Venture Investing in 2025: What We Still Do Know

The 2025 Autumn Governance Series: A Comprehensive Literature Review with C
Governance Implications
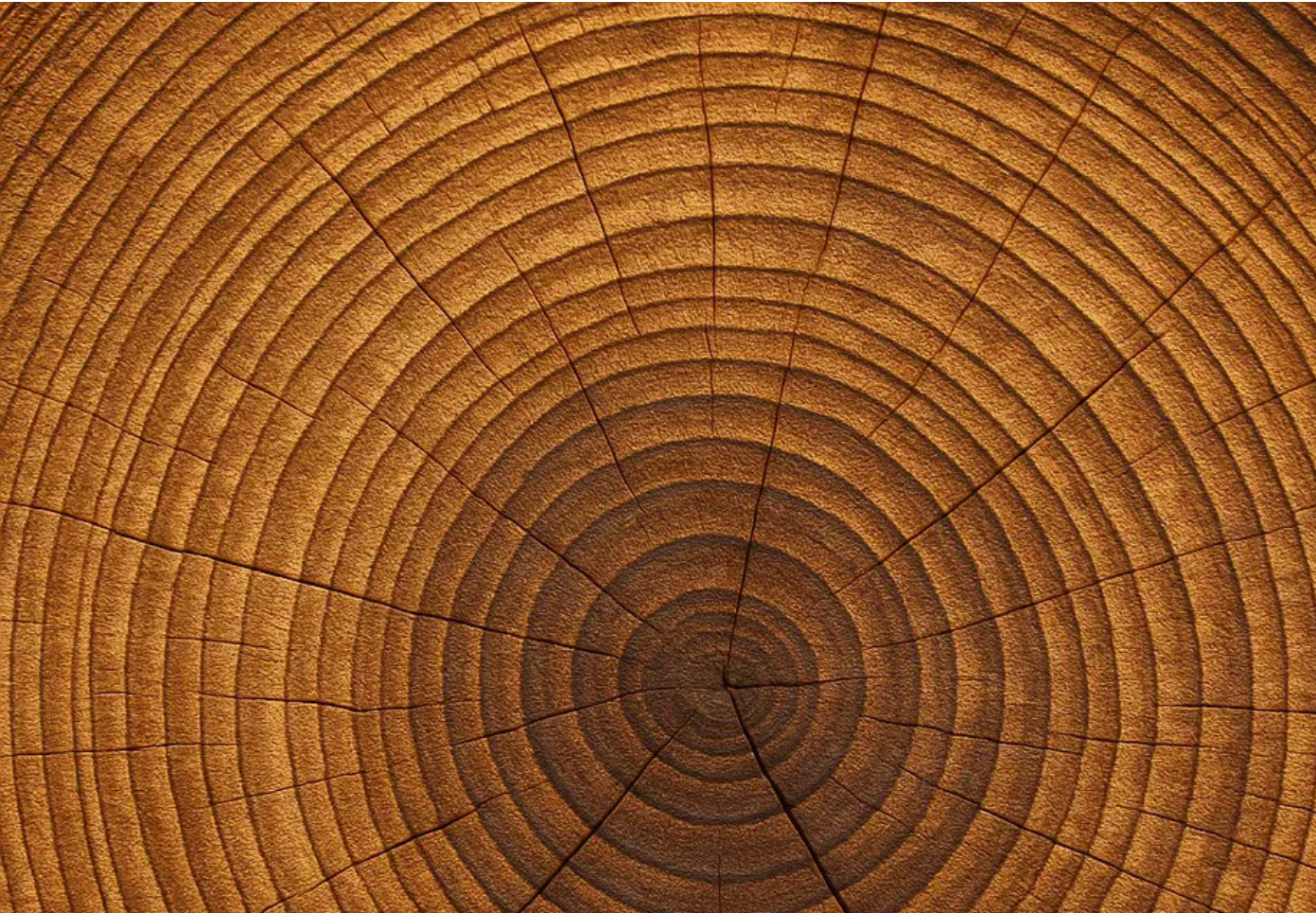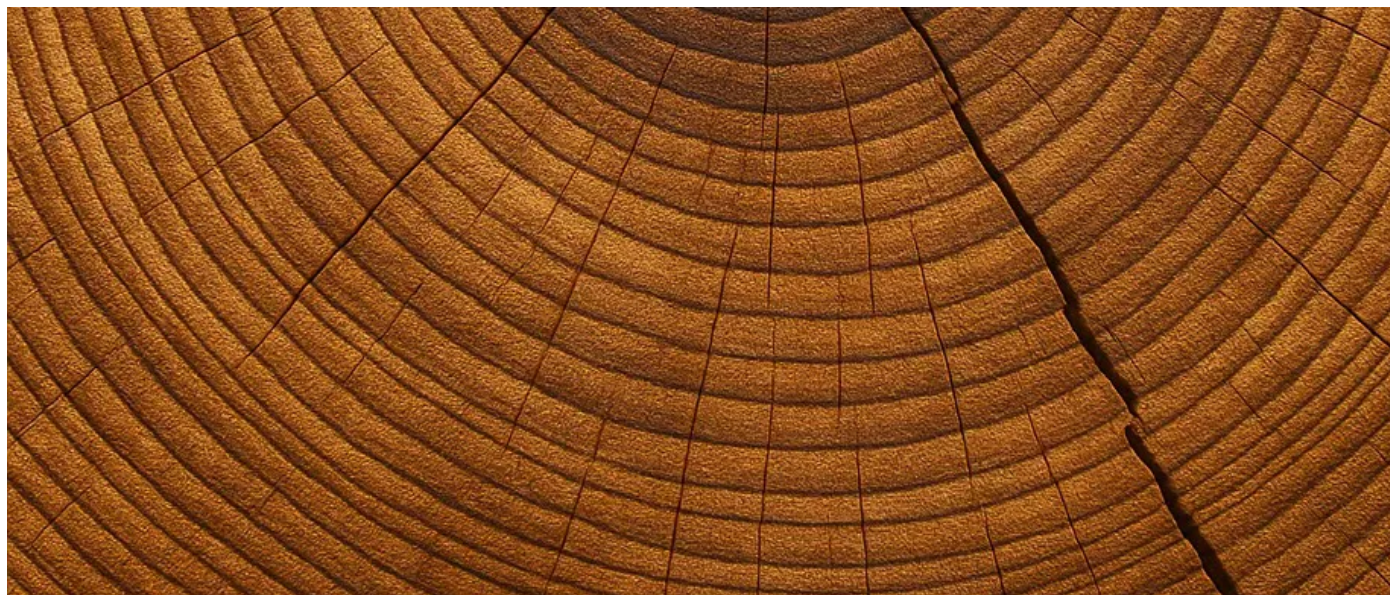
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OCT 02, 2025

