Pathway Research

Private Market Environment

3RD QUARTER 2022

CONTENTS

3Q22 Market Review

Global equity markets continued their downward slide during the third quarter, belying a brief hope that the worst of the drawdown had passed and that monetary tightening policies from central banks around the world would begin to show signs of slowing inflation. The S&P 500 had gained back over 50% of its first-half losses through mid-August but plunged during the second half of the quarter amid continued poor inflation readings. In August, U.S. inflation data showed a 0.6% monthly increase in the core consumer price index (CPI), which was well above forecasts of 0.3%, prompting a 4.3% daily decline in the S&P 500—its largest single-day loss since early 2020. September inflation data fared no better, showing a monthly increase in core U.S. CPI of 0.6% and an annual increase of 6.6%—a four-decade high. The S&P 500 and MSCI All Country World indices fell for the third-consecutive quarter, pushing their year-to-date returns to –23.9% and –25.3%, respectively. The persistently high inflation readings have nearly cemented market expectations that the U.S. Federal Reserve will make its fourth-consecutive 75-basis-point interest rate increase at its next meeting in November, increasing concerns of a hard landing for the U.S. economy. Expectations for further global monetary tightening and resulting safe-haven buying also drove a surge in the U.S. dollar during the quarter. The U.S. dollar reached a two-decade high by the end of September, appreciating by 6.7% relative to the euro during the quarter and reaching parity for the first time since 2002. The British pound was even more volatile, driven by threats of a sovereign debt crisis in late September that roiled financial markets. Market doubts regarding the announcement of a new tax-cut program in the UK triggered a sharp decline in sovereign bond pricing, forcing the Bank of England to adopt an emergency bond-buying program to support local pensions facing liquidity challenges. The volatility drove the pound to an all-time low relative to the U.S. dollar, falling 17.6% during the first three quarters of 2022.

The impact of broader market turmoil on private equity exit activity has become more evident as the year has progressed. Private equity–backed M&A exit value totaled $118.2 billion during the third quarter, a decline of 15% from the prior quarter and of 45% from the same period last year. Exit volume fell even further, declining by 20% quarter over quarter to its lowest level since the second quarter of 2020. Nearly 17% of the quarterly total was attributed to one deal: Adobe's acquisition of venture-backed interface

Table 1. Largest PE-Backed M&A Exits Announced in 3Q22
At September 30, 2022

Seller	Portfolio Company	Industry	Region	Value (MM)
Index Ventures, Greylock, Kleiner Perkins	Figma	Software	U.S.	$20,000
Madison Dearborn Partners	Evo Payments Inc.	FinTech	U.S.	$4,000
Thoma Bravo	Frontline Education	Software	U.S.	$3,700
Centerbridge Partners	AHEAD	Software	U.S.	$2,900
Vista Equity Partners	Ping Identity	Software	U.S.	$2,800

Table 2. Largest PE Investments Announced in 3Q22
At September 30, 2022

Buyer	Target	Industry	Region	Value (MM)
Vista Equity Partners	Avalara	Software	U.S.	$8,400
Apollo Global Management	Atlas Air Worldwide	Transportation	U.S.	$5,200
Vista Equity Partners	KnowBe4	Cybersecurity	U.S.	$4,600
Bain Capital	Evident	Life Sciences	Japan	$3,100
Berkshire Partners	AHEAD	Software	U.S.	$2,900

design platform Figma for $20.0 billion. The announcement provided a bright spot in what has otherwise been a challenging year for late-stage venture capital companies, selling at a price that was nearly double Figma's valuation garnered in its latest financing round just over one year prior. IPO market conditions have further reduced the number of potential exit options available to private equity managers. Market volatility and poor aftermarket performance from the vast majority of 2021's IPOs have brought new IPO activity to a near halt in 2022. Through the first three quarters of the year, just 12 private equity– or venture capital–backed listings had taken place on U.S. exchanges, placing 2022 on track for the lowest annual total since the Global Financial Crisis (GFC).

Buyout investment activity also fell sharply from the prior quarter, by 36% and 53% in the U.S. and Europe, respectively, driven by constrained financing markets, a valuation gap between buyer and seller expectations, and uncertainty over the near- and medium-term path of operating performance for target companies. In the U.S., primary leveraged loan and high-yield bond issuance in the third quarter fell to their lowest levels since the GFC; similarly, in Europe, year-to-date leveraged loan issuance was the lowest since the eurozone debt crisis in 2012. Although financing markets are not completely shut, loan and bond investors are demanding significant pricing concessions from borrowers, typically in the form of higher original issue discounts (OIDs). In September, the average OID for a new-issue single B-rated loan in the U.S. was 6.7%, up markedly from the 0.75% average at the end of 2021, according to S&P LCD data. Including the rise in base rates and spreads, the all-in yield for a new-issue single B-rated loan was 9.2%, compared with 5.2% at the end of 2021, significantly increasing the cost of capital for issuers, including private equity–backed companies. Additionally, banks are reluctant to underwrite new financing packages while they remain saddled with an estimated $80 billion in loan and bond commitments that they have not yet been able to syndicate. Private equity firms seeking acquisition financing have found some relief in the direct lending markets, which have been less impacted by market volatility and capital outflows than the syndicated debt markets have been. Many large-market buyouts announced year to date have featured fully underwritten debt packages provided by direct lending firms, including the $5.0 billion unitranche facility supporting the take-private acquisition of Zendesk—one of the year's largest buyout investments. Still, despite their willingness and capacity to remain active in the current environment, direct lenders are mindful of the uncertain economic outlook and have been seeking higher spreads, tighter documentation, and more-conservative structures for new debt facilities.

