2021 Investment Review

Rhyme Time

If there is one thing professional investors learn over the course of their careers, it's this: History rhymes. Each day brings its own set of challenges, but if you look carefully over long spans of time, you can find similarities between current times and historical periods. This can be heartening during growth and peacetime, or painful, as during economic weakness and tumultuous periods. We have most definitely turned the page into a more volatile and violent period. Our prayers are for those who suffer in this difficult time.

At the start of 2021, the U.S. faced overvalued stock markets, overstretched government debt levels, rising inflation, interest rate concerns, and the pandemic. Smoldering issues remained and sometimes turned hot: geopolitical and trade tensions with China, North Korea testing nuclear missiles, and Russian troops on the border of Ukraine (subsequent to the drafting of this note, Russia invaded Ukraine). Western wildfires, significant weather events, and natural disasters, such as the volcano/tsunami in Tonga, added to the eventful year.

Disruption from the COVID-19 pandemic continued, and continues, to impact most aspects of our lives. Globally, travel remained curtailed early in 2021, reopened substantially during the spring/summer as COVID cases ebbed, then wobbled again in the fall as the omicron variant drove case rates sharply higher. Retail shelves held fewer goods as sick employees couldn't deliver or stock them. Yet, U.S. consumers continued to buy global goods. Household Spending rose 3.4% versus January 2020 — before the pandemic was declared.[1] Ongoing unemployment claims fell to 1.6 million at the end of December 2021. That's less than each of the last three weeks in February of 2020 — before the pandemic shutdown.[2]

We received not one, but multiple, COVID-19 vaccines in the fastest time from virus identification to vaccine rollout in history. We fought both the virus and our frustrations. The excitement that followed the massive vaccination effort led people back to many of the things they had missed during the worst of the pandemic: parties, travel, restaurants, concerts, and shows. Broadway reopened to fully masked and vaccinated audiences in New York. Moulin Rouge! The Musical won 10 Tony Awards. Beaches were full during the summer of 2021, and many families chose to spend time with friends and relations over the Thanksgiving and Christmas holidays — rejoicing!

As it began to look like we could go back to *normal*, concerns about inflation smoldered in 2021. The Fed vowed to fight it. Despite initial concerns that tighter monetary conditions would squelch growth, equity market participants drove the S&P 500 stock index to new highs 70 times during the year. Consumer Price Inflation (CPI-U) ended the year up 7% from December 31, 2020.

[1] USA Facts, Standard of Living Recovery Indicators, Household Spending. Data from Bureau of Economic Analysis.
[2] USA Facts, Unemployment Claims, Ongoing.

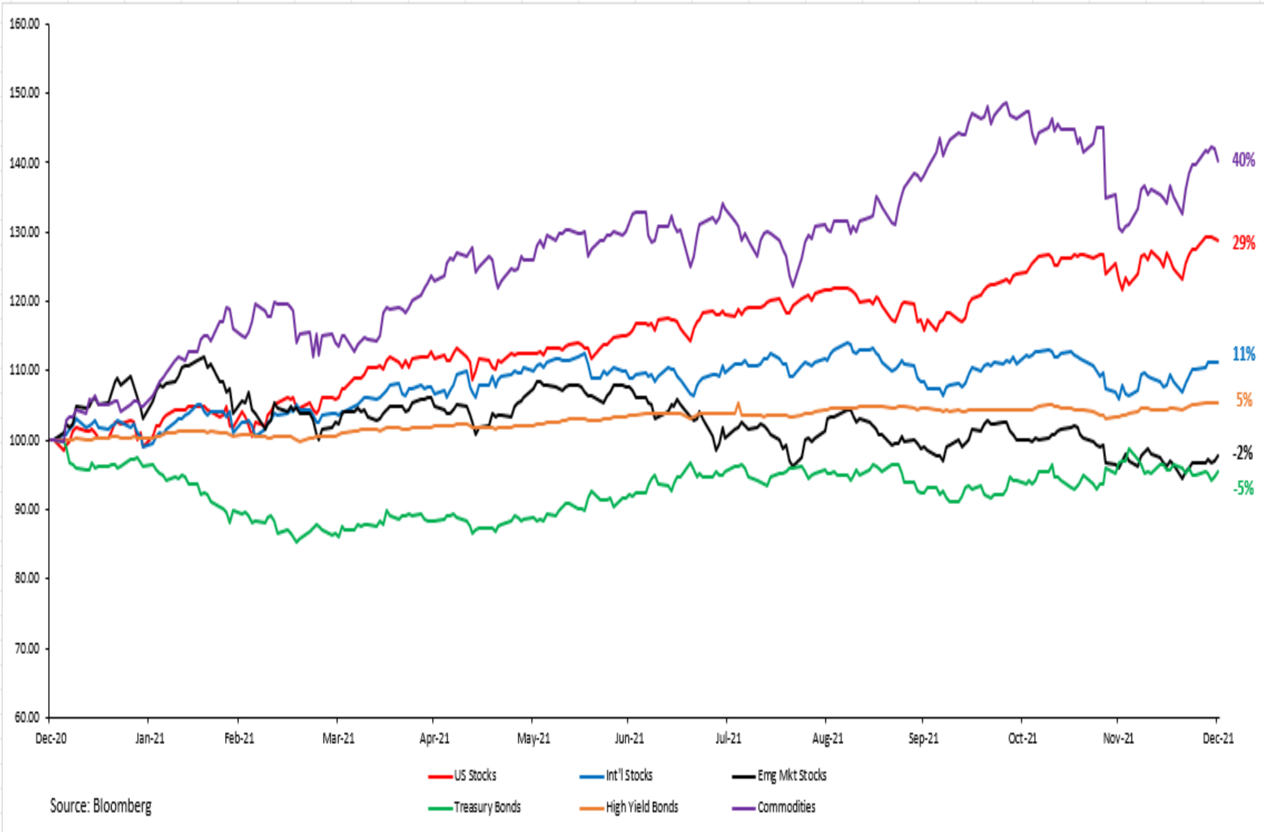
Market Themes in 2021

- COVID-19: vaccines, omicron, *when will this end?* syndrome
- Inflation and the Fed: interest rates set to rise
- Energy prices rose as hopes for an economic reopening became more of a reality
- Signs of a change in equity leadership started to appear — winners from 2020, such as Facebook, Amazon, and many other technology companies, fell from their highs but remained winners for 2021
- China's economic growth slowing: China's government began working to rein in debt levels, especially in the property sector, thus slowing the economy at the same time its zero-COVID policy also slows economic growth
- U.S. and global supply chain bottlenecks — could actually be worker shortages, which are much more difficult to solve without upward wage adjustments — inflationary

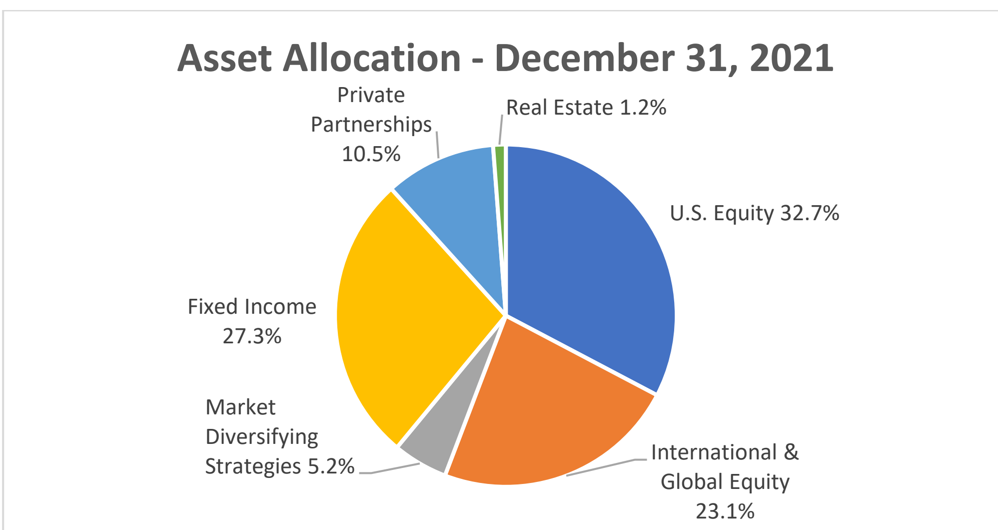
A snapshot of global market performance is shown in the graph that follows. Some highs and lows:

- U.S. stocks did very well
- Long-term U.S. Treasuries weakened as interest rates rose
- Diversified commodities performed well as energy recovered from 2020's drubbing
- International developed markets lagged the strong U.S. markets
- Emerging market stocks fell on concerns about the strength of the Chinese economy
- Broad-based real estate stocks did well, rebounding from 2020
- Initial Public Offerings from venture capital firms remained strong — pushing venture returns higher

Global Market Performance – 2021



The Board of Pensions uses a disciplined approach to asset allocation and the power of its long-term investment horizon in an effort to avoid unforced errors in its investment process.