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Artificial intelligence has reshaped the venture capital landscape at an unprecedented pace. In 2024, AI startups captured nearly half of all U.S. venture funding (46.4%) and 37% of corporate venture capital (CVC)-ba investment, while Generative AI alone absorbed $45 billion globally. Th carried into 2025, with U.S. venture activity in the first quarter reachir billion across nearly 4,000 deals—more than double the year before.

At the same time, research on venture capital is advancing. Benchmark as **VCBench** demonstrate that large language models (LLMs) can now outperform human experts and even tier-1 firms in predicting founder success. GPT-4o, for example, achieved ~3.2× the baseline precision ra while predictive simulations using Series B/C data showed up to 14× ca growth compared to naïve baselines. These results suggest that algorit have begun to rival human judgment in the earliest stages of screening

Yet the most important mechanics of venture investing remain poorly understood. We still do not know how AI-specific term sheets are stru how anti-dilution protections play out in practice, how venture debt ir

with equity financing, or how optimal exit timing should be engineered compute-intensive businesses. Nor do we fully understand which CVC governance models succeed, how long AI sub-sectors require before achieving commercial traction, or how policy scaffolding across jurisdi shapes outcomes.

For boards, LPs, and GPs, these gaps are not trivial—they are governan spots. Where fiduciaries lack transparency into capital structures and strategies, their duty of care cannot be fulfilled. Conversely, investors deliberately study these unknowns can extract excess returns, or **alph** inefficiencies that others misprice.

Closing these gaps is simultaneously a fiduciary obligation and a com advantage—a convergence that defines venture governance in the AI

Data Sources and Methodology

Figures on funding allocations, deal counts, and CVC activity are drawr primarily from **PitchBook (2024–2025)** and **CB Insights (State of CVC 2** Data on LLM-based screening and founder precision rates are sourced **Chen et al. (2024, VCBench, arXiv:2509.14448)**, which evaluated ~9,000 anonymized Series A–C deals from 2015–2023. Startup success definiti IPO or acquisition above $500 million or cumulative funding above $5(million—are consistent with **Potanin et al. (2023, Startup Success Prec arXiv:2309.15552)**.

The "market baseline" precision figure of 1.9% represents the historica proportion of successful founders in early-stage cohorts. Limitations r Crunchbase and PitchBook introduce survivorship and disclosure bias

censoring penalizes younger companies, and term-sheet-level data remain confidential.

