

AI in Venture Capital & Private Equity

The Third Value Lever Transforming Investment

John J. Shay IV | Global Gauntlet AI

February 2026

Executive Summary

AI has emerged as the **third value lever** in private equity and venture capital, joining financial engineering and operational excellence as a fundamental driver of returns.

Key Themes

AI now captures **53% of global VC funding**— up from 32% in Q3 2024

Foundation model companies (OpenAI, Anthropic, xAI) approaching **\$1 trillion combined value**

95% of PE/VC firms now use AI in investment decisions and deal evaluation

Top PE firms deploying proprietary AI platforms (EQT Motherbrain, Blackstone internal tools)

2025 AI VC funding on track to reach **\$490B**— 25% increase over 2024

\$490B

Projected 2025 VC Deal
Value

53%

AI Share of Global VC

95%

PE Firms Using AI

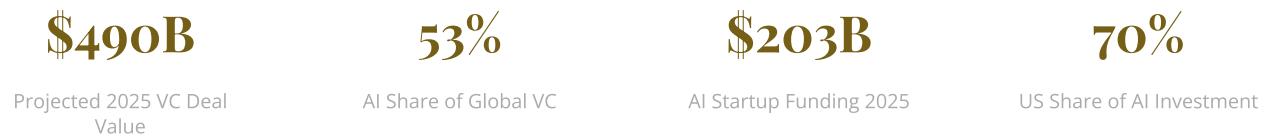
~\$1T

Top 3 AI Co. Valuation

O1

The AI Investment Landscape

2025: AI Dominates Global Venture Capital



AI has become the engine of the VC rebound — but highly concentrated across firms, stages, and geographies.

Key 2025 Developments

- ▶ Q3 2025: \$17.4B invested in applied AI — 47% YoY increase
- ▶ H1 2025: AI funding reached \$116B, exceeding all of 2024
- ▶ Agentic AI spending projected to hit \$155B by 2030
- ▶ AI now represents >50% of global venture capital funding
- ▶ Shift from developing LLMs to integrating AI into enterprise workflows

Source: WIPO Global Innovation Index, PitchBook, CB Insights, Morgan Lewis 2025

Geographic Concentration of AI Investment

North America Dominance

\$162B

AI-related VC in North America (2025)

70%

of global VC investment flows to US startups

All 6 billion-dollar+ rounds in Q2 2025 were US companies

Other Regions

Europe	\$19B	12% of global
Asia	\$9B	5.5% of global
Rest of World	\$2B	1.2% of global

Key Insight: Europe dipped to \$14.6B in Q2, while Asia remained muted at \$12.8B, dragged down by a sharp slowdown in China.

Source: WIPO Global Innovation Index, PitchBook 2025

02

Foundation Model Giants

The \$1 Trillion AI Triumvirate

OpenAI

\$300B

Valuation

Latest: \$40B Series F
Led by: SoftBank
Revenue: \$12.7B (2025)
Users: 700M weekly
Enterprise: 92% Fortune 500

Anthropic

\$183B

Valuation

Latest: \$13B Series F
Led by: Iconiq, Fidelity
Revenue: \$2.2B (2025)
Strategic: Amazon \$8B
Product: Claude 4 leads coding

xAI

\$230B

Valuation

Latest: \$20B (Nvidia led)
Total raised: \$42B+
Product: Grok 4 Fast
Infrastructure: 200K+ GPUs
Moat: X data exclusive

Combined private market value: ~\$713 billion

These three companies have absorbed the bulk of AI investor attention and together account for close to \$1 trillion in private market value.

2025 AI Mega-Rounds: \$84B+ in Top 10 Deals

Company	Amount	Round	Valuation	Lead Investor
OpenAI	\$40B	Series F	\$300B	SoftBank
xAI	\$20B	Latest	\$230B	Nvidia
Anthropic	\$13B	Series F	\$183B	Iconiq/Fidelity
Project Prometheus	\$6.2B	Launch	TBD	Bezos
Databricks	\$5B	Latest	\$134B	Multiple
Anysphere (Cursor)	\$2.3B	Series C	\$29B	Accel/Coatue
Thinking Machines Lab	\$2B	Seed	\$10B	a16z
Safe Superintelligence	\$2B	Latest	\$32B	Greenoaks

Notable: Thinking Machines Lab (\$2B seed) represents the largest seed round ever recorded. Founded by former OpenAI CTO Mira Murati.