One bright spot in an otherwise tepid market has been take-private buyout activity. Buyout managers have taken advantage of depressed share prices to acquire quality companies at meaningful discounts to recent valuations. In the U.S., 11 take-privates were announced during the third quarter, accounting for 46% of total buyout value and for nine of the 12 deals greater than $1.0 billion in size. The largest transaction announced was the $8.4 billion buyout of tax compliance software developer Avalara by Vista Equity Partners, which was agreed upon at $93.50 per share—51% below the company's 52-week high. Avalara, which had raised capital from a number of venture capital firms prior to going public in 2018, represents one of a number of previously venture capital–backed technology companies that have regained interest from the private equity market as their share prices have fallen. Other notable such transactions announced during the third quarter include Vista's $3.7 billion acquisition of KnowBe4, which held an IPO in 2021, and EQT's $1.7 billion acquisition of Billtrust, which went public via a SPAC merger in late 2020.

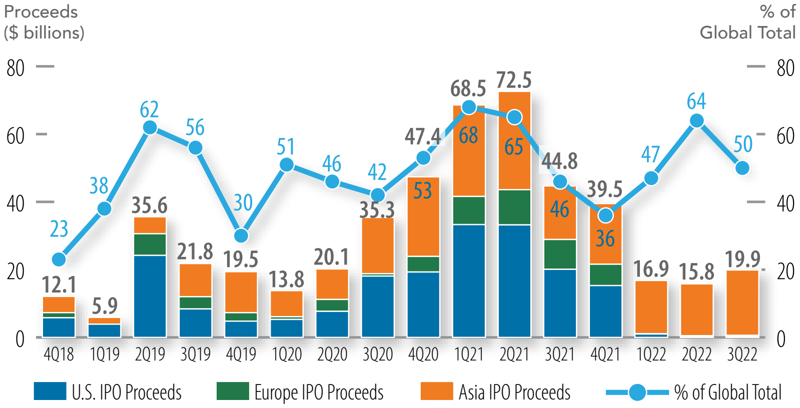
Global Exit Markets

Global exit market activity continued to cool during the third quarter due to increasing uncertainty and volatility in the financial markets. M&A exit activity worldwide totaled $118.2 billion during the third quarter, the third-consecutive quarterly decline and a decrease of 45% from the same period last year. Deal volume followed a similar trend, falling to 463 transactions during the quarter—the lowest level since the second quarter of 2020. The quarterly decline in exit value was most pronounced in Europe, where rising energy prices, a worsening economic outlook, and geopolitical risks have created additional near-term considerations for investors. M&A exit value in Europe fell 46% during the quarter to $24.9 billion; the U.S. and Asia experienced declines of approximately 5%.

Recent M&A exits have tilted toward sales to strategic buyers, although the disparity is not vastly different from historical norms. Strategics accounted for 80% of exit value during the third quarter, compared with an annual average of 72% over the past 10 years. The variance can be largely explained by a handful of notable exits announced during the quarter: Adobe's $20.0 billion acquisition of venture-backed Figma, Global Payments' $4.0 billion acquisition of Madison Dearborn–owned Evo Payments, and Roper Technologies' $3.7 billion acquisition of Thoma Bravo–owned Frontline Education. Adobe's acquisition of Figma marked the largest-ever acquisition of a U.S. venture-backed company, according to Pitchbook Data, Inc., a remarkable feat given current market conditions. Public market investors balked at the price—reported at roughly 50 times run-rate revenue—causing Adobe's stock to fall by 17% on the date of the announcement. Figma has a deep roster of venture capital investors, including early-stage investors Index Ventures, Greylock Partners, and Kleiner Perkins, and had last raised capital in June 2021 at a valuation of $10.0 billion.

