

How Do We Attribute Performance to Artificial Intelligence?

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A portfolio company exits at 12.5x EBITDA—25% above peer multiples. credits AI-enhanced operational improvements. The LP's audit firm as prove it.

This scene will play out hundreds of times in the next 24 months. Most will fail to provide credible answers because no standardized AI attribution methodology exists.

Performance attribution has always been central to private equity. Limited Partners (LPs) want to know exactly where their returns came from. General Partners (GPs) need to prove that value creation resulted not merely from favourable market winds, but from genuine operational improvements and skilled execution.

Yet the emergence of artificial intelligence (AI) has upended this logic. AI is no longer confined to back-office automation; it is embedded in sourcing, portfolio monitoring, interim valuations, exit timing, and even tax strategy. The question becomes unavoidable: **how much of today's performance can be credibly attributed to AI?**

This is not just a technical puzzle. It is a fiduciary governance problem demanding new standards of measurement, disclosure, and intellectual honesty.

Defining Performance Attribution

Attribution in finance means decomposing investment returns into the to understand *why* a portfolio performed the way it did.

In private equity, the classic three-pillar framework explains total value creation as a combination of:

- **EBITDA Growth** – Operational improvements such as revenue expansion or cost reduction.
- **Multiple Expansion** – The increase in valuation multiples between acquisition and exit.
- **Debt Paydown** – The impact of deleveraging on equity value.

Fees and carried interest reduce the total but do not alter the structural framework, formalized in the mid-2000s, has served as a lingua franca between GPs and LPs.

But when AI enters the picture, the framework breaks down. Attribution evolves beyond the three pillars to reflect a new contributor: the machine.

Defining AI Alpha

In traditional finance, “alpha” is the excess return relative to a benchmark representing the manager’s skill. “Beta” is the return derived from market movements.

exposure.

By analogy, **AI Alpha** is the portion of investment returns directly attributed to AI-driven decisions, after controlling for human expertise, market beta, and random variation.

For example, if an AI system recommends delaying an exit by six months and the delay captures an additional 20% valuation uplift, that gain could be counted as AI Alpha. The challenge is separating genuine machine skill from coincidental market timing or human judgment layered on top.

The Five Research Gaps in AI Attribution

The difficulty of measuring AI Alpha stems from five interlocking gaps in today's practice:

- **No Standard Methodology.** Traditional LBO attribution has formulas, but none does not.
- **No Alpha/Beta Separation.** We cannot yet distinguish between machine-driven skill and simple market exposure.
- **No Tax Integration.** LPs in different domiciles experience radically different after-tax outcomes, even from the same AI decision.
- **No Proven Returns.** Despite large AI investments, most firms cannot demonstrate measurable outperformance.
- **No Regulatory Standards.** Current industry templates and advertising rules do not require AI attribution disclosure.

The implication is stark: private equity AI attribution lags 15–20 years behind

public equity attribution standards and even trails traditional private equity benchmarks by a decade.

Extending the Attribution Framework

To close these gaps, attribution must be expanded into a **four-pillar framework**.

$$EBITDA_{Growth} = AI_Alpha + Human_Alpha + Market_Beta + \epsilon$$

Here:

- **AI Alpha** is incremental EBITDA linked to AI-driven recommendations
- **Human Alpha** is EBITDA tied to human decisions and oversight.
- **Market Beta** is performance correlated with market or sector trends
- ϵ captures idiosyncratic or unexplained residuals.

This formula does not resolve the problem of separation, but it clarifies categories and allows boards to begin measuring instead of guessing.

Sidebar: AI Performance Attribution in PE Governance

AI Attribution Governance GPT helps Investment Committees and Boards break down fund performance into AI Alpha, Human Alpha, and Market Beta. It recommends governance protocols, produces LP-specific reports, and washes risks—turning attribution into a trust-building advantage. [Link](#)

Working Example: The 64% Illusion

Consider a portfolio company whose EBITDA rises by \$14 million. The contribution margin log shows:

- AI pricing optimization: +\$6M
- Human override on restructuring: +\$3M
- Human geographic expansion: +\$2M
- AI-driven timing of supply chain automation: +\$3M

On first inspection, AI accounts for \$9M, or 64% of EBITDA growth.

