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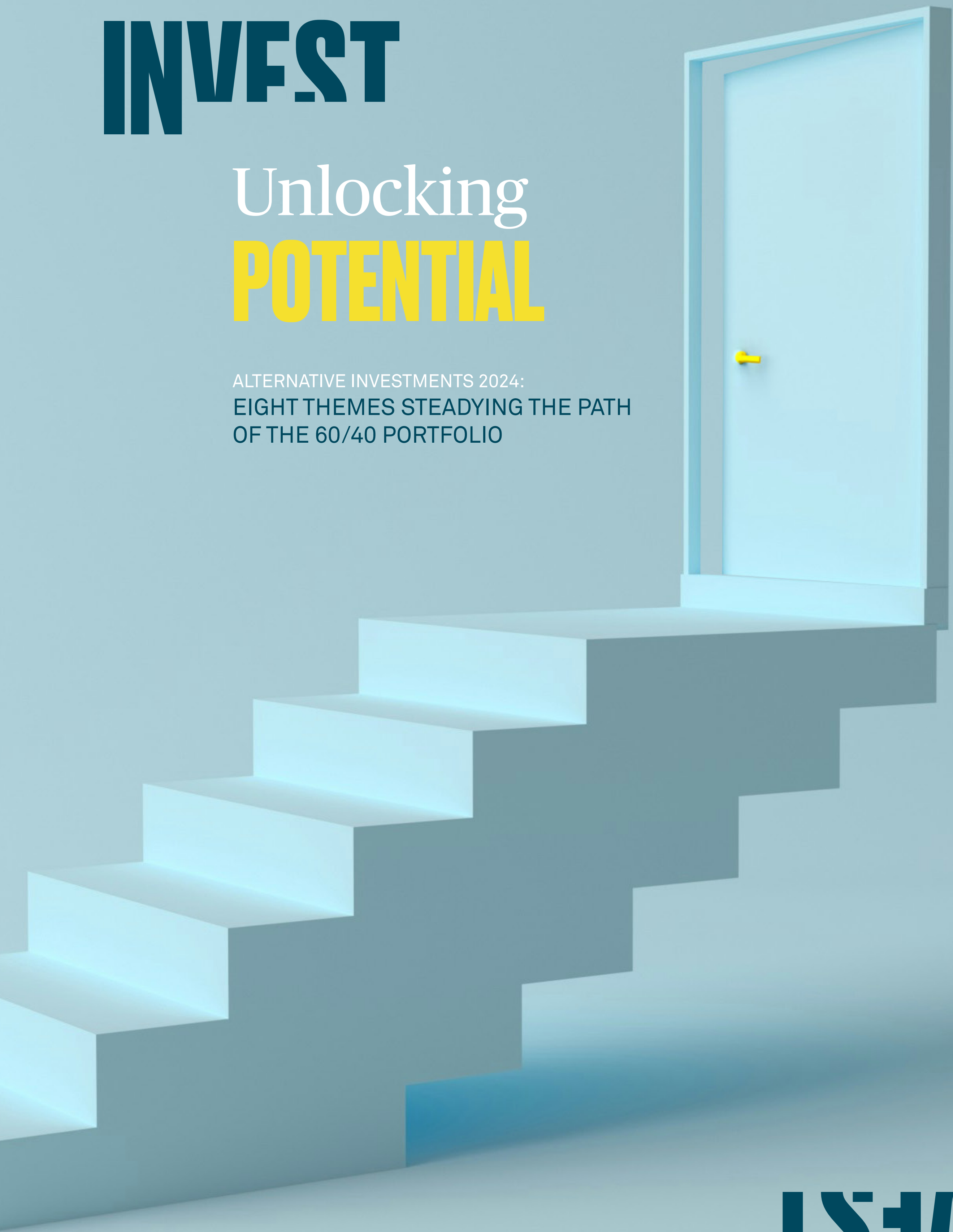
ALTERNATIVE INVESTMENTS 2024:

EIGHT THEMES STEADYING THE PATH OF THE 60/40 PORTFOLIO



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EXECUTIVE SUMMARY

Alternatives Add Balance to Portfolios

After a decade in which most major asset classes delivered attractive returns, 2022 was a shock for investors, as both stocks and bonds experienced correlated losses, and their correlated gains in 2023 further underscore the need to find new sources of diversification.

In *Alternative Investments 2024*, we look at non-traditional investments that can take advantage of eight cyclical and secular themes. These non-traditional strategies offer different return drivers and risk profiles, which help portfolios remain resilient in different geopolitical, political, economic and financial market climates.

Alternatives can profit during upward, sideways or downward public market moves, and over various economic cycles. Recessions, slowdowns or bear markets can be attractive points in the cycle for strategies such as private equity (PE) or distressed debt to acquire assets at discounted valuations. During expansionary periods, alternatives can add diversity to your investments through sector and security selection and also earn additional risk premiums, in the form of higher yield or enhanced return.

In the past year, alternatives seemed to provide a smoother ride.[1] The HFRX Aggregate Hedge Fund index returned 6.93% in 2023 after losing 1.47% in 2022, while the MSCI World Equity Index returned 24.42% in 2023 after losing 17.73% in 2022. Taking these two years together, hedge funds returned 5.35%, beating the 2.36% return from world equities and giving a less bumpy ride.

[1]Hedge Fund Research. HFR Database.

Longer-term investments such as private equity can provide an illiquidity premium over public markets. The Burgiss PE Fund Index returned 15.7% over three years and 15.7% over five years, outperforming public equities over both periods, where the S&P 500 returned 10.2% over three years and 9.9% over five years as of September 30, 2023.

On the private credit side, direct lending has outperformed liquid high yield corporate debt over 2022 and 2023, with a much steadier return profile. The Cliffwater Direct Lending Index returned 6.29% in 2022, and 8.92% in the first nine months of 2023, compounding to 15.77%. Currently, the index average yield is 11.76%, well above public high yield.[2] In contrast, the S&P U.S. High Yield Corporate Bond Index returned 5.4% in the first nine months of 2023, after losing 12.9% in 2022, meaning it lost 8.2% over the time period, underperforming private credit.

As we continue to face uncertainty arising from geopolitical, market and economic trends, alternatives can provide not only a necessary ballast to portfolios, but also a less correlated source of additional returns to help sustain the public market returns of the past decade. These eight themes and proposed investment solutions are a step toward building that necessary portfolio resilience.

[2] www.cliffwaterdirectlendingindex .com

ALTERNATIVE INVESTMENT STRATEGIES – A TYPICAL SPECTRUM OF SOLUTIONS

MORE LIQUID → LESS LIQUID

LIQUID ALTERNATIVES	HEDGE FUNDS	PRIVATE CREDIT	PRIVATE REAL ESTATE & REAL ASSETS	PRIVATE EQUITY
Long/Short Equity	Long/Short Equity	Distressed Investing	Core, Core+ Real Estate	Private Equity Buyout
Hedge Fund Replication	Event Driven	Direct Lending and Asset-based Lending	Value Add Real Estate	Growth Equity
Event Driven	Relative Value	Special Situations	Opportunistic Real Estate	Venture Capital
Managed Futures	Global Macro		Commodity Strategies	Secondaries
Commodities	Opportunistic Credit		Infrastructure, Core, Value Add, Opportunistic	
Listed Real Estate	Multi-strategy			
Listed Infrastructure				

Source: BNY Mellon Advisors. Data as of December 31, 2023.

TAKEAWAY

Liquid alternatives may include strategies available through ETFs and mutual funds regulated under the 1940 Investment Companies Act (40 Act) while Private Equity offers investors a more illiquid option.

01 CYCLICAL THEMES

Interest Rate Re-Normalization

Unprecedented government stimulus, supply chain disruptions and tight labor markets have all put upward pressure on inflation. While some of these pressures have moderated in recent months, there is a general expectation that inflation will continue to run at higher rates than the world experienced during the decade ending in 2020, before Covid.

Investors are adapting to the re-normalization of monetary policy, with higher rates, greater interest rate volatility and wider differences between countries' interest rate and inflation levels. Alternative asset classes and strategies can provide opportunities to take advantage of more dispersion, as well as dislocations and distress brought on by more expensive refinancing, to outpace inflation and to earn higher yields as well as potential illiquidity premia. This can be applied to a "buy and hold" strategy that accesses a wider range of credit asset classes including asset-backed securities, infrastructure debt and private debt, mainly to earn regular income, or to more active trading approaches that look for overpriced and underpriced markets and instruments.