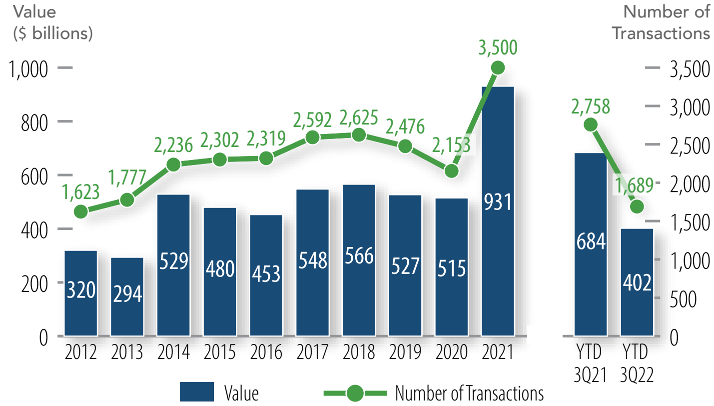
IPO markets continue to remain largely shut in most regions, with the exception of Asia, which has accounted for the predominant share of private equity–backed IPOs globally. In the U.S., just two venture-backed IPOs raised $254 million in proceeds during the third quarter, and no private equity–backed IPOs occurred for the third-consecutive quarter. The market continues to be hindered by poor performance from the wave of listings in 2021: through the end of the third quarter, 2021's venture-backed IPOs had generated an average return of –56%, while private equity–backed listings had generated an average return of –34%. Looking ahead, several of the notable companies previously expected to pursue a listing late in 2022 have announced plans to delay their IPOs until market conditions improve. As such, we believe that it is likely to take several quarters to see enough evidence of improving market conditions for IPO activity to fully regain steam.

Figure 1. Quarterly Global PE-Backed IPO Activity
At September 30, 2022



Source: Bloomberg, Renaissance Capital, and Pathway Research.

Figure 2. Global PE-backed M&A Exit Value & Volume
At September 30, 2022



Source: Mergermarket.

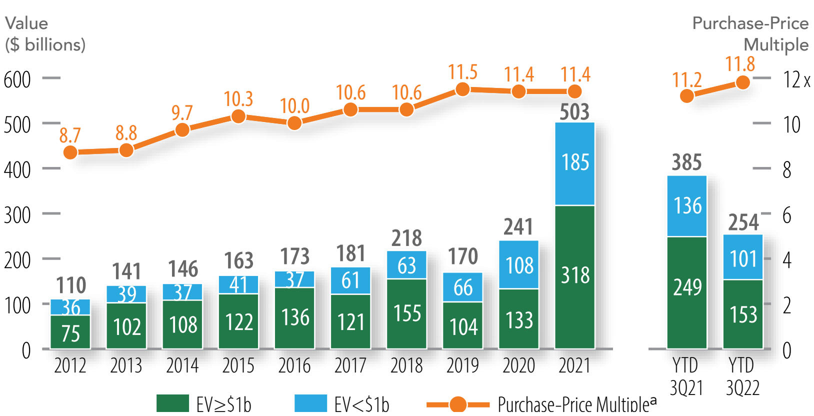
U.S. Buyout Markets

The resilience demonstrated in the U.S. buyout market during the first half of 2022 began to show signs of cracking during the third quarter: both deal value and volume fell to their lowest levels since the start of the COVID-19 pandemic. According to data provided by Refinitiv, U.S. buyout value totaled $59.2 billion during the third quarter, a decline of 36% from the prior quarter and of 50% from the third quarter of 2021. The third quarter marked the fifth-consecutive quarterly decline in buyout value, a sign that restrictive credit market conditions, an uncertain pricing environment, and growing macroeconomic uncertainty have begun to weigh more heavily on buyout managers' ability to successfully execute new transactions.

In line with trends during prior public market sell-offs, take-private buyouts have surged in 2022, offering upper-middle- and large-market buyout managers a new set of quality targets that were likely too expensive to acquire just a few quarters prior. A total of 11 take-private buyouts were announced in the third quarter, accounting for $27.5 billion in value, or 46% of the quarterly total. Through the first three quarters of the year, take-private buyouts accounted for $109 billion in value—on pace to be the largest annual total since 2007—and included eight of the 10 largest deals announced. Most notable among those were Vista Equity's $16.5 billion acquisition of Citrix Systems, Hellman & Friedman and Permira's $10.4 billion acquisition of Zendesk, and Vista's $8.0 billion acquisition of Avalara. Although the take-private market is likely to remain active over coming quarters, the ongoing dislocation in the high-yield and leveraged loan markets remains a restraining factor for new investment activity. It was reported in September that banks took losses of over $600 million trying to offload loans and bonds related to the Citrix acquisition, undercutting banks' appetite to underwrite new financings and driving financial sponsors to the direct lending market. According to PitchBook, all four take-private buyouts announced since late-July—Avalara, Ping Identity, Hanger, and ChannelAdvisor—are being financed by private lenders.

Valuation multiples have continued to remain elevated, averaging 11.8x EBITDA year-to-date 2022, according to S&P LCD. The higher valuation levels largely reflect the quality of companies that have transacted in the current environment, as well as a lag effect—the data represents completed acquisitions that were, in many cases, agreed upon many months earlier. General partners have been forced to structure their new investments more conservatively, maintaining higher interest coverage and contributing more equity. Several recent buyouts have even been announced as all-equity transactions with the expectation that they can be more-optimally capitalized once financing markets are more accommodative.

Figure 3. U.S. Buyout Investment Activity
At September 30, 2022



Source: Refinitiv, S&P 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 September 30, 2022

	2007	2021	YTD 3Q22
Purchase Price/EBITDA	9.7x	11.4x	11.8x
Equity Contribution %	30.9%	45.9%	45.8%
Debt/EBITDA	6.0x	5.8x	6.0x
EBITDA/Cash Interest	2.1x	3.5x	2.9x

Source: S&P LCD.

