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How Private Equity Firms Are Creating Value with AI

Given their mandate to create value in a relatively short time frame, PE firms offer a unique perspective on how to drive innovation in this area.

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Private equity (PE) firms are particularly interested in rapid value realization from investments in portfolio companies. They "buy to sell," typically purchasing companies they believe are undervalued and try to improve their performance and financials over the course of five to seven years before selling them. Given the promise of AI's

transformative potential, the industry is increasingly focused on how this technology can help.

The hitch, however, is that quickly creating value through AI investments is far from a sure thing right now. Surveys suggest that only 20–25% of companies have any production application of generative AI in place. A recent survey of 120 large company tech leaders found that only 10% had achieved "significant" ROI; an additional 11% reported moderate returns. The rest reported no or disappointing returns. While these surveys are focused on generative AI, analytical AI also has a troublesome history of returns in many companies.

Even so, a number of investment firms are leaning into this challenge, creating processes and developing use cases that, once refined and proven, can be deployed in a repeatable fashion to drive consistent value creation.

One of us (Mahidhar) works at Apollo, where he is an operating partner, head of the data, digital and AI team, and leading efforts to ensure a return on AI in private equity portfolio companies. The other (Davenport) is an academic researcher who studies AI and has done executive education at PE firms.

To understand how the industry is approaching this issue, we interviewed eight firms on the issue of value creation through AI. Three of the PE firms we interviewed were specifically created to pursue opportunities involving AI and digital transformation in their investing processes: MGX, which focuses on AI vendors and infrastructure; BayPine, which focuses on driving digital transformation, including the adoption of AI technologies, at its portfolio companies; and GrowthCurve Capital, which is focused on both AI for diligence and for portfolio value creation.

Many companies today have found value creation from AI to be challenging. Given PE firms' mandate to create value in a relatively short timeframe, they offer a unique perspective on how to drive innovation in this area.

Preparing to Create Value with AI

PE firms derive value from their AI investments through a progression of stages, the earliest of which involve preparation within the PE firm itself.

The first of these is securing commitment and talent. It may seem obvious, but for AI initiatives to be successful, leadership—at both the PE firm and at portfolio companies—must buy into the idea that the technology offers considerable potential for creating value. This may require education or persuasion, but it is the precursor for success.

At a leading PE firm, for example, the initial focus was to identify firm and portfolio company leaders who already believed in the transformational role of AI. Then they were relied on to make the case to less committed executives.

With commitment in place, the firm needs to acquire talent—at the leadership level both internally and on the frontlines in portfolio companies. We talked with several firms whose initial inclination was to hire data scientists for these roles, but the consensus among the firms was that they were difficult to hire and retain, and many value creation steps did not require their skills.

Ideal leaders for AI initiatives are operating partners who understand dealmaking processes and how to work with portfolio companies. For building and deploying AI solutions in portfolio companies, hiring several data scientists is one sensible approach, but most of the firms

we interviewed rely on consultants for this purpose. Misha Logvinov, operating partner at MGX said, "While the role of data scientists remains important for certain initiatives, advances in AI development and analytics tools now allow full-stack AI engineers, working closely with subject matter experts, to quickly build and deploy AI solutions at scale."

The next stage—still preparatory to building AI products—is assessing AI exposure and conducting detailed AI diligence. This stage involves multiple processes. An AI exposure assessment looks at industries, not companies, and points out where there is risk and opportunity for AI, and which industries are likely to see the greatest positive or negative impact. The assessment then guides the firm toward opportunity domains from AI and away from those with high risk. Not all firms we interviewed conduct an AI exposure assessment, but Apollo does, and its partners find it very valuable.

Conducting detailed AI diligence is done when evaluating a particular company for acquisition, to understand AI's role and potential impact on its future value creation. In this process, firms can assess the amount of knowledge workers (potentially affected by genAI), the possible automation or augmentation of the workforce, the competitive landscape as related to AI and a detailed financial assessment considering cost implications and implementation readiness.

This is an increasingly important process for PE firms that are committed to the potential value of AI—one firm we interviewed had 25 general partners involved in AI diligence processes—but it can also be performed by or with assistance from outside consultants. Cory A. Eaves, a partner and head of Portfolio Operations at Baypine emphasized, "Underwriting value creation from data and AI at the outset significantly increases the likelihood of successful

implementation during the ownership period." Apollo takes a similar approach incorporating AI related diligence as appropriate when considering each investment.

Again, there isn't a uniform approach. Other PE firms we interviewed said that they considered AI in due diligence processes, but the assessment was not systematic. One firm's AI expert, for example, said that they take a "generalist approach" to value creation in portfolio firms, and that AI was taken into account only in some industries and acquisition candidates.

