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The State of Commercial Open Source 2025

The Data-Backed Financial Case from 25 Years of Commercial Open Source

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Forewords by
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The State of Commercial Open Source 2025

Commercial Open Source (COSS) is a well-established venture investment category, accounting for an average of $9B per year across ~250 deals.

Mega-rounds in 2024 reflect **high confidence in late-stage COSS category leaders:** Databricks: **$9.5B**, xAI: **$11B**, Mistral AI: **$600M** (Series A).

The **US** is still the **primary hub for VC-backed COSS companies,** with 65% of companies being US-based — double the US share in overall software (33%).

Open source forms the backbone of modern software infrastructure; About **90% of venture-funded COSS companies design and maintain critical software infrastructure.**

Development tools and **core infrastructure** are over **5x** more likely **to be commercial open source (COSS)**, with **open source** being the **default go-to-market for investors & founders.**

COSS companies outperform closed-source peers in **fundraising speed** and **valuations** at **early stages**

COSS exits are real: 12% of **venture-funded COSS companies have reached M&A** or **IPO.**

COSS companies get **superior exit valuations** (**7x** higher at **IPO** and **14x** higher at **M&A**)

COSS companies **don't require more time or capital** to reach key valuation milestones — instead, they **convert both more efficiently into valuation.**

Highly valuable COSS companies cultivate **integral & vibrant project communities: OpenSSF Criticality Score**, the number of **distinct contributors**, & **commit frequency** correlate strongly with COSS valuations.

Communities benefit from COSS funding: **27%** increase in distinct contributors, **2+** new contributing organizations, and **52%** increase in release frequency following funding rounds.

COSS projects see significant community growth after funding — **8×** more dependent projects, **7×** more package downloads, and a **60%** jump in GitHub stars.

Contents

Forewords

For years, open source has been misunderstood as a kind of digital charity—a gift from generous developers to the world. A public good. A thankless hobby. But that framing is wrong. And dangerous.

Open source is not a gift. It's an asset class—arguably the most undervalued one in the modern economy.

Every modern company runs on open source. Every cloud, mobile app, AI model, and edge device depends on it. Kubernetes, PyTorch, PostgreSQL, and React aren't just tools; they are critical infrastructure. They represent tens of millions of hours of intellectual labor and trillions of dollars in aggregate value creation.

Since 2019, open source startups have averaged $9 billion in annual investments and 250 funding rounds per year. As you will discover in this report, commercial open source is a $26.4 billion investment category that consistently outperforms traditional software on key financial metrics. This helps explain why open source startups are seeing historic funding levels. In 2024, COSS companies raised $26.4 billion across 211 deals, making up 5% of all VC investments in software. This momentum continues in 2025, with open source recognized as a major investment category.

Yet, for all its successes, building a durable COSS company remains an inconsistent, ad-hoc art form. Even today, the category lacks a central institution that understands open source dynamics and can provide meaningful guidance to investors and founders.

This report, *The State of Commercial Open Source 2025*, is our first step toward changing that. It represents a new, data-centric approach to understanding the COSS market, made possible through a landmark partnership between Serena, the Commercial Open Source Startup Alliance, and Linux Foundation Research. Our objective is to begin replacing guesswork with authoritative intelligence.

This report is the initial public output of the Commercial Open Source Startup Alliance (COSSA), an initiative I began designing in late 2024 and which the Linux Foundation has been generously incubating. The mission of COSSA is to create the essential business infrastructure the open source market has lacked. We are focused on establishing clear standards and best practices, delivering market-wide data through the COSS Data Commons, connecting entrepreneurs to capital, and implementing structured education and mentorship programs to arm founders with the tools for modern business strategy. We are here to turn an unrefined process into a structured discipline.

The origin of this report reflects the blueprint for COSSA itself: a pragmatic partnership that leverages private sector innovations for public ecosystem gain. This publication came about through a landmark collaboration with Serena Capital, who contributed their comprehensive research on the COSS ecosystem. We have taken that foundational analysis and republished it here, enriching it with an updated community analysis provided by the Linux Foundation. By overlaying Serena's commercial data with community health metrics from the LFX platform, we are beginning the vital work of connecting an open source project's community to its commercial success.

More than just a single report, this work is an investment in shared infrastructure that will drive returns for the entire industry. The analysis in these pages and its underlying data forms the foundation of the COSS Data Commons, which we intend to become the system of record for scientifically analyzing venture-funded open source.

At COSSA, our data-driven frameworks will be codified into actionable COSS Playbooks and curricula designed to create a self-reinforcing flywheel where better information leads to more successful, enduring companies and more successful, enduring open source projects.

Together, we are building the essential architecture for the next decade of commercial open source. If you are a founder of, investor in, or advisor for commercial open source companies, please join us at **https://cossa.io.**

Matt Trifiro
Founder,
Commercial Open Source Startup Alliance (COSSA)

For years, questions have lingered over whether open source companies could deliver the kind of growth, defensibility, and returns that venture capital demands. Though research (including my own) has shown the importance of open source to startups, these questions about companies that have open source at the core of their business model remain. The evidence in this report makes the answer clear: not only can such companies become successful, they often do so more effectively than their proprietary counterparts.

Drawing on a quarter century of venture data, the picture that emerges is striking. Companies built on open source foundations routinely achieve higher valuations at exit — in some cases, several multiples greater than those of closed-source peers. They are not slower to reach those milestones, nor do they require more capital to get there. Instead, they tend to turn resources into enterprise value with greater efficiency. The effect is particularly pronounced in technology segments where developer adoption drives market leadership, such as with developer tools, DevOps platforms, and core infrastructure, areas where open source approaches are not the exception, but the rule.

Equally important is what the data reveals about the interplay between commercial performance and community strength. Far from existing in separate spheres, the two move together. Projects with broader contributor bases, higher diversity among contributors, and strong indicators of technical importance to the community (such as the OpenSSF Criticality Score) are consistently associated with higher company valuations.

Perhaps most encouraging for open source projects is that investment does not signal the beginning of a community's decline. On the contrary, the report finds that funding often sparks measurable growth: more contributors, more organizational participation, faster release cycles, and increased downstream adoption. The positive link between community vitality and company value actually strengthens as companies progress to later funding rounds, suggesting a reinforcing cycle where commercial resources and community engagement fuel each other. This report offers a data-backed framework to help investors identify promising opportunities and to give communities confidence that commercial partnerships can amplify their work rather than undermine it.

These results echo my own academic research (and that of others) on open source, which has shown that open collaboration drives innovation and creates measurable economic value for firms. The trends in this report, including stronger valuations, faster growth, and the interplay of community and commercial success, align with a broader body of evidence that open source is not just viable but strategically advantageous.

The future of software will be shaped in the open. By aligning the incentives of capital and community, we have the opportunity to create technologies that are not only commercially successful, but also resilient, widely adopted, and deeply collaborative. The data makes the case; it's now up to all of us to act on it.

Frank Nagle
Chief Economist, The Linux Foundation
Research Scientist,
The Massachusetts Institute of Technology

Executive summary

Over the past two decades, open source software has redefined how technology is built, adopted, and scaled. Yet despite its widespread use and appeal among developers and enterprises, the financial viability of commercial open source software (COSS) has remained a subject of debate. Critics have questioned whether open source companies can effectively monetize their technology, differentiate from competitors, and defend against hyperscaler commoditization. High-profile exits like Red Hat, MongoDB, and HashiCorp are often seen as outliers rather than evidence of a repeatable playbook.

This report sets out to settle that debate with data. Drawing from 25 years of venture capital activity and a matched dataset of over 800 VC-backed COSS startups, we benchmark the funding trajectories and liquidity outcomes of open source companies against their closed-source peers. The results are conclusive: not only is COSS financially viable, it consistently outperforms on key venture metrics especially in infrastructure software.

COSS companies raise at higher valuations, with median multiples of 1.6x at Series A and 1.23x at Series B compared to closed-source peers, and secure larger rounds, especially at Seed (1.45x) and Series A (1.33x). They also demonstrate stronger graduation rates, with the likelihood of progressing from Seed to Series A nearly twice as high as their closed-source counterparts. Finally, they move through the funding funnel more quickly, with shorter time gaps between rounds, 20% faster to Series A and 34% faster to Series B. On the liquidity side, COSS companies achieve superior outcomes: median IPO valuations are $1.3 billion (vs. $171 million), and M&A valuations are $482 million (vs. $34 million). These results come with no evidence of a liquidity penalty or longer time-to-exit for COSS companies.

This report also enriches the financial lens with an analysis of open source communities. The findings show that community quality, particularly contributor diversity, project centrality, and update activity, correlates with company valuation, especially as projects mature. Meaningful community metrics, like OpenSSF's Criticality Score, emerge as more predictive indicators of COSS company value than widely used vanity metrics like GitHub stars. Even more encouraging, COSS project communities continue along healthy growth paths after the company receives venture funding. In essence, highly valued COSS companies tend to cultivate more vibrant, diverse, and integral open source ecosystems, reinforcing the idea that business value and community value are tightly coupled in successful COSS models.

As AI reshapes the software stack, data infrastructure becomes more strategic, and digital sovereignty rises on public and private agendas, open source is emerging not just as a development model but as a cornerstone of modern software business strategy. This report is both a call to action and a foundational resource for entrepreneurs, investors, and policymakers seeking to understand where and why open source wins and how to back the companies that will define the next decade of software.

Matthieu Lavergne
Partner at Serena

Methodology

In this report, “open source” is defined broadly. It covers companies whose products rely on publicly accessible source code—whether under an OSI-approved license, open weights in AI, or products with a meaningful open source component alongside proprietary features. This report analyzes a representative sample of venture-funded companies that reflect the evolving reality of COSS models in today’s software landscape.

This report draws on two important strands of data. The first dataset, initially published as part of the *Commercial Open Source Report 2025* by Serena, explores the financial journey of open source companies through the lens of 25 years of venture data (2000 through 2024), tracking over 800 VC-backed COSS companies globally. The report follows these companies from the first VC round to exit (M&A or IPO) and benchmarks their trajectories against a control group of closed-source software companies, normalized for founding year, geography, and sector.

The second dataset augments the COSS analysis with nearly three years (June 2022 through May 2025) of open source community indicators covering all public GitHub repositories managed by the COSS companies in the sample. Originally collected by the Open Source Security Foundation’s (OpenSSF) **Criticality Score** initiative, these measures include factors like project age, contributor composition, release cadences, and community growth. We use this data to explore the correlation between commercial OSS value and tangible metrics for project community success.

800+
VC-backed companies

25
years of data

From **1st**
VC round to exit

13
measures of open source community

764
COSS GitHub organizations with a combined 6,432 repositories

3
years of data

Since COSS companies might have many open source projects on GitHub, we aggregate community measurements to the company level by taking the sum across all the company's public GitHub repositories. This approach better reflects the total extent of the COSS company's community impact which may potentially span across several widely used projects. As a robustness check, we note that the general pattern of results is consistent when using alternative aggregation functions, such as means and maximums across projects.

Because this report integrates quantitative financing and exit data from PitchBook with open source community and codebase activity data from GitHub, we can offer a combined view of financial performance and community traction. This dual perspective allows us to assess whether community engagement meaningfully influences financing success and valuation, as well as how COSS performance compares head-to-head with proprietary software across funding, growth, and exit outcomes.

Leverage LFX Insights for a contextualized view of the open source ecosystem

In this report we demonstrate how vibrant open source communities coincide with COSS values. For a deeper dive, the **LFX Insights** platform offers an unparalleled perspective into crucial community metrics. It provides organizations with a uniquely tailored understanding of their open source impact alongside a broader view of ecosystem-wide trends.

PART *01*

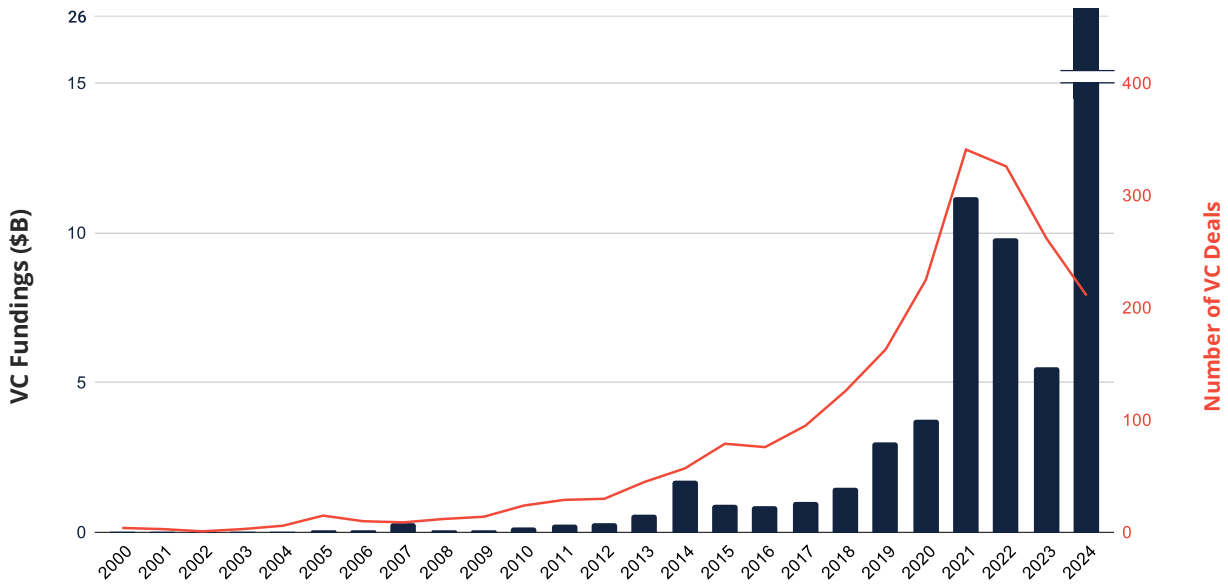
COMMERCIAL OPEN SOURCE AS A *VC CATEGORY*

FIGURE 1

Q: HOW BIG IS THE COSS VC CATEGORY?

