

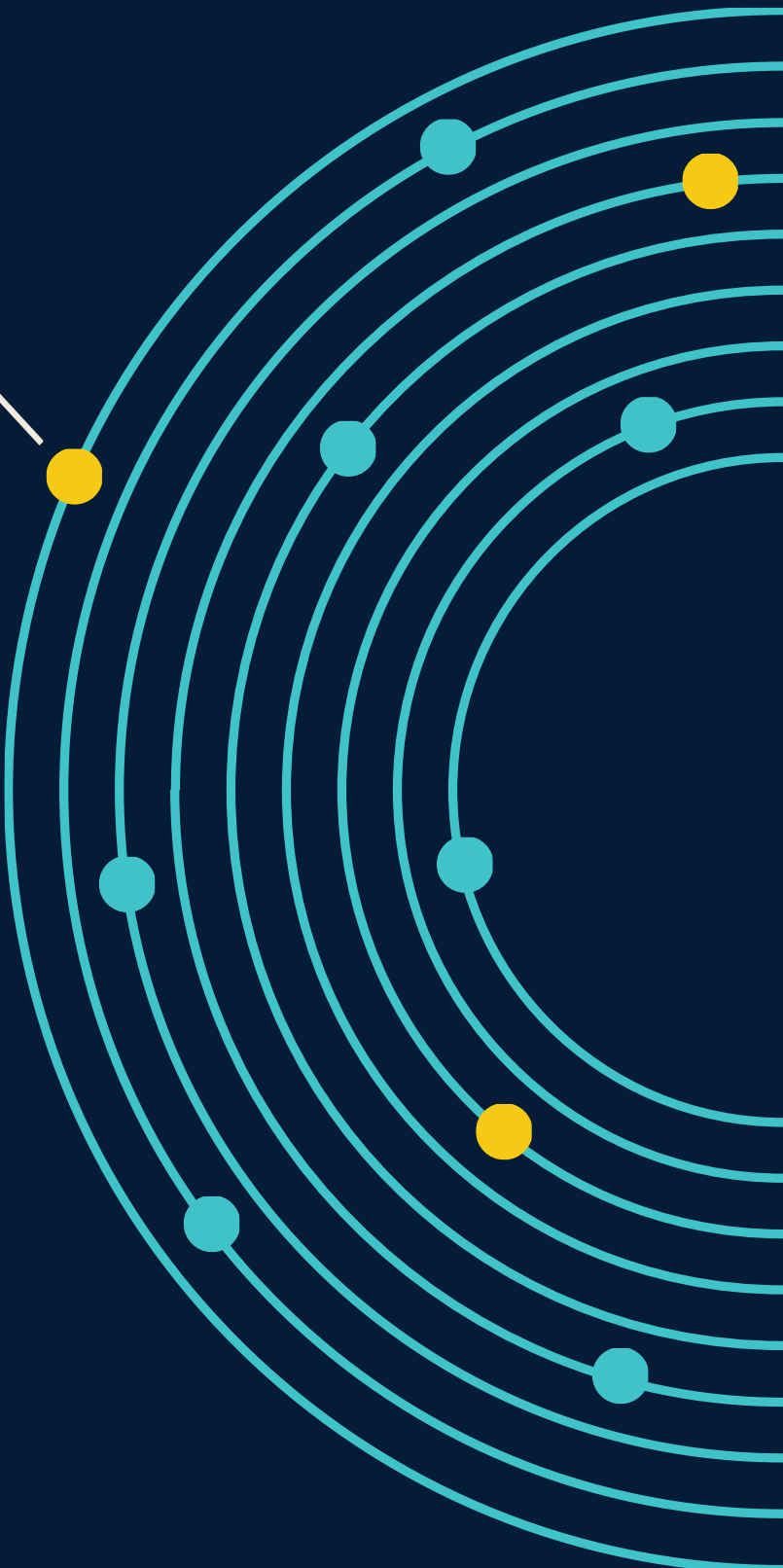


QUANT RESEARCH

VC Emerging Opportunities

Early-stage investment attractiveness across
technology verticals

2024





Introduction

In the dynamic VC investment landscape, trends in emerging technology verticals can shift quickly. This report can help investors stay on top of those trends by providing them with a quantitative approach to vertical analysis that blends bottom-up and top-down perspectives. The ultimate goal is to provide investors with an objective way to compare risks and opportunities in early-stage startup investments (seed, Series A, and Series B) across and within verticals, thereby enabling well-informed portfolio allocation decisions.

At the core of this analysis lies the [PitchBook VC Exit Predictor](#), a machine learning (ML) model that predicts the probability that a startup will be acquired, go public, or not exit. This tool serves as the foundation for our bottom-up analysis by allowing us to aggregate individual company predictions into a vertical-level assessment, which provides valuable insights into the potential risks and return opportunities associated with each vertical.

Our top-down analysis complements the insights provided by the VC Exit Predictor by tracking and synthesizing important macroeconomic-level trends across verticals. Indicators in this analysis include deal activity, valuations, published patent activity, top-ranked investor participation, and employee growth.

Note: Throughout this report, “early-stage” refers to companies raising seed, Series A, and Series B rounds. It does not follow our [traditional definition of “early-stage VC.”](#) Additionally, the company counts for each vertical will differ from those in our Emerging Technology reports because we filtered for companies with a minimum of two VC deals, aligning with our Exit Predictor methodology.

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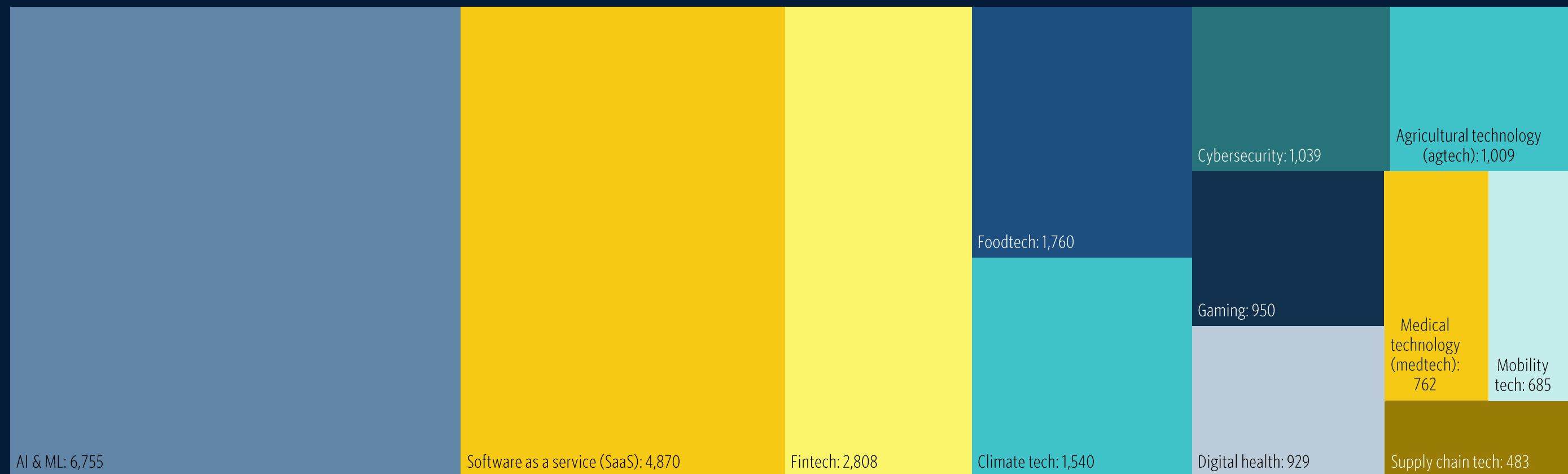


The opportunity set



The emerging tech opportunity set of the top 12 largest verticals covered by our analyst team

Figure 1 ► **Early-stage company count by vertical**



Source: PitchBook • Geography: Global • As of December 31, 2024

Note: Data includes only early-stage companies that have had at least two rounds of VC funding; vertical membership is manually curated by PitchBook analysts.



Deal value trends

Figure 2 ► **Trailing 12-month (TTM) early-stage deal value (\$B) by quarter**

	2022				2023				2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Agtech	\$6.6	\$6.6	\$6.2	\$6.3	\$5.6	\$5.0	\$4.3	\$3.9	\$3.6	\$3.7	\$4.1	\$4.0
AI & ML	\$60.7	\$60.2	\$55.0	\$48.4	\$41.2	\$36.4	\$34.5	\$33.0	\$33.2	\$34.8	\$37.6	\$37.8
Climate tech	\$11.7	\$12.8	\$13.5	\$13.5	\$13.1	\$13.1	\$12.8	\$12.8	\$12.8	\$13.6	\$15.0	\$14.7
Cybersecurity	\$9.6	\$9.5	\$8.9	\$8.0	\$6.8	\$6.0	\$5.4	\$5.4	\$5.1	\$5.3	\$5.3	\$5.1
Digital health	\$6.3	\$6.0	\$5.4	\$4.9	\$4.1	\$3.5	\$3.5	\$3.3	\$3.1	\$3.1	\$3.1	\$3.1
Fintech	\$25.4	\$25.1	\$22.3	\$19.9	\$16.5	\$14.2	\$12.9	\$11.3	\$11.2	\$11.6	\$11.7	\$11.6
Foodtech	\$13.9	\$13.8	\$12.5	\$10.8	\$9.0	\$7.8	\$7.1	\$6.1	\$5.7	\$5.3	\$5.2	\$5.2
Gaming	\$8.0	\$8.8	\$9.1	\$7.8	\$6.2	\$4.8	\$3.9	\$3.7	\$3.9	\$4.2	\$4.4	\$4.1
Medtech	\$8.8	\$8.4	\$7.6	\$6.8	\$6.3	\$6.2	\$6.0	\$5.5	\$5.5	\$5.6	\$5.7	\$5.8
Mobility tech	\$11.1	\$10.2	\$8.5	\$7.3	\$5.9	\$5.1	\$4.7	\$4.6	\$4.4	\$4.2	\$4.2	\$3.5
SaaS	\$60.7	\$62.0	\$59.4	\$54.6	\$45.6	\$39.3	\$34.6	\$31.3	\$30.5	\$31.2	\$32.9	\$33.0
Supply chain tech	\$6.5	\$5.9	\$5.2	\$4.4	\$3.5	\$3.2	\$2.9	\$2.5	\$2.3	\$2.2	\$2.2	\$1.9

Source: PitchBook • Geography: Global • As of December 31, 2024
Note: Data estimations are applied to the most recent 12 months to account for lagged data collection. Conditional formatting is applied across verticals each quarter.

Pre-money valuations

Figure 3 ► **Median TTM early-stage pre-money valuation (\$M) by quarter**

	2022				2023				2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Agtech	\$16.8	\$18.8	\$18.5	\$20.9	\$22.4	\$19.3	\$19.8	\$20.1	\$18.5	\$21.2	\$23.3	\$24.3
AI & ML	\$33.4	\$33.8	\$34.1	\$33.9	\$33.2	\$33.6	\$34.4	\$34.2	\$36.4	\$40.5	\$47.8	\$55.0
Climate tech	\$26.6	\$30.3	\$30.5	\$31.8	\$31.4	\$32.1	\$32.2	\$31.2	\$27.9	\$25.6	\$27.9	\$31.7
Cybersecurity	\$34.1	\$37.2	\$35.8	\$36.9	\$35.6	\$33.8	\$32.5	\$33.3	\$33.7	\$40.1	\$42.5	\$44.2
Digital health	\$20.4	\$20.6	\$21.9	\$20.6	\$21.3	\$23.0	\$24.4	\$26.9	\$27.6	\$26.5	\$28.2	\$36.4
Fintech	\$31.8	\$30.5	\$30.5	\$29.1	\$27.7	\$28.2	\$28.6	\$29.4	\$32.6	\$33.6	\$36.9	\$44.7
Foodtech	\$21.4	\$21.2	\$20.2	\$19.1	\$19.0	\$20.1	\$20.1	\$20.6	\$20.6	\$20.5	\$22.3	\$29.5
Gaming	\$31.1	\$32.5	\$31.9	\$33.2	\$31.3	\$29.7	\$32.7	\$33.3	\$29.4	\$31.6	\$41.4	\$47.2
Medtech	\$33.8	\$31.7	\$33.7	\$35.2	\$32.7	\$38.3	\$38.2	\$34.9	\$35.6	\$34.0	\$36.5	\$41.9
Mobility tech	\$43.5	\$50.1	\$55.7	\$64.4	\$67.8	\$64.5	\$65.8	\$53.7	\$51.0	\$48.0	\$59.1	\$67.9
SaaS	\$50.1	\$54.1	\$53.6	\$53.6	\$49.5	\$48.4	\$47.8	\$48.5	\$49.8	\$52.6	\$58.4	\$61.7
Supply chain tech	\$49.9	\$65.2	\$73.0	\$51.4	\$50.4	\$45.2	\$33.8	\$38.1	\$38.4	\$27.8	\$41.0	\$44.1

Source: PitchBook • Geography: Global • As of December 31, 2024

Note: Due to lower valuation disclosures in recent quarters amid an increase in down rounds, the medians may be biased to the upside. Conditional formatting is applied across verticals each quarter.



Select vertical highlights

SaaS

- From the bottom-up analysis that looks at expected exit rates and returns, SaaS is a clear positive standout. Early-stage SaaS companies are expected to successfully exit at a 75.7% rate—a net 10.1 percentage points higher than the second-ranked vertical.
- In terms of the expected successful exit rate, SaaS companies have been the top-ranked vertical for at least the past seven years.
- The SaaS early-stage investment opportunity set is relatively large, with nearly 5,000 companies currently eligible for a VC exit prediction. This is second only to AI & ML.
- Innovation in SaaS, as measured by the relative share of published patents, has continued to stall. In 2024, SaaS companies' share of published patents remained low at 12.4%, showing only a slight increase from the two-year low of 12.2% in 2023.

Climate tech

- Climate tech companies have seen the largest improvement in expected relative success rates and returns over the past several years. Since 2017, the vertical has risen from being the lowest ranked to the six best and now holds the third-highest position in relative expected returns.
- While 2024 was a difficult year for VC deal activity, climate tech saw the largest uptick in activity compared with other verticals. TTM early-stage deal value increased 15%—a net 16.4% higher than the cross-vertical average.
- Although climate tech companies registered the largest increase in the share of published patents in 2023, their net share in 2024 declined by 0.2%.
- Climate tech companies continued to reign in employee growth, with the highest median in 2024 at 15.9%—a net 10.4% higher than the cross-vertical average.

Gaming

- After the sector posted a CAGR of nearly 10% throughout the 2010s, punctuated by the COVID-19 pandemic, gaming's growth engines have slowed despite a historic release slate in 2023.
- As player spending and aggregate playtime decrease, consumers are allocating more time to "forever titles," creating an intense battle for user attention. As such, well-funded releases are posting underwhelming sales figures, layoffs have spiked, and startups are fighting for investor attention alongside AI exuberance.
- Gaming's 950 early-stage companies are forecast to produce positive but middle-of-the-pack returns. While IP owners and platforms such as Roblox, Epic, and Take-Two generate outstanding returns, development cycles can take many years to fully materialize.
- The skyrocketing cost of game development stands to benefit from AI tailwinds. In 2023, we predicted that the gap between content-focused investments (traditionally the sector's largest category) and back-end infrastructure deals would narrow, and we see expected returns forecast accordingly on [page 80](#).



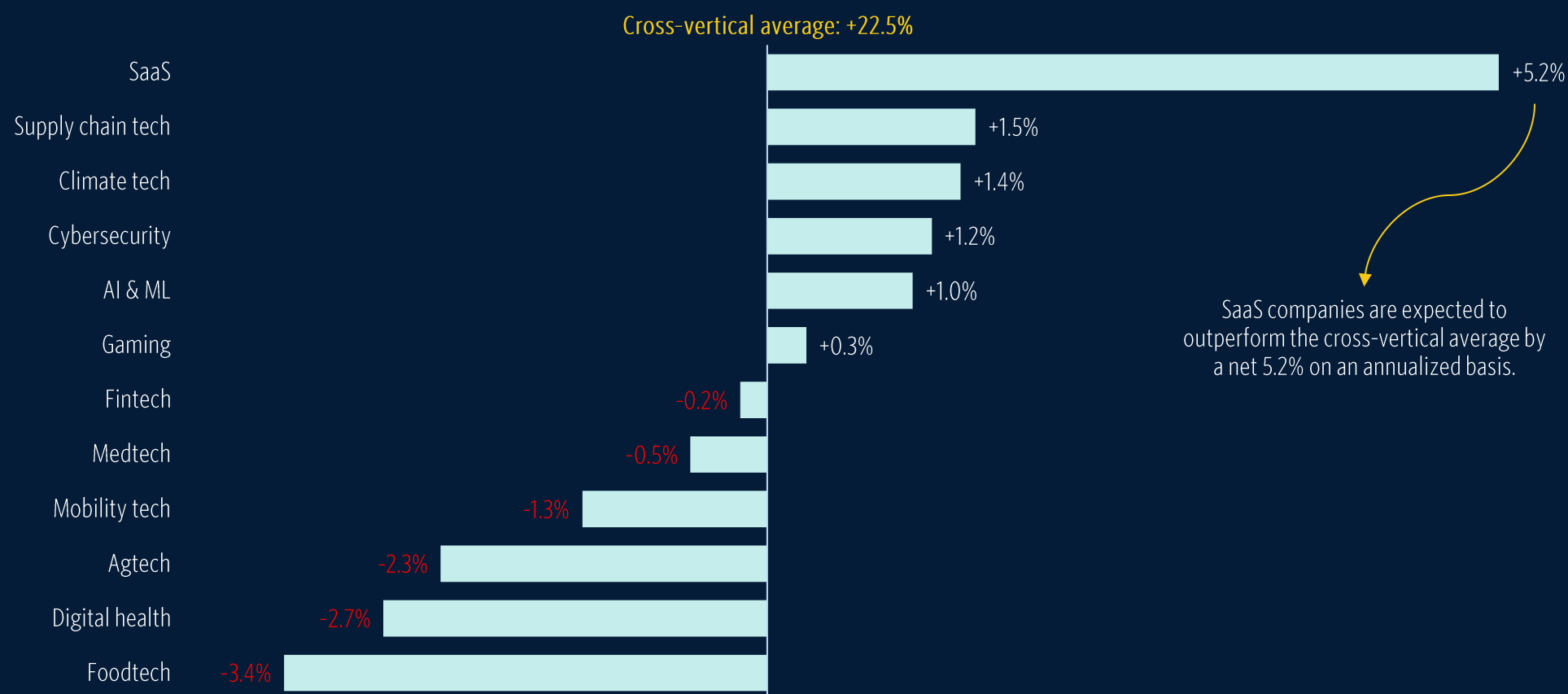
Bottom-up analysis

In this section, we analyze expected exit outcomes and relative returns across verticals based on a bottom-up aggregation of exit predictions for individual companies.



Our analysis suggests that early-stage SaaS companies are likely to materially outperform the average vertical...

Figure 4 ► **Annualized expected returns relative to the cross-vertical average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

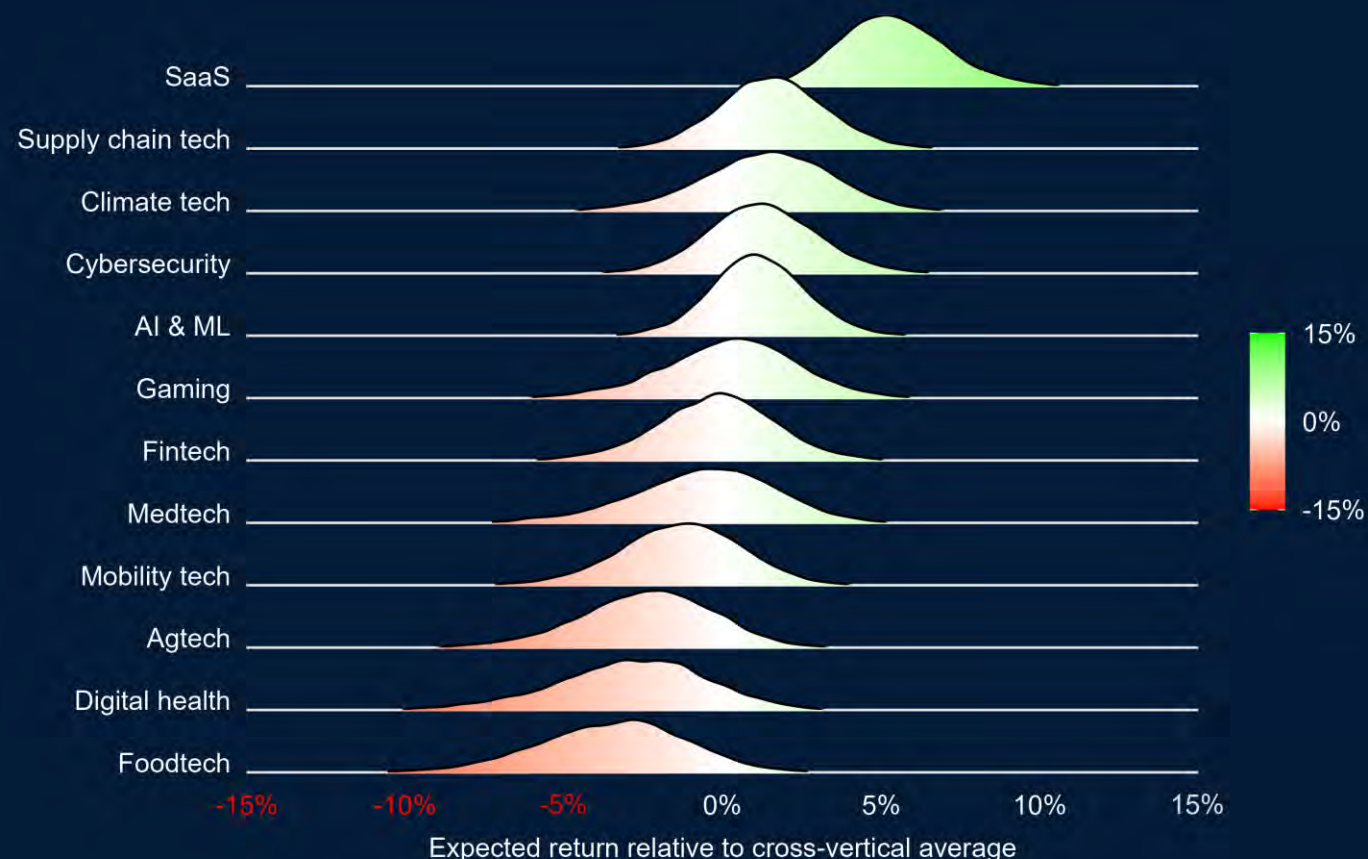
Expected returns for each vertical are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-vertical average return of 22.5% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each vertical, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.



...while the agtech, digital health, and foodtech verticals are likely to underperform.

Figure 5 ► **Distributions of relative annualized expected returns based on Monte Carlo simulations**



Source: PitchBook • Geography: Global • As of December 31, 2024



Monte Carlo simulations

To assess the uncertainty of the relative expected returns shown on the prior page, we ran 10,000 Monte Carlo simulations that randomly generated exit outcomes for each company based on the exit probabilities from the VC Exit Predictor. At each iteration, we then used the random exit outcomes to calculate the return for each vertical. We assumed that exit outcomes between pairs of companies were positively correlated—the degree to which was based on a single common factor, as well as factors for each vertical.

This analysis suggests that there are three tiers of verticals based on expected performance. SaaS is expected to outperform with high confidence, while agtech, digital health, and foodtech are expected to underperform. Meanwhile, the remaining verticals form a middle tier wherein the relative performance outcomes are much less certain.



SaaS remains the top vertical based on relative expected returns, while climate tech experienced the largest year-over-year improvement.

Figure 6 ► **Annualized expected returns for early-stage companies relative to the cross-vertical average**

	2017	2018	2019	2020	2021	2022	2023	2024
Agtech	-1.1%	-1.7%	-1.6%	-1.8%	-1.8%	-1.8%	-1.8%	-2.3%
AI & ML	+1.3%	+1.7%	+1.9%	+1.7%	+1.3%	+1.5%	+1.5%	+1.0%
Climate tech	-1.6%	-1.2%	-1.8%	-1.2%	-0.8%	-0.3%	+0.4%	+1.4%
Cybersecurity	+0.8%	+1.0%	+1.5%	+1.5%	+1.0%	+1.5%	+1.9%	+1.2%
Digital health	+0.5%	+0.4%	+0.2%	+0.2%	+0.1%	-0.4%	-1.4%	-2.7%
Fintech	+0.9%	+0.9%	+1.3%	+0.8%	+1.2%	+1.2%	+0.9%	-0.2%
Foodtech	-2.0%	-2.1%	-2.1%	-2.2%	-2.0%	-2.2%	-2.4%	-3.4%
Gaming	+0.7%	+0.7%	+0.4%	+0.0%	+0.8%	+1.6%	+1.4%	+0.3%
Medtech	-1.6%	-1.5%	-1.5%	-1.0%	-1.0%	-2.1%	-0.9%	-0.5%
Mobility tech	+1.9%	+1.8%	+1.8%	+1.9%	+1.4%	+1.0%	+0.4%	-1.3%
SaaS	+3.1%	+3.2%	+4.0%	+4.5%	+4.8%	+5.6%	+5.7%	+5.2%
Supply chain tech	+3.4%	+3.2%	+3.5%	+3.7%	+3.1%	+3.0%	+2.6%	+1.5%

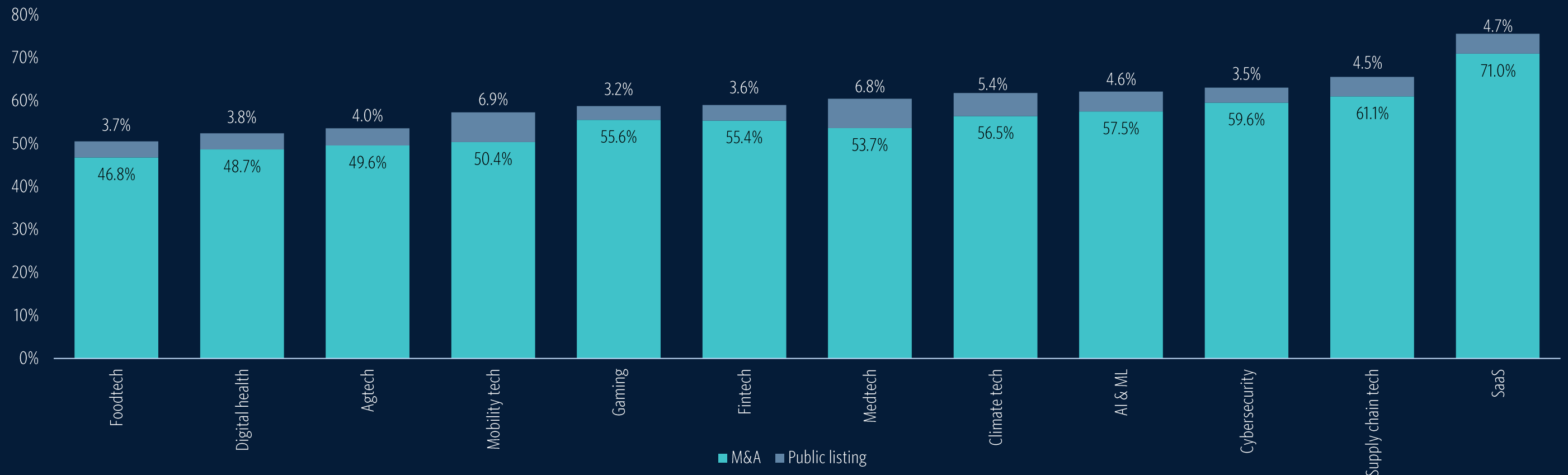
Source: PitchBook • Geography: Global • As of December 31, 2024

Note: Historical predictions are derived from models trained only on prior data relative to the year-end prediction date. Conditional formatting is applied across verticals each year.



The key driver of relative return expectations across verticals is the difference in expected exit type, which is based on individual company predictions from the VC Exit Predictor.

