Wilshire

Alternatives 2023 Outlook

January 2023

Introduction

Economic fundamentals matter. Whether investing in credit or equities, currencies or commodities, real estate or infrastructure, the macroeconomic context will ultimately influence performance. Understanding how markets affect our Alternatives strategies is a central tenet of our investment philosophy, and for nearly a decade, Wilshire Advisors ("Wilshire") has developed annual investment themes based on macro trends. As always, macro views can never take the place of rigorous bottom-up research. However, it can serve as a guide when allocating scarce resources to find and evaluate the most compelling investment strategies. We hope that you find this work a helpful guide to private investment opportunities in 2023.

Bill Bracamontes
Managing Director

Marc Friedberg
Managing Director

Shawn Quinn
Managing Director

Björn Waltmans
Managing Director

Mark Perry
Managing Director

William van Eesteren
Managing Director

Global Overview

Wilshire's Alternatives research practice follows a thesis-driven investment process, incorporating a top-down macroeconomic view that informs its portfolio decisions and supports the proactive development of investment themes as the basis for directed manager sourcing and research. A distinct investment strategy is then deployed for each Alternatives sector included in a portfolio. Market information such as capital flows, valuation levels, and pricing power is analyzed to identify where the best value and most inefficient markets exist within each sector. An integrated global process that leverages local team expertise and relationships seeks to optimize return and risk for our global clients.

2023 Global Mega Trends

We believe that having a top-down economic perspective better informs portfolio construction and focuses our research efforts on the most compelling segments of the market. To be clear, top-down perspectives do not replace extensive, local bottom-up manager research but they may guide the ultimate investment decision. These forces will influence both risks and opportunities for Alternatives managers in the coming year.

For 2023 we replaced "COVID" with "Geopolitics" as a Mega Trend recognizing that, while the virus has not and may never leave us completely, most of the world has learned to live with it and COVID's economic impact today is a fraction of what it once was. China, though in the process of loosening its zero-COVID policy, is the obvious exception to this and exemplifies the seismic ripple effects of geopolitical decisions on the global economy. Russia's invasion of Ukraine has caused a permanent shift in European energy policy and indeed supply chains worldwide as security is emphasized today as much as reliability, and a geopolitical lens is applied to supply chain configuration. As points of vulnerability are scrutinized and rectified, the likely result is some degree of deglobalization and re-shoring which has the potential to exacerbate an already difficult inflationary environment.

Inflation, its consequences, and the realization of economic slowdown globally are center stage in 2023 and anchor the next Mega Trend, "Macroeconomy". The "highs and lows" of 2023 – high inflation, high interest rates, low growth, low earnings, and low valuations – have made it increasingly difficult to forecast the future and widened the distribution of potential investment outcomes. The prospect of an economic downturn next year appears a foregone conclusion - the questions remain how deep a recession will be and how long will it last. Clearly, in uncertain macroeconomic periods such as these, diversification becomes critical.

Recognizing that the abnormal interest rate policy regime following the GFC is likely now over, it will be important to separate the cyclical, shorter-term macroeconomic inputs from the secular, longer-term shifts in 2023 and beyond. The highest inflation in decades for much of the world has triggered tighter central bank policy including rapidly rising interest rates. Strength in certain, more durable inflation indicators such as rent growth and wage inflation suggest that, while peak inflation will moderate, the resting heartrate for near-term inflation will likely be above recent historical trend. Consumer spending has remained robust - noting a mix shift from the pandemic-driven consumption of goods back to a focus on services – buoyed by a strong labor market, however, stubbornly high inflation is beginning to erode consumer confidence. Durably higher rates are also creating headwinds in housing as well as corporate balance sheets for those who did not lock-in lower borrowing costs before the low interest rate window closed. Any one of these factors itself presents a headwind to the investment landscape, but the combination of higher inputs costs, higher financing costs, and weakening demand together with slower growth prove a daunting challenge to earnings and valuations. Whether a controlled, moderate slowdown can be engineered or whether the slowdown spirals into a deeper recession remains a key question. Recognizing, however, that crisis often creates opportunity – focus must be shifted to strategies that are best positioned to capitalize on complexity and managers with the skill to navigate it.