Market Structure and Investment Trends

AI's rise is striking. Ten years ago, AI companies captured less than 10% of venture funding. By 2024, that figure had risen to nearly half in the United States, with Generative AI doubling its global inflows to $45 billion.

Empirical research complicates the narrative, however. When controlling for investor experience, stage, and geography, AI startups on average receive **smaller deal sizes** than their non-AI counterparts. The paradox is explained by stratification: Silicon Valley funds deployed a median $12 million in AI Series A rounds, 2.3× the $5.2 million median from emerging hubs.

From a governance perspective, this underscores why fiduciaries cannot rely on headline figures. Boards and LPs need reporting that disaggregates where and how AI capital is being deployed, so they can assess whether allocations are hype-driven or strategically disciplined.

Investment Stages and Deal Dynamics

Early-stage funding dominates the AI landscape. In 2024, 65% of CVC-backed deals were at the seed or Series A stage, the highest level in more than a decade.

At later stages, predictive models are beginning to reshape selection. Strategies using deep learning on Series B and C cohorts achieved simulated capital growth up to 14× over baseline. This figure was gross of fees, modelled

eight-year horizon, and should be interpreted as a backtest rather than forward guarantee. Even with those caveats, it highlights the lift provi predictive analytics.

Yet despite progress in selection, the mechanics of round capitalizatio remain opaque. We still lack clarity on liquidation preference structure participation rights, and valuation practices for AI-heavy companies w compute costs and uncertain monetization paths. For boards, this abse transparency raises governance concerns: approving financing withou understanding ownership and payout dynamics risks fiduciary failure.

Screening and Selection

Human investors remain inefficient at spotting winners. Market-wide, 1.9% of early-stage founders ultimately meet "success" thresholds. Tie improve that to ~5.6%, but still miss most winners. By contrast, GPT-4 achieved a precision rate of 29% in VCBench, and Gemini-2.5-Flash ac 70% recall.

For governance, this implies that boards should expect funds to explai selection processes using empirical evidence, not just gut instinct. Committees can no longer defend "pattern recognition" alone when su methods exist.

What We Still Do Not Know

Round Capitalization Mechanics

Very little empirical work has been done on the mechanics of capitaliz

rounds in AI deals. We lack data on valuation methodologies, liquidatic preferences, and participation rights.

Governance Risk: Boards and LPs often approve financings without se dilution pathways and payout structures.

Alpha Opportunity: Proprietary term-sheet datasets could generate **Structural Alpha** by revealing pricing inefficiencies.

Anti-Dilution Protection

Anti-dilution clauses remain undocumented in AI contexts. We do not whether full-ratchet or weighted-average formulas dominate, or how terms influence founder retention.

Governance Risk: Poorly designed clauses can destroy founder incenti **Alpha Opportunity:** Modelling dilution-adjusted IRR offers **Structural** while boards should monitor dilution per round quarterly and keep it 15–20% at early stages.

Venture Debt and the Equity–Debt Interface

AI startups now consume nearly one-third of venture debt dollars. Yet know little about how lenders underwrite loans or how covenants shar equity rounds.

Governance Risk: Boards may approve debt packages that constrain fl or accelerate collapse.

Alpha Opportunity: Aligning covenants with R&D milestones creates **Structural Alpha**. Debt-to-equity ratios should remain ≤30%, based or Kaplan–Strömberg's findings that default risk rises sharply above this l

Exit Timing in AI Markets

AI startups are staying private longer. The median time-to-exit is ~9.5 compared to ~7 years for non-AI ventures. OpenAI, founded in 2015, re private ten years later.

Figure 2: Exit Timing — AI vs Non-AI Ventures

AI ventures stay private 35% longer than non-AI peers, complicating DP realization and fund reporting. Source: PitchBook venture exit dataset. Methodology: Median exit age across 2,000 U.S. companies (2010–2024). September 2025.

Governance Risk: Delayed exits impair DPI and distort fund reporting.
Alpha Opportunity: Exits engineered around compute cycles (GPU ref

every ~2 years) and regulatory milestones create **Timing Alpha**.

Corporate Venture Capital

CVCs dominate AI funding, but governance structures are uneven. Mar
due to parent politics or over-selectivity.

Figure 3: CVC Governance — Success vs Failure Models

*Successful CVCs balance autonomy with accountability through indepen
committees and dual-KPI reporting. Source: CB Insights 2024 CVC repor
author synthesis. Methodology: Comparison of 25 major CVC programs.
October 2025.*

By contrast, successful CVCs such as **Salesforce Ventures** and **Intel Ca** maintain independent committees, report on both IRR and ecosystem adoption, and reserve minority stakes to avoid conflicts.