Figure 7 ► **Expected share of exits for early-stage companies by successful exit type**

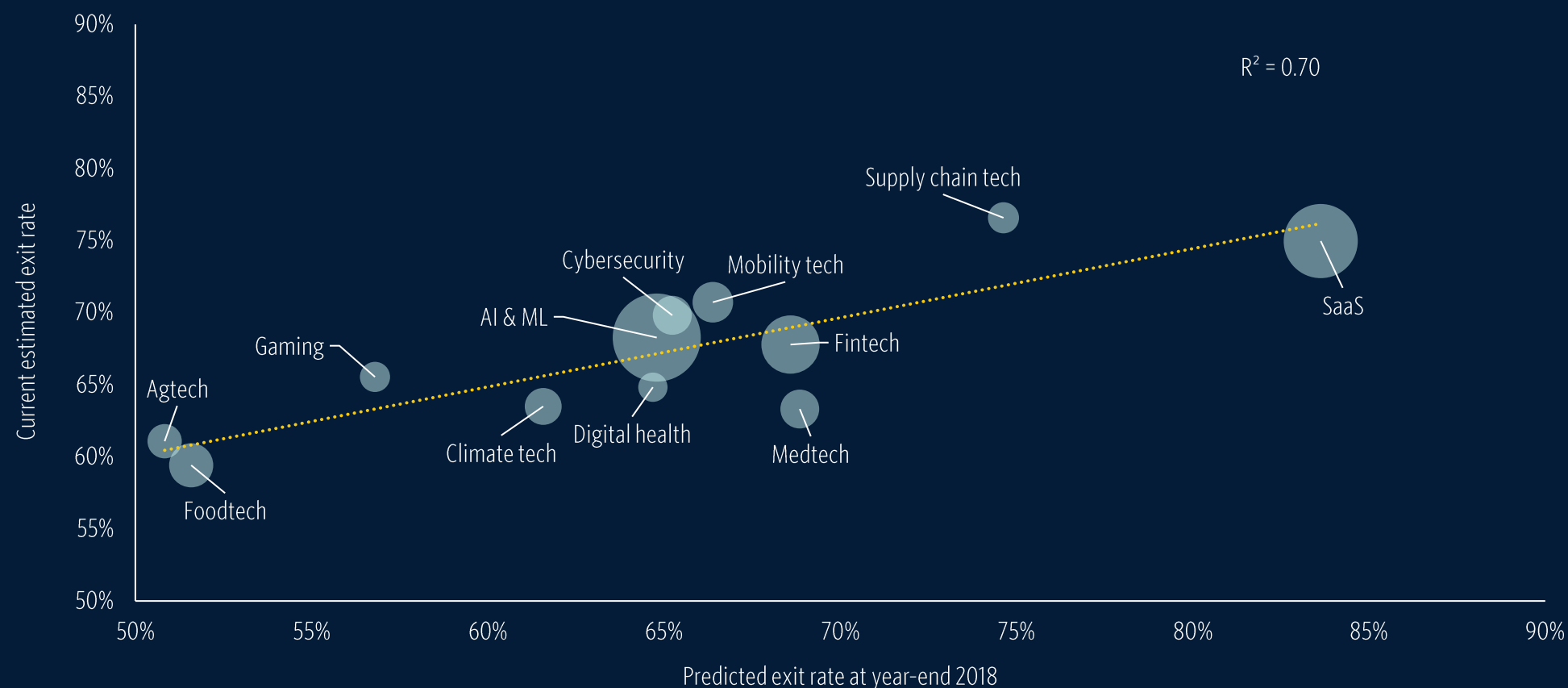


Source: PitchBook • Geography: Global • As of December 31, 2024
Note: Data includes only early-stage companies and is based on individual company predictions from the PitchBook VC Exit Predictor.



These predictions have historically done a good job of forecasting differences in exit rates across verticals.

Figure 8 ► Predicted exit rate for eligible early-stage companies from 2018 versus current estimated exit rate



Source: PitchBook • Geography: Global • As of December 31, 2024

Note: The current estimated exit rate is based on both companies that have exited and current exit predictions for those that are still VC backed. Bubble size reflects the number of companies in each vertical.



Model evaluation

To get a sense of how well the VC Exit Predictor does at estimating differences in exit outcomes across verticals, we looked at results from a back-test conducted for eligible companies at the end of 2018. A model was trained using only known exit outcomes at the time, and then predictions were made for each company. The predicted success rate for each vertical was calculated as the average predicted success rate of the underlying individual companies.

Fast-forward seven years, and we can evaluate the quality of these predictions, as shown in the accompanying chart. Because using only companies that have exited would create a biased sample, as successful exits take longer to materialize than failures, we also included companies that are still VC backed using updated exit predictions with current information.



Vertical return expectations are derived from forward-looking individual company exit predictions and historical return assumptions.

Figure 9 ► Hypothetical example of a vertical’s return expectations

	Latest financing stage	Predicted M&A probability	Predicted IPO probability	Historical average M&A return	Historical average IPO return	Historical M&A holding period (years)	Historical IPO holding period (years)	Expected payout given M&A exit	Expected payout given IPO exit	Expected total payout
Company A	Seed	15.0%	3.0%	35.9%	45.3%	5.2	5.9	\$4.90	\$9.10	\$1.00
Company B	Series A	60.0%	6.0%	30.5%	34.5%	4.6	4.4	\$3.40	\$3.70	\$2.30
Company C	Series B	45.0%	13.0%	28.6%	30.7%	4.3	3.7	\$2.90	\$2.70	\$1.70

Expected total payout = (15% × \$4.90) + (3% × \$9.10) = \$1.00

Total payouts conservatively assume that no exits are a total loss.

Historical average returns are calculated for each financing stage (seed, Series A, and Series B).

Average expected holding period

Expected payout = (1 + 28.6%)^{4.3} = \$2.90

Annualized expected vertical return = $\left(\frac{\$1.00 + \$2.30 + \$1.70}{\$3.00}\right)^{(1/4.7)} - 1 = 11.5\%$

Companies are equally weighted.

Source: PitchBook
Note: The historical returns consider ownership dilution for each series; expected payouts are expressed per \$1 of the initial investment.



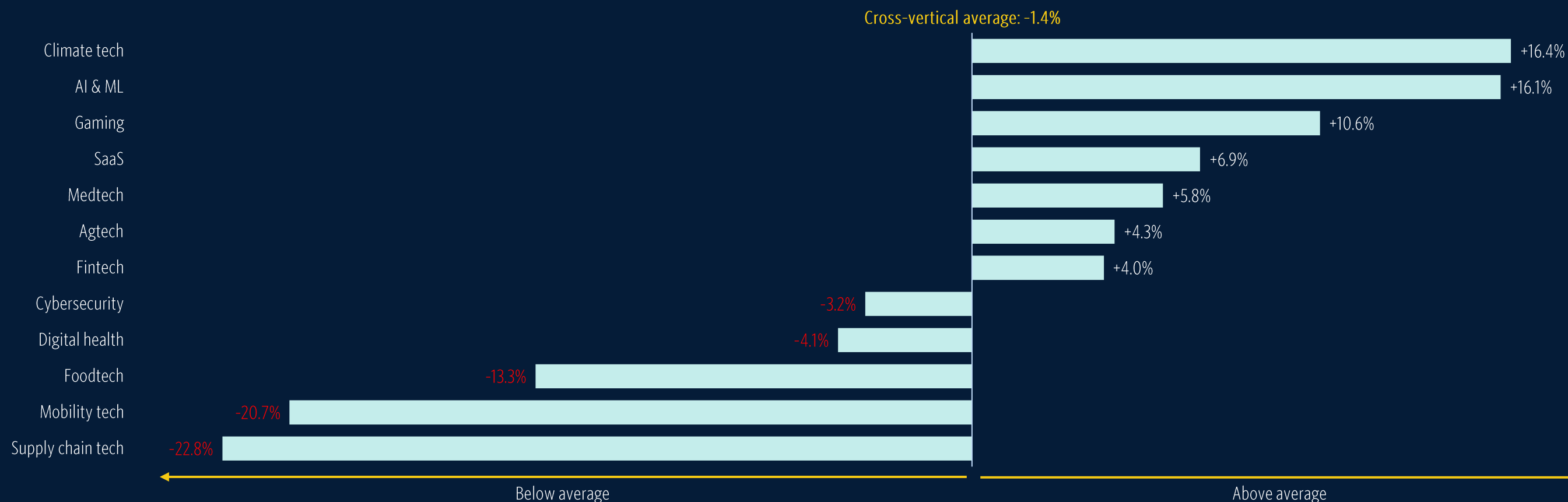
Top-down analysis

In this section, we analyze short-term cross-vertical trends in key areas to complement the previous bottom-up company-level analysis.



Deal value improved throughout 2024, but the dispersion between verticals widened. Supply chain tech and mobility tech were hit the hardest, with deal value declining by more than 20% from 2023.

Figure 10 ► **TTM change in early-stage deal value relative to the cross-vertical average**

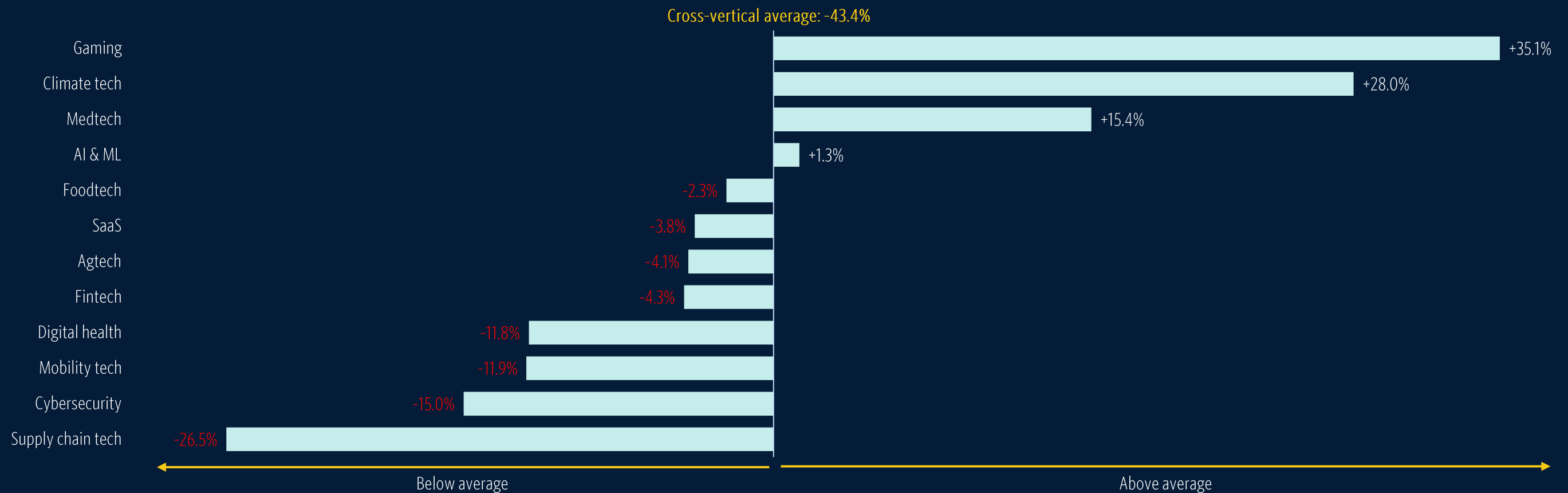


Source: PitchBook • Geography: Global • As of December 31, 2024
Note: Data estimates are applied to the most recent 12 months to account for lagged data collection.



First-time financing declined across all verticals in 2024, with supply chain tech experiencing the steepest relative decline at 26.5% below the cross-vertical average.

Figure 11 ► **TTM change in first-time VC financing count relative to the cross-vertical average**



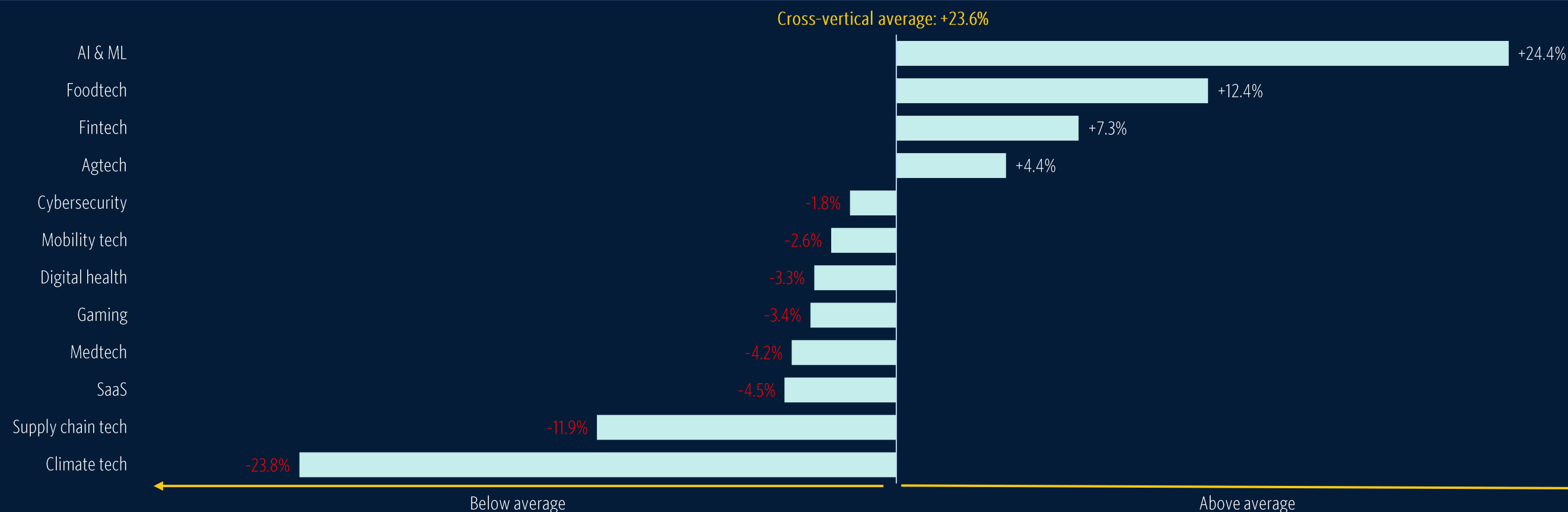
Source: PitchBook • Geography: Global • As of December 31, 2024

Note: Data estimates are applied to the most recent 12 months to account for lagged data collection. Because there can be delays in tagging newly financed companies to verticals, the vertical average is likely biased to the downside.



AI & ML continues to show strong pre-money valuation growth, outpacing the cross-vertical average alongside foodtech, fintech, and agtech.

Figure 12 ► **TTM change in median early-stage pre-money valuation relative to the cross-vertical average**



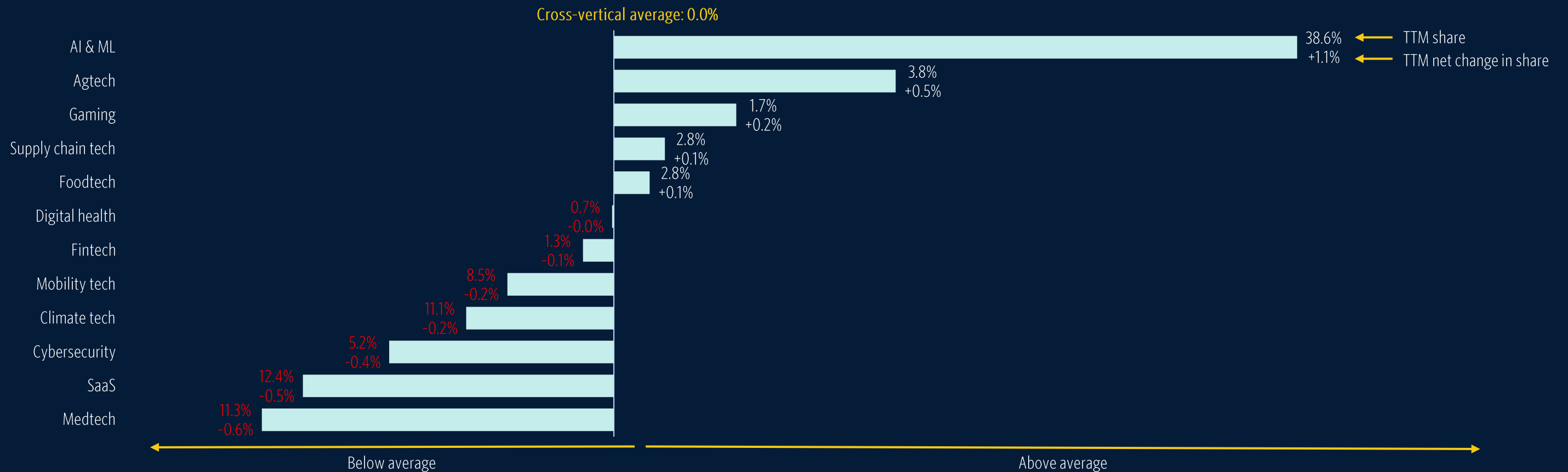
Source: PitchBook • Geography: Global • As of December 31, 2024

Note: Percentage changes in seed, Series A, and Series B valuations are calculated separately and then aggregated using a weighted average.



AI & ML not only dominated in the share of total patents filed, accounting for 38.6% of the cross-vertical share, but also saw the highest growth from 2023.

Figure 13 ► **TTM share of published patents and net change in share relative to the cross-vertical average**

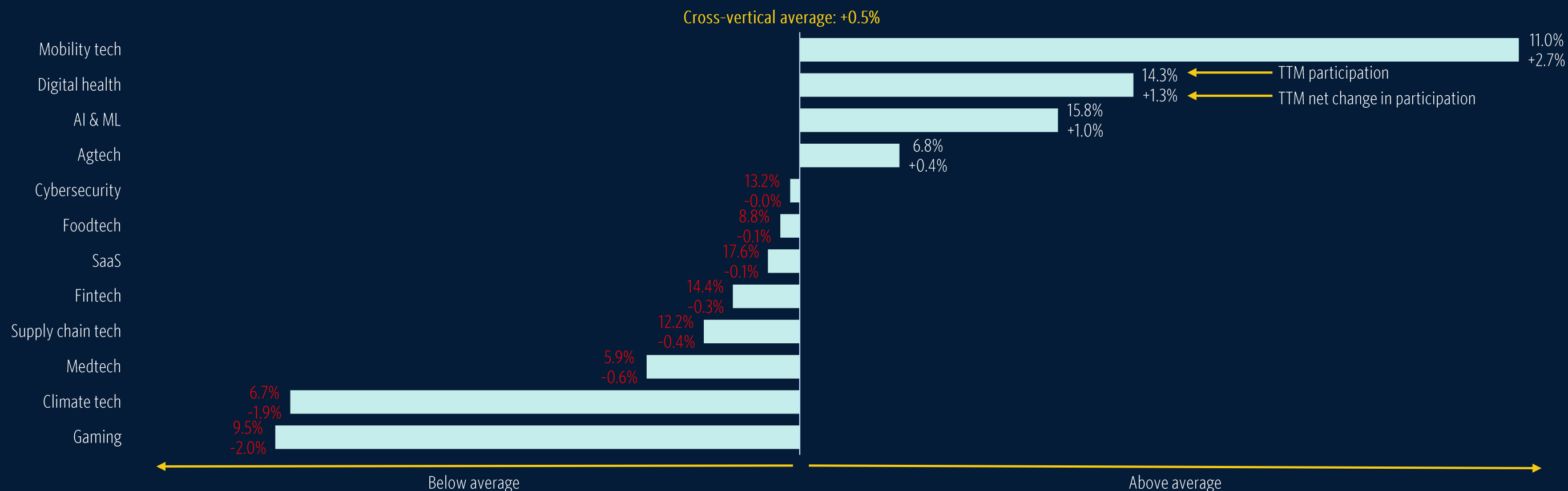


Source: PitchBook • Geography: Global • As of December 31, 2024



Mobility tech saw the largest increase in top-ranked investor participation despite broader industry challenges, including declining investment activity, valuations, and patent filings.

Figure 14 ► **TTM top-ranked investor participation and net change in participation relative to the cross-vertical average**



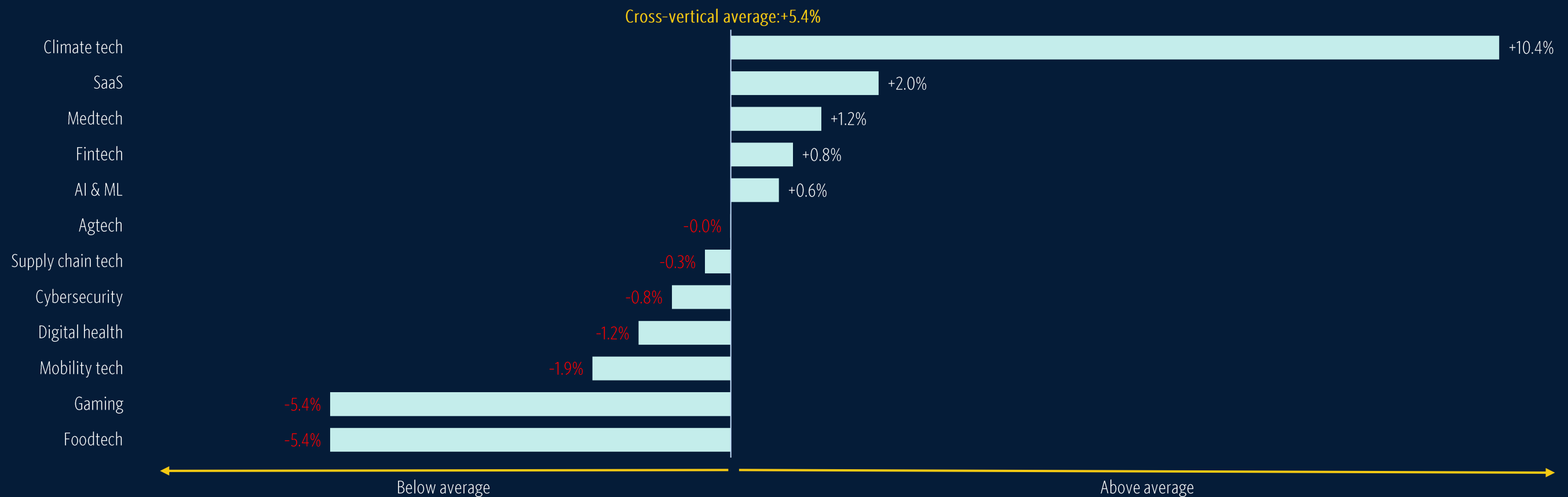
Source: PitchBook • Geography: Global • As of December 31, 2024

Note: Top-ranked investors are those that are in the top decile based on the investor network score that is used as an input to the VC Exit Predictor. For more details, please see the [methodology document](#). "Participation" is defined as the share of total deals in the trailing 12 months in which a top-ranked investor was involved.



Climate tech experienced the largest employee growth, partly attributed to the increasing investment into early-stage deals and first-time financing relative to other verticals.

Figure 15 ► **Median TTM employee growth relative to the cross-vertical average**



Source: PitchBook • Geography: Global • As of December 31, 2024

Note: Employee growth is calculated at the company level by comparing the latest data point from the current year with the latest data point from the prior year.



Cross-vertical summary

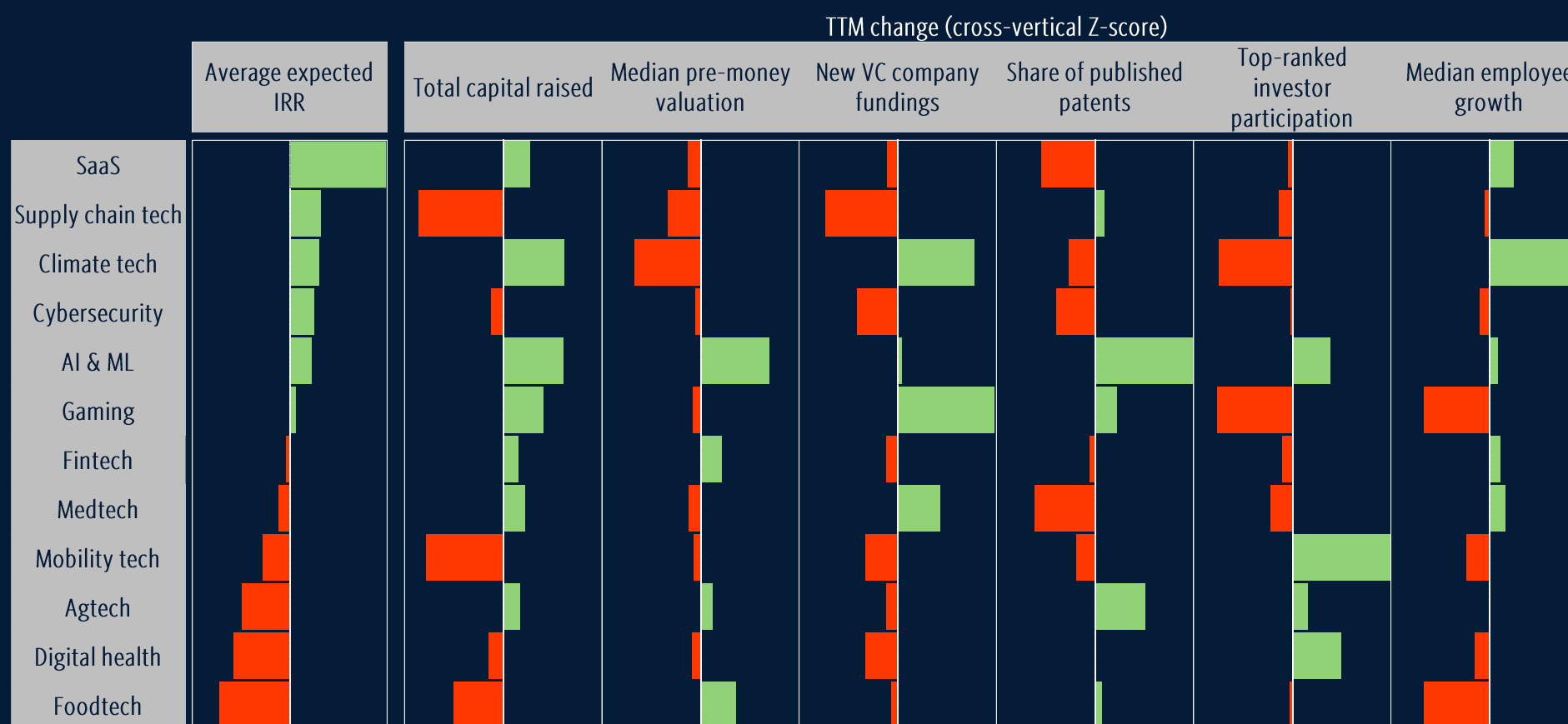


Summary of bottom-up and top-down analyses



Summing it up

Figure 16 ► **Cross-vertical Z-scores for bottom-up and top-down metrics**



Source: PitchBook • Geography: Global • As of December 31, 2024

This table summarizes the annual 2024 values for each of the previously covered metrics and is sorted by the average expected return. The length of each bar represents the cross-vertical Z-score, wherein the maximum and minimum lengths are +/- two standard deviations, respectively. The center of each column is zero.



Individual vertical analyses



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Agtech

For the latest in-depth agtech research, click [here](#).

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Introduction

The agtech sector faced challenges but demonstrated resilience and innovation in 2024. Technologies aimed at boosting crop yields, efficiency, and sustainability continued to evolve, including software, biotech, sensors, machinery, and indoor farming solutions.

Investment trends

- Agtech VC deal activity reached \$1.8 billion across 149 deals in Q4, an 8.9% increase QoQ. However, early-stage funding declined, with pre-seed/seed deal count dropping 33.7% YoY. Annual deal value fell by 25.6% due to high interest rates and a tough exit environment. Major deals included Sound Agriculture's \$100 million Series D and Carbon Robotics' \$70 million Series D.

Sector performance

- Precision agriculture led with \$2.1 billion across 238 deals in 2024, driven by demand in automation and robotics. Remote crop monitoring tech also gained traction. Indoor farming struggled with 28 bankruptcies, including that of Bowery. However, Oishii secured a \$150 million Series B at a \$615 million post-money valuation.

Global landscape

- The US retained its dominance in agtech VC funding, while Asian firms gained ground. Malaysia's Aerodyne secured the year's largest deal at \$200 million for industrial drones.

Emerging technologies

- AI, automation, precision agriculture, gene editing, and biological inputs attracted investor interest. Robotics and AI improved farm productivity, while gene editing enhanced yields. Biofertilizers gained popularity as sustainable alternatives to traditional chemicals.

Exits and acquisitions

- Exit activity declined in 2024 with only 35 exits totaling \$1.1 billion. Key acquisitions included Kubota's purchase of Bloomfield Robotics and GEA Group's acquisition of CattleEye, reflecting the rise of AI and imaging in agriculture.

Outlook

- Despite 2024's challenges, a market rebound is expected as interest rates ease. Agtech's focus on capital-efficient, sustainable solutions positions it for future growth as it continues to emphasize food security, sustainability, and climate change mitigation.