03

Top AI-Focused VC Firms

Leading AI Venture Capital Firms

Firm	AUM	AI Focus	Notable AI Investments
Andreessen Horowitz	\$42B+	Infrastructure, GenAI	OpenAI, Databricks, Anthropic, Mistral
Sequoia Capital	\$85B+	AI across sectors	OpenAI, Nvidia, Scale AI, Harvey
Khosla Ventures	\$15B+	AI moonshots	OpenAI (early), Cursor, ClickHouse
Lightspeed	\$25B+	Enterprise AI	Anthropic, Mistral, Glean
Accel	\$50B+	AI applications	Scale AI, Grammarly, UiPath
Founders Fund	\$11B+	Deep tech, defense	Anduril, SpaceX AI systems

Investment Thesis

a16z: Bold, tech-driven startups
Sequoia: Durable, scalable businesses
Khosla: High-risk frontier tech

Key Series A Metrics

Minimum ARR: \$1M+
Gross Margins: 50%+ after compute
Growth Rate: 3x YoY preferred

Most Active AI Investors: 2025

Deal Count Leaders and Biggest Check Writers

By Deal Count (May 2025)

1 Khosla Ventures — 12 rounds

ClickHouse \$350M, NewLimit \$130M

2 Accel — 12 rounds

Anysphere \$900M, Wonder \$600M

3 Y Combinator — 20 startups

Top incubator activity

4 General Catalyst — 5 leads

Grammarly \$1B revenue deal

5 Thrive Capital — 4 leads

Anysphere, Neuralink

Who Writes Biggest Checks?

Series A+ Leaders:

- Andreessen Horowitz
- Sequoia Capital
- Lightspeed Venture Partners
- Thrive Capital
- Coatue Management

Key Insight:

85% of VCs use AI for daily task automation. 82% use AI for deal sourcing research.

O4

Private Equity's AI Transformation

Top PE Firms Embracing AI

95% of PE firms now use AI in investment decisions and deal evaluation

Firm	AUM	AI Strategy	Key Achievements
Thoma Bravo	\$184B	AI governance framework	565+ software companies, \$285B value
EQT	\$120B+	Motherbrain AI platform	15+ investments sourced by AI
Blackstone	\$840B	Internal AI platform	AI across 70+ portfolio companies
KKR	\$600B+	AI portfolio integration	Focus on AI infrastructure plays
Apollo	\$840B	Credit and equity AI	Distressed asset AI modeling

AI is now the third value lever alongside financial engineering and operational excellence. About two-thirds of PE clients had implemented at least one AI initiative by 2024.

— EY Private Equity AI Report 2025

Case Study: EQT's Motherbrain Platform

The Industry's First AI-Driven Investment Platform

What is Motherbrain?

Founded 2016 — EQT holds first PE AI patent

- ▶ Scans 50+ data sources
- ▶ Tracks 10M+ startups globally
- ▶ 140,000+ data points for M&A
- ▶ ML pattern recognition
- ▶ Deal team workflow integration

Proven Results

15+ investments fully sourced by AI

Notable AI-sourced deals:

- Peakon (acquired by Workday)
- AnyDesk
- CodeSandbox
- Netlify

32 portfolio companies now have access to Motherbrain tools

"Motherbrain is designed as a system where AI amplifies human expertise. Amateurs using software outcompeted grand masters too rooted in their own biases."

05

AI Use Cases Across Investment Lifecycle

AI Transforms Every Stage of Investment



Key Insight: *The highest ROI comes from automating due diligence — not just sourcing. When you can run scenarios quicker, you can run more of them.*