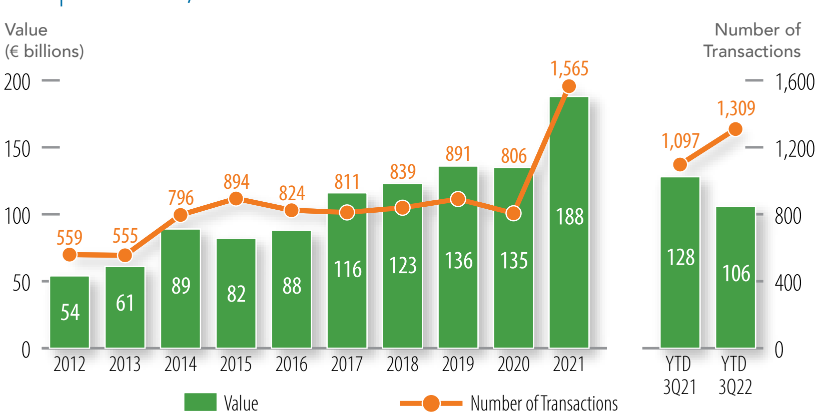
European Buyout Markets

European buyout activity has been choppy in 2022 to date, driven by a number of factors that have created meaningful uncertainty for the outlook of the European economy, including the war in Ukraine, inflationary pressures, concerns about a recession, and rapid political changes in several European countries. Buyout activity experienced a slow start to the year in the first quarter, found some recovery in the second quarter, and fell again sharply during the third quarter. It is not unusual for the third quarter to be quieter than the second quarter; this was the case for seven of the 10 prior years. However, the decline in third-quarter activity in 2022 went beyond seasonal patterns, falling 53% quarter over quarter, compared with an average of –19% for the prior 10 years. The aggregate transaction value of European buyouts announced in the third quarter was €22.4 billion, 31% below the third-quarter average for the five prior years, according to data provided by Refinitiv.

At the upper end of the market, buyout activity virtually dried out in the third quarter. For the first time in nine years, no large-cap deal (i.e., deals with an enterprise value in excess of €1.0 billion) was announced during the quarter. Only two upper-mid-market deals (i.e., deals with enterprise values between €500 million and €1.0 billion) were announced. In aggregate, upper-mid-market and large-cap deals represented 7% of the total transaction value in the quarter, significantly below the quarterly average of 59% for the past 10 years. The largest deal of the third quarter, with an enterprise value of €930 million, was Platinum Equity's acquisition of High Temperature Solutions ("HTS"), a French provider of refractory solutions to the steel, thermal, and foundry markets. This was followed by the acquisition of GreenYellow, a French manufacturer of semiconductors, by Ardian, Bpifrance, and Tikehau for €600 million. In contrast to the upper end of the market, the aggregate value of small-cap and lower-mid-market deals held up reasonably well in the third quarter: they were down only 11% and, as such, were in line with seasonal fluctuations. As a result, the average transaction value for buyouts announced in the quarter was €62.6 million, the lowest quarterly average since the GFC.

European credit markets have also experienced a significant drop in activity. According to data from UBS, European primary high-yield issuance declined by 53% from the already low total in the prior quarter to only €2.1 billion in the third quarter. This represents the lowest quarterly total since the GFC and is 89% below the quarterly average for the past 10 years. Spreads on BB-rated euro-denominated bonds experienced some volatility but ended the quarter close to where they began, around the 500-basis-point mark. Meanwhile, the leveraged loan market saw just €44.3 billion in aggregate loan volume in the first nine months of 2022, on track to record the lowest annual issuance since 2013, according to data from S&P LCD.

Figure 4. European Buyout Investment Activity
At September 30, 2022



Source: Refinitiv and Pathway Research.

Table 4. Notable European Buyouts Announced in 3Q22
At September 30, 2022

Buyer	Target	Country	Value (MM)
Platinum Equity	Imerys–HTS	France	€930
Ardian, Bpifrance, Tikehau	GreenYellow	France	€600
Stirling Square Capital	Eurofins Digital Testing	Belgium	€220
Investindustrial	Eataly	Italy	€200

Source: Refinitiv.

