



Pathway Research

Private Market Environment

4TH QUARTER 2021

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2021 Year in Review

Global equity markets resumed their rally in the final quarter of 2021, capping a second-consecutive year of strong returns for investors in the pandemic era. The MSCI All Country World Index generated a return of 6.8% during the quarter, increasing its full-year return to 19.0%. Developed markets outperformed emerging markets during the year, benefiting from a generally stronger monetary and fiscal policy response to the pandemic and an earlier reopening of their economies compared with their counterparts. In China, the country's major equity indices generated flat or negative returns in 2021, driven by slowing economic growth, a beleaguered real estate market, and a wide-ranging regulatory crackdown on the country's private sector. In the U.S., record corporate earnings, a resurgent economy, and ultra-loose monetary policy drove equity markets to new heights during the year. The S&P 500 generated a return of 28.7% in 2021, bringing its cumulative return since the first quarter of 2020 to 89.5%. Still, recent spikes in market volatility underscore the litany of risks and uncertainties facing investors. In November, news of the fast-spreading Omicron variant of the coronavirus, on the heels of the Delta variant, highlighted the ongoing public health crisis and raised concerns over its potential impact on economic growth. In January, minutes released from the Federal Reserve's December meeting indicated that the central bank may begin raising interest rates as early as this March in response to persistently high inflation readings, which caused a sharp sell-off in equity markets and a spike in the 10-year U.S. Treasury yield.

Global private markets experienced a banner year in 2021, outpacing even the industry's standout year in 2020 and setting new high-water marks for capital deployment, IPO and M&A exits, fundraising activity, and distributions. The industry's record-setting year was catalyzed by an unprecedented level of global M&A activity and a seemingly insatiable demand for high-quality assets from both strategic and financial buyers, as well as from public market investors. Worldwide M&A activity totaled \$5.9 trillion in 2021, an increase of 64% from 2020 and nearly 40% higher than the prior annual record set in 2015, according to data from Refinitiv. The torrid pace of deal-making activity in 2021 was driven by a confluence of factors, including highly accommodative credit markets, the ongoing global economic recovery that has boosted overall sentiment, a pull-forward of M&A activity to bypass a potential increase in tax rates in the U.S., an explosion of special purpose acquisition companies (SPACs) searching for merger targets, acquisitive corporate buyers with strong balance sheets, and private equity firms seeking to deploy their dry powder. SPACs, which raised more than \$150 billion in new capital in 2021 alone, accounted for 10% of M&A activity during the year, including the nearly \$40 billion merger of Grab, Southeast Asia's largest ride-hailing and food delivery company, with blank-check company Altimeter Growth.

Private equity firms rode the M&A wave, participating in the boom as both buyers and sellers. U.S.-based buyout investment activity totaled \$503 billion in 2021, more than double the pandemic-impacted prior year and surpassing the long-standing prior record of \$434 billion set in 2007. In Europe, buyout firms announced transactions totaling €204 billion in 2021, 50% higher than in the prior year and 22% higher than the prior record set in 2007. Technology companies accounted for nearly 40% of buyout-backed investment activity during the year, by far the largest sector of interest for the industry. Many technology companies, particularly software companies, feature attractive growth profiles, highly recurring revenue streams, and pricing power, making them attractive acquisition targets and well-suited to withstand a potential economic downturn or inflationary environment. Corporate carveouts and take-private buyouts were also prevalent, particularly at the upper end of the market, driven by strong support for transformational initiatives among corporate boards and shareholders. The largest transaction of the year, however, was the acquisition of family-owned medical supplies manufacturer Medline by a consortium of buyout firms for \$34.0 billion. This was the largest buyout investment since the \$45.0 billion take-private acquisition of TXU in 2007. General partners took advantage of robust conditions in the M&A market to sell existing

investments and return capital to their investors. Private equity-backed M&A exit activity totaled \$891 billion in 2021, a 77% increase from 2020 and well above the prior record of \$566 billion in 2018, according to Mergermarket. Notable PE-backed M&A exits during the year include the sale of pharmaceutical testing company PPD to Thermo Fisher Scientific for \$17.4 billion and the sale of satellite company Inmarsat to Viasat for \$7.3 billion. The strong pace of realization activity resulted in record distributions to limited partners: through the first three quarters of 2021 alone, private equity funds returned nearly \$500 billion in capital to investors—already more than 20% higher than the prior full-year record—according to Burgiss Private iQ.

The venture capital industry experienced an exceptional year in 2021, fueled by the acceleration of digital transformation across the global economy since the beginning of the pandemic and a surge in demand for the companies, products, and technologies enabling that change. The dislocation caused by the pandemic pulled forward the pace of technological adoption in virtually every industry sector by years, driving further penetration of e-commerce, remote working, cloud computing, fintech, virtual learning, and digital entertainment across the global economy. Venture capital firms flourished in this environment, generating the industry's highest returns of the past 20 years and record amounts of liquidity through M&A exits, initial public offerings, and SPAC mergers. The total exit value for venture capital-backed companies (which includes the market value of companies that have gone public through an IPO or SPAC merger) reached nearly \$775 billion in 2021, shattering the prior annual record, according to PitchBook-NVCA Venture Monitor. Notable venture-backed exits during the year include the sale of identity access management company Auth0 to Okta for \$6.5 billion, the IPO that valued software development tools provider GitLab at \$11.0 billion, and the \$8.7 billion SPAC merger of online personal finance company SoFi. Despite venture capital's success in 2021, there are signs that an increase in volatility for the asset class may lie ahead. Although venture-backed IPO activity reached its highest level in history in 2021—driven by strong demand for growth and technology stocks from public market investors—most companies that completed their IPOs during the year have performed poorly since their debuts: more than half of the U.S. venture-backed IPOs completed ended the year below their IPO prices, and the average return for all venture-backed IPOs was -18%. The poor aftermarket performance was driven in large part by the specter of rising interest rates and their impact on valuations, particularly for high-flying growth companies.