Strategies such as global macro and distressed are positioned to take advantage of dislocations by acquiring good businesses or securities at attractive valuations while potentially trading around dislocations. Distressed investors opportunistically step in as liquidity and capital providers when market liquidity dries up. The opportunity for distressed and deep value private equity and private credit investing continues to increase as the higher-for-longer environment is resulting in rising defaults, and the dearth of financing options is placing stress on businesses as well as commercial real estate, increasing re-financing risks and creating deep value investment opportunities. The heightened level of dispersion across businesses and sectors will further enhance an active approach to picking winners and losers during this part of the economic cycle.

Investments in **traditional infrastructure** (such as toll roads and utilities) and **non-traditional infrastructure** (such as cell towers and renewable energy) often have built-in inflation hedges, providing explicit protection. Other real assets such as **real estate** and **natural resources** have substantially outperformed 60/40[3] portfolios in past periods of higher inflation. Real estate generally performs well in inflationary periods. For example, long-term leases for industrial assets include annual adjustments generally linked to inflation. Multifamily leases are short-term with rents that reset often and keep pace with inflation.

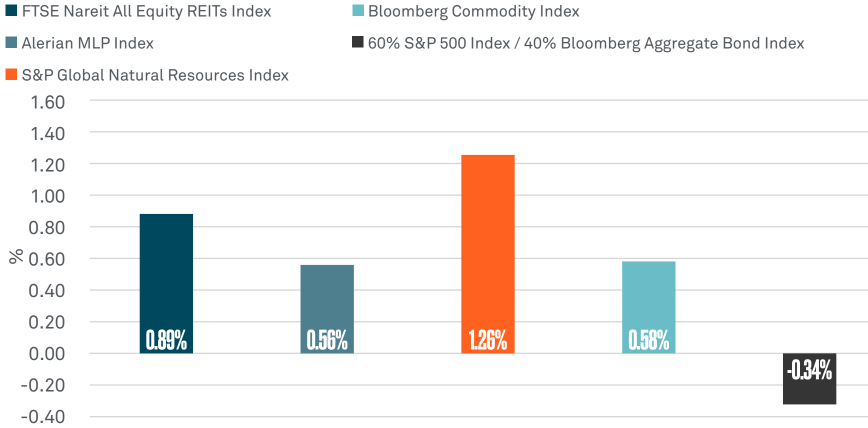
[3] The portfolio presented herein is not representative of a specific strategy managed by BNY Mellon Advisors as of the date of this publication and is not intended to constitute an advertisement of a specific BNY Mellon Advisors product or service, instead, all information, content and materials are for general information purposes only.

TAKEAWAY

Real assets have generally outperformed public equities and fixed income in periods of higher inflation.

REAL ASSET PERFORMANCE DURING INFLATIONARY PERIODS

Average Monthly Return During Periods of 4%+ Headline Inflation



Past performance is no guarantee of future results.

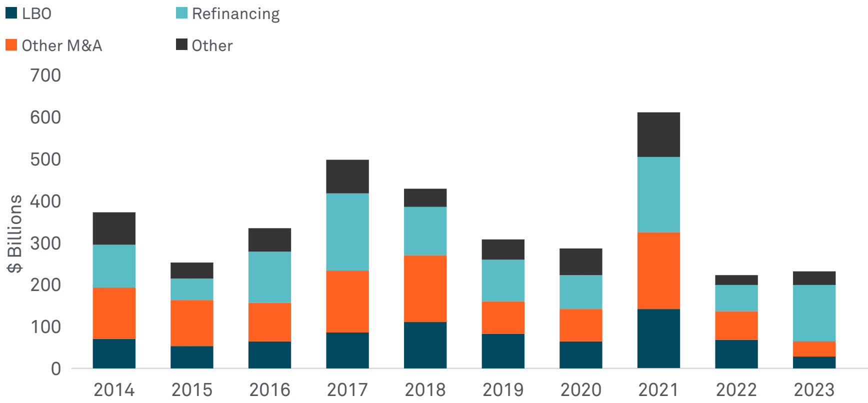
Time period: 2002-2023.
Source: Bloomberg. Data as of December 31, 2023.

TAKEAWAY

The recent shortage of liquidity in credit markets and the dearth of traditional lending alternatives have created an attractive environment for private lenders.

DECLINE IN PUBLIC CREDIT ISSUANCE

U.S. Institutional Loan Volume



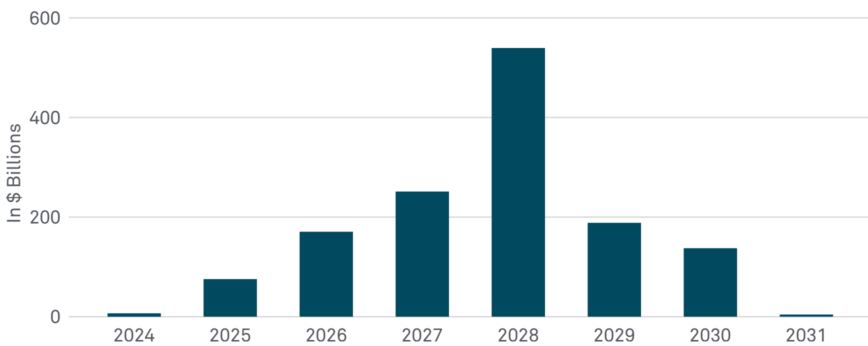
Source: Pitchbook and LCD. Data as of December 31, 2023.

TAKEAWAY

The higher-for-longer rate environment may create headwinds for a subset of overlevered corporate borrowers looking for refinancing options.

CORPORATE DEBT MATURITY WALL IS APPROACHING

Maturity Breakdown of Performing Leveraged Loans



Source: Morningstar LSTA U.S. Leveraged Loan Index.
Data as of December 31, 2023.

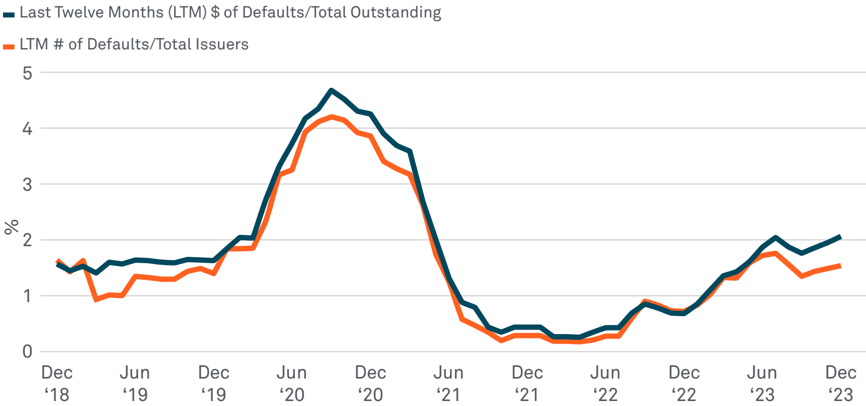
See Appendix for definitions of important terms.

TAKEAWAY

The recent uptick in public debt default rates reflects increasing refinancing headwinds for overlevered companies and will create attractive investment opportunities for distressed investors.

LEVERAGED LOAN DEFAULT RATE IS RISING

U.S. Institutional Loan Volume ($B)



Source: Morningstar LSTA U.S. Leveraged Loan Index.
Data as of December 31, 2023.

Meanwhile, a high-rate environment will limit real returns for traditional fixed income. Some would consider diversifying beyond government bonds into complementary credit strategies.

- **Private debt** is generally an all-weather strategy that can provide consistent, attractive risk-adjusted returns, in part due to the illiquidity premium. The negotiated nature of private loans results in stronger lender protections, which historically have led to higher recovery rates on defaulted debt. Private debt tends to be floating rate, making it attractive in a high or rising rate environment. Equally, given that the consensus expects multiple Fed rate cuts this year, the structuring feature of floors setting minimum reference rates can help to maintain portfolio yields.
- **Asset-based lending** involves private loans that are backed by hard assets, such as equipment loans or real estate. The floating rate nature of this debt protects against rising rates, while the underlying value of the assets typically rises with inflation. This segment of private debt is largely fragmented with a select group of experienced investors.

Private debt has been growing over multiple decades. Bank consolidation in the early 2000s and the increased regulation of banks following the Global Financial Crisis (GFC) have paved the way for the growth of the asset class as traditional lenders exited the middle market sector. Today, conditions in private debt continue to be favorable for investors, as banks, saddled with hung debt,[4] have retreated from lending, and have tightened underwriting standards. The stress among the regional bank sector, which has historically served small- and mid-sized businesses as well as commercial real estate, has placed further pressure on the availability of credit. This reduced liquidity in the markets has opened opportunities for private lenders to step in.

