Pathway Research

Private Market Environment

4TH QUARTER 2023

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2023 Year in Review

The final quarter of 2023 provided a fitting conclusion to a dynamic and eventful year that, despite continuing macroeconomic and geopolitical uncertainty, consistently exceeded the expectations of most market participants. The year was not without fraught, however, featuring the collapse of three major banks in the U.S., interest-rate hikes in most major economies, and two ongoing wars. Despite the volatility caused by these events, financial markets remained resilient during the year, bolstered by steadily declining inflation, stable growth, and rising consumer confidence. In the U.S., the consumer price index increased by 3.4% year over year, down significantly from the 6.5% increase in 2022. The positive trajectory led the U.S. Federal Reserve to hold rates flat in its final three meetings of 2023, signaling the end of the current rate-hike cycle and spurring market optimism that the next change in rates would be downward. Public equity markets responded favorably to the news: the S&P 500 index generated an annual return of 26.3%, recouping all its losses from 2022 and hitting a record high in December 2023. Equity markets were further fueled by a surge of interest in artificial intelligence technologies, benefitting the large technology companies viewed as best-positioned to take advantage of it. The "Magnificent Seven" stocks posted an average annual return of 111%, well outpacing the broader market. While the market today certainly appears to be on more stable footing than it was heading into the year, many investors continue to anticipate a slowdown in the economy over coming quarters, and we expect the volatility seen over the past two years to likely remain a feature of the market in 2024.

The private equity markets reflected much of the broader market uncertainty throughout 2023, which drove a slower pace of activity across most private equity segments, where both limited partners and private equity firms sought to assess a transitioning market environment. Private equity managers remained cautious during the year, navigating a high interest-rate environment and wide bid–ask spreads that constrained overall transaction activity. In the U.S., buyout transaction value fell to $213 billion during 2023, down 20% from 2022. Buyout activity in Europe fell even sharper, down 51% from 2022, marking the slowest year since 2013. A notable evolution in the 2023 buyout market was the impact of constrained financing markets and higher interest rates on pricing and deal structures. The average purchase-price multiple for buyouts completed in the U.S. during the year fell to 10.8x EBITDA, more than a turn below the average of 11.9x EBITDA in 2022 and the first significant annual decline since 2009. General partners also capitalized their investments more conservatively: the average leverage ratio for completed buyouts during the year was 4.8x EBITDA, the lowest level since 2010, while the average equity contribution rate reached a record high of 51.1%.

Table 1. Notable PE-Backed M&A Exits Announced in 2023
At December 31, 2023

Seller	Portfolio Company	Industry	Region	Value (MM)
Hellman & Friedman, Silver Lake	Splunk	Software	U.S.	$28,000
Madison Dearborn, HPS	NFP	Financial Services	U.S.	$13,400
Lime Rock Partners	CrownRock	Energy	U.S.	$12,000
Thoma Bravo	Adenza	Software	U.S.	$10,500
TPG Capital	Creative Artists Agency (CAA)	Entertainment	U.S.	$7,000

Table 2. Notable PE Investments Announced in 2023
At December 31, 2023

Buyer	Target	Industry	Region	Value (MM)
GTCR	Worldpay	Software	U.S.	$18,500
Japan Industrial Partners	Toshiba	Technology	Japan	$13,520
Silver Lake	Qualtrics	Software	U.S.	$12,500
Roark Capital	Subway	Consumer	U.S.	$9,550
Bain Capital	Guidehouse	Business Services	U.S.	$5,300

Exit market activity reached a decade low in 2023, driving the pace of distributions to limited partners well below the levels seen in recent years. Global M&A exit activity during the year totaled $421 billion, a decline of 35% from 2022 and of 59% from the record 2021 total. A weaker seller's market has led many private equity managers to delay exit processes, seeking more clarity on valuations and the go-forward outlook before bringing prize assets to market. Despite the delays, many private equity–backed companies have continued to grow at a steady pace, helping to partially offset the negative impact of declining valuation multiples and extended holding periods. According to data from Burgiss, the average trailing 1-year EBITDA growth rate for buyout-backed companies through the end of the third quarter totaled a healthy 10%. IPO markets continued to be largely closed for PE-backed companies, the culmination of the slowest 2-year period for PE-backed U.S. IPOs since at least 2000. Although a handful of notable PE-backed listings occurred in early fall, subsequent performance for those listings failed to meet expectations. Of the 31 PE-backed IPOs in the U.S. during 2023, 58% finished the year trading below their IPO price, including several of the year's most prominent venture-backed listings.

The venture capital industry also experienced a challenging year, navigating both a reset in valuation expectations and a market transitioning its focus toward profitability and away from the growth-at-all-costs mantra of recent years. The uncertain market environment resulted in a significant slowdown in deal activity: venture capital transaction activity fell 30% in the U.S. and 46% in Europe during the year, the lowest levels for both since 2019. A notable theme across the venture capital landscape was the growing interest in artificial intelligence technologies and their potential to be a disruptive force across a wide range of end markets. Although newer to the public sphere, the artificial intelligence sector has been a core area of focus for many venture capital investors for many years. Bucking the downward annual trend, AI-related venture investment activity totaled $62.6 billion during the year, an increase of 15% from 2022. This included notable investments into Anthropic and OpenAI, two prominent companies in the sector, which raised an aggregate $17.0 billion during the year. The coming year is likely to be telling for the venture capital industry. Cash balances for many companies that last raised capital prior to the current cycle are beginning to tighten, which will place pressure on companies to raise new capital in a far less accommodative market. We believe that the long-term themes supporting the venture capital industry remain strong and expect that disciplined, experienced managers will have attractive opportunities to deploy capital in the current market.