195X

Companies ID'd by AI vs. 1
analyst

15-30%

Cost reduction in targeted
processes

4 hrs

Financial models vs. weeks
manually

64%

PE firms integrate AI in
portfolio ops

AI for Deal Sourcing

Finding the Needle in the Haystack — At Scale



Pattern Recognition

AI analyzes market data to identify high-growth targets



NLP-Powered Discovery

Scans news, filings, social media for opportunities



Predictive Scoring

ML models predict company success likelihood



Real-Time Monitoring

Continuous tracking of market signals

Leading Deal Sourcing Tools

PitchBook

Comprehensive deal database

Grata

Middle-market AI intelligence

CB Insights

Market forecasting

Inven

23M+ companies globally

Capix

PE firm discovery platform

AlphaSense

Document NLP analysis

AI for Due Diligence

From Weeks to Hours: The Due Diligence Revolution

Traditional Process

- Weeks of manual document review
- Hundreds of pages per deal
- High risk of human error
- Multiple team bottlenecks
- Limited scenario testing

AI-Powered Process

- Hours for comprehensive analysis
- RAG-powered document synthesis
- Automated anomaly detection
- Parallel processing capability
- Unlimited scenario modeling

"If you can run scenarios quicker, you can run more of them. You're not limited by time anymore."

— Uttam Kumaran, CEO of Brainforge

AI Due Diligence Capabilities

Financial Audits: AI reviews statements for discrepancies and fraud

Legal Review: ML evaluates contracts, compliance, filings

Reputational: Monitors news and social for perception risks

CIM Review: Automated extraction of investment memorandums

AI for Portfolio Management & Value Creation

From Reactive Reporting to Proactive Intelligence

Real-Time KPI Monitoring

AI dashboards with automated anomaly detection

EBITDA Improvement

15-30% cost reduction via AI efficiencies

Fraud Detection

Dynamic risk scoring and anomaly detection

Standardized Reporting

Automated reconciliation across portfolios

Growth Opportunity ID

AI surfaces untapped markets

Investor Relations

Personalized LP communications

Blackstone has deployed AI across 70+ portfolio companies with 50+ data science professionals, developing solutions for pricing, staffing, and customer engagement.

06

AI Tools for VC & PE Professionals

Essential AI Tools by Function

Deal Sourcing & Intelligence

PitchBook • CB Insights • Grata • Inven • Capix • AlphaSense • Quid

Due Diligence & Analysis

Evisort • Brainforge • V7 Labs • Kira Systems • Glean • Luminance

Portfolio Management

ZBrain • Nosible • 73 Strings • iLEVEL • Chronograph • Allvue

Communication & Productivity

InboxPro • SlideGPT • Grammarly • Notion AI • Fireflies • Otter.ai

85%

VCs use AI for daily tasks

82%

Use AI for deal sourcing

95%

PE firms use AI in decisions

50%+

Time saved on DD

07

Vertical AI: Sector-Specific Opportunities

Healthcare AI: A Vertical Goldmine

\$23B in VC investment (2024) — 30% directed to AI-focused startups

Company	Latest Funding	Valuation	Focus Area
Abridge	\$316M Series E	\$5.3B	Medical conversation AI
Ambience Healthcare	\$243M Series C	TBD	AI healthcare operating system
OpenEvidence	\$410M total	\$6B	Clinician AI search
Hippocratic AI	\$126M Series C	\$3.5B	Healthcare AI agents
Tennr	\$101M Series C	\$605M	Medical records automation

Key Healthcare AI Applications

Diagnostics AI-powered imaging	Drug Discovery AI compound ID	Clinical Workflows Documentation automation
Patient Comm AI-powered triage	Medical Records Automated extraction	Personalized Med Treatment optimization

Enterprise AI: The B2B Opportunity

\$8B+ invested in enterprise AI software (2024)

Segment	Key Players	Opportunity
Enterprise Search	Glean (\$7.25B), Perplexity (\$18B)	Knowledge discovery
Developer Tools	Cursor/Anysphere (\$29B), GitHub Copilot	AI coding assistants
Sales & GTM	Gong, Apollo, Outreach	Revenue intelligence
Customer Service	Zendesk AI, Intercom, EliseAI (\$2.2B)	Automated support
Legal Tech	Harvey, EvenUp (\$2B+), Ironclad	Contract analysis

VCs predict 2026 as the year enterprises see meaningful ROI from AI — after three years of experimentation.
95% of enterprises weren't getting meaningful returns in 2025.