[4] Leveraged buyout debt issued by banks at lower rates, where the debt becomes unattractive in a rising rate environment, and banks are unable to syndicate the debt to investors.

There are inherent risks in all strategies described herein and there is no guarantee that these strategies, if employed, would be successful.

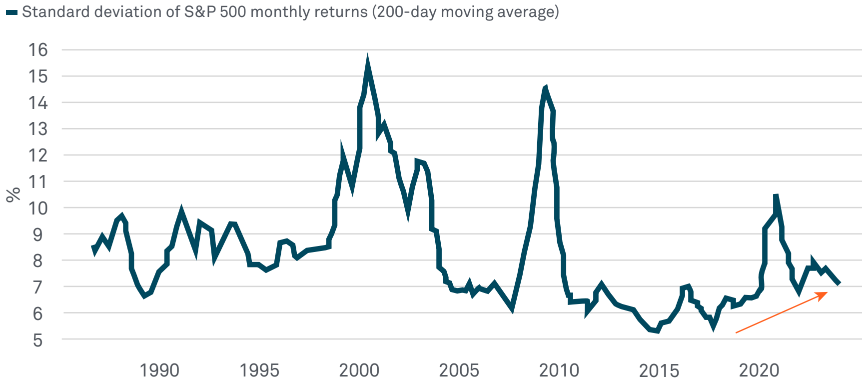
Volatility, Asset Class and Geographic Dislocations

Periodic market dislocations, often fueled by reduced liquidity in the public markets, are becoming more common. This increases the frequency of potential entry points for opportunistic investors for particular asset classes, sectors or geographies. Higher correlation between stocks and bonds has been seen in both the 2023 bull market, and the 2022 bear market, for both asset classes. There have been other multi-year periods over the past four decades when bonds and equities moved in tandem, most often during periods of higher inflation. This means that investors may need to think outside the box of the 60/40[5] portfolio to obtain diversification. This increases the importance of strategies with low correlation to the direction of public markets, which diversify portfolios, as well as opportunistic strategies that could perform well if there is another synchronized sell-off in bonds and equities.

TAKEAWAY

Increased dispersion among securities creates more opportunities for alpha[6] generation. There has been an upward long-term trend in dispersion since 2018.

DISPERSION OF INDIVIDUAL STOCK RETURNS



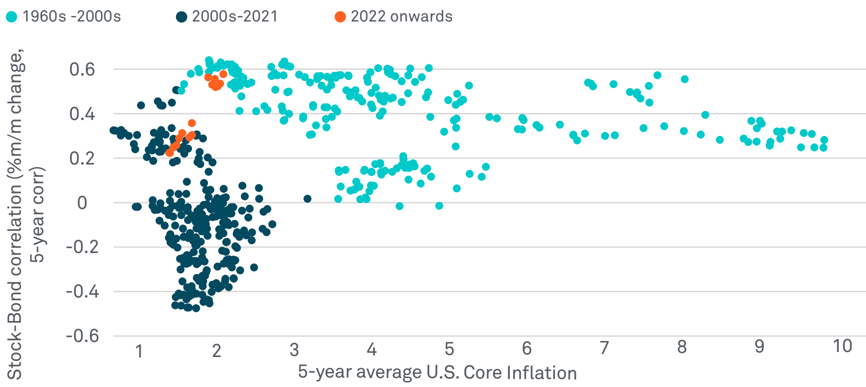
Past performance is no guarantee of future results. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Asset allocation and diversification cannot assure a profit or protect against loss.

Source: Macrobond, BNY Mellon Investment Management.
Data as of January 2024.

TAKEAWAY

The link between rising inflation expectations and stock/ bond correlation underscores the added diversification benefits of alternatives. Historically, during periods of low inflation, the correlation between stocks and bonds has tended to be negative. During periods of higher inflation, the correlation rose fast and became positive.

STOCK-BOND CORRELATION AND INFLATION ARE TIGHTLY CONNECTED



Source: Macrobond, BNY Mellon Investment Management.
Data as of January 31, 2024.

[5] The portfolio presented herein is not representative of a specific strategy managed by BNY Mellon Advisors as of the date of this publication and is not intended to constitute an advertisement of a specific BNY Mellon Advisors product or service, instead, all information, content and materials are for general information purposes only.
[6] Alpha is a measure of active return on an investment, above the return of the market or benchmark. A positive alpha is the extra return awarded to the investor for taking a risk instead of accepting the market return.

Solutions that dampen portfolio volatility through hedged market-neutral positioning include **equity market neutral, long/short equity** and **relative value**. Market neutral and relative-value hedge fund strategies, as a result of their neutral portfolio positioning, have historically delivered consistent returns, with significantly lower volatility and lower correlation to the public markets over market cycles. Strategies such as **global macro**, which utilize equities, fixed income, currencies, commodities, and derivatives thereof, express views on macroeconomic and political trends while taking advantage of increased volatility and dislocations through long or short positions. **Distressed investing** and **opportunistic real estate** are positioned to take advantage of dislocations by acquiring good assets or businesses at attractive valuations while potentially trading around dislocations.

"During economic slowdowns, PE managers can acquire companies at lower entry valuations and employ a hands-on approach to driving growth. These can also be timely launching points for VC-backed companies that attract new talent and innovative business models."

JOANNA BERG, DIRECTOR, SENIOR ALTERNATIVE INVESTMENTS STRATEGIST, BNY MELLON ADVISORS

Moderating and Modest Economic Growth

The renormalization of interest rates, amid inflation still somewhat above central bank targets, could increase the likelihood of a slower economic growth environment. Limited scope for rate cuts, a persistently tight U.S. labor market, tightening credit standards and higher refinancing and borrowing costs for companies and consumers, may dampen economic growth. Certain alternative investment strategies tend to perform better under muted economic growth.

Skilled **global macro** and **long /short** managers can take advantage of increased volatility and dislocations that a slower growth environment will bring, through long or short positions in a range of asset classes and instruments. Higher interest rates improve the risk reward for **short selling** for two main reasons. Some overleveraged companies are more likely to be forced to raise more equity and/or enter into debt for **equity swaps** and may ultimately fail. In addition, short sellers earn interest on the proceeds of the short, which in a normal interest rate environment will more often outweigh the security borrow and dividend costs of the short.

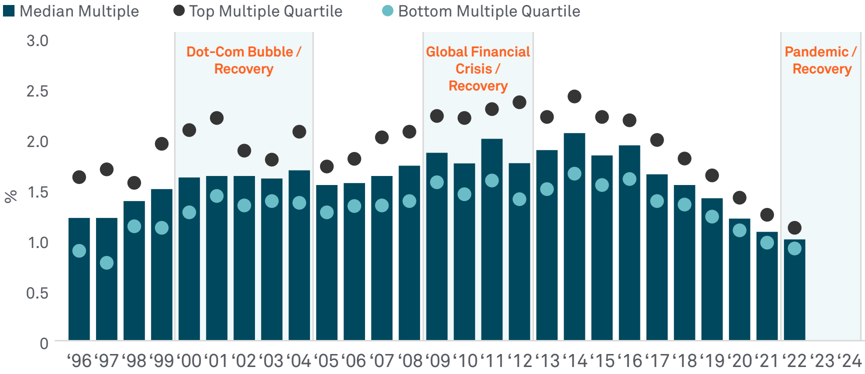
During recessionary and post-recessionary periods, or simply economic slowdowns without recession, **PE** managers can acquire companies at lower entry valuations and as always employ a hands-on approach to driving growth and value creation. This was evident during the GFC, when troubled and distressed companies needed private capital and turnaround expertise. Historically, PE vintages during these economic environments have tended to outperform for these reasons. A weaker economic environment also tends to coincide with less competition for deals. The lower middle market segment is characterized by smaller companies that are more reliant on underlying profit growth vs. financial engineering or leverage to generate returns, which makes this segment even more attractive in a higher interest environment.

See Appendix for definitions of important terms.

TAKEAWAY

The best vintages for private equity investments have historically been those made in periods of economic uncertainty.

PRIVATE EQUITY PERFORMANCE DURING ECONOMIC UNCERTAINTY



Past performance is no guarantee of future results.
*Projected Real GDP. Sources: Bureau of Economic Analysis, U.S. Department of Commerce, The Conference Board, PitchBook. Private Equity Benchmark Statistics as of December 31, 2023.