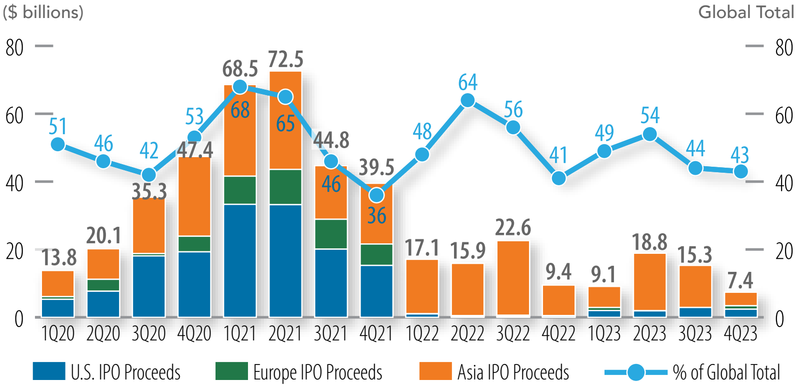
Following a resilient fundraising pace in 2022, the muted levels of deal activity seen in most private equity strategies over a now 2-year period had a greater impact on the fundraising market in 2023. Although rising public markets helped offset some of the denominator effect felt by institutional investors during 2022, limited partners still had to grapple with a number of headwinds, including a lower level of distributions and an uncertain macroeconomic outlook. During the year, private equity funds globally raised $536 billion, a decline of 28% from the prior year. The decline was even more pronounced when considering the number of funds raised: just 1,511 funds held closes in 2023, down 42% from the prior year and the slowest year since 2018. The slower year comes in contrast to what has continued to be a robust market for many large-cap managers. Eight funds closed on $15.0 billion or greater during the year, including Clayton, Dubilier & Rice XII ($26.0 billion) and CVC Capital Partners IX ($29.2 billion), the latter being the largest private equity fund on record. As we have seen in both current and prior periods of market turmoil, the private equity industry is well-suited to take advantage of opportunities arising from market volatility, and we expect overall demand for the asset class to remain at a high level.

Global Exit Markets

Global exit market activity fell to a recent low in 2023, hindered by continued market uncertainty that prompted both buyers and sellers alike to take a cautious approach to new transactions. Global M&A exit activity totaled just $99.6 billion during the fourth quarter, bringing the full-year total to $421 billion—a decline of 35% from 2022 and the slowest year since 2013, according to data from Mergermarket. The decline was particularly pronounced in the U.S., where M&A exit activity totaled just $223 billion during the year, down nearly 50% year over year. Notable exits were few; however, there were a handful of prominent exits, including Madison Dearborn's $13.4 billion sale of NFP to Aon and Thoma Bravo's $10.5 billion sale of Adenza to Nasdaq. As average holding periods for PE-backed companies have extended, many general partners have explored solutions to provide liquidity for their investors. One such method has been through GP-led secondaries, which can provide liquidity for certain limited partners without forcing a general partner to sell an investment that it still believes has strong growth prospects. The GP-led secondary market has grown substantially over the past several years and remained active in 2023, totaling $52 billion in transaction value, according to data from Jefferies.

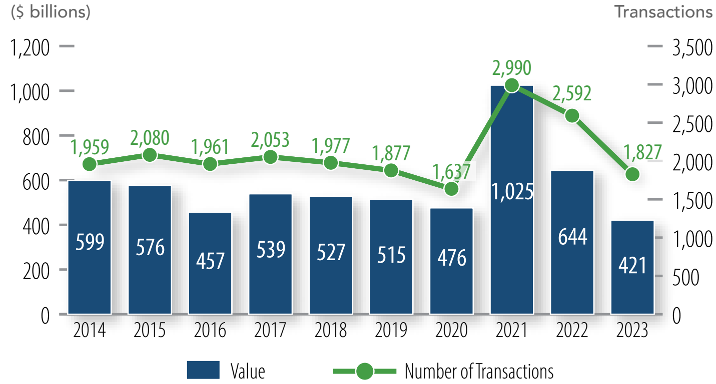
IPO markets experienced another slow year in 2023. Although market optimism of a near-term recovery grew during the middle of the year, subsequent volatility halted any visions of a broader market reopening and kept overall activity at low levels through the end of the year. In the U.S., 31 PE–backed IPOs took place, raising $9.1 billion in proceeds—an increase from the $2.0 billion raised through 15 IPOs in 2022 but still the second-slowest year since 2009. The year did see a handful of notable listings, including the $1.5 billion raised by L Catterton–owned Birkenstock, the $660 million raised by venture-backed Instacart, and the $576 million raised by Summit Partners–backed Klaviyo. The latter two marked the first significant venture-backed technology IPOs since late 2021: although both companies went public at discounts to their latest private financing valuations, they still represent significant wins for their early-stage investors. Performance for new listings overall was mixed: collectively, the 31 PE-backed U.S. IPOs generated an average return of 10% during the year, underperforming the broader market, and nearly 60% of the year's IPOs ended 2023 trading below their IPO price. The 2-year period of muted IPO activity has created a healthy backlog of high-quality companies ready and waiting to access the public markets. Based on recent filings, there appear to be several prominent companies signaling their intent to go public in the coming months, and we expect the success of those listings to have a meaningful impact on the trajectory of the IPO market during 2024.