Agtech overview

Figure 17 ▶ Count of early-stage agtech companies by segment

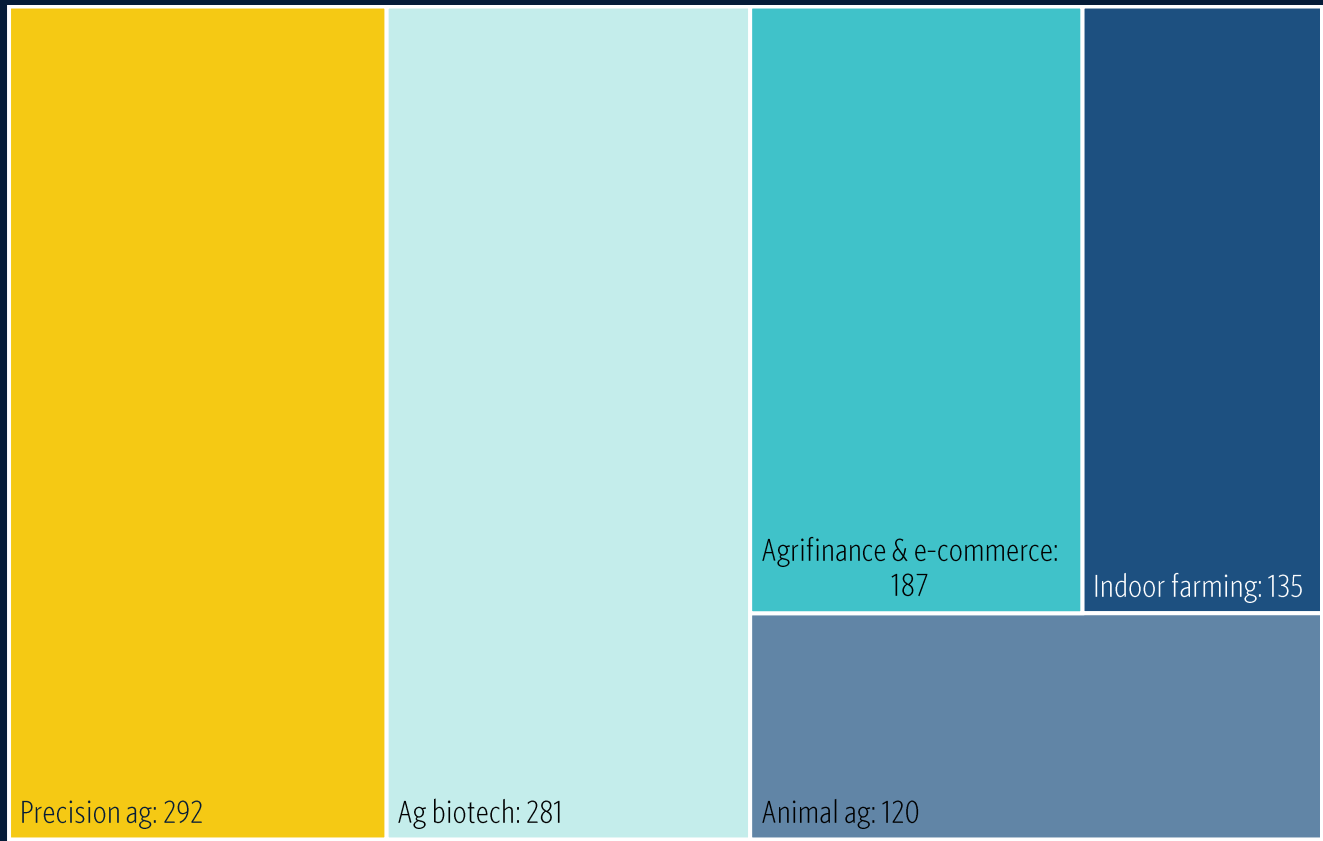


Figure 18 ▶ Agtech metric summary

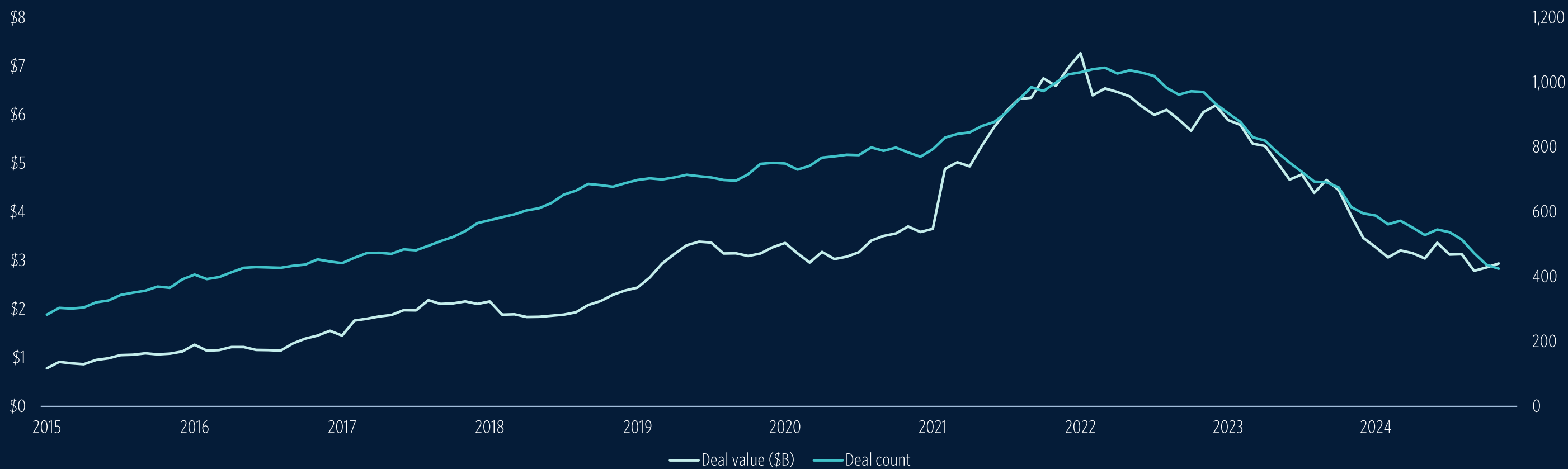
	Value	TTM change	Relative score
Annualized expected return*	20.1%	+0.1%	
Total capital raised	\$4.0B	+2.9%	
New VC company fundings	128	-47.5%	
Median pre-money valuation	\$24.3M	+28.6%	
Share of published patents	3.8%	+0.5%	
Top-ranked investor participation	6.8%	+0.9%	
Median employee growth	5.4%	-8.2%	

Source: PitchBook • Geography: Global • As of December 31, 2024

*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.

Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.

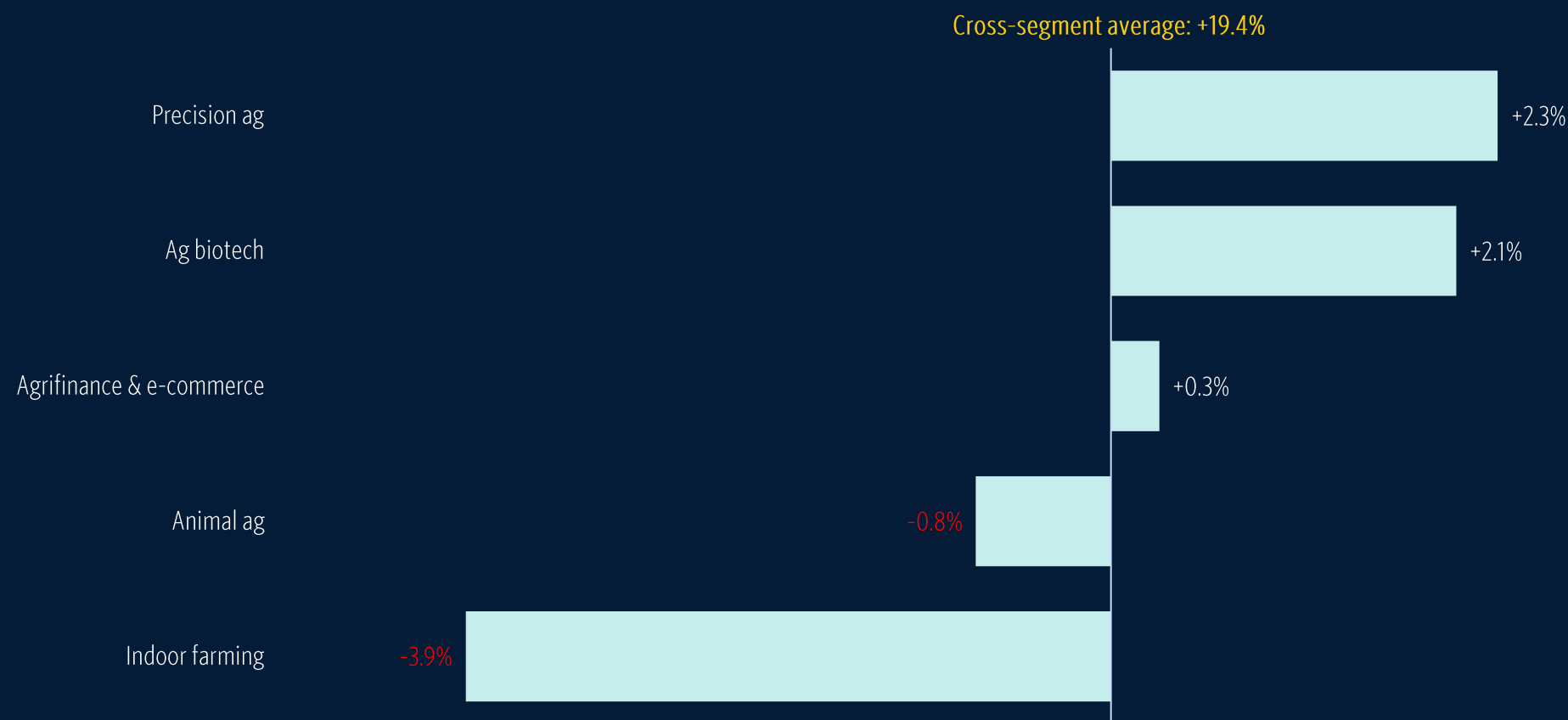
Figure 19 ► **TTM early-stage agtech VC deal activity**



Source: PitchBook • Geography: Global • As of December 31, 2024

Investment attractiveness of early-stage agtech companies by segment

Figure 20 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 19.4% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.

Individual company highlights: North America

Figure 21 ► **North American early-stage agtech companies with largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Pixxel Space Technologies	Precision ag	81%	15%	83	+72
Farm-ng	Precision ag	72%	3%	71	+56
SwineTech	Animal ag	88%	1%	93	+55
Minnowtech	Animal ag	81%	1%	83	+53
Bountiful	Precision ag	70%	1%	62	+50
ForeLight	Ag biotech	51%	7%	50	+48
AgEye Technologies	Indoor farming	75%	1%	73	+46
Harpe Bio Herbicide	Ag biotech	76%	3%	81	+44
VinSense	Precision ag	57%	1%	46	+44
Avalo	Ag biotech	74%	4%	80	+43

Please use this [saved search](#) for a complete, dynamic list of agtech companies.

Source: PitchBook ▪ Geography: North America ▪ As of December 31, 2024

Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.

Individual company highlights: Europe

Figure 22 ► **European early-stage agtech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Meridia	Precision ag	87%	1%	92	+89
Roslin Technologies	Ag biotech	80%	6%	93	+61
Deep Planet	Precision ag	87%	1%	92	+59
WASE	Indoor farming	81%	5%	91	+56
Airwayz	Precision ag	81%	1%	84	+54
FreezeM	Animal ag	74%	2%	73	+53
AgroLeague	Ag biotech	83%	1%	86	+51
MIRICO	Precision ag	85%	1%	88	+50
Agrow Analytics	Precision ag	76%	1%	74	+49
Nasekomo	Ag biotech	83%	5%	94	+49

Please use this [saved search](#) for a complete, dynamic list of agtech companies.

Source: PitchBook • Geography: Europe • As of December 31, 2024

Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



AI & ML

For the latest in-depth AI & ML research, click [here](#).





Introduction

Generative AI offers an opportunity for the future of AI technology yet does not benefit all existing vendors equally. Many legacy companies' prospects have dimmed as their AI models have become obsolete and their business models have struggled to keep up with the latest techniques. AI & ML companies operate across segments to bring academic innovations to market.

Each segment has different prospects based on the extent of competition and technological progress within them. These segments include:

- Horizontal platforms, which empower end users to build and deploy AI & ML algorithms across a variety of use cases. These platforms apply scientific advances in AI & ML research directly to commercial applications. Companies in this segment have differentiated AI & ML approaches and are built with AI & ML from the ground up—referred to as AI-first. Furthermore, some horizontal platforms are used to improve AI & ML algorithms but do not use AI & ML themselves.
- Vertical applications in AI & ML, which address specific problems within industries and are not always AI-first. Many startups in this segment design a solution to an industry problem using software and integrate AI & ML to optimize some part of their product.
- AI & ML semiconductors, which include companies focused on design and software-based optimization of computing hardware, including both semiconductors and sensors.
- Autonomous machines, which can perform tasks in human-present environments without explicit human control. These machines synthesize ML, computer vision, and datasets of the physical world, such as navigation.

Competitive dynamics differ across each segment. In semiconductors, NVIDIA has emerged as a clear leader, which challenges startups to commercialize. In horizontal platforms, tech giants including Alphabet, Amazon, Meta, and Microsoft develop models and the infrastructure needed to deploy them. In vertical applications, legacy vendors in each industry update their software to integrate AI. Autonomous machines offer startups greenfield opportunities given limited deployments of autonomous vehicles, drones, and intelligent robotics.

Returns in horizontal platforms and vertical applications trend toward the market average because of their increasing role in the marketplace. AI & ML VC funding increased to 46.4% of all US VC deal value in 2024 after never exceeding 25% previously. The vertical contributed 51.4% of new unicorns in 2024, increasing from 41.4% in 2023. These large deals derive primarily from the horizontal platforms and vertical applications segments, which create some of the largest companies in the private markets. OpenAI, a horizontal platform company building foundation models, is expected to raise \$40 billion of late-stage venture funding in a deal led by SoftBank, reaching an estimated valuation of \$300 billion. The scope of AI & ML VC deals contributes to an outsized share of the market.

Autonomous machines and semiconductors deviate from average returns given their smaller scale and greater risk. Companies in both segments commercialize hardware and build novel AI models. Semiconductor startups have suffered from macroeconomic headwinds, competition, and execution risk in building costly new computing platforms. Autonomous machine startups have found suitable use cases in national defense, real estate inspection, and warehouse management. Simultaneously, state-of-the-art AI methods are progressing in robotics thanks to new discoveries in computer vision and reinforcement learning that can support improved machine performance.

AI & ML overview

Figure 23 ▶ Count of early-stage AI & ML companies by segment

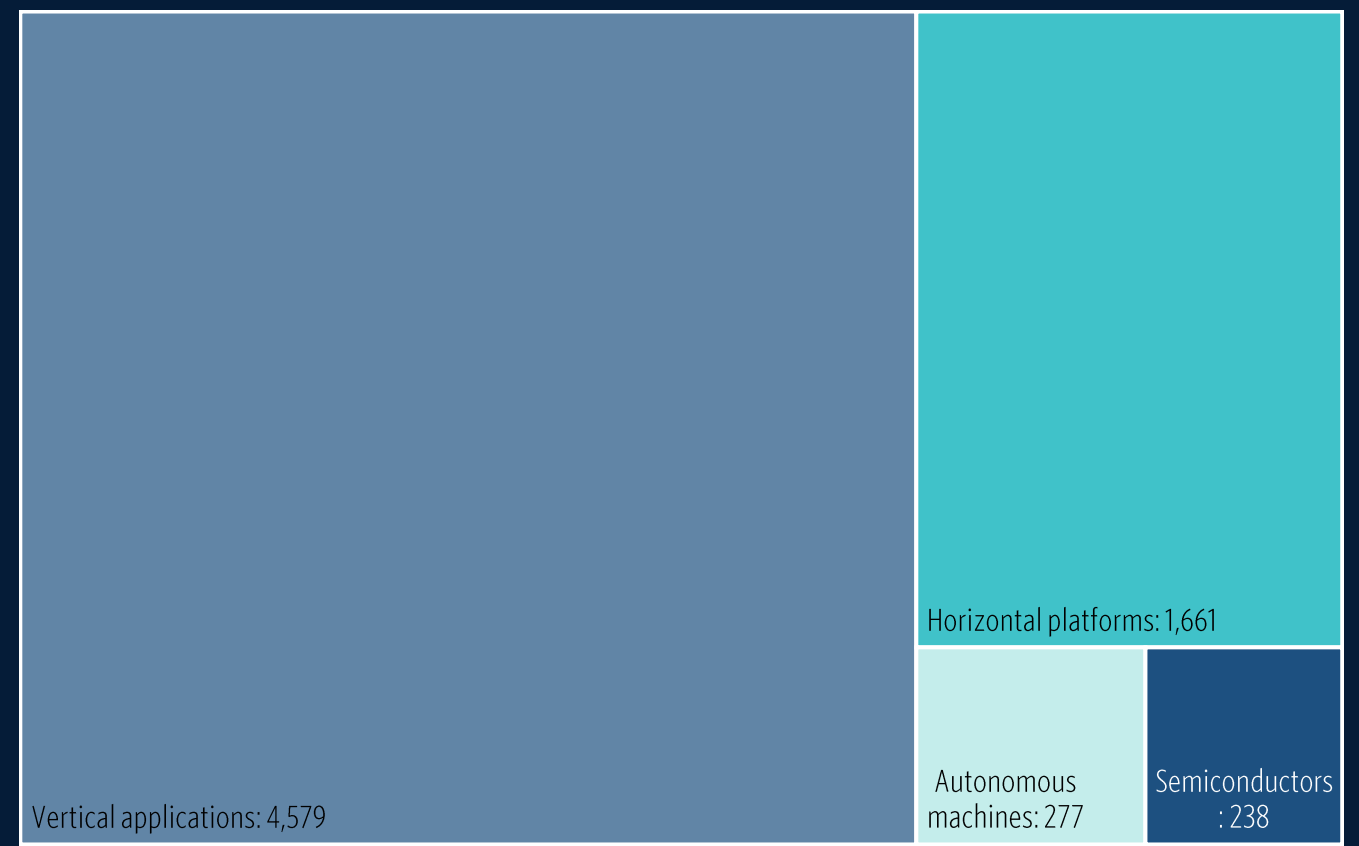


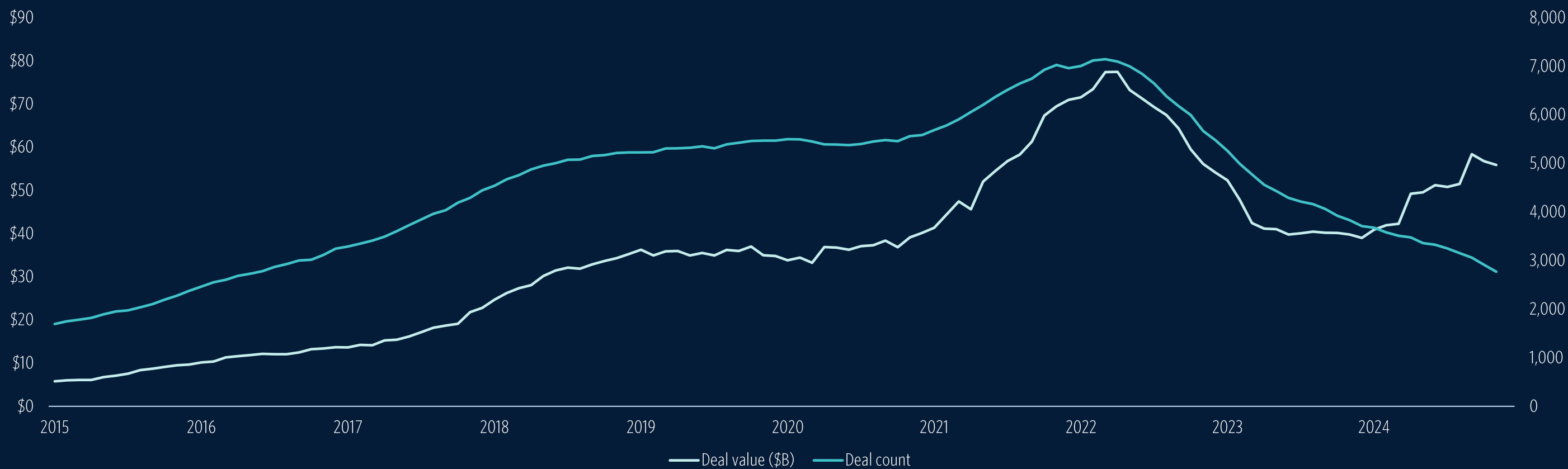
Figure 24 ▶ AI & ML metric summary

	Value	TTM change	Relative score
Annualized expected return*	23.5%	+0.1%	
Total capital raised	\$37.8B	+14.6%	
New VC company fundings	626	-42.1%	
Median pre-money valuation	\$55.0M	+48.6%	
Share of published patents	38.6%	+1.1%	
Top-ranked investor participation	15.8%	+1.5%	
Median employee growth	6.1%	-5.7%	

Source: PitchBook • Geography: Global • As of December 31, 2024
*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.
Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.



Figure 25 ▶ TTM early-stage AI & ML VC deal activity

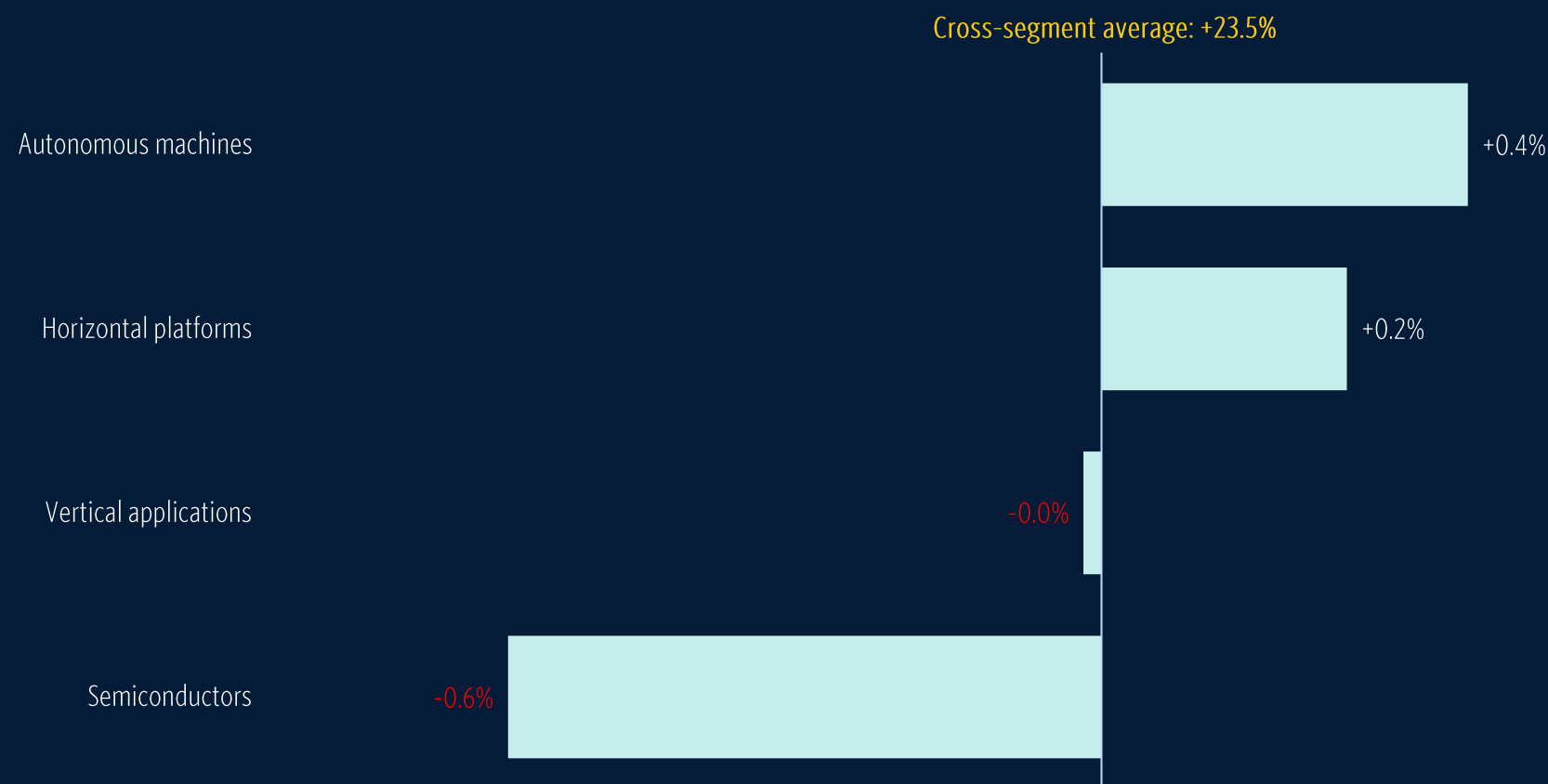


Source: PitchBook • Geography: Global • As of December 31, 2024



Investment attractiveness of early-stage AI & ML companies by segment

Figure 26 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 23.5% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.



Individual company highlights: North America

Figure 27 ► North American early-stage AI & ML companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
WOMBO	Vertical applications	93%	1%	97	+77
Avibra	Horizontal platforms	75%	5%	84	+75
Myavana	Vertical applications	94%	1%	98	+74
Numa	Horizontal platforms	91%	2%	75	+71
Otis AI	Vertical applications	82%	1%	85	+70
Hemera	Vertical applications	81%	1%	83	+66
When	Vertical applications	79%	1%	79	+64
ChalkTalk	Vertical applications	86%	1%	90	+63
New Lantern	Horizontal platforms	77%	5%	87	+60
Raiinmaker	Horizontal platforms	82%	1%	85	+60

Please use this [saved search](#) for a complete, dynamic list of AI & ML companies.

Source: PitchBook ▪ Geography: North America ▪ As of December 31, 2024
Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Individual company highlights: Europe

Figure 28 ► European early-stage AI & ML companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Apify	Horizontal platforms	89%	1%	94	+93
Valohai	Horizontal platforms	85%	1%	88	+87
CASTOR	Horizontal platforms	81%	3%	89	+78
Signatrix	Vertical applications	86%	1%	91	+71
Oplit	Vertical applications	80%	1%	82	+64
Allsorter	Vertical applications	85%	1%	89	+62
Unlimited Robotics	Autonomous machines	86%	1%	90	+62
Peppercorn AI	Horizontal platforms	82%	1%	85	+62
IMU Biosciences	Vertical applications	70%	2%	65	+60
AIKO	Horizontal platforms	90%	1%	95	+59

Please use this [saved search](#) for a complete, dynamic list of AI & ML companies.

Source: PitchBook ▪ Geography: Europe ▪ As of December 31, 2024
Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Climate tech

For the latest in-depth climate tech research, click [here](#).

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Introduction

Climate tech includes a diverse range of technologies and applications that focus on climate change mitigation, either by reducing greenhouse gas emissions from various industries and processes or by removing previously emitted carbon dioxide from the atmosphere. Key sectors of focus for climate tech include mobility & transport, energy generation & distribution, industrial processing & manufacturing, food & agriculture, and the built environment. Many climate technologies provide alternative processes to conventional high-carbon processes, as is the case for renewable energy sources and chemical production without using fossil fuel resources. Others are compatible with existing high-carbon processes, such as capturing carbon from industrial or energy-producing facilities.

Regulation and policy are critical factors driving adoption of climate technologies, many of which involve costlier processes than conventional methods, particularly considering the developing nature of certain technologies in the sector. Regulatory support has increased dramatically in the past few years, though initiatives such as the EU's Emissions Trading System (ETS) have been in place for longer and are increasing their requirements each year to maintain pressure to decarbonize. The ETS is compliance based; it requires companies in certain sectors to either meet certain carbon targets or purchase additional carbon allowances. To meet these targets, companies may implement climate technologies or switch to low-carbon inputs. Other regions focus more on incentivization rather than compliance. For example, the US passed the Inflation Reduction Act in 2022, which contains approximately \$370 billion in climate tech support in the form of grants and tax credits. More recently, political change has introduced uncertainty around the level of US government support for climate tech companies, as climate change mitigation has become something of a partisan issue.

VC investment in climate tech grew rapidly between 2021 and the end of 2022, influenced by market conditions for VC overall, plus growing global recognition of the need to mitigate climate change. Consumer interest in low-carbon alternatives for food, consumer goods, and transport has increased, as have pledges at the country, city, and corporate levels. While pledges on their own are not meaningful without further planning and implementation, country-level pledges are often the catalyst for changes to the regulatory and policy environment. Technological advancement is also critical in some segments of climate tech, and developments to battery technologies in particular have allowed deployment of electric vehicles with capabilities expected by users. Similarly, rooftop solar panels have developed to the point that they are now more widely considered economically viable, particularly given the high, volatile energy prices seen from 2022 onward. Since the end of 2022, though, the challenging market conditions for VC overall have dampened deal activity in the sector. Datacenter growth—coupled with the desire to reduce datacenter environmental impacts—is driving demand for low-carbon energy, including intermittent renewables, plus low-carbon dispatchable sources such as geothermal and nuclear fission.

