

# **Behind the Curtain: Exploring AI's Transformative Power in Private Equity**

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# Abstract

This study investigates private equity (PE), a crucial segment of the global financial ecosystem where funds and investors directly invest in private companies or buy out public companies. Unlike public equity markets, PE offers essential capital for growth, restructuring, and management buyouts, predominantly from institutional investors and high-net-worth individuals. The study outlines the structure of PE firms as limited partnerships, where general partners manage investments while limited partners provide capital and share profits. It explores various types of PE investments, including venture capital, growth capital, buyouts, and distressed situations. The research highlights significant growth in the PE sector, driven by superior returns compared to traditional asset classes, despite challenges from evolving technology and regulatory changes. A central focus is the role of artificial intelligence (AI), which is transforming deal sourcing, due diligence, portfolio management, and operational efficiency. The objectives of this study are to understand the operations and significance of private equity firms, explore AI's impact on PE functions, and assess the market landscape of AI within the private equity sector. This exploration provides insights into AI's potential to reshape investment strategies and enhance value creation in private equity.

**Keywords:** Private equity, Investment, Artificial intelligence, Buyouts, Limited partnerships, General partners, Value creation

#### 1. Introduction

Private equity (PE) is a form of investment where funds and investors directly invest in private companies or engage in buyouts of public companies, resulting in their delisting from public stock exchanges. Unlike public equity markets, where companies raise capital through the issuance of shares to the general public, private equity focuses on acquiring stakes in companies that are not listed on public markets. The private equity industry plays a crucial role in providing capital to companies that require funding for growth, operational restructuring, or management buyouts.

PE investments are typically made by institutional investors, high-net-worth individuals (HNWIs), or private equity firms that pool capital from limited partners (LPs). These investments are made with the



expectation of achieving higher returns over a long-term horizon, often through active involvement in the management and strategic decisions of the invested company. This long-term perspective allows private equity firms to implement significant changes in a company's operations, financial structure, or management, which might be difficult in a public market environment.

# 1.1 Structure of private equity firms

Private equity firms are organized as limited partnerships, with the private equity firm acting as the general partner (GP) and the investors as limited partners (LPs). The general partner is responsible for sourcing deals, making investment decisions, and managing the portfolio, while the limited partners provide the capital for investments but do not participate in day-to-day operations. In return for their investment, LPs are entitled to a share of the profits, typically after the general partner receives a performance-based fee known as "carried interest."

# **1.2** Types of private equity investments

- 1. Venture Capital (VC): Focuses on early-stage companies with high growth potential, often in industries such as technology or biotechnology.
- 2. Growth capital: Provides capital to mature companies that require funds to expand or restructure operations, enter new markets, or finance a major acquisition without changing ownership control.
- 3. **Buyouts**: Involves acquiring a controlling interest in a company, often by leveraging debt to finance the transaction. Buyouts can take the form of management buyouts (MBOs), where the existing management team takes control, or leveraged buyouts (LBOs).
- 4. **Distressed or special situations**: Private equity firms may invest in companies experiencing financial difficulties but with potential for recovery, often restructuring operations or management to turn the business around.

In recent years, private equity has experienced significant growth, driven by its ability to offer superior returns compared to traditional asset classes such as public equities or bonds. According to industry estimates, global private equity assets under management (AUM) have surged, making it a key component of the global financial ecosystem. However, with the growing size and complexity of deals, the private equity industry faces increasing pressure to adapt to evolving technological advancements, regulatory changes, and market dynamics. One of the most transformative forces in this landscape is the integration of artificial intelligence (AI). (1,2,6)

AI has emerged as a powerful tool, reshaping industries and business operations by enabling automation, enhancing decision-making, and optimizing processes. In the realm of private equity, AI is revolutionizing deal sourcing, due diligence, portfolio management, and operational improvements. PE firms are increasingly leveraging AI-driven algorithms, machine learning models, and advanced data analytics to make more informed investment decisions, mitigate risks, and unlock new value-creation opportunities. (11,13,14) Journal of Next-Generation Research 5.0 (JNGR 5.0) Website: www.jngr5.com Email: editor@jngr5.com

# 2. Study Objectives

- To understand the operation and significance of Private Equity Firms
- To know the role of AI in PE functions
- To examine the market scenario of AI and PE

# 3. Research Methodology

The research design used for this project is Descriptive research. This project heavily relies on secondary sources, particularly those found online. The systematic presentation of all the gathered and compiled information and data might lead to meaningful inferences. The paper also has a connection to current circumstances.