Figure 1. Quarterly Global PE-Backed IPO Activity
At December 31, 2023



Source: Bloomberg, Renaissance Capital, and Pathway Research.

Figure 2. Global PE-backed M&A Exit Value & Volume
At December 31, 2023

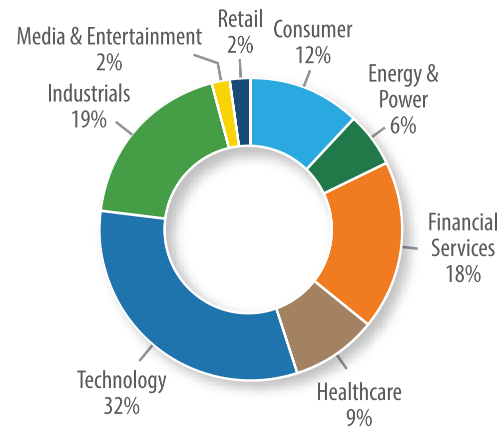


Source: Mergermarket, Dealogic, and Pathway Research.

U.S. Buyout Markets

U.S. buyout investment value declined by 25% in the fourth quarter to $54.0 billion, capping another muted year of activity in the buyout markets. Similar to the theme of 2022, high interest rates, dislocated financing markets, an uncertain economic outlook, and a wide gap between buyer and seller expectations weighed heavily on buyout activity. During the year, U.S. buyout investment activity totaled $213 billion, according to data from Refinitiv, a decrease of 20% from 2022 and of 15% from the trailing 5-year average. Deal value was buoyed by a few mega deals—GTCR's carveout of fintech company Worldpay for $18.5 billion, Silver Lake's take-private of software company Qualtrics for $12.5 billion, and Roark Capital's acquisition of restaurant chain Subway for $9.6 billion—which collectively accounted for 19% of annual deal value. Additionally, despite the recovery in public equity markets, take-privates continued to be a viable source of deal flow for buyout managers at the large end of the market. Take-privates accounted for 41% of total deal value during the year, the second-highest percentage since 2013.

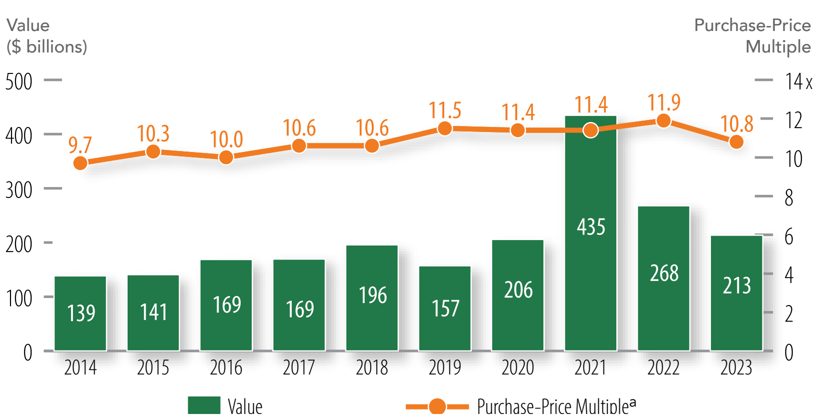
Figure 3. 2023 U.S. Buyout Transaction Value by Sector



Source: Refinitiv and Pathway Research.

The impact of a higher interest-rate environment was more widely evident in the 2023 buyout market. Continuing the third-quarter trend, valuations once again fell during the fourth quarter. The average purchase-price multiple for transactions completed in the quarter fell to 9.3x EBITDA, which brought the average for 2023 to 10.8x EBITDA, down from 11.9x EBITDA in 2022, according to PitchBook LCD. General partners also structured their investments more prudently during the year due to the cost and availability of debt, relying on high-conviction value-creation plans to generate returns. The equity contribution rate for U.S. buyouts reached an all-time high of 51.1% during the year, while the average leverage multiple fell to 4.8x EBITDA, the lowest level since 2010. The changes in pricing and deal structure corresponded with a widening scope of deals completed during the year relative to a technology-centric buyout market in 2022. While technology investments still accounted for the largest proportion of deal value in 2023, the sector accounted for just 32% of overall deal value, compared with 56% in the prior year. As the current cycle continues to evolve, the prospect of declining interest rates and resetting valuations is likely to spur additional deal activity across a wide range of sectors and provide private equity managers with an attractive opportunity set of potential investments.

Figure 4. U.S. Buyout Investment Activity
At December 31, 2023



Source: Refinitiv, PitchBook LCD, and Pathway Research.
Notes: Amounts may not foot due to rounding. • EV=Enterprise value.
[a]Average PPM (as a multiple of trailing EBITDA) of all LBOs.

Table 3. U.S. Buyout Investment Statistics
At December 31, 2023

	2007	2022	2023
Purchase Price/EBITDA	9.7x	11.9x	10.8x
Equity Contribution %	30.9%	45.8%	51.1%
Debt/EBITDA	6.0x	5.9x	4.8x
EBITDA/Cash Interest	2.1x	2.9x	2.4x

Source: PitchBook LCD.