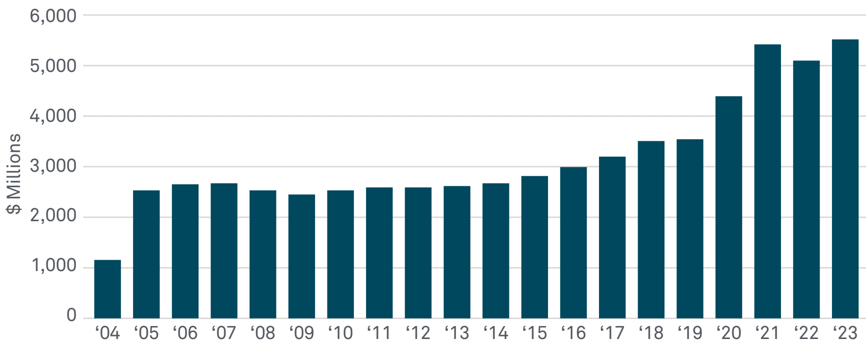
Recessions and shocks can also be timely launching points for **venture capital (VC)**-backed companies that attract new talent and innovative business models. With decreased valuations, VCs are able to acquire larger stakes in companies and more preferential terms than in the previous few years, which becomes beneficial upon successful exits. Companies with disruptive business models focused on categories, like distributed workforce, remote learning and direct-to-consumer, were able to accelerate their growth during the pandemic. As business formation increased notably over the past several years, including in the categories of artificial intelligence and machine learning, these companies will need funding for growth.

TAKEAWAY

Increase in small business formation may likely provide increasing investment opportunities for PE and VC as these businesses need capital to grow.

NEW BUSINESS FORMATION

U.S. New Business Applications



Source: Business Formation Statistics. Data as of January 24, 2024.

U.S. Economic Exceptionalism Persists

Divergence between and within industrial sectors, higher inflation and tight monetary policy continue to affect the performance of some businesses (especially small- to mid-sized), industries, real estate sectors and countries.

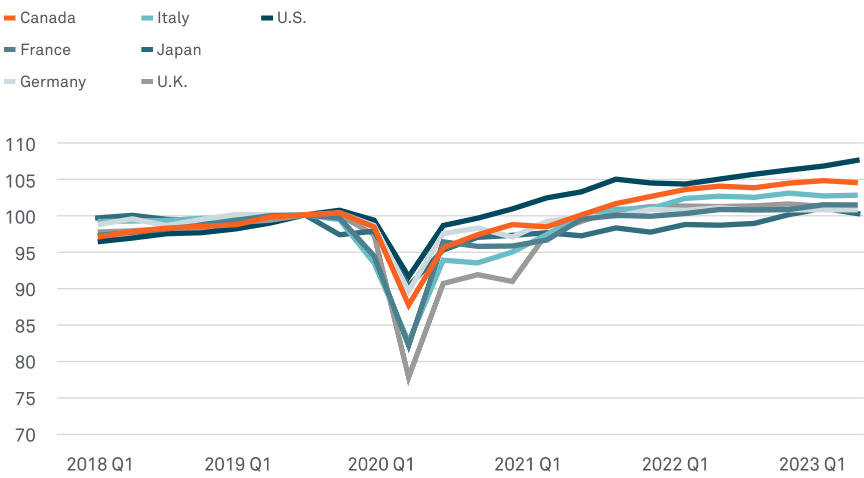
Uneven global growth is beginning to emerge as the U.S. is outperforming the rest of the world. Economic growth in Europe has slowed more than in the U.S., and a strong China recovery has not materialized as the country is dealing with a real estate crisis and subdued export demand. This divergent growth will produce winners and losers in the market, where asset differentiation may likely be key to achieving attractive portfolio returns.

TAKEAWAY

The divergence in economic growth across the globe can lead to dispersion in fundamentals and attractive for some to consider.

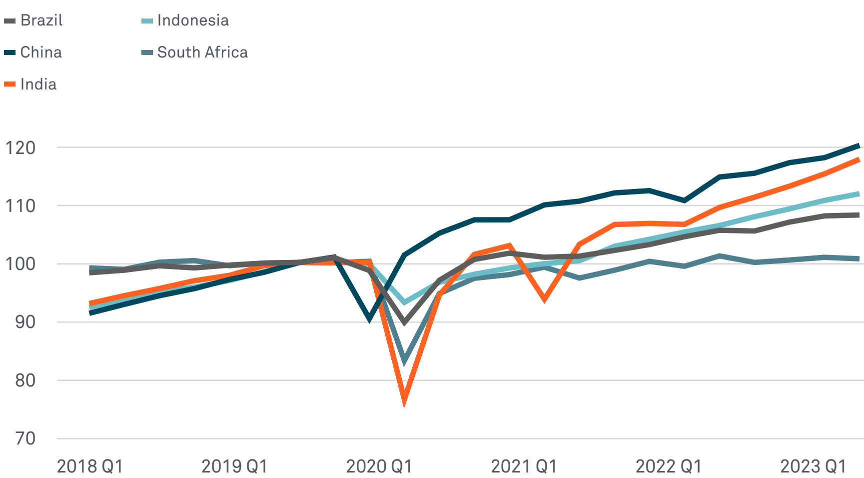
GLOBAL ECONOMIC GROWTH DIVERGENCE

G7 Countries Divergence in Growth



Source: Macrobond. Data as of November 1, 2023.

Divergent Recoveries in Emerging Markets



Source: Macrobond. Data as of November 1, 2023.

"Uneven global growth is beginning to emerge as the U.S. is outperforming the rest of the world. A variety of hedge fund strategies can be deployed to capitalize on these changes, such as long/short equity, merger arbitrage and global macro to profit from winners and losers between countries and regions."

CHRISTOPHER VELLA, CFA,[7]
CHIEF INVESTMENT OFFICER,
BNY MELLON ADVISORS

A variety of hedge fund strategies can be deployed to capitalize on these changes. **Long/short equity** can distinguish between leader, laggard and loser companies adjusting to the changing trends. **Merger arbitrage** benefits from investment opportunities in strong businesses seeking acquisitions and weak businesses looking for a lifeline through mergers and acquisitions (M&A). **Long/short credit** invests in the debt of healthy companies impacted by an economic slowdown, while shorting those with unsustainable business models. **Global macro** can apply a similar approach to profiting from winners and losers between countries and regions.

Private markets can also capitalize on new opportunities. **Private equity** and **growth equity** identify businesses with products or services that benefit from greater demand. Investment themes in real estate include sectors and geographies poised to emerge as winners due to economic growth, demographic drivers and shifting life/work trends.

[7] CFA® and Chartered Financial Analyst® are registered trademarks owned by CFA Institute.

No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment. Asset allocation and diversification cannot assure a profit or protect against loss. There are inherent risks in all strategies describes herein and there is no guarantee that these strategies, if employed, would be successful.
See Appendix for definitions of important terms.

02 SECULAR THEMES

The Rise and Rise of Private Equity

The structure of the equity market has been evolving for several decades. The number of U.S. private equity-owned companies surpassed that of public companies over a decade ago. The number of IPOs has declined, but the percentage backed by private equity has risen.

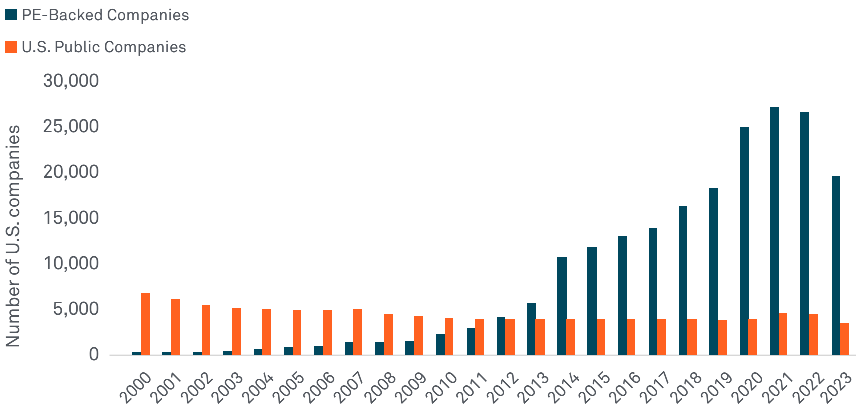
This is in part due to companies remaining private for longer where the greater amount of value creation takes place during the private phases of a company's life. Good companies choose to remain private in order to grow their businesses for the long term. This in turn provides investment opportunities for venture capital managers across various stages of business life cycles. Additionally, the ever-growing target market for buyouts, or acquiring stakes through growth equity, provides ample investment opportunities for private equity managers. As a result of these structural changes, private equity funds have outperformed public equities in recent decades.