Source: BNY Mellon

By looking forward through near-term volatility and market turmoil, the Board can maintain or add to growth assets, like stocks, when other investors need to stay defensive. The annualized return impact of the Board's long-term investment horizon and disciplined asset allocation process are shown below.

Annualized Returns as of December 31, 2021

	20 yrs	**15 yrs**	**10 yrs**	**5 yrs**	**3 yrs**	**2 yrs**	**1 yr**
Total Portfolio	**8.0%**	**7.4%**	**10.1%**	**11.6%**	**15.4%**	**14.3%**	**15.0%**
US Equity	10.5%	11.1%	16.8%	18.5%	26.2%	24.5%	26.3%
International Equity	7.6%	5.1%	8.5%	10.1%	13.8%	9.4%	6.5%
Global Equity					24.8%	22.9%	21.9%
Marketable Diversifying Strategies		2.6%	3.9%	5.8%	8.1%	6.9%	12.4%
Fixed Income	5.0%	4.6%	3.8%	4.2%	5.6%	4.0%	-0.3%
Private Partnerships	13.3%	11.1%	12.4%	14.8%	15.6%	23.3%	45.9%
Real Estate		4.3%	11.4%	9.8%	11.0%	10.2%	22.8%

Source: BNY Mellon

Despite a difficult and volatile year in so many ways, the Board of Pensions Balanced Investment Portfolio did well. Long-term returns remained strong and more than sufficient to provide needed benefits to plan members.

Looking ahead, we see both risks and opportunities. The following graphic highlights a few of the risks we are discussing in 2022.

[3]

History rhymes. Today, the world is a risky place, but there is much to be optimistic about in 2022. Vaccines are widely available and likely to be ready for innoculating our youngest family members soon — so caretakers can feel more comfortable going back to work. Many businesses are beginning their return-to-office efforts. As people return to their non-home offices, there will be more activity to support economic growth, people's livelihoods, and thus the markets.

---

[3] Ang, Carmen, Visual Capitalist, January 28, 2022, [Which Global Risks Have Worsened During the Pandemic?](#) Data from Global Risks Report, World Economic Forum.

The Board invests for the long term. The markets keep turning and they will churn from time to time, but investors have, and will continue to, adapt. Maintain a risk aware stance and have a plan for what you will do when market volatility rises.

With great hope for your good health and that of your loved ones in 2022, may peace be with you and with us all.

Don Walker
Executive Vice President and Chief Investment Officer

Investment Review contributors
Ahmad Ali (Private Equity)
Michael Kwiatkowski (Fixed Income)
Peter Maher (Equity)
Matthew Nurkin (Real Estate)
Don Walker (Chief Investment Officer)
Lydia Yost (Portfolio Data)

Appendix 1 – Equities

Global stocks delivered another year of sharply positive performance in 2021. U.S. stocks produced larger gains for investors compared to international markets, continuing an extended period of outperformance stretching back over the last decade. Emerging markets returns were negative for the year. A sample of stock market index returns are shown in the table below.

Annualized Index Returns as of December 31, 2021

	2021	3YR	5YR	10YR
Russell Top Cap (largest 50 stocks)	30.1	29.9	21.2	17.5
Russell Large Cap	27.9	27.3	19.7	17.2
Russell Mid Cap	22.6	23.3	15.1	14.9
Russell 2000 (Small Cap)	14.8	20.0	12.0	13.2
MSCI EAFE (Developed foreign)	11.3	13.5	9.5	8.0
MSCI EM (Emerging foreign)	-2.2	11.3	10.3	5.9
MSCI ACWI (Global stocks)	18.5	20.4	14.4	11.8

Source: BNY Mellon

In the U.S., large-capitalization stocks outperformed smaller company stocks, with the S&P 500 recording 70 closing highs over the course of 2021 — the most in a single calendar year since 1995. During the first half of 2021, market participants welcomed the easing of COVID-19 restrictions as vaccination campaigns rolled out. As the year progressed, a number of issues presented challenges for investors. Labor shortages, due to illness and other factors, amplified supply chain issues and resulted in inflation that accelerated at a rate not seen in almost four decades. In spite of new variants of the virus (delta, then omicron) gaining predominance, corporate profits and consumer spending returned to, and surpassed, prepandemic peaks.

As shown in the table below, Board of Pensions public equity managers delivered mixed returns in 2021.

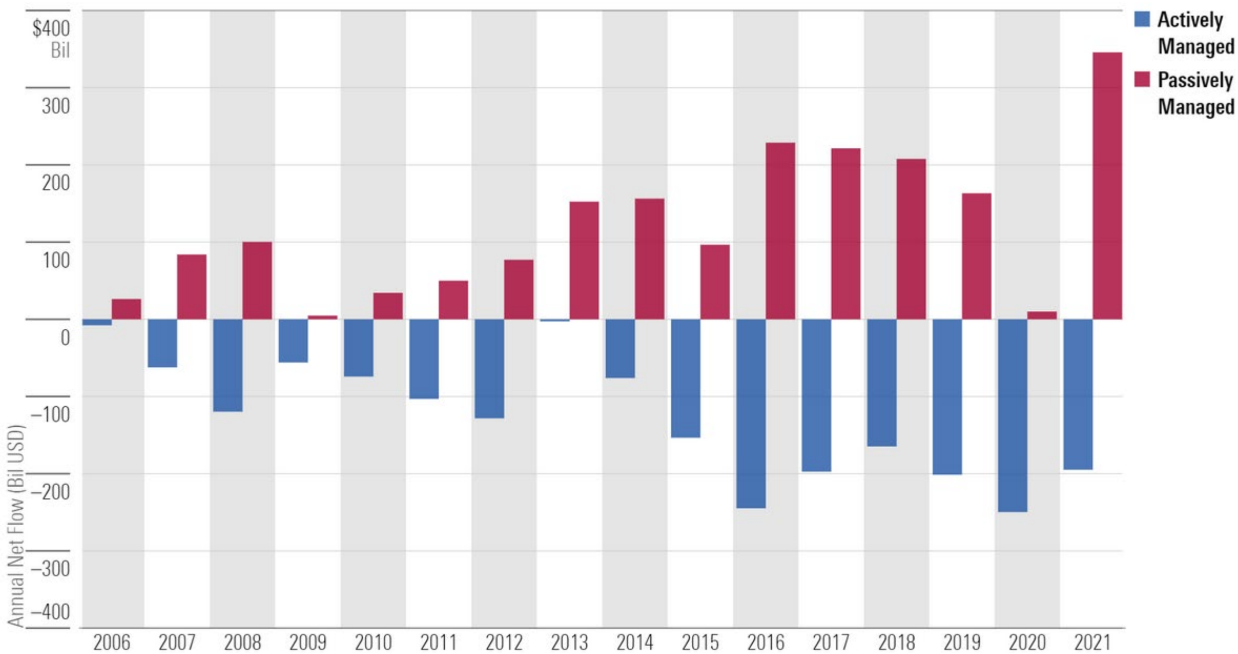
	2021	3YR	5YR	10YR
Board of Pensions U.S. Equity	26.3	26.2	18.5	16.7
Board of Pensions International Equity	6.5	13.8	10.0	8.5
Board of Pensions Global Equity	21.9	24.8	--	--

Source: BNY Mellon

U.S. Equity

In the U.S. component of the Balanced Investment Portfolio, managers generated results that surpassed the benchmark index. Small cap managers in the portfolio produced returns that were far superior to their benchmarks and made positive contributions to performance results. However, the wide performance differential between large and small cap stocks in the U.S. posed challenges for many active equity managers. Generally, active equity managers attempt to find investment opportunities among companies that are smaller in market capitalization and are relatively less well known and understood by investors. In 2021, large capitalization stocks, especially in technology, outperformed their smaller peers. As a result, many actively managed equity portfolios struggled to keep pace with the performance of passive benchmark indices, which are weighted according to market capitalization and where the largest stocks are assigned the most weight in the index. The hype and publicity around *meme* stocks and cryptocurrency in the early part of the year overshadowed the continued investor flows into passively managed, or *indexed*, equity investments. The following chart displays annual net flows into actively and passively managed U.S. equity mutual funds and exchange-traded funds. After accounting for outflows, passively managed funds took in a record $346 billion last year, while active funds saw net outflows of $195 billion. This record-breaking year for flows into passive equities fueled the performance of the largest capitalization stocks, supported passive index performance, and created a challenge for active manager performance.