European Buyout Markets

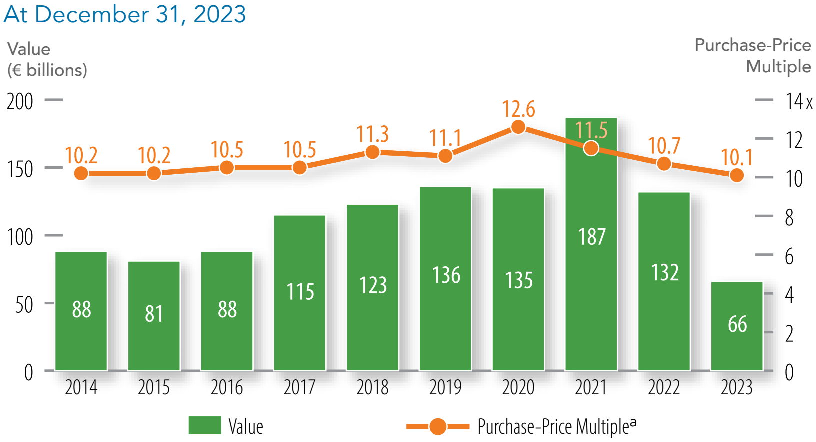
Investment activity experienced a notable slowdown in 2023 due to tightening monetary policy, persistent inflationary pressures, and macroeconomic uncertainty. Muted activity continued during the fourth quarter, during which the aggregate transaction value of announced European buyouts amounted to €16.0 billion— less than half the quarterly average of €32.9 billion for the past five years, according to data provided by Refinitiv. As a result, 2023 was the slowest year since 2013, posting an aggregate transaction value of €65.5 billion—a decline of 51% from 2022. Activity was down across regions: France, Benelux, Southern Europe, and CEE each witnessed drops of more than 60% from their 2022 levels. The DACH and Nordic regions showed relative resilience but still experienced declines of 23% and 15%, respectively. Despite a 48% decline in activity, the UK maintained its position as the largest European buyout market in 2023, albeit with a narrow margin over the DACH region (€19.4 billion vs. €16.1 billion).

The decline in European buyout activity by deal size was broad-based, with a notable and continued decrease at the upper end of the market. Between 2017 and 2021, large-cap deals (with enterprise values above €1 billion) constituted 43%–66% of total annual deal value. However, in 2022 and 2023, their share dropped to 27% and 28%, respectively. Specifically, eight large-cap buyout deals were announced in 2023, compared with an average of 27 over the past five years. The fourth quarter saw only two deals surpass the €1 billion mark: Triton's take-private of Caverion, a Finnish industrial services provider, and the acquisition of Scandinavian airline SAS by a consortium of investors led by Castlelake and Air France.

The fundraising market experienced contrasting tales in 2023. Buyout fundraising reached a record high of €77 billion—up 64% from 2022—despite recording the lowest fund count over the past five years. This was fueled by a small number of large buyout groups, such as CVC, Permira, and KKR Europe, that raised record-breaking funds. In contrast, many funds struggled in the current environment, contending with macroeconomic headwinds and constrained capital availability from limited partners.

According to UBS, European primary high-yield issuance totaled €43.0 billion in 2023, a 93% increase from 2022. Despite this uptick, total activity for 2023 ranked as the second-lowest annual figure in the past decade. During the fourth quarter, the spread of BB-rated euro-denominated bonds tightened from around 350 basis points at the beginning of the quarter to 285 basis points by mid-December. Meanwhile, extensions drove activity in the European loan market in 2023 as a result of M&A activity remaining subdued. Anecdotal evidence from buyout sponsors suggests that European debt markets remain conducive to buyout activity, but pricing expectations of buyers and sellers will need to adjust considerably to revive buyout volumes.

Figure 5. European Buyout Investment Activity
At December 31, 2023



Source: Refinitiv and Pathway Research. • [a]Average PPM (as a multiple of trailing EBITDA) of LBOs with EV of €500 million or more.

Table 4. Notable European Buyouts Announced in 4Q23
At December 31, 2023

Buyer	Target	Country	Value (MM)
Triton	Caverion	Finland	€1,422
Castlelake, Air France	SAS	Sweden	€1,118
Apax	WGSN	UK	€803
Trive Capital	Ten Entertainment Group	UK	€565
Rhone Group	Orkla Food Ingredients	Norway	€525

Source: Refinitiv.