TAKEAWAY

The number of U.S. private equity-backed companies has surpassed public companies. Companies are remaining private for longer and significant value creation occurs in the private stages. Furthermore, the concentration in the public equity markets has been steadily rising, with performance driven by a group of select stocks.

EQUITY MARKET STRUCTURE IS CHANGING

Number of U.S. PE-Backed Companies has Surpassed Public Companies

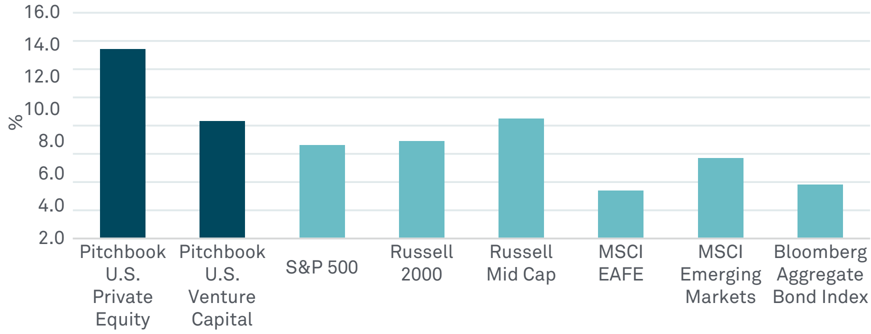


Private Equity-backed data consists of both Private Equity and Venture Capital-backed companies.
Source: World Federation of Exchanges and Pitchbook.
Data as of June 30, 2023.

TAKEAWAY

On average, private equity funds have outperformed public markets in recent decades, delivering the illiquidity premium associated with this asset class.

ANNUALIZED RETURNS % Q1 2008-Q3 2023[8]



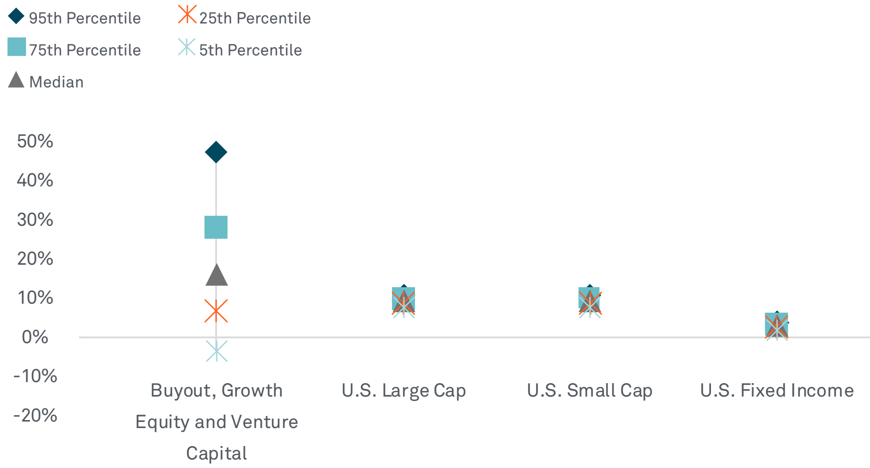
Source: Pitchbook. Data as of December 31, 2023.

TAKEAWAY

Dispersion highlights the importance of manager selection and access in the private markets. Top-ranked PE funds outperformed bottom-ranked funds by an average of 21% IRR.

ASSET CLASS PERFORMANCE DISPERSION[9]

Asset Class Returns by Quartile
20-Year Period Ending December 31, 2022



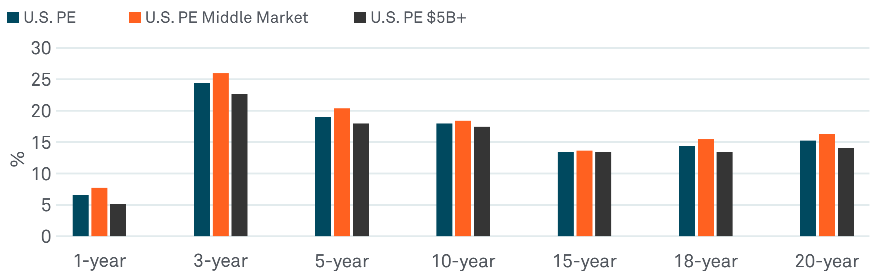
Source: PitchBook, Preqin and Morningstar.
Asset class returns over 20-year period ending December 31, 2022.

TAKEAWAY

Middle Market Private Equity has outperformed the PE industry, unveiling the importance of segmentation within private equity to obtain the most attractive returns.

PERFORMANCE DISPERSION ACROSS PE SIZE SEGMENTS[10]

PE Fund Horizon IRRs by Size



Source: PitchBook, Preqin and Morningstar.
Asset class returns over 20-year period ending December 31, 2022.

[8] The information on indices is presented for illustrative purposes only and is not intended to imply the potential performance of any fund or investment. Index performance assumes the reinvestment of all distributions, but does not assume any transaction costs, taxes, management fees or other expenses, which would reduce the performance shown. Indices are unmanaged and are not available for direct investment. **Past performance does not guarantee future results.**

[9-10] **Past performance does not guarantee future results.**

Shifting Geopolitical Friendships and Tensions

Geopolitical tensions across the globe, the Middle East conflict, the war in Ukraine, and the cooling relations between the U.S. and China are paving the way for the emergence of new strategic alliances. There is now greater emphasis on the transatlantic relationship, while simultaneously the U.S. is trading more with Mexico than with China.

World economies are refocusing on the strategic importance of energy and supply chains. Raw material dependencies are rising to the top of agendas around the world. Governments will most likely use their influence to make supply chains more secure and reduce risks to their economies (e.g., the U.S. CHIPS and Science Act to boost domestic semiconductor manufacturing).

The world economy has passed the peak of trade openness. New business models will emerge as a result of these changes, highlighting the importance of a local manufacturing presence.

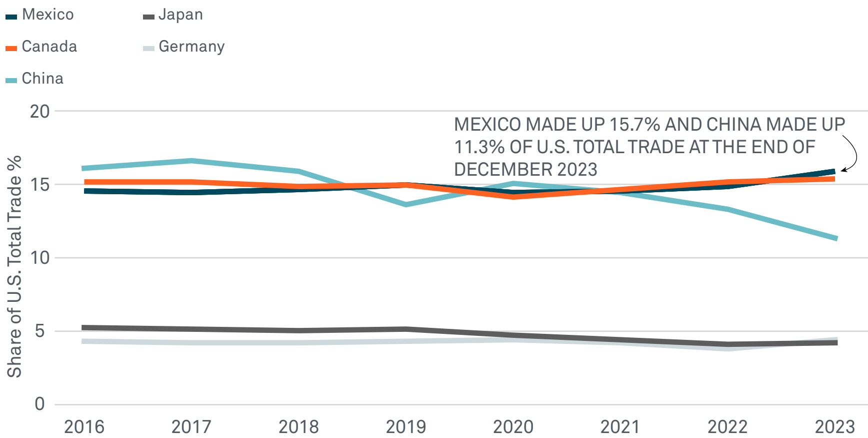
Clear winners and losers will likely emerge from this geopolitical reset, and both hedge fund and private markets are well positioned to navigate the long-term risks and opportunities. For example, **global macro** strategies are well placed to take advantage of shifting macroeconomic trends, while **long/short equity** can identify companies that are likely winners and bet against those that are not. **Venture capital** can fund businesses that will profit from the changes, while **private equity** can help companies adapt to the challenges.

TAKEAWAY

The changing global dynamics leading to shifting trade relationships will create new investment opportunities in businesses positioned to capitalize on such trends.

LONG-TERM TRENDS IN U.S. TRADE PARTNERS

Mexico Has Eclipsed China as Biggest U.S. Trade Partner



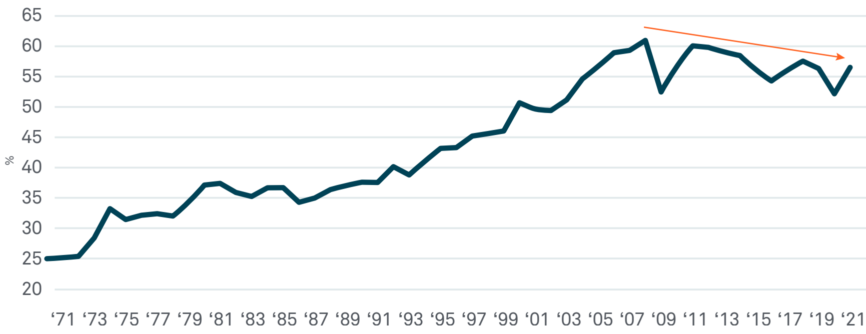
Source: U.S. Census Bureau. Data as of December 31, 2023.