In the following sections we will review how the aforementioned macroeconomic and geopolitical effects, together with innovation and ESG (combined the 2023 "Global Mega Trends") translate into a regional context for North America, Europe and Asia-Pacific, and how the resulting regional investment themes will guide the construction of our global portfolios in 2023.

North America

Regional Context

We expect the U.S. economy in 2023 to be characterized by higher inflation and higher interest rates, culminating in slower growth. With this view we have distilled the 2023 Global Mega Trends into Regional Context and Local Opportunities in the U.S. across the asset classes that we cover as summarized below and elaborated upon in the sections that follow.

	Regional Context	Local Opportunities
Innovation	Digital Economy Financial Products Life Science	Ecommerce Democratization of Alternatives Healthcare & Pharmaceuticals
ESG	Environmental Initiatives Diversity & Inclusion Geopolitical Tensions	Sustainable Products Energy Transition Education and Housing
Geopolitics	Supply Chain Configuration Deglobalization Currency & Commodities	Industrial Onshoring Security and Defense Increasing Uncertainty
Macro-economy	Interest Rates Valuations Income & Financial Inequality	Real Assets Special Situations Floating Rate & Alt Yield

The U.S. economy is experiencing its highest inflation in 40 years, which has triggered the Federal Reserve to increase rates rapidly. While this action increases the threat of recession, economic momentum remains resilient in part due to historically high excess demand for labor. If the pending downturn ends up light for workers, it may suggest a milder recession given the role of consumer consumption in the U.S. economy. Supply chain health – a key focus area to start the year – is improving as COVID-driven demand for goods subsides and demand for services returns to pre-COVID levels.

With the midterm elections in the U.S. now complete, the resulting split government should mute the possibility of significant legislation through 2024, and the overall trend towards fiscal and monetary withdrawal is expected to continue absent unforeseen shocks. That said, we note the significant legislative support already in place for energy transition, infrastructure, and parts of technology e.g., chips and semi-conductors which provide a tailwind to those sectors.

Overall, 2023 will begin with a mounting quantum of risks in North America and an increasingly wider distribution of future outcomes. Recognizing that much of the Alternatives market is inherently opportunistic, investors can position their portfolios towards those asset classes that are either uncorrelated or benefit directly from higher rates, higher inflation, or revaluation. For better or for worse, cheap debt is no longer available to bail out bad deals and, as a result, manager skill must be emphasized in the forthcoming vintage.

Regional context becomes critical to understanding which areas of the market provide the strongest cyclical and secular tailwinds and which sectors require caution.

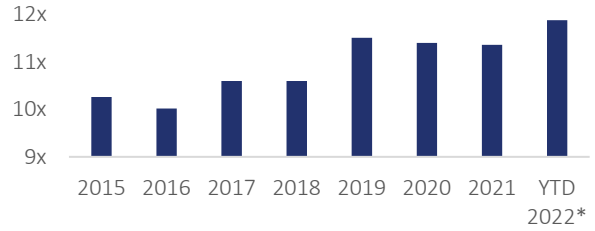
Private Equity

Strategy	Outlook
Buyout	◐
Growth Equity	◕
Venture Capital	◐

Key
● Highly Favorable
◕ Favorable
◐ Neutral
◔ Cautious
○ Unfavorable

Buyout

North American Buyout Purchase Price Multiple[1]

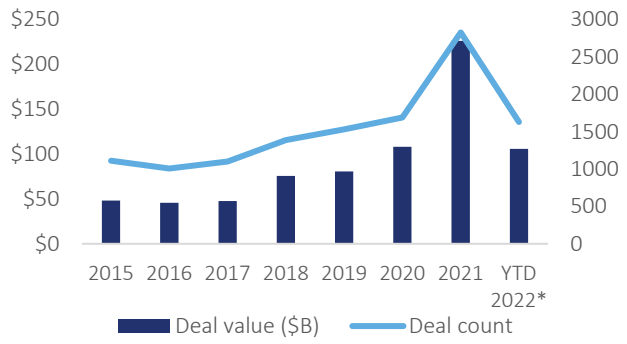


The buyout deal environment, long the beneficiary of low rates and high valuations, is being challenged by increasing financing costs and economic uncertainty. Despite these headwinds deal activity has held up better than expected, holding just below pre-pandemic levels while valuations have stayed stubbornly high. Consistent with this, add-on activity has reached an all-time high as firms blend-down their higher initial entry price. Manager skill will be tested in 2023, as peak deals done at peak valuations with peak leverage levels will likely be challenged by rising debt costs and the possibility of a decline in earnings. Operational improvement as a catalyst for both value creation and enhanced risk management remains a key enabler for U.S. buyout managers' ability to outperform as financial engineering and multiple expansion become more difficult.