Annual Net Flows for Active and Passive U.S. Equity Funds



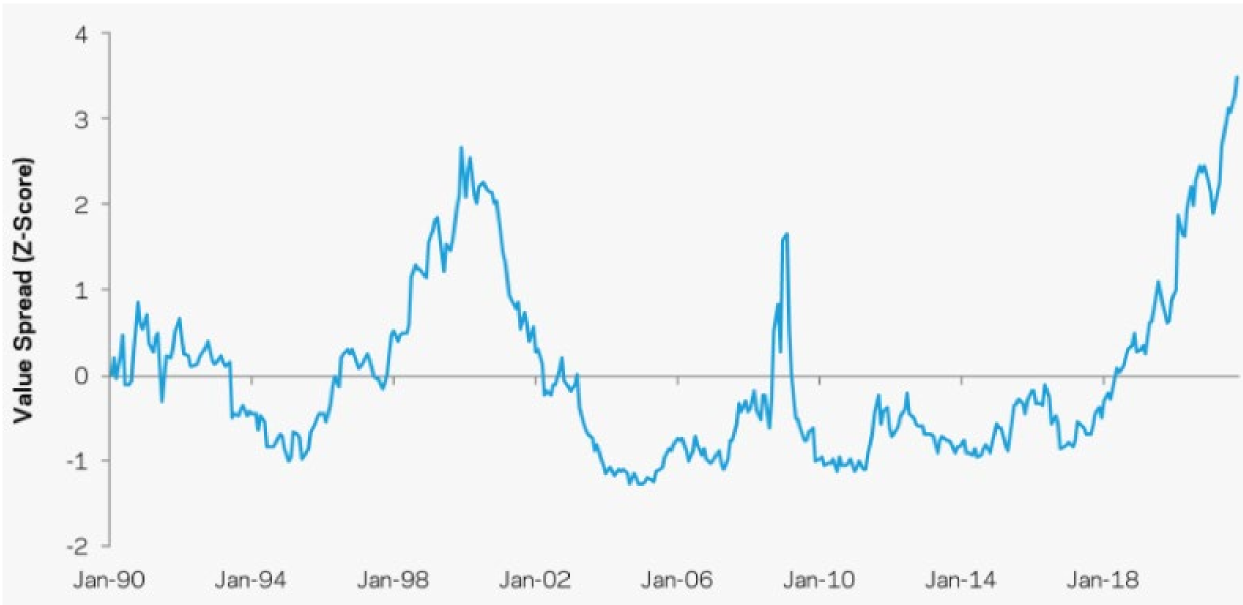
Source: Morningstar. Data as of 12/31/21

Global/International Equity

In the international equity component of the Balanced Investment Portfolio, equity manager performance as a whole fell short of the MSCI ACWI ex U.S. benchmark index in 2021. On a relative basis, emerging markets managers outperformed their emerging markets benchmark index (the MSCI EM), the portfolio's global manager outperformed its world markets benchmark (the MSCI ACWI), and non-U.S. developed markets managers underperformed their benchmark index (the MSCI EAFE). Some manager portfolios with positions in China experienced declines as Chinese internet stocks fell following the announcement of government efforts to reshape the country's technology industry. A bright spot was performance from some Balanced Investment Portfolio managers who utilize a value investment style. Global value equity indices have endured a prolonged period of underperformance relative to growth indices, and we believe the cycle may be coming to an end.

Cliff Asness, Managing and Founding Principal of the investment firm AQR, wrote a year-end blog post on the prospects of value as an investment style. The post, [That's It, That's the Blog,] consisted of a single chart, shown below.

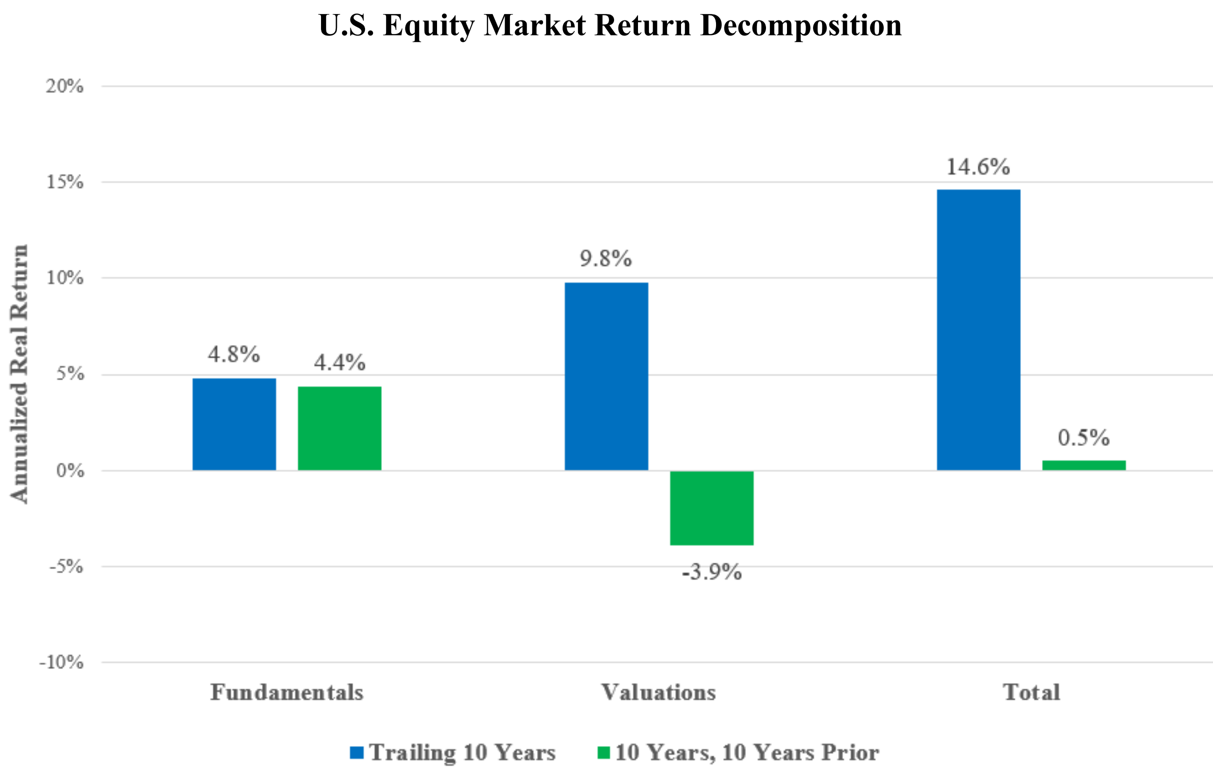
Global Value Spreads



Source: AQR. Data as of 11/30/21

The chart displays what is known as a value spread, or the difference in valuation between the most expensive stocks globally and the cheapest stocks. While expensive stocks will always be more expensive than cheap stocks, investment practitioners are interested in how much cheaper relative to the long-term history of the relationship. Near year-end 2021, the spread between expensive and cheap stocks was at its widest level in over 30 years. According to AQR, the spread was above the 90th percentile for all global equity regions on November 30, 2021. It is interesting to note that today's spread is higher than the late 90s — the period that produced the technology bubble in the U.S.

It can be instructive to decompose stock market returns into their component parts of investor expectations embedded in valuations and the actual fundamental performance of companies. On the page that follows we reproduce such an exercise shared in GMO's third quarter letter to investors. The chart demonstrates that investors' willingness to place higher valuations on U.S. stocks was the key driver of performance over the 10 years ending September 2021 (blue bars). Importantly, the fundamental performance of companies over this period, as measured by a combination of sales, gross profits, smoothed earnings, and GMO's proprietary measure of economic book value, was comparable to the fundamental performance of companies over the preceding 10 years (green bars). However, investors were unwilling to assign higher valuations to stocks in the prior 10-year period, demonstrating that changes in valuations can be the difference between rewarding periods for investors or a *lost decade* of poor returns.