But once market beta is adjusted—peers grew 18% annually while this company grew 22%—the outperformance narrows to 4%. The recalculation

Alpha drops to 18% of EBITDA growth.

The lesson: preliminary attribution almost always overstates AI's role. Without a rigorous adjustment, AI Alpha risks being an illusion.

The Valuation Feedback Loop

Attribution becomes even murkier when AI valuations influence behavior. If an AI system marks a company at 12x EBITDA rather than 10x, a GP may allocate more board seats and operating partners to that company. With more resources, performance improves, and the company exits at 12.5x.

But what actually happened? Did AI predict value, or did its higher mark create value by triggering reallocation? This is the **valuation-behavior feedback loop**.

Governance tools exist to break the loop:

- **Blind decision-making**, where resource allocation occurs before AI predictions are revealed.
- **Dual attribution reporting**, separating decision-driven from valuation-driven outcomes.
- **Valuation governance committees** are empowered to override AI predictions if feedback effects are detected.

Without these guardrails, attribution devolves into circular logic.

Tax-Adjusted Attribution: Whose Returns Count?

Attribution also varies across LPs. Identical AI-driven decisions that produce a gross 3.2x multiple can result in very different net outcomes:

- US tax-exempt pension: 3.2x (no withholding).
- US taxable corporate: 2.7x (21% federal and state taxes).
- Non-US taxable: 2.1x (withholding plus home-country tax).

Should AI Alpha be measured pre-tax, to evaluate the system's raw contribution, or after-tax, to represent the LP's real experience?

The recommended solution is dual reporting: pre-tax AI performance for internal benchmarking, and after-tax LP value for fundraising and investor relations. This duality ensures both fairness and accuracy.

Transparency as Strategy

AI attribution is not just a measurement exercise. It is a **trust exercise** in an environment where investors are skeptical and regulators are watchful. Transparency is the differentiator.

“In an industry where AI washing is rampant, intellectual honesty about uncertainty becomes more persuasive than inflated claims we cannot defend.”

What Transparency Means

Transparency requires five practices:

- Clear explanation of attribution methodology.
- Disclosure of limitations and uncertainty.

- Reporting of ranges, not false precision.
- Third-party audits and academic peer review.
- LP-specific, tax-adjusted dashboards.

Why Transparency Wins

Firms that disclose rigorously enjoy tangible advantages:

- **LP interest premium**
- **Higher re-up likelihood**
- **Decreased regulatory scrutiny risk**
- **Talent attraction advantage**

For a \$500M Fund V fundraise, this transparency premium could translate into millions of additional commitments from sophisticated LPs who value measurement rigour over performance marketing.

Transparency is not philanthropy. It is a competitive strategy.

Intellectual Honesty as Marketing

Sophisticated LPs know the empirical evidence is thin. What they seek is humility and rigour. Firms that admit uncertainty—saying “AI contributed 9% of returns, midpoint 6.5%, with high uncertainty”—gain credibility.

By contrast, firms that declare “AI delivered 15% outperformance” with caveats invite distrust. In private equity, intellectual honesty is market

Transparency as Governance Capital

Transparency itself becomes an asset, like culture or reputation. It strengthens fundraising, reduces regulatory risk, attracts talent, and differentiates firms in a crowded field. More importantly, it ensures that five years of empirical data finally arrive, only transparent firms will have logs and records to credibly prove AI Alpha.

What Investment Committees Should Consider This Quarter

Attribution to AI is still a young field, but committees that act now can build both credibility and a competitive advantage. Four concrete steps stand out as priorities.