The private markets industry has performed well since the beginning of the pandemic. The industry's cautious outlook overall prior to 2020 and its active and control-oriented ownership model allowed it to withstand the swift and massive disruption caused by the pandemic and take advantage of the dislocation and ensuing recovery. Today, even as the industry has deployed record amounts of capital in a heady market environment, there are signs of moderation and prudence across the asset class. Quality general partners have remained focused on investing in resilient and high-quality businesses and are implementing value-creation plans focused on operational improvements and growth. Disciplined buyout firms are structuring investments with meaningful equity cushions and flexible debt facilities to better withstand unforeseen adverse scenarios. Private equity firms overall have sold investments at a record pace, realizing investment gains, returning capital to investors, and freeing up resources to manage new investments. These measures provide a solid footing in what may be a more volatile and less favorable market environment going forward, marked by tighter monetary policy, rising interest rates and inflation, an uneven global economic recovery, an ongoing public health crisis, heightened geopolitical risk, and a highly competitive investment environment. As we have seen in past cycles, the private markets industry is well-suited to take advantage of volatility and uncertainty, and we expect that experienced and disciplined general partners will continue to perform well in the prospective market environment.

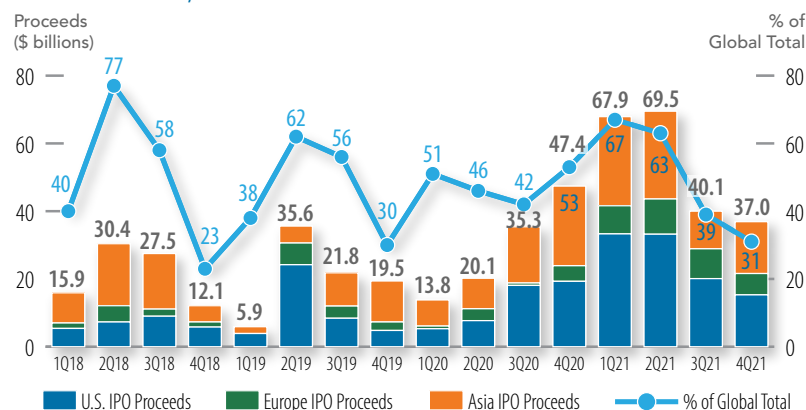
Global Exit Markets

Global exit market activity continued at a torrid pace through the end of 2021, concluding a record-setting year for both M&A and public market exits. General partners capitalized on the favorable market dynamics to return record distributions to their investors through a variety of exit paths. Through September 30, 2021, private equity managers worldwide distributed \$490 billion to their limited partners, according to Burgiss Private iQ, already 22% above the prior annual peak set in 2017. Based on Pathway Research estimates, we expect fourth-quarter distribution figures to exceed the pace of the prior three quarters, placing the private equity industry on track to meet approximately \$700 billion in total distributions during 2021.

M&A exit market activity jumped meaningfully in 2021, surpassing \$210 billion in exit value in each quarter of the year. Global PE-backed M&A exit value reached \$891 billion during the year, according to data from Mergermarket—an increase of 77% from 2020 and the largest annual figure on record by a wide margin. Deal volume followed suit: 3,326 transactions were announced during the year, up 54% from the prior year. The average deal size for announced M&A exits in 2021 was \$268 million—the largest such figure on record—supported by a number of outsized exits in the healthcare and technology sectors. Notable transactions included the \$17.4 billion sale of Carlyle- and Hellman & Friedman-backed pharmaceutical testing company PPD, the \$17.0 billion sale of Veritas Capital-backed healthcare technology provider Athenahealth, and the \$9.6 billion sale of EQT- and TA Associates-backed biotechnology company Aldevron.

Public market activity was equally strong during 2021 as a result of general partners seeking to take advantage of the spread between public and private valuation multiples to take their companies public at the strongest pace in more than two decades. During the year, 547 PE-backed companies raised \$214 billion in proceeds through IPOs globally—an increase in proceeds of 84% from 2020 and the largest total in history. A further 188 PE-backed companies accessed the public markets through announced mergers with SPACs, accounting for \$496 billion in exit value. Despite the record pace, mounting concerns related to the emergence of the Omicron variant and persisting inflation in the U.S. late in the year led to a sell-off for new listings. PE-backed companies that held IPOs in the U.S. during the year experienced an average decline in share price of 8% from IPO price to year-end. Similarly, 75% of the SPAC mergers completed since the start of 2020 ended the year trading below their reference prices. Although the IPO pipeline for 2022 still remains healthy overall, several notable IPOs that were expected in January 2022 have been postponed, and we expect general partners to closely monitor market conditions when considering taking their companies public in the coming months.