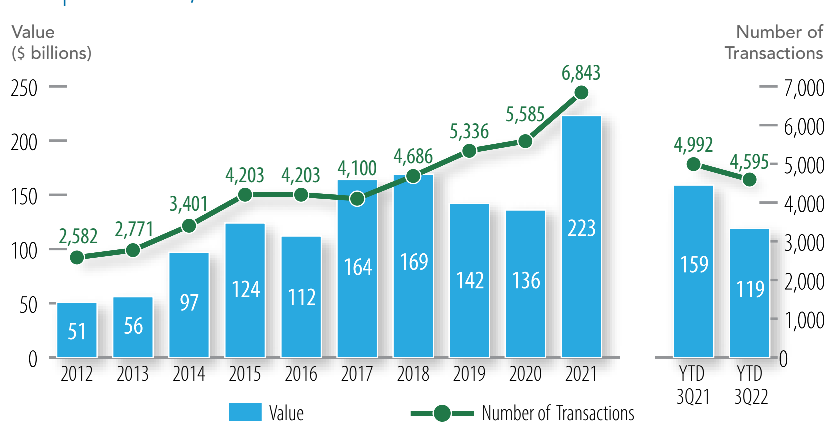
Asia Private Equity

Asia private equity investment activity trended down for the fourth-consecutive quarter and fell to a 5-year low of $25.0 billion in the third quarter, down 35% from the prior quarter and 64% from the prior year, based on data from *Asia Venture Capital Journal* (*AVCJ*). Compared with 2021, 2022 is shaping up to be a down year and has the potential to be the slowest investment year since 2016 as a result of bearish market sentiment, a softening global macroeconomic outlook, and the depreciation of major Asian currencies pushing investors to slow or pause investment activity. The decrease in investment activity was most pronounced in Australia, which saw reduced activity at the upper end of the market, and India, where the number of growth-stage IT investments during the quarter almost halved. China's private equity activity stayed relatively flat quarter over quarter, and despite falling 67% year over year, the country continues to represent the bulk of investment activity in Asia.

Bucking the global trend, the Asia IPO market remained relatively resilient: 236 companies raised $33.8 billion via initial public offerings on Asia-based exchanges, a 65% increase from the prior quarter. Private equity–backed companies accounted for 57% of the total proceeds raised and for 13 of the top 20 IPOs during the quarter. The strong total was primarily driven by domestic Chinese listings: the Shanghai and Shenzhen exchanges collectively registered 73% of the region's proceeds. Additionally, Chinese companies seeking to list in the U.S. and already-listed Chinese companies both received promising news during the quarter. In August, U.S. and Chinese regulators reached an initial agreement to allow U.S. regulators access to audited data of Chinese companies listed in the U.S., an important first step in the negotiations to ensure that U.S. exchanges remain a viable option for Chinese companies.

Private equity fundraising activity in Asia continued at a healthy pace. Although smaller and newer funds have faced a more challenging fundraising environment of late, established managers are proving still able to raise large sums and close on target. Sequoia Capital took just a few months to secure $8.8 billion in commitments for its latest set of China-focused funds, overcoming the fundraising challenges that have beset many of its peers in the country. Funds focused on India and Southeast Asia (SEA) continue to build traction as a result of limited partners making a bet on the long-term growth potential of these markets. Some pan-Asian groups have also set their sights on SEA and India and have signaled their intentions to allocate more capital to these emerging markets.

Figure 5. Asia PE Transaction Value & Volume
At September 30, 2022



Source: *AVCJ.*

Table 5. Largest Asia PE Investments in 3Q22
At September 30, 2022

Buyer	Target	Country	Value (MM)
Itochu Corp, Japan Industrial Partners	Hitachi Construction Machinery	Japan	$1,579
Coller Capital, Hahn & Company	Ssangyong C&E	South Korea	$1,500
The Carlyle Group	HCP Packaging	China	$1,500
Bain Capital	CitiusTech Healthcare Technology	India	$960
EUM Private Equity, Premier Partners	SK Ecoplant	South Korea	$465

Source: *AVCJ.*

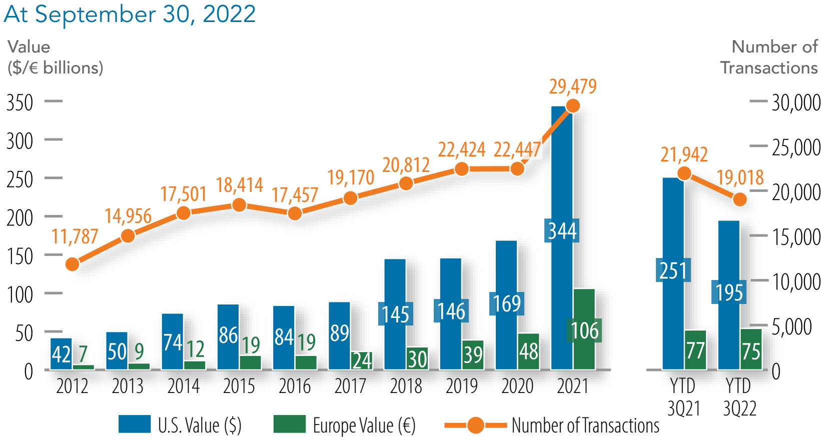
Venture Capital Markets

Venture capital investment activity fell sharply during the third quarter to its lowest level in more than two years, driven by a pullback in activity in later-stage rounds. According to the PitchBook-NVCA Venture Monitor, U.S. venture capital investment activity totaled $43.0 billion during the quarter, down 40% from the prior quarter. Activity in Europe followed suit, falling 26% quarter over quarter to €18.9 billion. The decline in activity in Europe came despite hosting four of the five largest rounds raised during the quarter, headlined by the $1.0 billion Series D round raised by Munich-based Celonis, which valued the company at $13.0 billion.