# 4. Analysis and Discussion

# 4.1 Operation and significance of PE firms

# 4.1.1 How private equity firms operate: a detailed overview

Private equity (PE) firms operate by investing in private companies or taking public companies private, to increase their value over time and then selling them for a profit. Their operations are characterized by sourcing capital, acquiring companies, improving those companies' performance, and eventually exiting the investment. The process typically involves a combination of fundraising, deal sourcing, value creation, and exit strategy. Here is a step-by-step breakdown of how private equity firms operate:

# 1. Fundraising and capital sourcing

The first step in the operation of a private equity firm is to raise capital. Private equity firms typically raise money from institutional investors such as pension funds, sovereign wealth funds, endowments, insurance companies, and wealthy individuals. This capital is pooled into a private equity fund, which is a collection of capital that the firm will use to invest in companies.

**Fund structure:** Private equity firms create funds that are structured as limited partnerships. The private equity firm acts as the general partner (GP), managing the fund and making investment decisions, while the investors are limited partners (LPs). The LPs provide the bulk of the capital, while the GP contributes a small percentage.

**Capital commitments:** LPs commit to providing a certain amount of capital to the fund, which the GP draws upon over time as they find investment opportunities. The capital is typically "locked up" for several years, meaning LPs cannot withdraw their investment until the fund completes its cycle, which usually spans 7-10 years.

# 2. Deal sourcing and investment selection

Once the fund is established, the private equity firm moves to the next stage: identifying potential companies to invest in, a process known as deal sourcing. **Proprietary deals:** Private equity firms often rely on their own networks, industry relationships, and reputation to source deals directly from company owners or management teams. These are known as proprietary deals, as they are typically exclusive to the firm.

**Intermediaries and brokers:** Sometimes private equity firms work with investment banks, brokers, or other intermediaries to find potential investment opportunities. These intermediaries help connect the private equity firm with companies that are looking for investors or buyers.

**Screening and due diligence:** Once potential targets are identified, the firm conducts due diligence to assess the viability of the investment. This involves a deep dive into the company's financials, market position, management team, operations, and potential for growth. The firm will evaluate whether the company aligns with its investment thesis and whether there are opportunities to add value and achieve a good return.

# 3. Acquiring companies (leveraged buyouts)

One of the most common methods private equity firms use to acquire companies is through a leveraged buyout (LBO). In an LBO, the private equity firm uses a combination of its own equity and a significant amount of debt to purchase a company. The debt is typically secured by the assets of the acquired company and is repaid over time using the company's cash flows.

Why leverage is used: Leveraging the buyout allows the private equity firm to make larger investments without having to put up all the capital themselves. This also amplifies potential returns—if the company performs well and its value increases, the equity return on the private equity firm's initial investment can be significantly higher due to the use of borrowed money.

**Negotiating and closing:** After evaluating the target company and securing financing, the private equity firm negotiates terms with the company's owners. This includes agreeing on a purchase price and any other terms, such as earn-outs or management participation. Once a deal is agreed upon, the acquisition is finalized, and the private equity firm takes control of the company.

# 4. Creating value in portfolio companies

After acquiring a company, private equity firms focus on creating value, improving the company's performance, and increasing its profitability. This is a critical stage of the process and one that distinguishes successful private equity firms.

**Operational improvements:** Private equity firms often bring in their expertise, resources, and network to improve the operations of the portfolio company. This may involve optimizing the supply chain, improving marketing strategies, upgrading technology systems, reducing costs, or streamlining processes.

