Mercer

Top considerations for alternatives in 2023

welcome to brighter

Introduction

The year 2022 will certainly be remembered as momentous, and it may take some time to fully understand the ramifications of the events that occurred this year. Thankfully, the effects of the COVID-19 pandemic finally began to attenuate, although the virus has not completely disappeared. For the first time in decades, Europe had an active military conflict, and, at the time of writing, it is still unclear how that situation will be resolved. Energy prices, due to both the conflict and ensuing policy decisions, increased significantly. On the macroeconomic front, inflation returned with a vengeance and reached levels not seen in 40 years. As a result, for the first time in many investment professionals' careers, we are seeing a significant increase in interest rates.

Any of these events individually would likely have had a profound impact on markets, both public and private. However, in combination, these events, along with other relevant factors, have certainly pulled the rug out from under markets.

In this publication, we discuss how these significant events are affecting various private market segments and what we expect their ramifications to be in 2023. **Below are the specific topics we will cover.**

1. Private debt

Discusses the potential benefits of private debt during a period of substantial uncertainty including the flexibility that the asset class offers.

2. Private equity

Examines whether general partners will accelerate capital calls and commit new capital during a period of declining valuations, which could have implications for performance.

3. Venture capital

Argues that, historically, periods of economic distress have led to the development of next-generation technology products and services.

4. Asia private equity

Discusses the current investment conditions in China and the potential opportunities these circumstances present.

5. European private equity

Makes the case that, despite economic uncertainty in the region, the current situation may present an opportunity to gain access to general partners who would otherwise be inaccessible.

6. Real estate

Presents the case for which property types are likely to perform better in the current macroeconomic climate as well as how ESG will impact the sector.

7. Infrastructure

Breaks down the issue of how some, but not all, infrastructure assets can provide a degree of inflation protection.

8. Hedge funds

Reviews hedge fund rebalancing considerations and strategic versus tactical allocations, and offers an alternative approach.

9. Impact investing

Examines the growth and development of several impact-investing sectors and argues that the current market backdrop may offer a good opportunity to consider an impact-investing program.

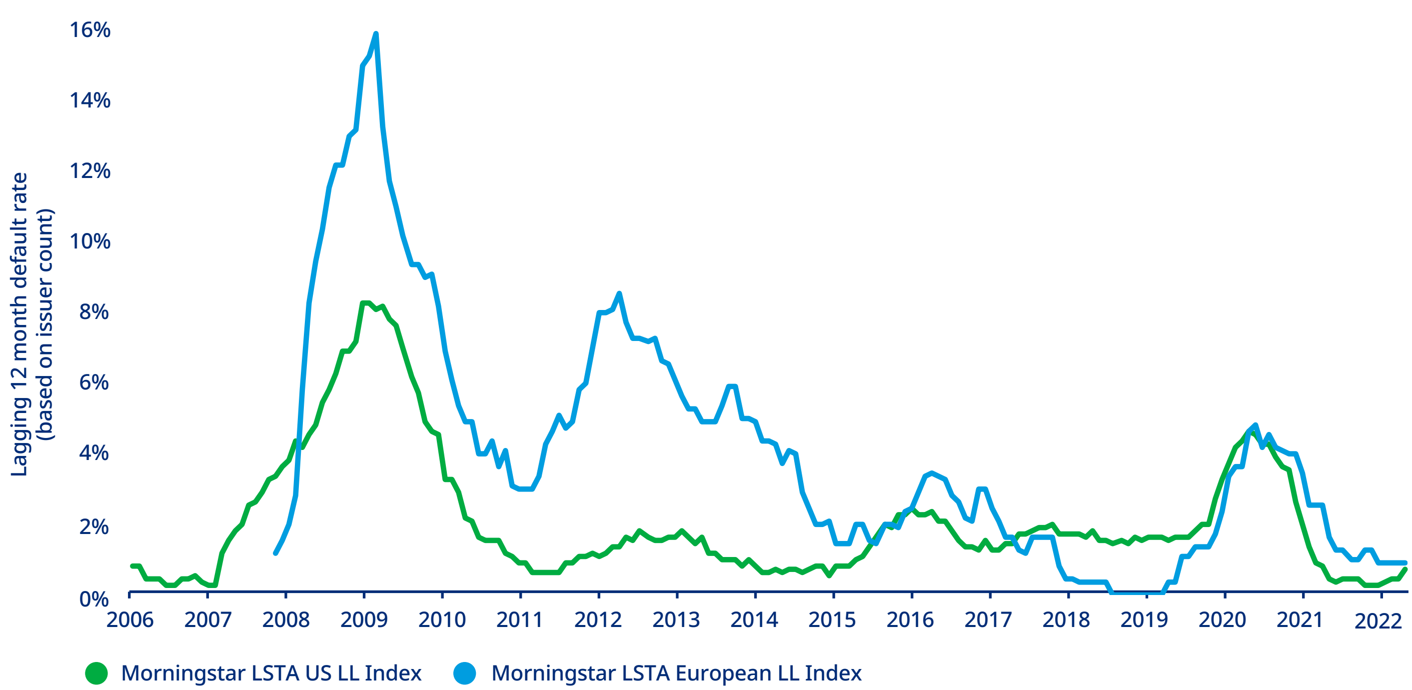
We hope you find these pieces thought provoking and that our commentaries provide some valuable insights into how the various sectors could perform in 2023 as private markets come to terms with an extraordinarily eventful year. As always, please let us know if you would like to discuss any of these issues in greater detail.

1. Private debt

"Success is where preparation and opportunity meet" — Bobby Unser, Motorsports Hall of Fame automobile racer

During 2022, the initial anxiety around whether or not inflation would prove to be transitory rapidly transformed into substantial concern that a tectonic shift in global monetary policy could result in a hard landing for economic growth. Following the conflict in Ukraine and the ensuing supply chain and energy price shocks, central banks raised interest rates in the face of stark inflation readings. As we look to 2023, so far, performance in private debt has remained steady*. By way of example, default rates in the broadly syndicated leveraged loan indices in the US and Europe, which serve as a proxy for private debt, remain at low levels.

Figure 1. Leverage loan default rates

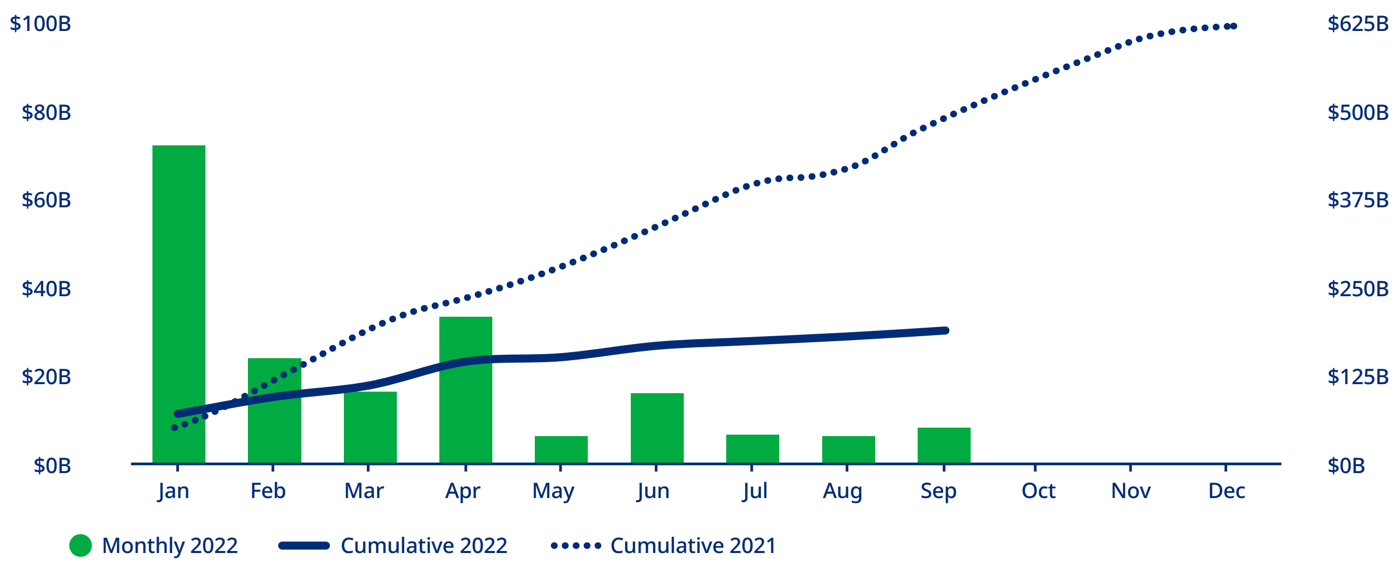


Source: Morningstar (Aug. 2022)

* Past performance is no guarantee of future results.

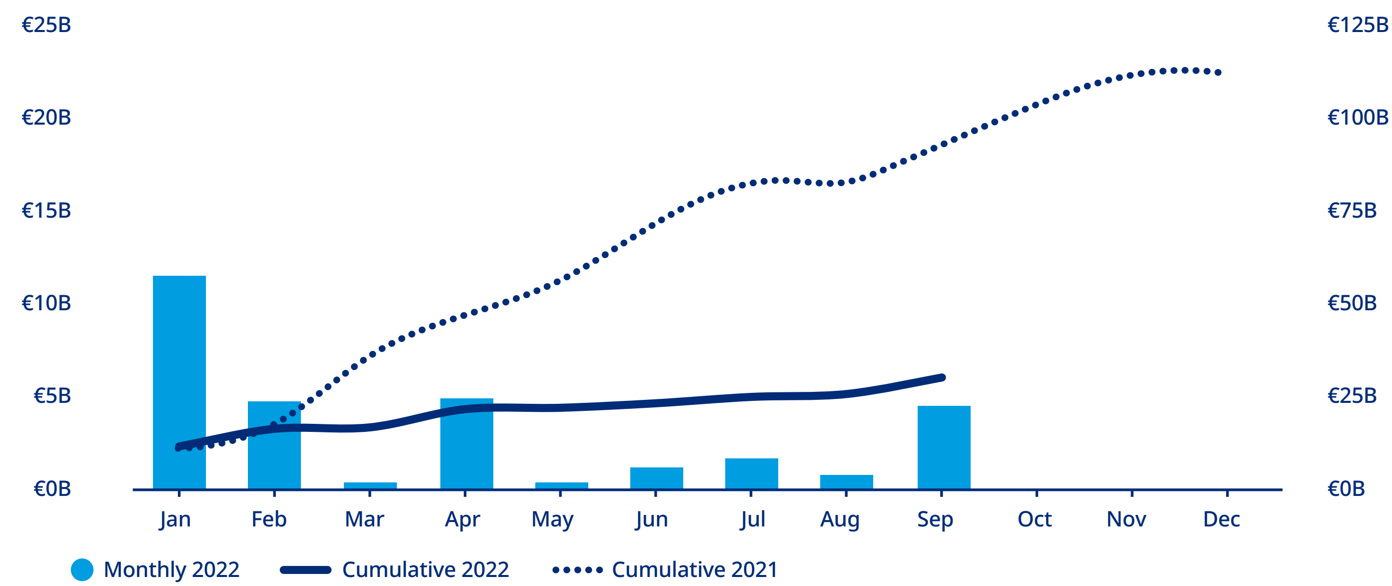
However, a prevailing sense of uncertainty is clearly reflected in market sentiment, with “traded” loan issuance falling precipitously compared to the prior year, and the weighted-average bid for loans falling steadily.