Figure 1. Quarterly Global PE-Backed IPO Activity At December 31, 2021



SOURCE: Bloomberg, Renaissance Capital, and Pathway Research.

Figure 2. Global PE-backed M&A Exit Value & Volume At December 31, 2021



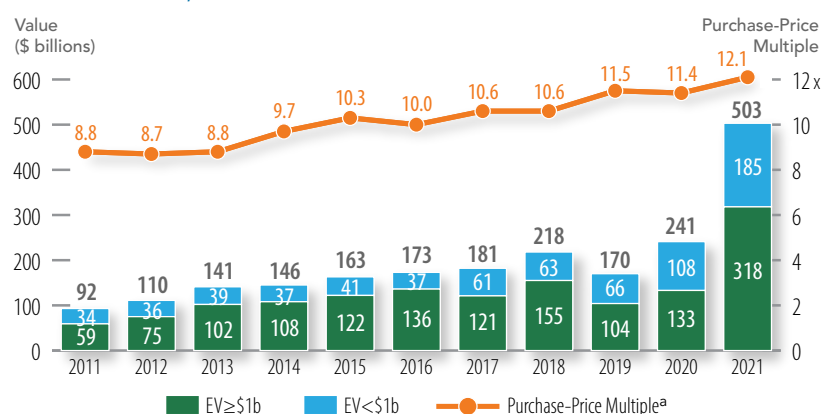
SOURCE: Mergermarket and Pathway Research.

U.S. Buyout Markets

U.S. buyout market activity experienced a banner year in 2021, eclipsing the industry's long-standing record for deal activity. During the year, U.S. buyout investment activity totaled \$503 billion, according to Refinitiv and Pathway Research—more than double the prior year's total and 16% above the previous record of \$434 billion set in 2007. The frenzied pace came despite lingering macro-economic headwinds, including uncertainty surrounding new coronavirus variants, concerns over rising inflation figures, and tepid U.S.–China relations. Buyout activity remained unphased, however, surpassing \$115 billion in value during each quarter of the year—the four largest quarterly totals since the second quarter of 2007. Activity was propelled by accommodative debt financing markets, the ongoing economic recovery from the pandemic, and high levels of dry powder held by buyout firms globally. General partners also cited an increase in deal flow, particularly in the middle market, from sellers looking to harvest gains under the current tax code ahead of potential changes proposed by the Biden administration in various iterations throughout the year. This contributed to a record \$185 billion being invested during the year in small- and middle-market companies (i.e., those with enterprise values of less than \$1.0 billion), an increase of more than 70% from the prior annual record.

Buyout activity remained elevated across most industries during 2021. General partners maintained a strong interest in companies that have demonstrated resilience during the pandemic, particularly in the technology (46% of deal value) and healthcare (14%) sectors. Technology-focused buyouts alone accounted for more than \$230 billion in value during the year, just shy of the full-year 2020 total for all industries. The sector benefited from the accelerated adoption of many technology-related solutions, which proved to be crucial for companies across a wide range of end markets that adapted to remote working environments and reevaluated business models and efficiencies. The technology sector accounted for 12 of the 20 largest buyouts announced during the year, led by the \$17.0 billion buyout of healthcare technology provider Athenahealth and the \$13.8 billion take-private of cybersecurity software provider McAfee. Buyout activity in the healthcare sector reached \$68.3 billion during the year, nearly double the industry's prior annual record, although roughly half of the annual total was tied to the \$34.0 billion take-private of medical supply manufacturer Medline Industries—the largest buyout since 2007. The prevalence of technology- and healthcare-related buyouts, which typically trade at premium valuation multiples, drove purchase-price multiples to an average of 12.1x EBITDA in 2021, according to S&P LCD, up from 11.4x EBITDA in 2020. Looking forward, we continue to see a high level of competition for attractive assets from both financial and strategic buyers, which is expected to keep both valuations and deal activity elevated through the early parts of 2022.

Figure 3. U.S. Buyout Investment Activity
At December 31, 2021



SOURCE: Refinitiv, S&P LCD, and Pathway Research.

NOTES: Amounts may not foot due to rounding. • EV=Enterprise value.

^aAverage PPM (as a multiple of trailing EBITDA) of all LBOs.

Table 1. U.S. Buyout Investment Statistics
At December 31, 2021

	2007	2020	2021
Purchase Price/EBITDA	9.7x	11.4x	12.1x
Equity Contribution %	30.9%	46.8%	47.0%
Debt/EBITDA	6.0x	5.7x	5.9x
EBITDA/Cash Interest	2.1x	3.4x	3.5x

SOURCE: S&P LCD.