Late-stage investment activity in the U.S. tallied just $24.9 billion during the third quarter, nearly 50% below the prior quarter and the lowest total since the fourth quarter of 2019. The late-stage segment has come under pressure due to declining public market comparables, and many late-stage venture capital managers have worked closely with their portfolio companies to preserve cash rather than be forced to raise capital in a less favorable environment. The market has also been impacted by reduced investment from many nontraditional venture capital investors, including hedge funds, mutual funds, corporate investors, and private equity funds, which have poured capital into high-growth startups in recent years at lofty valuations. Median late-stage valuations have begun to fall as a result, dropping from $677 million in 2021 to $582 million to date in 2022, although they still remain well above median figures seen prior to last year. Looking ahead to the fourth quarter, it is likely that round sizes and valuations will continue to fall as the venture capital industry adjusts to current market fundamentals; however, it remains to be seen whether the slower pace of activity seen in the third quarter is a sign of a broader market pullback or just a temporary reprieve. The venture capital industry is on pace to achieve a record year in the fundraising market, providing general partners with ample dry powder to take advantage of new opportunities in coming quarters.

Exit markets for venture-backed companies continue to languish, providing limited options to companies searching for potential alternatives to raising capital in an uncertain financing market. Just two venture-backed companies held IPOs in the U.S. during the quarter, the most notable of which being the $213 million raised by biopharmaceutical company Third Harmonic Bio. Through the end of the third quarter, venture-backed companies had raised just $1.6 billion through 12 IPOs, down 97% in value from the same period last year and the slowest annual pace since 2009. M&A exit activity for venture-backed companies remained sluggish as well, although Adobe's $20.0 billion acquisition of Figma provided a glimmer of hope. The acquisition, which is expected to close in 2023, would represent the largest acquisition of a private U.S. venture capital company on record.

Figure 6. Venture Capital Transaction Value & Volume
At September 30, 2022



Source: PitchBook-NVCA Venture Monitor Report.

Table 6. Largest Venture Capital Deals in 3Q22
At September 30, 2022

Company	Select Investors	Region	Value (MM)
Celonis	Durable Capital Partners, Splunk Ventures	Germany	$1,000
TeraWatt Infrastructure	Vision Ridge Partners, Keyframe Capital, Cyrus Capital	U.S.	$1,000
Klarna	Sequoia Capital, Silver Lake	Sweden	$800
TerraPower	Cascade Investment, SK Group	Sweden	$750
SumUp	Bain Capital Tech	UK	$603

Source: PitchBook Data, Inc.

Private Credit Markets

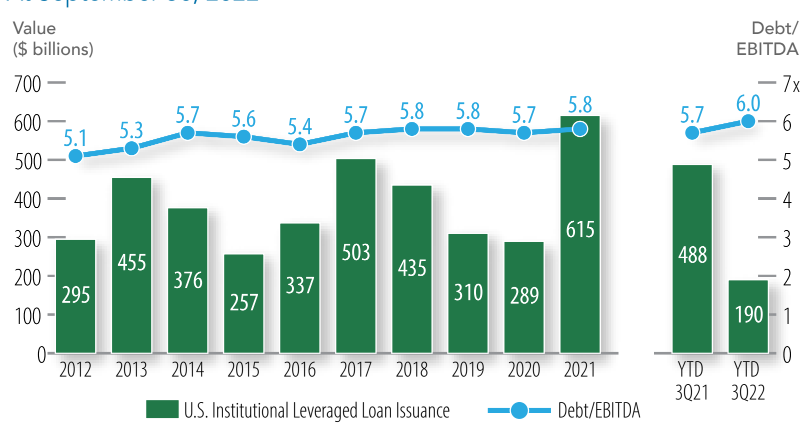
Liquid leveraged credit markets remained dislocated in the third quarter, driving primary bank loan and high-yield issuance to their lowest levels since the GFC and generating opportunities for direct lending firms to fill the void. U.S. institutional leveraged loan issuance totaled $21.4 billion in the third quarter, a 62% decline from the prior quarter and an 86% decline from the same period in 2021, according to data from S&P LCD. The third-quarter total was approximately half the issuance at the height of the pandemic in the second quarter of 2020 and the lowest quarterly total since the fourth quarter of 2009. Similarly, high-yield bond issuance totaled $18.9 billion in the third quarter, the lowest quarterly total since the first quarter of 2009. Market volatility and uncertainty damaged investor sentiment and weighed on secondary market prices, dampening appetite for new issuance and restricting borrowers' ability to access financing during the quarter. The average bid price for the Morningstar LSTA US Leveraged Loan Index (Morningstar LLI) was 91.9% at the end of September, down from 98.6% at the end of 2021. Despite the decline in loan prices, including interest income received year to date, the Morningstar LLI has generated a year-to-date total return of –3.25%, outperforming most other asset classes over the same period. As expected, direct lenders are taking advantage of constrained leveraged loan and high-yield bond markets to increase their market share over traditional debt syndication channels. For example, in August, a small club of direct lenders provided a billion-dollar recurring-revenue loan to support the take-private acquisition of identity security company Ping Identity. Despite their willingness and capacity to remain active in the current environment, direct lenders are mindful of the uncertain economic outlook and have been seeking higher spreads, tighter documentation, and more-conservative structures for new facilities.