Figure 2. US new-issue loan volume



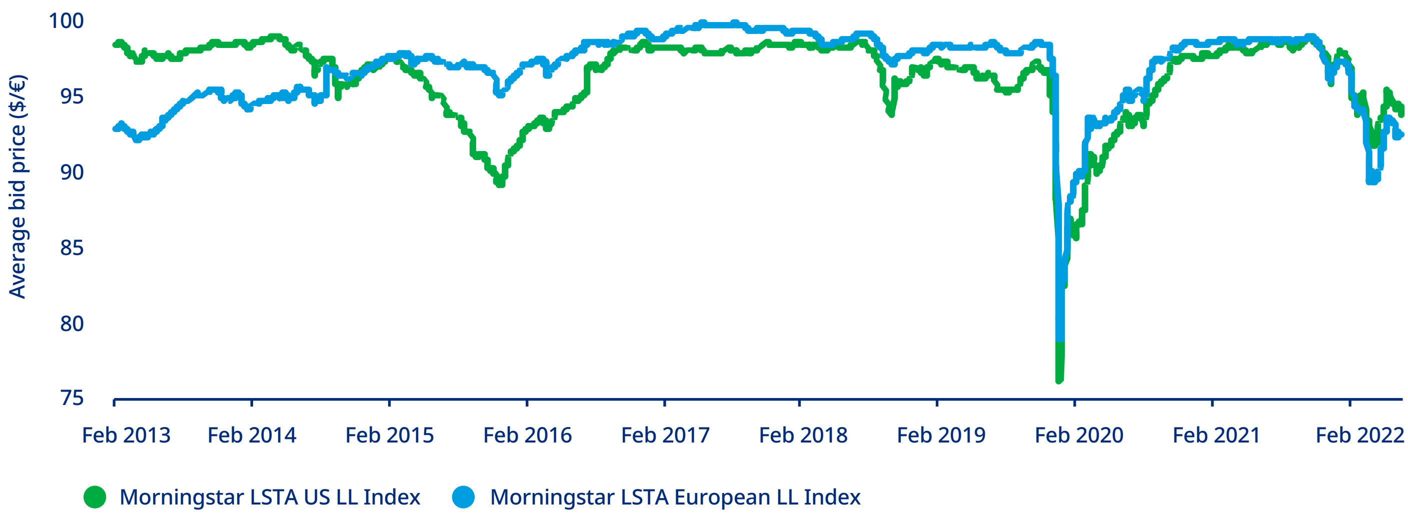
Source: LCD (Sep. 2022), *2022 volume through Sep.30

Figure 3. European new-issue loan volume



Source: LCD (Sep. 2022), *2022 volume through Sep.30

Figure 4. Leverage loan secondary market price



Source: Morningstar (Sep. 2022)

Where pricing volatility becomes a challenge for investors and financing options are reduced for larger, "liquid" corporate borrowers, private debt becomes an increasingly viable alternative to the liquid credit markets. Combined with a predominantly floating-rate structure, private debt offers one of the few bright spots on investors' radars, despite the prognosis for rising default rates across all credit asset classes.

Private debt has demonstrated a premium versus liquid credit over a long period, often combined with lower default rates and higher recovery rates.[1] Given the current economic backdrop, it's more crucial than ever to build your allocation to private debt in the right way. Naturally, diversification should be a core tenet for any private debt investor, and we strongly advocate avoiding concentration risk. Taking this approach is playing defense at a time when the market environment strongly suggests that more dispersion lies ahead — between asset managers, investment strategies, sectors and portfolio companies.

In this paper, we choose to highlight another, perhaps underappreciated, tenet for private debt investors: ***flexibility***. A flexible approach is not only defensive, but, to some extent, it can also be an attack.

To us, *flexibility* means:

- **Maintaining broad coverage of the expanding landscape of private debt:** Consider where the imbalance of capital demand and supply is likely to be most acute over the next 3-4 years. The world of corporate direct lending has traditionally demonstrated this imbalance: reduced bank lending to the midmarket (supply) and the rising requirement for debt capital from private equity (demand). As the world of private debt continues to expand, we see new themes and avenues for exploiting imbalances that may become even more acute over the next 3-4 years — structured credit and specialty finance spaces, in particular — therefore improving risk-adjusted return potential.

- **Cultivating broader relationships:** In the traditional model, investors commit assets to a narrowly defined investment strategy. Instead, we advocate that investors access broader credit platforms (that is, an asset manager with multiple credit capabilities) with the potential to bring a diverse opportunity set together at a single point of access. An asset manager that can look across its credit platform has a higher probability of committing the next dollar of capital to

[1] For more information, see https://www.mercer.com/content/dam/mercer/attachments/global/gl-2022-private-debt-report.pdf

the best risk-adjusted return opportunity. The resulting portfolio should be more robust, and able to achieve a greater level of diversification. Underwriting the various underlying capabilities may mean more work, but we believe it is worth it for the benefit of the overall portfolio.

- **Becoming a provider of liquidity in stressed or dislocated situations:** Periods of secondary market volatility can escalate as a result of liquidity, concentration and leverage limitations imposed on other market participants. We believe opportunistic credit strategies are well placed to meet their higher return targets when these circumstances proliferate in the wake of a broader credit market dislocation. Being a provider of liquidity in these situations — whether through secondary tranches of CLOs or individual broadly syndicated loans — offers capital gain opportunities while allowing investors to retain a focus on credit fundamentals and downside protection. The ability to pivot toward credit dislocation funds, special situations and distressed debt at opportune points in the cycle can be rewarding.

The market environment is highly uncertain. In many respects, private debt currently looks attractive, both on an absolute basis and relative to other asset classes. However, there will be greater dispersion ahead. Opportunities will present themselves as the asset class continues to expand and the macroeconomic picture develops. In conjunction with diversification, incorporating an element of flexibility into portfolio planning, construction, and implementation can help private debt investors effectively prepare and increase the odds of a successful outcome.

Key takeaways

Private debt is currently an attractive asset class, both on an absolute basis and relative to other asset classes. However, there will be greater dispersion ahead. Given the current economic backdrop, it is imperative to build your allocation to private debt in the right way. Naturally, diversification should be a core tenet of any private debt investor, and we strongly advocate avoiding concentration risk.

2. Private equity

Whenever we encounter turbulence with declining public markets, we inevitably hear clients voicing concerns about committing new capital to private equity. The fears around committing capital to illiquid investment strategies while portfolio values are declining — or have recently materially declined — are certainly understandable.

Cash positions are guarded, and nobody wants to sell liquid assets at depressed valuations to fund capital calls. All of this begs the question, one we often hear from limited partners (LPs) when public markets are declining: should we pause our commitment pacing to private equity? We are beginning to hear this question again, so this feels like an opportune time to revisit the topic.

Let's look at two of the more common fears:

- General partners (GPs) are going to accelerate capital calls at a time when liquidity is low or at risk.
- Committing new capital to any investment when markets are declining and uncertainty is high could exacerbate the performance problem.

The above fears were widely held at the beginning of the global financial crisis (GFC) of 2008 and the COVID-19 pandemic of 2020. History suggests, however, that these fears were not well founded.

Most recently, at the onset of the COVID-19 pandemic, GPs worked with portfolio companies and their lenders to conserve cash and bolster liquidity to help them survive business shutdowns and revenue declines. Very few, if any, GPs called capital from investors at the outset. Rather, GPs focused on assessing the impact of the pandemic on portfolio company operations, cash flows and overall health. Portfolio companies were generally categorized as healthy, challenged or at risk.

Certain healthy portfolio companies actually benefitted from the increase in e-commerce and/or demand for products and services. Challenged portfolio companies were typically those that were growing before the pandemic but had been temporarily impacted. Portfolio companies that were struggling pre-pandemic were largely deemed to be at high risk of loss.

During the early months of the pandemic, GPs were on the defensive, and the last thing any GP wanted to do was invest good money after bad. As such, the at-risk companies were the least likely to receive life support. Challenged portfolio companies were closely monitored, and financial support was provided on a case-by-case basis. Still, based on our observations, relatively few GPs made capital calls purely for portfolio support reasons. As a result, capital calls did not overwhelm investors' liquidity.

In prior recessions, GPs eventually shifted from playing defense to offense, but that took some time to develop. Markets function best during periods of stability. When market volatility increases and public equities are declining, price discovery becomes challenging. Investors are reticent to re-enter the market before it bottoms out. Nobody wants to catch the proverbial falling knife. During this period, the bid-ask spread between the price that buyers (GPs) are willing to pay and the price sellers are willing to accept tends to widen. Buyers make discounted offers that reflect their lower risk tolerances, but sellers are generally unwilling to accept valuations substantially lower than what their businesses were worth just months before. The result is a sharp decline in transaction volumes and a corresponding decrease in capital call activity.

During the GFC, US buyout transaction counts dropped 21% and 42% in 2008 and 2009, respectively. Prior to the COVID-19 pandemic, transaction counts dropped 5% in 2019 and then during it in 2020 they dropped an additional 11%.[2] The feared spike in capital calls did not materialize in either instance.

Investors are also generally reluctant to make new commitments to private equity when markets are declining, for fear of reducing precious liquidity while the timing is bad; that is, when markets may continue to fall, exacerbating losses. This is a legitimate fear, but nobody can really time the markets. The best investors can do is prepare and position portfolios for the future. One way to do so is to commit capital for future investment. By continuing to make new commitments, investors are effectively giving investment-decision-making authority to trusted experts who are closest to their markets, well informed and able to act quickly on opportunities. As previously noted, private equity GPs are unlikely to take undue risk and invest rapidly until markets begin to stabilize and uncertainty subsides. This is precisely why private equity funds have investment periods of 5-6 years.