European Buyout Activity

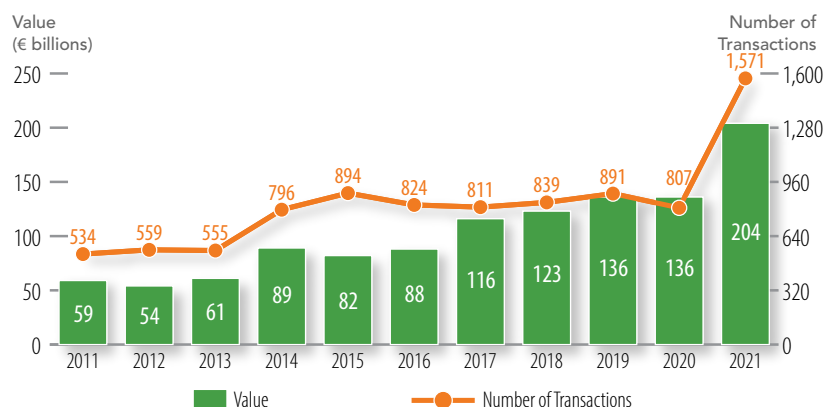
European buyout activity finished 2021 on a high: according to data provided by Refinitiv, the aggregate transaction value of European buyouts announced in the fourth quarter was €74.5 billion, an increase of 58% from the third-quarter value. Following four prior quarters of elevated activity, the fourth-quarter total represented the highest quarterly total on record and brought aggregate European buyout activity for 2021 to €204 billion—the highest annual total on record. The strong annual total significantly exceeds the previous record of €167 billion in 2007 and is 70% above the average for the five prior years.

The increase of activity in the fourth quarter was broadly based across deal size ranges, except for the small-cap market (deals with enterprise values below €100 million), which experienced a flat quarter. However, the increase in activity was particularly steep in the large-cap market (deals with enterprise values in excess of €1 billion), where the aggregate transaction value was up 103%—nearly four times the rate of increase of the remaining market segments. Activity in the large-cap market had dropped in spring but subsequently recovered well. As a result, the large-cap market represented 54% of the aggregate transaction value in the fourth quarter, which is in line with its 5-year quarterly average of 53%. In the fourth quarter, four deals were announced at or just above €4.5 billion: Clayton, Dubilier & Rice's take-private of WM Morrison Supermarkets; 3G Capital's take-private of Hunter Douglas, a manufacturer of window blinds and shades; Permira's take-private of Mimecast, a provider of cybersecurity solutions; and CVC's carve-out of Unilever's tea and coffee business (Ekaterra).

The UK and the Netherlands were each home to two of the four largest deals of the quarter. As a result, the UK and the Benelux region were the most active European regions in the fourth quarter, with aggregate transaction values of €27.4 billion and €16.3 billion, respectively. For the full year, the UK maintained its usual role as Europe's largest buyout market (€68.1 billion), but the Benelux region pushed the DACH region from its traditional second place, with €34.2 billion versus €32.4 billion, respectively.

European credit markets remained conducive to leveraged buyout activity. According to data from UBS, European primary high-yield issuance totaled €27.7 billion in the fourth quarter—an increase of 7% from the prior quarter. 2021 was already a record year before the start of its final quarter. For the full year, aggregate primary issuance was €125 billion, significantly exceeding the previous record of €93.6 billion set in 2017. Throughout 2021, the cost of debt remained close to historical lows: spreads on BB-rated euro-denominated bonds on average traded around 230–260 basis points.

Figure 4. European Buyout Investment Activity
At December 31, 2021



SOURCE: Refinitiv and Pathway Research.

Table 2. Largest European Buyouts Announced in 4Q21
At December 31, 2021

Buyer	Target	Country	Value (MM)
Clayton, Dubilier & Rice	WM Morrison Supermarkets	UK	€11,755
3G Capital	Hunter Douglas	Netherlands	€6,270
Permira	Mimecast	UK	€5,100
CVC	Ekaterra	Netherlands	€4,500
Carlyle	Accipiter Finance	Luxembourg	€2,155

SOURCE: Refinitiv.

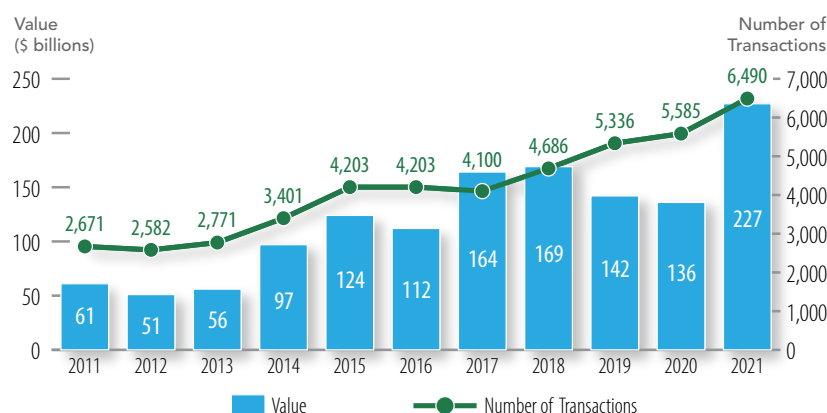
Asia Private Equity

During the fourth quarter, Asia private equity investment activity amounted to \$54.3 billion from 1,673 transactions—a 29% decrease in value quarter over quarter and a 33% increase year over year, based on data provided by *Asia Venture Capital Journal* (AVCJ). Despite a drop in investment activity in the fourth quarter, annual Asia private equity investment activity increased 66% from 2020, positioning 2021 as the most active year on record. The largest PE-backed investment in Asia for the quarter was the merger of D&J China with New Ease China, backed by a consortium of investors that included Warburg Pincus and Sequoia China.