Asia Private Equity

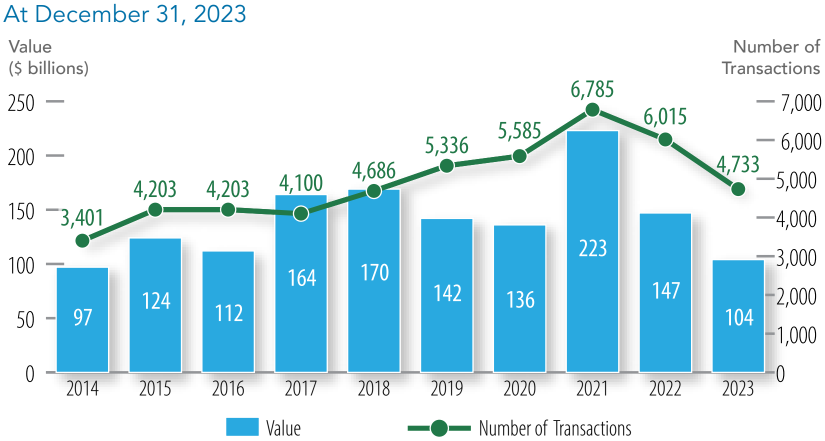
Asia private equity investment activity rebounded during the fourth quarter, increasing in value 35% quarter over quarter and 48% year over year to $33 billion across 1,110 transactions. The rebound was driven primarily by one mega investment, the ¥2.1 trillion (~$13.5 billion) take-private of Toshiba by a consortium led by Japan Industrial Partners. Despite a strong finish to 2023, it was a slow year for Asia private equity: full-year investments concluded at $104 billion, the lowest level since 2014. As was the case in the fourth quarter, 2023 deal activity was driven by a small number of large-cap transactions: the top 15 deals accounted for 34% of the annual total (compared with 20% in 2022 and 17% in 2021).

Exit activity continued to trend down in 2023: private equity generated less than $40 billion in exit proceeds during the year, approximately half the total for 2022, according to Mergermarket data. Exits across all channels plummeted, although the decrease in sponsor-to-sponsor transactions was relatively less pronounced. The largest deal of the year was the $6.5 billion merger between Vistra and Tricor, two EQT Asia portfolio companies recapitalized using new capital from the general partner's latest fund. Similar cross-fund transactions, as well as single-asset and multi-asset continuation vehicles, have gained prominence as a result of private equity sponsors seeking creative liquidity solutions for companies amid a less favorable exit market.

On Asia-based exchanges, 885 companies raised $70.5 billion via public offerings in 2023, down 32% year over year. PE-backed IPOs accounted for more than half of the total proceeds, and China remained the dominant IPO destination, accounting for nearly 70% of proceeds raised. Although soft market conditions have been the primary factor behind 2023's drop in IPO proceeds, two notable IPOs in Japan and India that did not issue new shares and raise new capital also contributed to the slump. KKR sold 58.5 million shares and realized more than $800 million from the IPO of Kokusai Electric in October, the largest Japanese IPO in five years; similarly, ChrysCapital Partners and other investors sold more than $500 million worth of shares at Mankind Pharma's IPO in May, which represented India's largest listing of the year.

Excluding RMB-denominated vehicles, Asia posted its lowest fundraising total in six years: its share of global private equity fundraising fell below 10% for the first time since 2019. Although global capital is pivoting away from China in response to geopolitical tensions and the country's macroeconomic headwinds, the capital redirection to other markets within the region has not materialized as expected, particularly in more-growth-oriented markets. However, RMB fundraising surged in 2023 in line with the shift in recent deal activity in China, increasing by more than 30% from 2022.

Figure 6. Asia PE Transaction Value & Volume
At December 31, 2023



Source: Mergermarket.

Table 5. Notable Asia PE Investments in 4Q23
At December 31, 2023

Buyer	Target	Country	Value (MM)
Japan Industrial Partners	Toshiba	Japan	$13,520
Bain Capital	ChinData	China	$3,160
TPG Capital	InvoCare	Australia	$1,206
JIC Capital	Hitachi Astemo	Japan	$1,006
Bain Capital	Estia Health	Australia	$631

Source: Mergermarket.

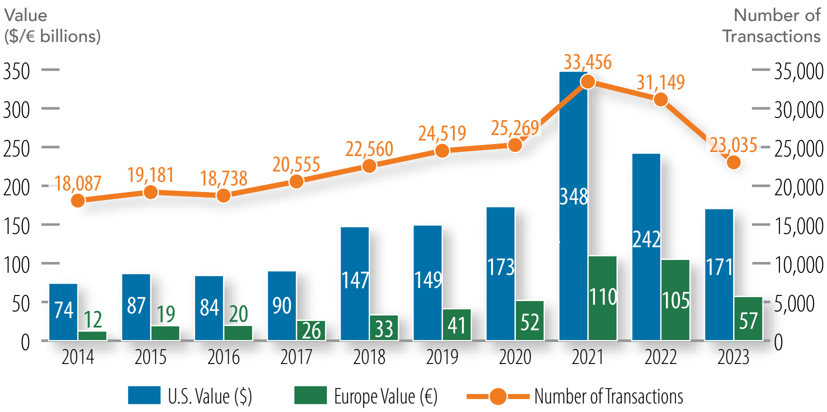
Venture Capital Markets

The venture capital industry experienced a widespread slowdown in activity during 2023, reflecting the uncertainty posed by resetting valuations, closed IPO markets, and a volatile macroeconomic climate that included the collapse of one of the industry's key financial partners, Silicon Valley Bank, early in the year. In the U.S., investment activity totaled $171 billion during the year, according to the PitchBook-NVCA Venture Monitor, a decline of 30% from the prior year and the lowest annual total since 2019. Activity in Europe did not fare much better, totaling €57.1 billion in value—a decrease of 46% from the prior year. The impact of a weaker financing market has led many venture-backed companies to conserve cash and delay the need to raise new capital until the market becomes more receptive. With valuation expectations well below recent peaks, companies that did raise capital in 2023 faced a challenging market. This was most apparent in the mature end of the venture market, where median pre-money valuations for late- and growth-stage U.S. companies fell by 18% and 47% year over year, respectively.