Governance Risk: Parent capture wastes capital and slows decision-m
Alpha Opportunity: Independent investors can profit from **Arbitrage A** co-investing where corporates misprice risk.

Horizon of Disappointment

The eight-year success horizon is poorly calibrated for AI. Longer R&D mean that premature exits or abandonments destroy potential value.

Governance Risk: Misallocated reserves.
Alpha Opportunity: Recalibrating by sub-sector supports **Timing Alph**

Geography and Policy Scaffolding

Research linking policy scaffolding to venture outcomes is sparse. Asia decline in 2024 contrasts with Japan's resilience, but few causal studie

Governance Risk: Overexposure to fragile jurisdictions.
Alpha Opportunity: Funds that integrate policy analysis capture **Arbit** **Alpha**.

Corporate Governance Implications

The gaps above translate into governance failures. Boards often appro financings blind to dilution, debt covenants, or exit strategies. This undermines fiduciary oversight.

- **Structural Oversight:** Monitor contracts and dilution quarterly.

- **Timing Oversight:** Audit exit readiness semi-annually.

- **Arbitrage Oversight:** Evaluate CVC mandates and policy scaffoldin
  annually.

Governance dashboards should track debt-equity ratios, liquidation pi
exit readiness.

Counterarguments and Limitations

Not all gaps can or should be closed. Information asymmetry can rewa
conviction investors and deter herd behaviour. Overly rigid governanc
stifle founder agility. Term-sheet opacity persists partly to preserve
competitive dynamics. Recognizing these limits avoids overreach.

Practitioner Voice

Failures illustrate governance risk. A Series B AI startup saw its founde
wiped out by a full-ratchet clause, leading to collapse. Another faced
accelerated debt repayment just before a major contract, forcing a dist
sale.

Yet governance discipline can also pay off. A Series C robotics compan
negotiated covenant waivers tied to compute spend milestones, preser
flexibility to delay its IPO until markets improved. The company ultima
exited at a 4.2× multiple.

LP questions to ask GPs:

- How do you benchmark dilution terms across AI deals?

- What ceilings are in place on debt-to-equity ratios?

- How do you align exits with compute and policy cycles?

Sidebar: Venture Governance Suite

Tracking dilution across rounds, modelling debt covenant scenarios, a
benchmarking CVC governance structures requires systematic data an
built the Venture Governance GPT Suite to help LPs and boards opera
these oversight mechanisms. Link here.

Conclusions and Research Roadmap

Integrated Takeaway

Venture investing in 2025 is predictively sophisticated but structurally
opaque. Screening models identify winners more efficiently than huma
structuring, governance, and exits elude systematic study. For investor

inefficiency creates opportunity. For fiduciaries, blind spots create risk

Structural Alpha lies in mastering contracts, dilution, and debt.
Timing Alpha lies in engineering exits and calibrating horizons.
Arbitrage Alpha lies in exploiting CVC missteps and regulatory asymm

Boards and LPs that embed structured governance oversight into thes
domains will not only fulfill their duty of care but also capture a durabl
investment advantage.

Agenda for Researchers

The critique of venture research should not end with diagnosis. Future
could advance in three directions:

1. **Term-Sheet Corpus Analysis:** Build datasets of liquidation prefs, a
   dilution protections, and participation rights.

2. **Longitudinal Covenant Study:** Track venture debt covenants acros
   financing cycles.

3. **Policy Scaffolding Econometrics**: Use quasi-experiments (EU AI A
   export controls, China's capital policies) to assess causal impacts.

Feasibility Note: Executing this agenda will require addressing data ac
constraints. Term-sheet corpus analysis may necessitate regulatory sa
harbours or industry consortia willing to anonymize proprietary data.
Longitudinal covenant studies will likely require cooperation from ven
lenders and LPs to release contractual data under confidentiality fram
Policy scaffolding econometrics could leverage Freedom of Informatio
(FOIA) requests or partnerships with multilateral institutions that trac

subsidies and regulatory interventions across jurisdictions. Without su
enablers, the research agenda risks remaining aspirational.

The insights from the Venture Investing article resonate directly with
governance frameworks I explore in *Shaping the Next Decade.* Both arg
boards and committees must move beyond pedigree and static benchr
learning to underwrite conviction edges while managing new risks int
by AI, regulation, and systemic concentration. What begins as a framev
today's investment committees—scoring conviction and networks—be
tomorrow's blueprint for fiduciary governance in an era where human
algorithmic judgment, and long-horizon policy priorities intersect. Ava
for purchase here.

Research and Audio Supported by AI Systems

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