India and Southeast Asia displayed strong momentum in 2021: both markets continued to ride the transition to become more-digital- and more-internet-driven economies. India's early- and growth-stage information technology investments increased by more than 300% year over year to \$34.7 billion in 2021, according to AVCJ. 2021 was also a year of important liquidity milestones for both markets. In November, India recorded its largest IPO ever: digital payment provider Paytm raised INR 183 billion (~\$2.5 billion) at a valuation of approximately \$19 billion on the Bombay Stock Exchange. Less than a month later, Southeast Asia's largest ride-hailing and food delivery company, Grab, became the largest company to close a SPAC merger, trading on the Nasdaq with a market capitalization of approximately \$40 billion. In China, following a series of sweeping regulatory reforms introduced during 2021, government officials began to provide further clarity on the new regulations. In January 2022, the China Securities Regulatory Commission finalized cybersecurity review rules for offshore IPOs, which, importantly, confirmed the exemption of Hong Kong listings from the review process. The exemption is expected to be a boon for Hong Kong's capital markets as the city solidifies its unique position as a source of foreign capital for Chinese companies that would otherwise face challenges pursuing U.S. listings. However, the shift has yet to be reflected in Hong Kong's IPO activities: during 2021, Hong Kong recorded a 20% drop in IPO proceeds relative to the prior year, according to data from the Hong Kong Stock Exchange, and eight of the 10 largest IPOs on the exchange ended the year below their IPO prices.

Fundraising for Asia private equity funds in 2021 fell 24% year over year to \$75.0 billion, according to data from Refinitiv. The decline was due largely to a steep drop in RMB fundraising, according to AVCJ. Fundraising activity was affected both by COVID-19, which caused investors to become more selective due to the absence of in-person meetings, and by the chilling effect of China's regulatory reforms, which caused limited partners to take a wait-and-see approach to new commitments to Chinese funds. Notably, 75% of USD capital raised for Chinese funds closed in the first half of the year, prior to the introduction of the regulatory reforms.

Figure 5. Asia PE Transaction Value & Volume
At December 31, 2021



SOURCE: AVCJ.

Table 3. Largest Asia PE Investments in 4Q21
At December 31, 2021

Buyer	Target	Country	Value (MM)
Sequoia China, Warburg Pincus	DNE Group	China	\$1,500
Abu Dhabi Investment Authority, Fidelity International, Primavera, Temasek	GoTo Group	Indonesia	\$1,300
Huada Semiconductor, CICC Capital, Cathay Capital, CPE, Hopu	GTA Semiconductor	China	\$1,251
CITIC Group, Redview Capital, Virtue Capital	Nanjing Linghang Technology (T3)	China	\$1,206
Oceanpine Capital, Vivo Global, CPE, GGV	Chipone Technology	China	\$1,020

SOURCE: AVCJ.

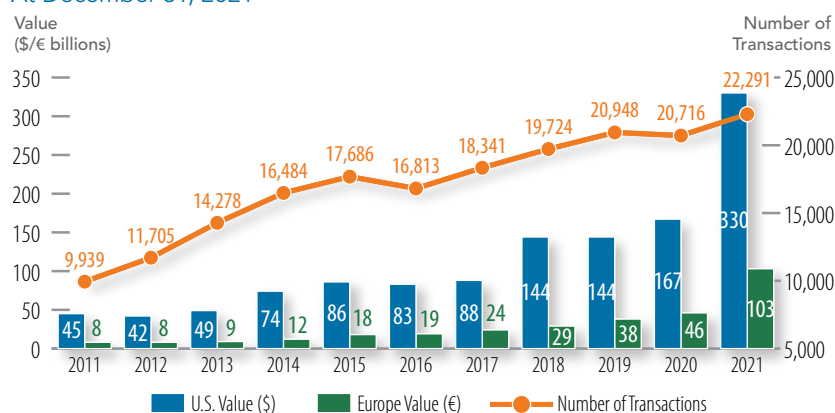
Venture Capital Markets

Spurred by significant amounts of dry powder and an influx of interest from non-traditional investors, the venture capital market experienced an unprecedented year during 2021. Fourth-quarter investment activity in the U.S. set yet another record, with \$88.0 billion invested via 3,536 transactions, according to the PitchBook-NVCA Venture Monitor. The strong fourth-quarter figure brought the annual investment total to \$330 billion, nearly double the prior annual high of \$167 billion set during 2020. Investment activity was broadly based during the year: each investment stage (i.e., angel/seed, early, and late) experienced a year-over-year increase in deal value of greater than 50%, led by late-stage activity at 103%. The increase was driven by growth in both the average size of rounds raised and the number of financings completed, the latter of which rose 37% year over year. According to Crunchbase, Tiger Global was the most active investor during the year, executing 350 deals, followed by Insight Partners, which completed 245 deals. Mirroring the U.S., venture capital investment activity in Europe reached new heights during 2021: €103 billion was invested via 9,662 transactions—an increase in value of 120% from the prior year. Headlined by Northvolt's \$2.75 billion Series E round of financing during the second quarter, the late-stage European venture capital market dramatically outpaced the other funding stages, largely as a result of significant investment activity from SoftBank Vision Fund, which led or co-led 21 late-stage financing rounds in Europe during the year.