THERE HAVE BEEN 211 VC DEALS IN COSS IN 2024 TOTALING $26.4B IN AGGREGATE FUNDING

Yearly Deal Count and VC Funding in COSS



~250
Deals per year [19 - 24]

4.5%
Of all software VC investments [24]

~$9B
VC Funding per Year [19 - 24]

PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

TABLE 1

Q: WHAT ARE THE BIGGEST ROUNDS OF 2024 IN COSS?

AI LEADS IN RECENT COSS FUNDRAISING ROUNDS

COMPANY	TOTAL FUNDING ($M)	DEAL DATES	VERTICALS
xAI	$11,146	05/2024 11/2024	AI
databricks	$9,500	12/2024	AI
MISTRAL AI_	$999	02/2024 06/2024	AI
tenstorrent	$659	12/2024	AI
ClickHouse	$399	05/2025	Data
Chainguard	$323	04/2025	Security
Rivos	$321	04/2024	Semiconductors
Grafana	$300	08/2024	Observability
together.ai	$293	02/2025	AI
Vercel	$233	05/2024	CloudTech & DevOps
supabase	$189	03/2025	Data
aqua	$178	01/2024	Cybersecurity, SaaS, TMT
tailscale	$147	04/2025	Security
Temporal	$135	03/2025	Core Infrastructure

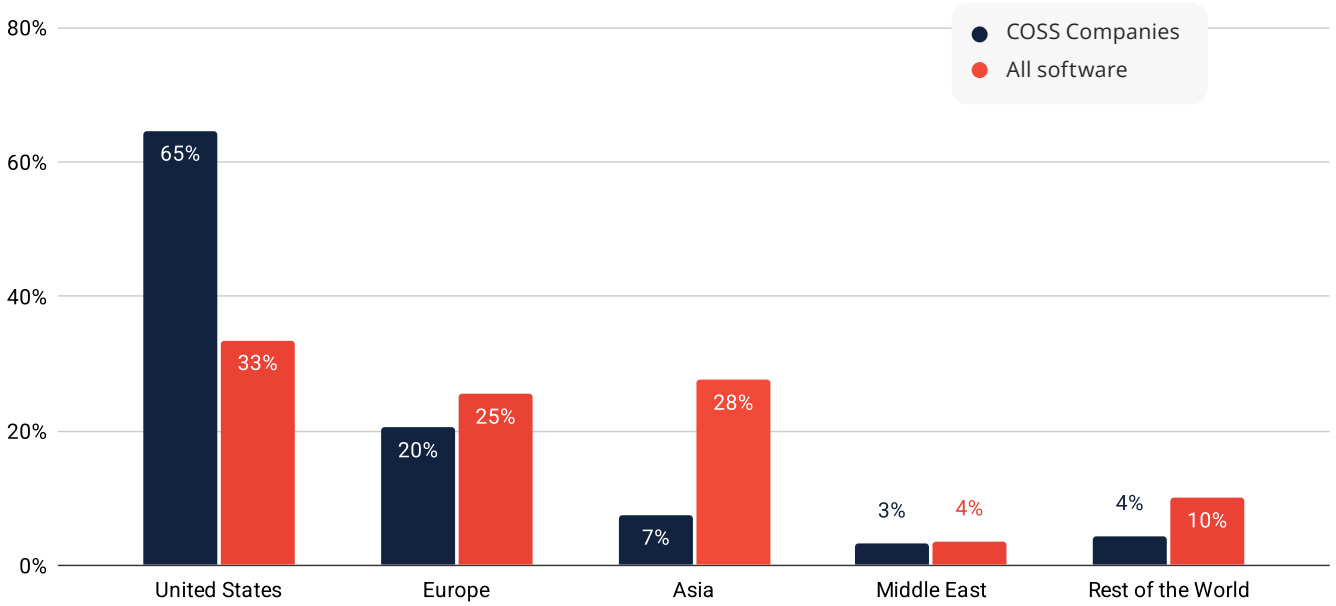
PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

FIGURE 2

Q: WHERE ARE COSS COMPANIES LOCATED?

THE US IS THE PRIMARY HUB FOR VC-BACKED COSS COMPANIES, WHERE THEY ARE DISPROPORTIONATELY REPRESENTED

Headquarters Location (% of total) by region



COSS companies are far more concentrated in the US (65%) than the overall software industry (33%), highlighting the US as the dominant hub for Commercial Open Source innovation.

Europe has a stronger presence in COSS (20%) compared to its share of the overall software sector (25%), suggesting a growing ecosystem for open source businesses.

Asia, despite being a major software hub (27.5%), has a much smaller share of COSS companies (7.5%), indicating lower adoption of open-source business models.

PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

TESTIMONIAL

THE POV

PIERRE BURGY
Co-Founder & CEO @ Strapi

strapi

HQ: USA

Cumulative Fundings: ~$50M

Ten years ago, securing VC funding for open source startups in Europe was almost impossible—the ecosystem simply wasn't mature enough, and investors lacked the appetite for such risk.

Thankfully, the landscape has changed for the better. Tech European VCs now support open source ventures at early stages. However, at later funding rounds, founders inevitably must still seek US investors, as Europe lacks sufficient depth of late-stage capital.

Commercial Open Source Software (COSS) companies are inherently international from day one because their products are globally accessible. And given that roughly 50% of the Software total addressable market sits in the US, it's essential to build a meaningful US presence early—first to drive user adoption, then to scale sales.

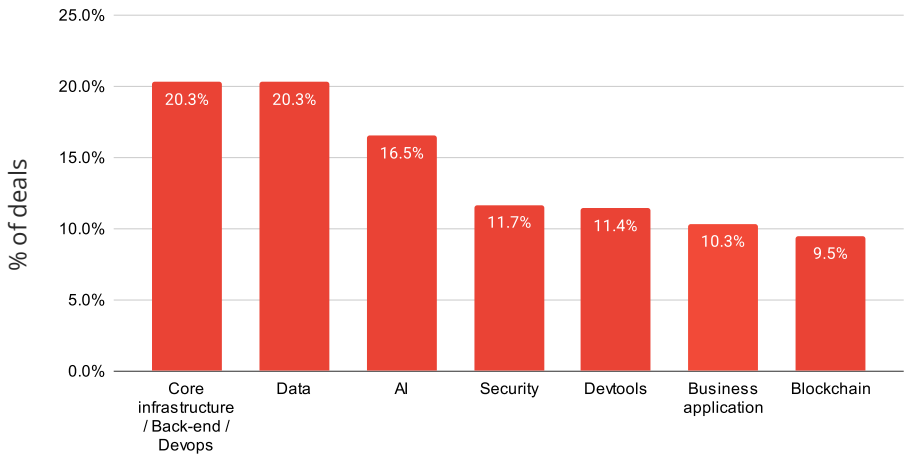
Recently, as US investors pull back from European markets, establishing a physical presence in the US is increasingly vital to secure American capital and maintain competitive growth.

FIGURE 3

Q: WHO ARE THESE COSS COMPANIES?

VCS INVEST IN OPEN SOURCE COMPANIES THAT FORM THE BACKBONE OF MODERN SOFTWARE & CLOUD ECOSYSTEMS

Deal count (% of total) per categories



Methodology: We categorized companies into 7 segments using a mix of PitchBook descriptions and automated classification via GPT API, run 5 times per company with a majority vote to ensure consistency.

Core Infrastructure and Data Lead: Each category represents 20% of deals, showing that investors focus on foundational open source technologies that enable cloud computing, data management, and large-scale software operations.

AI Gains Strong Traction (17%), reflecting the increasing role of open source AI frameworks and models in automation, analytics, and machine learning.

Security (12%) and DevTools (11%) Remain Key Areas, highlighting sustained interest in cybersecurity solutions and developer productivity tools.

Lower Investment in Business Applications (10%) and Blockchain (9%), suggesting that open source adoption in enterprise software and decentralized technologies is not as mature as in infrastructure-related segments.

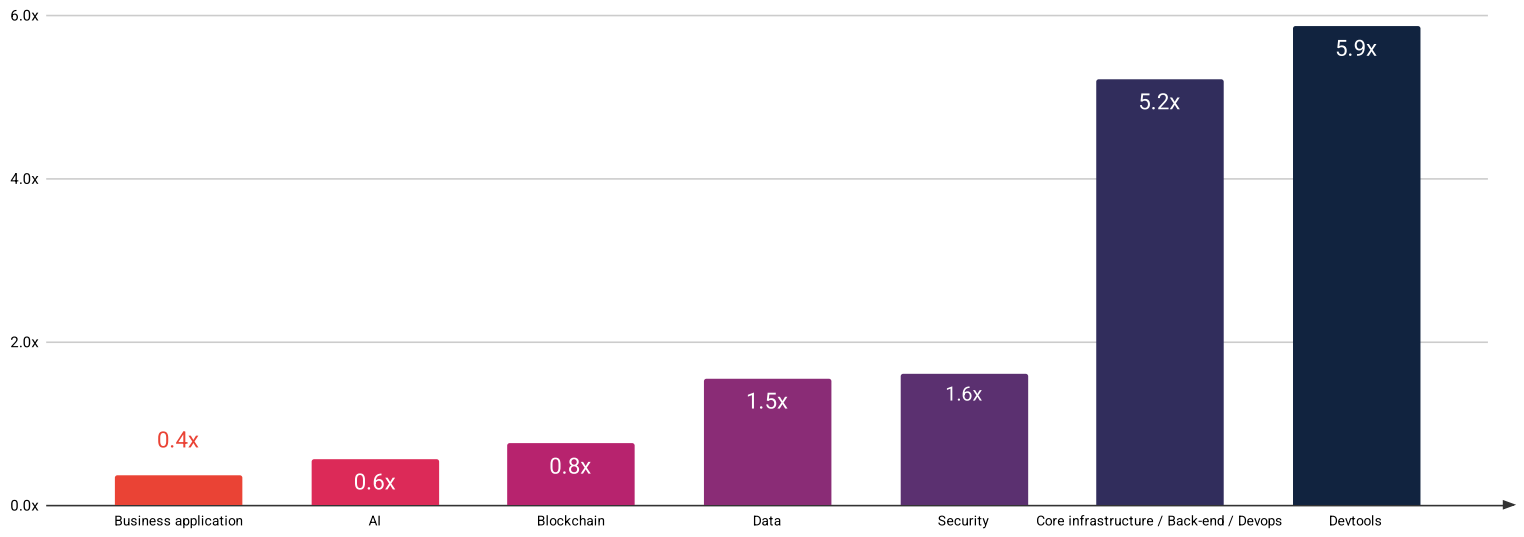
PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

FIGURE 4

Q: WHERE DID COSS EAT SOFTWARE?

DEVTOOLS & CORE INFRASTRUCTURE COMPANIES ARE FAR MORE LIKELY TO GO OPEN SOURCE THAN CLOSED SOURCE

Odds ratio for a given company to be COSS Companies vs. Closed Source



More likely to go Closed Source

More likely to go Open Source

Methodology: We calculated the odds ratio for each software category by comparing the share of COSS companies within that category to the overall share of COSS companies in a combined dataset of US software companies founded after 2018, VC-backed, using PitchBook data with COSS companies removed from the control group.

PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

TESTIMONIAL

THE POV

RAND HINDI
Co-Founder & CEO @ Zama

ZAMA

HQ: France

Cumulative Fundings: ~$150M

As a cryptography company, we had no choice but to fully open source our technology to gain trust and adoption.

However, this raised a key question: how could we maintain defensibility against large companies that had superior distribution, resources, and product capabilities? Competing on those fronts alone was not an option, so we implemented a dual licensing strategy.

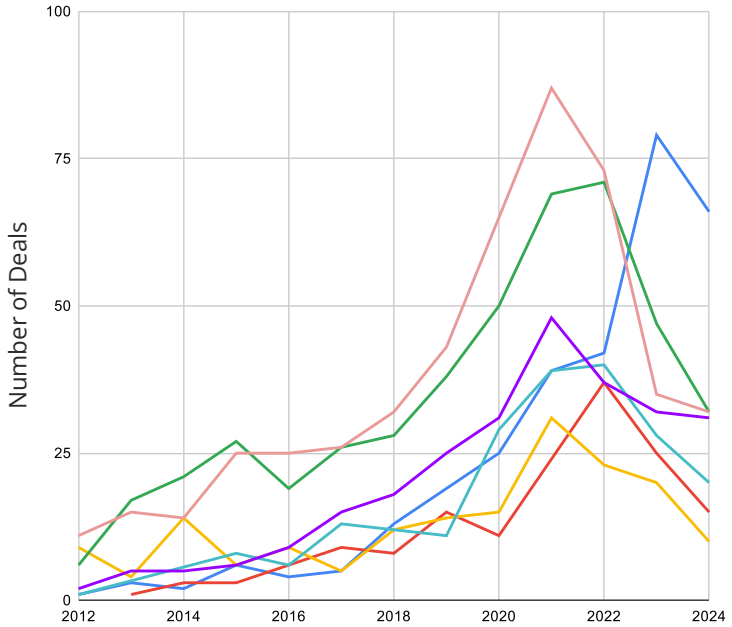
We open sourced our core technology while filing patents to prevent direct replication. At the same time, we focused on capturing and retaining key talent—ensuring that by the time competitors found ways to work around our patents, we would have already built a strong distribution network and significant brand equity.