Implementing AI in Portfolio Companies

Once a PE fund has bought a company, AI activity shifts to planning and implementing AI products and projects within the acquired company. That includes developing specific use cases and a roadmap for implementing them, working closely with the CEO and other executives within the company.

There are several valid approaches to this important step. One leading firm, for example, takes a "flywheel" approach that not only focuses on solving business problems with AI but also building sustained capability and momentum in the portfolio company. The flywheel components include:

- AI governance and compliance
- Talent recruitment
- Use case identification and prioritization in alignment with the deal thesis
- Technology partnerships (curated by the PE fund)
- Implementation partners (curated by the PE fund)
- Adoption and value realization

Another PE firm uses a DANCE framework for identifying valuable use cases. With its focus on content creation, personalization, and employee productivity, it's well-suited for identifying generative AI use cases. The framework includes:

- D: Discover insights
- A: Automate Processes
- N: Novel creation of products or content
- C: Customize solutions (personalized products or services)
- E: Enhance Performance and employee productivity

Successful PE firms begin thinking about potential exit scenarios almost as soon as they have bought a company, and thus need to consider how long the AI initiatives will take to implement and whether they would make the company more attractive to a future acquirer. For example, two AI leaders in PE firms mentioned that individual productivity applications of gen AI are unlikely to appeal to buyers unless there are carefully measured productivity gains, which can be difficult to accomplish.

In general, PE leaders said they seek improvements from AI in operational metrics that demonstrate momentum throughout the ownership period. One executive felt early on in their company's AI journey (2022) that even proofs of concept of AI use cases might be sufficient to show the next buyer the potential value of AI, which would avoid all of the challenges of production deployment. However, in 2025 it's clear that some production deployments with demonstrable value are required by both limited partner investors and potential next buyers.

Several PE firm AI leaders noted that it is important to address data quality—either structured data for analytical AI use cases, or unstructured data for gen AI applications—before building AI. The

data quality issues ideally would surface during the diligence process. However, given the cost and time of substantial data management initiatives, it's important to be selective in which data domains are improved. "Avoid the temptation to boil the ocean" was one AI leader's comment.

There are also important talent and change management issues to be considered. From a talent standpoint, a key question is who will do the AI development and implementation. There are three primary options: use external consultants, rely on the portfolio company's own personnel, or build an internal center of excellence that houses technology capabilities and drives implementation across the firm and its portfolio.

Although some PE firms we interviewed have built small CoEs, the primary approach is to introduce portfolio companies to an ecosystem of talent resources that can augment their internal expertise. One AI leader at a PE firm said that, in part because of talent challenges, the firm is encouraging portfolio companies either to buy AI applications rather than build them, or leverage use cases already built by other portfolio companies.

A key change management issue is to get buy-in and recruit stakeholders within the portfolio company. "This is a *carpe diem* moment for companies to see their data as an off-balance sheet item," Sajjad Jaffer, head of data and analytics at Growthcurve Capital, told us. "Data can be both a latent asset and a latent liability. The private equity industry is in the early innings of infusing a 'data first' culture. This culture starts at the top with the CEO. Private equity boards are also developing a data first approach to guiding their CEOs and management teams."

Another PE firm attempts to build commitment by involving the company's executive team and board in use-case prioritization and then asking for management volunteers to be accountable for implementation. Another leans on functional heads (e.g., the CFO for a finance-oriented use case) to be the primary driver of the project.

Several of the AI leaders in firms emphasized that analytical AI (as opposed to generative) can often create more rapid value in portfolio companies. For example, one firm used analytical AI to identify a portfolio company's best and worst customers. Another used it to identify cross-sell opportunities. The companies most focused on value creation with generative AI were primarily viewing it as a means of creating better and less expensive products and services, such as in a textbook company and a professional services firm.

The commitment by these PE firms to AI-enabled transformation is evidence that large-scale investors see value in the technology. But it doesn't come automatically by any means. The firms and companies that will be most successful in driving value creation through AI applications are those that both see the big picture – how AI is impacting specific industries in connection with other macro trends – and also focus on the narrow, specific use cases that translate into measurable improvements in productivity, profitability and growth.

The AI-focused due diligence and value-creation activities in PE portfolio companies are a clear indication that AI investments won't yield sufficient value without careful analysis, planning and implementation. As the PE playbook continues to evolve towards a greater focus on initiatives that drive intrinsic value creation, the proven and repeatable AI use cases are being developed now. Any company can and should adopt the approaches that PE firms use to make the most of this transformative technology.

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