Venture-backed IPOs flooded the public markets during 2021: activity reached its highest level since the dot-com bubble of 2000. In the U.S., 30 offerings raised \$10.9 billion of proceeds during the fourth quarter, bringing the annual total to a record \$58.1 billion raised via 101 IPOs. Fourth-quarter venture-backed listings were led by the \$2.5 billion offering of Nubank, a Brazilian digital bank, which had previously raised capital from a myriad of firms, including Sequoia Capital, Ribbit Capital, TCV, and Founders Fund. Despite the substantial amount of liquidity generated through IPOs in 2021, investor sentiments and market reception were mixed: venture-backed IPOs during the year traded down an average of 18% from IPO date to year-end amid concerns regarding inflation and proposed rate hikes by the Federal Reserve. Direct listings were also a prominent feature in 2021: six companies pursued this route, led by cryptocurrency exchange Coinbase, which held the largest direct listing in Nasdaq history and the seventh-largest U.S. listing of all time.

During the year, M&A exit activity in the U.S. and Europe for venture-backed companies totaled \$92.7 billion and €25.2 billion, respectively, which were both record totals. The most-notable transactions, however, were several large SPAC mergers, led by the nearly \$40 billion SPAC merger of Singapore-based Grab. Despite momentum early in the year, SPAC merger activity markedly slowed toward the tail-end of the year as a result of trading losses, poor public market performance, and high SPAC redemption rates. Grab, which began trading in December 2021, ended the year at \$7.13 per share, down 29% from its reference price.

Figure 6. Venture Capital Transaction Value & Volume
At December 31, 2021



SOURCE: PitchBook-NVCA Venture Monitor Report.

Table 4. Notable Venture Capital Deals in 4Q21
At December 31, 2021

Company	Select Investors	Value (MM)
Commonwealth Fusion Systems	Tiger Global Management, Coatue Management, Khosla Ventures	\$1,800
Sierra Space	General Atlantic, Coatue Management, Moore Strategic Ventures	\$1,412
Lacework	Sutter Hill Ventures, Altimeter Capital Management, Tiger Global Management	\$1,300
Thrasio	Silver Lake, Advent International, Oaktree Capital Management, Shrug Capital	\$1,000
N26	Coatue Management, Third Point Ventures, Dragoneer Investment Group	\$900

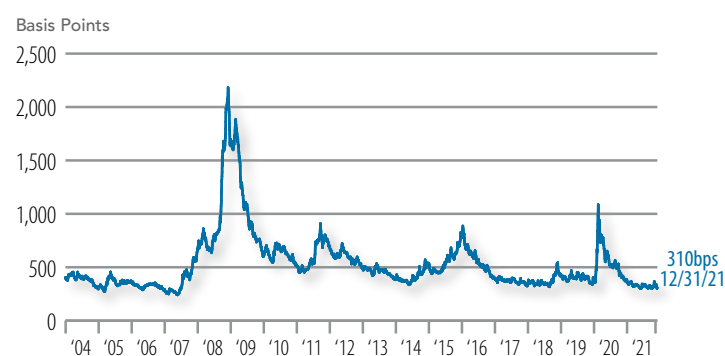
SOURCE: PitchBook Data, Inc.

Private Credit Markets

The direct lending asset class continued to expand its addressable market in 2021, structuring and leading large-scale financings that heretofore were possible only in the syndicated loan and high-yield markets. During the year, direct lenders underwrote at least 10 multibillion-dollar debt facilities, including the \$2.6 billion unitranche loan supporting the acquisition of Stamps.com and the \$1.8 billion annual recurring revenue (ARR) loan supporting the acquisition of Medallia. The ability of direct lenders to participate at scale in leveraged credit financings is the result of a decade-long trend of traditional bank lender retrenchment from middle-market leveraged lending, as well as strong capital inflows and investor interest in the private credit asset class amid a low-interest-rate and low-default-rate environment. Additionally, borrowers have been drawn to direct lenders' ability to structure bespoke financing solutions and to underwrite loans more efficiently and more reliably than the syndicated debt markets. Direct lending funds raised \$78.2 billion in 2021, up 7% from the prior year and just below the record amount raised by the industry in 2017. However, the total amount raised by direct lenders during the year is likely significantly understated because it does not include capital raised through separate accounts or single-investor funds. In the syndicated debt markets, primary issuance in both the leveraged loan and high-yield markets reached record heights in 2021, helping fuel the M&A boom. Institutional leveraged loan issuance totaled \$615 billion in 2021, more than double the prior year's total and 22% above the prior record set in 2007. The average yield for a new B-rated leveraged loan was 4.67% at the end of 2021, compared with 5.21% at the end of 2020.