FIGURE 5 & 6

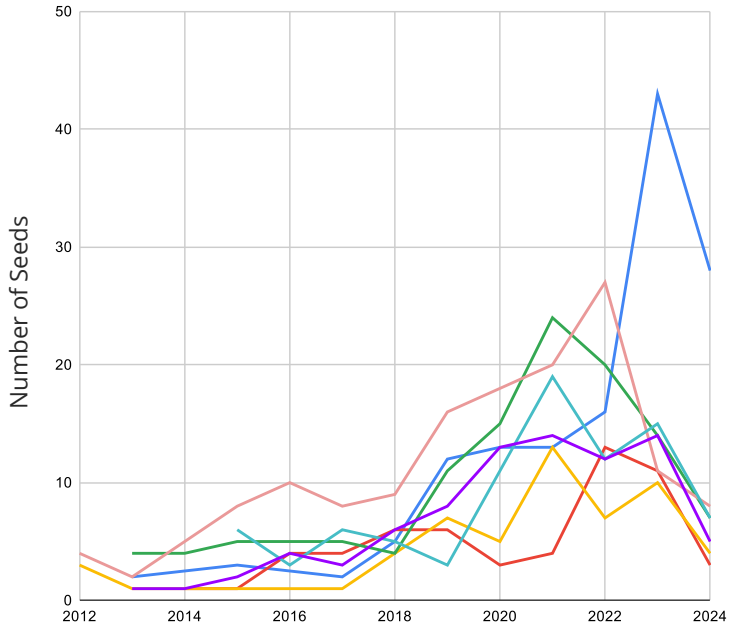
Q: WHAT SEGMENTS HAVE ATTRACTED VC MONEY IN RECENT YEARS?

IN 2024, AI SECURED ITS PLACE IN THE COSS UNIVERSE

Deal Count per category



Seed Round: Deal Count per category



Categories

AI · Blockchain · Business Application · Data · DevTools · Security · Core Infrastructure, Back-end, DevOps

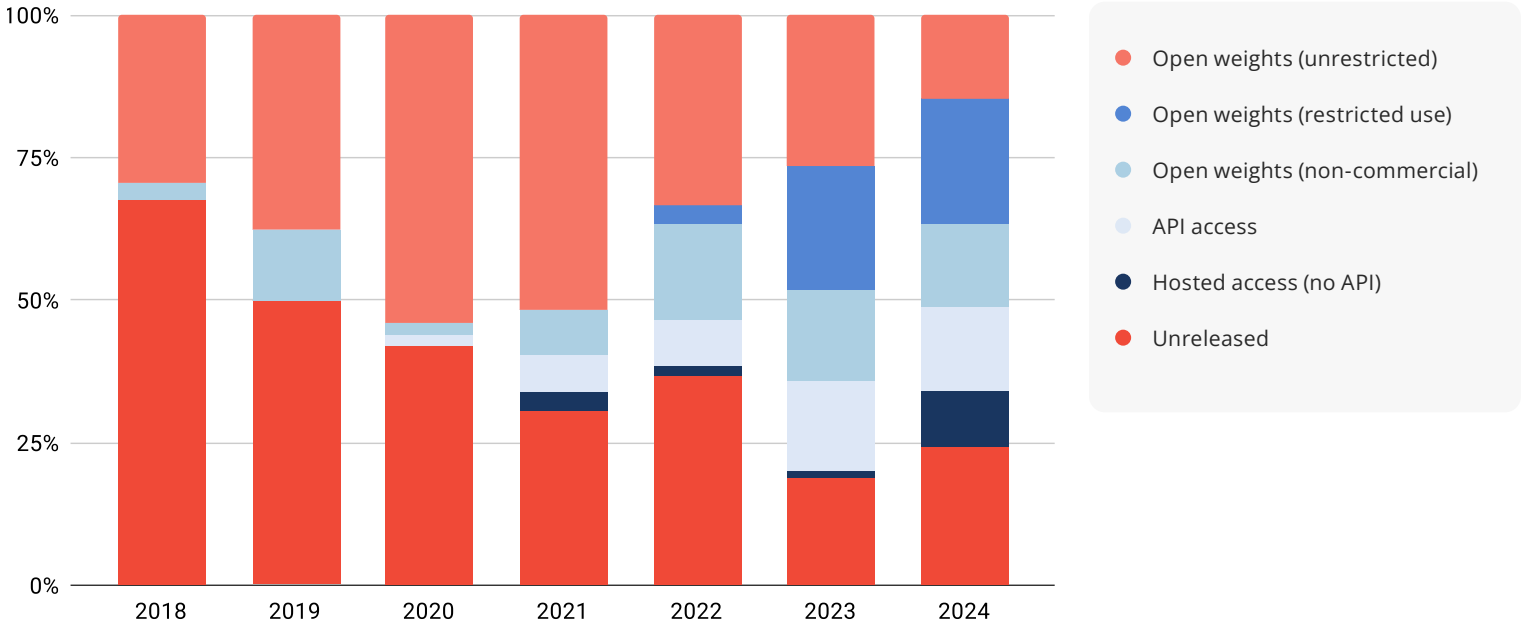
PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

FIGURE 7

Q: HOW OPEN IS OPEN SOURCE AI?

NEARLY HALF OF AI MODELS RELEASED HAVE INCLUDED SOME FORM OF OPEN COMPONENT—THOUGH THE DEFINITION OF 'OPEN' REMAINS AMBIGUOUS

Most notable AI models released from 2019 to 2024



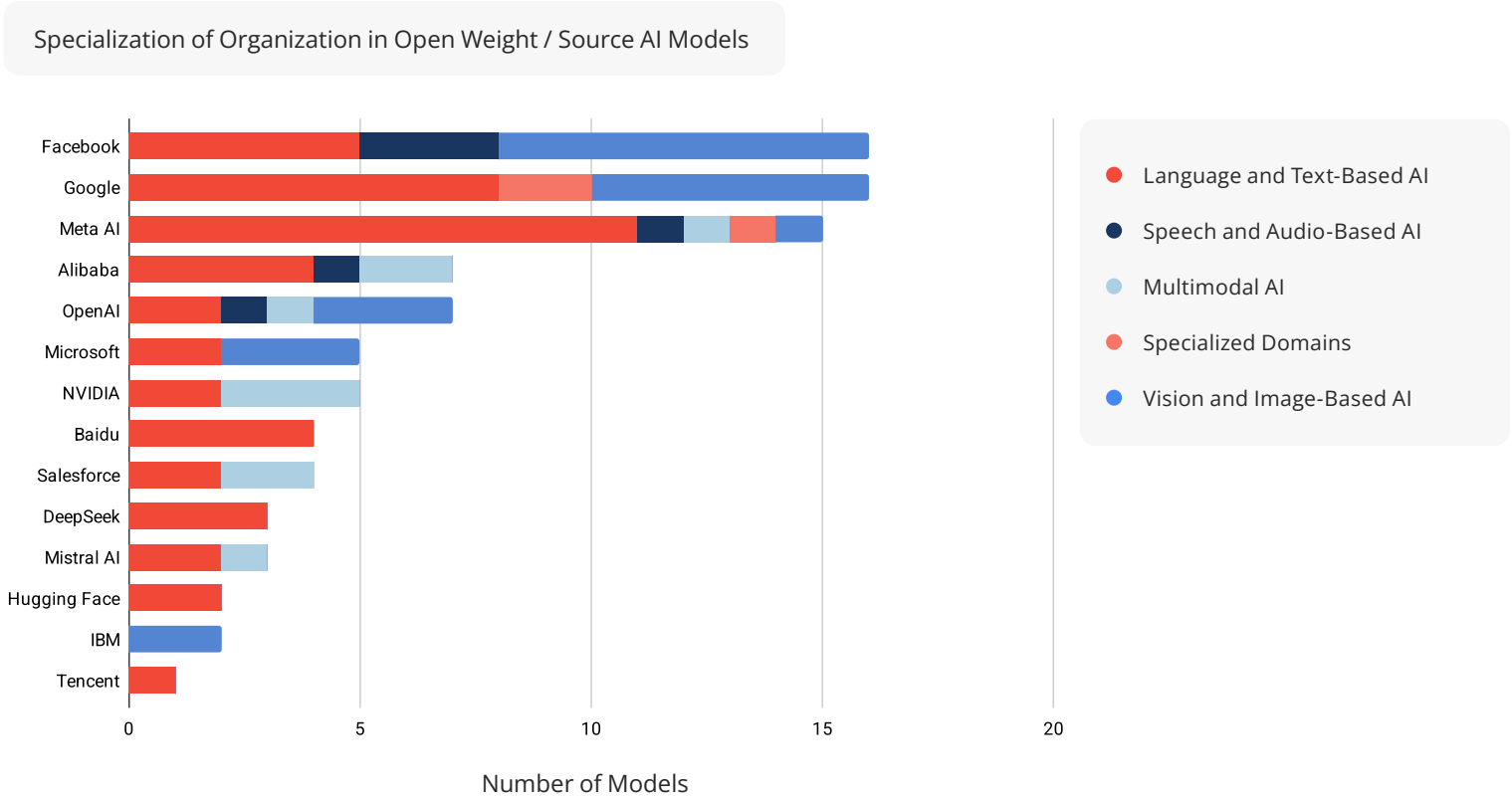
Source: Epoch AI Data, How Far Behind Are Open Models?

PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

FIGURE 8

Q: HOW OPEN IS OPEN SOURCE AI?

OPEN-WEIGHT AI: BIG TECH CALLS THE SHOTS ON 'OPENNESS'



Source: Epoch AI Data, How Far Behind Are Open Models? Only models classified as Open Weights (Unrestricted), Open Weights (Restricted Use), and Open Weights (Non-Commercial) were included.

TESTIMONIAL

THE POV

LOUBNA BEN ALLAL
Research Engineer
@ Hugging Face

Hugging Face HQ: USA Cumulative Fundings: ~$400M

Openly released AI models often spark community-driven innovation.

Over 1.5 million public models are now available on Hugging Face, with some attracting millions of monthly users.

More notably, active users don't just adopt these models — they build on top of them, extending their impact and reach. That kind of adoption compounds visibility, usefulness, and ultimately, trust in the original model — which feeds directly back into the brand.

In foundational models, open-source creates a compounding trust loop: transparency accelerates adoption, and community scrutiny enhances robustness. We've seen this firsthand — releasing open weights brought not just traction, but credibility in a highly competitive space.

While it's easy to worry that openness limits defensibility, we've learned that in a fast-moving field like AI, community trust and contribution can be far more durable than a secret sauce.

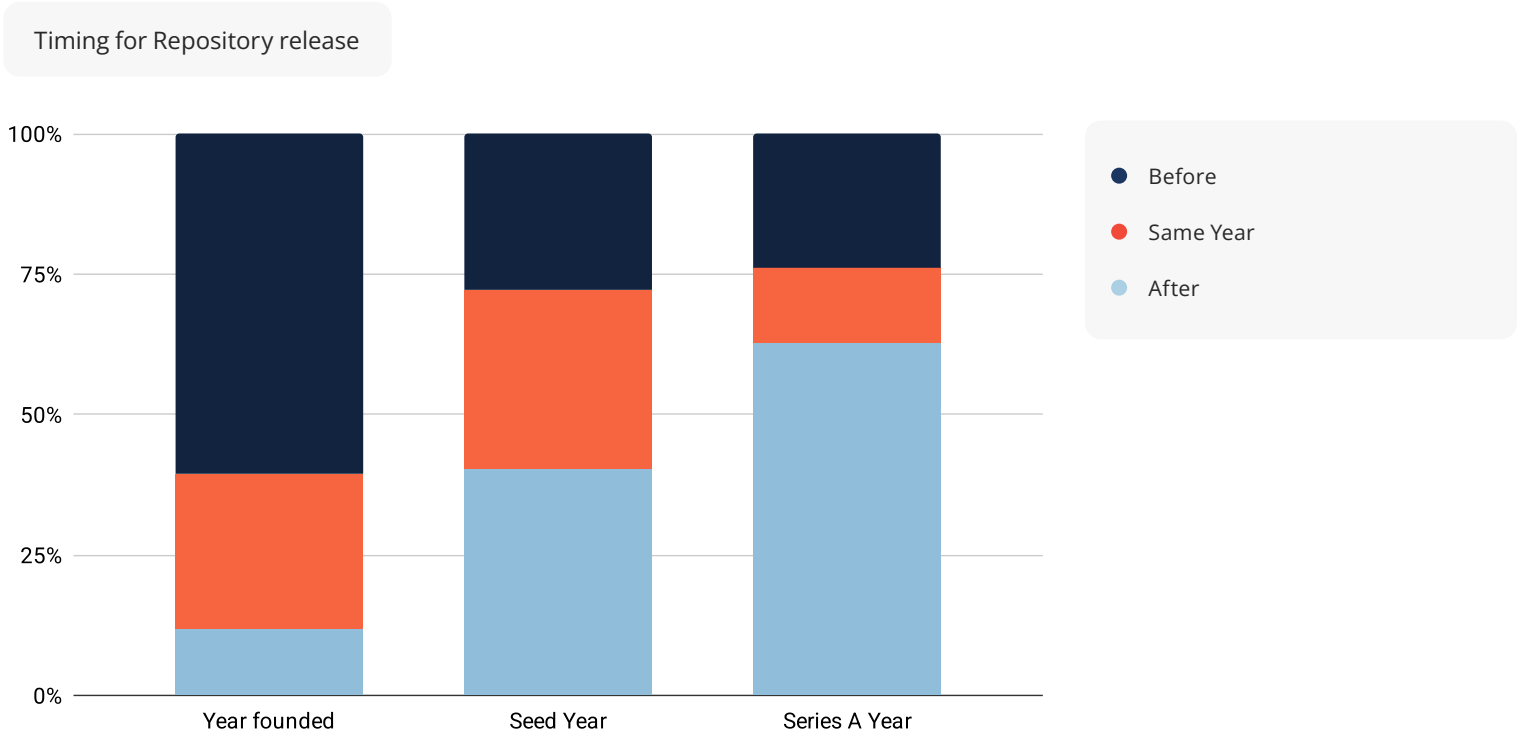
PART *02*

THE VC JOURNEY FOR *COSS COMPANIES*

FIGURE 9

Q: THE STARTING POINT: PROJECT OR COMPANY?