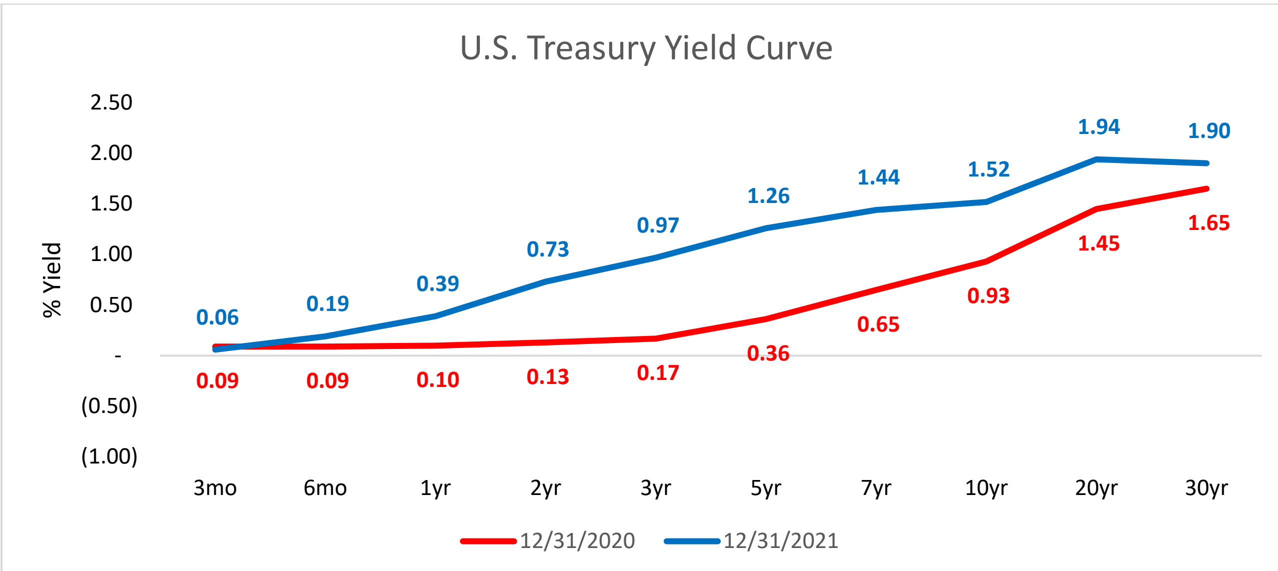
Source: GMO. Data as of 9/30/2021

Upward revisions in investor expectations as observed in rising valuations have driven U.S. stock market returns over the immediate past 10 years, to the benefit of the most expensive stocks relative to the cheapest stocks. In order for the most expensive stocks to maintain their outperformance, investors must believe that market participants will continue to place a premium on expected company fundamental performance (in an increasing interest rate environment), that actual fundamental performance will significantly improve to meet or exceed those expectations, or both. It could be that investors in the most expensive stocks are facing a *lost decade*.

Peter T. Maher, CFA
Vice President and Managing Director

Appendix 2 – Fixed Income Markets

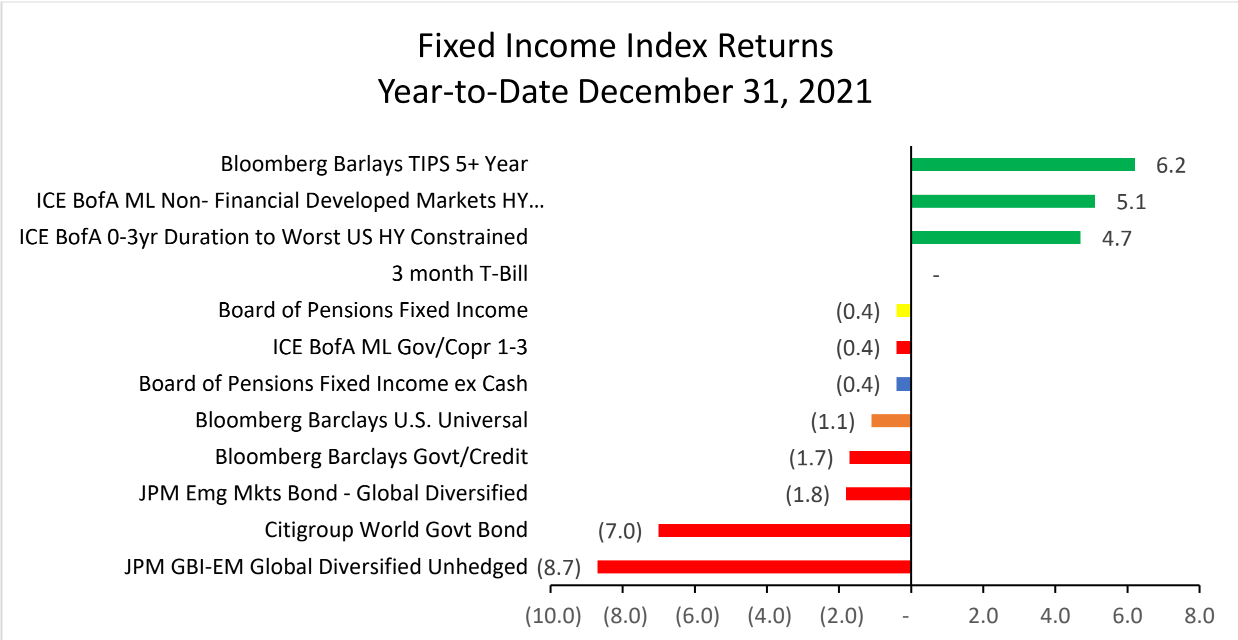
Developed market yields broadly increased during 2021 as yield curves steepened. The increase in rates in developed markets, combined with investors' appetites for more yield, resulted in a *risk on* environment in the fixed income market. In the U.S., Treasury yields rose. The largest yield increases were found in the intermediate portion of the curve as shown in the chart below.



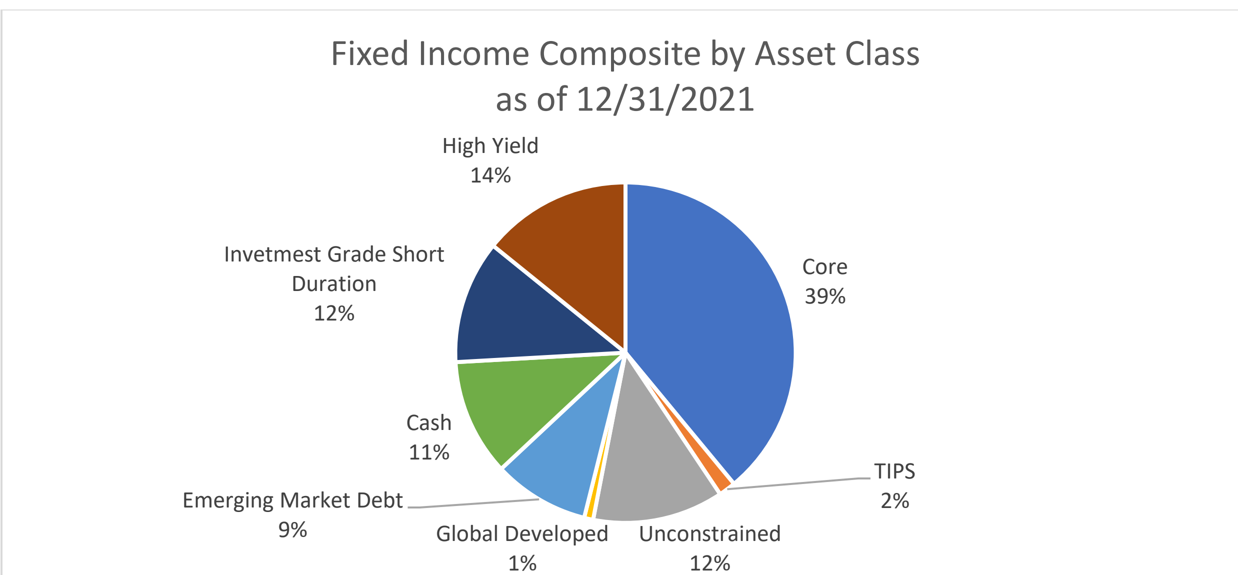
	3mo	6mo	1yr	2yr	3yr	5yr	7yr	10yr	20yr	30yr
YoY Yield Chg (bps)	-0.03	0.10	0.29	0.60	0.80	0.90	0.79	0.59	0.49	0.25

The global economic recovery continued in 2021. Economic growth coupled with supply chain disruptions and higher energy prices led to an increase in inflation expectations. As a result, Inflation-linked bonds performed best, with U.S. Treasury Inflation Protected Securities returning 6.2% for 2021. Global credit spreads tightened to prepandemic levels by year-end as high yield finished the year strong, with December posting the strongest monthly returns of the year. Global high yield and U.S. short duration high yield returned 5.1% and 4.7%, respectively, for 2021.

The indices that underperformed in 2021 were those concentrated in higher rated bonds and bonds with longer time to maturity: U.S. Investment grade corporate bonds, global developed ex U.S. government bonds, and emerging market bonds, both U.S. dollar denominated and local currency. The decline in U.S. investment grade bonds was largely due to price declines associated with rising Treasury yields. This marked only the fourth negative calendar year return for the Bloomberg U.S. Aggregate Bond Index since its inception in 1976.