**Strategic growth:** Many private equity firms focus on helping companies grow by entering new markets, launching new products or services, or expanding geographically. They may also pursue add-on acquisitions, where the portfolio company acquires smaller competitors or complementary businesses to expand its market presence.

**Management and governance:** Private equity firms often play an active role in the management of their portfolio companies. They may replace or supplement the company's management team with experienced executives, and they typically implement stronger governance structures, including performance metrics and key performance indicators (KPIs) to track progress.

**Financial engineering:** In addition to operational improvements, private equity firms may use financial restructuring to boost the company's value. This could involve refinancing existing debt, optimizing the company's capital structure, or finding ways to improve cash flow management.

# 5. Exit strategy: realizing returns

The ultimate goal of private equity firms is to exit the investment at a higher value than what they initially paid, thereby generating a return for the firm and its investors. There are several ways private equity firms can exit an investment:

**Initial Public Offering (IPO):** If the company has grown substantially and the market conditions are favourable, the private equity firm may take the company public through an IPO. This allows them to sell their shares in the open market and realize a return on their investment.

Sale to another company (strategic buyer): The firm may sell the portfolio company to a strategic buyer, such as another company in the same industry that wants to acquire the company for synergies, market expansion, or other strategic reasons.

**Secondary buyout:** Sometimes, private equity firms sell their portfolio company to another private equity firm. This is known as a secondary buyout and is a common exit strategy when the original firm feels the company has reached its potential under their management but still has room for further growth.

**Recapitalization:** In some cases, private equity firms may recapitalize the company by selling a portion of their stake back to the company or another investor, while retaining a partial ownership interest. This allows them to take some profits off the table while continuing to benefit from future growth.

# 6. Returns and compensation: how private equity firms make money

Private equity firms make money through a combination of management fees and carried interest:

**Management fees:** Private equity firms typically charge LPs an annual management fee, usually around 1.5% to 2% of the total committed capital. This fee is meant to cover the firm's operating expenses, such as salaries, office space, and overhead.

**Carried interest:** The bulk of a private equity firm's profits come from carried interest, which is a share of the profits generated by the fund. Typically, this is around 20% of the profits, after the LPs have been paid back their initial investment plus a preferred return (usually around 8%). This structure incentivizes the private equity firm to maximize the fund's performance, as their compensation is directly tied to the success of their investments. (3,4,13,14,11)

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# 4.1.2 Why private equity matters

Private equity (PE) plays a pivotal role in the global economy by driving innovation, fostering growth, and providing an essential source of capital to businesses at various stages of development. Although it operates largely behind the scenes, private equity has far-reaching effects on industries, job creation, and economic progress. Here's why private equity matters:

# 1. Driving business growth and expansion

Private equity provides much-needed capital to companies, enabling them to grow, expand into new markets, and pursue strategic initiatives. Whether through venture capital for startups or growth capital for more mature companies, private equity helps businesses scale their operations. These investments often go beyond just providing funds-they also offer strategic guidance, industry expertise, and access to valuable networks that help companies reach their full potential.

For startups and growing companies that might struggle to secure traditional bank loans or public market financing, private equity represents a crucial source of funding that can help them scale quickly.

# 2. Turning around struggling companies

Private equity is often a lifeline for underperforming or distressed companies. Through leveraged buyouts (LBOs) or distressed investment strategies, private equity firms acquire struggling businesses and work to turn them around by improving operational efficiency, cutting costs, and implementing strategic shifts. These firms bring fresh perspectives and management expertise to the table, often revitalizing companies that might otherwise fail. Successful turnarounds not only save jobs but also preserve value for stakeholders and can inject new life into industries facing economic challenges.

# 3. Creating jobs and driving innovation

By helping companies grow, private equity investments lead to job creation. Whether it's hiring more staff due to business expansion or fostering innovation through R&D investments, private equity's contribution to job creation is significant. Many firms use private equity to fuel technological advancements, enabling businesses to innovate in their products, services, or processes. For example, private equity has been instrumental in helping tech companies, healthcare startups, and renewable energy firms scale their innovations, accelerating industry evolution and contributing to long-term economic sustainability.