[1]S&P LCD, *1Q-3Q22

Growth Equity

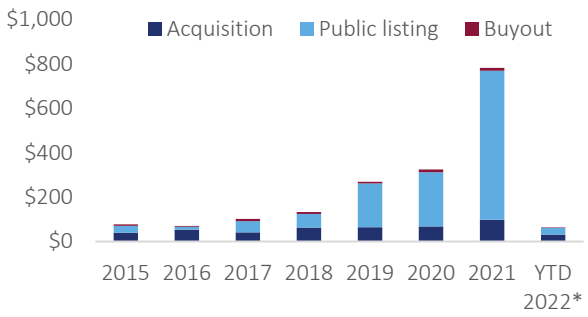
U.S. Growth Equity Investment Activity ($B)[2]



While down from its 2021 peak, growth equity deal activity remained strong this year as strategies continue to benefit from robust upstream venture capital activity and the acceleration of tech-driven sector disruption. Growth equity perhaps more so than any other private equity strategy is feeling the effect of the challenged IPO market as liquidity from public listings has significantly dried up. Looking ahead to 2023, digital remains an important theme in this market including media content, digital services, healthcare technology, and cybersecurity amongst other disruptive forces. We expect a renewed emphasis on profitable growth next year as growth equity benefits from larger, more mature companies staying private for longer, less competition, and revaluation.

Venture Capital

U.S. Venture Capital Exit by Type ($B)[3]



Over the past few years strong fundraising has fueled historically high valuations particularly in late-stage companies. With fundraising slowing, venture returns may be challenged to the extent that less capital brings fewer downstream sales and/or less up-round financings to marginal businesses. In addition, the exit environment has weakened, including all-important IPOs which have slowed considerably and are expected to remain so over the medium term. That said, sustained corporate M&A activity, accelerating technological innovation, emerging technology ecosystems, and shifting consumer behavior are all tailwinds which buoyed venture returns through the COVID crisis and support the case for 2023, particularly in early-stage given the expectation for improving transaction and pricing dynamics.

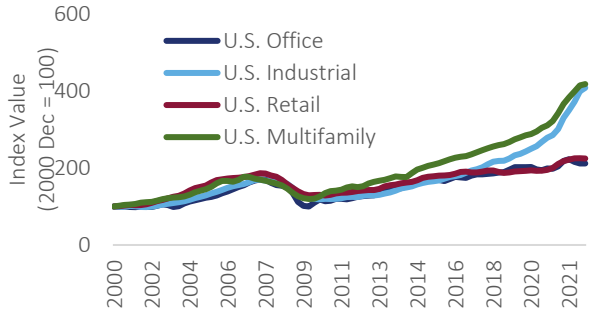
Private Real Assets

Strategy	Outlook
Real Estate	◐
Natural Resources	◔
Infrastructure	◔

Key
● Highly Favorable
◔ Favorable
◐ Neutral
◕ Cautious
○ Unfavorable

Real Estate

U.S. Property Type Pricing Indices (2000 Dec = 100)[4]



Although real estate is very 'local', making general statements difficult, the chart above illustrates that the bifurcation in this market continues to accelerate. While secular trends relating to demographic shifts and e-commerce remain important long- and medium-term drivers, COVID accelerated themes in nesting, medical office, and logistics which have created a tailwind behind industrial and multi-family property types and simultaneously a headwind to retail and office. Flexible office with attractive attributes should separate the winners from losers as leases roll, as should service-providing retail. While real estate's positive inflationary attributes bode well for the asset class overall, value-added and opportunistic strategies in particular provide an opportunity for excess returns in a potentially volatile environment.