Climate tech overview

Figure 29 ▶ Count of early-stage climate tech companies by segment

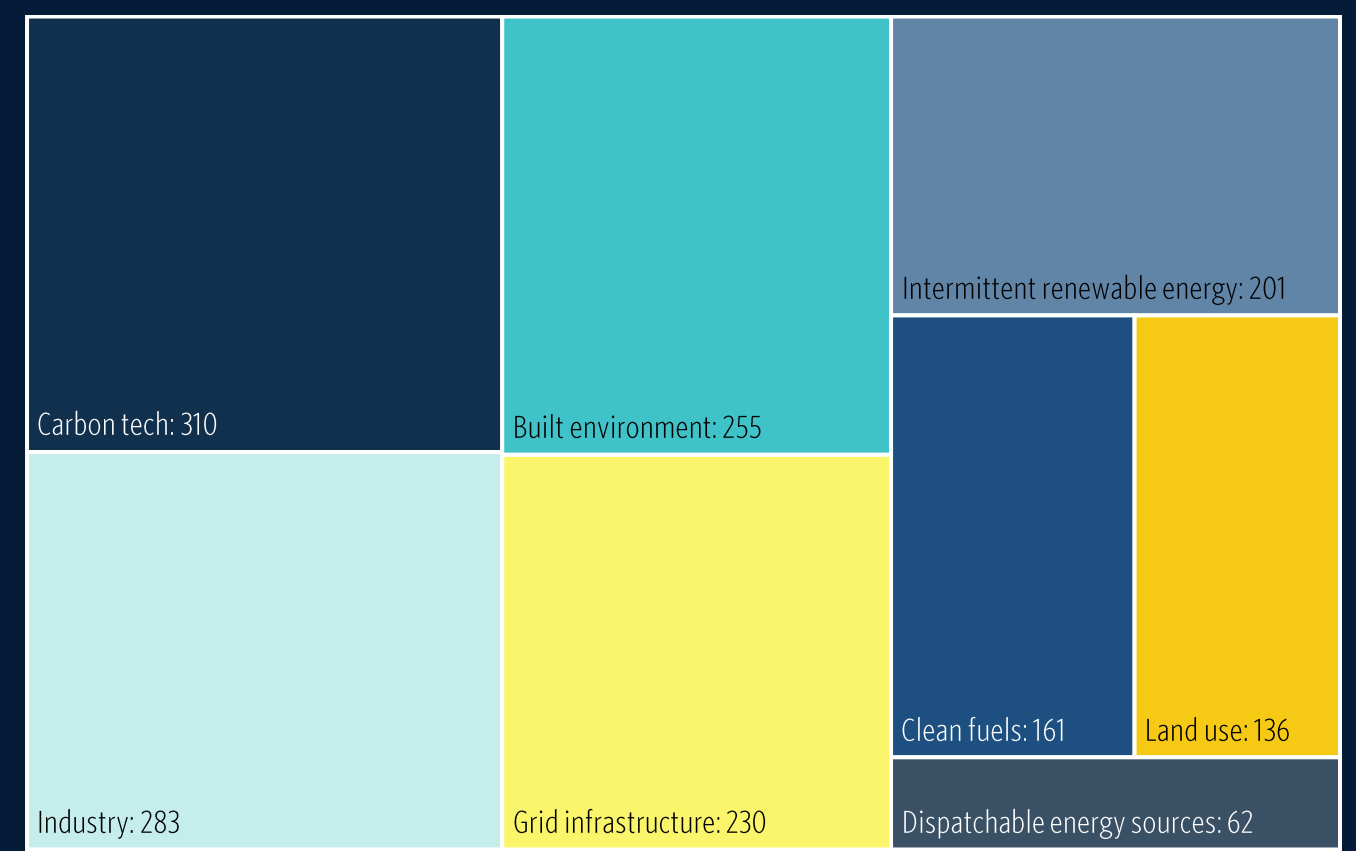


Figure 30 ▶ Climate tech metric summary

	Value	TTM change	Relative score
Annualized expected return*	23.8%	+1.5%	
Total capital raised	\$14.7B	+15.0%	
New VC company fundings	551	-15.4%	
Median pre-money valuation	\$31.7M	+0.5%	
Share of published patents	11.1%	-0.2%	
Top-ranked investor participation	6.7%	-1.4%	
Median employee growth	15.8%	+0.0%	

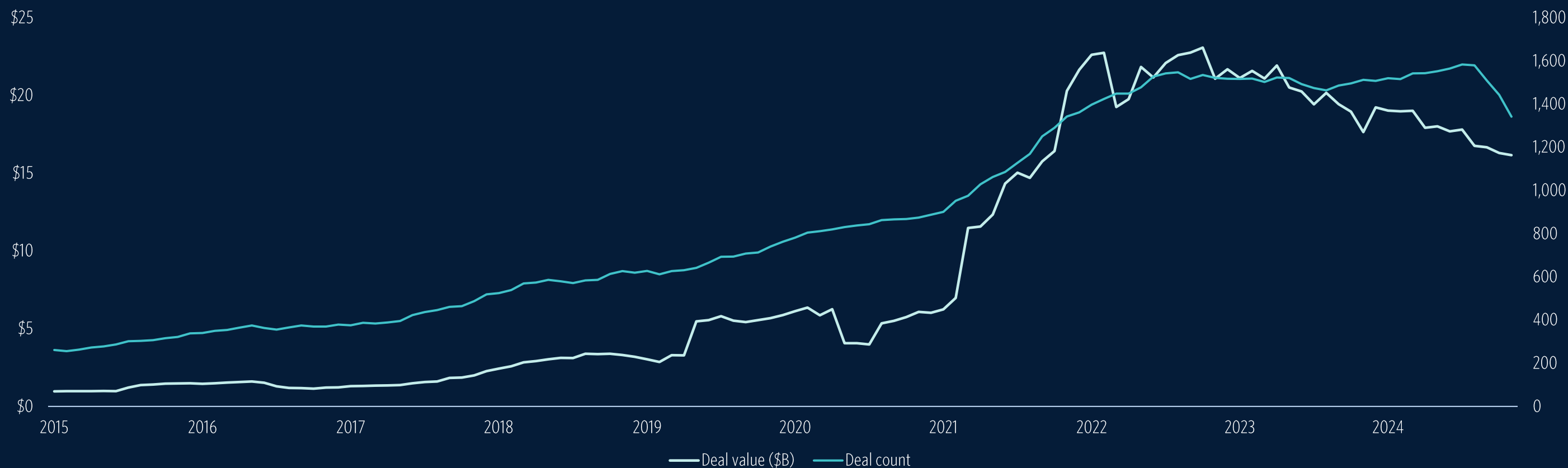
Source: PitchBook • Geography: Global • As of December 31, 2024

*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.

Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.



Figure 31 ► **TTM early-stage climate tech VC deal activity**

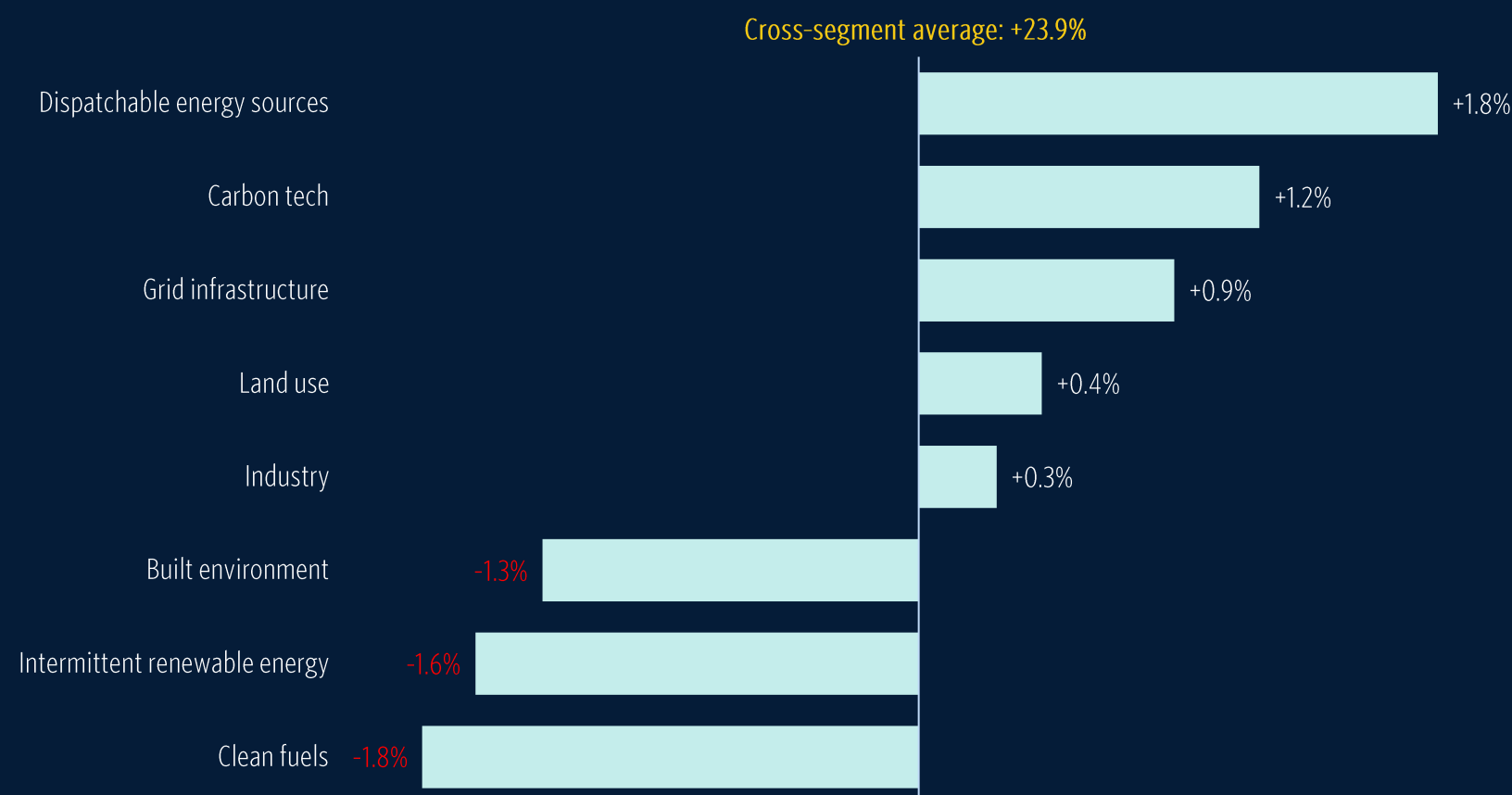


Source: PitchBook • Geography: Global • As of December 31, 2024



Investment attractiveness of early-stage climate tech companies by segment

Figure 32 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 23.9% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.

Individual company highlights: North America

Figure 33 ► **North American early-stage climate tech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
SmartAC.com	Built environment	69%	8%	82	+82
Xcimer	Dispatchable energy sources	22%	56%	99	+81
Celadyne Technologies	Clean fuels	79%	1%	80	+70
Prism Worldwide	Industry	83%	4%	92	+70
Transaera	Built environment	78%	4%	86	+63
Mycocycle	Industry	84%	1%	87	+61
Azure Printed Homes	Built environment	72%	1%	66	+56
Vantem	Built environment	78%	1%	78	+55
Phoenix Tailings	Industry	67%	20%	68	+53
Pure Lithium	Industry	33%	39%	97	+52

Please use these saved searches for a complete, dynamic list of climate tech companies: [carbon & emissions tech](#) and [clean energy](#).

Source: PitchBook • Geography: North America • As of December 31, 2024

Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.

Individual company highlights: Europe

Figure 34 ► **European early-stage climate tech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Caeli Wind	Intermittent renewable energy	56%	25%	98	+84
Gridcog	Grid infrastructure	87%	1%	92	+81
Monumental	Built environment	83%	1%	87	+70
Aerones	Intermittent renewable energy	53%	36%	100	+70
Aegir Insights	Intermittent renewable energy	85%	1%	89	+65
SUBLIME Energie	Clean fuels	70%	3%	68	+59
SOLAR MATERIALS	Intermittent renewable energy	71%	6%	81	+56
Flower	Grid infrastructure	58%	17%	86	+54
44.01	Carbon tech	17%	72%	100	+52
NAMé Recycling	Industry	65%	1%	55	+46

Please use these saved searches for a complete, dynamic list of climate tech companies: [carbon & emissions tech](#) and [clean energy](#).

Source: PitchBook • Geography: Europe • As of December 31, 2024
Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Cybersecurity

For the latest in-depth cybersecurity research, click [here](#).





Introduction

Cybersecurity (also known as information security) refers to technology and services that protect enterprises from digital threats to business operations. Segments of the market commonly addressed by private vendors include:

- Application security, which encompasses technologies and services that address the vulnerabilities of software programs. Common vulnerabilities include data requests within applications, injection of malicious scripts into existing code, and contamination of log file entries and HTTP headers.
- Data security, which uses encryption, monitoring, filtering, blocking, and remediating technologies to address the risks of inadvertent or accidental data loss and the exposure of sensitive data.
- Endpoint security, which refers to the protection of data communicated through and stored in devices at the network edge, detection of attacks on edge devices, and responses to these attacks by utilizing forensic analysis and breach remediation.
- Identity & access management software, which enables management of employee and customer details, as well as permissions across the enterprise network.
- Network security, which includes software and hardware that protect enterprise network infrastructure from digital attacks. The segment focuses on the traffic entering the enterprise perimeter and moving laterally among network nodes.
- Security operations technology, which aids the critical functions of the enterprise's security operations center or equivalent entity in utilizing the tools in other segments.

These segments differ in market maturity, end user spending, and risk prioritization. Enterprise networks are expanding via the cloud and remote workstations, which is creating an uncertain landscape for cybersecurity leaders. Application security and endpoint security benefit from the diffusion of enterprise workloads more so than network and data security. Even so, each segment has distinct market leaders and competitive dynamics that change the investment outlook for startups in the space.

Cybersecurity overview

Figure 35 ▶ Count of early-stage cybersecurity companies by segment

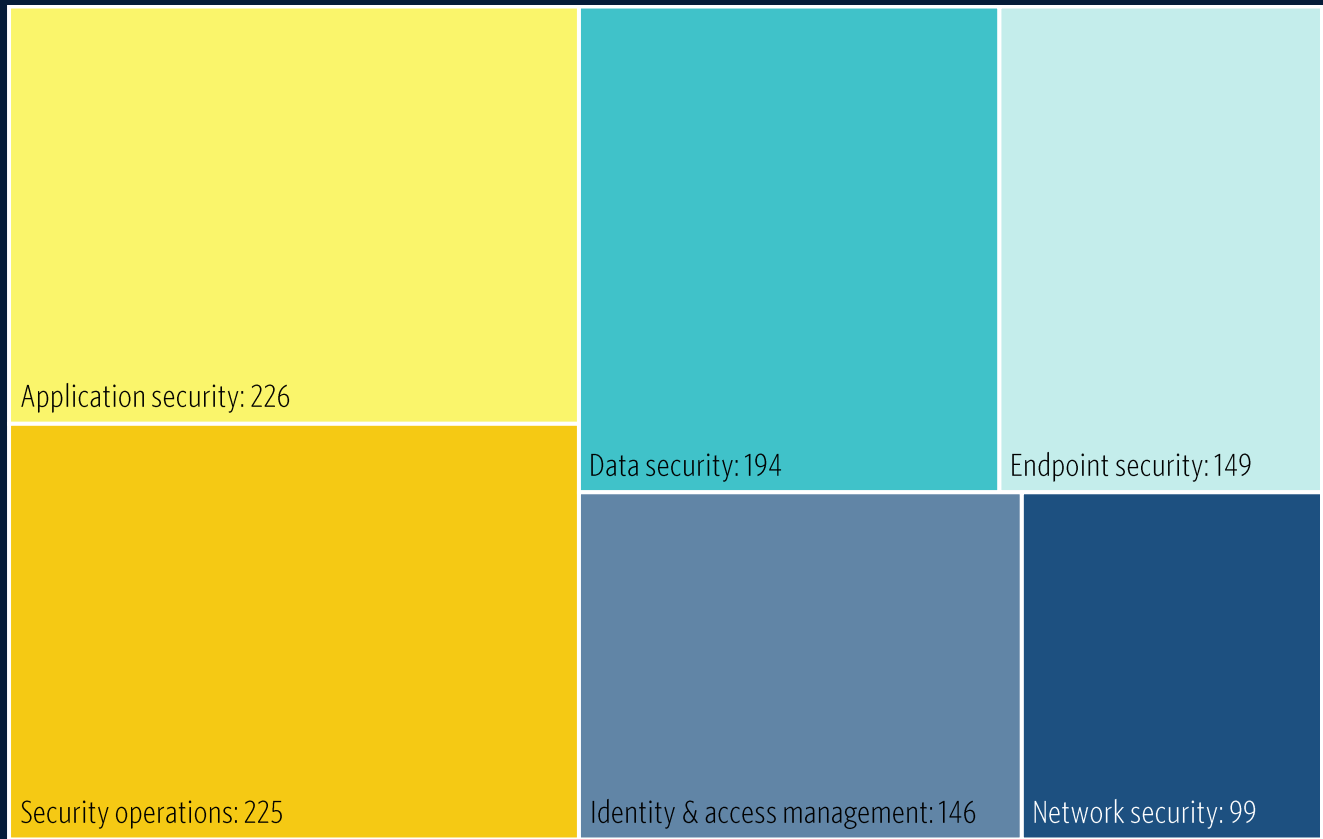


Figure 36 ▶ Cybersecurity metric summary

	Value	TTM change	Relative score
Annualized expected return*	23.6%	-0.2%	
Total capital raised	\$5.1B	-4.7%	
New VC company fundings	101	-58.4%	
Median pre-money valuation	\$44.2M	+22.4%	
Share of published patents	5.2%	-0.4%	
Top-ranked investor participation	13.2%	+0.5%	
Median employee growth	4.6%	-6.5%	

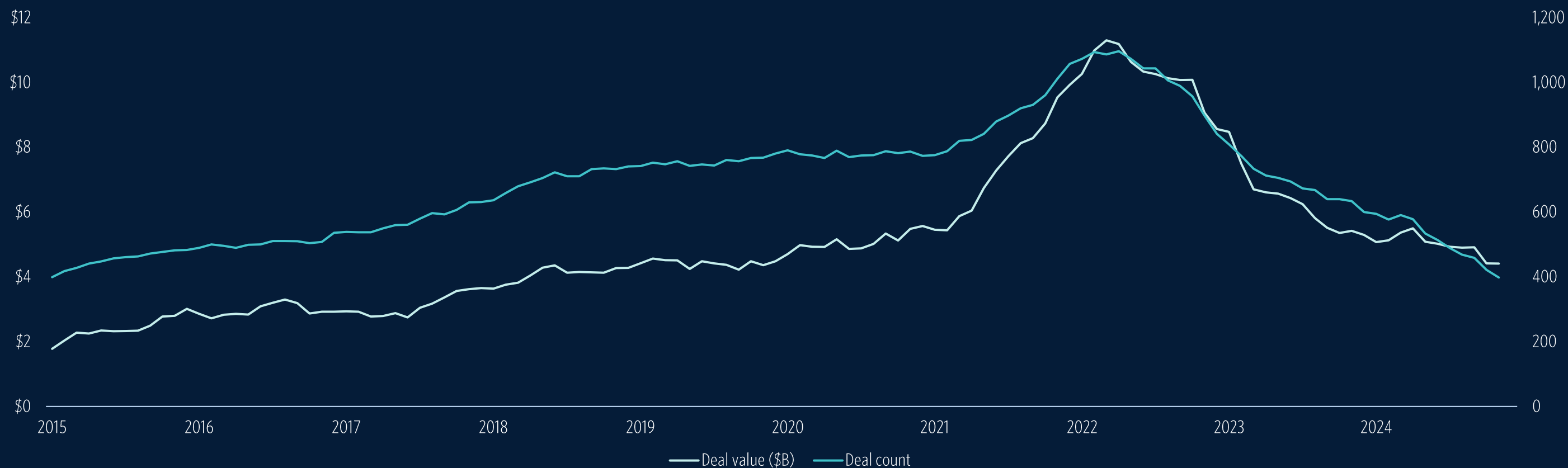
Source: PitchBook ▪ Geography: Global ▪ As of December 31, 2024

*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.

Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.



Figure 37 ▶ **TTM early-stage cybersecurity VC deal activity**

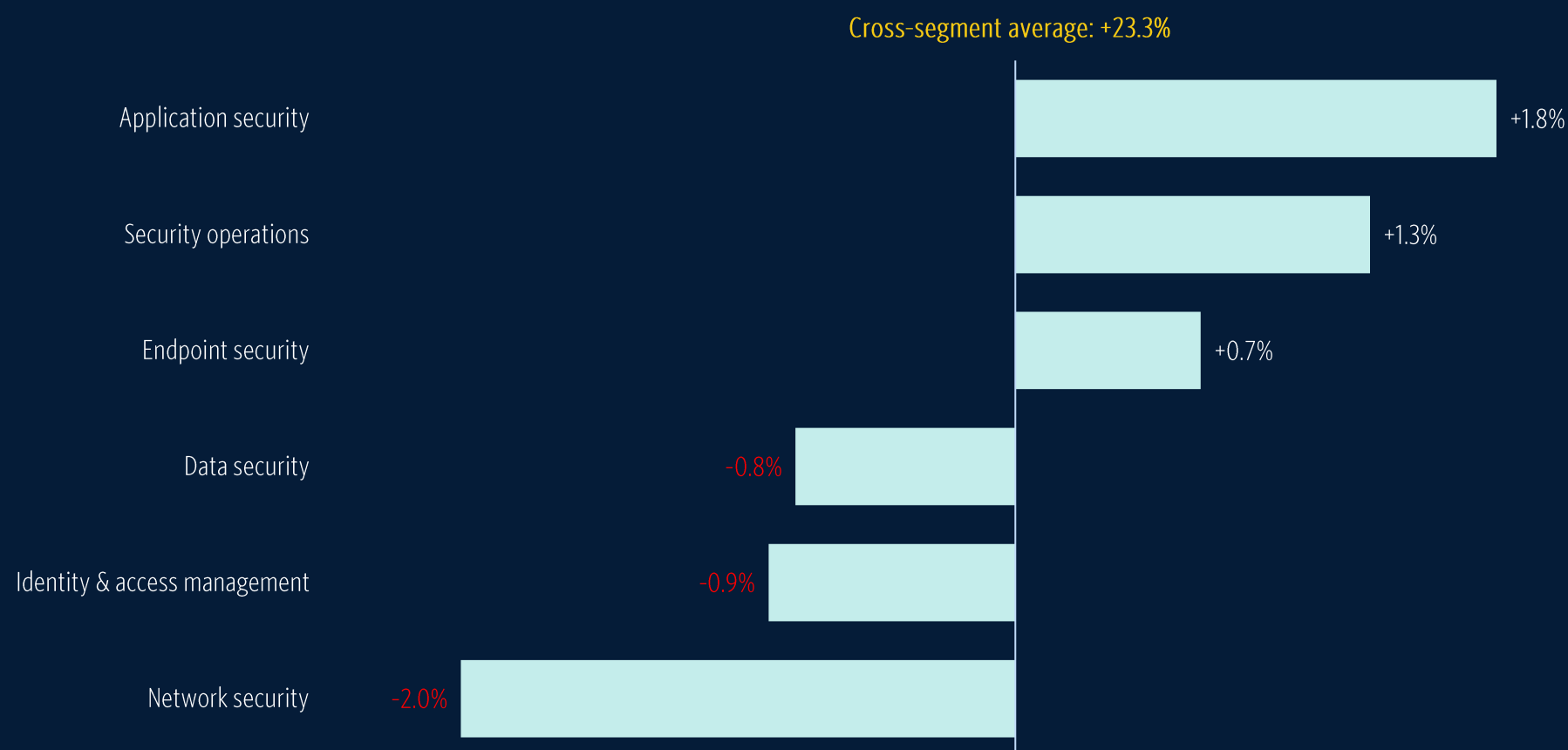


Source: PitchBook • Geography: Global • As of December 31, 2024



Investment attractiveness of early-stage cybersecurity companies by segment

Figure 38 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 23.3% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.

Individual company highlights: North America

Figure 39 ► **North American early-stage cybersecurity companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Civic Technologies	Application security	78%	3%	83	+83
Samurai Labs	Application security	78%	1%	77	+61
CYRISMA	Security operations	85%	1%	89	+58
Compyl	Data security	78%	1%	78	+47
SecurityGate.io	Security operations	72%	1%	66	+47
Codesphere	Application security	91%	2%	96	+47
BreachBits	Security operations	79%	1%	81	+46
iboss	Network security	43%	47%	79	+45
AI SPERA	Security operations	73%	2%	70	+45
Babylon Labs	Application security	58%	20%	94	+44

Please use this [saved search](#) for a complete, dynamic list of cybersecurity companies.

Source: PitchBook • Geography: North America • As of December 31, 2024
 Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.

Individual company highlights: Europe

Figure 40 ► **European early-stage cybersecurity companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Baobab	Security operations	88%	1%	93	+60
Alias Robotics	Endpoint security	71%	1%	65	+49
NANO Corp.	Network security	82%	1%	85	+47
CyberDirekt	Security operations	66%	1%	57	+46
Think Cyber Security	Security operations	60%	1%	49	+44
IPercept	Endpoint security	87%	1%	91	+43
Quantum Dice	Data security	85%	1%	88	+41
Lybero.net	Data security	54%	1%	42	+40
Buddywise	Data security	59%	1%	48	+39
NetBird	Network security	74%	2%	72	+39

Please use this [saved search](#) for a complete, dynamic list of cybersecurity companies.

Source: PitchBook ▪ Geography: Europe ▪ As of December 31, 2024

Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Digital health

For the latest in-depth digital health research, click [here](#).

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Introduction

Digital health is the most consumer-oriented vertical within healthcare, encompassing telehealth, care and benefits coordination, chronic condition management, and lifestyle areas such as nutrition, fitness, and supplements. As healthcare continues to digitize, the next wave of innovation is focused on bringing care closer to the patient through direct-to-consumer (DTC) diagnostics, AI-powered care search and chatbots, digital therapeutics, and personalized health insights derived from wearables and biomarkers. While many companies in digital health operate under DTC or B2B2C models, others—particularly in remote patient monitoring—facilitate care with more indirect patient engagement.

In 2023, VC funding in digital health reached \$6 billion, and through the first three quarters of 2024, funding reached \$5.6 billion. This suggests that deal activity has stabilized after a trough in 2023, though it remains unlikely that VC funding will return to the peak levels seen in 2021, when over \$22 billion was raised. Nonetheless, the sector continues to benefit from long-term trends driven by the increasing consumerization and digitization of healthcare. VC activity in digital health took a positive turn in Q3 2024, with funding reaching \$2.2 billion—the highest quarterly figure since early 2022. Top deals included \$200 million for Flo Health and Foodsmart and Maven’s \$150 million Series F, along with seven deals of \$100 million or more. Despite this upward trend, digital health still faces challenges in balancing virtual, hybrid, and traditional brick-and-mortar care models. For instance, the closure of hybrid primary care provider Forward and the strategic pivot of youth mental health platform Brightline, which now includes brick-and-mortar clinics, highlight ongoing market adjustments.

Exits in digital health have declined significantly since the COVID-19 pandemic, and the reduced recycling of capital to investors has further constrained additional investment. We have argued that the highest-quality digital health startups may hold off on public offerings, preferring to wait until less notable companies test the public market first. Still, we expect 2025 to see a rebound in exits—both through M&A and IPOs—as public market conditions strengthen and more startups aim to graduate from the private market. Should the IPO window remain narrow, founders and their VC backers may turn to acquisitions, even if it means accepting lower valuations than those achieved at the market peak. In a sign that M&A could be on the rise, healthtech startup Transcarent bulked up its care navigation offering in January with a \$620 million purchase of publicly traded Accolade.

Metabolic health and weight loss remain key investment themes, and market opportunities have been shifting from DTC platforms to cost management solutions as employers increasingly seek third-party platforms to evaluate spending. Weight Watchers’ 2023 acquisition of Sequence and Noom’s recent launch of cost management programs further underscore the evolving weight loss landscape in digital health. Additionally, consumer health platform Ro aims to follow in the footsteps of Hims & Hers, which has successfully scaled its weight loss services. However, DTC platforms face longer-term risks from a potential regulatory crackdown on compounded versions of GLP-1 weight loss drugs.