Fintech & Financial Services AI

Ramp valued at \$22.5B — AI-driven expense management leads

Application Area	Key Players	AI Opportunity
Expense Management	Ramp (\$22.5B), Brex, Divvy	Auto categorization, spend analysis
Lending & Credit	Upstart, Kabbage, Figure	AI underwriting, risk assessment
Trading	Alpaca, QuantConnect, Kensho	Algorithmic trading
Compliance	Chainalysis, ComplyAdvantage	AML/KYC automation
Wealth Mgmt	Betterment, Wealthfront, Titan	Robo-advisory

\$22.5B

Ramp Valuation

\$45B+

GenAI in Fintech (2024)

30%

Compliance Cost Cut

\$1.3T

Projected Market 2032

Defense Tech AI: Geopolitical Tailwinds

Geopolitical tensions create sustained investment momentum

US Defense Tech Leaders

Anduril — \$2.5B round, \$14B valuation

AI-powered defense systems, autonomous vehicles

Scale AI — \$14.3B from Meta (49% stake)

Data labeling for defense AI, government contracts

Palantir — Public, \$60B+ market cap

Government AI platforms, battlefield intelligence

European Defense Tech

Helsing — \$683M (Munich)

AI for European defense, autonomous systems

Tekever — \$500M (Portugal)

Drone surveillance, maritime patrol

Market Context: Defense has become one of the most dynamic AI sub-sectors in 2025.

08

Regulatory Landscape & Compliance

EU AI Act: The Global Compliance Benchmark

The first comprehensive AI regulatory framework worldwide — entered force August 2024

Feb 2025	Aug 2025	Aug 2026	Dec 2027
Prohibited AI practices banned; AI literacy obligations begin	GPAI model rules effective; Code of Practice published	High-risk AI systems must comply (financial sector)	Extended deadline (proposed) for high-risk systems

Penalties for Non-Compliance

Prohibited practices: €35M or 7% global turnover

Other infringements: €15M or 3% turnover

Incorrect information: €7.5M or 1% turnover

Key Requirements for PE/VC

- AI inventory & risk classification
- Technical & transparency docs
- AI literacy training
- Vendor compliance due diligence

US AI Regulation: State-by-State Patchwork

Federal pro-innovation stance with aggressive state-level enforcement

Federal Level

America's AI Action Plan (July 2025)

Pro-growth, innovation-driven strategy

SEC AI Task Force (Aug 2025)

Chief AI Officer appointed; 2025 AI Compliance Plan

FTC Inquiry (Sept 2025)

Investigating 7 consumer AI chatbots

State Level Enforcement

California AB 489 (2025)

Prohibits AI from implying healthcare licensure

Pennsylvania (May 2025)

AI property management company penalized

Massachusetts (July 2025)

\$2.5M fine for AI lending bias

State AGs stepped up AI enforcement in 2025 — expect continued scrutiny in 2026. Companies must balance federal innovation-friendly stance with aggressive state-level consumer protection.

09

Investment Thesis & Opportunities

AI Investment Thesis: Where Smart Money Flows

Hot Investment Categories

Category	Investment Rationale	Examples
Infrastructure & Compute	Fundamental AI enabler	Data centers, GPU cloud, inference
Vertical AI Applications	Clear path to revenue	Healthcare, legal, fintech solutions
Enterprise AI Agents	Workflow automation ROI	Sales, customer service, HR automation
AI Security & Governance	Regulatory tailwind	Model monitoring, bias detection
AI-Native Infrastructure	Developer adoption	MLOps, vector databases

Key Metric for AI Series A: \$1M ARR minimum + 50%+ gross margins after compute costs. Proven traction and AI business fundamentals remain priorities.

AI Valuation Premium: What Investors Pay

Late-stage AI companies command a 100% premium over non-AI peers at Series C

Median Pre-Money Valuation at Series C

Non-AI Startups	\$150M
AI Startups	\$300M+

What Drives AI Valuations?