MOST COSS COMPANIES LAUNCH BEFORE THEIR FIRST REPO IS RELEASED

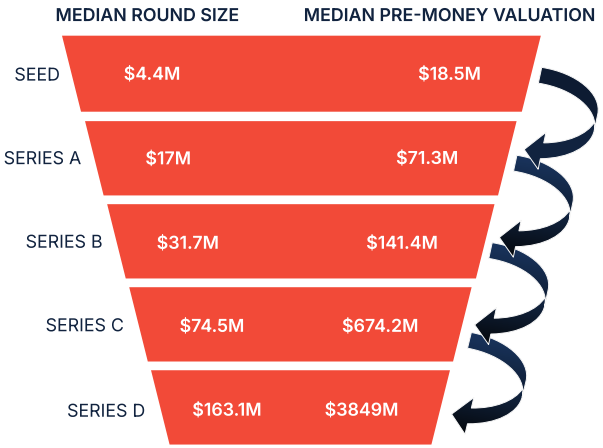


Methodology: Based on PitchBook and GitHub data, we compared the creation year of the official organization repository with the company's founding year, Seed round year, and Series A round year. The GitHub page used is the company's current official organization page. Some projects may have originally started on a personal developer account before being migrated to the official company repo.

FIGURE 10

Q: WHAT ARE THE TYPICAL ROUND SIZES & VALUATIONS COSS COMPANIES GET?

THE TYPICAL VC JOURNEY FOR COSS COMPANIES



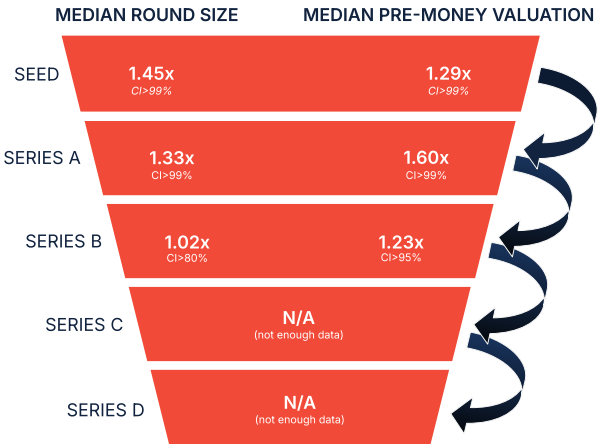
TIME BETWEEN ROUNDS	CONVERSION RATE
15 months	74%
17 months	62%
17 months	61%
13 months	54%

Methodology: Round sizes and valuations were calculated on a 2023-2024 cohort. Conversion rates were calculated on a 2015-2017 seed cohort. Median lead times were calculated across all companies in the sample.

FIGURE 11

Q: IS IT HARDER TO FINANCE COMMERCIAL OPEN SOURCE COMPANIES VS CLOSED SOURCE?

COSS COMPANIES RAISE MORE CAPITAL, FASTER, AND WITH GREATER EASE THAN THEIR CLOSED-SOURCE COUNTERPARTS



TIME BETWEEN ROUNDS	CONVERSION RATE
20% Faster CI>99%	91% Higher CI>99%
34% Faster CI>80%	88% Higher CI>98.5%
None (not enough data)	None (not enough data)
None (not enough data)	None (not enough data)

CI = Confidence Interval

Methodology: Round sizes, valuations, and time between rounds were calculated on a 2018-2024 cohort (US, software, VC-backed), comparing COSS companies to a matched control group with similar sector distribution; conversion rates were calculated on a 2015-2017 seed cohort, with all metrics based on PitchBook data and statistical significance assessed across 100 resampled control groups.

PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

TESTIMONIAL

THE POV

ALEXEY MILOVIDOV
CTO @ ClickHouse

ClickHouse

HQ: USA

Cumulative Fundings: ~$650M

Adopting new software in a company is a multi-step journey, and open source has been instrumental in driving the success of ClickHouse Cloud at every stage. The most crucial step, adoption, becomes significantly easier with open source.

Technical teams can seamlessly download, install, and experiment with the software without external friction, enabling rapid proof-of-concept validation. From there, assessing the software's value and moving to production is a natural progression, with minimal barriers.

Beyond adoption, building in the open let us kick off new features as quickly as possible, polish product quality, and receive feedback as soon as possible.

Open source is the strongest marketing and distribution force, organically expanding our user base and market reach. As ClickHouse's popularity grows, so does the demand for our commercial offering. And because our cloud service is built on the same open source foundation, transitioning from OSS to a commercial solution is frictionless.

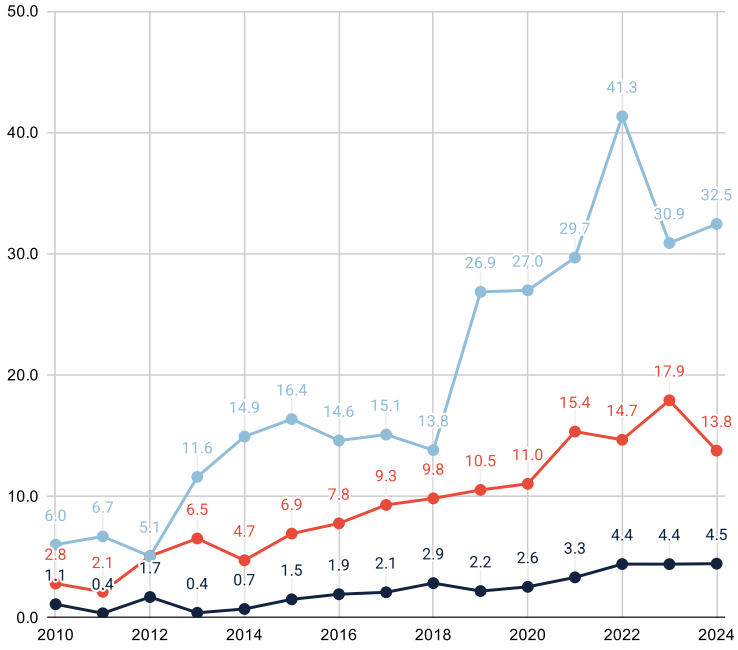
The enterprise offering further extends the value with scalability, security, integrations, and compliance—ensuring that open source fuels, rather than competes with, commercial success.

FIGURE 12 & 13

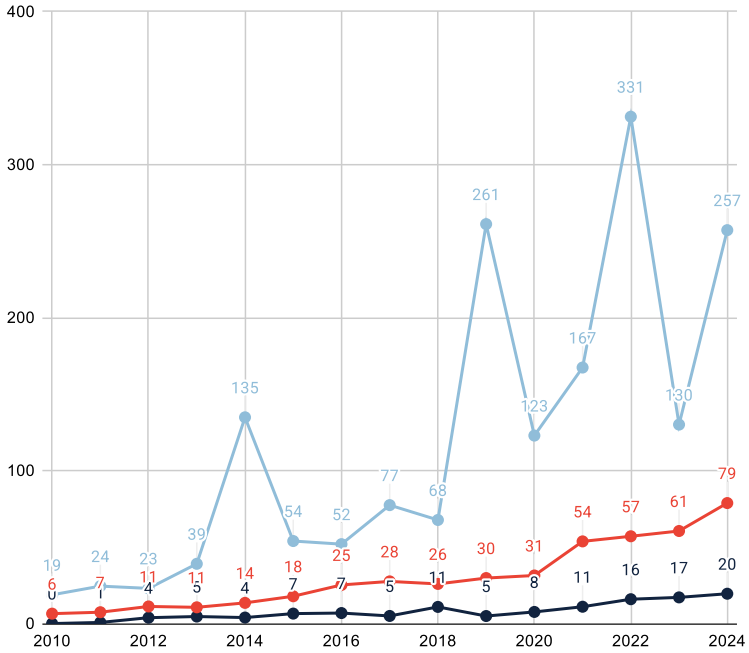
Q: WHAT ARE THE TRENDS IN VALUATIONS AND ROUND SIZES IN COSS FUNDRAISING?

THE SIZE OF FUNDRAISING ROUNDS FOR COSS IS INCREASING, MIRRORING THE OVERALL TREND IN VC FUNDRAISING

Median Round Sizes in COSS



Median Pre-money valuation in COSS



Deal Type

Seed Round Series A Series B

PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

TESTIMONIAL

THE POV

BAILEY PUMFLEET
Co-founder & CEO @ Cal.com

Cal.com

HQ: USA

Cumulative Fundings: ~$30M

When we started Cal.com, choosing open source wasn't about differentiating ourselves from closed-source competitors—it aligned naturally with our vision and infrastructure approach.

Open source alone doesn't automatically set you apart; it must directly reinforce your core value proposition to truly differentiate.

Fundraising wasn't an issue for us—the open source aspect didn't raise eyebrows since investors cared primarily about the health and potential of our business model, which we had. Yes, there's always someone who might copy your code, but that's precisely where building a strong brand matters.

Beyond this, we've seen significant downstream benefits in the sales process, particularly in compliance, privacy, and extensibility. These advantages have positioned Cal.com as a compelling case study in the commercial open source space.

TESTIMONIAL

THE POV

BOB VAN LUIJT
Co-founder & CEO @ Weaviate

Weaviate | HQ: Netherlands | Cumulative Fundings: ~$62M

At Weaviate, we've seen how open source plays very different roles depending on your stage.

Pre-revenue, OSS is all about building a great product and a recognizable brand fast. Your metrics substitute for revenue—so long as you measure what matters, not vanity metrics. It's about driving usage and adoption first. Post-revenue, OSS metrics shift from a revenue substitute to fueling GTM; they become a top-of-funnel driver.

In the end, with closed source, you eat the whole pie—but it's often smaller. With open source, you only eat a slice, but if your product, funnel, and brand are strong, the pie and the slice can be 10x larger.

PART *03*

LIQUIDITY AND SHAREHOLDER ROI IN *COSS*

FIGURE 14

Q: WHAT DOES LIQUIDITY LOOK LIKE IN COSS?

COSS EXITS ARE REAL: 12% OF COSS COMPANIES THAT ENTERED THE VC FUNNEL HAVE REACHED M&A OR IPO STAGES

PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

TESTIMONIAL

THE POV

BERTRAND DIARD
Co-Founder @ Talend

talend

HQ: France

NASDAQ IPO in 2016
taken Private in 2021

There's a persistent myth that liquidity is harder to achieve for Open Source companies. But that's the wrong framing altogether.

Liquidity doesn't depend on being Open Source or not—it depends on being a great company.