# 4. Providing long-term capital and stability

Private equity typically involves longer-term investments than public market trading. Firms often hold investments for several years, working with management teams to drive meaningful changes that improve a company's long-term value. This long-term horizon contrasts with the quarterly pressures of public companies, which often focus on short-term profitability to satisfy shareholders. By focusing on long-term growth rather than short-term gains, private equity can take the necessary steps to develop and strengthen a company's foundation. This patient capital allows businesses to make strategic decisions that have lasting impacts.

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#### 5. Driving operational and strategic improvements

One of the hallmarks of private equity is the hands-on approach firms take to improve the companies they invest in. Unlike passive investors in public markets, private equity firms often collaborate with management teams to improve operations, drive efficiencies, and implement strategic initiatives. These improvements may include optimizing supply chains, implementing new technologies, reducing overhead, or expanding product lines. The impact of these operational improvements can be substantial, leading to increased profitability, market share, and competitiveness for the companies involved.

# 6. Maximizing value for investors

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Private equity has consistently delivered attractive returns to its investors, often outperforming public market indices over the long term. These returns come from the firm's ability to identify undervalued or high-potential companies, optimize their operations, and exit at a time when the company's value is significantly higher. The success of private equity investments provides substantial benefits to institutional investors like pension funds, endowments, and sovereign wealth funds, which often allocate significant portions of their portfolios to private equity. The high returns generated by private equity investments can help these institutions meet their long-term financial obligations, such as funding retirements or educational programs, benefiting society as a whole.

#### 7. Enhancing economic resilience

Private equity plays a vital role in stabilizing economies by injecting capital into sectors or companies facing headwinds. Whether it's revitalizing companies in financial distress or helping industries recover from economic downturns, private equity supports broader economic resilience. During times of financial crisis or uncertainty, private equity often steps in as an alternative funding source when traditional credit markets dry up. This resilience-building function of private equity ensures that businesses can continue operating, innovate, and contribute to economic recovery during challenging times.

#### 8. Expanding access to new markets and industries

Private equity facilitates the entry of companies into new industries or markets by providing the capital and expertise required to expand. Whether it's helping a domestic business go global or enabling a traditional company to diversify into a new sector, private equity fosters cross-border business expansion and economic integration. This growth promotes international trade, global competitiveness, and job creation in multiple regions. For instance, private equity-backed companies have played crucial roles in entering emerging markets, bringing new technologies and services to regions that previously lacked access.

# 9. Fostering a culture of accountability and performance

Private equity firms often bring a culture of accountability, performance, and results-driven management to the companies they invest in. With strong financial incentives for performance, both for the private equity firm and company management, there's a clear focus on achieving specific targets, including revenue growth, profitability, and operational efficiency. This focus can significantly enhance the per-



formance of businesses, driving them toward long-term sustainability and success, which benefits employees, customers, and the economy as a whole. (5,6,7)

# 4.2 Role of AI in PE functions

Artificial Intelligence (AI) is transforming industries across the board, and private equity (PE) is no exception. As private equity firms seek to generate value from their investments and stay competitive in a fast-evolving market, AI is playing an increasingly crucial role. By leveraging AI's capabilities, firms can enhance their decision-making processes, identify more promising investments, streamline operations within portfolio companies, and predict market trends with greater accuracy. AI's potential in private equity goes beyond traditional data analysis, providing firms with tools to handle vast amounts of data more efficiently and make smarter, data-driven decisions at every stage of the investment lifecycle. From deal sourcing to due diligence, from improving portfolio company performance to optimizing exits, AI is revolutionizing the way private equity operates.

# Enhancing deal sourcing with AI

One of the key challenges for private equity firms is finding the right deals among a vast pool of potential investments. Traditionally, deal sourcing involved labor-intensive research, relying on personal networks, intermediaries, and manual data analysis. With AI, this process has been streamlined and significantly improved. AI-powered algorithms can quickly sift through enormous datasets to identify companies that match specific investment criteria. These algorithms scan financial records, public databases, news articles, and even social media to flag companies that may not have been on the firm's radar. AI can also help predict future performance by analyzing trends in market behavior, customer sentiment, and competitive positioning. This makes deal sourcing faster, more efficient, and less reliant on human intuition alone.