TAKEAWAY

Global trade has passed its peak, and rising reshoring trends are creating investment opportunities in businesses positioned to benefit from such changes.

GLOBAL TRADE OVER TIME

Sum of World Exports and Imports (% World GDP)



Source: OurWorldinData.org. Data as of 2023.

Accelerating Tech Adoption and AI Innovation

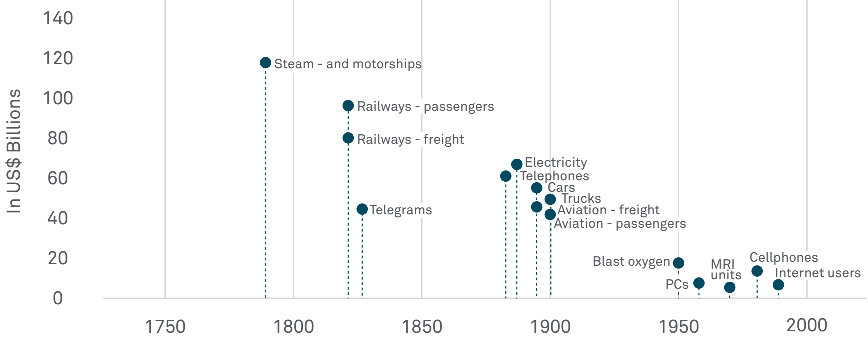
The pandemic has accelerated trends in technology innovation, and the resulting shifts in consumer behavior are creating clear winners in the marketplace. Consumers are adopting new technologies faster, making such investments more attractive to investors.

TAKEAWAY

The lag between technological innovation and adoption has decreased over time, creating opportunities for managers who can identify companies early in their life cycle that are pursuing disruptive technologies in different industries.

TECHNOLOGY ADOPTION OVER TIME

Estimated Technology Adoption Lag in Years



Source: Comin, D and Hobijn, B (2010), "An exploration of technology diffusion," *American Economic Review*, Vol. 100, No.5, pp2031-59.

"The speed of innovation in technology and healthcare continue to create investment opportunities in technologies that will fundamentally shift business models. Innovations across artificial intelligence, machine learning, supply chain technology and healthcare tech are some of the trends at the forefront of the VC investing community."

CHRISTOPHER VELLA, CFA,[11]
CHIEF INVESTMENT OFFICER,
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The speed of innovation in technology and healthcare continue to create investment opportunities in technologies that will fundamentally shift business models. Innovations across artificial intelligence, machine learning, supply chain technology and healthcare tech are some of the trends at the forefront of the VC investing community. Artificial Intelligence **(AI)** has seen strides in advancement in the last few years, and incredible adoption since 2022 with the accessibility of Chat GPT, although it has seen venture activity for nearly a decade. AI is considered to be the next great tech transition, akin to the introduction of the internet or iPhone, and has the ability to disrupt every industry and subcategory that technology touches. The digitization of data is impacting financial markets and quantitative trading strategies can capitalize on increased computing power, big data and new sources of information. The rapid pace of innovation in healthcare, spurred by inequalities exposed during the pandemic, has paved the way for a radical overhaul of the sector. Sectors such as e-commerce and remote work and learning are similarly undergoing rapid evolution. Furthermore, blockchain technology and Web3 infrastructure are poised to alter various established investment and operational processes, revolutionizing many aspects of the economy even before the digital age has reached its full global potential.

- **Venture capital** and **growth equity** invest in businesses that are innovators or early adopters, leaving them ideally positioned to profit from the development of emerging technologies. With the bulk of growth and innovation happening during private stages of companies' lives, today's PE and VC vintages are well positioned to produce future winners in AI.
- **Long/short equity** operating in specific sectors such as tech and healthcare can identify companies that are positioned to profit and those that may come under pressure.

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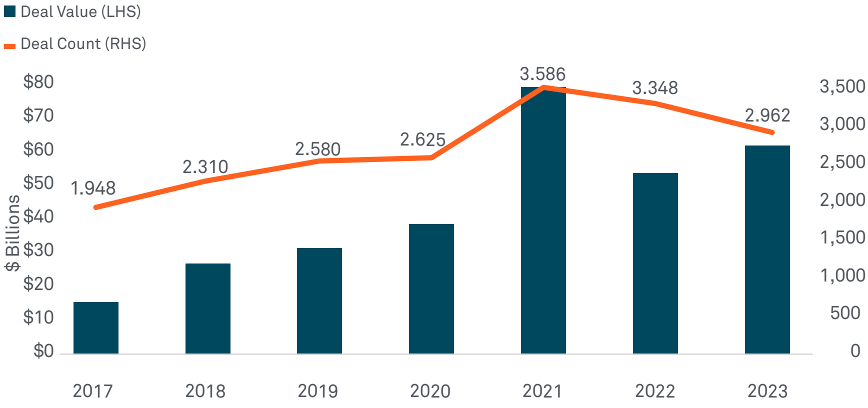
TAKEAWAY

Investment opportunities in AI, from infrastructure to applications, are expected to be at the forefront of VC activity.

U.S. ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING DEAL ACTIVITY

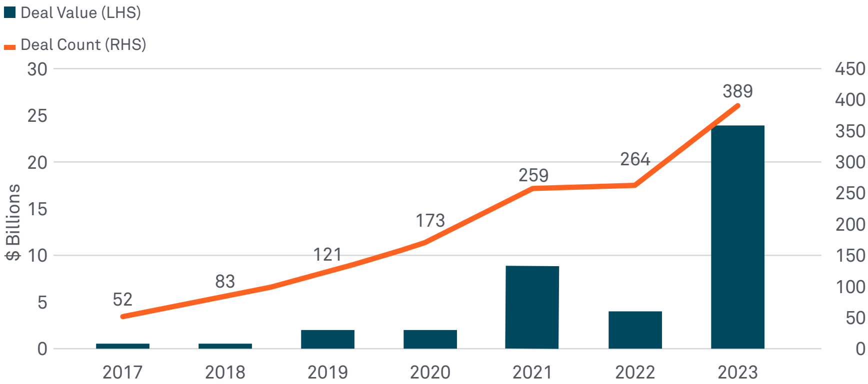


Source: Pitchbook. Data as of December 12, 2023.

TAKEAWAY

Generative AI deal activity continues to rise at a rapid pace.

U.S. GENERATIVE ARTIFICIAL INTELLIGENCE VC DEAL ACTIVITY



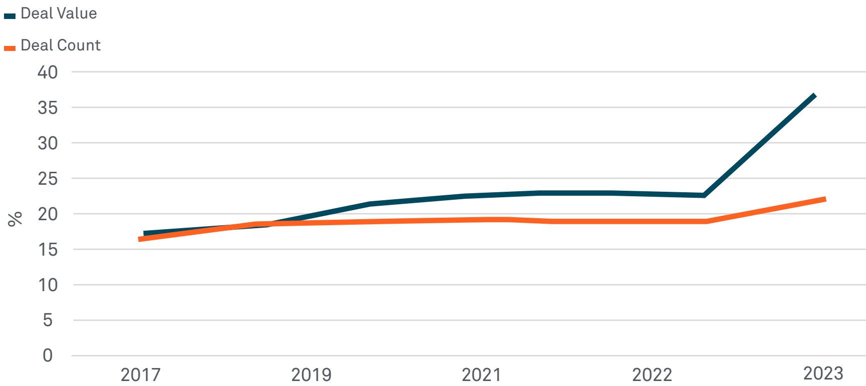
Source: https://www.census.gov/foreign-trade/balance/.
Data as of December 12, 2023.

TAKEAWAY

Investors have been increasingly shifting their focus to AI and ML.

ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

VC Deal Activity as Share of All U.S. VC Activity



Source: Pitchbook. Data as of December 31, 2023.

Investing for Impact and Profit

Impact investing assets are estimated to be around $1.16 trillion globally as of December 2021.[12] The UN Sustainable Development Goals, Paris Climate Agreement, and global efforts to combat climate risk have likely contributed to this growth over the past several years. More recently, the pandemic, heightened social inequity issues and multiple global geopolitical crises have increased investor interest in employing some of their capital to find solutions for global sustainability challenges. Private markets provide a significant opportunity to meet global sustainability needs:

- **Needs:** environmental sustainability, climate change mitigation and adaptation, support unbanked transition and underserved individuals and communities, foster inclusive economic growth and development, drive increased social equality and welfare.
- **Opportunities:** resource efficiency, smart technology, waste reduction, sustainable infrastructure, protecting diversity, microfinance, microinsurance, affordable housing, financial and credit education, affordable healthcare and medicine, food and nutrition, education technology and materials.