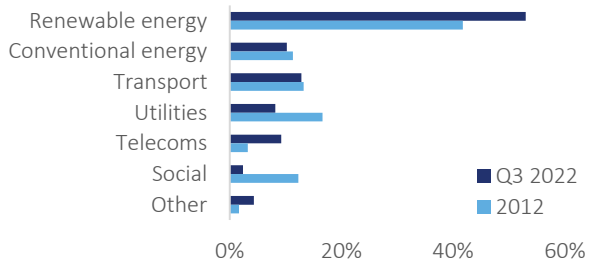
[2]PitchBook/NVCA Venture Monitor – Growth Equity, *1Q-3Q22

[3]PitchBook/NVCA Venture Monitor, *1Q-3Q22

[4]CoStar Commercial Repeat-Sale Indices (CCRSI), CoStar Group. Value weighted data. Data through September 30, 2022

Infrastructure

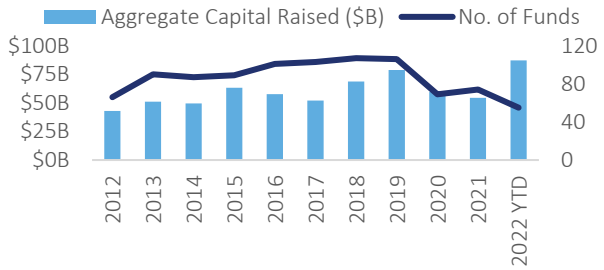
U.S. Infrastructure Deals by Sector – 2022 vs. 2012[5]



With the passage of the $1 trillion Infrastructure Investment and Jobs Act late last year, there now exists substantial government support and increasing public prioritization across the infrastructure spectrum from clean energy to broadband. Despite this influx, the large and growing gap between long-term infrastructure capital needs and current investment levels suggest strong demand for private capital to meet the significant U.S. infrastructure capital need. Meanwhile the continued emphasis on renewable and digital infrastructure suggests the possibility of buoyant deal flow in the near term. While historically high dry powder levels and a growing infrastructure debt market continue to support high valuations in this segment, the prevalence of contractual inflation adjustments make infrastructure an attractive area in the current inflationary environment.

Natural Resources

North America Natural Resources Fundraising[6]



Despite struggling for most of the past decade, Natural Resource strategies performed well in 2022. Indeed, areas such as energy, mining, and agriculture tend to be in an apparently constant state of flux as the result of the geopolitical, technological, macroeconomic, capital market, and ESG forces that shape these markets. While focus has clearly shifted towards climate-aware asset classes, including renewables, this energy transition is now complemented by a focus on energy security and brings with it increased demand for the metals that support next generation clean technology. Indeed, this security trend extends beyond energy to other natural resources such as food and water. The abundance of natural gas in the U.S. positions it well to meet Europe's burgeoning import need. Emerging private credit markets in energy – traditional and renewable – agriculture and mining offer compelling risk-adjusted returns that can dampen commodity price and other external risk exposure on the downside while maintaining upside optionality.

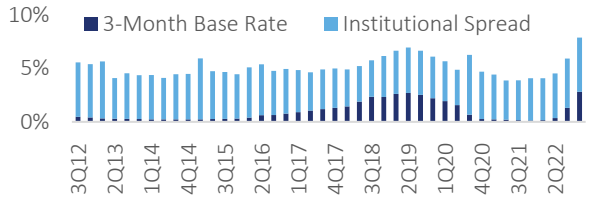
Private Credit

Strategy	Outlook
Direct Lending	◐
Distressed Debt	◕
Opportunistic	◕
Alternative Yield	●

Key
● Highly Favorable
◕ Favorable
◐ Neutral
◔ Cautious
○ Unfavorable

Direct Lending

Weighted Average Absolute Institutional Rate[7]



While the direct lending market has suffered from intense competition in recent years, secular bank retrenchment in the leveraged loan market together with sustained high M&A activity and private equity dry powder levels suggest robust opportunity ahead for direct lending deployment. That said, at the time of this writing, new issuance has slowed dramatically as lending standards have tightened, especially for riskier borrowers. The floating rate nature of these instruments is a double-edged sword – on one hand, it is reasonable to assume higher default rates in this market as higher borrowing costs collide with slower growth, and on the other hand, returns will benefit from the rising base rate. This together with the potential for wider spreads and better terms as recession eases the competitive forces in this market suggest 2023 may be an attractive direct lending vintage.

[5] Preqin Global 2023 Infrastructure Report, data as of 3Q22

[6] Preqin as of December 2022.