Establish Decision-Logging Protocols

Every material portfolio decision should be logged with a clear tag: **AI-recommended, human-initiated, or hybrid.**

This might sound administrative, but it is foundational. Without proven attribution becomes impossible. If a deal's success is later credited to a few investors and auditors must be able to see exactly how the decision was recorded at the time. Did the GP act directly on an AI recommendation or did human overrule the machine? Or was the decision a mix of both?

Decision-logging is not about adding bureaucracy. It is about creating a defensible trail. In practice, this means building simple digital forms or integrating logs into existing portfolio management systems. The log should capture the details of the decision, the source of recommendation, and any justification for overrides. Over time, this dataset becomes the raw material for attribution.

analysis and the safeguard against retrospective “AI washing.”

Form a Valuation Governance Committee

One of the biggest risks is the valuation-behaviour feedback loop, where marks change human decisions, which then validate the AI. To counter this, committees should create a dedicated Valuation Governance Committee—separate from the operations or investment team.

This body reviews interim valuations, challenges AI-driven marks, and ensures they do not unduly shape resource allocation. Its independence is crucial. Separating valuation oversight from operations, firms reduce the risk that generated multiples are treated as marching orders.

The Valuation Governance Committee should also oversee dual attribution reporting: one report tracing outcomes to logged decisions, another accounting for valuation-driven behaviour. This dual view helps LPs see whether AI is shaping value creation or merely predicting it.

Develop an LP Tax Profile Database

Attribution that stops at pre-tax fund-level outcomes misses the reality LPs care most about: their after-tax experience. A US pension fund, a Canadian endowment, and a European corporate investor can walk away from the same AI-enhanced decision with very different net returns.

Investment committees should instruct teams to build an LP tax profile database. At a minimum, this should capture each investor's domicile, status (taxable, exempt, sovereign), and treaty benefits. With this data, attribution can be adjusted to reflect both the gross impact of AI and the

impact per LP category.

Doing so creates two layers of trust. First, it demonstrates methodological rigour: the committee is not reporting generic averages but tailoring attribution to actual investor outcomes. Second, it strengthens fundraise LPs see their specific net AI Alpha, which makes the reporting directly relevant to their boards and beneficiaries.

Commission a Third-Party Methodology Audit

Finally, before raising the next fund, committees should commission a party audit of attribution methods.

This does not mean hiring consultants to endorse inflated claims. It means engaging auditors, academics, or independent experts to review whether decision logs, valuation governance, and tax adjustments are applied consistently. A methodology audit signals seriousness to LPs and regulators alike. It shows that attribution is not a marketing exercise but a governance discipline.

Importantly, audits also inoculate firms against regulatory scrutiny. In an era where agencies are ramping up oversight of performance advertising, validated methodology reduces the risk that bold AI claims are later deemed misleading.

Why These Steps Matter

Each of these four actions is feasible within a quarter. None requires new infrastructure. Yet together, they lay the foundation for credible attribution.

- Decision logs create the data backbone.
- Valuation committees ensure independence of judgment.
- LP tax databases align attribution with investor reality.
- Audits deliver external validation.

For investment committees, the message is clear: AI performance attribution need not be delegated to future academic research. It is a fiduciary responsibility to act sooner than later.

Governance Before Evidence

The central lesson is clear: **build governance now, prove attribution later**

If the industry waits for 5–10 years of data, it will be too late to reconstruct decision logs, separate valuation feedback effects, or model tax overlay. Firms that commit to transparency today will be able to defend their AI performance tomorrow.

We do not yet claim to have proven AI Alpha. What we claim is that we are building the only frameworks capable of proving it when the evidence matures. That commitment to intellectual honesty, more than inflated performance claims, will define the winners in the AI era of private equity.

This analysis draws directly on the broader frameworks in my forthcoming book, *Shaping the Next Decade: Governance, Sustainability, and Artificial Intelligence, 2026–2036*. The book expands on themes introduced here: temporal windows, regulatory convergence, and cultural choices in

governance shape long-term competitive positioning. If this article reflects the questions your board or investment committee is grappling with, it offers deeper tools, case studies, and practical checklists designed to turn governance into a lever for strategy.

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