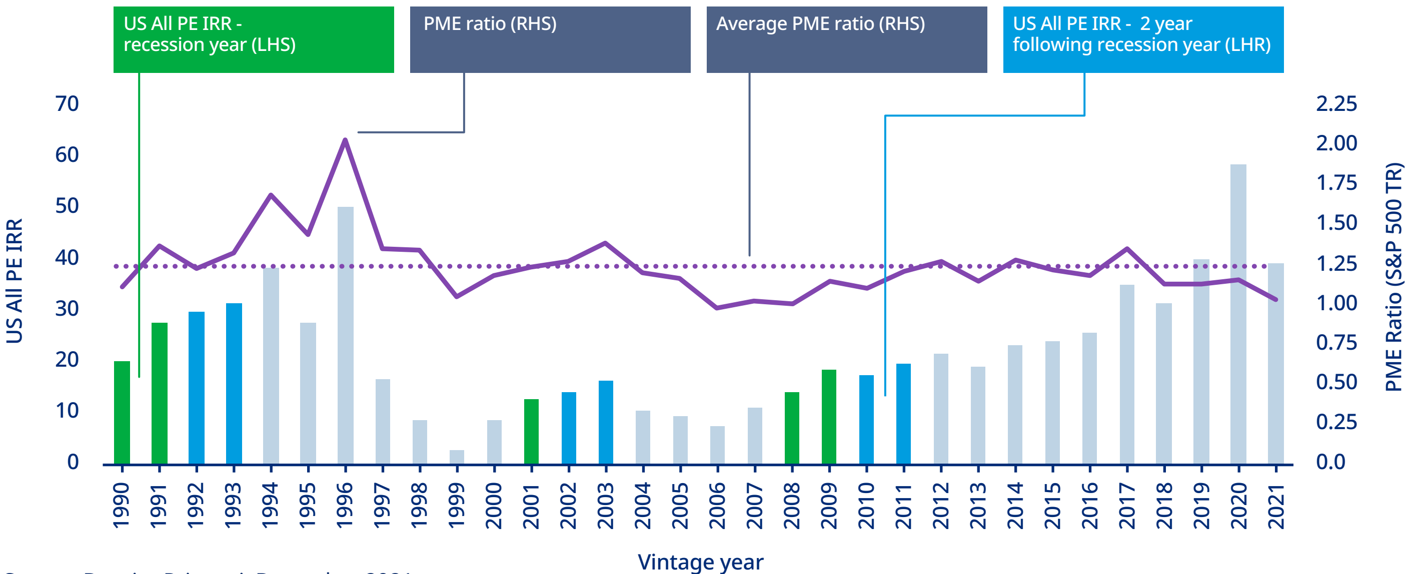
Obviously, committing to illiquid private equity strategies requires trust and faith. That is why alignment is a central factor in our fund evaluation and rating process. A strong alignment of interests between investors and GPs is essential. When markets are declining, we inevitably see a flight to quality managers — those with tested strategies and strong track records across economic cycles.

Assuming the absence of an actual liquidity crunch, our response is generally to stay the course. Commitment pacing plans are part of the strategic discipline of portfolio management. We all know that markets are unpredictable and cannot be timed, so commitment pacing should be disciplined and systematic. We don't encourage clients to overcommit during bull markets, nor do we suggest pausing commitments during bear markets.

Historical market performance data supports our view on both an absolute and relative basis. Committing to US private equity during recession years and near subsequent years has been rewarding for investors that maintained their commitment pacing.

[2] Burgiss Private i as of 12/31/21.

Figure 5. Relative outperformance of private equity (as of December 31, 2021)



Source: Burgiss Private i, December 2021.

The Kaplan-Schoar public market equivalent (PME) provides a relative performance measurement that is informative and supports our opinion. The Kaplan-Schoar PME is a ratio describing the relative performance of a private investment versus a public index. In Figure 5 above, we show the Burgiss US All Private Equity Pooled IRR versus the S&P 500 Total Return (TR) PME. For example, the PME ratio (solid purple line) for 1991 is 1.38, indicating that the US All Private Equity Pooled IRR for the vintage year 1991, as of December 31, 2021, exceeded the S&P 500 TR PME by 38%. Further, the vintage-year returns (columns) and the PME ratios trend upward beginning in recession years and continue to improve into near subsequent years, usually exceeding the average outperformance (dotted purple line). In other words, investors that maintain disciplined and steady commitment pacing have been rewarded with strong absolute and relative performance.

Portfolio investment plans exist to provide a governance framework to guide investors through good times and bad, during periods of exuberance and fear. When markets are volatile, emotions can run high. More often than not, the biggest challenge is to remain calm and disciplined, and investors that are able to do so have been rewarded in US private equity.

Key takeaways

Assuming the absence of an actual liquidity crunch, our response is generally to stay the course. Commitment pacing plans are part of the strategic discipline of portfolio management. Markets are unpredictable and cannot be timed, so commitment pacing should be methodical and systematic. We don’t encourage clients to overcommit during bull markets. Nor do we suggest pausing commitments during bear markets.

3. Venture capital

Downturns spawn venture-backed innovative successes

If history tells us anything, it's that there appears to be a correlation between downturns and the creation of iconic companies. As far back as the 1930s, there are examples (Hewlett-Packard) of new companies being spawned in every recessionary period. Why? The desire to fix current issues, trying to find a better way, or trying to be frugal; employee layoffs may also force true entrepreneurs to take that leap of faith and launch a new enterprise.

Newly unemployed job seekers either need to find new jobs or do something to survive. These layoffs motivate those considering starting a new business to do so. These "intrapreneurs" may have had an idea that their corporations didn't support or didn't dare to sell internally. A layoff can be the push into the deep-end they need to learn how to swim.

Figure 6. Innovations born of downturns

After the GFC in 2008, the founders of Airbnb wanted to find a way to make extra money during the downturn and so offered up a couch in their living room. They developed a better way to provide space for short-term stays while accommodating the need to be frugal in a challenging economic environment. That spawned the idea of creating a platform for others to do the same. Today, Airbnb (NAS: ABNB) has a market cap of roughly US$70bn (as of October 12, 2022) and a 2021 annual revenue just shy of US$7bn.

Another GFC success story in 2009 was Venmo, where friends Andrew Kortina and Igram Magdon-Ismail wanted a cheaper and easier way to send money digitally. They had used checks to pay each other back for purchases and found the less-than-instantaneous process of finding the checkbook and cashing the check to be too cumbersome and inconsistent with the instant lifestyle mobile phones offered. They set about figuring out how to make payments to anyone, anytime, with the transfer being as easy as sending a text message. These college roommates tackled an issue with current processes and made it more efficient. Venmo was backed by several notable venture capital firms, including Accel, and was ultimately acquired by Braintree and then Paypal.

One final example of innovation removing obstacles is the founding of Uber. Starting the company as UberCab, the two founders wanted a better experience than that offered by existing taxicabs and thought of utilizing black car services' unused capacity to solve this issue. In 2009, the founders of Uber had difficulty locating a taxi in Paris after a tech conference. The desire to create an app to reduce or eliminate a pain point was born and ultimately revolutionized transportation as we know it. Uber created a whole category of ridesharing and the sharing economy. Today, Uber has a market cap of roughly US$55bn (as of October 12, 2022) and 2021 total revenues of US$18bn.

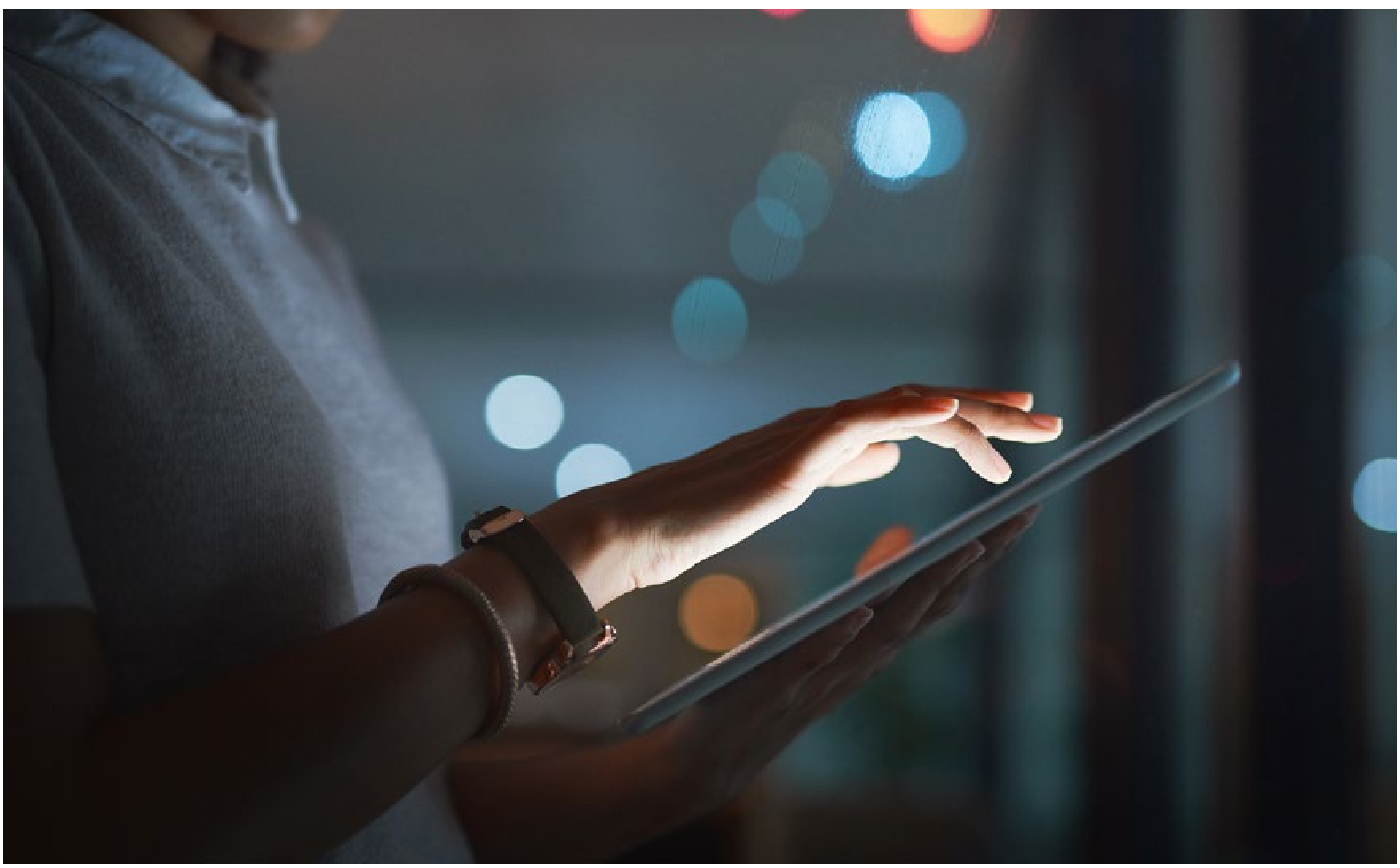
Notably, the markets for all three companies essentially didn't exist little more than a decade prior, and yet, in barely 10 years, these services have become indispensable.

These venture-backed companies are organizations founded during a cyclical downturn by entrepreneurs solving a problem. These founders and CEOs understand the value and cost of money. The need to bootstrap or reduce cash burn to live another day is heavily ingrained in their entrepreneurial journeys. Difficult times can spawn the need for capital efficiency. These recessionary founders might focus more on returns on their investments and expenditures than those founding companies during "high times."

For the past several years, money has been cheap and flowed freely. But now the launch parties of the early 2000s have disappeared, even though they were fun, and many of those startups probably wish they had used their capital more wisely and not spent as much on entertainment and extravagant food – they might still exist. The easy flow of capital can make founders forget what fundraising in a downturn looks like.

Fundraising risk is real and occurs at the worst of times, particularly during recessions. A few dollars used wisely can make or break a startup. CEO founders in recessionary periods are particularly sensitive to cash burn, as they experience fundraising deserts. It's vital to have sufficient capital to weather economic downturns and be prepared for all economic cycles.