 ARR Growth Velocity 3x YoY growth preferred	 Gross Margin Profile 50%+ margins after compute
 Model/Data Moat Defensibility via proprietary data	 Enterprise Traction Proven customer adoption

AI Investment Risk Factors

Critical considerations for VC and PE investors

Concentration Risk	Top 3 foundation models control majority of AI investment; winner-take-most dynamics
Regulatory Uncertainty	EU AI Act, state laws, and evolving federal stance create compliance complexity
Compute Cost Economics	Margin compression from compute costs; infrastructure spend outpacing revenue
Talent Concentration	AI expertise heavily clustered; 18% Stanford, 10% CMU, 6% MIT founders
Model Commoditization	Open-source models eroding proprietary advantages; differentiation challenges
Enterprise Adoption Lag	95% of enterprises not seeing meaningful AI ROI (MIT 2025); long sales cycles

10

The Future: 2026 and Beyond

2026 Outlook: AI Investment Predictions

1 Enterprise AI Adoption Inflection

CIOs push back on vendor sprawl; consolidation around proven solutions; meaningful ROI finally realized

2 AI IPO Wave

OpenAI, Anthropic, Databricks expected to go public; validation of AI company valuations

3 Agentic AI Dominance

Shift from assistants to autonomous agents; \$155B market by 2030 projection

4 Regulatory Maturation

EU AI Act high-risk rules effective; US federal framework development; global harmonization

5 Vertical AI Winners Emerge

Healthcare, legal, fintech verticals see clear category leaders with defensible moats

AI: The Third Value Lever in Private Equity

Beyond Financial Engineering and Operational Excellence

Financial Engineering

Traditional

Capital structure optimization, leverage, financial arbitrage, deal structuring

Operational Excellence

2000s-2010s

Efficiency gains, cost reduction, margin improvement, process optimization

AI & Data Intelligence

2020s+

Autonomous analysis, predictive insights, real-time optimization, data-driven decisions

"Two-thirds of PE clients had implemented at least one AI initiative in their portfolio by 2024. AI is no longer optional — it's a competitive necessity."

— EY Private Equity Report 2025

Key Takeaways for Investors

1 AI Dominates VC

53% of global funding; \$490B projected for 2025

2 Concentration is Real

Top 3 foundation models approaching \$1T combined value

3 PE Firms Are All-In

95% use AI in decisions; leaders build proprietary platforms

4 Vertical AI Wins

Healthcare, enterprise, fintech see clearest paths to ROI

5 Regulatory Complexity Rising

EU AI Act, state laws create compliance requirements

6 Due Diligence ROI Highest

Transform weeks to hours; run unlimited scenarios

7

2026 is the Inflection Point

Enterprise adoption, IPO wave, and market consolidation expected

Strategic Imperatives for VC & PE Professionals

Action Items for 2026 and Beyond

Build AI Competency Develop internal data science capabilities; train investment teams on AI evaluation frameworks

Evaluate AI Platforms Consider tools like PitchBook, Grata, CB Insights for deal sourcing; Motherbrain-style platforms for larger firms

Update Due Diligence Incorporate AI compliance assessment; evaluate target company AI governance and regulatory readiness

Track Regulatory Developments Monitor EU AI Act implementation; prepare for high-risk system requirements by August 2026

Identify Vertical Opportunities Focus on healthcare, enterprise, and fintech AI with clear paths to profitability and defensible moats

Embrace AI in Portfolio Ops Deploy AI across portfolio companies for real-time monitoring, KPI tracking, and value creation

"The window for advantage is narrowing as AI capabilities spread across the industry. Firms that act decisively now will define the next decade of returns."

Sources & References

Market Data & Research

- WIPO Global Innovation Index 2025
- PitchBook Q3 2025 Venture Monitor
- CB Insights State of AI Report 2025
- Crunchbase AI Funding Analysis
- McKinsey Global AI Survey
- EY Private Equity AI Report 2025

Regulatory Sources

- European Commission AI Act Documentation
- Morgan Lewis AI Regulatory Update 2025
- SEC AI Task Force Announcements
- State AG Enforcement Actions

Company & Investment Data

- TechCrunch Funding Announcements
- Bloomberg Technology Coverage
- The Information AI Coverage
- Company Press Releases
- SEC Filings (where available)

Industry Analysis

- a16z AI Market Commentary
- Sequoia Capital AI Playbook
- EQT Motherbrain Case Studies
- Blackstone AI Portfolio Reports

All data current as of February 2026. Market conditions and valuations subject to change. This presentation is for informational purposes only and does not constitute investment advice.

Thank You

John J. Shay IV

Global Gauntlet AI

M&A Executive | AI Strategist | \$4B+ Transactions

bit.ly/jjshay

February 2026