# **Revolutionizing due diligence**

Due diligence, a critical step in the investment process, involves in-depth evaluation of a company's financials, market position, and operational capabilities. AI enhances this process by automating data collection and analysis, reducing the risk of human error and increasing the depth of insights. Through AI-driven tools, private equity firms can analyze a target company's financial health more thoroughly by examining years of financial data and comparing it to industry benchmarks. These tools also help identify potential red flags, such as operational inefficiencies or market risks that might otherwise go unnoticed. Additionally, AI enables more accurate forecasting of a company's future performance based on historical data, current trends, and industry dynamics. AI-driven sentiment analysis tools can also scan news, social media, and other public platforms to gauge a company's reputation, giving firms a more comprehensive understanding of the business's public perception, risks, and opportunities. Journal of Next-Generation Research 5.0 (JNGR 5.0)

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#### Improving operational efficiency in portfolio companies

After an investment is made, private equity firms focus on maximizing the value of their portfolio companies. AI plays a vital role in this phase by helping to streamline operations, optimize supply chains, and reduce costs. For example, AI tools can analyze vast amounts of operational data to identify inefficiencies in areas such as procurement, logistics, or customer service. AI-powered predictive analytics can forecast customer demand more accurately, helping companies optimize inventory and reduce waste. In manufacturing, AI systems can improve production efficiency by predicting equipment failures before they occur, minimizing downtime and reducing maintenance costs.

In addition, AI can enhance decision-making at the strategic level. By analyzing market trends, consumer behavior, and competitor actions, AI provides executives with actionable insights that guide long-term growth strategies and operational improvements.

# AI in exit strategy and portfolio optimization

AI's role in private equity does not end once a firm has acquired a company. AI tools can help private equity firms determine the best time to exit an investment and maximize returns. By analyzing historical data, market conditions, and performance metrics, AI can provide predictive insights on when the market conditions might be optimal for a sale or initial public offering (IPO). Furthermore, AI can support the optimization of entire portfolios. By tracking the performance of portfolio companies in real-time, AI helps private equity firms to identify underperforming assets or areas where additional value can be unlocked. AI-driven analysis can recommend changes in management, operational strategies, or even suggest bolt-on acquisitions that could enhance overall portfolio value.

# **Risk management and AI**

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Private equity is inherently risky, and managing these risks is crucial to ensuring successful investments. AI tools are particularly valuable in this area, providing advanced risk assessment capabilities by continuously monitoring internal and external data. AI algorithms can detect early warning signs of financial distress, operational disruptions, or shifts in market conditions, allowing firms to take preemptive actions before these issues escalate. AI can also evaluate geopolitical risks, regulatory changes, and environmental factors that could impact investments. By providing a more holistic view of potential risks, AI helps private equity firms develop more robust risk mitigation strategies.

# **AI-driven predictive analytics**

One of the most powerful applications of AI in private equity is predictive analytics. AI can forecast future trends based on historical data, market dynamics, and even external factors such as regulatory changes or geopolitical developments. This capability is invaluable for private equity firms in making informed investment decisions, predicting market shifts, and identifying future growth areas for portfolio companies. For example, AI can analyze consumer sentiment and purchasing patterns to forecast demand in specific industries, helping firms make investment decisions that are more likely to yield high returns. AI also allows firms to simulate different scenarios and their potential impact on portfolio comJournal of Next-Generation Research 5.0 (JNGR 5.0) Website: www.jngr5.com Email: editor@jngr5.com

panies, providing a clearer understanding of the risks and opportunities associated with different strategic decisions.

# The Future of AI in private equity

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AI is still in the early stages of its integration into private equity, but its role is expected to grow significantly in the coming years. As AI technology advances, it will likely become an indispensable tool in the PE industry, driving greater efficiency, better decision-making, and higher returns. Firms that embrace AI early on will have a competitive advantage, as they will be able to leverage data and insights that are simply out of reach for those relying on traditional methods.