A bright spot in an otherwise challenging year was the technological innovation demonstrated in the artificial intelligence sector and the resulting interest from investors and corporations globally. AI has been a key area of focus for many technology-focused venture capitalists for many years, and the venture capital industry is well-positioned to take advantage of the surge in interest. AI accounted for 37% of total U.S. venture funding during 2023, headlined by the $6.6 billion raised by Anthropic, which included significant investments from Alphabet and Amazon, and the $10.3 billion raised by OpenAI, which included investments from Microsoft and a number of brand name venture capital funds.

In line with the broader market, exit market activity for venture-backed companies remained limited in 2023. Exit value in the U.S. totaled just $61.5 billion, down 22% from 2022 and 92% from the standout 2021 total. Further compounding these challenges, the most notable exit of the past two years, Adobe's $20 billion acquisition of Figma, was abandoned in late 2023 due to antitrust regulatory concerns. IPO market conditions have remained an impediment to many venture capital managers' plans to get liquidity from their later-stage investments, and many expected IPOs have continued to be pushed further into the future. Despite the muted level of activity, there remain reasons to be optimistic about the outlook for 2024. Many companies raised significant capital in 2021 and have been able to successfully navigate the market slowdown. Venture capital managers themselves are sitting on a record amount of dry powder and are well-positioned to both support their investments and take advantage of new opportunities. Over the long term, the themes of technological innovation and digital adoption will continue to remain highly relevant to the overall market, which is expected to keep a high level of interest in the asset class and in the products and services in which it invests.

Figure 7. Venture Capital Transaction Value & Volume
At December 31, 2023



Source: PitchBook-NVCA Venture Monitor Report.

Table 6. Notable Venture Capital Deals in 4Q23
At December 31, 2023

Company	Select Investors	Region	Value (MM)
Anthropic	Rabben Hood Ventures	U.S.	$2,000
Metropolis	Assembly Ventures, Slow Ventures	U.S.	$1,700
Commure	AIX Ventures, General Catalyst	U.S.	$1,323
Relativity	Arctic Ventures, Evolutionary Ventures	U.S.	$1,049
Databricks	Berkeley Frontier Fund, Capital One Ventures	U.S.	$685

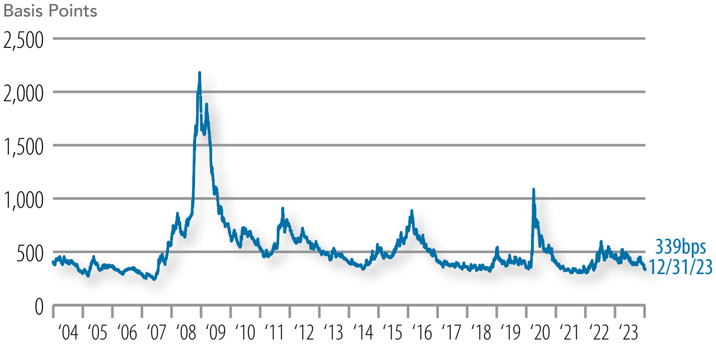
Source: PitchBook Data, Inc.

Private Credit Markets

The private credit asset class continued to expand its reach in 2023, despite a slowdown in overall lending activity due to subdued M&A volumes and an uncertain economic outlook. Early in the year, the regional banking crisis in the U.S. underscored the risks of asset/liability duration mismatch in a rising interest-rate environment and sparked fears of contagion in the financial markets, further constraining banks' appetite for leveraged lending. The volatility provided another opportunity for direct lending firms to demonstrate their value as a reliable source of debt financing and a provider of large-scale facilities previously available only in the syndicated debt markets. The ratio of new buyout transactions financed in the direct lending market to those financed in the broadly syndicated loan market reached an all-time high of 7x in 2023, up from 5x in 2022 and less than 2x in the pre-pandemic era, according to data from PitchBook LCD. Additionally, with many borrowers focused on managing near-term maturities, private credit firms completed several high-profile public-to-private refinancings during the year, including a $3.4 billion unitranche facility for Hyland Software and a $4.8 billion unitranche facility for Finastra, both of which replaced the companies' existing broadly syndicated loans. The inroads made by direct lenders in financing larger transactions helped mitigate the decline in overall lending volumes due to lower M&A activity during the year. Still, the significant amount of dry powder held by direct lenders, improving market sentiment, and increased competition to agent new facilities have led to a notable compression (50–150bps) in spreads since the beginning of 2023, particularly for upper-mid-market and large-market companies. Overall, the direct lending asset class continues to enjoy favorable market conditions: new financings generally feature still-high all-in yields, relatively conservative structures, and robust creditor protections.