Digital health overview

Figure 41 ▶ **Count of early-stage digital health companies by segment**

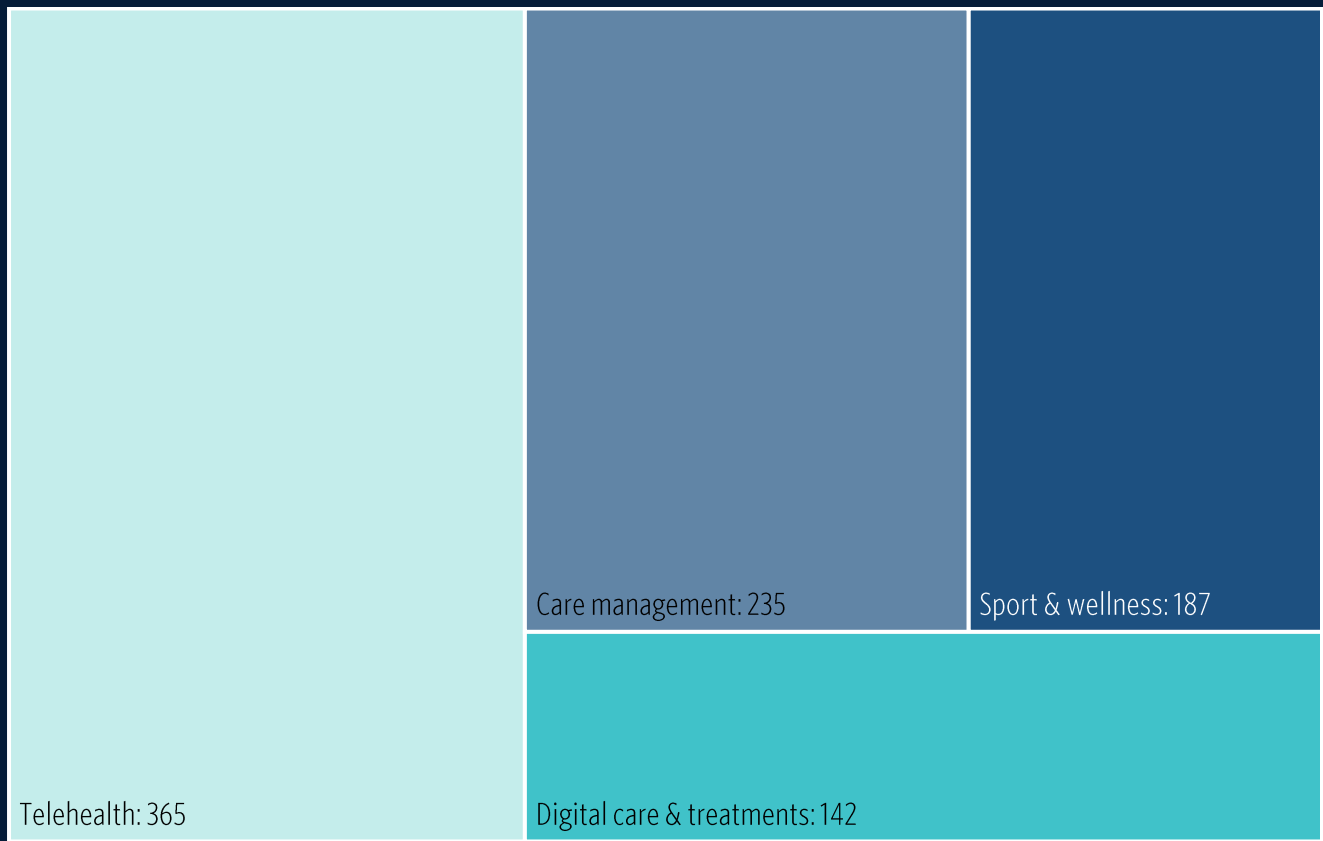


Figure 42 ▶ **Digital health metric summary**

	Value	TTM change	Relative score
Annualized expected return*	19.7%	-0.7%	
Total capital raised	\$3.1B	-5.5%	
New VC company fundings	47	-55.2%	
Median pre-money valuation	\$36.4M	+20.9%	
Share of published patents	0.7%	-0.0%	
Top-ranked investor participation	14.3%	+1.8%	
Median employee growth	4.2%	-5.9%	

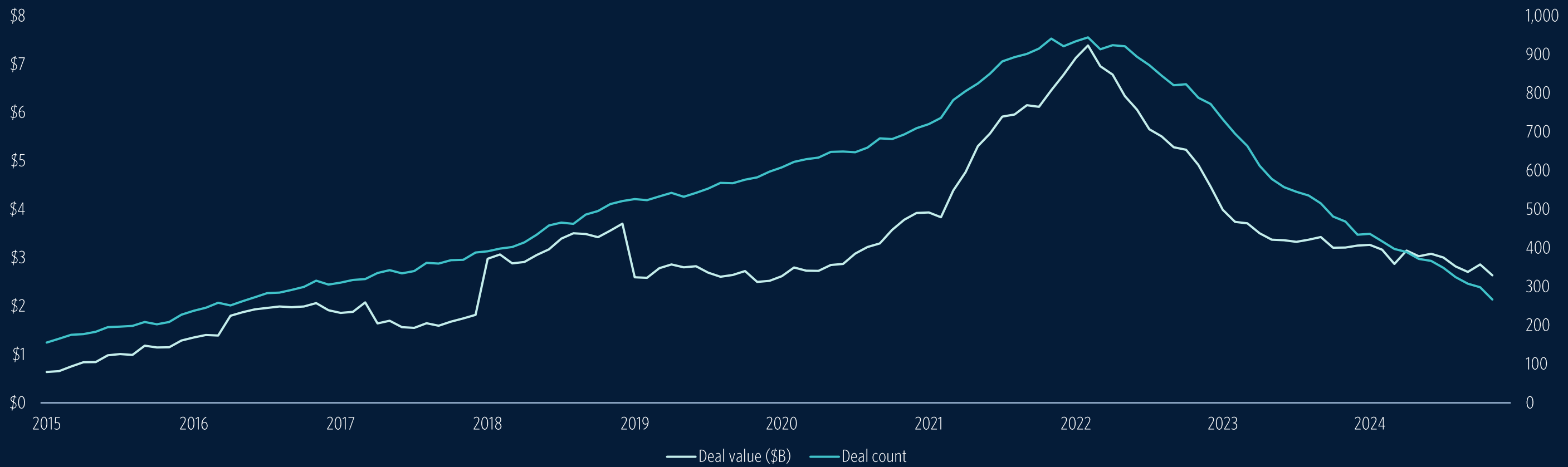
Source: PitchBook ▪ Geography: Global ▪ As of December 31, 2024

*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.

Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.



Figure 43 ▶ **TTM early-stage digital health VC deal activity**

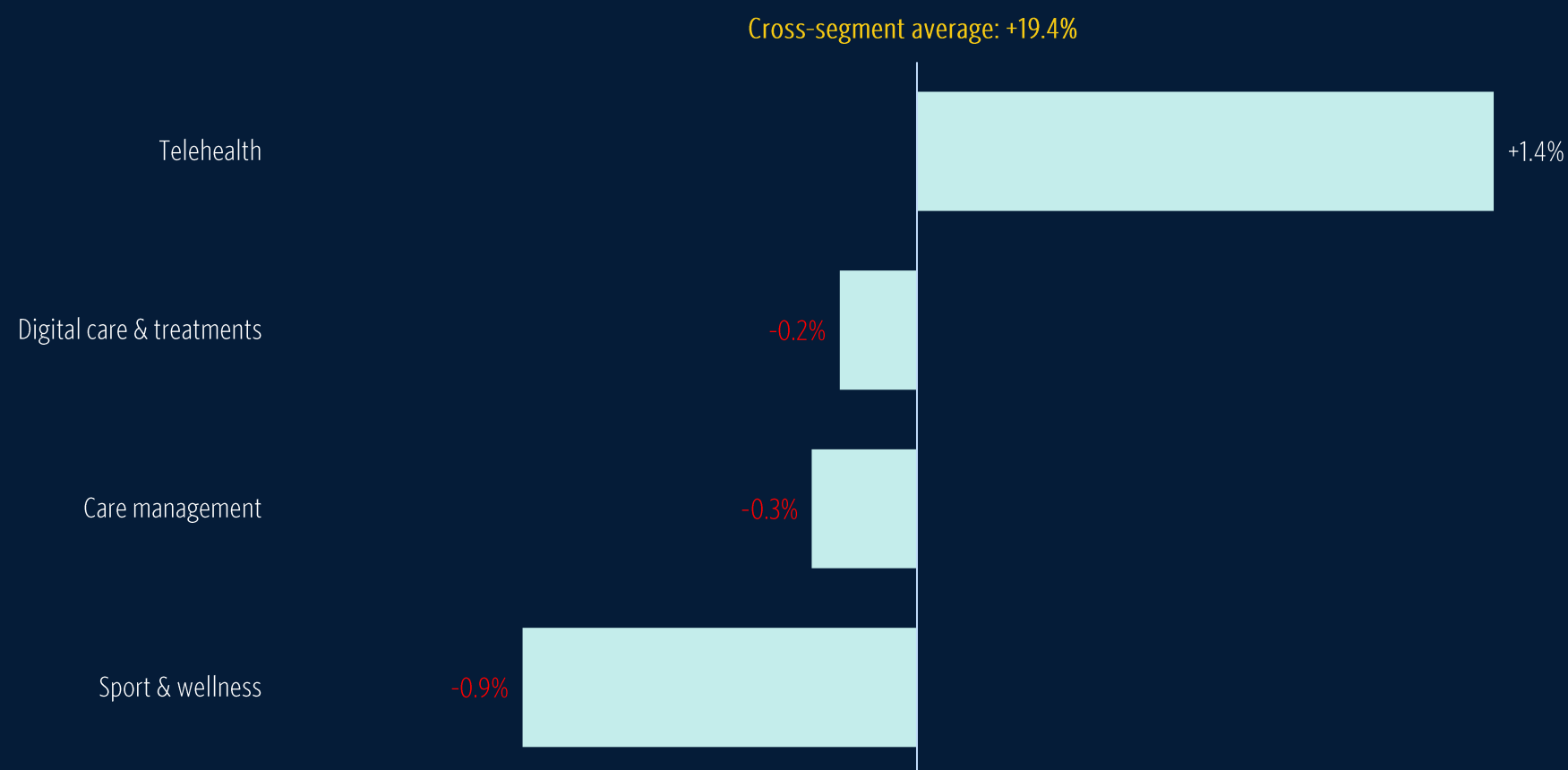


Source: PitchBook • Geography: Global • As of December 31, 2024



Investment attractiveness of early-stage digital health companies by segment

Figure 44 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 19.4% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.

Individual company highlights: North America

Figure 45 ► **North American early-stage digital health companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Journey	Telehealth	76%	4%	83	+69
Canopie	Telehealth	75%	1%	72	+61
MD Ally	Care management	81%	1%	85	+57
Welltory	Sport & wellness	81%	3%	87	+54
Clivi	Digital care & treatments	87%	1%	91	+54
Nourish	Digital care & treatments	73%	14%	98	+50
UnaliWear	Care management	68%	1%	60	+50
BellaLift	Sport & wellness	64%	8%	73	+44
Impilo	Care management	72%	2%	70	+42
MEDvidi	Telehealth	63%	2%	55	+42

Please use this [saved search](#) for a complete, dynamic list of digital health companies.

Source: PitchBook ▪ Geography: North America ▪ As of December 31, 2024
 Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.

Individual company highlights: Europe

Figure 46 ► **European early-stage digital health companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Yazen	Telehealth	55%	21%	90	+59
Resilience	Telehealth	72%	9%	89	+57
JOIN	Sport & wellness	69%	1%	61	+44
Inflow	Sport & wellness	72%	3%	71	+38
Soula	Care management	57%	1%	46	+37
OmMej	Telehealth	68%	1%	59	+36
Lottie	Care management	80%	3%	88	+35
Remente	Telehealth	51%	1%	40	+34
Exakt Health	Digital care & treatments	66%	1%	57	+29
VoiceMed	Care management	59%	1%	49	+29

Please use this [saved search](#) for a complete, dynamic list of digital health companies.

Source: PitchBook ▪ Geography: Europe ▪ As of December 31, 2024
Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Fintech

For the latest in-depth fintech research, click [here](#).

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Introduction

The fintech industry remains one of the most well-funded sectors, with a wide range of investment opportunities. The space comprises products and services that help businesses and consumers transact, budget, borrow, lend, save, and invest, and it is enabled by the ongoing development of new AI & ML, blockchain, API, and cloud technologies.

The fintech industry is stabilizing after the rapid growth of 2021, adjusting to more sustainable levels of investment and valuation. Despite rising interest rates, limited access to capital, inflation, geopolitical tensions, and evolving regulations, the sector has shown remarkable resilience. Many companies, especially neobanks once thought to be struggling, have made impressive turnarounds, improving their financial efficiency and generating positive cash flow. Investors have taken notice, rewarding fintech stocks with strong returns in 2024, particularly for companies that have reached profitability.

However, challenges remain, and the industry is unlikely to return to the hypergrowth seen in the post-pandemic boom. Many startups are still operating cautiously, extending their financial runway while searching for new funding or acquisition opportunities. Others have faced tougher realities, with companies such as Tally, Bench, and Level shutting down in 2024. Regulatory uncertainty, intensified by the collapse of Synapse, has slowed dealmaking and discouraged new partnerships. While a shift toward deregulation in the US is expected under the new Trump administration, the overall outlook for financial oversight remains unclear, leaving many fintech leaders cautious.

Despite these hurdles, the future of fintech remains promising. VC firms are raising new fintech-focused funds, and investor sentiment toward emerging innovations is

increasingly optimistic. The IPO market also shows signs of revival, fueled by rising tech valuations and recent public successes such as ServiceTitan. Several major fintech companies, including Chime, Klarna, Toss, Groww, and Mynt, have signaled their intent to go public, pointing to a potentially strong market in 2025.

Fintech overview

Figure 47 ▶ **Count of early-stage fintech companies by segment**

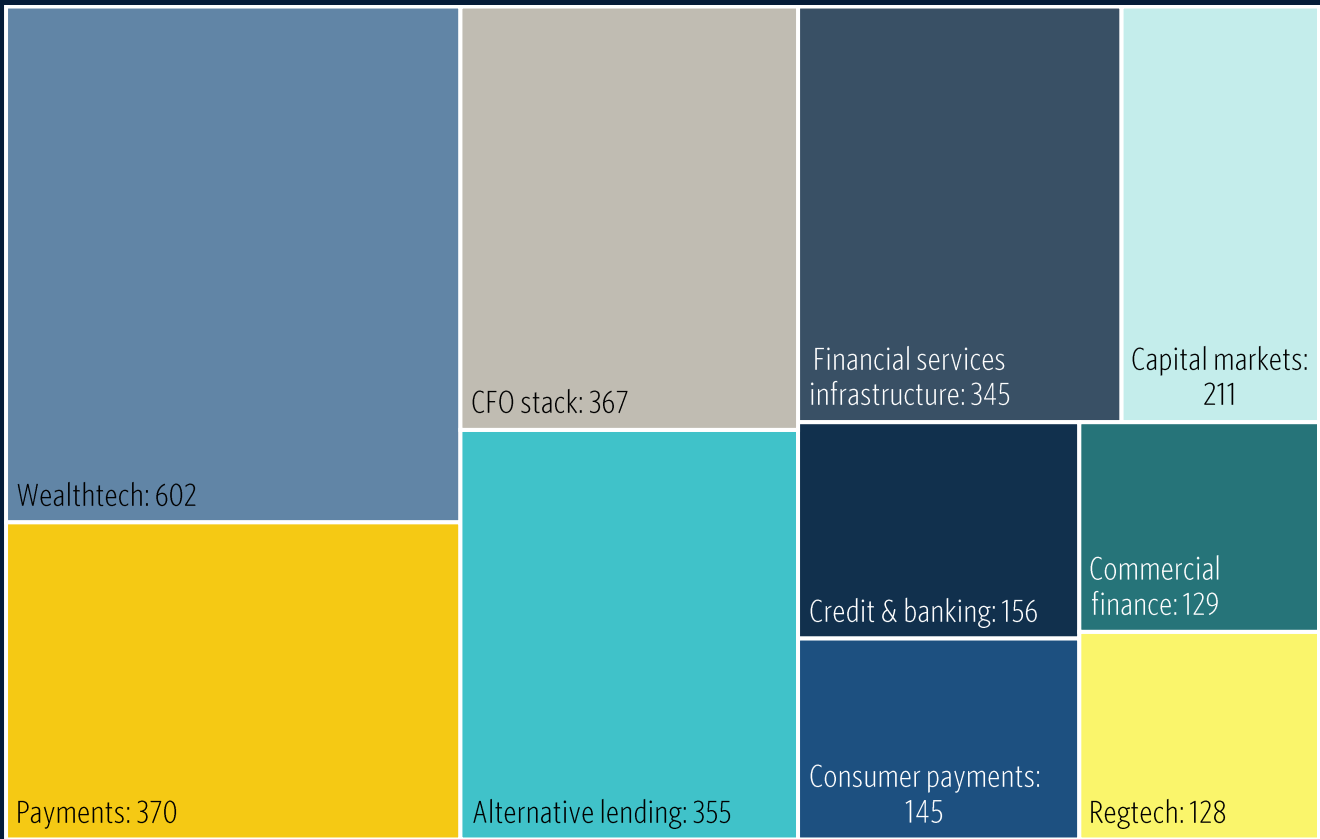


Figure 48 ▶ **Fintech metric summary**

	Value	TTM change	Relative score
Annualized expected return*	22.3%	-0.6%	
Total capital raised	\$11.6B	+2.6%	
New VC company fundings	316	-47.7%	
Median pre-money valuation	\$44.7M	+31.5%	
Share of published patents	1.3%	-0.1%	
Top-ranked investor participation	14.4%	+0.2%	
Median employee growth	6.3%	-4.9%	

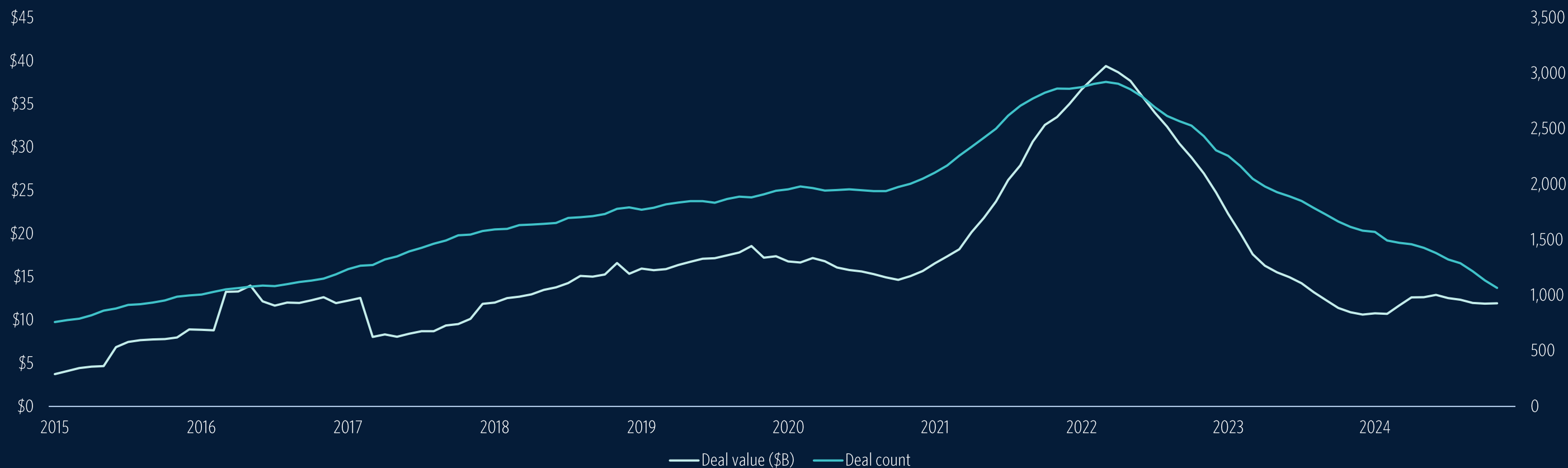
Source: PitchBook • Geography: Global • As of December 31, 2024

*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.

Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.



Figure 49 ► **TTM early-stage fintech VC deal activity**

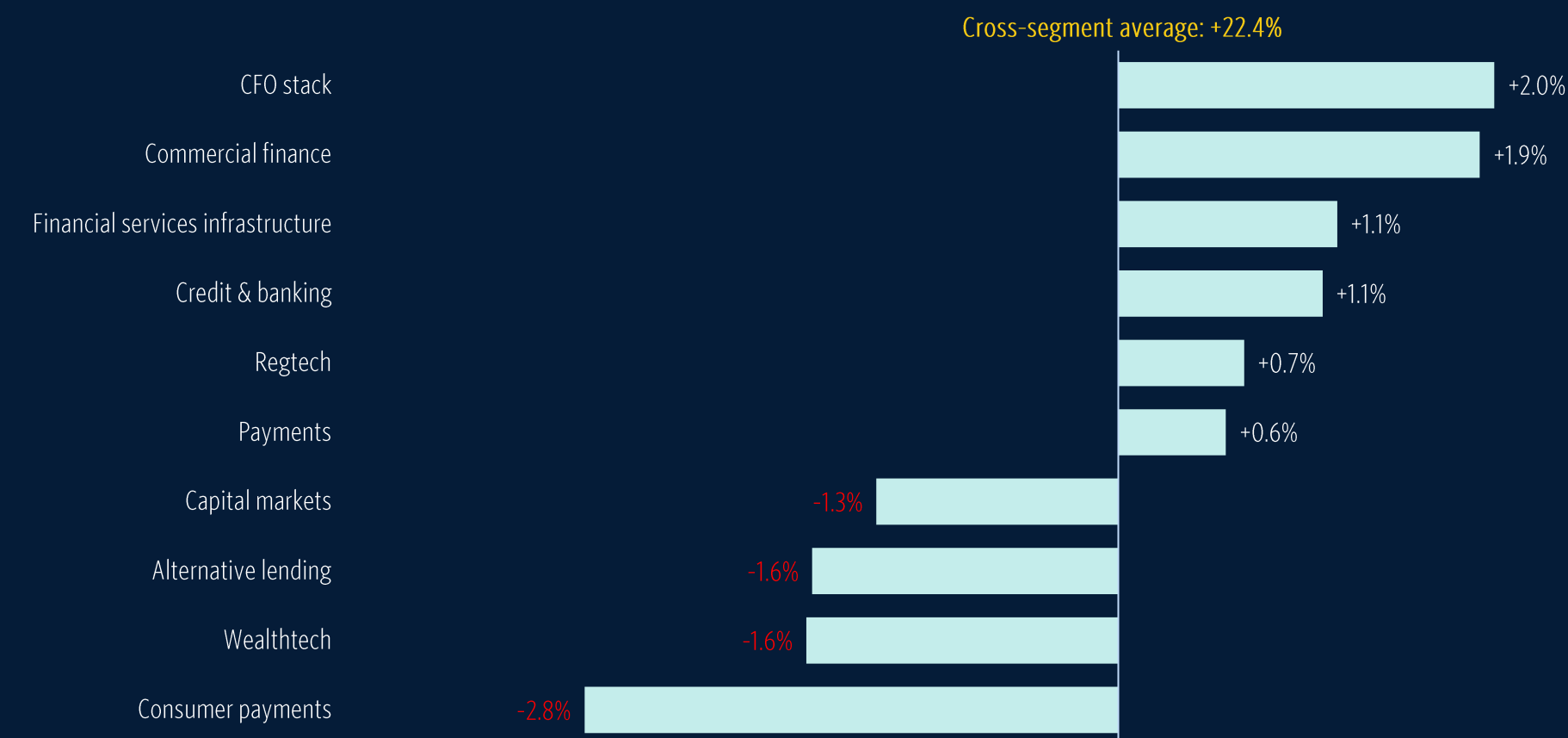


Source: PitchBook • Geography: Global • As of December 31, 2024



Investment attractiveness of early-stage fintech companies by segment

Figure 50 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 22.4% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.

Individual company highlights: North America

Figure 51 ► **North American early-stage fintech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Rogo	Financial services infrastructure	93%	2%	98	+77
Elevate Pay	Financial services infrastructure	89%	1%	93	+75
Rail	Payments	85%	1%	89	+66
Contalink	CFO stack	87%	1%	92	+64
Two Dots	Regtech	85%	1%	90	+63
Alphaledger.	Financial services infrastructure	75%	2%	75	+61
BlueTape	Alternative lending	65%	17%	95	+59
Félix	Payments	72%	12%	95	+58
Clade	Capital markets	73%	1%	69	+58
PredictAP	CFO stack	93%	1%	98	+56

Please use this [saved search](#) for a complete, dynamic list of fintech companies.

Source: PitchBook ▪ Geography: North America ▪ As of December 31, 2024
 Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.

Individual company highlights: Europe

Figure 52 ► **European early-stage fintech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
HUB2	Financial services infrastructure	90%	2%	96	+85
Unbox the Universe	Financial services infrastructure	78%	5%	88	+72
SparkChange.	Wealthtech	78%	1%	78	+60
Apiday	Capital markets	81%	6%	94	+54
Diesta	Payments	84%	1%	88	+52
Wollit	Wealthtech	86%	1%	90	+49
Embat	CFO stack	83%	4%	93	+49
AZA Finance	Payments	70%	16%	66	+47
Monto	CFO stack	74%	1%	71	+46
Sonect	Consumer payments	85%	2%	91	+45

Please use this [saved search](#) for a complete, dynamic list of fintech companies.

Source: PitchBook ▪ Geography: Europe ▪ As of December 31, 2024
Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Foodtech

For the latest in-depth foodtech research, click [here](#).

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Introduction

Foodtech refers to a rapidly growing sector within the broader technology industry that focuses on innovation and disruption in the food system, from production to consumption. In recent years, the global food system has undergone significant transformations and faced challenges, prompting the need for new technologies and services to enhance its efficiency and resilience. This industry has gained substantial attention from VCs and investors due to its potential to revolutionize our relationship with food. We define foodtech as startups developing products and services that are changing how food has traditionally been discovered, purchased, delivered, prepared, and consumed.

2024 overview: Selective growth

Annual foodtech VC investment rose 7.1% YoY to \$10.3 billion, but deal counts fell 33%, highlighting a cautious investor approach favoring established startups. Early-stage funding suffered, with pre-seed/seed deal counts down 46% and early-stage VC deal counts down 44% YoY.

E-commerce dominates

Online grocery platforms led investment, though market saturation caused many to struggle. US grocery sales hit \$9.6 billion in December, up 18.7% YoY.¹ Investors backed proven platforms over risky newcomers.

Alt-proteins: Mixed results

Investor confidence returned to fermented proteins (with deal value up 23%) and plant-based proteins (with deal value up 13%), but cultivated proteins saw a 40% funding

drop due to scaling issues. Meati led the segment with a \$222.4 million Series C for its mushroom-root meat analogs.

Exits and acquisitions

Notable IPOs included Swiggy (\$1.4 billion) and Ibotta (\$2.4 billion). However, caution remains for mature startups eyeing exits. M&A activity saw Getir sell its Turkish unit for \$250 million, a steep markdown from its \$11.8 billion valuation in 2022. Wonder acquired Grubhub for \$450 million, significantly lower than its \$4.8 billion valuation in 2021.

Looking ahead

Despite a challenging market, consolidation and selective investment in proven technologies indicate foodtech's resilience. Investors are prioritizing sustainability, scalability, and profitability as key factors in funding decisions.

¹: "December 2024 U.S. eGrocery Sales Climb 19% Versus Year Ago to \$9.6 Billion," Mercatus, Aaron Le Blanc, January 13, 2025.