In summary, AI is reshaping the private equity landscape by enhancing every stage of the investment process. From deal sourcing and due diligence to optimizing portfolio company performance and managing risk, AI enables private equity firms to operate more efficiently, make smarter decisions, and ultimately generate better returns for their investors. As the technology continues to evolve, the influence of AI on private equity will only deepen, revolutionizing the industry for years to come.

# 4.3 Market analysis of AI and PE

# 4.3.1 Industry Overview

In recent years, private equity firms have increasingly adopted AI technology, with many AI-driven initiatives becoming strategic priorities. Traditionally, these firms relied on employees' institutional knowledge to predict trends and spot investment opportunities, utilizing tools like CRMs, spreadsheets, and investment memos. However, there's now a growing focus on automating processes to improve the analysis and reporting of both structured and unstructured data. This shift is driven by the potential for deeper insights into portfolios and future acquisition prospects.

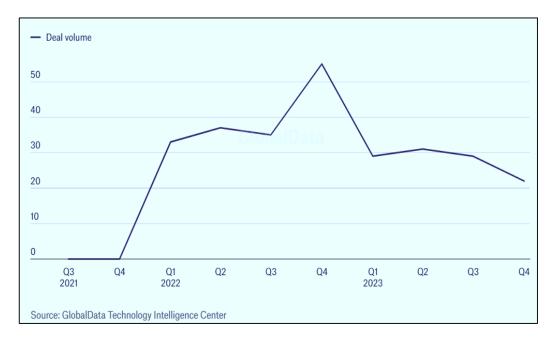
# Private equity AI trends in the tech sector: Q4 2023 overview

- A review of major themes in private equity transactions highlights the significant impact of artificial intelligence.
- In Q4 2023, 22 technology deals were announced, with a total value of \$5.3 billion.
- The largest disclosed transaction was Clearlake Capital Group and Insight Venture Management's \$4.4 billion acquisition of Alteryx, taking the company private.

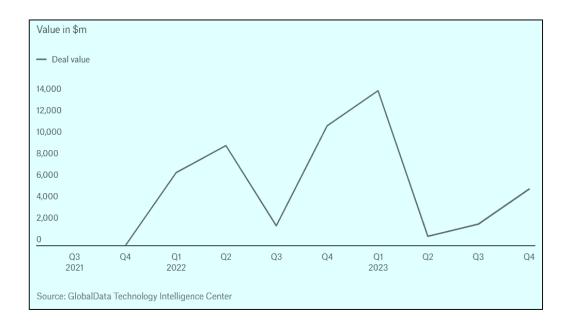
Upon examining the graph, it becomes clear that deal volume experiences fluctuations, reflecting changes in the number of deals over time. Despite these variations, there is an overall upward trajectory. The highest deal volume is observed in Q4 2022, while the lowest occurs in Q3 2021.



Artificial Intelligence-Related Private Equity Deals in the Global Technology Sector (by deal volume) - Q3 2021 – Q4 2023



Artificial Intelligence-Related Private Equity Transactions in the Global Technology Sector (by deal value) - Q3 2021 – Q4 2023



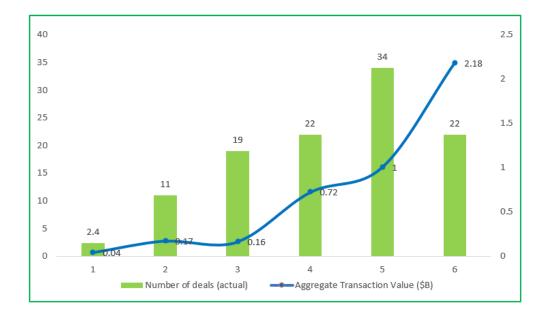
#### 4.3.2 Global overview

AI Draws Increased Private Equity Investment Amid 2023 Deal Slump. Despite a broader decline in mergers and acquisitions (M&A) in 2023, private equity and venture capital investments in generative

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AI companies more than doubled. According to S&P Global Market Intelligence, private equity investments in generative AI surged to \$2.18 billion in 2023, up from \$1 billion the previous year, even as M&A activity backed by private equity slowed across most sectors. This momentum carried into early 2024, with \$250 million invested in generative AI by mid-February, surpassing the first quarter of 2023's total.



