0.53
Recursion Pharmaceutic	2,496	53	50	33	(5)	65	67	(509)	(672)	(526)	(549)	47.3	49.9	NM	NM	NM	NM	1.43	NM
AbCellera Biolog	1,657	50	71	(90)	43	94	93	(354)	(210)	(210)	(107)	33.4	23.3	NM	NM	NM	NM	NM	0.54
Coveo Solutions	691	124	147	17	19	77	78	(9)	(1)	(7)	2	5.6	4.7	NM	NM	NM	NM	0.32	0.25
SoundHound AI	554	46	80	47	75	72	74	(65)	8	(126)	(34)	12.1	6.9	NM	NM	NM	NM	0.26	0.09
Median		\$424	\$489	28%	25%	73%	74%	(2%)	9%	3%	7%	12.5x	9.2x	44.5x	34.3x	34.9x	45.9x	0.39x	0.35x
RPA / Process Automation																			
UiPath	\$9,330	\$1,252	\$1,478	20%	18%	85%	85%	14%	15%	14%	17%	7.5x	6.3x	53.9x	41.3x	52.6x	38.2x	0.38x	0.35x
Appian	3,943	536	623	15	16	75	74	(13)	(5)	(13)	(4)	7.4	6.3	NM	NM	NM	NM	0.50	0.39
Median		\$894	\$1,050	17%	17%	80%	80%	1%	5%	0%	6%	7.4x	6.3x	53.9x	41.3x	52.6x	38.2x	0.44x	0.37x
Front Office Software																			
HubSpot	\$30,542	\$2,086	\$2,540	21%	22%	84%	83%	17%	18%	12%	14%	14.6x	12.0x	NM	68.6x	NM	NM	0.71x	0.55x
Veeva Systems	29,998	2,348	2,780	10	18	73	74	35	37	41	36	12.8	10.8	36.1	29.0	31.2x	29.6x	1.24	0.59
Braze	4,491	437	538	27	23	69	69	(11)	(2)	(6)	(1)	10.3	8.4	NM	NM	NM	NM	0.39	0.36
Sprinklr	3,594	706	817	16	16	76	76	9	11	7	10	5.1	4.4	55.7	39.2	72.6	42.8	0.32	0.28
Sprout Social	3,150	332	434	31	31	78	78	2	4	6	7	9.5	7.3	NM	NM	NM	NM	0.31	0.24
Median		\$706	\$817	21%	22%	76%	76%	9%	11%	7%	10%	10.3x	8.4x	45.9x	39.2x	51.9x	36.2x	0.39x	0.36x

Source: Factset. Market data as of July 31, 2023.

29 Note: "NM" defined as values that are greater than 75.0x or less than 0.0x. Metrics unburdened by stock-based compensation.

Select AI Public Comps (as of 07/31/23 cont'd)

Company Name	Enterprise Value	Operating Metrics										Valuation Metrics							
		Revenue		Revenue Growth		Gross Margin		EBITDA Margin		UFCF Margin		EV / Revenue		EV / EBITDA		EV / uFCF		EV / Revenue / Growth	
		CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E	CY '23E	CY '24E
Collaboration / Contact Center Software																			
Zoom Video Communic	\$17,834	\$4,468	\$4,663	2%	4%	80%	79%	39%	38%	26%	30%	4.0x	3.8x	10.3x	9.9x	15.1x	12.5x	1.74x	0.88x
NICE	14,387	2,362	2,637	8	12	72	73	33	34	22	23	6.1	5.5	18.5	16.3	27.8	23.8	0.73	0.47
Twilio	9,422	4,085	4,478	7	10	52	52	15	16	2	7	2.3	2.1	15.3	13.2	NM	29.0	0.34	0.22
monday.com	8,360	704	903	36	28	89	89	3	4	10	12	11.9	9.3	NM	NM	NM	74.2	0.33	0.33
Five9	6,814	908	1,075	17	18	61	61	18	19	10	10	7.5	6.3	42.9	33.3	NM	60.6	0.45	0.34
RingCentral	5,790	2,196	2,427	10	11	79	79	22	24	12	15	2.6	2.4	11.9	10.0	21.8	15.5	0.25	0.23
Verint Systems	3,320	932	1,003	3	8	70	71	27	28	20	21	3.6	3.3	13.1	11.7	18.2	16.1	1.10	0.44
8x8	970	754	784	5	4	72	73	13	14	6	9	1.3	1.2	9.9	8.6	21.2	14.3	0.25	0.31
Median		\$1,564	\$1,751	8%	10%	72%	73%	20%	21%	11%	14%	3.8x	3.6x	13.1x	11.7x	21.2x	19.9x	0.40x	0.34x
Semiconductors																			
Broadcom	\$421,084	\$36,114	\$38,359	7%	6%	75%	75%	63%	64%	55%	57%	11.7x	11.0x	18.4x	17.3x	21.2x	19.3x	1.58x	1.77x
AMD	185,055	22,920	27,146	(3)	18	51	53	24	29	15	21	8.1	6.8	33.0	23.8	53.9	32.0	NM	0.37
Marvell Tech	60,962	5,559	6,374	(4)	15	62	64	33	38	25	29	11.0	9.6	32.9	25.0	43.7	32.7	NM	0.65
Teradyne	18,445	2,674	3,222	(15)	20	58	59	24	30	14	20	6.9	5.7	28.2	19.0	50.4	29.3	NM	0.28
Ambarella	3,300	272	330	(19)	21	63	63	(2)	5	2	2	12.1	10.0	NM	NM	NM	NM	NM	0.47
Median		\$5,559	\$6,374	(4%)	18%	62%	63%	24%	30%	15%	21%	11.0x	9.6x	30.6x	21.4x	47.0x	30.6x	1.58x	0.47x
Robotics / Hardware																			
Intuitive Surgical	\$110,183	\$7,143	\$8,170	15%	14%	68%	69%	39%	40%	25%	27%	15.4x	13.5x	39.3x	33.8x	61.2x	49.5x	1.04x	0.94x
Symbolic	37,296	1,226	1,824	71	49	21	26	1	11	11	11	30.4	20.4	NM	NM	NM	NM	0.43	0.42
FANUC	14,215	6,051	6,317	(2)	4	38	39	27	29	13	15	2.3	2.3	8.6	7.9	18.7	15.0	NM	0.51
Median		\$6,051	\$6,317	15%	14%	38%	39%	27%	29%	13%	15%	15.4x	13.5x	23.9x	20.8x	40.0x	32.3x	0.74x	0.51x
Overall AI Public Comps Median		\$2,196	\$2,618	15%	18%	73%	73%	19%	20%	14%	16%	9.4x	7.4x	25.9x	22.5x	31.6x	29.2x	0.58x	0.47x

Source: Factset. Market data as of July 31, 2023.

30 Note: "NM" defined as values that are greater than 75.0x or less than 0.0x. Metrics unburdened by stock-based compensation.

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