Indicators of distress in the non-investment-grade credit markets remain at very low levels but have increased in recent quarters. The trailing 12-month leveraged loan default rate was 0.9% at the end of September, up from 0.3% at the end of the second quarter, according to S&P LCD. The notable increase was driven by the bankruptcy filings of drug manufacturer Endo Pharmaceuticals in August and movie theater chain Cineworld in September. The leveraged loan distress ratio, which measures the percentage of performing loans trading at below 80% of par, ended the third quarter at 5.8%, up from 2.8% in the second quarter but still well below the recent cycle high of 56.8% in March 2020. Although default rates remain relatively low, distressed debt and opportunistic credit investors have become more active in recent quarters, taking advantage of volatility and the dislocation in financing markets to acquire discounted secondary debt, provide capital solution financings, serve as anchor investors in select syndicated financings, and acquire "hung" bonds and loans from bank underwriters. In September, it was reported that a group of banks that had underwritten a financing package to support the buyout of cloud-computing company Citrix was forced to take $600 million in losses to offload $8.1 billion in loans and bonds to investors.

Figure 7. High-Yield Bond Spreads over U.S. Treasuries
At September 30, 2022

Source: BofA Merrill Lynch.

Figure 8. U.S. Institutional Leveraged Loan Issuance
At September 30, 2022



Source: S&P LCD.

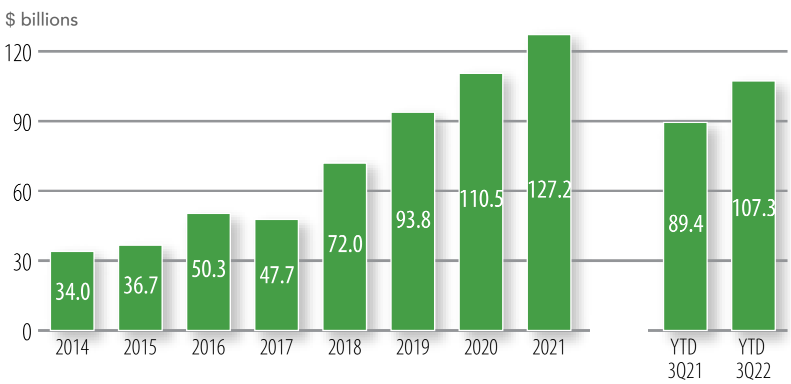
Private Infrastructure Market

Global infrastructure fundraising moderated from recently heightened levels in the third quarter, during which 10 funds raised a combined $10.5 billion—a decrease of 78% from the prior quarter. Third-quarter fundraising was driven by smaller, industry- or region-specific funds; two such funds, CI Energy Transition Fund I ($3.0 billion) and Ardian Americas Infrastructure Fund V ($2.1 billion), accounted for 49% of the quarter's total. In the fourth quarter, several large global funds are expected to hold closes, and with $107 billion raised year to date, 2022 is on pace to exceed the record $127 billion raised in 2021.

Global infrastructure investment value totaled $9.3 billion during the second quarter, a decline of 40% from the prior quarter. Through the third quarter, total transaction value amounted to $68.7 billion, down from the $91.8 billion transacted through the first three quarters of 2021. This is largely reflective of more-volatile markets and less accommodating debt markets; however, activity remains elevated relative to historical averages. Brookfield's $2.5 billion acquisition of Uniti Group (Australia), a diversified provider of telecommunication services, was the largest transaction completed during the third quarter—the second-consecutive quarter in which a public-to-private transaction represented the largest value. Through the third quarter of 2022, public-to-private transactions totaled $25.5 billion, or 37% of total transaction value for the period, as a result of large-cap managers increasingly exploring public markets for deal flow.

Sharp increases in inflation readings and associated interest rate hikes have created a unique infrastructure environment. As of the end of the third quarter, the U.S. consumer price index had increased by 8.2% from the prior year. In response, the U.S. Federal Reserve raised rates five times during the year to a current target of 3.0% to 3.25%, and further hikes are expected. Infrastructure assets are traditionally long dated and significantly debt financed, creating potential sensitivities to interest rate increases. However, these sensitivities are partially offset by the inherent pricing power and the contractual inflationary links that these assets typically possess. Consequently, infrastructure assets have historically significantly outperformed broader equity markets in elevated inflation and interest rate environments.

Figure 9. Global Private Infrastructure Capital Raised
At September 30, 2022



Source: PitchBook Data, Inc.