Whether we call our current economic situation a recession or not, there is certainly turmoil. Rising interest rates, inflation, the persistence of COVID-19, geopolitical issues with China, fuel shortages in Europe, rising fuel costs and the Russia-Ukraine conflict all outline potentially bleak markets in the near term. Two things will not change: cyclical markets and entrepreneurship. The entrepreneurial spirit to create, innovate, improve and solve challenging problems seems to flourish in cyclical down markets. Venture capital fuels the flames of innovation and disruptive technologies that change the world and make it a better place.



There is always a good time to invest in early-stage venture capital. New, disruptive technologies are created daily, as entrepreneurs see new challenges they want to fix. Doubting venture capital as an asset class requires disbelief in the ability of humanity to innovate and navigate challenges.

Given the current uncertainty, however, the ultimate question is whether now is the right time to invest in venture capital. In part, the answer comes down to returns. The Q2 2022 Burgiss Private i trailing 10-year IRR benchmark shows that venture capital was the best-performing private markets asset class for the past 10 years by a considerable margin.

If history does repeat itself (or at least rhyme), it might be possible to make attractive returns following the current crisis while also helping to develop products and markets that we don't even know we need right now.

Figure 7. Q2 2022 Burgiss Private i trailing 10-year IRR benchmark*

Asset class	Capitalization (Millions)†	Number of funds	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Venture Capital	1,002,885	3,323	-6.53	-10.13	1.89	30.18	26.45	20.38
Expansion Capital	114,665	167	-4.67	-8.05	-4.98	16.67	15.15	13.27
Buyout	3,414,272	2,523	-2.91	-3.14	8.13	20.63	18.35	15.98

Source: Burgiss - †Pooled Results: USD | Individual Results: Local

Other companies founded in recessions:

Hewlett-Packard (1937–1938 recession)
Microsoft (1973–1975 recession)
Electronic Arts (1981–1982 recession)
Slack (2007–2009 recession)
Warby Parker (2007–2009 recession)
WhatsApp (2007–2009 recession)
Square (2007–2009 recession)

Key takeaways

There appears to be a correlation between downturns and the creation of iconic companies. Innovations and improvements seem to flourish in cyclical down markets. If history does repeat, it might be possible to make attractive returns following the current crisis while also helping to develop products and markets that we don't even know we need right now.

* Past performance is no guarantee of future results.
† Pooled Results: USD | Individual Results: Local

4. Asian private equity

China

The emergence of the Omicron variant in late 2021 and rising vaccination rates rapidly changed the dynamics of the COVID-19 pandemic in 2022. Public fatigue from COVID-19 restrictions and Omicron's lower fatality rates made the choice to reopen obvious, especially for counties with no viable COVID-19 containment strategies. The high infection rate has also increased the complexity of containment strategies exponentially, leading to the widely publicized lockdowns in key Chinese cities.

The ongoing deleveraging of the real estate sector, allegations about human rights in Xinjiang and the association of the Russia-Ukraine conflict with the Taiwan-China relationship have exacerbated negative sentiment toward China.

With global competition as a backdrop, a number of policies, led by the G7, have limited China's ability to access the global capital markets, critical technologies and markets where Chinese goods are sold.

Weak sentiment has had an impact on business confidence, reflected in market valuation and youth unemployment, which was at 18.7% in August 2022 compared to the 2021 peak of 16.2%.[3]

Opportunities

Weak sentiment toward China has manifested in China's recent fundraising numbers and public market valuations. However, there is a silver lining. Valuations for Asian businesses, especially in China, are at very attractive levels, measured in price per unit of expected growth.[4]

Many GPs have also indicated that sellers of Chinese businesses are more willing to negotiate and cede control to buyers. This creates more opportunity for buyouts, which historically account for just one-ninth of all of China's private equity transactions.[5] In other mature markets, buyouts account for more than half of total private equity volume.

On a positive note, China has made massive investments in infrastructure projects in flood controls, roads, food production and water distribution, making global climate change and food crisis more manageable than in even some of the most advanced economies. Combined with its production capacity and quality labor force, annual inflation in China has been within a healthy range at less than 3%.[6]

With much of the pessimistic news already priced in, there is an obvious opportunity for upside. It's only a matter of time before COVID-19 restrictions are relaxed, and signs are increasingly pointing in a more pro-economy policy direction. China has also become more self-sustaining and has developed a large domestic capital base that already accounts for more than half of total private equity funds raised in China in recent years, providing the capital needed to fuel the economy.

Tech

Demographic trends, geopolitical tensions and policy initiatives, such as common prosperity and national security, have resulted in the repricing of previously highly sought-after tech-related sectors, including consumer internet platforms, cryptocurrency, online gaming and media. Monopolistic Big Tech companies have also been affected.

Nonetheless, the 14th Five-Year Plan has created opportunities for biotechnology, enterprise technology[7] (software, data efficiency) and deep technology, which China considers strategically important for becoming more self-reliant. According to iResearch,[8] China's enterprise software and enterprise SaaS markets will grow from RMB240bn and RMB53bn to RMB350bn and RMB136bn, respectively, between 2020 and 2023, at respective CAGRs of 14% and 37%.

[3] Statista. "Monthly surveyed urban unemployment rate in China September 2020–2022," October 24, 2022, available at https://www.statista.com/statistics/1244339/surveyed-monthly-youth-unemployment-rate-in-china/.

[4] TPG Asia June 2022 Annual General Meeting.

[5] AVCJ database, as of June 2022.

[6] National Bureau of Statistics of China. Extracted on October 13, 2022.

[7] Deep technology includes a number of sub-sectors including advanced manufacturing, semiconductor, artificial intelligence, robotics, autonomous driving, etc.

[8] iResearch, Future X Capital information.

On the sustainability front, China has committed to a carbon-neutral target by 2060 and is already the largest electric vehicle (EV) market, with sales of 2.92 million EVs, or 53% of the global EV market share.[9] China is currently the world's largest producer of wind and solar energy and the largest domestic and outbound investor in renewable energy. Four of the world's five largest renewable energy deals were made by Chinese companies in 2016.[10] As of 2022, China owns eight of the 10 largest solar-module manufacturing companies.[11] China's advanced manufacturing capability allows it to play a critical role in arming the world for the fight against global climate change.

Other private equity segments

The drop in company valuation and the lack of near-term liquidity, due to current public market conditions, gave rise to more control and buyout opportunities, which were previously difficult to access due to high seller expectations. There are still venture capital opportunities, but late-stage tech has become less attractive compared to early-stage tech. Investors now also favor companies that are more cautious of the cash-burn rate and put a higher focus on earning abilities. Although the long-term drivers of the Chinese economy remain largely unchanged, and innovation remains critical for fueling economic growth, careful consideration should be given to late-stage investments due to their limited exit window. For the same reason, we support smaller growth and buyout opportunities, ideally with GPs that can proactively influence the direction of the business, which should lead to long-term value creation for investors.

[9] Daxue Consulting. "China's Electric Vehicle Market, a Rising Global Leader in EV Technology," August 10, 2022, available at https://daxueconsulting.com/electric-vehicle-market-in-china/.

[10] Chiu D. "The East Is Green: China's Global Leadership in Renewable Energy," *New Perspectives in Foreign Policy,* Issue 13, Summer 2017 (October 6, 2017), pp. 3–8, available at https://www.csis.org/east-green-chinas-global-leadership-renewable-energy.

[11] Marsh J. "Top Solar Panel Manufacturers," Energy Sage, August 6, 2022, available at https://news.energysage.com/best-solar-panel-manufacturers-usa/. Energy Sage: https://news.energysage.com/best-solar-panel-manufacturers-usa/

Beyond China

The jury is still out on the long-term outcome of the supply-chain restructuring. However, in the short term, this has resulted in the need to create redundancy in the supply chain, the majority of which is expected to occur within the region, where a cheaper and more reliable labor force is available. This enables the creation of the so-called "China-plus" strategy, where GPs leverage their knowledge of Asia and execution experience in China to speed up the development of a high-quality supply chain alternative.

Countries such as Vietnam, Thailand and Indonesia have become potential alternative locations for manufacturing, while the Philippines, along with India in South Asia, have already become major hubs in customer service and IT outsourcing. This has created a range of growth opportunities in the business-to-business and consumer-oriented sectors, as the size of the middle class expands. Major risks exist in these markets, and returns are often driven by short-term capital flow. Managers with the right access and execution skillset and with well-considered exit strategies, such as M&A and trade sales, are expected to outperform in these traditionally less-robust markets.

The new economic reality has created both uncertainties and opportunities. We expect China to remain the region's economic driver, as the country's fundamentals noted in Consideration 2022 have not materially changed. Beyond China, recent developments have created interesting growth opportunities in other Asian countries. Combined with the more mature private equity markets — such as Australia, Japan and Korea — that offer more traditional buyout opportunities, Asia private equity presents an interesting diversification story in this uncertain environment.

5. European private equity

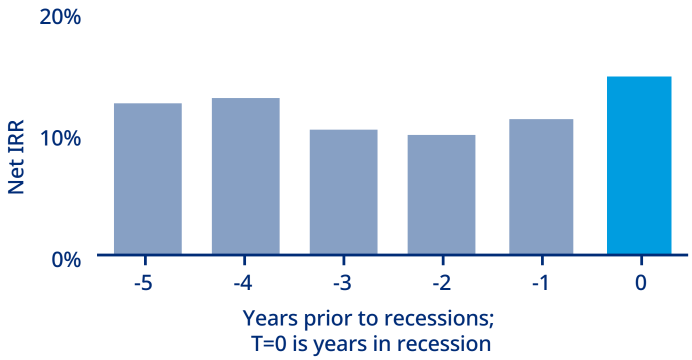
Private equity outperforms in recessions

Looking at the current European macroeconomic environment, it may be hard for some investors to see the case for allocating to European private markets. With inflation running significantly higher than many investors recall having seen during their careers, and depressed economic growth, it isn't obvious that Europe is the place to invest over the coming few years. However, investors should pay attention to their history lessons and note that, in the past, private equity has performed well during recessions.*

Several GPs today deploy buy-and-build strategies, with the aim of ultimately creating better companies. A recession may provide a good opportunity for GPs to acquire companies that will be additive to their existing portfolios. As long as their companies are able to manage a recessionary environment (for example, by putting through price increases where needed), a downturn may allow GPs to achieve excellent results. Accordingly, now is not the time to pull back and stop investing in European private equity. Furthermore, as we can see from Figure 8 below, returns from private equity have been less volatile than in the public markets.

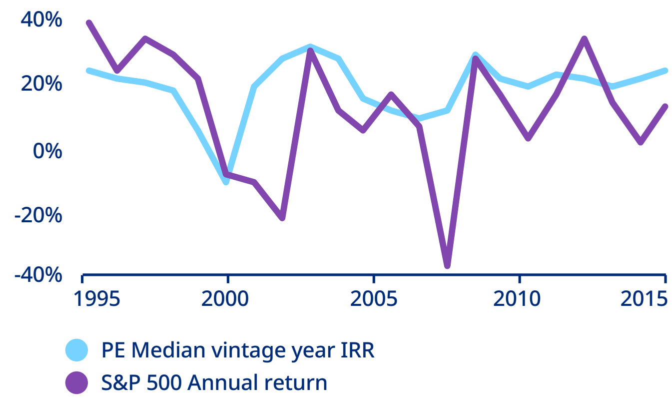
* Past performance is no guarantee of future results.