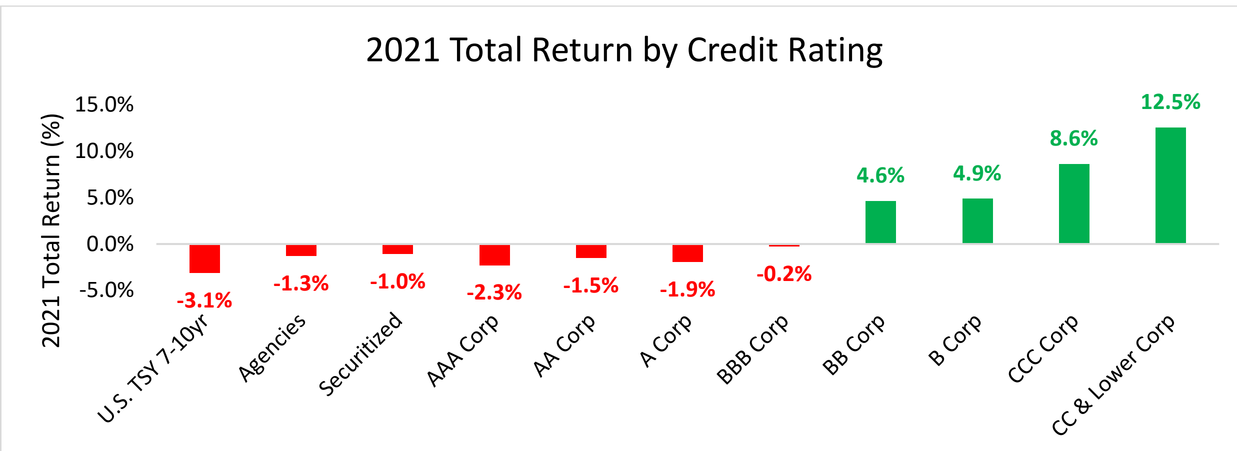


The Board of Pensions fixed income component, as of 12/31/2021, is positioned largely in less volatile holdings. U.S. core, investment grade short duration, and cash composed approximately 62% of the fixed income component as shown by the pie chart that follows. The remaining 38% of the portfolio is invested in bonds with higher return potential and commensurate volatility: global high yield bonds, emerging market sovereign debt, and Treasury Inflation Protected Securities (TIPS).



Looking more closely at which portions of the bond market benefited from the changing environment in 2021, investors focused on below investment grade credit quality issuers and bonds with less time to maturity. Below investment grade bonds are typically issued with a shorter maturity compared to investment grade bonds, which would be impacted less by rising interest rates and higher inflation.

Investment grade corporate bonds returned -1.6%, with AAA-rated corporate bonds lagging all other investment grade bonds at -2.3%. Indicative of the *risk on* environment, below investment grade U.S. corporate bonds performed very well, returning 5.3% for 2021. Within the non-investment grade universe, the lower quality issuers had the best year with CC-rated bonds and lower returning 12.5%, CCC-rated bonds returning 8.6%, and BB- and B-rated bonds returning 4.6% and 4.9%, respectively. Overall, non-investment grade bonds were the best performers in the corporate bond market for 2021.



Heading into 2022, many investment managers expect to see slower but above trend growth. The global economy appears to be progressing toward late-cycle dynamics, and monetary policy in most regions is shifting course toward normalization.

In a market characterized by the potential of rising short-term rates, low yields, and little additional compensation available for taking credit risk, we believe that current bond risk premiums do not reflect the potential downside scenarios. The Investment team continues to evaluate opportunities to produce superior risk-adjusted returns, risk reduction, and an efficient portfolio.

One article that discusses the rise in treasury yields and the outlook for bond market volatility is linked here from PIMCO: Treasury yields and volatility.

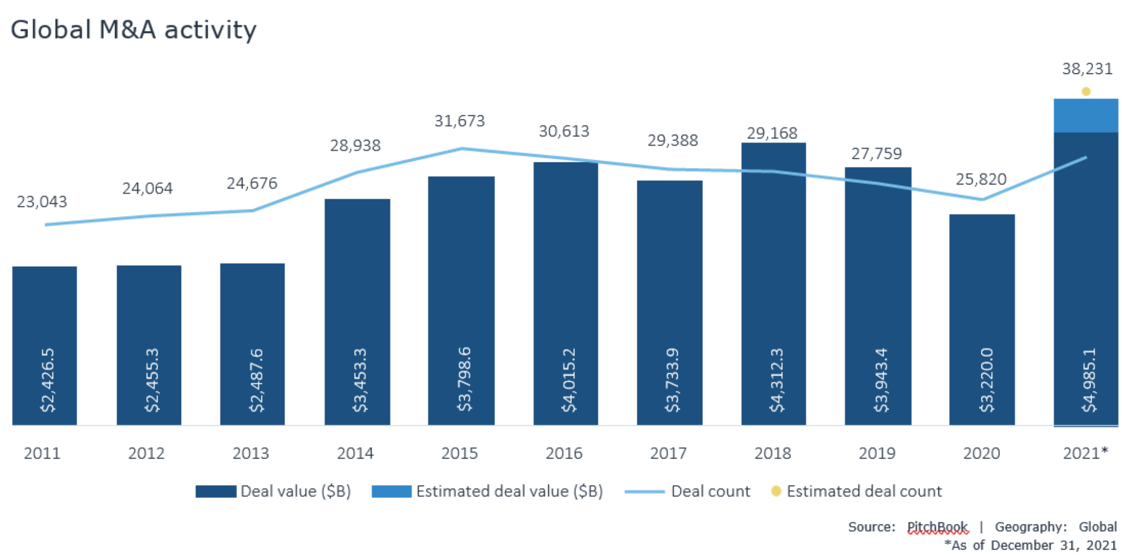
Michael J. Kwiatkowski, CFA
Assistant Director, Fixed Income

Appendix 3 – Private Equity and Venture Capital

2021 was a great year for Corporate Finance in general and Private Equity (PE) specifically. The year recorded several milestones across multiple geographies:

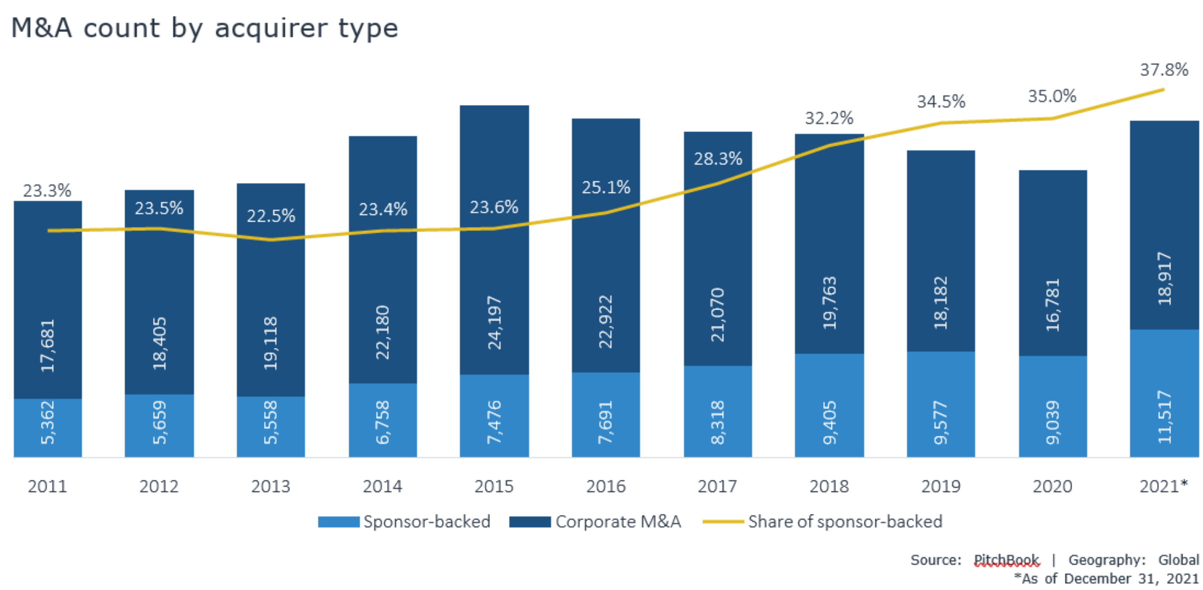
- $5T in Global M&A activity, of which approximately 40% was financial sponsor backed.
- $773B raised globally for private equity funds, which is the highest tally since the global financial crisis (2008-2009), and the fifth consecutive year of fundraising exceeding $500B. The top 10 funds in 2021 raised 20% of the global total.
- $1.2T in U.S. Private Equity investment activity.
- €754B in European Private Equity investment activity.
- $774.1B in U.S. venture-backed exits, of which $681.5B were through public listings [Initial Public Offerings (IPOs) or Special Purpose Acquisition Companies (SPACs)].
- $330B in financing raised for U.S.-backed venture companies versus $166.6B in 2020. $126.0B of that capital was supplied by non-traditional venture firms (Sovereign Wealth Funds, corporate venture capital firms, hedge funds).
- U.S. Venture Capital fundraising eclipses $100 billion.