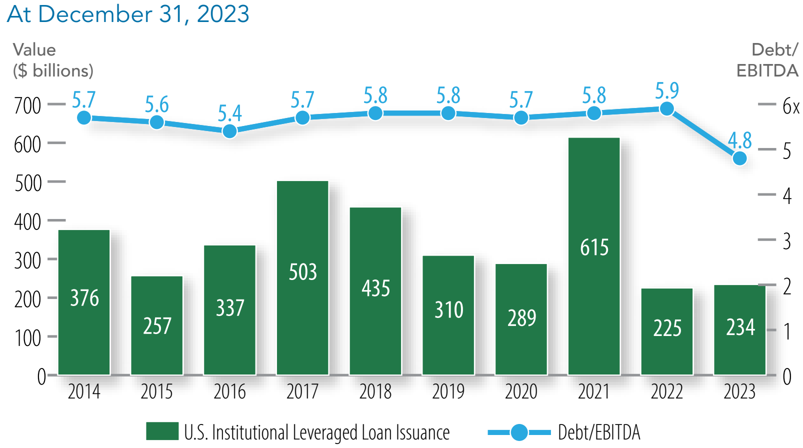
High-yield bond and leveraged loan default rates have been on the upswing since the beginning of 2023, although they remain well below prior market cycle peaks. The trailing 12-month U.S. high-yield bond default rate was 3.2% as of December 2023, up from 1.3% at the end of 2022 and the highest level since the first quarter of 2021, according to Fitch Ratings. Similarly, the leveraged loan default rate ended the year at 1.5%, up from 0.7% at the end of 2022, according to PitchBook LCD. In the core middle market, direct lenders and BDCs are reporting modest increases in default and non-accrual rates, as well as increases in the number of amendment, consent, cash-to-PIK, and covenant waiver requests from borrowers seeking flexibility and time to manage through the high interest-rate environment and idiosyncratic operational challenges. Overall, however, the level of distress in non-investment-grade markets to date has not been as widespread as many feared, highlighting the health and resilience of most companies in the face of elevated debt servicing costs and an uncertain economic outlook. Despite the lack of a robust corporate distressed debt opportunity set, opportunistic credit and distress-related investors found opportunities to deploy capital in 2023, particularly by acquiring assets from banks and finance companies seeking to bolster their balance sheets and address rising funding costs.

Figure 8. High-Yield Bond Spreads over U.S. Treasuries
At December 31, 2023



Source: BofA Merrill Lynch.

Figure 9. U.S. Institutional Leveraged Loan Issuance
At December 31, 2023



Source: PitchBook LCD.

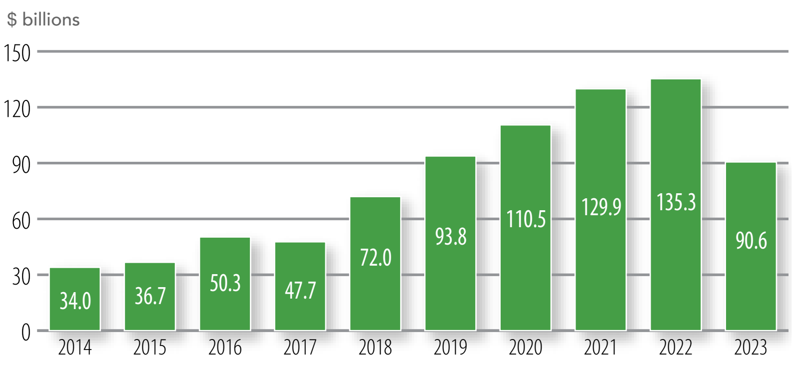
Private Infrastructure Market

Global infrastructure fundraising activity increased during the fourth quarter: 19 funds raised a combined $56.7 billion—the second-largest quarterly infrastructure fundraising total in history, according to data from PitchBook Data, Inc. Despite the increase in fundraising activity during the quarter, the full-year 2023 fundraising total of $90.6 billion represents the lowest annual fundraising total of the past five years. Although a number of large funds have been actively raising capital, a challenging fundraising environment has extended several fundraisings into 2024 that were previously expected to close in 2023. Fourth-quarter fundraising was driven primarily by Brookfield, which raised $28.0 billion for its Infrastructure Fund V and $6.0 billion for its Infrastructure Debt Fund III. Brookfield Infrastructure Fund V represents the largest closed-ended infrastructure fund in history, and cumulatively, Brookfield accounted for 60% of the quarter's total infrastructure fundraising. Given the backlog of fundraising activity seen in 2023 and the continued strong investor demand for the sector, fundraising activity is expected to have a strong year in 2024.

Global infrastructure investment value totaled $30.8 billion during the fourth quarter, the largest quarterly total since the first quarter of 2022. Notable deals in the fourth quarter included KKR's $23.3 billion acquisition of Telecom Italia in collaboration with Abu Dhabi Investment Authority and the government of Italy. This transaction involved a fixed-network asset, encompassing landline grids in Milan, Italy. Additionally, there was a $1.2 billion investment in energyRe, a developer of energy infrastructure aimed at decarbonizing cities, that was funded by Glentra Capital, Novo Holdings, and PKA.

The challenging fundraising environment that lingered throughout 2023 despite continued interest in the asset class has created difficult decision points for potential investors as they consider new fund commitments. In general, fundraisings have been extended, and several high-profile managers have required more than a year after holding an initial closing to reach sufficient scale. These prolonged fundraisings have created an imbalance of interests among limited partners who participate in the various closes before a fund's final closing. By delaying investment decisions until after funds have begun investing, limited partners can reduce their blind-pool risk before reaching a conclusion. Waiting does come with a ticking fee but can result in an early gain if the portfolio has been written up. This gain can come at the expense of the fund's early closers, thus creating tension between early and late closers and the underlying fund manager. In the context of this evolving fundraising landscape, limited partners should be cognizant of the timing of fundraising processes and the associated costs and benefits of when they commit.

Figure 10. Global Private Infrastructure Capital Raised
At December 31, 2023



Source: PitchBook Data, Inc.