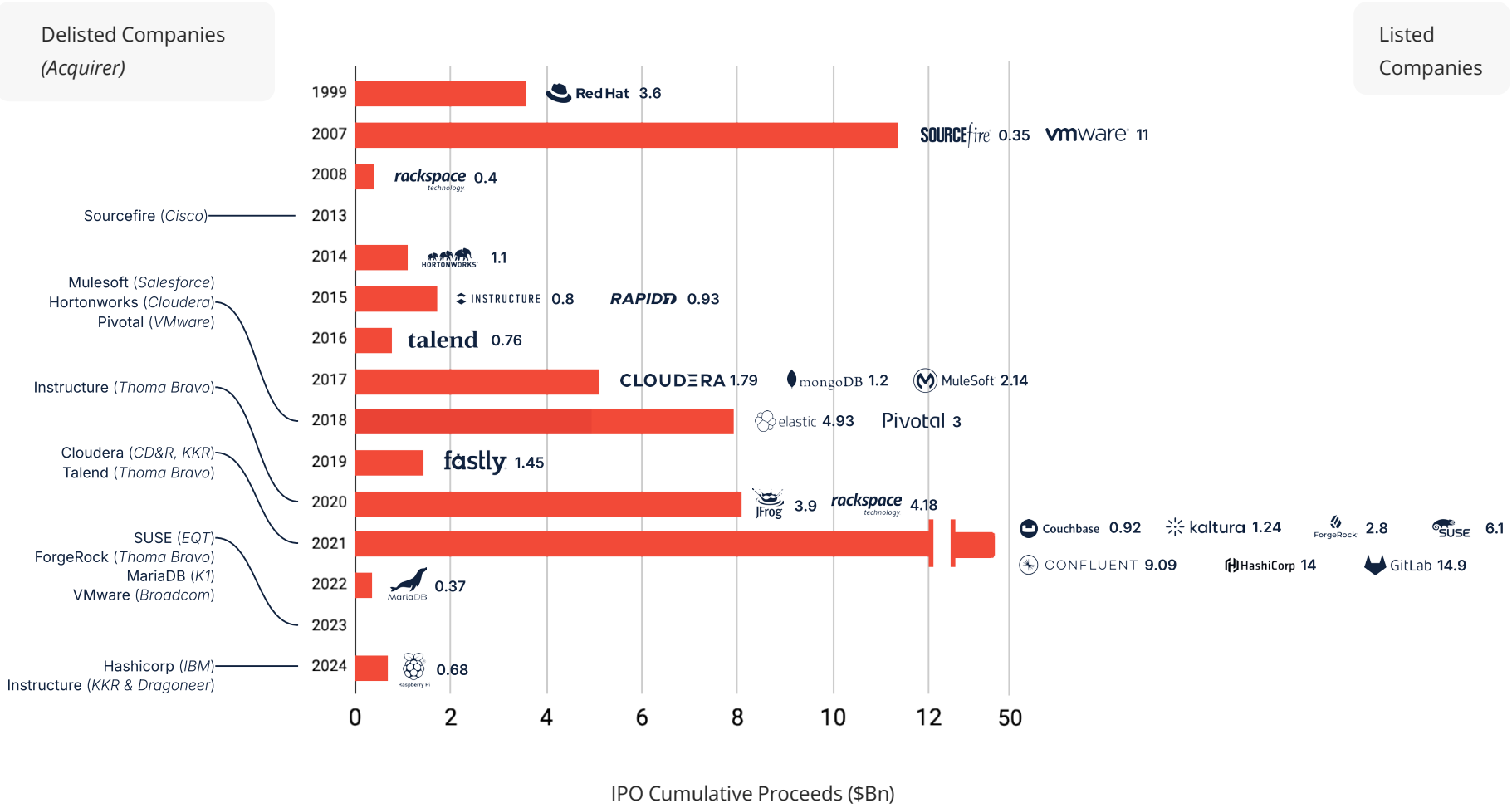
Once you've reached scale and profitability, you're no longer seen as an 'Open Source business'—you're simply a software company.

At that point, public markets and acquirers look at the same metrics they would for any SaaS or infrastructure player: revenue growth, gross margins, profitability, capital efficiency. The open source label may describe your origin, but it doesn't define your exit.

FIGURE 15

Q: WHO IPO'D IN COSS?

HISTORY OF ALL VC-BACKED COSS COMPANIES REACHING IPO OVER THE LAST 25 YEARS

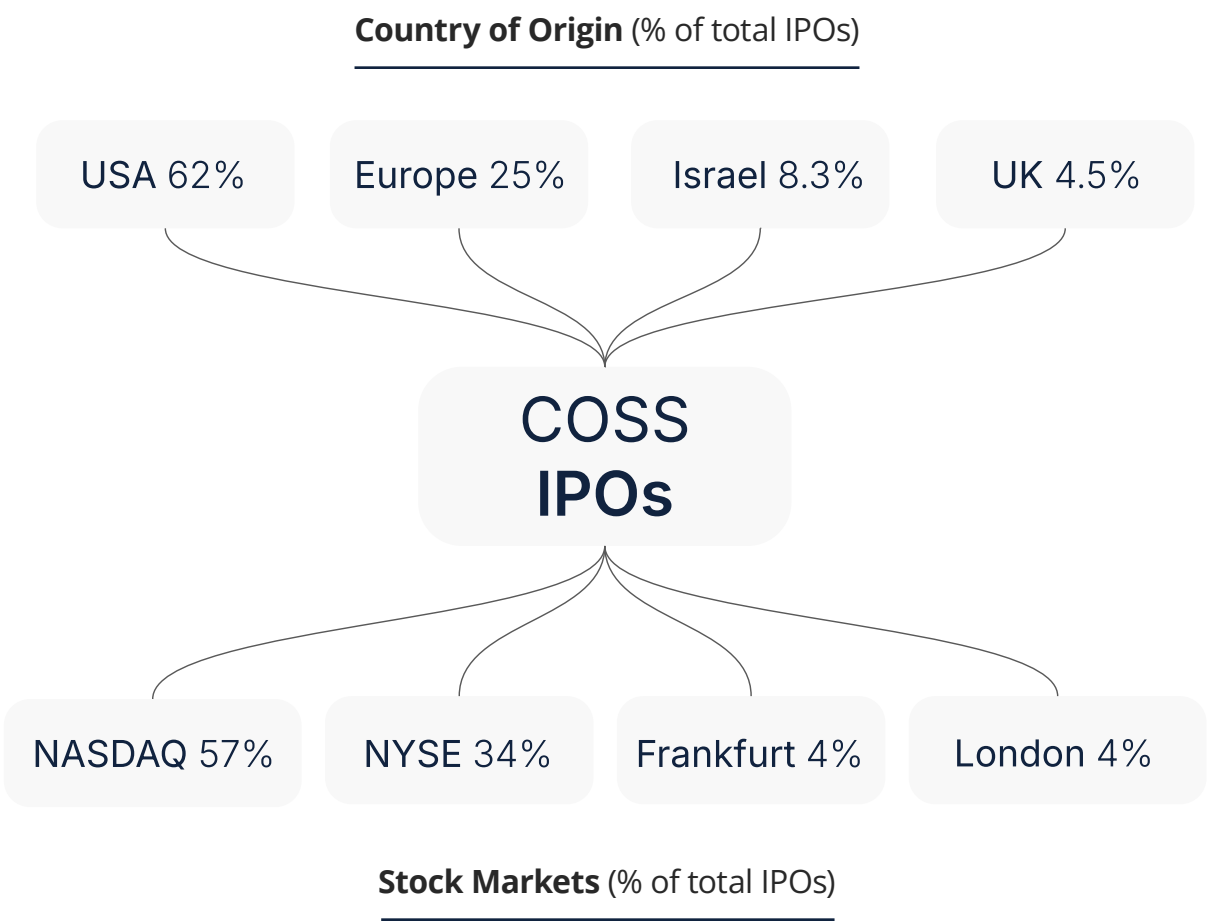


PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

FIGURE 16

Q: WHERE DID COSS PUBLIC COMPANIES ORIGINATE AND WHERE DID THEY GET LISTED?

US-BORN (62%) & EU-BORN (25%) COMPANIES PROVIDE THE BULK OF THE IPO SUPPLY. US STOCK EXCHANGES RECEIVED 91% OF IPOs



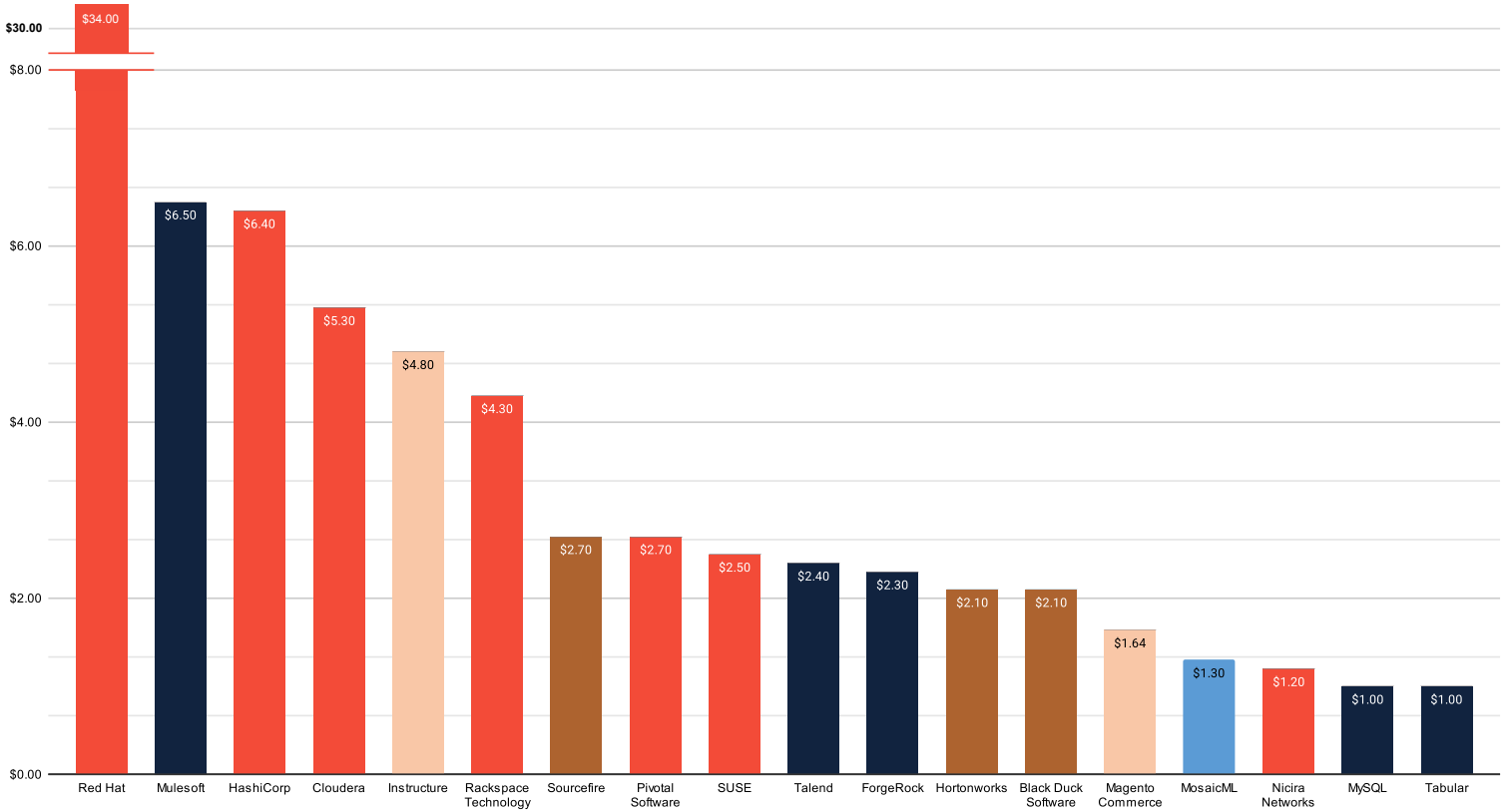
PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

FIGURE 17

Q: WHAT ARE THE ACQUISITIONS THAT MADE HEADLINES IN HISTORY?

THE BIGGEST M&A COSS DEALS SINCE 2000

Biggest COSS M&A Deals in history ($Bn)



Categories

Business Application · Data · AI · Security · Core Infrastructure, Back-end, DevOps

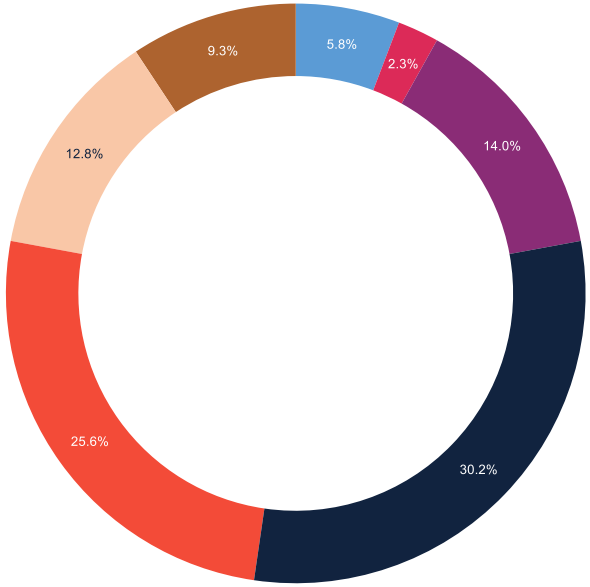
PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

FIGURE 18

Q: WHAT TYPE OF COMPANIES GET ACQUIRED HISTORICALLY?