Global Mergers and Acquisitions (M&A) flourished in 2021. Deal activity rebounded from the COVID-19-induced slowdown in 2020 and surpassed previous records. Strong public equity markets undergirded the resurgence, reflecting high business confidence and providing the swelling ranks of public companies with increased buying power. However, persistent inflation may contribute to a softening in equity markets and higher cost of capital due to interest rate hikes in 2022. Various inflation drivers, including supply chain bottlenecks and labor shortages, are also pressuring some companies' margins. Nevertheless, the outlook for 2022 is overwhelmingly positive as companies across sectors use M&A to navigate technological change and the growing attention to environmental, social, and governance (ESG) themes.
Unprecedented PE fundraising, especially by the largest funds, lays the foundation for forthcoming M&A activity.



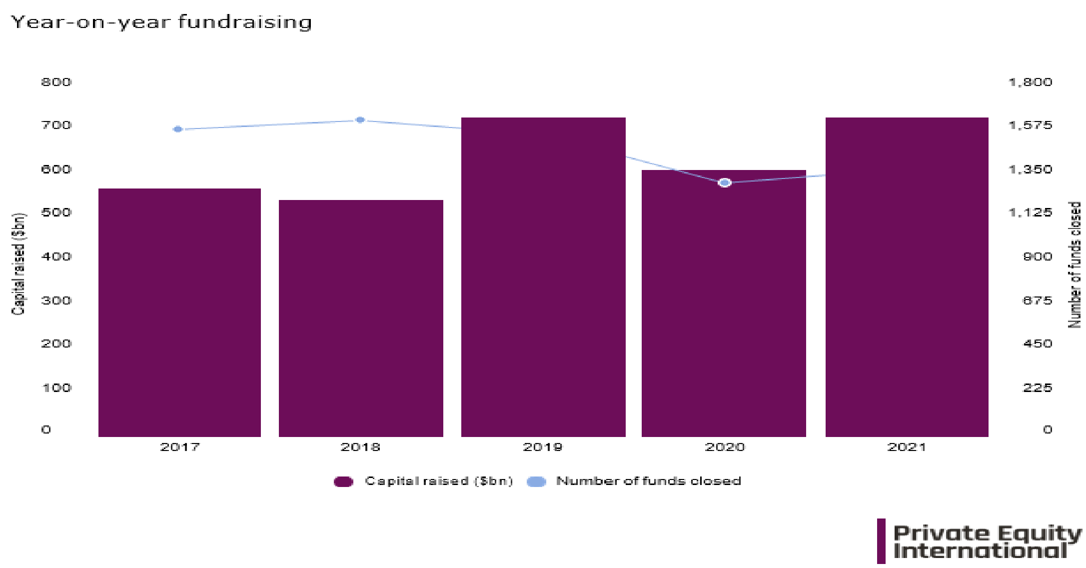
Healthy returns from public markets provided a more favorable M&A environment. Major equity indexes, including the FTSE 100 and the S&P 500, rose through much of the year. This reflected higher confidence levels and surging fundamentals. Earnings and profits increased, while public company earnings multiples remained above the long-term historical average. This helped corporate leadership feel more comfortable taking on risk and pursuing M&A deals. **Additionally, the lofty multiples enticed private equity- and venture capital-backed companies to publicly list — through IPOs, reverse mergers with a SPAC, or via direct listings — at a rate not seen in over two decades.**

Private equity deal-making hit an all-time high in 2021, and preliminary signs point to an equally active 2022. With the trillions of dollars that have poured into private funds in the past decade or more, strategies beyond financial-engineering-focused leveraged buyouts (LBOs) of asset-heavy companies have become the norm. PE firms are becoming more specialized and sophisticated operators and are thus diversifying strategies within the asset class, from growth equity to continuation funds, in which a manager and electing limited partners can hold an investment beyond the term of the original investment fund. The year also saw the return of the megadeal. (Deals over $10 billion.)

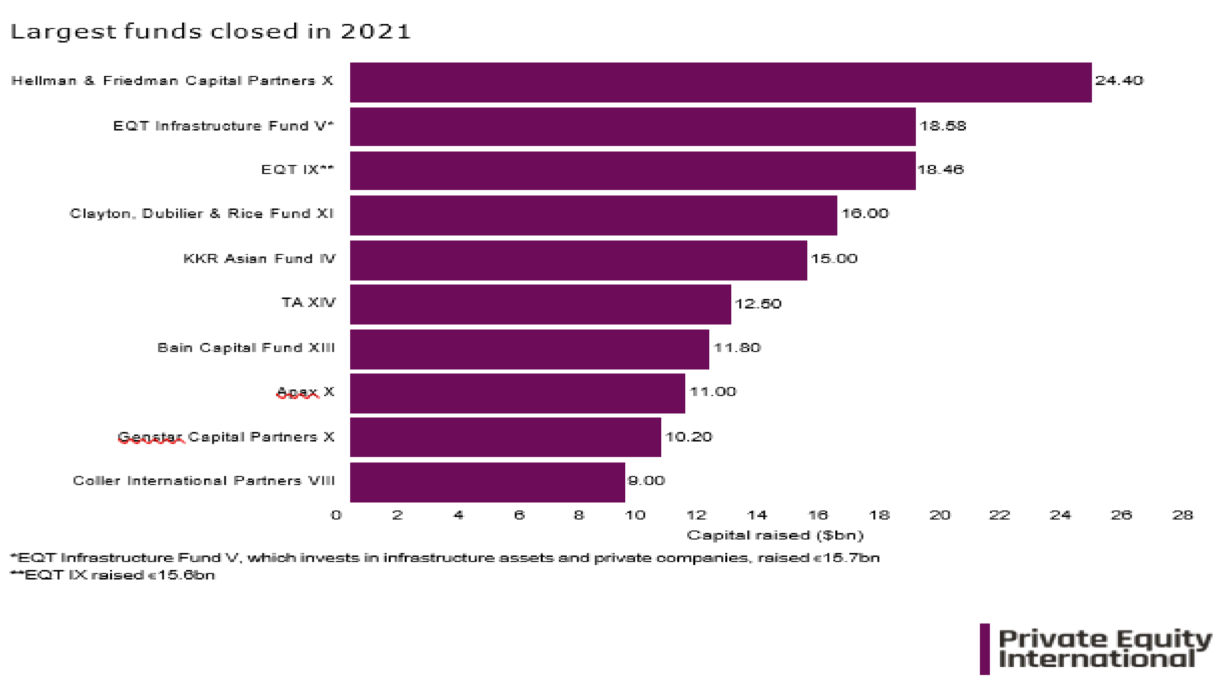


Consortiums of financial sponsors teamed up on several deals larger than $10 billion during 2021, including $17.0 billion for Athenahealth and $34.0 billion for Medline. The excitement spread to Europe as well, with Telecom Italia (MILAN: TIM) receiving a €10 billion-plus buyout offer; Bain Capital and CVC are expected to bid on Walgreens' (NASDAQ: WBA) carveout of UK-based pharmacy Boots. With buyout funds expected to amass record capital for funds larger than $5 billion in 2022, these mega deals could become more commonplace.

Fundraising

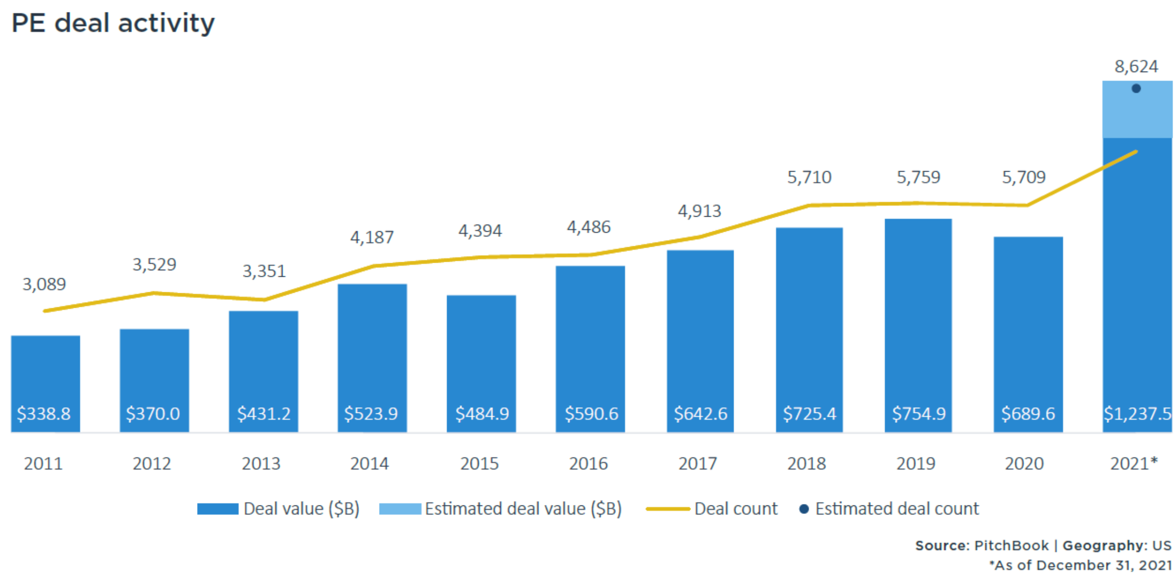


Private equity fundraising reached new heights in 2021, with approximately $733 billion raised, according to preliminary estimates from Private Equity International. That figure is the highest tally since the great financial crisis, and the fifth consecutive year that global fundraising has exceeded $500 billion. 2021's capital raising total is also 20% greater than 2020's. Multiple dynamics drove investor demand, including high levels of capital deployment and liquidity across most funds.