Foodtech overview

Figure 53 ► Count of early-stage foodtech companies by segment

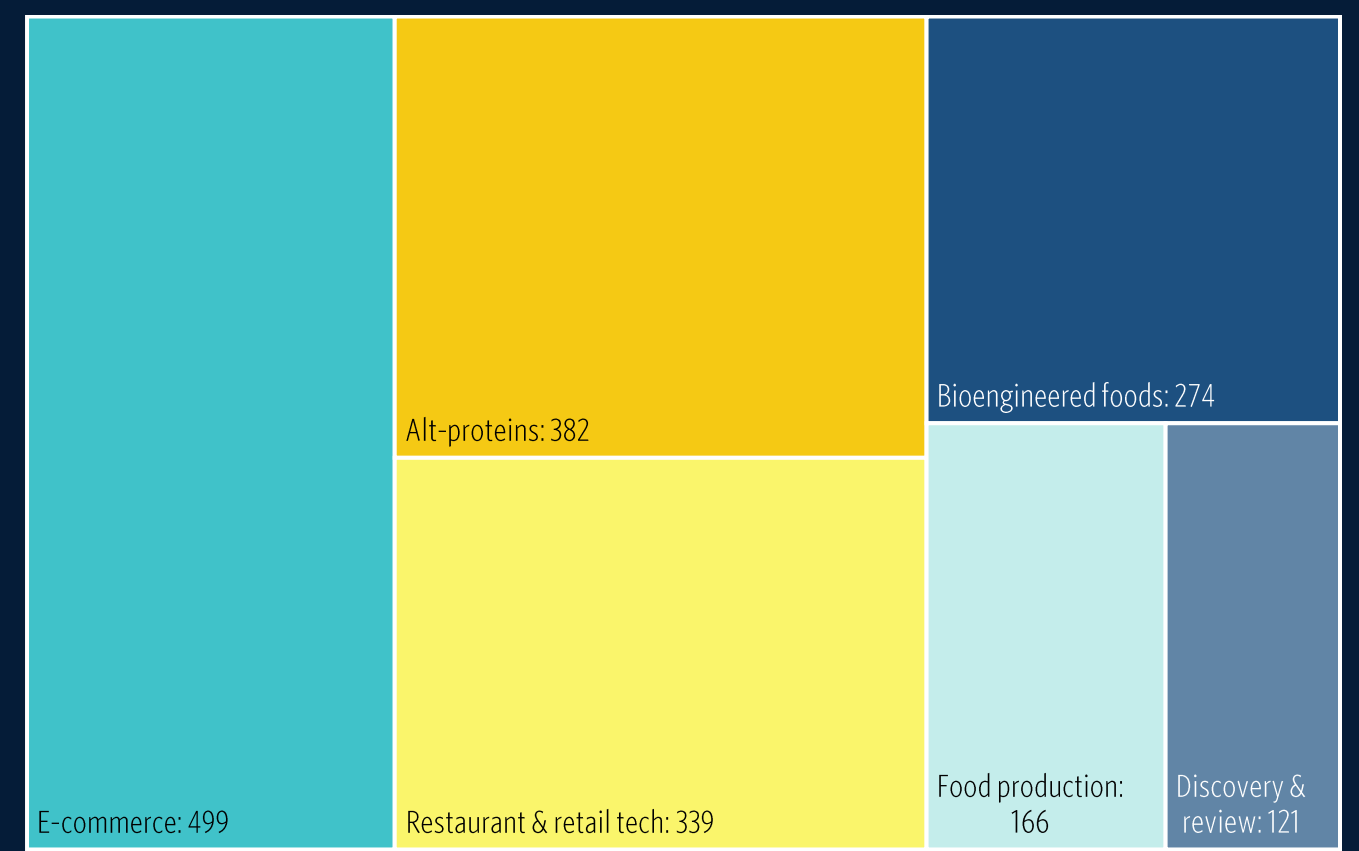


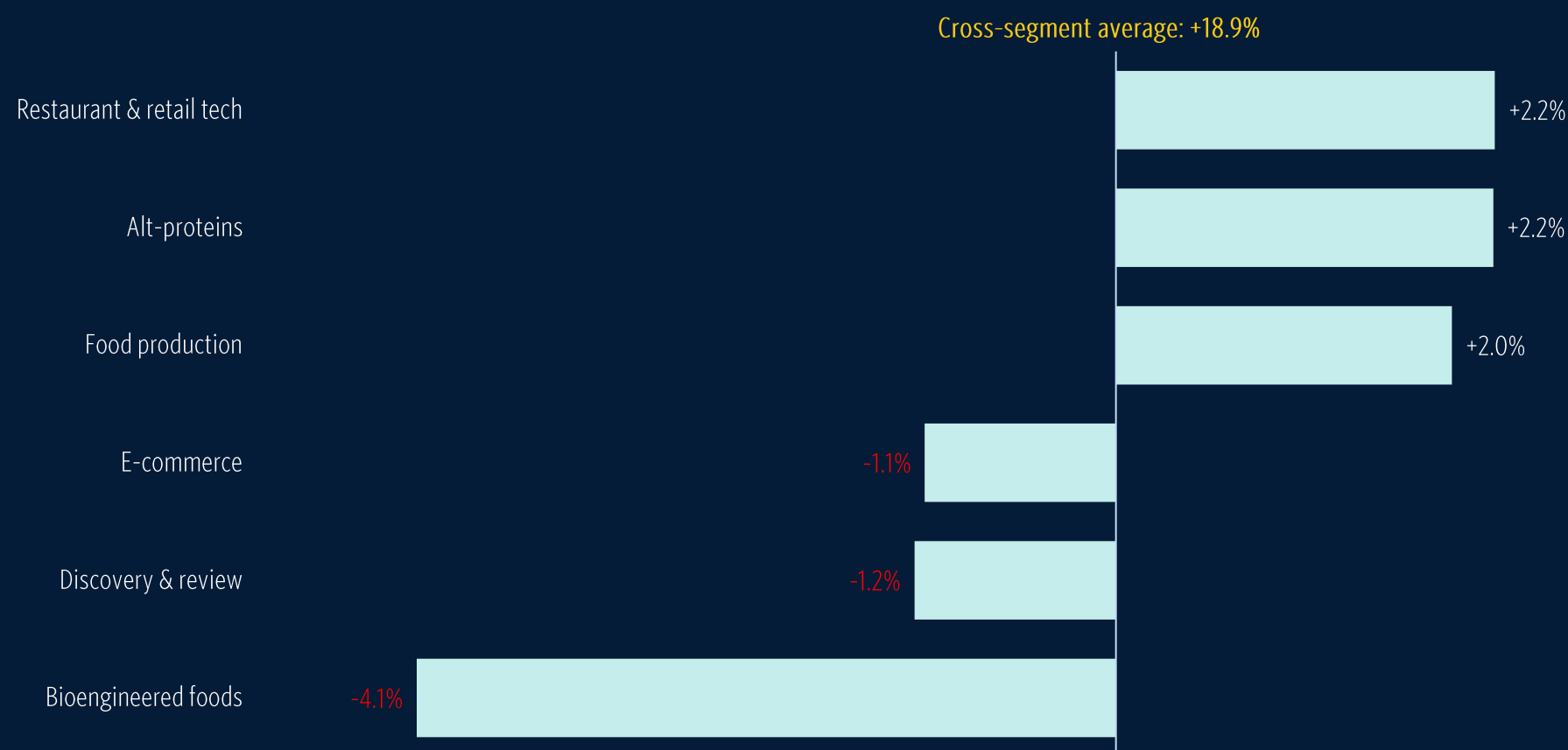
Figure 54 ► Foodtech metric summary

	Value	TTM change	Relative score
Annualized expected return*	19.0%	-0.4%	
Total capital raised	\$5.2B	-14.7%	
New VC company fundings	188	-45.7%	
Median pre-money valuation	\$29.5M	+36.7%	
Share of published patents	2.8%	+0.1%	
Top-ranked investor participation	8.8%	+0.4%	
Median employee growth	0.0%	-9.1%	



Investment attractiveness of early-stage foodtech companies by segment

Figure 56 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 18.9% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.

Individual company highlights: North America

Figure 57 ► **North American early-stage foodtech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Chicory	E-commerce	83%	1%	86	+85
Polybion	Alt-proteins	80%	1%	83	+60
Pani	Restaurant & retail tech	79%	1%	79	+60
Hungry House	Restaurant & retail tech	72%	2%	68	+59
Näak	Bioengineered foods	73%	2%	72	+58
Nfinite Nanotech	Food production	78%	6%	90	+53
Aniai	Restaurant & retail tech	89%	1%	94	+52
GoodSam	E-commerce	66%	2%	59	+50
Young Mountain Tea	E-commerce	73%	2%	69	+50
Actual Veggies	Alt-proteins	79%	1%	81	+48

Please use this [saved search](#) for a complete, dynamic list of foodtech companies.

Source: PitchBook ▪ Geography: North America ▪ As of December 31, 2024

Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.

Individual company highlights: Europe

Figure 58 ► **European early-stage foodtech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Hubcycle	Bioengineered foods	87%	2%	92	+65
Togather	E-commerce	86%	1%	90	+59
Reduced	Bioengineered foods	82%	1%	86	+51
Protera	Alt-proteins	65%	3%	60	+51
BlueTree Technologies	Bioengineered foods	70%	2%	64	+50
Growth Kitchen	Restaurant & retail tech	86%	1%	90	+49
ProteinDistillery	Alt-proteins	53%	15%	74	+41
Novameat	Alt-proteins	69%	7%	79	+41
BioRaptor	Alt-proteins	69%	2%	65	+41
MOA Foodtech	Alt-proteins	76%	1%	74	+39

Please use this [saved search](#) for a complete, dynamic list of foodtech companies.

Source: PitchBook ▪ Geography: Europe ▪ As of December 31, 2024

Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Gaming

For the latest in-depth gaming research, click [here](#).

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Introduction

The gaming startup ecosystem spans the totality of the game development lifecycle and includes content development technologies, operational and monetization services, and access and experience platforms, as well as games themselves.

Venture activity in Q3 2024 produced a minor QoQ increase in deal value (up 3.9% to \$1.9 billion) but a decrease in deal count (down 8.9% to 143). With the hype-driven investment behavior of COVID-19 now in the rearview mirror, the gaming venture ecosystem has both found a nadir and shown signs of modest recovery. Q3 marked the fourth consecutive quarterly increase in deal value after investments bottomed out at \$1 billion in Q3 2023, and the past eight quarters averaged \$1.3 billion invested across 170 deals. Q3 2024 deal value was the highest since Q3 2022—propped up by four late-stage deals over \$80 million—but the lowest in terms of deal count since Q3 2023.

Throughout the 2010s, the industry's CAGR was nearly 10%, powered by growth vectors such as mobile games, user-generated content, live services, the COVID-19 pandemic, and more. But these sources are effectively tapped. Spending from existing users is slowing; net-new users are not spending at the same rate; and new mediums, such as esports and Web3 games, have not delivered value commensurate with their hype. As such, layoffs have roiled the industry and IP holders have moved to de-risk content development.

Nevertheless, we maintain the sector is underinvested. The gaming industry's market cap exceeds \$1 trillion globally with only \$1.5 to \$4 billion invested annually (excluding outlier COVID-19 years). An infinitesimally small portion of the industry's market cap is being reinvested into high-risk ventures. By comparison, public fintech companies have a market cap of over \$1 trillion, and \$10 to \$17 billion of VC is invested annually.

Similarly, the combined healthcare IT public market cap exceeds \$100 billion with approximately \$5 billion invested per year.

The exit landscape is similarly challenged. Though Korean developer Shift Up listed publicly, combined VC and PE exits sat at 34 in Q3 2024, pacing to reach 43 by the end of the year, which would be the lowest exit count since 2019. The [Q3 2024 PitchBook-NVCA Venture Monitor](#) reiterated that few VC-backed IPOs were viable for the remainder of the year. Further, the post-IPO performance of technology companies was mixed in 2024, indicating that public markets remained generally risk-averse. A small batch of companies are viable candidates to list publicly, including Discord, Epic Games, and Dream Games, though few others are expected to test the waters in the coming year despite a more favorable regulatory environment.

The industry now looks to 2025, eagerly anticipating Take-Two's Grand Theft Auto VI and the Switch 2. But more fundamental growth drivers must emerge to create a sustainable ecosystem, including emerging markets, AI, novel game genres/mechanics, mobile progression in AAA/cloud-streamed games, and more.

Gaming overview

Figure 59 ▶ Count of early-stage gaming companies by segment

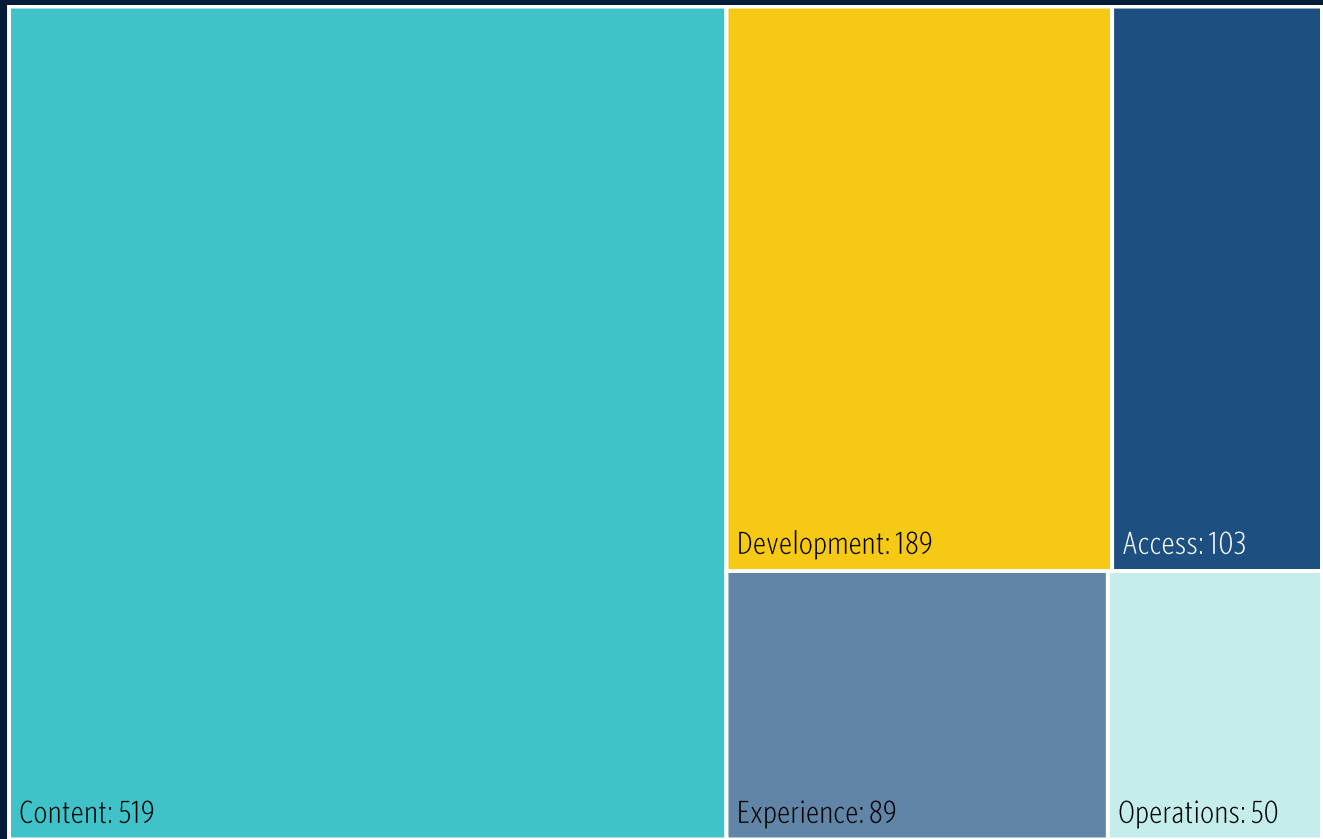


Figure 60 ▶ Gaming metric summary

	Value	TTM change	Relative score
Annualized expected return*	22.7%	-0.5%	
Total capital raised	\$4.1B	+9.2%	
New VC company fundings	215	-8.3%	
Median pre-money valuation	\$47.2M	+20.9%	
Share of published patents	1.7%	+0.2%	
Top-ranked investor participation	9.5%	-1.5%	
Median employee growth	0.0%	-5.8%	

Source: PitchBook • Geography: Global • As of December 31, 2024

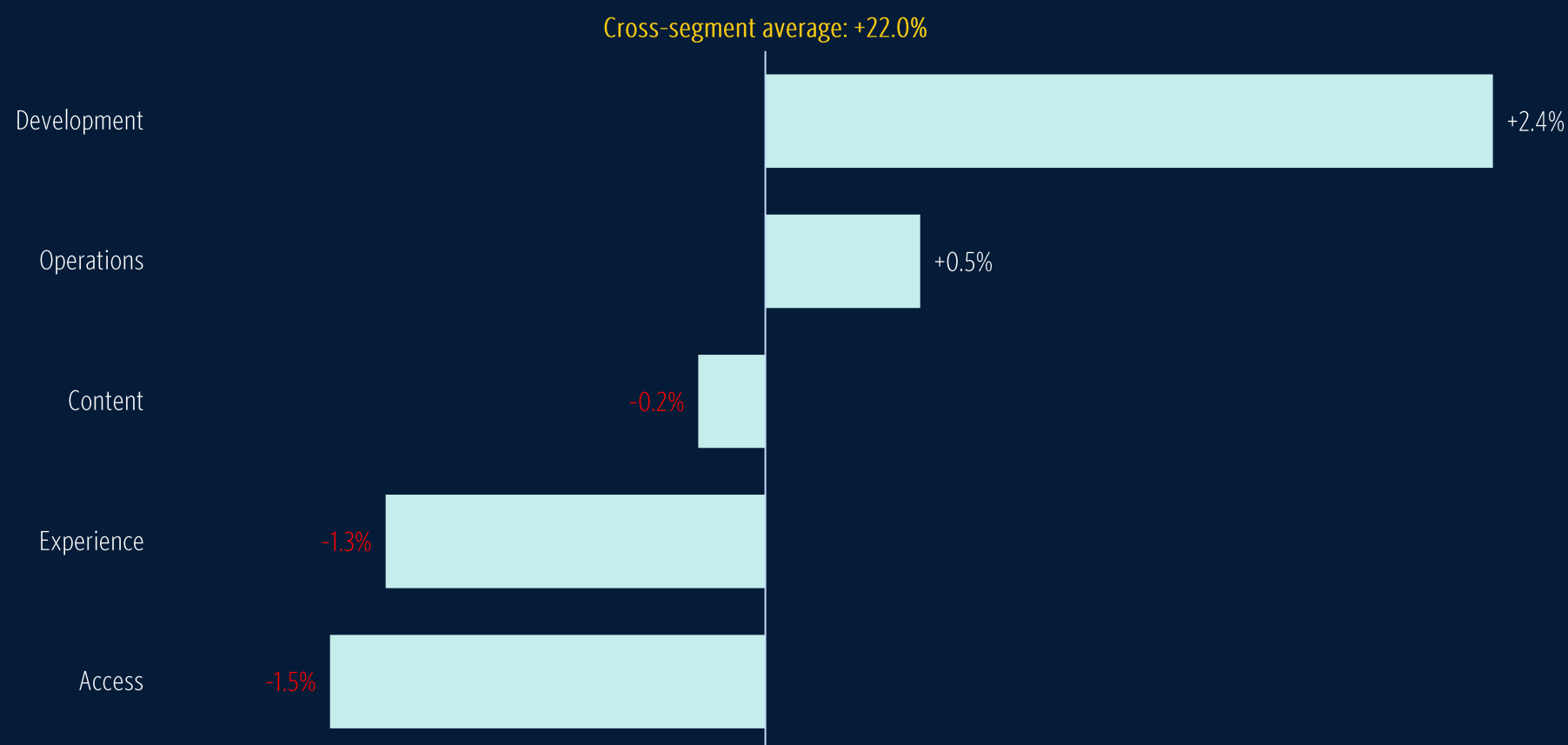
*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.

Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.



Investment attractiveness of early-stage gaming companies by segment

Figure 62 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 22% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.

Individual company highlights: North America

Figure 63 ► **North American early-stage gaming companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Polycam	Development	87%	1%	91	+69
Benjamin Capital Partners	Content	73%	1%	68	+57
SoBet	Content	57%	12%	70	+57
e6data	Operations	86%	1%	91	+56
Loric Games	Content	74%	1%	70	+53
1v1Me	Content	86%	1%	90	+52
Squido Studio	Content	77%	2%	77	+51
Novig	Content	80%	1%	82	+45
Jock MKT	Content	85%	1%	89	+44
MEandMine	Content	88%	1%	92	+42

Please use this [saved search](#) for a complete, dynamic list of gaming companies.

Source: PitchBook ▪ Geography: North America ▪ As of December 31, 2024
 Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.

Individual company highlights: Europe

Figure 64 ► **European early-stage gaming companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Cross The Ages	Content	78%	7%	92	+75
LocalizedDirect	Development	78%	1%	78	+64
Omeda Studios	Content	75%	6%	87	+47
Roto	Access	61%	1%	51	+44
GameBoost	Experience	65%	1%	55	+43
Xterio	Content	70%	14%	95	+41
Dynamo	Operations	72%	3%	72	+41
Walker Labs	Content	72%	1%	66	+41
Orqa	Access	79%	2%	82	+34
Eterlast	Content	78%	1%	78	+28

Please use this [saved search](#) for a complete, dynamic list of gaming companies.

Source: PitchBook ▪ Geography: Europe ▪ As of December 31, 2024
 Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Medtech

For the latest in-depth medtech research, click [here](#).

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Introduction

Medtech is a mature industry that continues to experience significant innovation across diverse submarkets, including life science equipment, diagnostics, medical devices, imaging software, and portable therapies. A key differentiator in this sector is the presence of large incumbents with the capital to acquire or develop innovative technologies, which can pose challenges for startups seeking traction while simultaneously offering potential exit opportunities. Long-term dynamics such as the rising rates of chronic conditions, an aging population demanding more complex care, and the presence of strong pricing power all support ongoing VC investment in medtech.

Acquisitions are a common exit pathway in medtech, with large companies buying emerging technologies to scale them through established distribution networks. Despite this, overall M&A activity has been more subdued recently due to valuation mismatches between buyers and sellers, antitrust concerns, cost-cutting by incumbents, and a reluctance to acquire loss-making startups. Despite fewer major acquisitions of VC-backed startups, the past year has seen several public-to-public deals such as the acquisitions of Shockwave, Abiomed, Axonics, and Silk Road Medical, among others. We anticipate a higher volume of exit activity in the medtech sector in 2025 as large firms look to M&A to complement internal research & development and as antitrust concerns diminish. Reports that Medline Industries aims to raise \$5 billion in an upcoming IPO further support our view of a more favorable exit landscape.

In Q4 2024, global medtech VC investment declined for the second consecutive quarter with \$2.7 billion of funding. Despite the downturn, eight deals over \$100 million closed in the quarter, the largest being BostonGene's \$120 million Series B2. The deal represents a down round for the precision medicine startup, cutting its valuation from \$2.2 billion to an estimated \$1.5 billion, and is indicative of the challenges startups face when trying to maintain past valuations in the current funding environment. Following the broader VC market, AI has captured significant investor attention in medtech, with five of the top 10 medtech deals in Q4 going to startups also in our AI & ML vertical. Established US Food and Drug Administration regulatory frameworks for the technology have allowed medtech to outpace other healthcare sectors in AI implementation. However, funding continues to be directed at long-standing AI technologies, such as medical image analysis and diagnostics, rather than net-new innovations in generative AI. Full-year VC funding increased to nearly \$13 billion across 828 deals, driven by greater investment in later-stage startups. The tougher deal environment has disproportionality affected pre-seed/seed and early-stage VC startups, with deal counts for these stages down 36% and 16%, respectively, driving the median deal size to record highs as funding is consolidated among fewer, larger deals.

Medtech overview

Figure 65 ► **Count of early-stage medtech companies by segment**

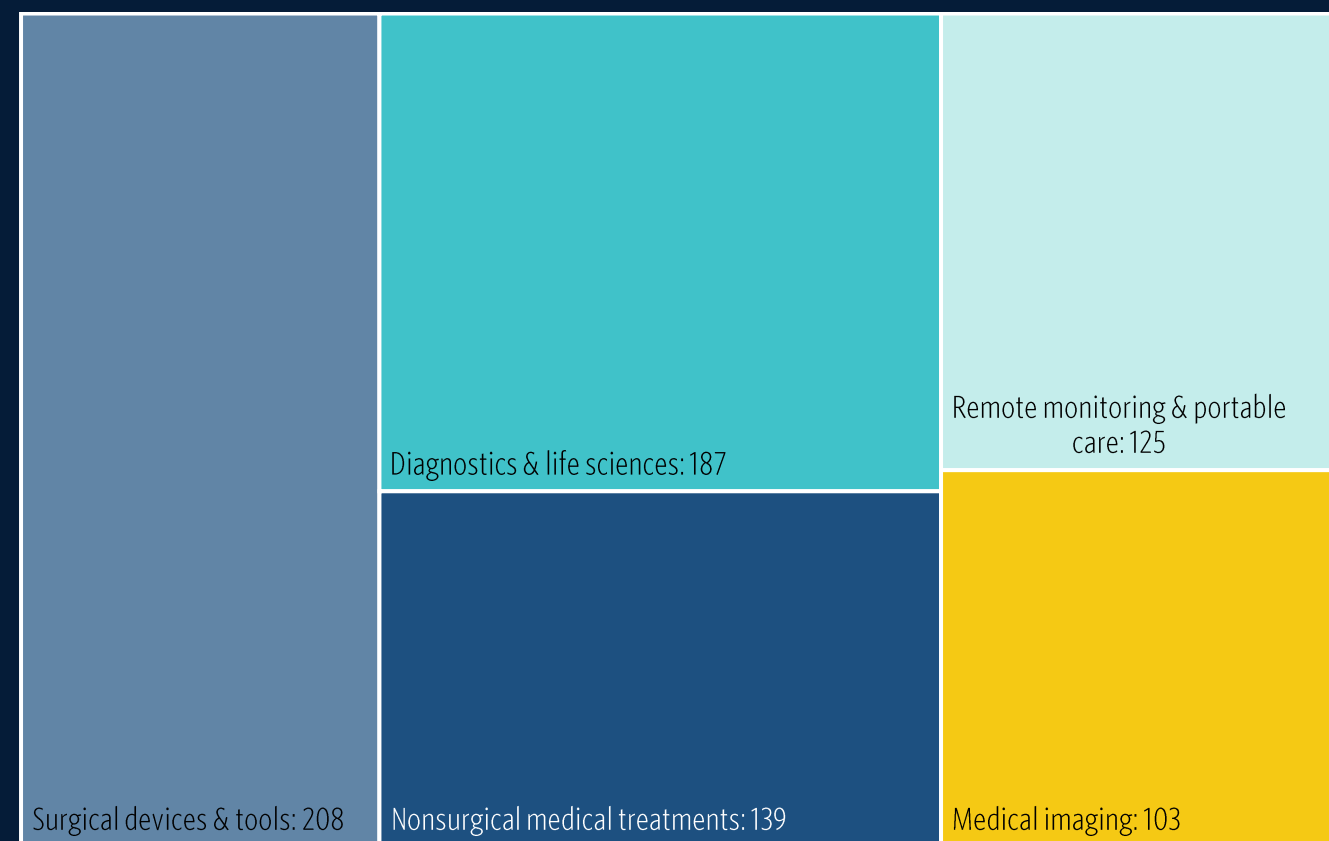


Figure 66 ► **Medtech metric summary**

	Value	TTM change	Relative score
Annualized expected return*	21.9%	+0.9%	
Total capital raised	\$5.8B	+4.4%	
New VC company fundings	50	-28.0%	
Median pre-money valuation	\$41.9M	+19.9%	
Share of published patents	11.3%	-0.6%	
Top-ranked investor participation	5.9%	-0.1%	
Median employee growth	6.6%	-9.2%	

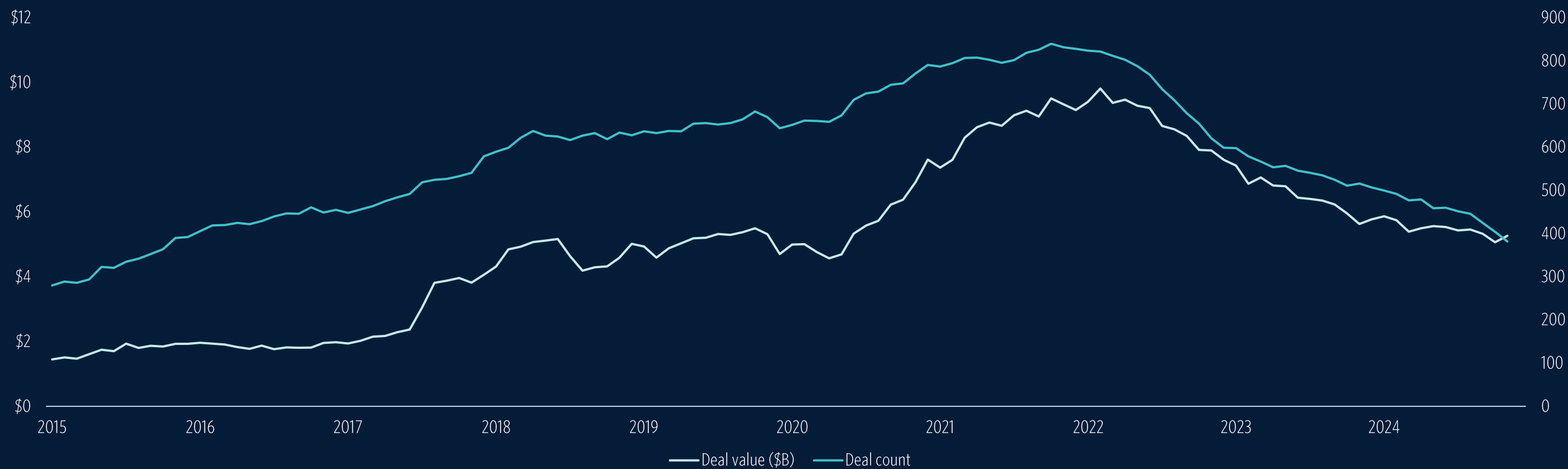
Source: PitchBook • Geography: Global • As of December 31, 2024

*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.

Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.