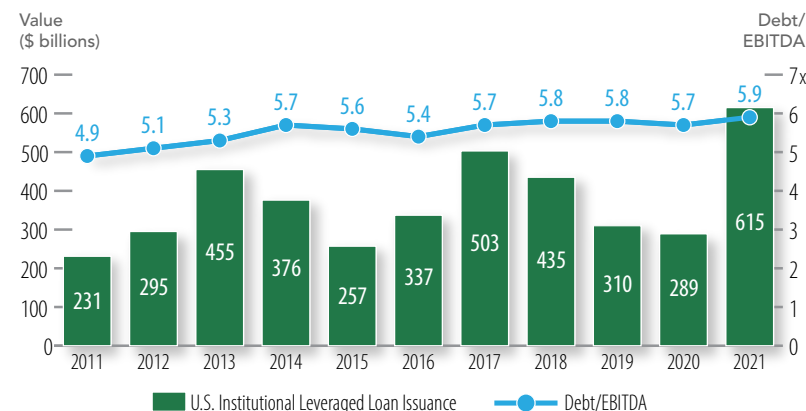
Indicators of distress in the leveraged credit markets fell to multi-year lows at the end of 2021, in strong contrast to the pandemic-driven dislocation and spike in volatility in the first half of 2020. The trailing 12-month U.S. high-yield default rate fell to 0.5% at the end of 2021, well below the 4.5% rate in 2020 and the lowest annual default rate on record, according to Fitch Ratings. Total default volume during the year was \$6.9 billion, approximately 10% of the default volume in 2020. Market conditions improved significantly for many at-risk non-investment-grade companies over the past year, driven by the reopening of the economy, the unprecedented scale of fiscal and monetary policy support to counter the impact of the pandemic, a rebound in energy commodity prices, and accommodative credit markets, which allowed many companies to access liquidity and extend maturities. The quick snap-back in leveraged loan and high-yield bond prices from their March 2020 lows left a relatively small window of opportunity for investors to deploy capital in traditional corporate distressed opportunities. However, distressed debt investors believe that there are many companies and industry sectors that remain vulnerable to an economic downturn and anticipate an increase in volatility and distressed opportunities, driven in part by the commencement of the Federal Reserve's monetary tightening cycle.

Figure 7. High-Yield Bond Spreads over U.S. Treasuries
At December 31, 2021



SOURCE: BofA Merrill Lynch.

Figure 8. U.S. Institutional Leveraged Loan Issuance
At December 31, 2021



SOURCE: S&P LCD.

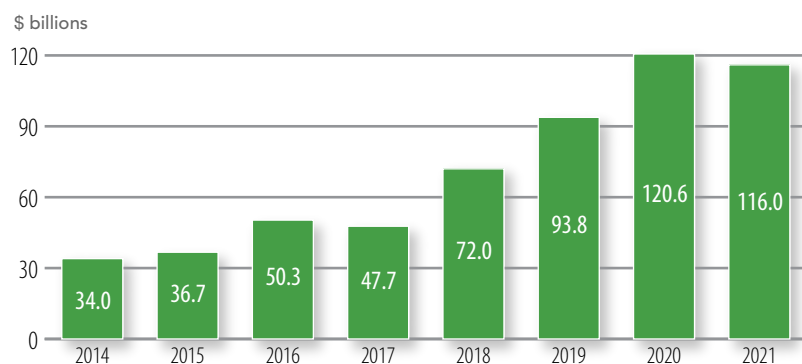
Infrastructure

Global infrastructure fundraising moderated from recently heightened levels during the fourth quarter of 2021: five infrastructure-focused funds raised a combined \$21.3 billion, marking a decrease of 43% from the prior quarter but remaining largely in line with the 5-year quarterly average. The continued resilience in infrastructure fundraising brought the full-year total to \$116 billion—the second-consecutive year in which fundraising activity exceeded \$100 billion. Fourth-quarter fundraising activity was driven primarily by EQT Infrastructure V (\$18.1 billion), which accounted for 85% of the quarter's total. Notably, there were 29 funds that raised in excess of \$1.0 billion during 2021, including three that raised more than \$10 billion: EQT Infrastructure V (\$18.1 billion), KKR Global Infrastructure IV (\$15.0 billion), and ISQ Global Infrastructure III (\$12.1 billion).

Infrastructure investment activity experienced a strong uptick during the fourth quarter: 60 investments were completed for an aggregate transaction value of \$63.3 billion—the most active quarter on record and an increase of 107% from the quarterly average for the first three quarters of 2021. Sixteen investments exceeded \$1.0 billion in transaction value during the quarter; the two largest deals—KKR's and GIP's \$15.0 billion acquisition of data center operator CyrusOne and the \$14.9 billion acquisition of Sydney Airport by a consortium of investors that included IFM and GIP—accounted for nearly 50% of total quarterly activity. Underpinned by a strong fourth quarter, global infrastructure investment activity totaled a record-setting \$155 billion during the year—an increase of 86% from the 2019 record.

In light of a sharp increase in inflation driven in part by accommodative monetary policy, stimulative fiscal policy, and supply chain constraints, investors are turning their attention to infrastructure for the potential protective qualities it offers against rising prices. At year-end, the U.S. consumer price index increased by 7% from the prior year—the largest increase since 1982—and eurozone inflation rose a record 5% in December compared with the prior year. Due to the underlying characteristics of its assets and cash flows, infrastructure remains well-positioned to combat an inflationary environment. The essential nature and inelastic demand of infrastructure assets, accompanied by the contractual inflationary links often inherent with these assets, offer investors both inflationary protection and upside potential. Additionally, commodity- and construction-price increases limit the availability of supply and competition for essential infrastructure assets, and currency depreciation can result in quicker debt repayments, further increasing the attractiveness of the asset class during inflationary periods.