The 10 largest funds, almost all of which are buyout funds, gathered nearly $150 billion between them, about one-fifth of all fundraising in 2021. Hellman & Friedman Capital Partners X raised the largest fund, gathering $24.4B. Both EQT and CD&R XI (Clayton Dubilier & Rice) shot past their targets and were oversubscribed. KKR Asian Fund IV was the largest Pan-Asian fundraiser. Coller International Partners VIII was the only secondary fund in the top 10 list, whereas in 2020, six of the top 10 funds raised were dedicated to secondaries.

U.S. Private Equity Activity



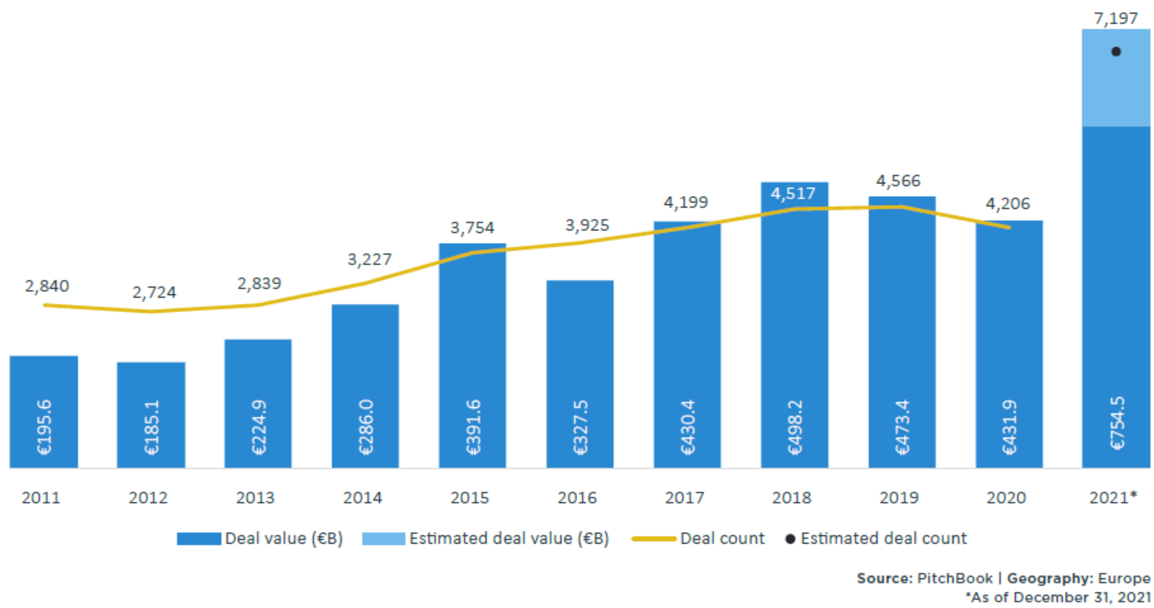
U.S. PE deal-making eclipsed $1.2 trillion in total deal value and set several new high-water marks. All this activity came despite the numerous headwinds, including COVID-19 variants, inflation, and a higher regulatory burden, among others. Deal-making figures in 2021 benefited from transactions that were pushed back from 2020 because of COVID-19-related uncertainty, while other deals were pulled forward into 2021 from 2022, for tax-related reasons.

These factors caused a boom across all sizes, sectors, and deal types, although technology and healthcare remained dominant. Add-ons, additional investments in companies already owned by a fund, accounted for nearly three-fourths of all buyouts as fund managers sought to take on less risk by investing in companies they know well rather than new platforms. The deluge of add-ons also helped firms average down cost multiples and grow revenue rapidly.

Growth equity deal-making also hit a new high as the target market expanded and General Partners (GPs, also known as *limited partnership fund managers*) sought to finance myriad quickly growing companies. GP-owned deals also had a profound year with a flurry of middle-market firms selling stakes and firms innovating around fund liquidity facilities.

With much of the pandemic-related economic uncertainty seemingly in the rearview mirror, secondary buyers were more comfortable buying portfolio companies. Other monetization routes, including dividend recaps, partial exits, and continuation funds also boomed. GP-led secondary deals for single- and multi-asset portfolios became more widely accepted and were heavily used by sponsors.

European Deal Activity



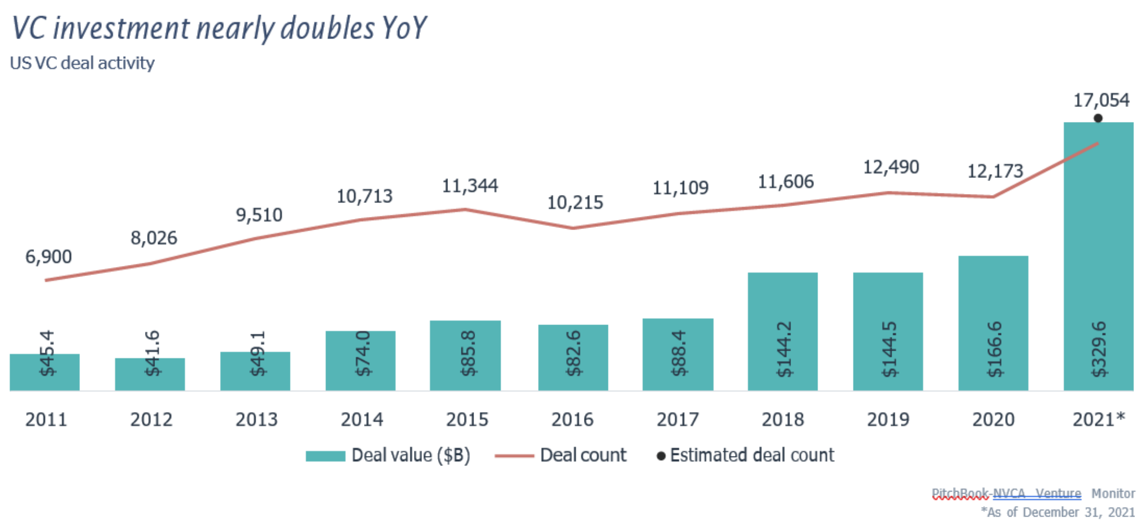
European private equity (PE) deal activity ballooned in 2021, to new records on both the deal value and deal volume fronts. The industry has tripled in size over the past decade. The year 2021 was the best environment for European private equity deal-making ever, characterized by strong leveraged lending markets, willing sellers, heightened purchasing capacity, and massive fiscal and monetary stimulus. The strength in deal-making showed up across the board, but especially within information technology, healthcare, and financial services sectors. Add-ons were the dominant path to value creation for sponsors, accounting for 65.0% of buyouts, also a new annual record.

European PE exit activity soared to record highs in 2021. European PE exit activity generated record results, buoyed by the best IPO market ever. The year 2021 saw approximately 1,538 liquidity events worth €445.2 billion — marking year-over-year increases of 60.3% and 132.0%, respectively. Sponsors (GPs) pursued public listings at a record clip, as the unprecedented stimulus drove public valuations upward, lifted by public equity investors' willingness to pay outsized premiums for fast-growing private companies. Corporate acquisitions and secondary buyouts also heavily contributed to a robust exit market, propelled by healthy balance sheets and the availability of fundraising capital.

Venture Capital

2021 began with a bang in Venture Capital (VC) activity and ended in similarly spectacular fashion, producing another record-setting year. While many were bullish on the industry at the start of 2021, no one predicted how remarkable the year would prove to be.