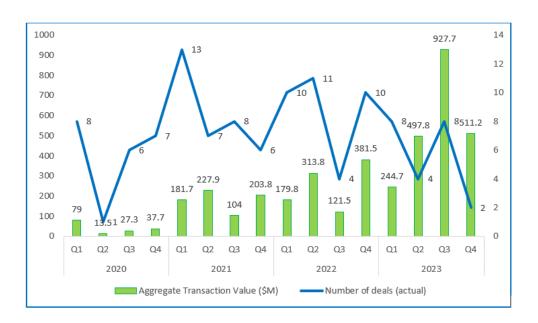
# Global PE/VC-Backed Investments in Generative AI Since 2018-2023

# Figure 1: KKR

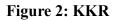
# **Excitement grows**

The release of ChatGPT in November 2022 ignited a wave of investment interest in generative AI. Private equity-backed investments soared to \$927.7 million in the third quarter of 2023, a dramatic rise compared to the \$121.5 million recorded during the same period in the previous year, according to Market Intelligence data.





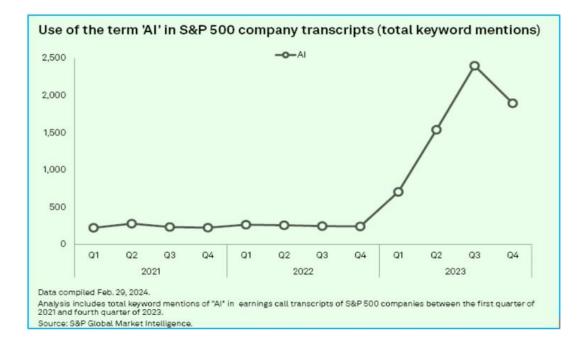
#### Global PE/VC-backed investments in Generative AI Since 2020-2023



Generative AI gained momentum alongside increased private equity investment in the field.

During the last quarter of 2023, the term "AI" was cited 2,398 times in the earnings calls of 159 S&P 500 companies, marking a nearly tenfold surge compared to the prior year. In the previous year's earnings calls, only 52 companies in the index mentioned the term, as reported by Market Intelligence's Trending Topics.

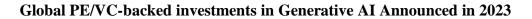




#### Figure 3: S&P Global

#### **Investment trends**

In 2023, almost half of private equity investments in generative AI companies were focused in the US and Canada, reaching \$974.9 million across 11 deals. Europe followed with six deals, totaling \$608.6 million in announced value.



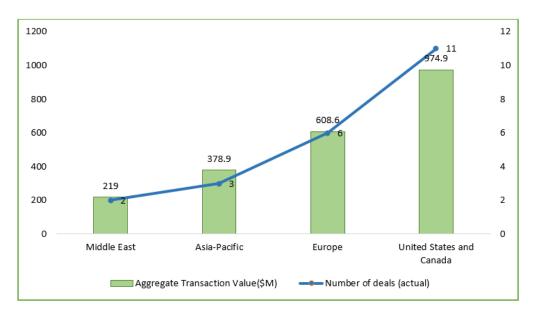


Figure 4: S&P Global

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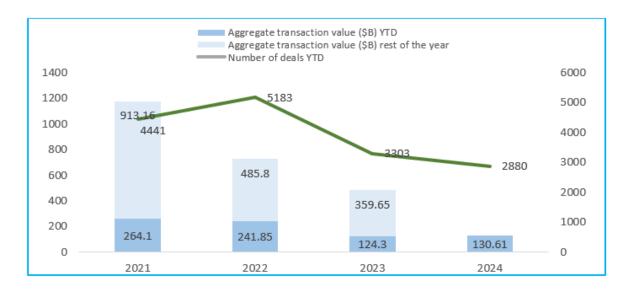
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# Q1 2024 Shows Increase in Private Equity and Venture Capital Investments

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- Despite a drop in the number of transactions compared to Q1 2023, private equity and venture capital investments experienced a rise in total value during the first quarter of 2024.
- The total deal value for the first three months of 2024 increased by 5.1%, reaching \$130.61 billion, up from \$124.30 billion in the same period last year.
- However, the number of deals saw a 12.8% year-over-year decline, with 2,880 transactions completed by the end of Q1, according to S&P Global Market Intelligence data.