55% OF COSS M&A ACTIVITY OCCURRED IN CORE INFRASTRUCTURE & DATA TOOLS

M&A in COSS per category



Categories

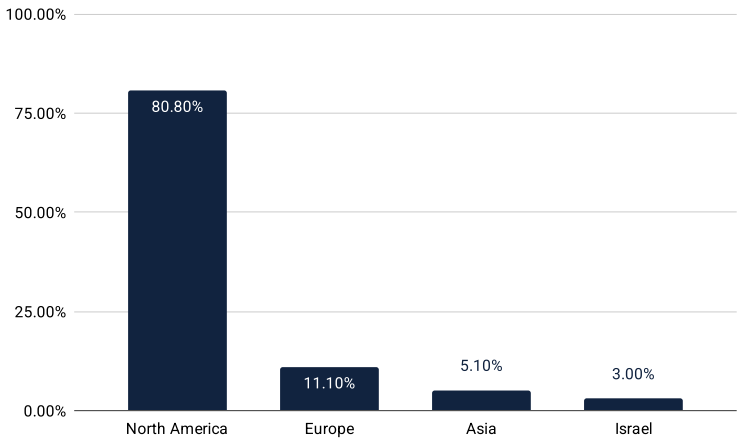
- AI
- Blockchain
- Business Application
- Data
- DevTools
- Security
- Core Infrastructure, Back-end, DevOps

FIGURE 19 & 20

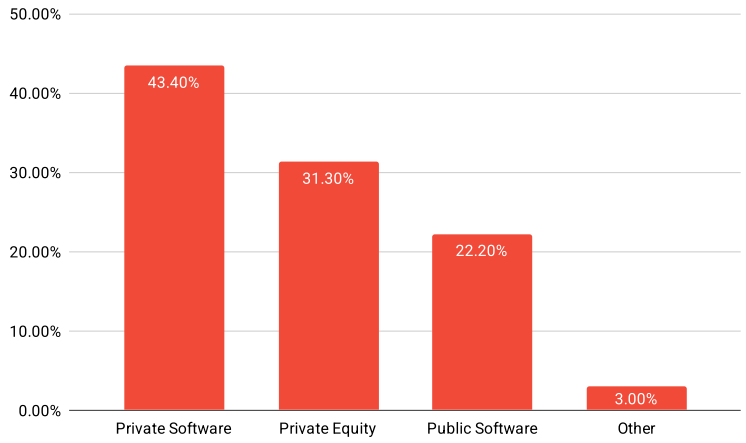
Q: WHO ARE THE COSS ACQUIRERS?

NORTH AMERICAN COMPANIES ARE THE MOST ACQUISITIVE IN COSS WHILE PRIVATELY OWNED SOFTWARE COMPANIES UNDERTOOK 43% OF ALL HISTORICAL M&A

COSS Acquirers by HQ Location



COSS Acquirers by Typology



PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

TABLE 2

Q: WHO ARE THE MOST ACTIVE ACQUIRERS OF COSS COMPANIES?

THE MOST ACTIVE COSS ACQUIRERS SINCE 2000

F5 Networks
(Public Software)

Nginx ($670M-2019)
Suborbital (undisclosed-2023)

VMware
(Public Software before Acquisition)

Pivotal Software ($2.7Bn-2019)
Nicira Networks ($1.2Bn-2012)
Heptio ($420M-2018)
Bitnami (undisclosed-2019)

Thoma Bravo
(Private Equity)

ForgeRock ($6.4Bn-2023)
Talend ($2.4Bn-2021)
Alfresco Software (undisclosed-2020)
Instructure (undisclosed-2020)

IBM
(Public Software)

Red Hat ($34Bn-2019)
HashiCorp ($6.4Bn-2024)
Databand ($150M-2022)
Ahana (undisclosed-2023)
Kubecost (undisclosed-2024)

Snowflake
(Public Software)

Streamlit ($800M-2022)
Ponder ($46M-2023)

EQT Partners
(Private Equity)

SUSE ($2.5Bn-2018)
WSO2 ($600M-2024)

Red Hat
(Public Software before Acquisition)

JBoss ($420M-2006)
CoreOS ($250M-2018)
Gluster ($138M-2012)
NeuralMagic (undisclosed-2024)

Databricks
(Private Software)

MosaicML ($1.3Bn-2023)
Tabular ($1Bn-2024)

TESTIMONIAL

THE POV

JON JONES
VP & Global Head of Startups
and Venture Capital @ AWS

aws

HQ: US

Across the world, the momentum around open source innovation is undeniable. Open source startups are fundamental to the tech ecosystem—they democratize access to cutting-edge technologies, foster unprecedented transparency, drive collaborative problem-solving across industries.

For startups leveraging AI today, three critical needs stand out: they require model flexibility to adapt to specific use cases, transparency to understand and trust their AI systems' decisions, and sovereignty over their data and technology stack—all while moving at startup speed without getting bogged down in infrastructure management.

AWS is here to make that journey easier and to support the next wave of startup champions. With Amazon Bedrock, startups have choice to build on the state-of-the-art open models that best fit their purpose, integrate them seamlessly into their stack, and scale with confidence—all without the operational burden of managing the underlying infrastructure. This level of flexibility enables them to stay nimble, iterate fast, retain full control over their technology choices, and to focus on their core differentiation rather than undifferentiated heavy lifting.

TABLE 3

Q: WHAT ARE THE ACQUISITIONS THAT MADE HEADLINES IN 2024?

THE 6 BIGGEST M&A COSS DEALS OF 2024

HashiCorp	Instructure	Black Duck	Tabular	Isovalent	WSO2
$6.4Bn	$4.8Bn	$2.1Bn	$1Bn	$650M	$600M

HashiCorp

Acquirer: IBM
Nature of Acquisition: M&A (public-to-public)

Category: Core infrastructure/ Back-end/DevOps

Instructure

Acquirer: KKR & Dragoneer
Nature of Acquisition: LBO (public-to-public)

Category: Business Application

Black Duck

Acquirer: Clearlake Capital Group & Francisco Partners
Nature of Acquisition: LBO

Category: Security

Tabular

Acquirer: Databricks
Nature of Acquisition: M&A

Category: Data

Isovalent

Acquirer: Cisco Systems
Nature of Acquisition: M&A

Category: Core infrastructure/Back-end/DevOps

WSO2

Acquirer: EQT Partners
Nature of Acquisition: M&A

Category: Core infrastructure/ Back-end/DevOps

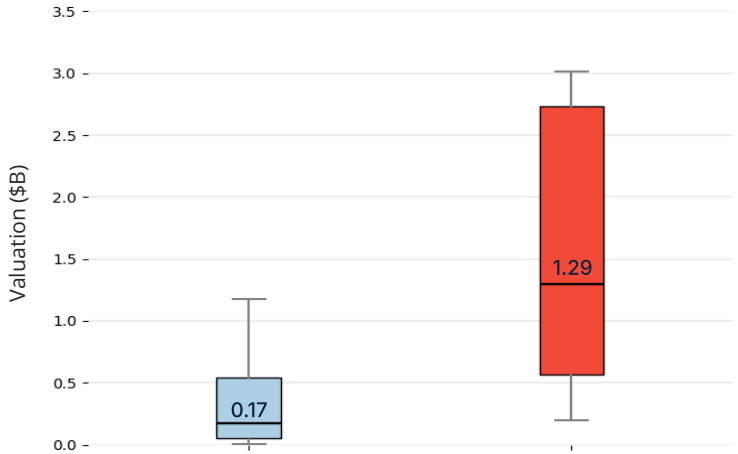
FIGURE 21 & 22

Q: DO COSS COMPANIES GET BETTER OR LOWER VALUATION AT EXIT?

COSS COMPANIES EXIT AT BETTER VALUATIONS THAN THEIR CLOSED-SOURCE COUNTERPARTS

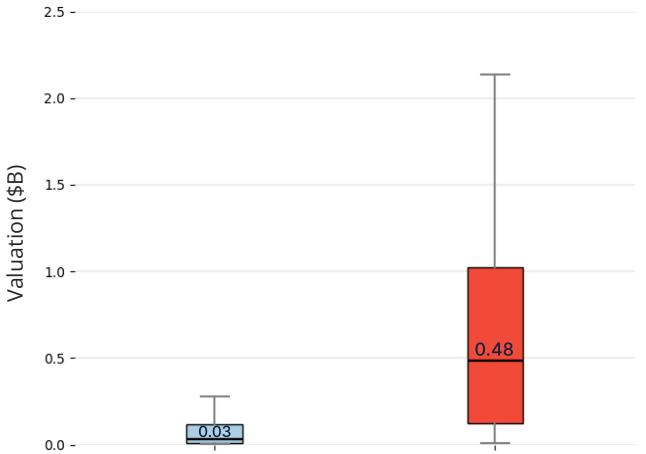
Valuation @ IPO

p-value : 0.000003



Valuation @ M&A

p-value : 0.000000



Closed-source Open-source

Methodology: We compared deal sizes at M&A and pre-money valuations at IPO for infrastructure companies across the COSS and control software datasets (US, founded after 2018, VC-backed or formerly VC-backed) using Mann-Whitney tests to assess statistical significance.

Liquidity timelines show no major difference between COSS and closed-source companies for M&A (median time: 5 years for both).

For IPOs, COSS companies historically took longer to go public-8 years vs. 5.6 years for the broader software category.

PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

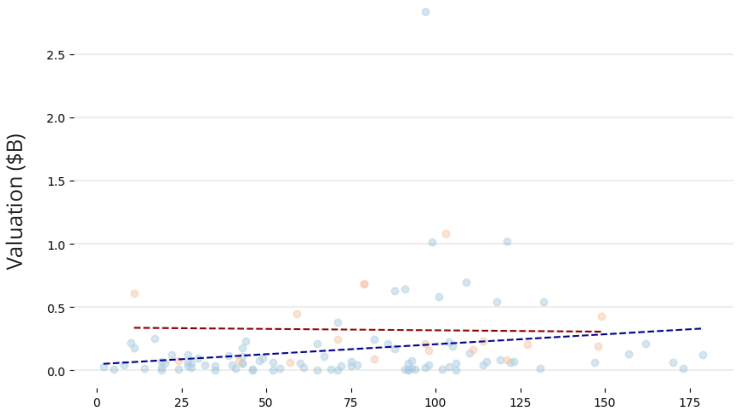
FIGURE 23 & 24

Q: DOES IT TAKE LONGER OR REQUIRE MORE CAPITAL TO REACH THE SAME VALUATION AT IPO?

IPO: NO EVIDENCE COSS REQUIRES MORE TIME OR CAPITAL TO ACHIEVE SIMILAR VALUATIONS

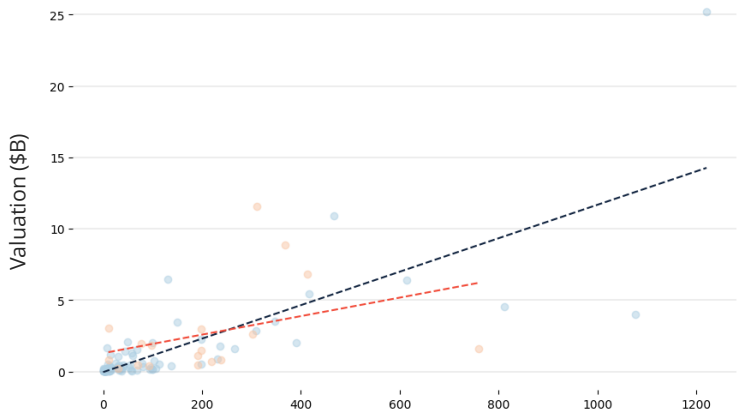
Time to IPO and Valuations

R^2 Control Group : 0.030
R^2 COSS : 0.000



Cumulative Fundings and Valuations

R^2 Control Group : 0.633
R^2 COSS : 0.137



Control Group · COSS · Trend COSS · Trend Control Group

COSS companies do not systematically take longer (or shorter) to IPO compared to closed-source companies for a given level of valuation.

Indeed valuation and time to IPO are essentially uncorrelated (very low R^2), and the COSS and control group trends are statistically indistinguishable ($p = 0.6041$).

COSS Companies do not systematically require more or less capital to achieve a given IPO valuation compared to closed-source companies.

Valuation and cumulative funding are only weakly correlated for COSS companies ($R^2 = 0.137$), while the correlation is much stronger for the control group ($R^2 = 0.633$). However, the difference in funding efficiency — the relationship between funding raised and valuation achieved — is not statistically significant ($p = 0.2134$).

PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

FIGURE 25 & 26

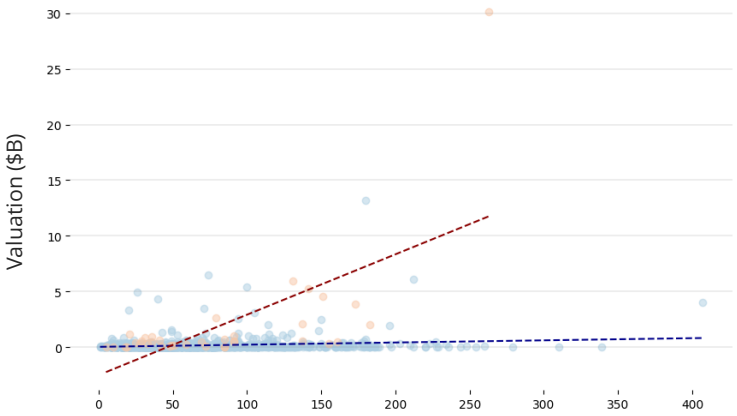
Q: DOES IT TAKE LONGER OR REQUIRE MORE CAPITAL TO REACH THE SAME VALUATION AT M&A?