In private markets companies drive intentional good, through products and services that are impactful (clean energy or healthcare access) or through businesses that are run in ways that are beneficial to their employees and communities in which they operate. In private markets, through control over the outcome, the goal is to drive capital toward opportunities that generate impact along financial returns.

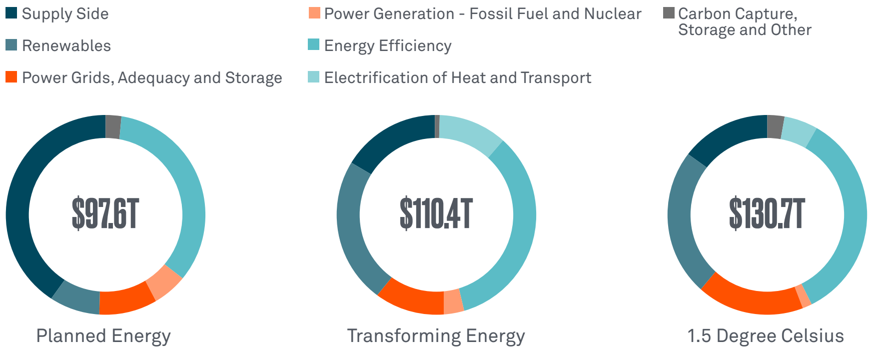
TAKEAWAY

There is a global policy and regulatory tailwind rapidly driving an energy transition over the course of the next few decades. The energy transition will create new investment opportunities, as sums required for the energy transition will come in the form of both direct government investments and incentives designed to harness private sector capital. One notable example of the trend is the 2022 U.S. Inflation Reduction Act (IRA), which includes significant support for lower emission air and energy initiatives, new energy technologies and repurposing coal power plants into wind/solar energy storage sites. Across the pond, the European Union's Green Deal, launched in 2019, includes policies for reducing emissions, preserving biodiversity and investing in innovative solutions to mitigate climate change. Almost one-third of the EU's seven-year budget and funding from the NextGenerationEU recovery plan are expected to finance the Green Deal.

According to the International Renewable Energy Agency (IRENA), investment of between $100-$130 trillion will be necessary to achieve a net zero carbon emissions outcome by 2050. The following figure shows several possible energy transition scenarios. Key areas for investment will include renewables, energy efficiency measures and improvements to power grids to support greater electrification and energy storage.

[12] Source: Global Impact Investing Network, "GIINsight: Sizing the Impact Investing Market" October 2022.

NET ZERO BY 2050 WILL REQUIRE SIGNIFICANT INVESTMENT (BY SCENARIO)



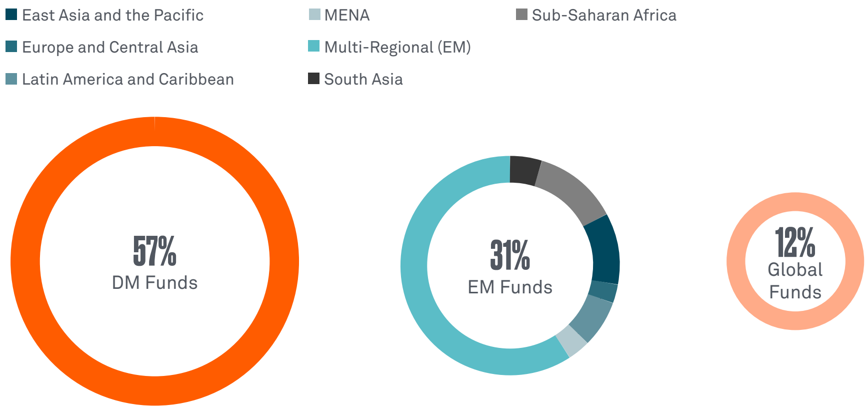
Source: International Renewable Energy Agency (IRENA): "Global Renewables Outlook: Energy Transformation 2050" (2020) and IRENA "World Energy Transitions Outlook: 1.5 C Pathway" (2021). Data as of June, 2021.

TAKEAWAY

The global distribution of committed capital to measured impact funds is still largely allocated to developed markets (56%). North America and Europe and Central Asia alone account for 48% of committed capital to measured impact funds; 12% of committed capital is allocated to global funds, and 19% of committed capital is allocated to measured impact funds that invest exclusively in emerging markets but target more than one region.

IMPACT INVESTING IN PRIVATE MARKETS

Geographical Breakdown by Region



Source: Preqin, Global Impact Platform, EMPEA, Syminvest, Pitchbook, Crunchbase. Data as of 2020.

Strategy	Features
INFRASTRUCTURE	Generally focused on resilient energy infrastructure solutions.
NATURAL ASSETS	Private capital focused on strategies such as land and marine preservation.
PRIVATE DEBT	Lending to businesses focused on building products and services with an aim to deliver both financial returns and a positive social or environmental impact.
PRIVATE EQUITY, VENTURE CAPITAL AND GROWTH EQUITY	Invest in companies where financial returns are directly tied to social or environmental impact and returns are not sacrificed. Impact must be intentional, additional and measurable.
PRIVATE REAL ESTATE	Address social inequality through investments such as private real estate funds focused on workforce and affordable housing.

03 CONCLUSION

In an environment where investors face continued uncertainty from market and economic trends, geopolitical uncertainty and structural changes in public markets, alternatives can create new sources of return or income, provide added diversification and smooth out the ride. Additionally, various alternative strategies can take advantage of opportunities and mitigate risks created by eight cyclical and secular themes shaping portfolios today.

However, investor goals vary, and the optimal use of alternatives may not imply holding all asset classes. We believe investors should focus on their unique challenges and objectives to identify which investments have the right characteristics to help address them. Below, we consider a non-exhaustive list of how certain types of investors may employ specific alternative investments.

EXAMPLE INVESTOR	GREATEST PRIORITIES AND CHALLENGES	POTENTIAL SOLUTIONS	PAGE
A **Family Office** that aims to grow, preserve and pass on wealth for children and grandchildren; An **Endowment** set up to provide annual funding for a university	Limit volatility so unavoidable outgoings are sustainable in down years	**Hedge Funds** that provide uncorrelated returns or benefit from volatility	9-10, 12-13
A **Family Office** that aims to grow, preserve and pass on wealth for children and grandchildren; An **Endowment** set up to provide annual funding for a university; A **Foundation** providing discretionary grants to a range of medical research institutes	Significantly grow capital to be able to increase spending in future	Assets with high potential returns, such as **Venture Capital** and **Growth Private Equity**	14-15, 18-19
A **Sovereign Wealth Fund,** investing a pool of capital for future generations	Diversify risk exposure away from national economy and sectors on which it depends	Long-term assets, including **Renewables Infrastructure** and **Impact Investing**	6, 20-21
A **Public Defined Benefit Pension Scheme** that is open to new entrants	Increase returns to ensure long-term fiscal sustainability	**Private Equity, Real Estate** and **Private Debt** with higher potential returns than public markets	6-8, 14-15
A **Corporate Defined Benefit Pension Scheme** that is closed to new entrants	Meet cost-of-living increases on current and deferred commitments	**Infrastructure** investments where returns have explicit inflation linkages	6-7

UNLOCK POTENTIAL

CONTACT BNY MELLON TO DISCUSS HOW ALTERNATIVE STRATEGIES MAY HELP MEET YOUR GOALS

APPENDIX I

ALTERNATIVE THEMES SUMMARY

Below is a summary of the challenges investors will face and some solutions to consider.

THEME	CHALLENGES	SOLUTIONS
CYCLICAL		
Interest Rate Re-Normalization	Inflation and interest rates may remain elevated	Investments in infrastructure often have built-in inflation step ups, providing explicit inflation protection, while real estate provides inflation hedging through rent increases. Private Debt is characterized by floating rates, which move with rising interest rates.
Volatility, Asset Class and Geographic Dislocations	Frequent volatility and greater stock/bond correlation reduces diversification of 60/40[13] portfolio	Dampen volatility (equity market neutral, long/short equity, relative value) and seize opportunities (global macro, distressed investing, opportunistic real estate).
Moderating and Modest Economic Growth	Higher rates and slower growth increase likelihood of global recession	Trade macro volatility (global macro) and capitalize on reduced competition for private-market deals (venture capital and private equity).
U.S. Economic Exceptionalism Persists	Permanent shifts in consumer behavior will bring greater growth differentials between countries, sectors and businesses	Trade divergence (long/short equity and credit, global macro, merger arbitrage) and invest in winners (private equity, growth equity, real estate).
SECULAR		
The Rise and Rise of Private Equity	Listed companies and IPOs are declining and private markets play a greater role	Fund early-stage companies (venture capital) and turnaround or improvement opportunities (private equity).
Shifting Geopolitical Friendships and Tensions	Trade openness has peaked and security of supply chains will become a priority	Trade macro and micro trends (global macro, long/short equity) and support businesses to respond to changes (venture capital, private equity).
Accelerating Tech Adoption and AI Innovation	New technologies are altering consumer behavior and operational processes	Invest in innovators (venture capital, growth equity) and trade breakthrough technological developments (long/short equity, quantitative trading).
Investing for Impact and Profit	Raising funding to address global environmental, social and sustainability needs	Invest in innovators (venture capital, growth equity) and trade breakthrough technological developments (long/short equity, quantitative trading).