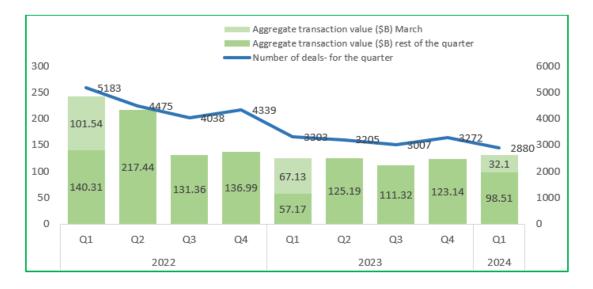


# **Global Private Equity and Venture Capital entries worldwide since 2021**

Figure 5: S&P Global



# Global Private Equity and Venture Capital entries worldwide, 2022-2024



# Figure 6: S&P Global

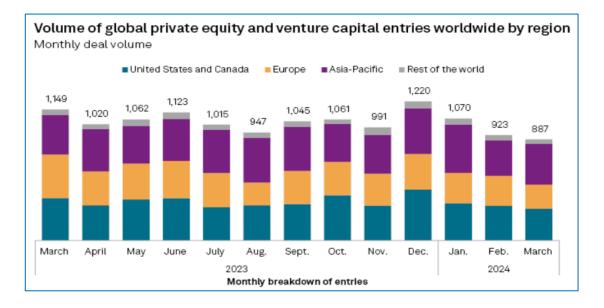
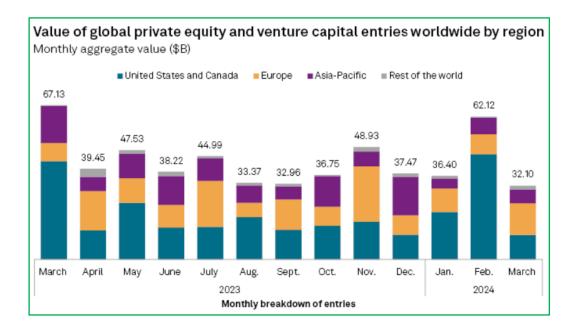


Figure 7: S&P Global

In March, Europe experienced a notable rise in deal value, hitting \$13.77 billion—an impressive increase of over 72% compared to March 2023. Conversely, private equity investments in the US and Canada plummeted, falling 74.9% year-over-year to \$10.73 billion for the month. Likewise, investments in the Asia-Pacific region reached \$5.91 billion, reflecting a 63.1% drop from the previous year. (9,15,16,17)







# 5. Conclusion

As private equity firms increasingly adopt AI tools and algorithms, several key insights emerge that highlight the opportunities and challenges associated with this technological transformation. The integration of AI is poised to offer significant competitive advantages in deal execution and fundamentally reshape how investments are sourced, evaluated, and managed. However, firms must also navigate complex ethical and regulatory landscapes as they leverage these technologies. Despite the early stages of AI implementation in private equity, several promising tools have begun to gain traction, assisting firms in critical areas such as deal sourcing, due diligence, and portfolio management. Looking ahead, the potential for AI in private equity remains vast, with many unexplored opportunities that could lead to substantial operational, strategic, and outcome-related benefits. For instance, AI's role in revolutionizing due diligence is particularly noteworthy. By utilizing predictive and prescriptive analytics, AI can analyze historical transactions, market trends, management psychographics, corporate culture, and performance data to better forecast the potential success of investments. This enhanced decision-making capability will enable private equity firms to mitigate risks and improve the overall performance of their investment portfolios, ultimately driving greater success in the ever-evolving landscape of private equity. (6,8,10,12)

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