Figure 8. Private equity vintage performance
(average of median net IRRs)



Source: Schroders, based on data sourced from Preqin. Based on analysis of vintage years from 1980 to 2009.
Recessions: 1980–1982, 1990–1991, 2001, 2007–2009.

Figure 9. Private equity IRR versus S&P 500
(1995–2015)



Source: Hamilton Lane and Thomson Reuters Datastream.

Currency depreciation movements may enhance European private market returns for non-European investors

There has been significant depreciation in the euro and sterling against the US dollar. For investors who believe this isn't a long-term trend, there's a currency advantage to investing in euro and sterling funds now. One such advantage is providing drawdowns while the currency is weak and ultimately having that capital returned with a stronger currency in several years. Although there can be no guarantee that the European currencies will appreciate, this may provide non-European investors with a small boost to their returns.

However, the key to good private market returns over the long term is having access to the best European funds. This means investing in funds that should ultimately provide investors with the best absolute returns, regardless of the economic cycle or currency movements.

Ability to gain access to highly-rated funds

One clear trend we have identified involves LPs wanting to focus on investing and having relationships with fewer GPs than previously. This presents an ideal opportunity for LPs that are new to private market investing or those looking to access higher-quality managers. Managers that historically might have closed quickly or have been oversubscribed may now have space for high-quality new LP relationships. Over the past six months, we've seen some GPs that have historically provided their investors with top-quartile returns year after year suddenly make space for a select number of new investors. Although this presents an ideal opportunity for those that can take advantage of this dynamic and move relatively quickly, it may pose an interesting challenge for GPs next time they raise. For example, if a GP wants to maintain the same fund size next time, how will it accommodate its new LPs alongside those historic LPs that passed this time around and want back into a fund next time they come to market?

Often, the hardest decision for an investor to make when macroeconomic conditions are negative is to stay the course and continue investing. It's important to remember that those that stayed the course in 2008 and during other difficult times were well rewarded. Over the next few years, a number of robust GPs are coming to market that should be able to take advantage of market dislocation and benefit from recessionary conditions. As we can see in Figures 8 and 9 above, good returns can be achieved despite poor economic conditions — as long as you're invested with the very best managers!

6. Real estate

Introduction

Moving into the final months of 2022, global real estate markets are catching up with the reality of persistent, rampant inflation, substantially higher interest rates across the developed world and the likelihood of recessionary times ahead. Property investors are looking back at past cycles and concluding that each one only partially fits the current context. The blend of macroeconomic and financial factors with longer-term structural trends is distinctively different from anything we've seen before, leading us to believe that successful real estate strategies remain available, even if the overall backdrop has become more challenging compared to a year ago.

With rising borrowing costs and property prices adjusting around higher risk-free rates, we expect the strong valuation growth experienced during H2 2021 and H1 2022 to slow and potentially turn negative in places. Prior cycles have taught us that, with the future of valuations uncertain, some investors will be inclined to pause investment or even seek to redeem capital from funds offering possible liquidity. Although this is understandable, we strongly recommend focusing on the long term with respect to both established strategies and commitment plans. Valuation weakness may occur over the next few quarters, but real estate provides investors with an opportunity to gain exposure to trends shaping the future — from greening the built environment to onshoring supply chains — which, over the longer term, generate attractive income and positive value growth driven by fundamentals.

Main considerations

Which property types will best weather the storm?
Friction between yield impact and NOI growth

The return potential of property sectors is generally determined by economic growth cycles, but several sectors also experience tailwinds through longer-term structural trends that lift demand. For the best-positioned sectors, upward pressure on NOI and pricing will likely still occur, which should offset persistent inflation and other fundamental shifts.

Rising logistics values have been boosting portfolio returns over recent years, but increasing interest rates are likely to put pressure on the lowest-yielding properties. However, this will be offset in many markets where NOI growth is able to soften the blow as industrial demand is boosted by trends such as domestic manufacturing, increased stock-building and just-in-time supply chains. The softening impact of these tailwinds is likely to be felt more locally; for example, where vacancy or supply is low in certain markets.

Similarly, housing shortages in midmarket and affordable segments are far from solved. Less-heated economic circumstances should take some of the pressure off high construction costs and labor shortages. Institutionally-owned for-rent residential properties derive their valuation from potential rental cash flows, which remain robust and may even benefit from distress in the for-sale housing market.

Several niche segments may also benefit from secular and economic tailwinds. Student housing, with its short-term cash flows in many regions, matches inflation closely in terms of NOI, while student populations tend to increase during economic downturns. Life sciences, senior housing and medical office buildings continue to benefit from an aging population and increasing life expectancy in developed markets. These trends, combined with pharmaceutical and venture capital funding in the life sciences sector, continue to increase demand for healthcare-related property. Increasing data usage resulting from secular trends — such as e-commerce, internet-of-things, streaming online content, etc. — continues to cause a positive supply-demand imbalance and strong return potential for data center and studio/media content properties, particularly in the US.

The economical side of ESG integration
Saving on energy makes good economic sense

Much has been said about the long-term need to improve the environmental performance of real estate. With record-high energy prices, an increasing number of landlords and tenants are starting to see the economical side of occupying more sustainable buildings. The ESG upgrade, which was already visible in many global property markets before the onset of the pandemic, is now gathering speed and intensity. Total occupational costs may end up lower in more energy-efficient properties, even if the rent alone is slightly higher than for more average building grades.

This is good news from an income-generation perspective, but investors and appraisers are also increasingly recognizing these ESG benefits in their valuations. This applies to more than just the office sector. In the face of climate change and high energy prices, tenants choose residential homes that will save on risks and expenditure, while corporate tenants of logistics or retail will do everything they can to protect their bottom lines. These effects all speed up the transitioning and retrofitting of existing outdated real estate stock.

Commit now for the best returns
Blind pool vintages late 2022/2023 likely to outperform

Real estate is a large and diverse investment universe, not only in terms of underlying property sectors but also in the ways in which investors can access the asset class. Fund investors can choose from a wide variety of open-ended funds providing access to portfolios for different risk styles and sectors. Or they may choose blind-pool funds, where the manager builds the portfolio with the ability to make more tactical decisions and take advantage of secular trends and market shifts. Discomfort with current valuations should therefore not be a deterrent to making real estate allocations. Using history as a guide, real estate investors are rewarded when investing during times of dislocation, when attractive valuations and opportunities can be found. Value-added or opportunistic funds raised in late 2022 and 2023 will likely benefit from distress in their acquisitions and will be well-positioned to sell once the market has rebased. For investors seeking income-producing strategies, we also recommend exploring the secondary markets, where significant discounts upon entry may be found, mitigating future volatility.

Key takeaways

Investors should focus on the long term with regard to both established strategies and commitment plans. While valuations may weaken over the next few quarters, real estate provides investors with an opportunity to gain exposure to trends shaping the future — from greening the built environment to onshoring supply chains — which, in the longer term, generate attractive income and positive value growth, driven by fundamentals.

7. Infrastructure

The Western (and now global) social convention of proposing marriage with a diamond ring is actually only around 75 years old, while the diamonds themselves have taken at least one billion years to form naturally.

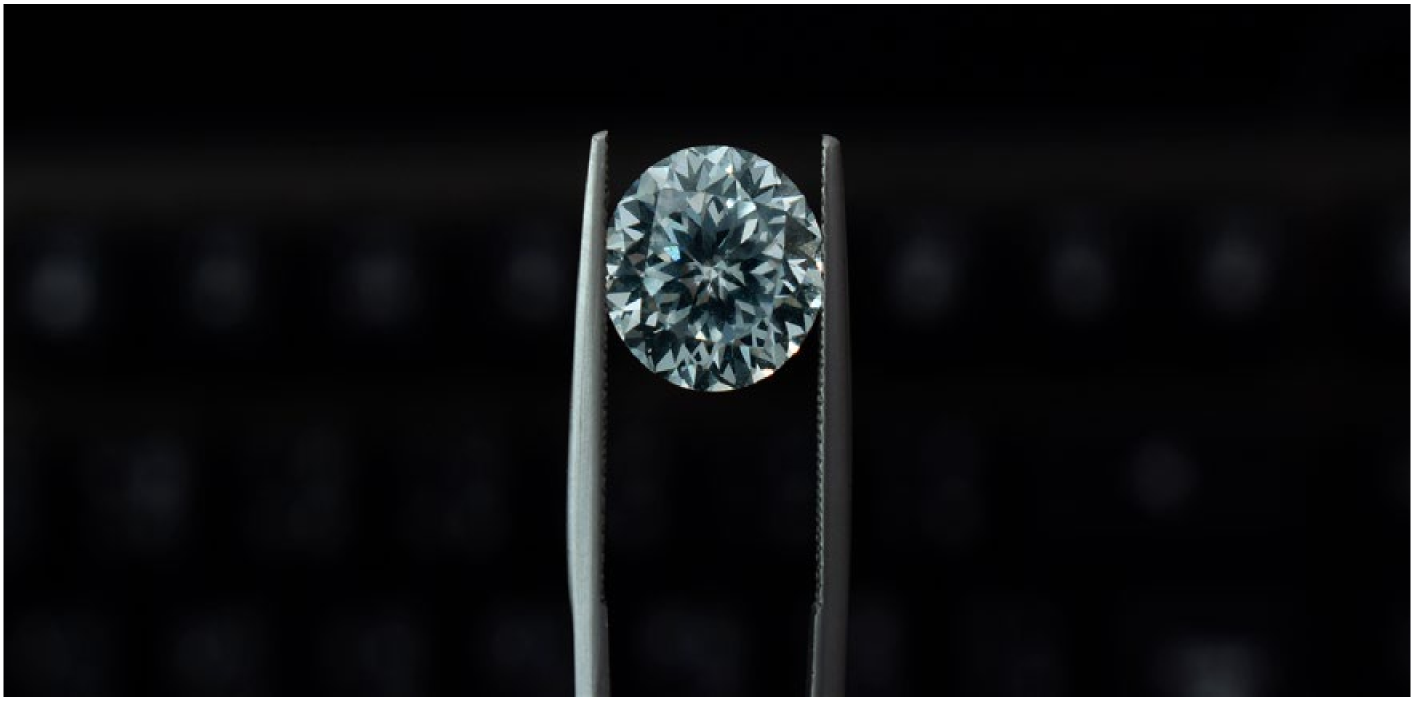
In 1947, Mary Frances Gerety (a copywriter at N.W. Ayer & Son) penned a now iconic strapline for De Beers Consolidated Mines Limited, which transformed an otherwise declining industry: "A Diamond is Forever." It has been used by De Beers ever since and was even named the best advertising slogan of the 20th century.

Since then, Marilyn Monroe, James Bond and even Inspector Clouseau, among others, have contributed to the aura surrounding these little pieces of crystal-structured carbon. That said, the aura is justified (at least from a utilitarian, if not aesthetic, perspective); diamonds are the hardest-known naturally occurring material, have the highest thermal conductivity and can withstand extreme pressure.

In several industrial processes, nothing but diamonds can endure the associated physical stresses and strains. If you want resilience, you need a diamond.