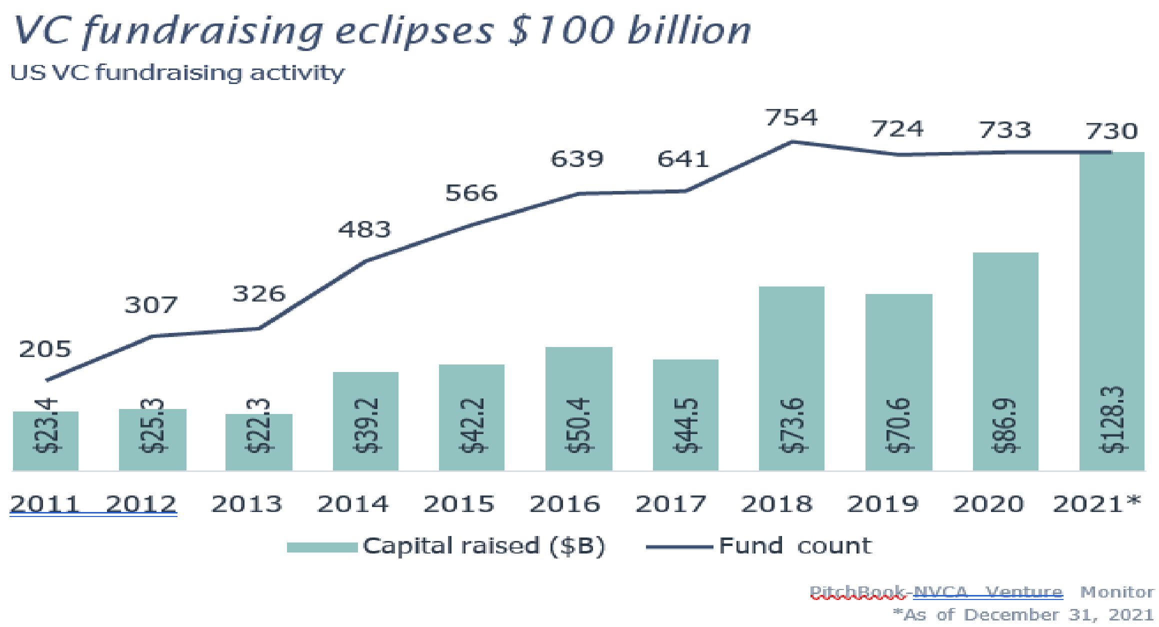
U.S. VC-backed companies raised $329.6 billion in 2021 (global venture capital was $621 billion), nearly double the previous record of $166.6 billion, raised in 2020. Investment activity (measured in both total dollars invested and total deal count) for seed, angel, and early- and late-stage companies all hit records, as did investment activity for companies receiving their first equity round of institutional financing and companies raising VC mega-rounds (sized $100 million or more). Total deal count also increased substantially to an estimated 17,054 deals in 2021 (up from 12,173 in 2020).



Exits were a huge part of the story of 2021, with approximately $774.1 billion in annual exit value created by VC-backed companies that either went public or were acquired. The overwhelming majority of these dollars, some $681.5 billion, was realized through public listings, a testament not only to the favorable conditions presented by robust public markets and strong valuations, but also to the availability of SPACs as an acceptable and popular alternative to IPOs.

That VC-backed companies were able to generate such enormous exit value in 2021, during a time characterized by great uncertainty and extraordinary circumstances, highlights the continued importance of VC-backed companies to U.S. public markets. It is important to note that the strong IPO activity for VC-backed companies in 2021 was a result of early-stage investment from investors that, in many cases, first partnered with the founders more than 10 years ago. Those companies have scaled over the past decade during a strong startup and high growth environment.

U.S. Venture Capital Fundraising



The abundant well of capital has yet to dry up, as annual VC fundraising eclipsed $100 billion in 2021. VC firms raised a record-shattering $128.3 billion in new capital over the course of the year, representing a 47.5% year-over-year increase of $86.9 billion. And it's no wonder, given the prior year's near-record returns of 50.1%, per Cambridge Associates.

Investors continue to pour money into venture capital in hopes that early, private investments in promising growth companies will provide returns that eclipse public market alternatives. With the Fed expected to raise rates at least three times in 2022, valuation rerating may provide additional opportunities for private markets investors.

Ahmad Ali
Vice President and Managing Director

Appendix 4 – Real Estate

Following a prior year marked by uncertainty and anemic transaction volume, the announcement of vaccine approvals suggested a light at the end of the tunnel for the real estate sector in 2021. Despite setbacks due to vaccine hesitancy and COVID-19 variants, the sector has recovered more quickly than anticipated and enjoyed strong performance during the past year.

2021 investment volume approximated 2019 prepandemic volumes, fundamentals in many sectors rebounded from pandemic lows, and some metrics are now better than they were prepandemic. While a portion of the volume reflected pandemic-delayed deals that finally closed, 2021 set an annual record with $614 billion through November, per Real Capital Analytics.

Low interest rates and capital market liquidity bolstered commercial real estate performance during 2021, and while the wave of distressed deals anticipated in 2020 didn't materialize, private equity real estate investors amassed a record $288 billion for commercial property investment (57% more than at the end of 2019). The volume of cash-chasing opportunities helped drive up pricing an average of 18% through November 2021, according to Real Capital Analytics.

The industrial sector continued its hot streak during 2021. Driven by e-commerce growth and supply chain bottlenecks, rents rose to record levels and shortages of available space (despite millions of square feet of new construction) forced tenants to renew leases years ahead of schedule or snap up whatever space was available in anticipation of future needs. McKinsey and Co. estimated that the pandemic collapsed 10 years of e-commerce growth into just three months, and CBRE has estimated that every $1 billion increase in online sales translates to 1.25 million square feet of warehouse demand to suppport fufillment needs, driving robust demand that persisted thoughout the year. Not surprisingly, these fundamentals in turn drove skyrocketing valuations, heightened development, and a stampede of capital to the sector during 2021.

The multifamily sector outperformed expectations during 2021, despite significant concerns about the sector early in the pandemic. As supply/demand fundamentals drove median home price increases of nearly 20 percent during the year, buyers left on the sidelines helped drive up rents instead. Aided by high construction costs and a relative lull in new deliveries, sector fundamentals remained durable through 2021. With vacancy rates at their lowest levels in 30 years, rental growth set records in several markets with an average increase of 11.4 percent compared to the year before, according to real estate data firm Yardi Matrix. Urban areas that saw an average vacancy increase nearly 200 bps during the peak of the pandemic returned to nearly prepandemic levels by 3Q 2021. Multifamily pricing improved during 2021 in response to strong investor demand and fundamentals. The capitalization rate compression (an indicator of increased demand and higher valuations) seen in only a handful of high-growth markets during 2020 was spread more generally across markets during 2021.

Two years into the COVID-19 pandemic, the exact future course for the office sector remains uncertain. The sector's response to changed conditions typically lags other sectors (due to longer lease durations), and the final dynamics of remote work have yet to play out. However, signs are emerging that the sector will recover well long term. In addition to an increase in acquisitions by institutional investors, who often serve as bellwethers for the sector, office leasing picked up substantially during 2021 as companies made plans to get employees back in the office. Per national broker Savills, 4Q-2021 leasing in major markets was up 89% compared to 4Q-2020, despite the growth in remote work, with demand for direct leases coming from a variety of business sectors. In San Francisco, arguably the office market hit hardest by the pandemic, leasing activity was up 400% year over year. Notably, per global advisor Jones Lang LaSalle, tenants are displaying a strong preference for recently delivered (newer) product with top-notch amenities to attract the best talent and draw workers back to the office, leaving older properties requiring significant capital improvements to bear the brunt of the pandemic's effect on the sector.

COVID-19 has exacerbated the prepandemic headwinds faced by hospitality and retail properties, which continued to face significant challenges in 2021. While certain subsets improved their performance last year as business and vacation travel began to slowly return, international travel remained down over 75% from prepandemic levels as recently as August 2021. Industry experts anticipate the overall hospitality sector may take years to fully recover. Necessity- and grocery-anchored properties proved relatively resilient within the retail sector, but the benefits of the limited return of in-person shopping in 2021 paled in comparison to the ongoing effects of e-commerce's acceleration. While the rise of online retail has clearly benefited the industrial and logistics properties, its negative impact on physical retail properties has been dramatic and did not abate in 2021.

Institutional investment in specialty property types continued to grow during 2021 as investors recognized the relative pandemic resiliency of a range of nontraditional sectors, including life sciences, medical office, self-storage, single-family rentals, and data centers. 2021 saw many institutional investors balance reductions of exposure to conventional property types, such as retail and office, with increased commitments to one or more of these niche sectors.

Publicly traded real estate (REITs) finished the year up more than 40%, thanks in part to strong December performance, with double-digit performance across all sectors. While some of these gains reflect a recovery from the depths of pandemic, public real estate returns exceeded prepandemic performance during 2021.

Overall, despite strong sector performance, 2021's initial hopes for a return to normal were hampered by the onset of COVID-19 variants and limited vaccination rates, and many of the year's initial questions have yet to be answered at the outset of 2022. However, if 2021 performance is any indication, the real estate market will continue to present interesting investment opportunities during 2022 and beyond. PwC's Emerging Trends in Real Estate 2022 provides additional context.

Matthew H. Nurkin
Vice President and Managing Director