[13] The portfolio presented herein is not representative of a specific strategy managed by BNY Mellon Advisors as of the date of this publication and is not intended to constitute an advertisement of a specific BNY Mellon Advisors product or service, instead, all information, content and materials are for general information purposes only.

No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

APPENDIX II

ASSET CLASS DEFINITIONS

Asset Class	Key Features
ASSET-BASED LENDING	Private loans secured on hard assets, predominantly at floating rates. Income that should rise in line with higher rates, secured against physical assets whose value should increase with inflation.
CORE REAL ESTATE	Investments in privately-owned real estate assets with the goal of participating in net interest income and capital appreciation.
DIRECT LENDING	Private loans to middle market companies (senior or junior in the capital structure), predominantly at floating rates. Provide current income as well as pass-through fees that provide additional return. Floating rates mean that income should keep pace with a higher-rate environment.
NON-TRADITIONAL INFRASTRUCTURE	(Wind turbines, solar panels, cell towers, communications networks). Accessible through value-add strategies and dedicated renewables investments. Provides opportunities to diversify beyond traditional infrastructure and find new sources of growth.
OPPORTUNISTIC/ DISTRESSED INVESTING	Investing in stressed or distressed companies that have good businesses with bad balance sheets. Opportunities can be in the secondary debt markets (debt market sell-off), primary debt markets (rescue lending, debtor-in-possession) and deep value private equity (equity stakes in stressed companies, turnarounds). Distressed investors opportunistically step in as liquidity and capital providers when market liquidity dries up.
OPPORTUNISTIC REAL ESTATE	Opportunistic real estate funds, which can invest in distressed real estate with turnaround/transitional investment potential, can identify complex opportunities at attractive valuations.
PRIVATE CREDIT	Please see Direct Lending and Opportunistic/Distressed Investing.
PRIVATE REAL ESTATE AND REAL ASSETS	Investments in privately owned real estate or assets such as multi family, industrial, office or retail, or infrastructure assets, such as utilities, toll roads, airports, etc., through a value added or opportunistic approach, with the goal of profiting from the rise in valuation derived from capital improvements implemented by the asset manager.
REAL ESTATE	Includes both core real estate (low leverage, with a focus on income generation), as well as value-add and opportunistic real estate (capital appreciation and income). Real estate generally performs well in inflationary periods. For example, long-term leases for industrial assets include annual adjustments generally linked to inflation. Multifamily leases are short term with rents that reset often and keep pace with inflation.
TRADITIONAL INFRASTRUCTURE	(Toll roads, rail, airports, ports, utilities networks). Includes core infrastructure (essential assets with stable cashflows) and value-add infrastructure (opportunities for growth). Long-term revenue streams, often underpinned by economic regulation and tied to inflation indicators. These revenues are distributed to investors as regular income.

APPENDIX III

ALTERNATIVE INVESTMENT STRATEGY DEFINITIONS

Strategy	Features
EQUITY MARKET NEUTRAL AND RELATIVE VALUE	Market neutral and relative-value hedge fund strategies have historically delivered consistent returns, with significantly lower volatility and lower correlation than public markets as a result of low net portfolio positioning.
GLOBAL MACRO	Utilizes equities, fixed income, currencies, commodities and derivatives thereof to express views on macroeconomic and political trends while taking advantage of increased volatility and dislocations through long or short positions in a range of asset classes and instruments.
HEDGE FUND	Pooled investment vehicle that holds investment securities, both long and short, and aims to profit from their movements.
LIQUID ALTERNATIVES	Alternative investment funds, typically with more frequent liquidity and lower eligibility standards than traditional hedge funds, providing more accessible alternative investment options to investors.
LONG/SHORT CREDIT	Strategies that invest in the debt of healthy companies impacted by the pandemic while shorting those with unsustainable business models.
LONG/SHORT EQUITY	Investment strategy that takes long positions in underpriced securities, and short positions in overpriced securities, aiming to profit from the securities reversion to their fundamental valuations with the potential for generating substantial returns.
MERGER ARBITRAGE	Businesses emerging in strength looking to grow through acquisitions and weak businesses looking for a lifeline through M&A provide increased investment opportunities for merger arbitrage strategies. Merger arbitrage also tends to outperform in rising rate environments as arbitrage spreads tend to increase.
OVERLEVERAGED	Companies that borrowed too much money and are unable to or are having trouble making interest and principal payments.
PRIVATE EQUITY	Funds that utilize illiquid vehicles to acquire businesses with the intention to drive operational improvements over 4-5 year hold period to generate a return with a premium over public markets.
SHORT SELLING	The sale of a security that has been borrowed, with the intention of profiting on the value of the securities declining.
SWAPS	Financial derivative contracts where two parties exchange return cash flows or liabilities for the named financial instruments.
VENTURE CAPITAL	Investments in start-ups and young, high-growth businesses where the investor takes a minority stake backing a new business idea or technology, with the potential for generating substantial returns.

APPENDIX IV

INDEX DEFINITIONS

Index	Definition
ALERIAN MLP INDEX	Alerian MLP Index is the leading gauge of energy master limited partnerships (MLPs) and is a capped, float-adjusted, capitalization-weighted index, whose constituents represent approximately 85% of total float-adjusted market capitalization.
BARCLAYS AGGREGATE BOND INDEX	The Bloomberg U.S. Aggregate Bond Index is a broad-based benchmark that measures the investment-grade, U.S.-dollar-denominated, fixed-rate taxable bond market, including Treasuries, government-related and corporate securities, mortgage-backed securities (agency fixed-rate and hybrid adjustable-rate mortgage pass-throughs), asset-backed securities, and commercial mortgage-backed securities.
BLOOMBERG COMMODITY INDEX	The Bloomberg Commodity Index is a broadly diversified index that tracks the commodities markets through commodity futures contracts. These are subindices of the Bloomberg Commodity Index: Agriculture, Aluminum, Brent Crude, Cocoa, Coffee, Copper, Corn, Cotton, Energy, Gold, Heat Oil, Lean Hogs, Live Cattle, Natural Gas, Nickel, Silver, Soybean Oil, Soybeans, Sugar, Unleaded Gas, Wheat, WTI Crude Oil, Zinc.
FTSE NAREIT ALL EQUITY REITS INDEX	The FTSE Nareit All Equity REITs Index is a free-float adjusted, market capitalization-weighted index of U.S. equity REITs. Constituents of the index include all tax-qualified REITs with more than 50 percent of total assets in qualifying real estate assets other than mortgages secured by real property.
MSCI EAFE INDEX	The MSCI EAFE Index is a stock market index that measures the performance of large- and mid-cap companies across 21 developed markets countries around the world. Canada and the USA are not included. EAFE is an acronym that stands for Europe, Australasia, and the Far East.
MSCI EMERGING MARKETS INDEX	The MSCI Emerging Markets Index captures large and mid-cap representation across 24 Emerging Markets (EM) countries. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
RUSSELL 2000® INDEX	The Russell 2000® Index is a small-cap U.S. stock market index that makes up the smallest 2,000 stocks in the Russell 3000® Index.
RUSSELL MID-CAP® INDEX	The Russell Mid-cap® Index measures the performance of the mid-cap segment of the U.S. equity universe. The Russell Mid-cap Index is a subset of the Russell 1000® Index. It includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership.
S&P 500® INDEX	The S&P 500® Index includes 500 leading companies and covers approximately 80% of available market capitalization.
S&P GLOBAL NATURAL RESOURCES INDEX	The S&P Global Natural Resources Index includes 90 of the largest publicly traded companies in natural resources and commodities businesses that meet specific investability requirements, offering investors diversified and investable equity exposure across three primary commodity-related sectors: agribusiness, energy and metals & mining.

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