Global annual diamond sales now exceed US$130bn, but unfortunately, success brings competition and even imitation. Cubic zirconia, zircon, moissanite, spinel, rutile and even glass are some of the materials typically passed off as the genuine article. How do we tell the difference? There are several ways, but two extreme methods rely on the unique physical properties described above; we scratch the diamond, however possible, and we subject it to rapid heating and cooling. We test it to the breaking point, knowing that a true diamond will not break.

Odd as it may seem, there are many parallels between diamonds and infrastructure. The asset class has been around for thousands of years, yet it only became truly commercial within the last 30 or so. For many investors, infrastructure has become the jewel in their portfolios due to its lower downside risk under the extreme, yet varied, economic scenarios of the past decade. It, too, is now a multi-billion-dollar market, with ambassadors for the asset class ranging from President Biden to President Xi Jinping, and even Boris Johnson.

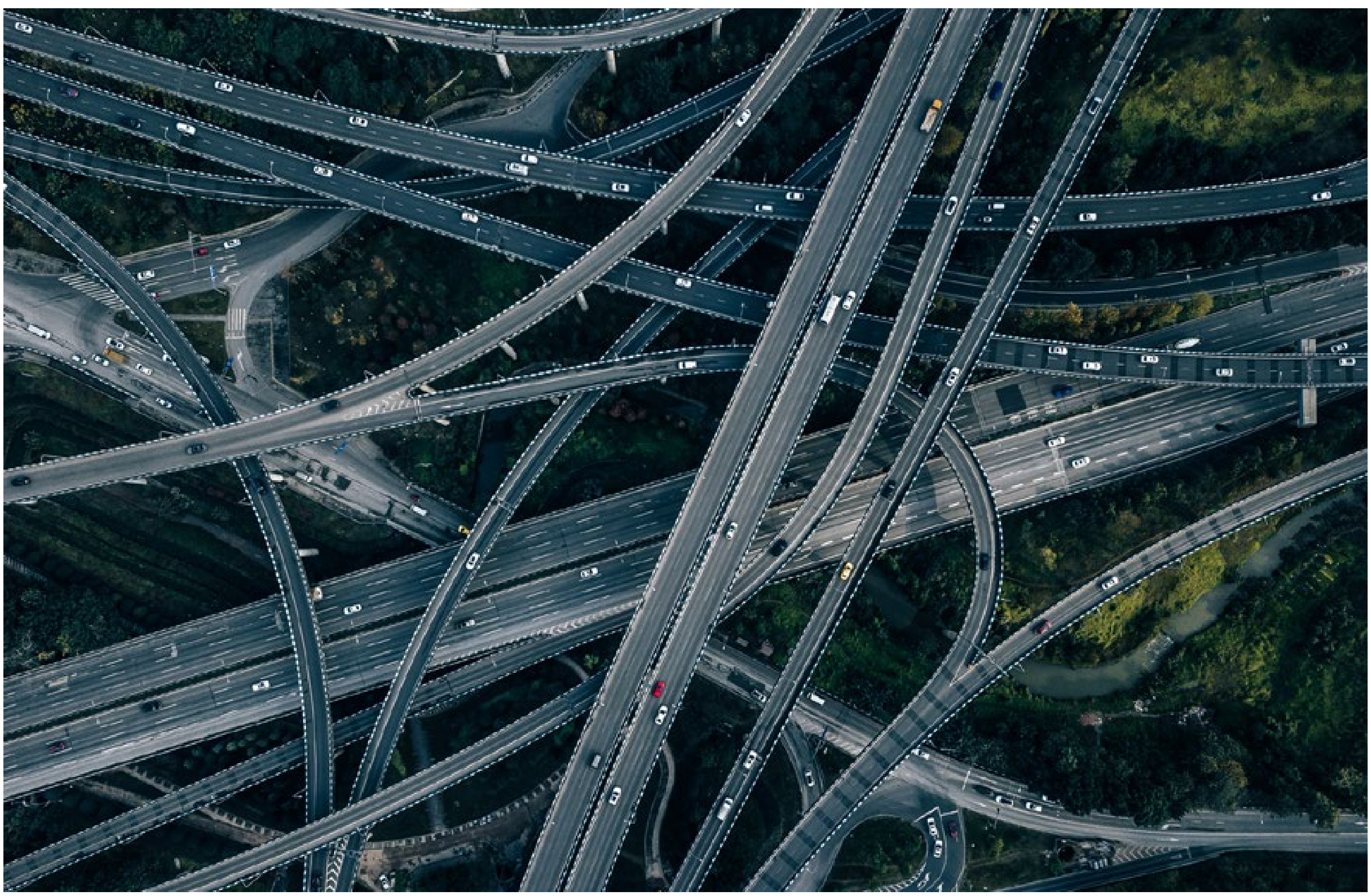


Unfortunately, these parallels also extend to imitation and branding. The (commercial) success of the asset class over the past decade appears to have resulted in certain assets and businesses being passed off as 'infrastructure' within portfolios. To the untrained eye, these counterfeits may also seem identical, and, as with diamonds, may even pass some of the tests when carried out in isolation or to a less-strenuous extent. And when being bought and then sold by otherwise reputable infrastructure investors, does that process itself not prove their authenticity?

What of the asset class's iconic strapline? Although none are as ingenious as that of Gerety, one in particular resonates just as strongly in this specific context: "infrastructure provides inflation protection." This simple yet incredibly powerful slogan is as appealing to an investor in the current market environment as a diamond's carat, clarity, cut (and cost!) are to a would-be fiancé. However, unlike De Beers' catchphrase, this one is, at best, incomplete and, at worst, inaccurate (particularly if "imitation" infrastructure is considered).

To be clear, infrastructure investments can indeed provide a degree of linkage to inflation over the medium to long term. However, the degree of linkage (and the period over which it materializes) varies on an asset-by-asset basis and may even be scenario-specific. This is because of the complex interaction of several factors, all of which may be changing simultaneously. Sadly, despite her marketing brilliance, even Gerety may have struggled to encapsulate this accurate (if somewhat uninspiring) description into something suitably elegant.

In the same way that the four Cs (carat, clarity, cut and cost) described earlier are important to a would-be fiancé, the five Cs of infrastructure are equally as important to a would-be investor seeking protection from rising inflation. Many investors naively assume that if an infrastructure asset's cash flow is in some way inflation-linked, that is enough. However, what happens if the asset's counterparties don't meet their contractual obligations? Or the asset doesn't have the pricing power predicted? Or the regulator won't allow for inflation pass-through as before?



That's just the top line. Investors then need to consider how an asset's cost structure varies with inflation (which could actually be growing faster than cash flow, at least in the short term). What about the asset's capital structure and the extent to which inflation linkage in cash flows after the cost structure is being geared up (or down) by the quantum and nature of the debt used to finance the asset? Typically, the realized gains from an infrastructure asset during its holding period come from its coupons, but the quantum, timing and inflation linkage of these are active management (not automatic) decisions.

The unrealized gains come through an asset's valuation, which, for infrastructure, is typically done on a discounted-cash-flow (DCF) basis. As all good scholars of Modern Portfolio Theory know, the key to any DCF is the discount rate, in turn determined by the capital asset pricing model (CAPM). However, what many good scholars struggle with, at least initially, is that CAPM can be more (dark) art than exact science. Therefore, although an asset's projected net cash flows may indeed be positively linked to inflation, an adverse change in the discount rate used may partially, or even completely, offset this in the asset's valuation.

So what does this all mean for the remainder of 2022 and beyond? Although a somewhat controversial view, infrastructure potentially has an imitation problem, as well as a (inflation) branding problem. What better way to test this view than for the global economy to experience the highest rates of inflation since the 1970s and, simultaneously, an associated increase in risk-free rates not seen since the GFC?

These will be the two extreme methods we use to test the unique investment characteristics of infrastructure as an asset class. We believe true infrastructure will pass these tests, despite them being unprecedented for the asset class given its relatively short commercial history. However, investor expectations of inflation linkage may need updating based on the experiences yet to come, and imitation infrastructure may finally be pushed to its breaking point.

Key takeaways

The magnitude of the link between inflation and private markets depends on the asset-specific capital structure, cash flows and the capital expenditures ratio. We believe true infrastructure will pass these tests, despite them being unprecedented for the asset class given its relatively short commercial history. However, investor expectations of inflation linkage may need updating based on the experiences yet to come, and imitation infrastructure may finally be pushed to its breaking point.

8. Hedge funds

Largely, hedge funds have delivered diversification benefits in a world where stocks and bonds have simultaneously been trounced. As of September 30, 2022, the HFRI Fund of Funds Composite Index (which we believe is the best representation of the average hedge fund investment experience) is down 5.9%, which compares favorably to the MSCI ACWI (-25.3%) and the Bloomberg Aggregate Bond Index (-14.6%). Many multi-manager hedge fund programs have performed significantly better; indeed, several with which we are familiar are solidly in positive year-to-date performance territory.

Now that hedge funds have delivered on diversifying both equity market and interest rate risk, what's next? In some cases, we're seeing hedge funds used as a source for rebalancing, which we believe may prove somewhat premature. In this section, we review hedge fund rebalancing considerations and strategic versus tactical allocations, and we offer an alternative approach. But first, let's consider where we are and where we may be going in the capital markets — and why this time may truly be different.

Following the GFC, investors allocated capital to asset classes and strategies, including hedge funds, intending to provide diversification to traditional asset allocations. From the GFC until the COVID-19 crisis, markets, fueled by "emergency" monetary measures, spiked up and to the right as stocks and bonds — indeed, nearly everything — appreciated, with the notable exceptions of volatility and dispersion. From 2011 to 2021, the traditional mix of stocks and bonds delivered one of the strongest 10-year periods of returns in history. Those hedge funds intended to diversify equity and interest rate risk proved an opportunity cost for an extended period.

Throughout this period, investors were rewarded for "buying the dip". Throughout the European debt crisis, the subsequent taper tantrum, the distressed energy micro-cycle of 2015, the growth scare of 2016 and the Christmas Eve 2018 bear market, buying the dip was rewarded, reinforcing the behavior. The "flash recession" due to COVID lockdowns resulted in the quickest bear market and fastest bull market in history, offering an exceptional risk-asset entry point if you had the liquidity to act in the

blink of an eye. The other side of the rebalancing coin is the source, and hedge funds sometimes serve this role. With capital markets receding into bear territory, we are again seeing rebalancing-driven redemptions across the industry. Although we are huge proponents of selling high and buying low, a potential regime shift in markets may be at hand.

The losses in capital markets in 2022 are arguably unlike those of the recent past. Inflation, largely under control since the early 1980s, has become the primary catalyst for resetting risk premia. As a result, the US Federal Reserve (the Fed) and global central banks have shifted priorities. Rather than "having the market's back" and stimulating at each whiff of weakness, central bankers are actively seeking to slow the economy to rein in prices. This represents a potential sea change with unique ramifications. The Fed is less likely to be structurally accommodative going forward, enhancing the need for diversification, downside protection, alpha and, ultimately, a rebalancing source.

In our opinion, hedge funds are uniquely positioned for this environment from a risk-reward standpoint.