Table 7. Notable Infrastructure Deals in 3Q22
At September 30, 2022

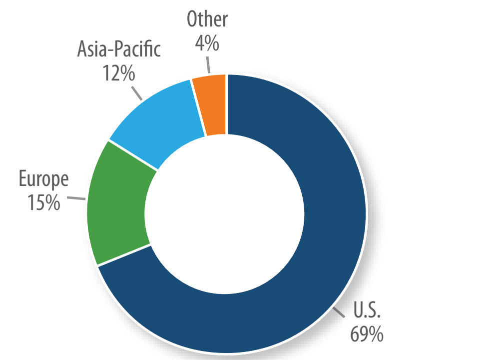
Asset/Company	Acquirer	Industry	Region	Deal Size (MM)
Uniti Group (Australia)	Brookfield Asset Management	Telecommunications	Australia	$2,540
Midcoast Energy Partners (Pipeline Assets in East Texas)	EnCap Flatrock Midstream	Energy	U.S.	$1,300
VLS Environmental Solutions	I Squared Capital	Renewables	U.S.	$1,000
Residencias de Estudiantes	PGGM	Social Infrastructure	Spain	$917
Hope Gas	Hearthstone Utilities	Energy	U.S.	$690

Source: PitchBook Data, Inc.

Fundraising Market

Indications of changing sentiment in the fundraising market became more evident in the third quarter. Worldwide private equity fundraising totaled $171 billion, according to data from Refinitiv and Pathway Research, a decline of 8% from the prior quarter and of 17% from the average over the prior four quarters. The asset class's relative outperformance of public markets during the first three quarters of the year has resulted in swelling private equity exposure for many limited partners, forcing them to make challenging decisions on how best to reduce their exposure to be closer to targeted ranges. Some limited partners have looked to the secondary market as a potential solution, some have decreased targeted commitments for 2023, and many others have simply made adjustments to their target allocation ranges to provide greater near-term flexibility. The resulting pressure has led to a highly competitive fundraising environment, extending fundraising timelines on average and providing additional hurdles for newer private equity firms to raise capital and expand their limited partner base. U.S. funds continue to shoulder the bulk of capital raised: they accounted for $121 billion during the quarter, or 71% of the global total, placing annual U.S. fundraising on pace to surpass $500 billion for the second-consecutive year. Notable U.S. funds raised during the quarter include Francisco Partners VII ($13.5 billion), Apollo Investment Fund X ($13.0 billion), and J.C. Flowers V ($11.0 billion).

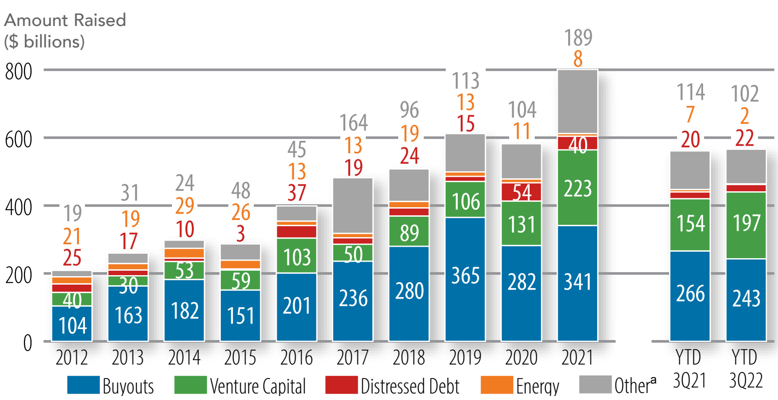
Figure 11. YTD 3Q22 Fundraising by Region



Source: Refinitiv and Pathway Research.
Notes: Percentages are based on net amounts raised, which are adjusted for fund-size reductions.
Data is continuously updated and is therefore subject to change.

On the heels of record venture capital fundraising since the beginning of 2021, activity for the strategy slowed considerably during the third quarter. Venture capital funds raised $44.0 billion in the third quarter, the lowest quarterly total since the fourth quarter of 2020 and a 34% decline relative to the quarterly average over the past year. Just five venture capital funds raised more than $1.0 billion during the quarter, the lowest count since the third quarter of 2020, led by Bessemer XII ($3.9 billion) and Qiming Venture Partners VIII ($2.5 billion). Buyout fundraising proved to be a bright spot: 108 funds raised $90.7 billion, the largest quarterly total of the year. Mega funds (i.e., those of $5.0 billion or greater) continued to play an outsized role in buyout fundraising during the third quarter: the four largest funds raised an aggregate $47.5 billion, of 52% of the quarterly buyout total. At least seven buyout funds still remain in the market targeting fund sizes of $15.0 billion or greater, making it likely that this trend will continue over coming quarters.

Figure 10. Global Fundraising by Strategy
At September 30, 2022



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 3Q22
At September 30, 2022

Fund	Strategy	Region	Amount (MM)
Francisco Partners VII	Buyout	U.S.	$13,500
Apollo Investment Fund X	Buyout	U.S.	$13,000
J.C. Flowers V	Buyout	U.S.	$11,000
Baring Asia Private Equity Fund VIII	Buyout	China	$10,030
Arsenal Capital Partners VI	Buyout	U.S.	$4,300

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.

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