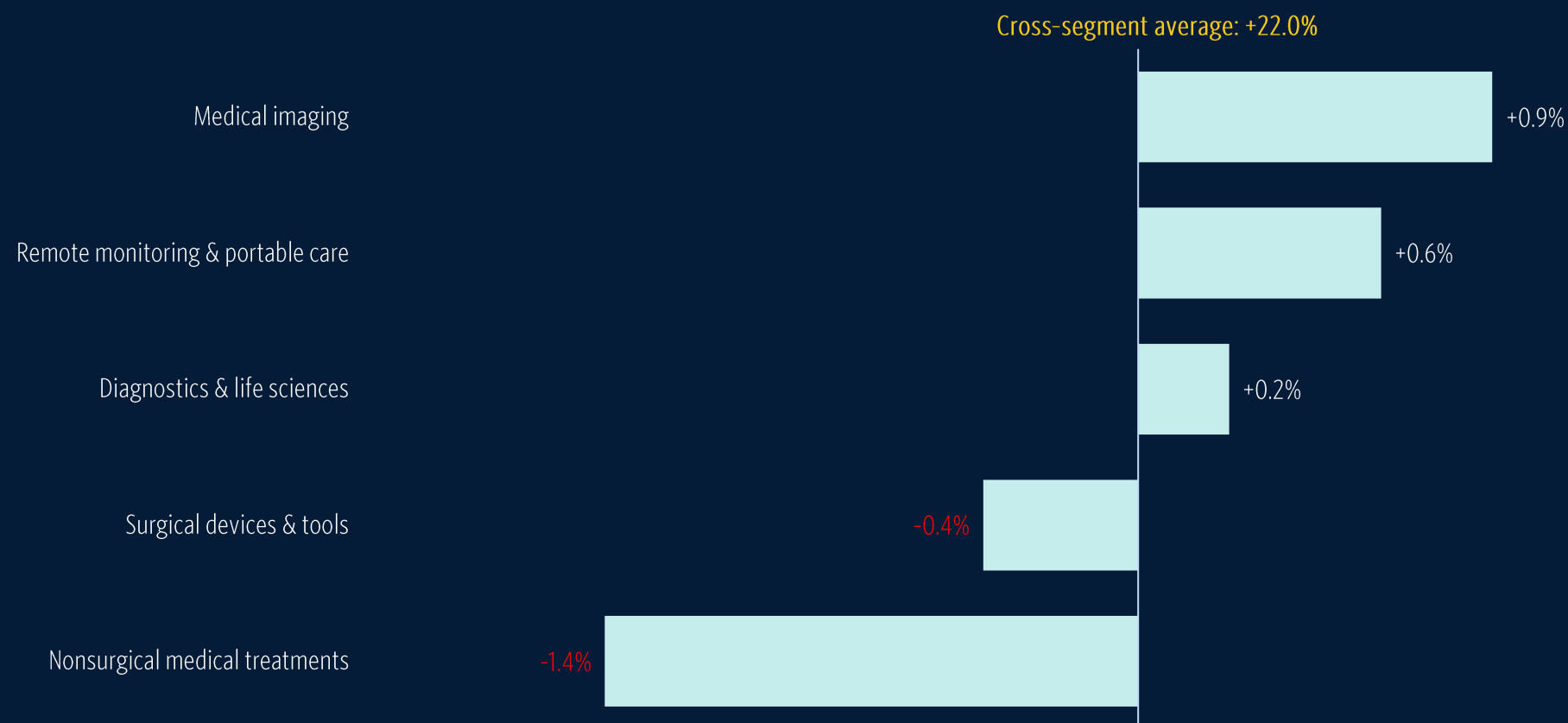
Figure 67 ▶ **TTM early-stage medtech VC deal activity**



Source: PitchBook • Geography: Global • As of December 31, 2024

Investment attractiveness of early-stage medtech companies by segment

Figure 68 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 22% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.

Individual company highlights: North America

Figure 69 ► **North American early-stage medtech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Sonavex	Medical imaging	90%	2%	96	+95
Melodi	Nonsurgical medical treatments	80%	1%	82	+68
Raydiant Oximetry	Nonsurgical medical treatments	81%	2%	86	+65
Motif	Remote monitoring & portable care	67%	9%	81	+59
OncoPrecision	Nonsurgical medical treatments	81%	1%	83	+56
NextSense	Remote monitoring & portable care	70%	10%	87	+53
PrimSphera	Diagnostics & life sciences	78%	1%	77	+50
BRIJ Medical	Nonsurgical medical treatments	65%	7%	70	+47
Proton Intelligence	Remote monitoring & portable care	82%	1%	84	+47
Ezra	Diagnostics & life sciences	88%	2%	94	+46

Please use this [saved search](#) for a complete, dynamic list of medtech companies.

Source: PitchBook ▪ Geography: North America ▪ As of December 31, 2024

Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.

Individual company highlights: Europe

Figure 70 ► **European early-stage medtech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Discure	Surgical devices & tools	56%	26%	98	+73
Echopoint	Surgical devices & tools	76%	1%	74	+68
Protembis	Surgical devices & tools	81%	14%	80	+64
SamanTree Medical	Medical imaging	92%	4%	79	+63
Aether Biomedical	Remote monitoring & portable care	75%	1%	71	+60
BCV	Medical imaging	71%	1%	65	+59
Salvia BioElectronics	Remote monitoring & portable care	42%	33%	97	+54
Nagi Bioscience	Diagnostics & life sciences	77%	4%	85	+53
FibriCheck	Diagnostics & life sciences	76%	1%	76	+53
Odne	Surgical devices & tools	48%	12%	57	+50

Please use this [saved search](#) for a complete, dynamic list of medtech companies.

Source: PitchBook • Geography: Europe • As of December 31, 2024
 Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Mobility tech

For the latest in-depth mobility tech research, click [here](#).

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Introduction

The mobility tech vertical is transforming the technology of transportation across its myriad forms, including air, water, road, and rail. With the increase in efforts to stem greenhouse gas emissions to slow or hopefully reverse climate change, the move to replace fossil fuels or reduce their use in transportation has been a major theme in mobility tech in recent years. Electric vehicles and related technologies are central to this theme. The development of the internet, and in particular the growth and ubiquity of connected mobile computing, has also significantly impacted transportation. The rapid growth of Uber as it “blitzscaled”—or rapidly scaled to achieve market dominance of the taxi and car service industries—kicked off a global wave of investment in ride-hailing and digital dispatch apps and related last-mile delivery solutions. Further, the popularity of Airbnb and similar apps spawned numerous car-sharing applications across mobile devices and platforms. Another major example of the impact of compute power on transportation is the development of autonomous vehicles. More than \$100 billion has been invested in the promise of driverless cars, trucks, trains, and airplanes within the past two decades.

VC activity in mobility tech has fallen in the past few years against the broader backdrop of softening VC investment overall. Investor caution across mobility tech also stems from the weakness of recently public companies, as well as the rapid rise of Chinese competitors, across several segments within the vertical. Similar performances for newly public companies in subsegments such as autonomous driving hardware and sensors have

contributed to private investor caution. Electric vehicle adoption has slowed in Western markets, and current political trends look to stem incentives and government investment. Ford and GM have shuttered their autonomous driving efforts, while Tesla sees robotaxis as the key to future growth. Autonomous driving solutions targeted at niche opportunities to solve problems in constrained environments, however, continue to capture investor attention and capital.

Electric vehicle batteries and related technologies are also seeing positive flows as the industry continues to demand higher energy density and range. Segments that are hard to abate from an emissions standpoint, such as aerospace and heavy trucking, continue to see strong capital flows for technologies and solutions that address the unique needs of these sectors. Government support and mandates to spur climate initiatives have clouded the investment outlook somewhat as participants sift through the shifting impacts of new rules, regulations, and politics.

Mobility tech overview

Figure 71 ► **Count of early-stage mobility tech companies by segment**

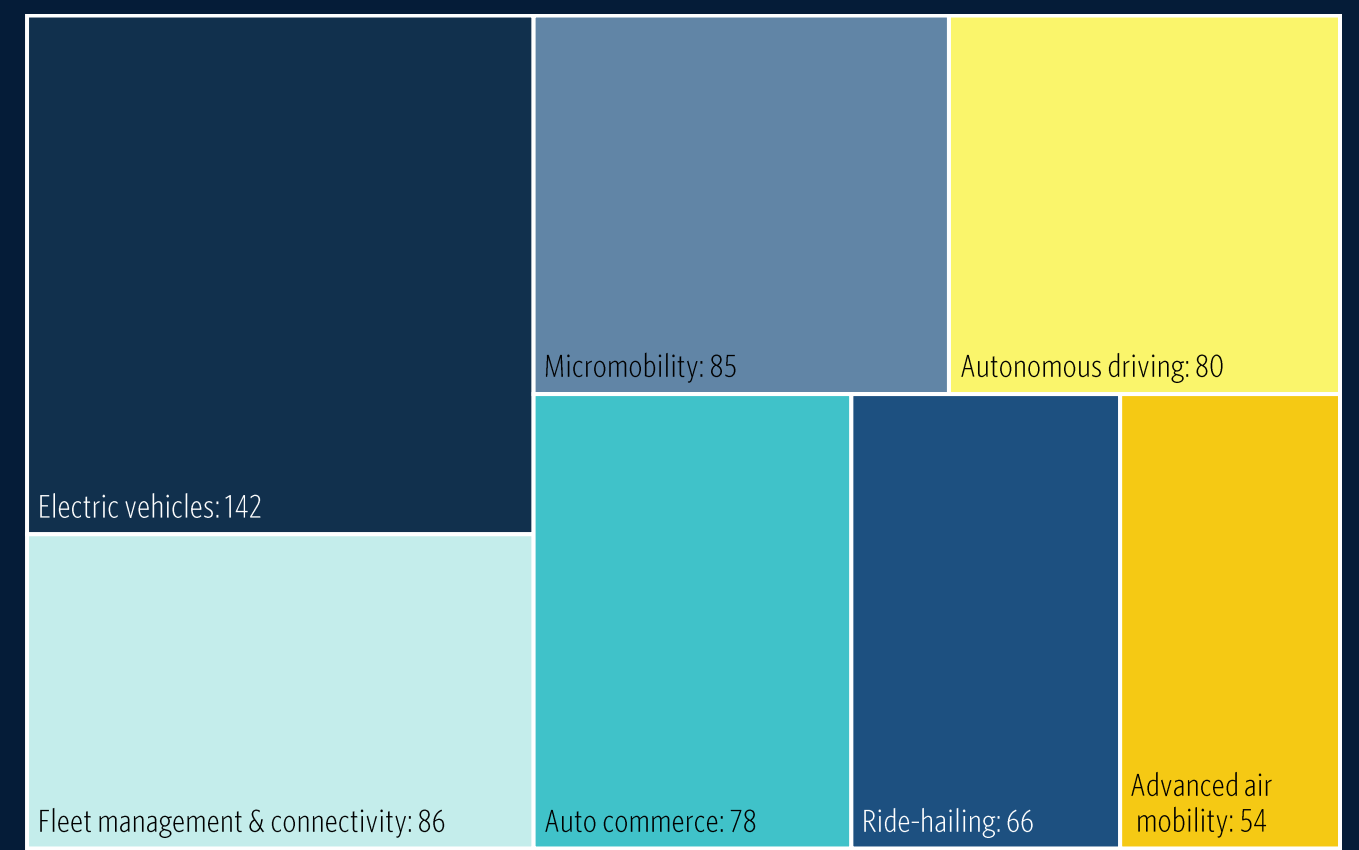


Figure 72 ► **Mobility tech metric summary**

	Value	TTM change	Relative score
Annualized expected return*	21.1%	-1.1%	
Total capital raised	\$3.5B	-22.2%	
New VC company fundings	26	-55.3%	
Median pre-money valuation	\$67.9M	+21.4%	
Share of published patents	8.5%	-0.2%	
Top-ranked investor participation	11.0%	+3.2%	
Median employee growth	3.5%	-9.2%	

Source: PitchBook • Geography: Global • As of December 31, 2024
*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.
Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.



Figure 73 ► **TTM early-stage mobility tech VC deal activity**

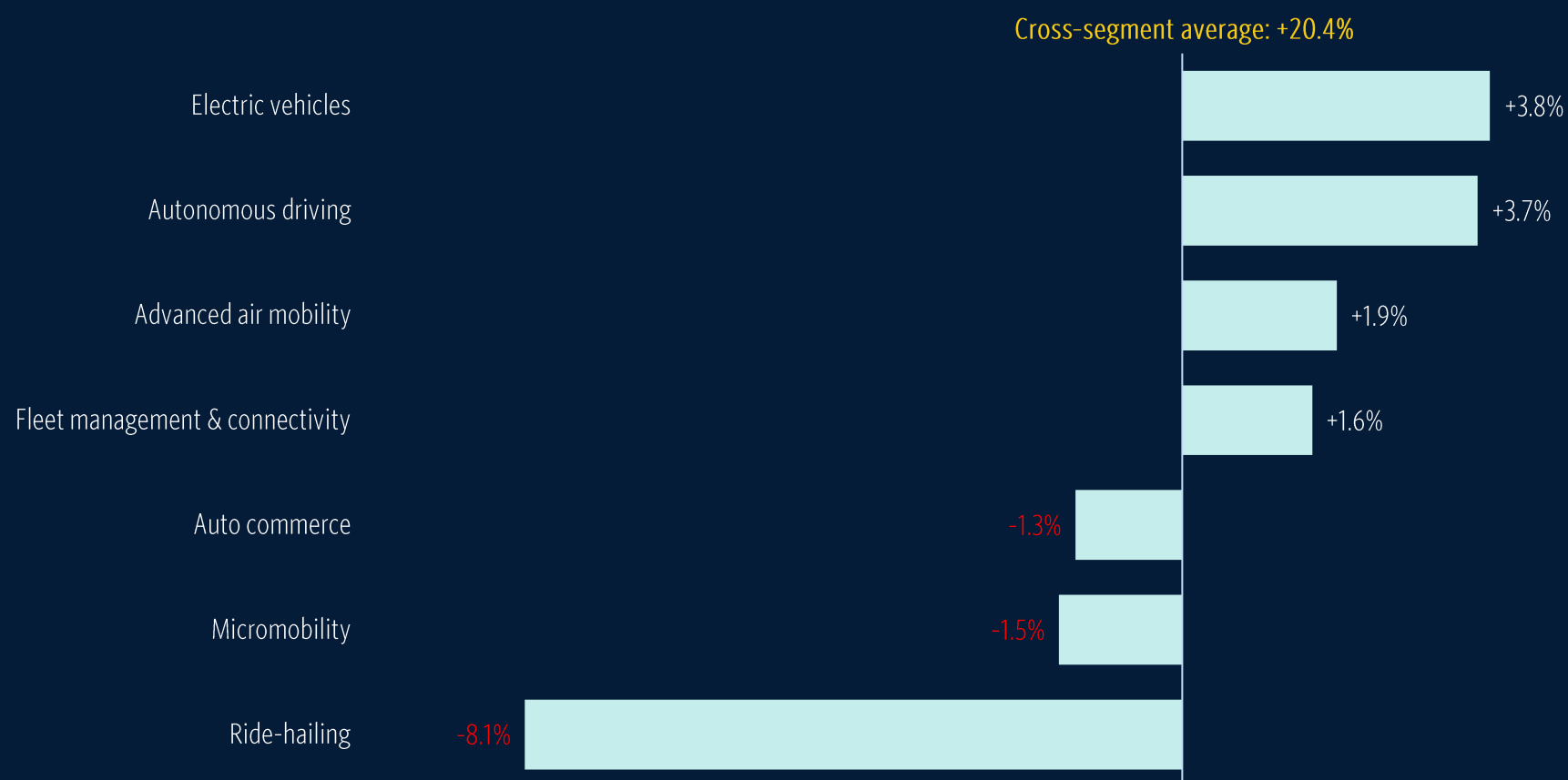


Source: PitchBook • Geography: Global • As of December 31, 2024



Investment attractiveness of early-stage mobility tech companies by segment

Figure 74 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 20.4% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.

Individual company highlights: North America

Figure 75 ► **North American early-stage mobility tech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
OCN	Auto commerce	51%	25%	94	+79
AirMatrix	Advanced air mobility	80%	1%	82	+72
Ridepanda	Micromobility	86%	2%	93	+70
Agility Robotics	Last-mile delivery	73%	23%	85	+60
Highland	Electric vehicles	35%	36%	94	+59
Burq	Delivery	80%	1%	81	+53
Treehouse	Electric vehicles	73%	9%	90	+51
Omega Power	Electric vehicles	66%	8%	76	+49
Boxcar	Ride-hailing	63%	4%	60	+48
Tarform	Micromobility	58%	1%	47	+41

Please use this [saved search](#) for a complete, dynamic list of mobility tech companies.

Source: PitchBook ▪ Geography: North America ▪ As of December 31, 2024
Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.

Individual company highlights: Europe

Figure 76 ► **European early-stage mobility tech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
infiniDome	Fleet management & connectivity	87%	2%	94	+63
Caravelo	Advanced air mobility	83%	1%	86	+59
Arksen	Marine	67%	7%	76	+43
Karver	Marine	53%	2%	43	+43
Wavefoil	Marine	51%	3%	44	+38
Surve Mobility	Electric vehicles	70%	2%	66	+33
heycar	Auto commerce	56%	10%	64	+33
Tictactrip	Ride-hailing	72%	2%	69	+32
Wever	Ride-hailing	39%	2%	30	+29
RigiTech	Advanced air mobility	60%	1%	49	+29

Please use this [saved search](#) for a complete, dynamic list of mobility tech companies.

Source: PitchBook ▪ Geography: Europe ▪ As of December 31, 2024
 Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



SaaS

For the latest in-depth SaaS research, click [here](#) and [here](#).

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Introduction

Our SaaS coverage is composed of two sectors: enterprise SaaS and infrastructure SaaS. Together, these address the modernization of traditional business practices. Our taxonomy for both is driven by a focus on fundamental business practices (enterprise SaaS), as well as the digital foundation of contemporary enterprises (infrastructure SaaS). Enterprise SaaS focuses on business functions that interact with customers and external stakeholders, as well as internal operations, observability, and support functions. Infrastructure SaaS includes software, databases, networks, and other resources that support an organization's business operations.

Enterprise SaaS

Enterprise SaaS is a broad horizontal sector united by its focus on providing business solutions. These can be as focused as bespoke solutions for specific industries, such as healthcare customer management and care, or as broad as sales or business intelligence services that can be used by any enterprise regardless of sector, geography, or customer base. This creates a massive total addressable market for companies to pursue, which is exemplified by established public companies such as Microsoft in the knowledge management systems segment and Salesforce in the customer relationship management segment.

Enterprise solutions have existed for as long as enterprises themselves. They have universal challenges, including managing assets, human capital, and customer experience. Therefore, the taxonomy used in this report is based on historical delineations among these solutions. Within our enterprise SaaS vertical, we have defined our segments as:

- **Customer relationship management:** Marketing, sales, and customer service.
- **Enterprise resource planning:** Assets, human capital, and operations.
- **Supply chain management:** Planning, procurement, and execution.
- **Analytic platforms:** Business intelligence, AI, and geospatial analytics.
- **Knowledge management systems:** Content, authoring, and projects.
- **Other application software:** Various additional emerging solutions.



Introduction (continued)

Infrastructure SaaS

Infrastructure SaaS encompasses the complex digital processes that enable modern enterprises. These foundational solutions have transformed yesterday's analog workflows into modern digital systems. Infrastructure SaaS includes application development and data creation and management, as well as IT and infrastructure services. These solutions are developed and sold by some of the largest software companies, including IBM, Broadcom, and Oracle, as well as hyperscalers such as Amazon, Microsoft, and Google, which package storage, network, and compute services. Nearly every sector of today's economy employs these solutions, driven by waves of digital transformation, Big Data, and recent advancements in and adoptions of large language models and other advanced AI solutions. Where enterprise SaaS solutions enable a firm to execute on its corporate goals—colloquially “front office”—infrastructure SaaS supports the increasingly complex “back office,” which enables these digital approaches through application support, networking, IT, and storage solutions.

Infrastructure SaaS solutions enable the digital initiatives of every modern enterprise that produces, manipulates, stores, and manages data. This includes all enterprise applications and their related infrastructure, as well as the systems and processes composing an enterprise's digital structure. Within our infrastructure SaaS vertical, we define our segments as:

- **Development operations (DevOps):** All application development stages and cycles.
- **Application infrastructure:** Platforms and systems that enable applications.

- **Data software & systems:** The capture, ingestion, and management of data.
- **Information technology operations (ITOps):** Information technology services, resources, and processes.

Many software vendors are migrating their offerings from one deployment to another, such as on-premises, SaaS, and cloud. Our two SaaS verticals encompass all applications employed to support critical business processes, regardless of deployment type. Additionally, these solutions are often deployed as a suite of applications, as well as standalone products that support and enhance specific digital infrastructure practices. Both application suites and standalone offerings are common in all our segments.

SaaS overview

Figure 77 ▶ Count of early-stage SaaS companies by segment

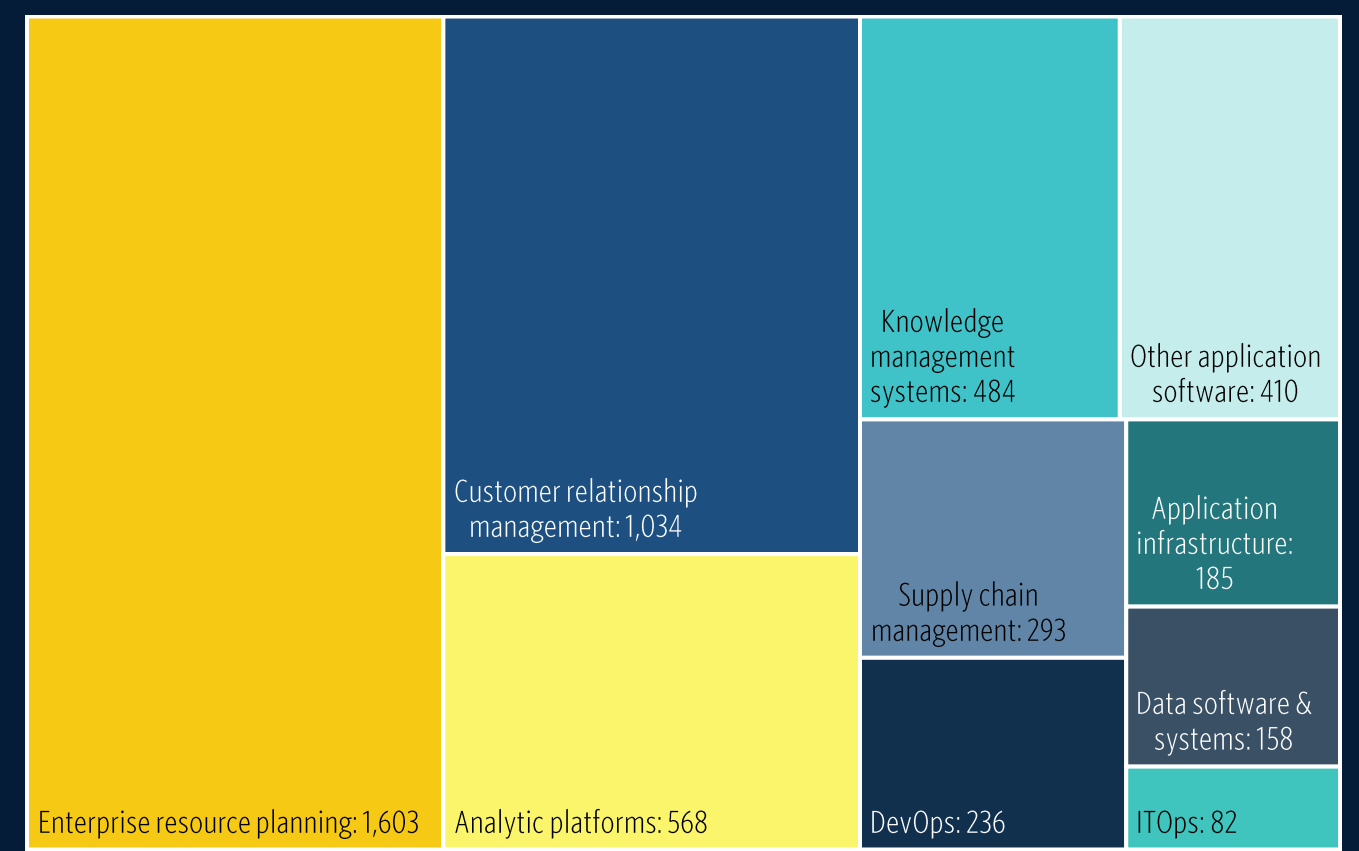


Figure 78 ▶ SaaS metric summary

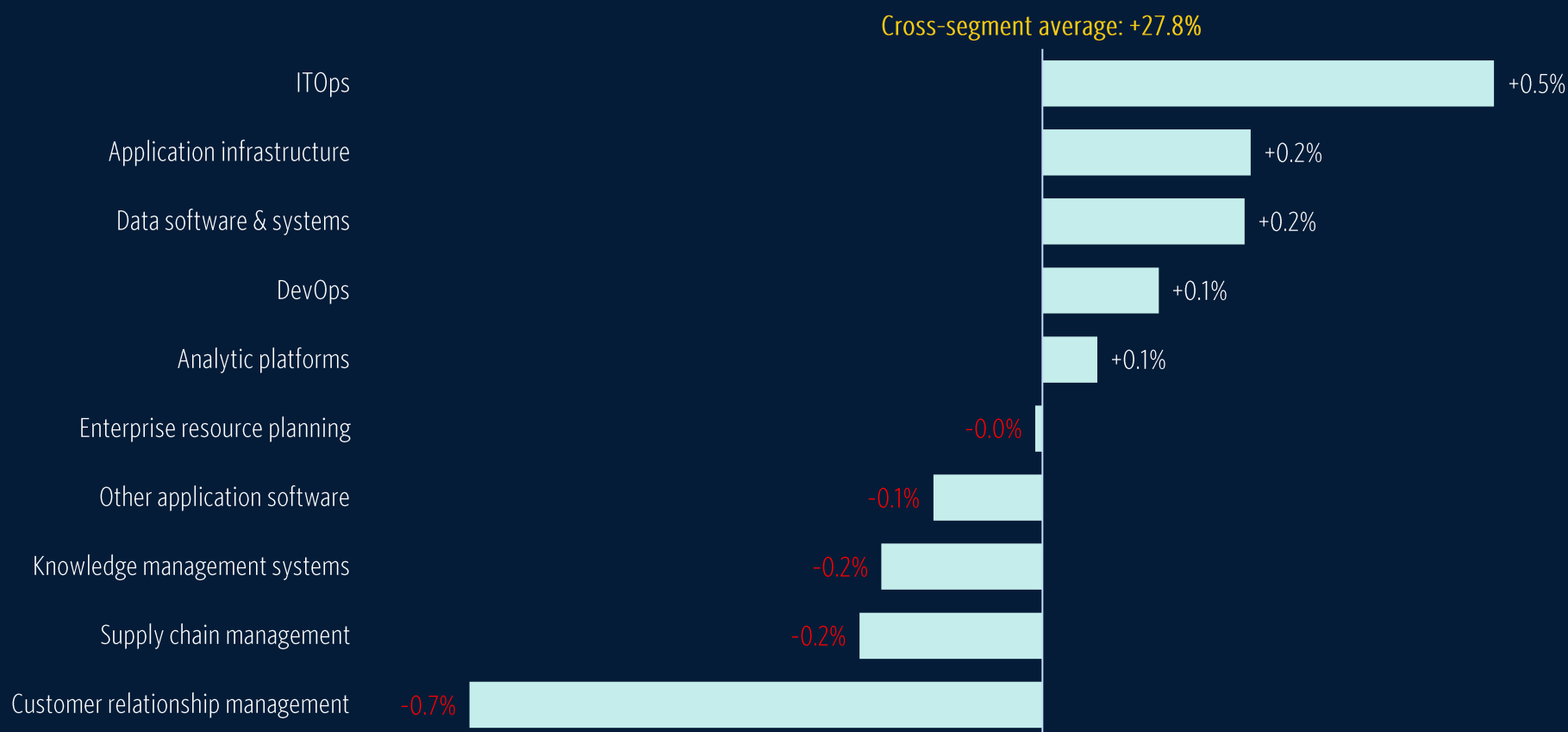
	Value	TTM change	Relative score
Annualized expected return*	27.7%	+0.1%	
Total capital raised	\$33.0B	+5.5%	
New VC company fundings	308	-47.2%	
Median pre-money valuation	\$61.7M	+19.6%	
Share of published patents	12.4%	-0.5%	
Top-ranked investor participation	17.6%	+0.4%	
Median employee growth	7.4%	+0.0%	

Source: PitchBook • Geography: Global • As of December 31, 2024
*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.
Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.



Investment attractiveness of early-stage SaaS companies by segment

Figure 80 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 27.8% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.

Individual company highlights: North America

Figure 81 ► **North American early-stage SaaS companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Illuma Labs	Other application software	93%	1%	97	+84
Clay	Data software & systems	75%	23%	86	+81
OnRamp	Customer relationship management	87%	1%	91	+80
Foundry	Application infrastructure	70%	11%	90	+77
Procurement Sciences AI	Analytic platforms	86%	2%	92	+72
io.net	Application infrastructure	93%	2%	98	+71
Kaedim	Knowledge management systems	85%	1%	90	+70
Supio	Enterprise resource planning	82%	8%	97	+70
GSTS	Analytic platforms	82%	1%	85	+67
Seekr	Analytic platforms	14%	79%	100	+66

Please use these saved searches for a complete, dynamic list of SaaS companies: [enterprise SaaS](#) and [infrastructure SaaS](#).

Source: PitchBook ▪ Geography: North America ▪ As of December 31, 2024
 Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.

Individual company highlights: Europe

Figure 82 ► **European early-stage SaaS companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score**

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Patchstack	Other application software	84%	4%	94	+82
Swap	Supply chain management	78%	3%	84	+75
Antidot	Other application software	80%	9%	68	+67
BotGuard	Other application software	86%	1%	90	+66
Genie AI	Knowledge management systems	82%	12%	99	+63
Hotelverse	Customer relationship management	84%	2%	90	+61
Doinstruct	Enterprise resource planning	84%	4%	94	+58
Dive	Knowledge management systems	85%	1%	89	+55
InsideBoard	Enterprise resource planning	92%	3%	78	+53
Nearby Computing	ITOps	82%	1%	85	+53

Please use these saved searches for a complete, dynamic list of SaaS companies: [enterprise SaaS](#) and [infrastructure SaaS](#).

Source: PitchBook • Geography: Europe • As of December 31, 2024

Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Supply chain tech

For the latest in-depth supply chain tech research, click [here](#).