COSS COMPANIES COMMAND HIGHER STRATEGIC VALUE IN ACQUISITIONS

Time to M&A and Valuations

R^2 Control Group : 0.023

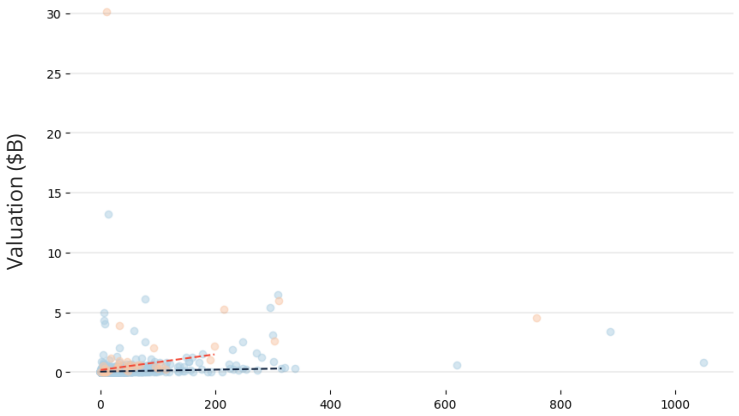
R^2 COSS : 0.417



Cumulative Fundings and Valuations

R^2 Control Group : 0.129

R^2 COSS : 0.401



Control Group COSS Trend COSS Trend Control Group

For a given time to M&A, COSS companies achieve significantly higher valuations compared to closed-source companies.

COSS R^2 (time-to-valuation correlation): 0.417 vs. Control Group: 0.023, showing that valuation compounds more predictably over time for COSS. COSS time efficiency (slope): 54.2 vs. Control: 1.94, meaning that longer time to M&A translates into significantly higher deal sizes for COSS, unlike closed-source companies. The statistically significant difference (p = 0.0000) confirms that COSS companies benefit from compounding value over time, whereas time plays little role in closed-source exits.

For a given amount of capital raised, COSS companies achieve significantly higher valuations at M&A compared to closed-source companies.

COSS R^2 (capital-to-valuation correlation): 0.401 vs. Control Group: 0.129, indicating that cumulative funding explains valuations more effectively for COSS. COSS capital efficiency (slope): 6.55 vs. Control: 0.81—meaning each dollar raised contributes more to final valuation in COSS. This statistically significant difference (p = 0.0001) confirms that COSS companies extract more value per dollar raised than closed-source companies.

PitchBook Data, Inc. The cited data has not been reviewed by PitchBook analysts and may be inconsistent with PitchBook methodology.

TESTIMONIAL

THE POV

ROXANNE VARZA
Director @ Station F

STATION F

HQ: France

At STATION F, and in France more generally, we are observing a rapid adoption of open source - which is transforming the tech industry and collaboration alike.

We've seen an especially big impact with generative AI. Startups like Hugging Face, a STATION F company, play a major role in democratizing and fostering open source.

We believe that open source is a real opportunity for innovation, but not without risks; security, governance, IP protection are some of the points that require specific attention.

That said, the future of open source can greatly benefit the entire ecosystem and we are thrilled to see its growth.

PART *04*

CAPITAL AND COMMUNITY

A successful COSS company has two objectives. It must nurture a vibrant, open, and authentic community around its open source project, as this is the primary engine for adoption and feedback. Simultaneously, the company must have a disciplined and clear plan for commercialization, such as building enterprise-grade features that the community is unlikely to build but that large customers will pay a premium for.

Generally speaking, investors will look at open source adoption and engagement metrics to get a sense of a project's health and product-market fit. While stars, forks, issues, pull requests, and similar metrics are the most important currency in a COSS company's Series A pitch deck, there has been very little research on the correlations between community health metrics and financial success.

Overview of COSS community measures

Having established COSS as a viable and profitable business model, we can enrich the financial data with community metrics to correlate activity in a company's open source project repositories with financial returns. To achieve this, we leverage a useful set of community metrics gathered by the **OpenSSF**, a Linux Foundation project that analyzes community health data to predict open source security risks. In particular, the **Securing Critical Projects Working Group** has developed the **Criticality Score**, designed to give a numerical measure of a software project's importance to the wider open source community. The Criticality Score is a composite metric derived from community signals of a project's popular adoption, centrality in the technology stack, and collaborative activity level. These measures include

- Project age
- Time since last update
- Count of distinct contributors
- Count of distinct organizations contributors belong to
- Commit frequency
- Recent release count
- Closed issues count
- Updated issues count
- Issue comment frequency
- Count of dependent projects

We use these individual community measures and the composite Criticality Score to explore the relationship between COSS and the community.

COSS Community Highlights

After combining the venture capital data with community measures for the sample of COSS companies, we were able to match 6,432 public software project repositories with OpenSSF Criticality Scores, covering over 90% (764) of the COSS companies in the study.

- A typical COSS company maintains 5 public software codebases eligible for a Criticality Score.
- The median COSS repository is 6 years old and has 18 distinct contributors belonging to 4 different organizations.
- Top languages: Go (16%), TypeScript (14%), Python (14%), JavaScript (11%)
- Top licenses: Apache 2.0 (32%), MIT (24%), no license (19%)

See Table A1 in the appendix for more comprehensive summary statistics for community metrics from the GitHub repositories of COSS companies in our analytical sample.

Valuable COSS companies cultivate vibrant project communities

A healthy, diverse, and active community is not just a feature but a powerful indicator of a company's current and future value. The research in this report demonstrates a direct and strengthening link between the health of an open source software (OSS) community and the financial success (valuation and venture capital funding) of the company built around it.

Figure 27 shows the Spearman correlation[1] between various community metrics (displayed along the vertical axis) and company pre-money valuation, decomposing the comparisons by funding round (horizontal axis). The chart visually represents the relationship between the open source community health metrics and the success of companies in securing venture capital funding at different stages of maturity.

The most striking trend is the dramatic increase in correlation from left to right. For early-stage companies (Round 1), the correlations are weak (all below 0.17). However, for mature, late-stage companies (Rounds ≥ 4), the correlations become much stronger, with all values being 0.25 or higher. This means that while community health has some importance early on, it becomes a **critical indicator of value** for later-stage investors.

1 Spearman correlation is chosen to account for the presence of outliers, skewness, and a high degree of non-linear relationships that are common in both financial and open source data.

FIGURE 27

CORRELATION BETWEEN COMMUNITY MEASURES AND VENTURE FUNDING

Methodology: Combining the available COSS valuation and community measure data results in a repeated cross section of 788 venture funding deals for 593 companies between June 2022 and May 2025. See Figure A1 in the appendix for an expanded version of Figure 27 that further demonstrates correlation between community measures and deal sizes as well as several additional community measures.

Key findings

- **Community health = financial health:** There is a direct, positive correlation. Companies with healthier, more valuable open source communities receive higher valuations and larger investments. The value of the company and the community are intrinsically linked.
- **The link gets stronger over time:** This is a critical insight. The correlation between community health and company value isn't static; it increases as a company matures and moves through later funding rounds. This implies a positive feedback loop: a good community helps secure funding, which allows the company to invest more in the community, which in turn drives future value. For investors, this means the health of the community becomes an even more important factor to evaluate in later-stage deals.
- **Diversity is a key indicator of value:** A "healthy" community is a diverse one. The most valuable companies have communities with a wide range of contributors from many different organizations. This signals resilience, a larger talent pool, and a project that is not dangerously dependent on a few key people or its parent company.

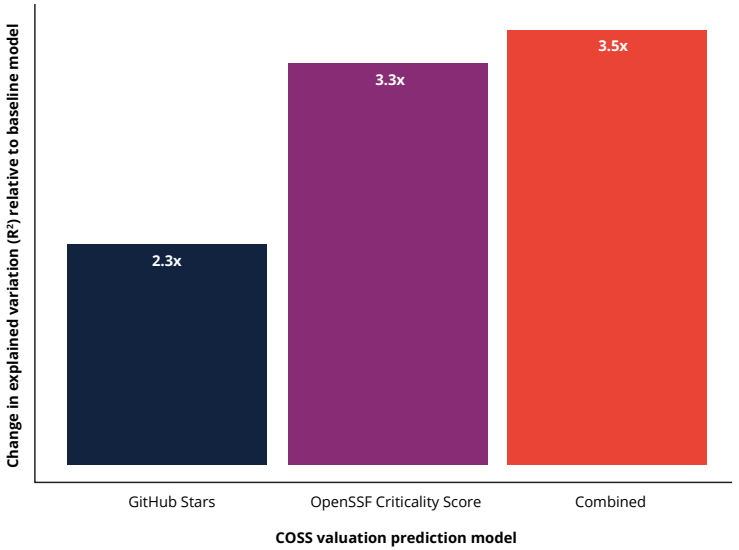
Top community indicators

GitHub stars are the most widely used indicator to identify popular projects. They are easily gathered and provide an immediately digestible ranking of projects in terms of popular interest. However, star counts can often be misleading, are subject to manipulation,[2] and could even present a new threat vector for malicious actors.[3] Our analysis suggests there are other measures of community that are superior to GitHub stars in terms of explaining COSS valuations and deal sizes.

As Figure 28 illustrates, more substantive community measures offer far greater predictive power than GitHub stars alone. The chart compares three models that predict COSS company valuations. While the popularity of a project (GitHub stars) is a decent predictor of valuation (2.3x), a model based on the OpenSSF Criticality Score becomes 3.3x more accurate in terms of prediction performance.[4] This jump from 2.3x to 3.3x is significant. It tells us that while popularity (stars) is a decent clue, a project's fundamental health and importance (Criticality Score) is a much stronger and more reliable signal of its true financial worth explaining more than twice the amount of variation.[5] These results suggest that analysts ought to integrate direct community measures or meaningful composites like the OpenSSF Criticality Score into their screening pipeline to identify OSS projects as potential investment targets.

FIGURE 28

COMMUNITY MEASURES EXPLAIN COSS VALUATIONS BETTER THAN GITHUB STARS



Methodology: The data used are a repeated cross-section of pre-money valuations from 965 venture funding deals for 366 companies between June 2022 and May 2025. The predictive models are random forest ensembles with 100 learners. The baseline model uses only a count of the COSS company's public repositories to predict pre-money valuation during a funding round event. The GitHub stars and OpenSSF Criticality Scores models add their respective variables to the baseline model. The combined model includes all 3 measures.

2 https://opensauced.pizza/blog/growth-hacking-killed-github-stars

3 https://devops.com/fake-stars-in-github-a-growing-security-threat-analysis-finds/

4 The objective of this analysis is not to suggest that community measures can or should be used alone to accurately predict firm valuation. By showing a strong correlation between community measures and COSS value, we hope to suggest a set of key indicators that can be added to established screening methodologies to identify potential investment opportunities.

5 More evidence to support this finding can be seen by comparing the OpenSSF Criticality Score and combined models in Figure 29. Adding GitHub stars to a model that already contains the OpenSSF criticality score yields only modest improvements in explained variation, from 3.3x to 3.5x relative to the baseline.

COSS community traction increases after funding

The conventional wisdom suggests venture funding kills open source community growth, but our research reveals that COSS companies actually see increased community traction after receiving investment. Our analysis compares COSS community traction both before and after venture funding rounds. Across a number of meaningful measures, we find that community traction consistently increases following funding rounds.

A link between community traction and user base growth for COSS

COSS proponents often argue that a company's open source community is their most vital asset. The ability for users to freely access, adapt, and integrate software creates a highly efficient, community-led growth model that builds a durable user base. This engaged ecosystem then becomes a global marketing team, a distributed R&D department, and a formidable competitive moat, all in one.

Others argue that, as venture capital flows into the space, there's a risk that short-term monetization pressures will lead to changes that alienate the community. Our results demonstrate that community interest expands significantly after COSS companies receive venture funding. This suggests the possibility of balancing the interests of founders, investors, and the community while building a company that lasts.

FIGURE 29

CHANGE IN COMMUNITY TRACTION FOLLOWING FUNDING ROUNDS

7x increase in package downloads

8x increase in dependent projects

60% increase in GitHub stars

Methodology: We compare community measures before and after funding events. After restricting the data to COSS companies that can be both (1) matched to the OpenSSF data and (2) have observations for the community measures before and after a venture funding event, this analysis summarizes 471 deals for 329 COSS companies between June 2022 and May 2025. To maximize the number of community growth comparisons with our available data, we pool the COSS company's community measures by taking means before and after each funding round.

A simple, direct measure of COSS use and community traction is package downloads. A high volume of downloads suggests that downstream developers are actively using, adopting, and integrating COSS into their projects. Consistent download trends, especially over time, can signal sustained interest, relevance, and user base growth, crucial ingredients for COSS success. Our analysis suggests that COSS downloads increase by more than 7x following funding rounds, solid evidence that venture funding

aligns with promoting the reach and influence of COSS within the broader open source ecosystem[6]

Another way to measure a project's traction is to count how many other projects use it as a key building block. The number and growth of dependent projects is a powerful indicator of a project's true influence. It shows that the COSS company has created an attractive and valuable technology that others can build and depend upon. Using another project's code carries risk,[7] and therefore an 8-fold increase in project dependencies after venture funding is a powerful vote of confidence. It suggests that downstream adopters find net upside in a funded COSS company's product.[8]

While GitHub stars have their flaws, they are a valuable signal, especially since more direct measures of adoption like downloads and dependency data are harder to observe at scale. For instance, our analysis reveals that when measured using GitHub star counts, project popularity increases by 60% on average following funding rounds. Despite our suggestion that inference made solely from GitHub stars is not advisable, comparing this observable trend with deeper adoption data allows us to estimate a practical "conversion rate" that shows how a surge in popular interest corresponds to more nuanced metrics.