Hedge funds can serve a critical strategic role in diversifying equity market and interest rate risks, particularly in an environment in which stocks and bonds are positively correlated. Hedge funds have delivered attractive downside protection and generated strong alpha in the current market.* On the other hand, the typical hedge fund program is a poor source for rebalancing.

Rebalancing from a hedge fund program can present challenges, particularly when time is of the essence, as is the case when seeking to buy risk assets when they are on discount. Hedge fund strategies aren't liquid enough to move quickly, as they typically carry limited redemption rights and advance-notice requirements. Moreover, such decisions often "force" redemption from the most liquid managers and strategies, which may impair the design of the hedge fund portfolio construction. Worse still, rebalancing could force you to sell precious capacity from otherwise closed managers that you may never be able to get back. In other words, when tactically moving hedge fund allocations up and down, there is a high probability that those managers you sell will be of higher quality than those available to buy.

* Past performance is no guarantee of future results.

As a result, we are strong proponents of an appropriately sized strategic hedge fund allocation that is long-term in nature and intended to remain untouched as a rebalancing source. Holding such an allocation was arguably difficult prior to 2022 — cash plus 4% represented an opportunity cost when cash rates fell to 0% and equities compounded at double digits with historically low volatility. As a result, many hedge fund allocation targets have been reduced over the past decade. In a world of such high uncertainty and arguably limited ability for monetary policy support, an absolute return of cash plus 4% is extremely attractive. For many clients, the current actual hedge fund allocation following 2022 relative performance likely represents an appropriate strategic target allocation, solving the rebalancing conundrum, for now.

In our experience, a diversified, multi-strategy, multi-manager approach represents the highest-probability path to attractive, diversifying absolute returns. Our approach in constructing such programs has always involved a small allocation to hedging strategies, which include directionally short strategies that carry a cost (effectively, insurance policies) as well as bi-directional strategies that carry positive return expectations, while historically displaying protective characteristics.

In a world of stagflationary risk, a reversal of liquidity and a higher cost of capital, we believe hedging strategies represent a compelling tactical overweight to hedge fund programs. Moreover, these strategies are among the most liquid of all hedge funds. Finally, and most importantly, when an insurance policy pays off, it behooves you to cash in. When risk is realized and risk assets suffer outsized losses, hedging strategies are expected to produce strong gains that should be monetized, creating a "sell high, buy low" mechanism that improves the efficiency of portfolio management.

We believe today's capital markets environment presents new challenges, as well as some that "rhyme" with the 1970s. As such, hedge funds can serve a critical strategic role in diversifying equity market and interest rate risks that we believe commands a tactically overweight allocation. Implementing the overweight with hedging strategies improves downside protection characteristics and creates a natural source for rebalancing funds without compromising the strategic hedge fund program design.

Key takeaways

Today's capital markets environment presents new challenges, as well as some that rhyme with the 1970s. As such, hedge funds can serve a critical strategic role in diversifying equity market and interest rate risks that we believe commands a tactically overweight allocation. Hedging strategies improve downside protection characteristics and create a natural source for rebalancing funds without compromising the strategic hedge fund program design.

9. Impact investing

Impact investing at an inflection point?

After an active year of investment activity, macro headwinds have taken center stage in 2022. Inflationary pressures, supply-chain challenges, tighter monetary policy and the conflict in Ukraine have challenged the long-term outlook for energy security, food production and economic advancement, among other concerns. The current investment environment faces challenges not seen for some time. But the opportunity set may be relatively ripe for sustainability- and impact-related strategies, such as the energy transition, sustainable food systems, social opportunity, sustainable natural resources and the circular economy. Such strategies offer alternatives to legacy products and services and may be better positioned to meet buyers' needs in this environment.

In contrast to conventional investment strategies, the sole purpose of which is to generate financial returns, impact investing pursues a double-bottom-line approach. This approach seeks investments that generate attractive returns while improving quality of life — through social initiatives, clean energy, sustainable agricultural systems and improved waste management.

The historical recognition and adoption of impact-investment strategies has been challenged by the perception of a tradeoff between risk-adjusted financial returns and impact (environmental and/or social return). However, recent studies generally contradict such sentiments. That said, although the perception of impact investing is becoming more positive, there remains a lack of overall consensus.[12]

Despite mixed perceptions, impact investment has expanded meaningfully over the past decade, driven by multiple converging factors:

- **Substantially improved impact products and services:** Scientific advances, declines in unit costs and high-speed internet penetration have had numerous positive effects. They have made products such as solar arrays more efficient and cheaper, alternative proteins taste more like animal protein, and online educational platforms more affordable, accessible and efficacious. For example, according to the Bloomberg New Energy Forum[13], the levelized cost of energy for solar and wind declined 86% and 60%, respectively, from 2010 to 2020, making them much more viable alternatives to fossil-fuel generation.
- **Growing end-user demand:** As impact products and services become more competitive with legacy solutions, end-user demand has increased. Impact products and solutions used to serve a small group of early-adopter, impact-focused end users willing to pay a premium or sacrifice quality to align their consumption with their values. Many impact product categories now appear to cater to an increasingly mass-market audience. For example, plant-based foods are now a more than US$7bn market, having grown by 54% over three years according to SPINS[14], a wellness-focused data technology company.
- **Increasing investor awareness:** Investors in both public and private markets are increasingly investing capital in impact- and sustainability-focused sectors and companies (see Figures 10, 11 and 12). This provides the capital for these companies to invest in growth initiatives to continue to develop their products and/or services and increasingly penetrate their selected markets.
- **Government-led sustainability and social initiatives:** Initiatives such as the United Nations Sustainable Development Goals and the Conference of the Parties (COP) events, as well as specific country-level regulations and initiatives, have supported certain segments of the impact space, driving awareness, capital and talent to the sector.

[12] Global Impact Investing Network. *GIIN Perspectives — Evidence on the Financial Performance of Impact Investments,* November 2017, available at https://thegiin.org/assets/2017_GIIN_FinancialPerformanceImpactInvestments_Web.pdf.

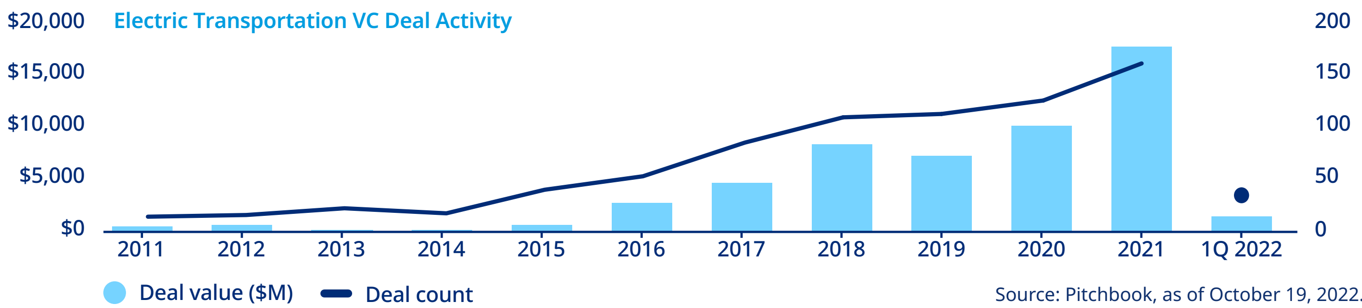
[13] Bloomberg NEF LCOE Update as of December 10, 2020; LCOE units in $/MWh 2019 real.

[14] The data presented is based on custom GFI and PBFA plant-based categories that were created by refining standard SPINS categories. Due to the custom nature of these categories, the presented data will not align with standard SPINS categories. Sources: SPINS Natural Enhanced Channel, SPINS Conventional Multi-Outlet Channel (powered by IRI); 52 Weeks ending 12-26-2021. Panel data from NCP, All Outlets, 52 weeks ending 12-26-2021. Copyright 2022 The Good Food Institute, Inc.

With multiple elements converging to support impact themes, the projected growth rates in impact sectors can be meaningful. For example, the global electric mobility market is expected to have a CAGR of 27.2% from 2021 to 2028. This would take the current market, of approximately US$279.45bn, to a size of US$1.5trn.[15] The global plant-based-meat market is expected to grow at a 9% CAGR from 2025 through 2040, above the -3% rate for conventional meats, according to ATKearney.[16]

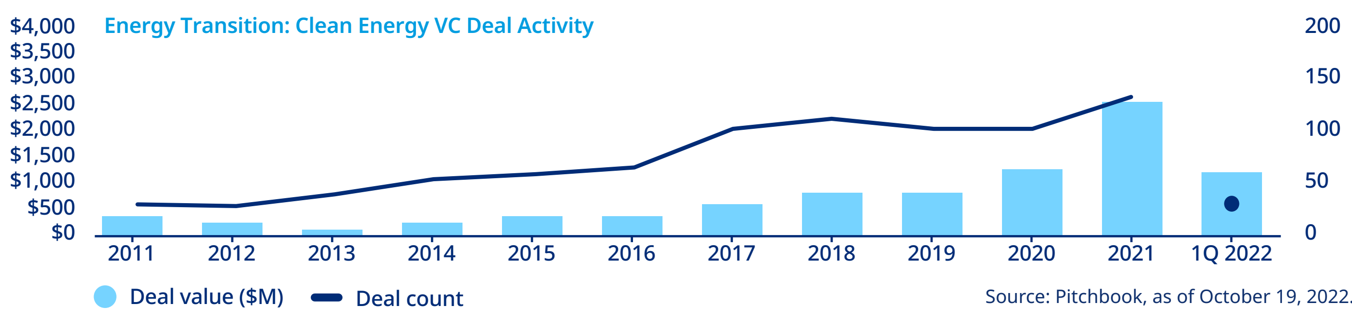
Also, the historical penetration rate of other growth sectors, such as smartphones, digital payments and e-commerce, has, in several cases, increased from below 5% to more than 70% over 10-20 years (see Figure 13). If the penetration rates of existing impact sectors, such as electric vehicles, plant-based foods and recycling solutions, even approach those of these sectors over a similar timeframe, the runway and growth trajectory in impact could be very exciting over the next 20 years. Indeed, the IEA expects that 90% of electricity generation should come from renewable sources by 2050.[17]

Figure 10. Electric transportation venture capital deal activity



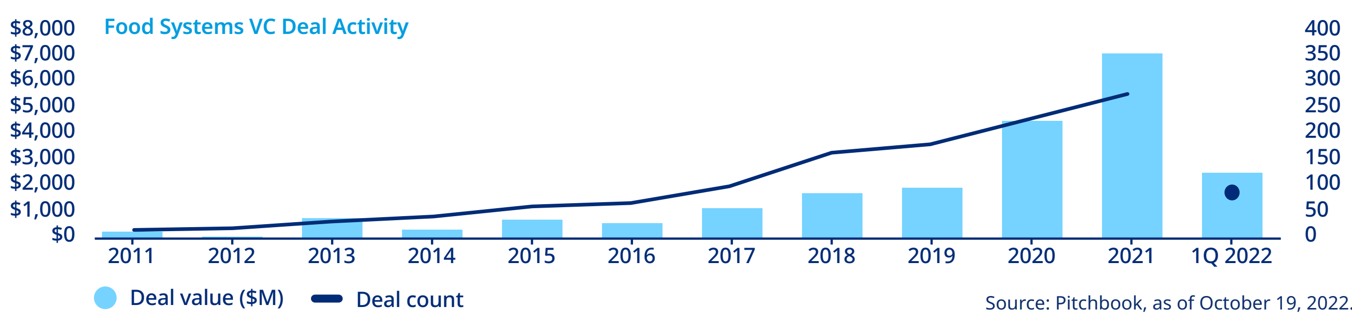
Source: Pitchbook, as of October 19, 2022.