Figure 9. Global Private Infrastructure Capital Raised
At December 31, 2021



SOURCE: PitchBook Data, Inc.

Table 5. Notable Infrastructure Deals in 4Q21
At December 31, 2021

Asset/Company	Acquirer	Industry	Region	Deal Size (MM)
CyrusOne (NASDAQ: CONE)	Global Infrastructure Partners, KKR	Telecommunications	U.S.	\$15,000
Sydney Airport (ASX: SYD)	AustralianSuper, Global Infrastructure Partners, IFM Investors, Qsuper	Transportation	Australia	\$14,909
Open Fiber	CDP Equity, Macquarie	Telecommunications	Italy	\$3,072
Ermewa Group	Caisse de dépôt et placement du Québec, DWS	Transportation	France	\$2,905
Carrix	Blackstone	Transportation	U.S.	\$2,500

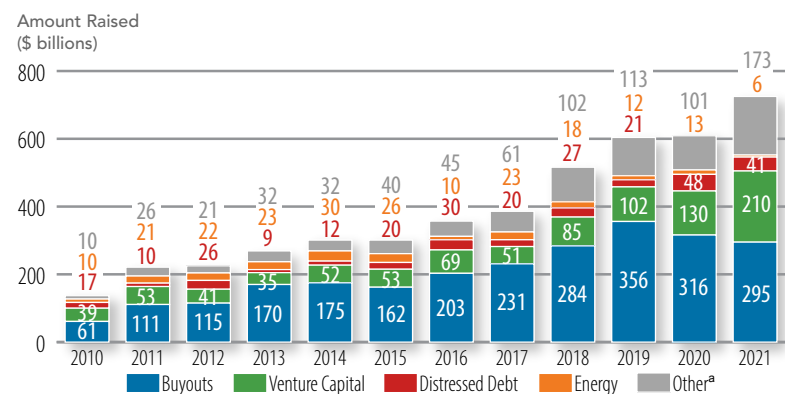
SOURCE: PitchBook Data, Inc.

Fundraising Market

Following a strong third quarter, worldwide private equity fundraising continued at a brisk pace during the fourth quarter, reaching \$197 billion, according to data from Refinitiv and Pathway Research. The record-breaking pace of fundraising activity during the second half of the year brought the 2021 total to \$726 billion and represented the largest annual amount on record—more than 19% greater than the previous annual record set in 2020. The increase in fundraising value was driven by continued success from large, proven fund managers that were able to raise successive funds on expedited timelines and at increasingly larger sizes. During the year, 16 mega funds (i.e., those of \$5.0 billion or greater) were raised, accounting for \$157 billion of commitments, or 22% of the annual global total. The six largest fundraisings during the year were all by U.S.-based managers, led by Hellman & Friedman X (\$24.4 billion), KKR North America Fund XIII (\$18.5 billion), and Insight Partners XII (\$18.2 billion). Notably, only the Asia-Pacific region experienced a year-over-year decrease in fundraising activity: the \$75.0 billion raised in the region during 2021 marked a year-over-year decrease of 24%. Europe- and U.S.-focused funds both hit record peaks, at \$500 billion and \$122 billion, respectively, surpassing the previous records set in 2019.

Significant fundraising increases in the venture capital and special situations strategies helped offset a moderate decline in annual buyout fundraising during the year. Venture fundraising totaled \$210 billion, an increase of 61% from 2020 and the largest annual amount on record, surpassing the \$148 billion raised during the dot-com bubble in 2000. The elevated pace of activity was fueled by a combination of accelerated fundraising timelines for many venture managers who quickly put to work their existing funds and the scale of many late- and growth-stage funds, raised both by traditional late-stage investors and by early-stage investors seeking larger pools of capital to follow on to their strongest-performing investments in subsequent financing rounds. Noteworthy venture funds raised during 2021 include Tiger Global Private Investment Partners XV (\$8.8 billion), Flagship Pioneering Fund VII (\$3.4 billion), and Bessemer Venture Partners XI (\$2.5 billion). Although buyout fundraising experienced a year-over-year decrease of 7% during 2021, the \$295 billion raised during the year by buyout funds still tallies as the third-largest annual total on record, trailing only the two prior years. U.S.-based funds accounted for 70% of the annual buyout total, bolstered by 45 funds that raised in excess of \$1.0 billion during 2021. Despite lingering global uncertainty wrought by COVID-19, we expect several large-cap buyout managers to come to market in 2022 targeting record-setting fund sizes, which is likely to keep both buyout and total fundraising figures elevated in coming quarters.

Figure 10. Global Private Equity Fundraising by Strategy
At December 31, 2021



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. • ^aComprises special situations and other fund strategies not classified as buyout-, venture capital-, credit-, or energy-focused.

Table 6. Notable Funds Raised in 4Q21
At December 31, 2021

Fund	Strategy	Region	Amount (MM)
Insight Partners XII	Special Situations	U.S.	\$18,240
Tiger Global Private Investment Partners XV	Venture Capital	U.S.	\$8,800
General Atlantic Investment Partners 2021	Special Situations	U.S.	\$7,800
Permira VIII	Buyouts	Europe	\$6,368
Advent Global Technology II	Buyouts	U.S.	\$4,000

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.

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