A rising tide lifts all code

A common fear is that venture capital flowing into an open source project will drive its community away. However, our findings show the opposite is true. When we consider how open source communities change following funding rounds, our analysis reveals a symbiotic relationship where funding benefits both the company's business goals and the health of the community itself, fostering continued participation and use.

FIGURE 30

CHANGE IN COMMUNITY HEALTH FOLLOWING FUNDING ROUNDS

27%
increase in distinct contributors

2
new contributing organizations

52%
increase in release frequency following funding rounds

Methodology: We compare community measures before and after funding events. After restricting the data to COSS companies that can be both (1) matched to the OpenSSF data and (2) have observations for the community measures before and after a venture funding event, this analysis summarizes 471 deals for 329 COSS companies between June 2022 and May 2025. To maximize the number of community growth comparisons with our available data, we pool the COSS company's community measures by taking means before and after each funding round.

6 We are not aware of public sources of historical package downloads for our sample period. As an alternative approach, use the correlation between package downloads and other community metrics to model how package downloads would trend along with the community metric. We first gathered a snapshot of package download counts for the sample of COSS repositories from ecosyste.ms. We matched the download counts to contemporaneous dependent project counts. A log-log regression of package downloads on dependent counts suggests a 1% increase in dependent projects is associated with a 0.9% increase in package downloads.

7 https://osr.finos.org/docs/bok/risks/dependency-risk

8 It should be noted that tightly coupled dependence relationships will also naturally generate additional package downloads.

Venture funding doesn't just grow the company; it expands the community. The number of distinct contributors to COSS projects increases 27% following funding rounds. This surge suggests that funding coincides with even more widespread project appeal and uptake. A larger and more diverse contributor base brings fresh perspectives, new skills, and a broader range of ideas, leading to more robust and innovative software.

Increases in contribution come from new sources, not simply from current maintainers or from COSS company itself. On average, COSS projects attract contributors from 2 new organizations following funding rounds, highlighting a significant expansion of collaborative efforts. This suggests that commercial backing can legitimize a project, making it more attractive for other companies or institutions to invest their own resources and developer time. When new organizations begin contributing to a project, particularly after it receives funding, it signals a deeper level of commercial adoption. Unlike individual contributions, these corporate commitments point to strategic product integrations and represent a significant, long-term investment in the technology.

Finally, COSS projects increase their release frequency by 52% post-funding. With increased funding, projects can dedicate more resources to development, testing, and deployment, leading to faster iteration cycles and more frequent delivery of new features and bug fixes. This accelerated release cadence not only provides users with more up-to-date and stable software but also demonstrates a project's vitality and responsiveness, further engaging its community.

TESTIMONIAL

THE POV

KEVIN CROSBY
Sr. Director, Open Source Funding

HQ: San Francisco, CA, USA

We are encouraged by the findings in the report, which demonstrate that commercial open source can create community durability and sustainability. Importantly, community health is a leading indicator of commercial success. Programs like GitHub Fund, GitHub Secure Open Source Fund, and GitHub Sponsors provide pathways to capital and community durability. As we explore new and diverse funding opportunities for maintainers of open source, identifying capital strategies and commercialization approaches that enable both open source software and communities to thrive is critical. This will help ensure that open source projects remain sustainable and continue to flourish, keeping their future open for all.

Conclusion

Commercial open source is not a niche or a passing trend. It is a fundamental and irreversible shift in how technology is built, distributed, and monetized. The data presented in this report proves that a community-centric model is not an act of philanthropy; it can be a durable, defensible business strategy to collaboratively develop state-of-the-art digital technology in public.

The ad-hoc, chaotic art form of commercializing open source is rapidly evolving into a structured, data-driven discipline. Organizations like Serena and the Commercial Open Source Startup Alliance (COSSA) are at the forefront of this transformation, creating the standards, high quality data, and educational frameworks necessary to professionalize the ecosystem.

Key takeaways:

1. **COSS is a premier asset class:** The data is unequivocal. The metrics on graduation rates, valuation, and exit multiples demonstrate a consistent pattern of outperformance that can no longer be ignored. Investors who continue to view open source through a lens of risk or altruism are missing the most significant value creation opportunity of the next decade.
2. **Commercial versus community is not a zero sum game:** The most successful COSS companies, such as Databricks, Confluent, and HashiCorp, did not win by closing off their technology. They won by building vibrant ecosystems. This report demonstrates that community health is a leading indicator of commercial success. A thriving community is a more durable competitive advantage than any proprietary code could ever be. It drives adoption, innovation, and resilience.
3. **The playbook for success is being written now:** For years, founders and investors have been forced to navigate the complexities of COSS with little guidance. That era is ending. Through initiatives like this research report, we are codifying the best practices for building sustainable, community-aligned businesses. The path to building a successful COSS company is becoming a replicable, predictable science.

The future of software is open, and the opportunity is immense. For investors, the narrative has shifted, and the data is now on the table. It is time to treat COSS as a primary investment category. For founders: you do not have to choose between your community and your business. For the broader open source community: this is your ecosystem. Help us create the market-wide intelligence needed to help the best projects and companies win. Engage with our research and help us build a future where open source is a public good and an enduring and powerful economic force.

About the authors

Sam Boysel is a Data Scientist at the Linux Foundation. He has extensive empirical research experience in topics across the open source ecosystem and has explored how contributor peer effects, software supply chain formation, and how forces like competition or generative AI shape development patterns. His work leverages microeconomic theory to explore incentives, behaviors, and place value on open source dynamics. Before joining the Linux Foundation, Sam was a postdoctoral researcher with the Laboratory for Innovation Science at Harvard. He holds a B.A., M.S., and Ph.D. in Economics.

Matthieu Lavergne is a Partner at Serena, where he leads pre-seed and seed investments in infrastructure software. He focuses on products designed for technical personas—developers, data teams, CTOs, and IT professionals—particularly in Open Source, DevOps, data infrastructure, and AI.

He is the lead author of the Commercial Open Source Software (COSS) Report, a widely referenced publication that analyzes the financial models and strategic dynamics of Open Source companies. His research informs founders, investors, and ecosystem platforms on how to build and scale viable COSS businesses.

Matt Trifiro is the founder and executive director of the Commercial Open Source Startup Alliance (COSSA), a new organization uniting entrepreneurs and investors to advance the understanding and practice of commercial open source. A veteran of high-growth startups, he has co-founded and led go-to-market efforts for companies including Heroku, Mesosphere, GeoWorks, 1000 Markets, and Wink Communications.

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Appendix

TABLE A1

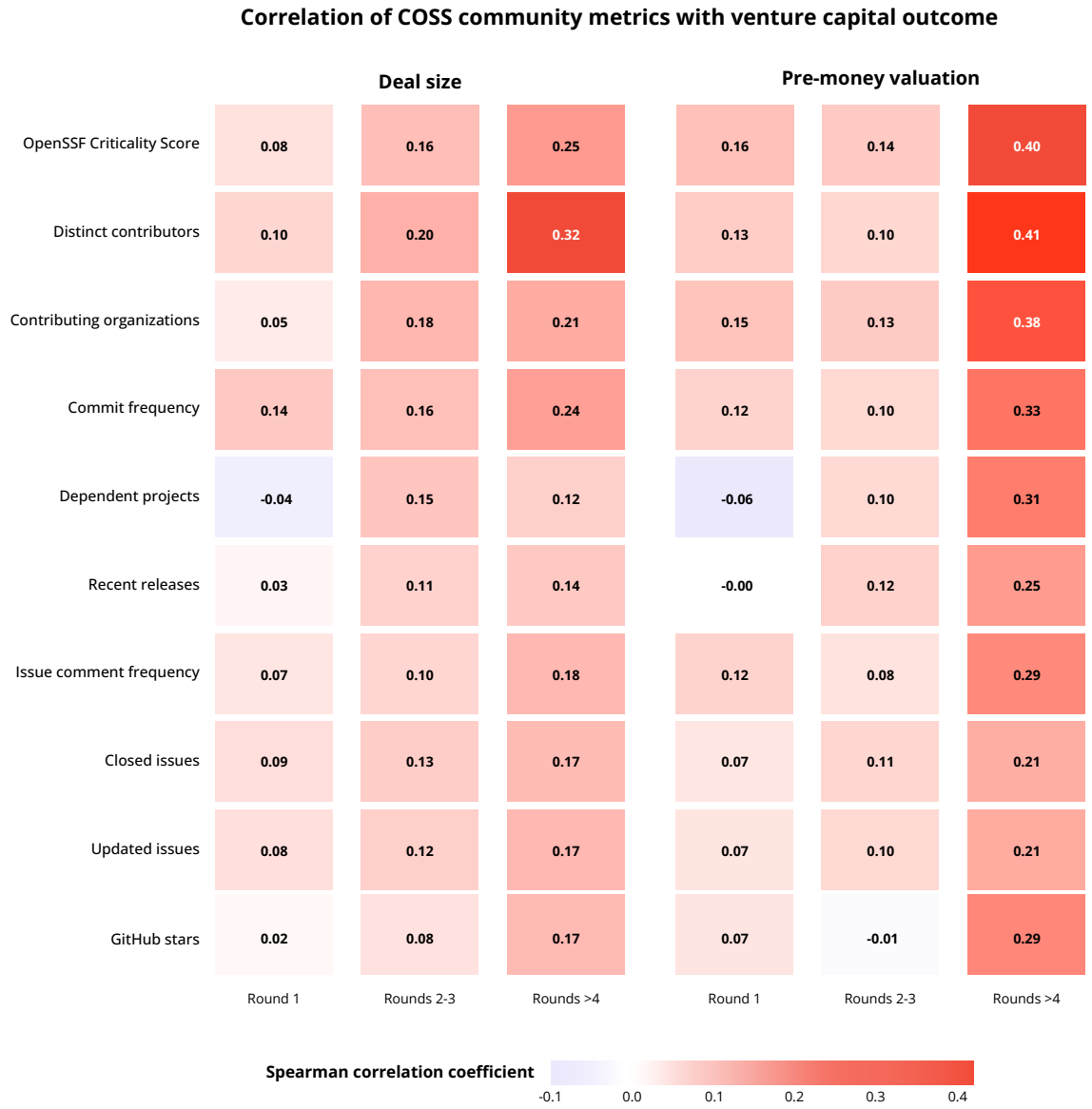
SUMMARY STATISTICS FOR COMMUNITY MEASURES.

COMMUNITY MEASURE	MEAN	STANDARD DEVIATION	MINIMUM	MEDIAN	MAXIMUM
OpenSSF Criticality Score	0.40	0.12	0.11	0.39	0.94
Repository age (months)	66	46	0	58	675
Time since last update (months)	13	22	0	2	152
Count of distinct contributors	69	233	1	18	5,000
Count of distinct organizations contributors belong to	4	2	0	4	13
Commit frequency	5	24	0	0	1,268
Recent release count	17	181	0	2	24,290
Updated issues count	336	2,248	0	9	142,821
Closed issues count	301	2,105	0	5	136,804
Issue comment frequency	0.8	1.0	0	0.5	19.0
GitHub mentions count	1,947	34,692	0	11	3,745,345
Dependent projects count	7,345	225,475	1	24	14,293,105
GitHub stars count	1,731	6,447	0	195	146,023

Methodology: The data is a repeated cross section of community measures for public GitHub repositories matched to a COSS company. This gives 114,900 observations for 6,432 repositories between June 2022 through May 2025

FIGURE A1

CORRELATION BETWEEN COMMUNITY MEASURES AND VENTURE FUNDING (EXPANDED VERSION OF FIGURE 27)



COSSA

The Commercial Open Source Startup Alliance (COSSA) is a newly-founded organization dedicated to strengthening the discipline of commercial open source. COSSA delivers shared data, mentorship, and best practices to support entrepreneurs and investors building the next generation of open source companies. Discover more at **http://cossa.io.**

THE LINUX FOUNDATION | Research

Founded in 2021, **Linux Foundation Research** explores the growing scale of open source collaboration, providing insight into emerging technology trends, best practices, and the global impact of open source projects. Through leveraging project databases and networks, and a commitment to best practices in quantitative and qualitative methodologies, Linux Foundation Research is creating the go-to library for open source insights for the benefit of organizations the world over.

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serena

Serena is one of Europe's leading venture capital funds, with 1 billion euros under management. In February 2025, the fund was recognized among the Top 5% value-add seed investors by Dealroom. Founded in 2008, Serena invests at early stages, from seed to series A, and supports innovative and ambitious entrepreneurs' success to serve a better world. Born of the profound conviction that a venture capital fund should be at the service of its portfolio companies, Serena has set up the largest operational platform team in Europe and the most active startup community, the Serena Squad, with more than 550 active C-levels. Serena strongly focuses on AI, SaaS, Climate Tech, Deep Tech, and Impact. Serena has invested in more than 100 startups with several international success stories such as Dataiku, Malt, The Fork, Electra, Descartes Underwriting, Accenta, Lifen, and AramisAuto. Combating climate change, protecting biodiversity, promoting sustainability, diversity and inclusion are at the heart of Serena's DNA.

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