Figure 11. Energy transition: Clean energy venture capital deal activity



Source: Pitchbook, as of October 19, 2022.

Figure 12. Food systems venture capital deal activity



Source: Pitchbook, as of October 19, 2022.

[15] Pales AF et al. "Net Zero by 2050 Hinges on a Global Push to Increase Energy Efficiency — Analysis." IEA, June 10, 2021, available at https://www.iea.org/articles/net-zero-by-2050-hinges-on-a-global-push-to-increase-energy-efficiency.

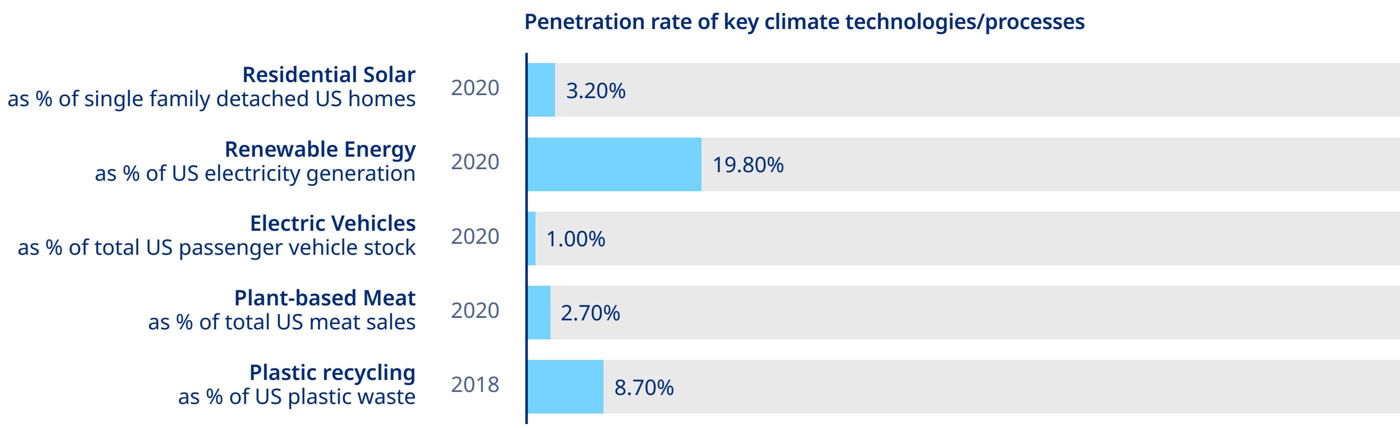
[16] Source: ATKearny (2019) "How Will Cultured Meat and Meat Alternatives Disrupt the Agricultural and Food Industry?"

[17] Source is the IEA World Energy Outlook 2022, An Updated Roadmap to Net Zero Emissions by 2050. https://www.iea.org/reports/world-energy-outlook-2022/an-updated-roadmap-to-net-zero-emissions-by-2050

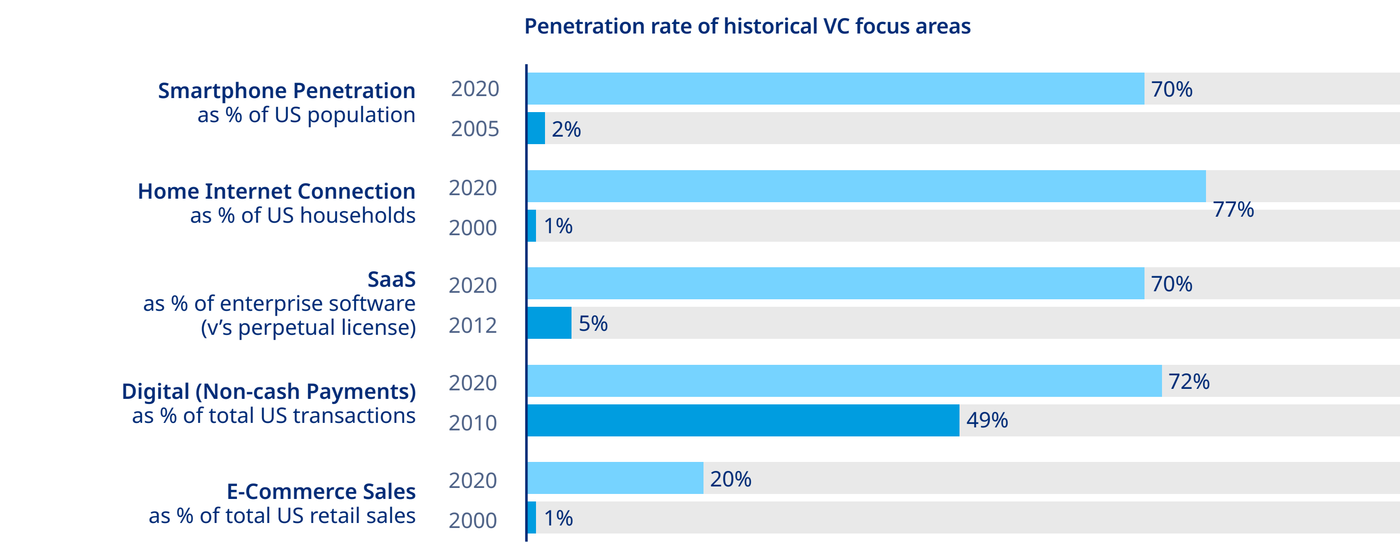
The commercial viability and public awareness of impact related brands such as Tesla (NYSE: TSLA) and Beyond Meat (NYSE: BYND), the stock prices of which reached record levels in 2021 and 2019 respectively, after going public in 2010 and 2019, respectively, exemplify the potential for impact opportunities. However, recent market volatility has put significant downward pressure on these and other once-high-flying names, with year-to-date returns[18] of -37% and -79%, respectively. This shift also demonstrates the inherent risks associated with such investments, although the recent market downdraft has had an effect on the broader market well beyond impact-oriented companies.

Although recent market performance may be less favorable for existing impact-minded investors, lower valuations may now provide more attractive entry points for prospective investors. Global disruption, including energy price volatility, housing affordability and broader inflation effects, could accelerate already-growing demand for impact-focused solutions. Given the further investment needed to meet long-term demand and broader sustainability goals, the opportunity to deploy capital could be robust for years to come.

Figure 13. Penetration rate of key climate technologies/processes versus historical venture capital focus areas



Source: NREL, EIA, Plant Based Foods Association (PBFA), BNEF

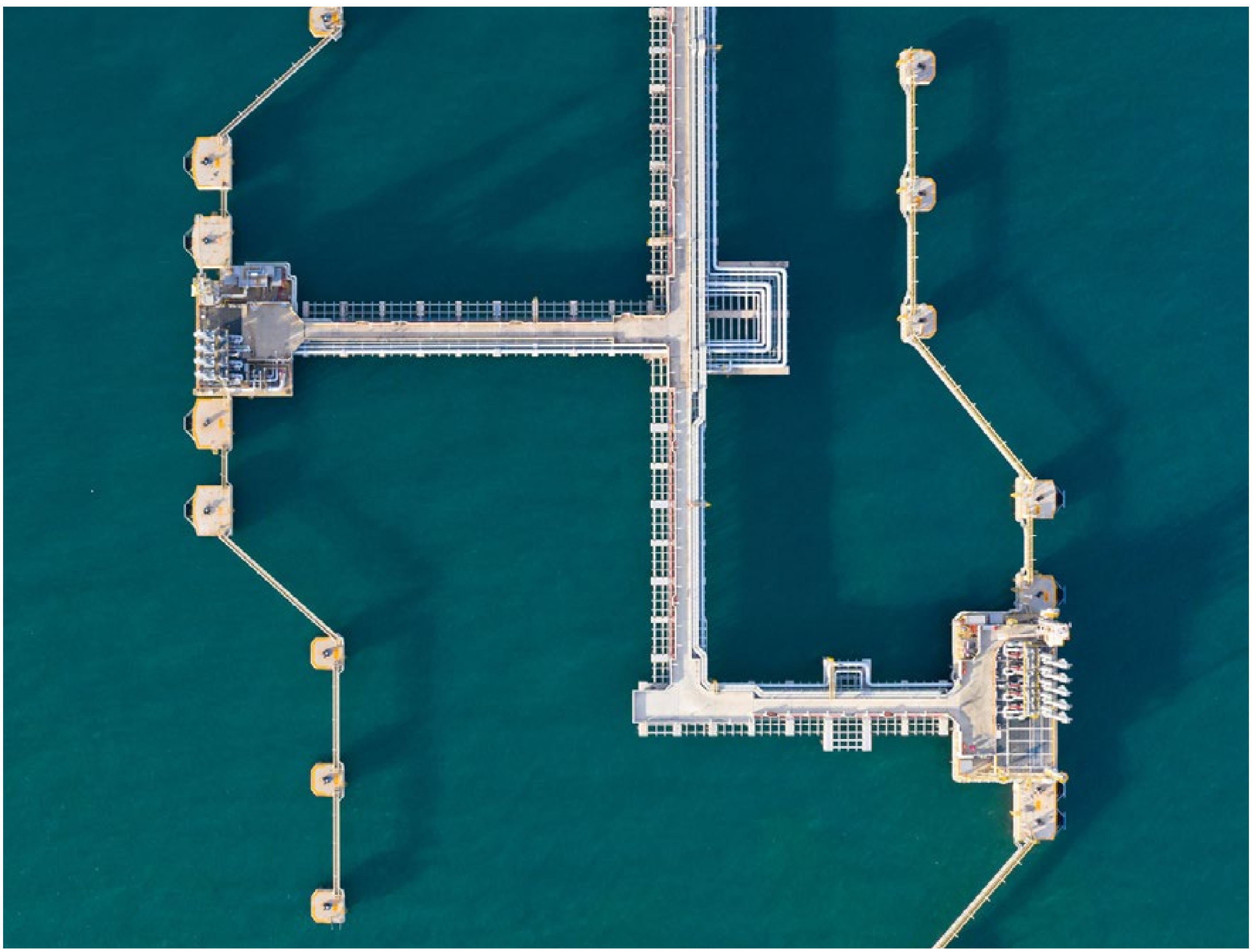


Source: Statista, Pew Research Center, William Blair, McKinsey, US Census

[18] Bloomberg.

Key takeaways

Although recent market performance may be less favorable for existing impact-minded investors, lower valuations may now provide more attractive entry points for prospective investors. Global disruption, including energy price volatility, housing affordability and broader inflation effects, could accelerate already-growing demand for impact-focused solutions. Given the further investment needed to meet long-term demand and broader sustainability goals, the opportunity to deploy capital could be robust for years to come.



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