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Introduction

Supply chain tech covers the various technologies applied to global supply chains to facilitate trade, reduce friction and cost, enhance visibility, and support new and emerging modes of commerce, including e-commerce and last-mile delivery. The sudden emergence of the COVID-19 pandemic strained global supply as manufacturers, distributors, and retailers struggled to keep operations running against extreme volatility in demand and commercial activity. Strategies shifted from just-in-time to just-in-case, and previously lean supply chains were bolstered to buffer the highly dynamic environment. VC funding flowed into the vertical with numerous technological efforts to solve the issues. Another major theme has been emissions abatement. The physical movement of goods around the planet requires considerable energy and produces an outsized share of emissions. Passenger vehicles typically run for less than a few hours per day, while trucks moving goods can operate 24/7, producing an enormous share of emissions. At the same time, simply attempting to apply passenger-electric-vehicle-like solutions to trucking falters because of the scale, scope, and cost of energy requirements for both batteries and charging. A final key theme is labor and automation. With the surging demands of e-commerce, warehouse labor has soared, spurring demand for automation solutions to more efficiently manage the flow and storage of goods. Trucking faces key labor shortages, with estimates of tens of thousands of unfilled positions by decade-end. Automation of long-haul trucking can ease such shortages as well as move goods more rapidly without the need for regulated breaks and driver downtime.

The supply chain tech vertical is divided into four segments spread across the various emerging opportunities in the space:

- Enterprise supply chain management, including enterprise resource planning & inventory management, asset tracking & management, procurement & sourcing, and supply chain finance & payments.
- Warehousing tech, including warehouse automation, warehousing & fulfillment, sustainable packaging, and augmented reality.
- Freight tech, including fleet management, marine rail & port logistics, trucking logistics, autonomous trucks & middle mile, and marine/air/rail freight.
- Last-mile delivery, including autonomous delivery, delivery services, drones & eVTOL logistics, reverse logistics, and ultrafast delivery.



Supply chain tech overview

Figure 83 ▶ Count of early-stage supply chain tech companies by segment

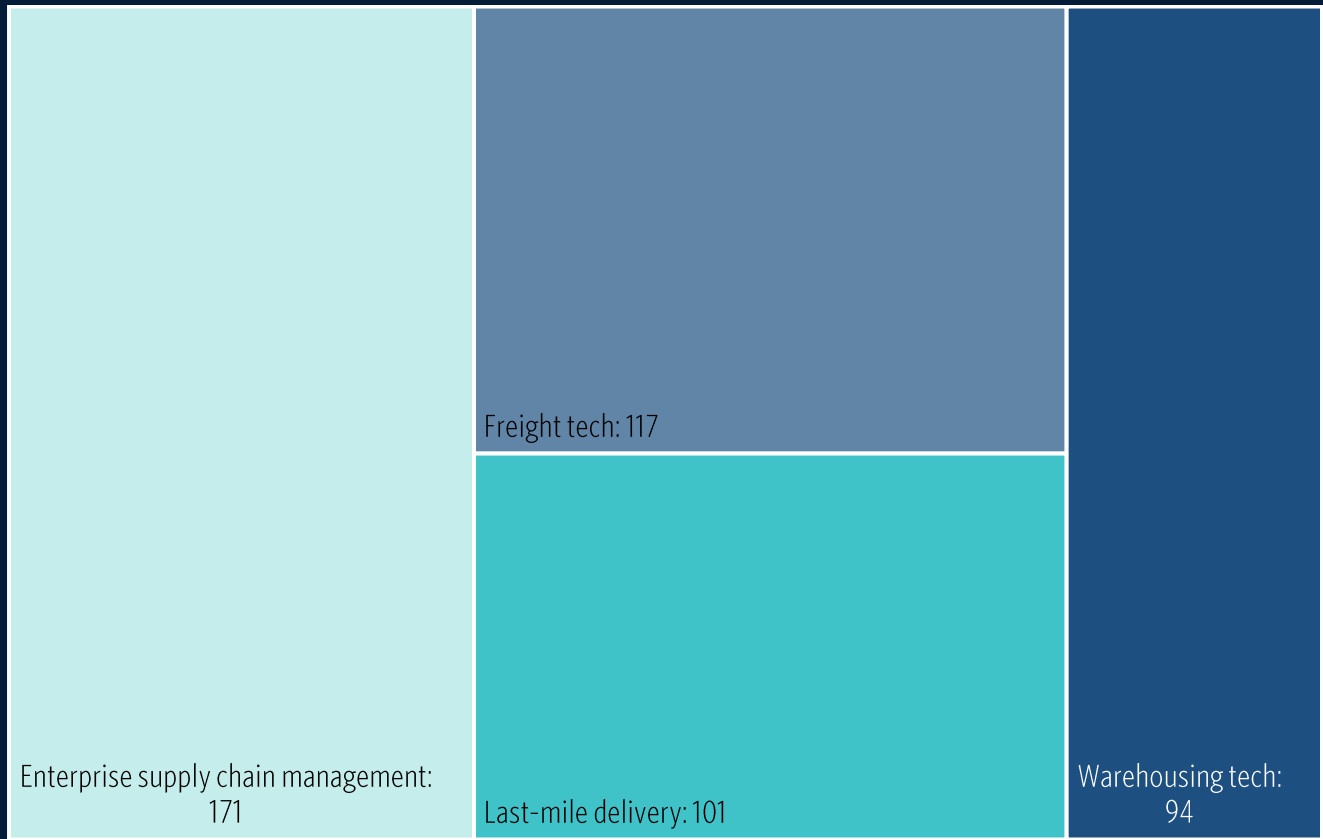


Figure 84 ▶ Supply chain tech metric summary

	Value	TTM change	Relative score
Annualized expected return*	23.9%	-0.5%	
Total capital raised	\$1.9B	-24.2%	
New VC company fundings	27	-69.8%	
Median pre-money valuation	\$44.1M	+12.2%	
Share of published patents	2.8%	+0.1%	
Top-ranked investor participation	12.2%	+0.1%	
Median employee growth	5.1%	-5.9%	

Source: PitchBook • Geography: Global • As of December 31, 2024

*Expected returns are derived from historical return assumptions and company-level exit predictions. See [page 15](#) for more details.
Note: The length of the relative score bars is based on cross-vertical Z-scores of the TTM change (except expected IRR and median employee growth), wherein the maximum and minimum lengths are +/- 2, respectively. The center of the column is zero.



Figure 85 ▶ TTM early-stage supply chain tech VC deal activity

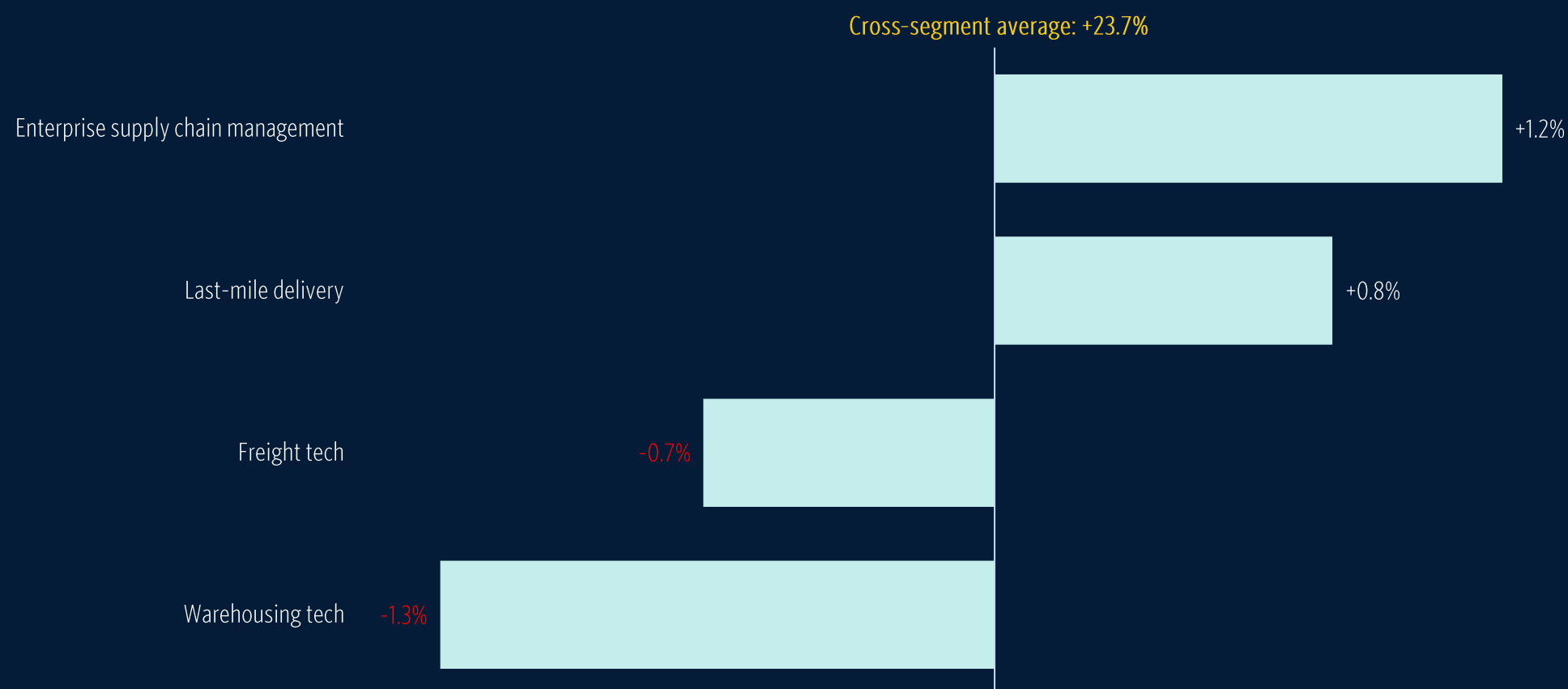


Source: PitchBook • Geography: Global • As of December 31, 2024



Investment attractiveness of early-stage supply chain tech companies by segment

Figure 86 ► **Annualized expected returns relative to the cross-segment average**



Source: PitchBook • Geography: Global • As of December 31, 2024



Expected returns

Expected returns for each segment are based on an aggregation of the expected returns for the underlying companies. Company-level returns are determined from the exit type predictions and historical returns by series. For more information, please see [page 15](#) and the VC Exit Predictor methodology located in the [PitchBook Help Center](#).

It is important to note that the cross-segment average return of 23.7% is provided as a historical baseline value and should not be relied on as a forecast. This baseline value is derived from the average of deal-level return data from 2000 to 2021 and can vary significantly based on the environment at any given time. The relative returns for each segment, however, are a more robust forward-looking measure because they are unaffected by factors that impact the entire VC ecosystem, such as interest rates, available funding, and economic growth.



Individual company highlights: North America

Figure 87 ► North American early-stage supply chain tech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
CargoSense	Enterprise supply chain management	67%	3%	64	+50
Yumi	Last-mile delivery	82%	9%	71	+33
Open Water	Warehousing tech	59%	5%	56	+31
Shipped	Last-mile delivery	51%	1%	39	+24
Elevator	Warehousing tech	49%	1%	37	+22
Bloodhound Tracking Device	Enterprise supply chain management	45%	1%	33	+20
Pandion	Last-mile delivery	70%	19%	69	+14
Better Trucks	Last-mile delivery	70%	1%	64	+10
Waldo Solutions	Enterprise supply chain management	39%	1%	28	+9
Logiwa	Enterprise supply chain management	96%	1%	82	+9

Please use this [saved search](#) for a complete, dynamic list of supply chain tech companies.

Source: PitchBook ▪ Geography: North America ▪ As of December 31, 2024
Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Individual company highlights: Europe

Figure 88 ► European early-stage supply chain tech companies with the largest YoY improvements in the VC Exit Predictor Opportunity Score

Company	Segment	M&A probability	IPO probability	Opportunity Score	One-year change in Opportunity Score
Scoutbee	Enterprise supply chain management	66%	21%	66	+42
Nomagic	Warehousing tech	71%	1%	65	+42
Okibo	Freight tech	73%	2%	48	+31
Cargoplot	Enterprise supply chain management	50%	1%	38	+22
Flowfox	Freight tech	64%	1%	55	+22
Skrap HQ	Enterprise supply chain management	87%	1%	91	+20
Jiga	Enterprise supply chain management	71%	1%	65	+14
Responsibly	Enterprise supply chain management	89%	1%	94	+13
Nanolike	Freight tech	78%	2%	81	+13
Infyos	Enterprise supply chain management	49%	1%	37	+11

Please use this [saved search](#) for a complete, dynamic list of supply chain tech companies.

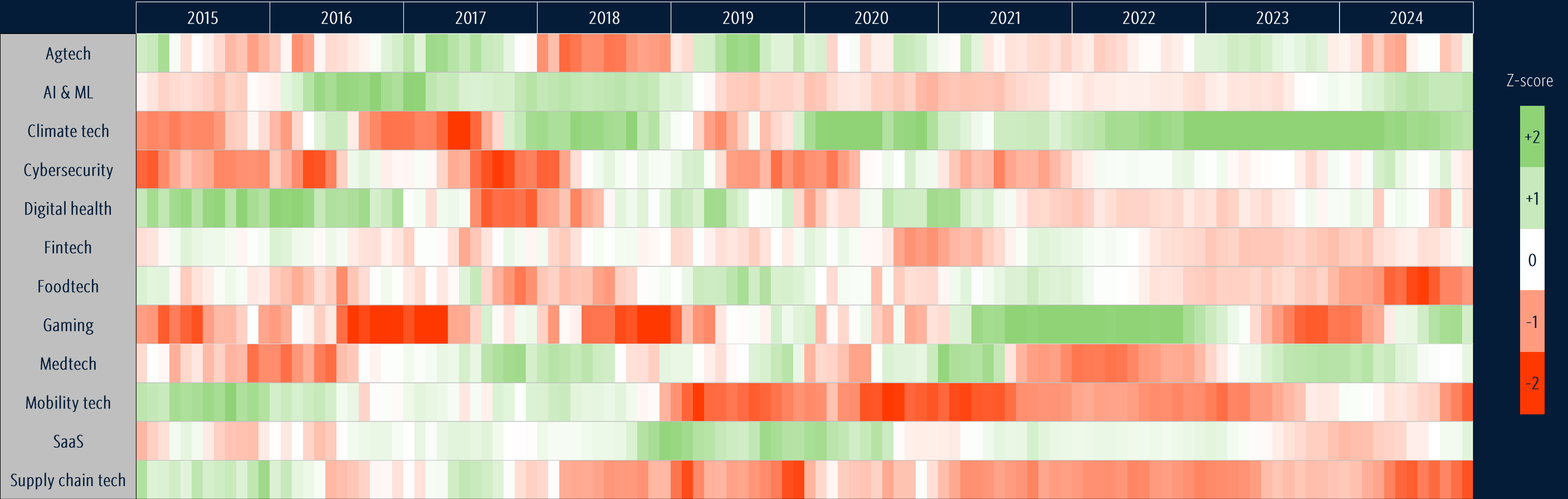
Source: PitchBook ▪ Geography: Europe ▪ As of December 31, 2024
Note: Opportunity Scores are percentile rankings that were calculated relative to all companies included in the report.



Appendix: Historical trends in top-down metrics

Historical deal activity trends

Figure 89 ▶ **Relative TTM change in early-stage deal value by vertical**

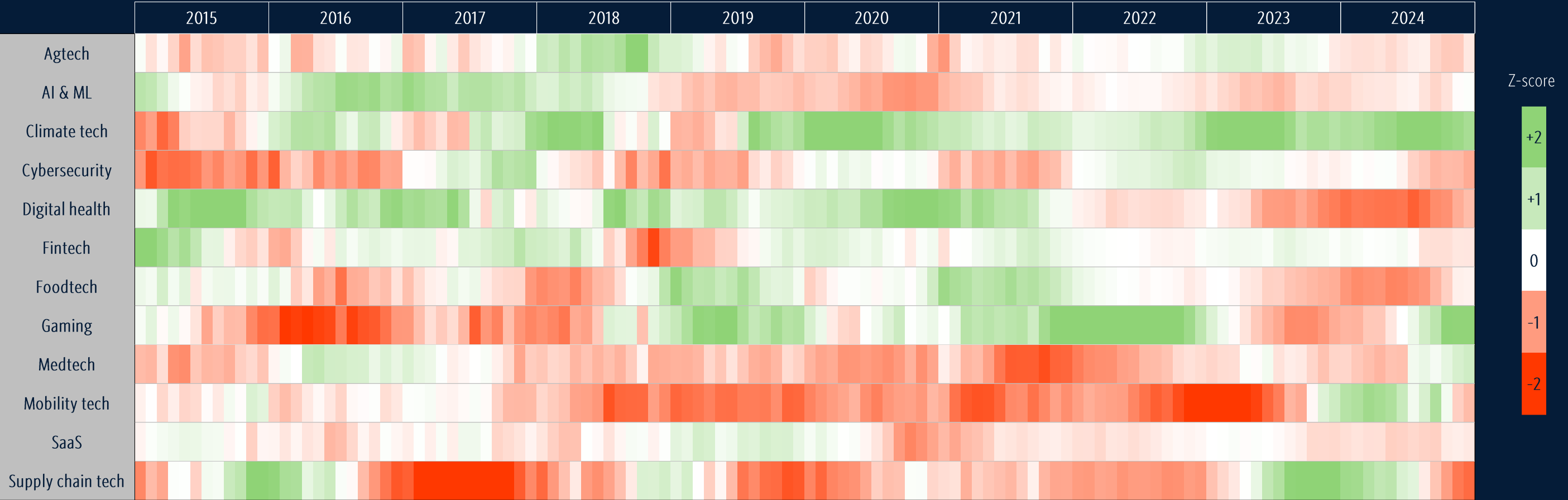


Source: PitchBook • Geography: Global • As of December 31, 2024
Note: Conditional formatting is applied across verticals in each period to Z-score normalized values. Data estimations are applied to the most recent 12 months to account for lagged data collection.



Historical first-time VC financing trends

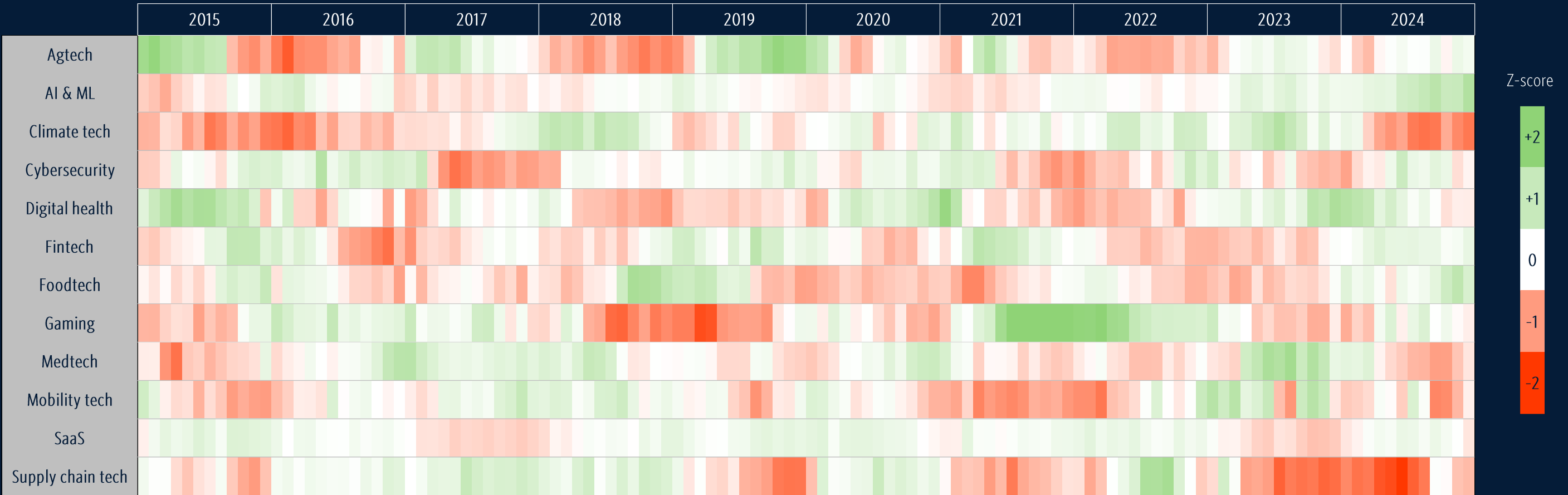
Figure 90 ▶ Relative TTM change in first-time VC financing count by vertical



Source: PitchBook • Geography: Global • As of December 31, 2024
Note: Conditional formatting is applied across verticals in each period to Z-score normalized values. Data estimations are applied to the most recent 12 months to account for lagged data collection.

Historical pre-money valuation trends

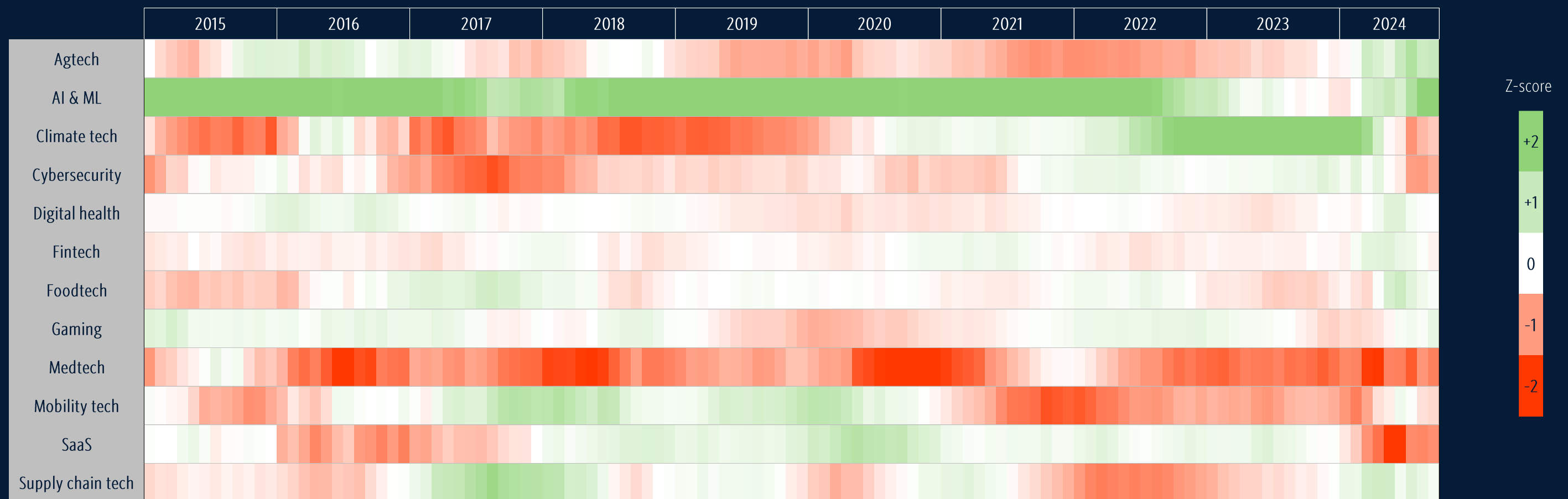
Figure 91 ▶ Relative TTM change in median early-stage pre-money valuation by vertical



Source: PitchBook • Geography: Global • As of December 31, 2024
Note: Conditional formatting is applied across verticals in each period to Z-score normalized values. Percentage changes in seed, Series A, and Series B valuations are calculated separately and then aggregated using a weighted average.

Historical patent activity trends

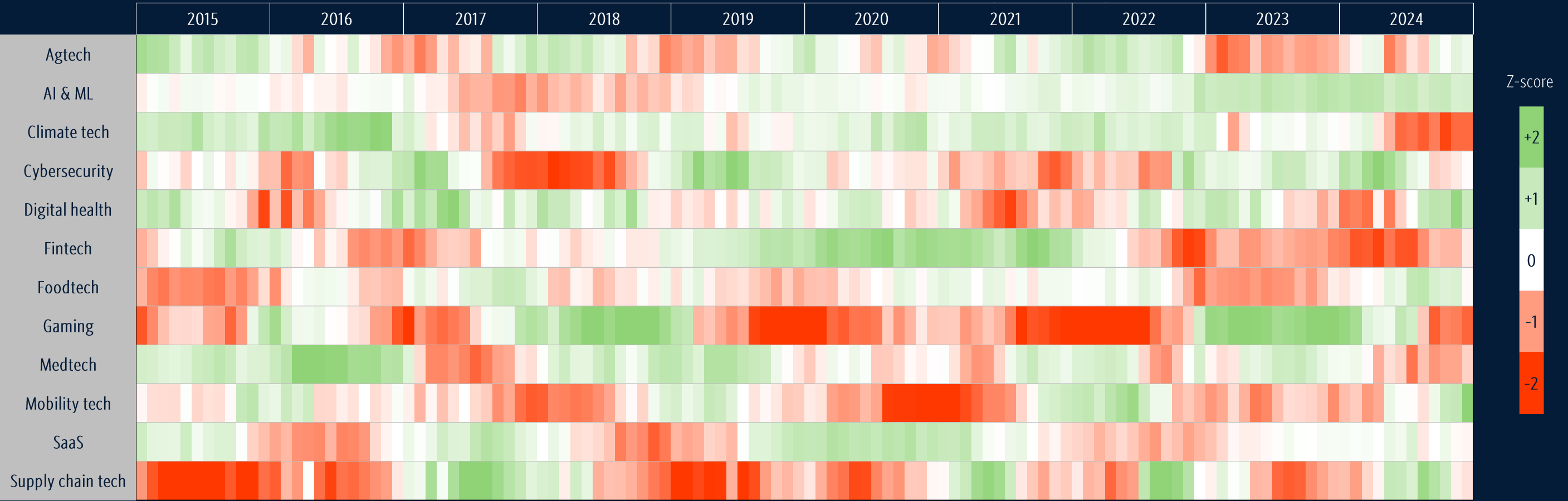
Figure 92 ▶ Relative TTM net change in the share of published patents by vertical



Source: PitchBook • Geography: Global • As of September 30, 2024
Note: Conditional formatting is applied across verticals in each period to Z-score normalized values.

Historical top-ranked investor participation rate trends

Figure 93 ▶ Relative TTM top-ranked investor participation by vertical



Source: PitchBook • Geography: Global • As of December 31, 2024
Note: Conditional formatting is applied across verticals in each period to Z-score normalized values.



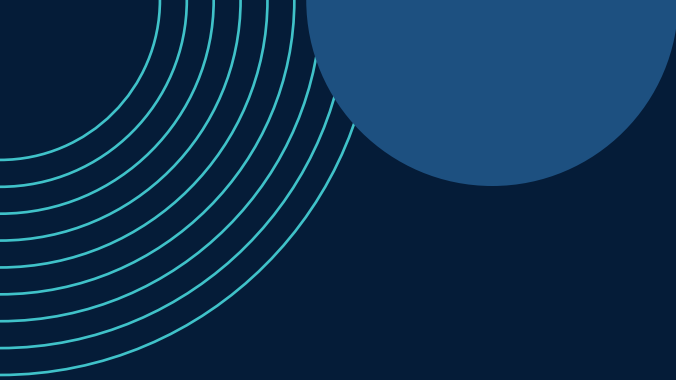
PitchBook VC Exit Predictor

The PitchBook VC Exit Predictor leverages ML and our vast database of information about VC-backed companies, financing rounds, and investors to objectively assess a startup's prospect of a successful exit. The primary component underpinning the score is a classification model that predicts the probability that a VC-backed startup will ultimately be acquired, go public, or not exit due to either failure or becoming self-sustaining. These probabilities are then used to calculate a naive expected return of an investment in the startup's next financing round using historical returns by series derived from capitalization table data. Finally, these expected returns are normalized across the VC universe by percentile ranking.

The final score for each currently VC-backed company is a number from zero to 100, wherein a score of 100 represents the most attractive and zero the least attractive. In this report, individual company exit and return predictions are aggregated to create a bottom-up analysis of specific emerging technology verticals. The aggregation is done by taking the average of individual exit type probabilities and returns to get an expected exit rate and return for an entire vertical. For example, if a vertical contained 100 companies with an average predicted successful exit probability of 60%, we would expect that 60 of them would eventually go on to successfully exit.

Historically, the aggregated exit predictions have done a good job of explaining relative differences in success rates across verticals. For example, when analyzing VC-backed companies at the end of 2018, the aggregated exit predictions were able to explain about 86% of the variability of observed success rates across verticals. However, there are certain limitations to the absolute expected success rates and returns. In particular, the expected returns are based solely on historical average returns, which means they will not capture periods wherein returns meaningfully deviate from the average. Therefore, while the absolute expected returns can be used as a baseline, comparing differences in expected returns between verticals is more valuable.

For additional details, please see the technical documentation located in the [PitchBook Help Center](#).



About PitchBook Industry and Technology Research

Independent, data-driven, and timely market intel

As the private markets ecosystem continues to grow in complexity and competition, investors need tools and data that can give them an edge.

Our Industry and Technology Research provides detailed analysis of established industries and nascent tech sectors from the perspective of private market dealmaking, helping you stay current on market trends and providing the insights you need to pursue new opportunities with confidence.

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