Table 7. Notable Infrastructure Deals in 4Q23
At December 31, 2023

Asset/Company	Acquirer	Industry	Region	Deal Size (MM)
Telecom Italia (Fixed Network Assets)	KKR, Abu Dhabi Investment Authority	Telecom	Europe	$23,295
energyRe	Glentra Capital, Novo Holdings, PKA	Renewables	U.S.	$1,200
Banks Renewables	Brookfield	Renewables	UK	$1,000
Energy Exemplar	Vista Equity Partners, Blackstone	Software	Australia	$1,000
Pipestone Energy	Strathcona Resources	Oil & Gas	North America	$1,000

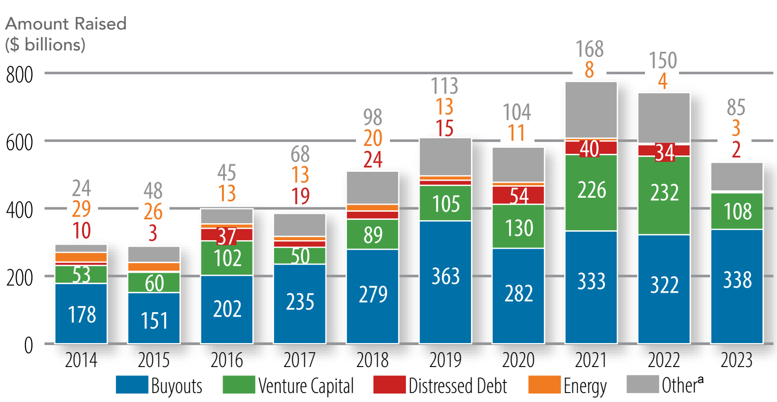
Source: PitchBook Data, Inc.

Fundraising Market

Worldwide private equity fundraising totaled $94.3 billion during the fourth quarter, a 6% increase from the prior quarter but still the second-lowest quarterly amount since the third quarter of 2018, according to data from Refinitiv and Pathway Research. The fourth-quarter total brought aggregate private equity fundraising for 2023 to $536 billion, down 28% from the prior year, although still a relatively healthy figure compared with annual activity outside the 2021–2022 time period. The decline in activity was more pronounced with respect to the volume of funds holding closes versus dollars raised: just 1,511 funds held closes during the year, a decline of 42% from 2022 and the slowest year since 2018. The variance can be explained by the success that many mega funds have had in the current market, supported both by traditional institutions and more-recent interest from large sovereign wealth and family office investors. Although rising equity markets during the year helped to allay some of the denominator effect pressure that many limited partners felt in 2022, the decline in distributions to investors posed an additional impediment in 2023. The more challenging environment for prospective fund managers has led to longer average fundraising periods and lower average fund-size growth compared with recent years.

Buyout fundraising activity starkly highlighted the market dynamic of more capital being concentrated in fewer funds. Despite a year-over-year decline of 32% in the number of funds raised, buyout funds raised $338 billion during the year—the second-highest annual total on record. Five buyout funds raised greater than $20 billion during the year, headlined by the €26.0 billion CVC Capital Partners IX—the largest buyout fund ever. The venture capital industry experienced a vastly different trend during the year, falling to its lowest annual total in four years. The number of venture funds raised during the year declined by 42% year over year, while total fundraising value reached just $108 billion, down 54% from the record $232 billion raised in 2022. The year featured a limited number of outsized venture funds, a reflection of the slow pace of deployment during the year and the record level of dry powder already amassed by the industry. We expect the fundraising market to remain steady in the coming year, albeit slower relative to the exuberance of the past several years. Many of the dynamics in today's fundraising market are positives for limited partners, and we expect experienced, disciplined private equity managers to continue to perform well in the prospective market environment.

Figure 11. Global Fundraising by Strategy
At December 31, 2023



Source: Refinitiv and Pathway Research.

Notes: Fundraising amounts are based on net amounts raised, which are adjusted for fund-size reductions. • Data is continuously updated and is therefore subject to change. • Amounts may not foot due to rounding. • [a]Comprises special situations and other fund strategies not classified as buyout-, venture capital–, credit-, or energy-focused.

Table 8. Notable Funds Raised in 4Q23
At December 31, 2023

Fund	Strategy	Region	Amount (MM)
Warburg Pincus Global Growth 14	Growth Equity	U.S.	$17,300
Brookfield Capital Partners VI	Buyouts	Canada	$12,000
PAI Europe VIII	Buyouts	Europe	$7,595
Harvest IX	Buyouts	U.S.	$5,340
American Industrial Partners Capital Fund VIII	Buyouts	U.S.	$5,000

Source: Refinitiv and Pathway Research.

About Pathway Capital Management, LP

Founded in 1991, Pathway provides private market portfolio solutions for institutional investors worldwide. Pathway manages capital on behalf of some of the largest corporate and public pension plans, government entities, and financial institutions around the globe. Since its formation, the firm has committed more than $100 billion to more than 1,000 private market investments.

Pathway is registered as an investment adviser with the SEC in the United States and as a portfolio manager and exempt market dealer in Ontario, Quebec, and Saskatchewan, Canada. Pathway's wholly owned UK subsidiary is regulated in the UK by the Financial Conduct Authority. Pathway's wholly owned Hong Kong subsidiary is regulated in Hong Kong by the Securities and Futures Commission.

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