[7] S&P LCD as of September 30, 2022

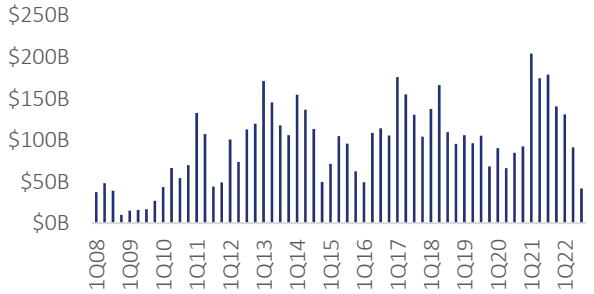
Distressed Debt

Levered Loan LTM Default Rate[8]

Distressed debt is an inherently cyclical asset class with outsized reliance on external factors such as market dislocation and default rates vis-à-vis other private credit strategies. The next distressed debt cycle has the potential to be attractive as the build-up of high-risk, low-quality debt in the system over the past decade has been pronounced. While a catalyst for the next cycle is impossible to predict, the combination of recent interest rate increases coupled with the pull back of liquidity from the Federal Reserve and increasing probability of near-term recession have the potential to create opportunity for distressed strategies. Perhaps a prelude of what is to come, default rates are already beginning to tick up as of the time of this writing.

Opportunistic

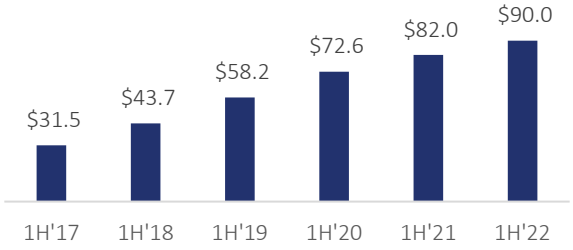
U.S. Highly Leveraged Loan Volume [9]



Opportunistic credit strategies are well-positioned as traditional credit market issuance slows. In this market, managers with the skill to capitalize on complexity and embrace flexibility can separate themselves from the herd and create upside optionality during periods of dislocation. What results is above-market return with below-market risk. The combination of sub-market inefficiency and manager competitive advantage pays dividends in frothy and stressed markets alike suggesting an attractive "all weather" attribute to opportunistic strategies. Sector specialization and unique deal sourcing are key strategic components and, when paired with highly structured and well-collateralized investments, can generate outsized risk-adjusted returns particularly during volatile periods like we may have ahead.

Alternative Yield

U.S. Paid Music Subscriptions (1H Average, $ Millions)[10]



Alternative yield strategies, born from the concept of uncorrelated return, delivered as expected through the stress test of the COVID crisis and are poised to generate attractive risk-adjusted yield in 2023. Indeed, investor appetite for differentiated strategies operating in less efficient markets, uncorrelated contractual cash flows, and outsized margins of safety are well positioned. Intangible assets such as music royalties, specialized asset-backed lending, risk transfer, and sector-focused direct lending are examples of such market segments that offer compelling risk-adjusted return and less correlated sources of income. As investors lean on diversification to help guide portfolios in 2023, these strategies have proven their utility not only as sources of risk-adjusted return but also as tools for portfolio risk management.

[8] Morningstar LSTA U.S. Leveraged Loan Index, Principal Amount. S&P LCD as of September 30, 2022

[9] S&P LCD as of September 30, 2022

[10] Source: RIAA

Europe

Regional Context

After a relatively strong first half of 2022, the European economy is currently in a challenging phase. Several shocks unleashed by Russia's invasion of Ukraine are denting demand and reinforcing inflationary pressures. As a result, although growth in 2022 is set to be better than previously forecasted, the outlook for 2023 is significantly weaker for growth and higher for inflation. With this in mind we have distilled the 2023 Global Mega Trends into Regional Context and Local Opportunities in Europe across the asset classes that we cover as summarized below and elaborated upon in the sections that follow.

	Regional Context	Local Opportunities
Innovation	Digital Disruption Ubiquitous Connectivity Maturing Tech Ecosystem	E-Commerce & FinTech HealthTech Cybersecurity & Big Data
ESG	Climate Change Energy Transition Circular Economy	Decarbonization AgriTech & Housing Pollution & Waste Control
Geopolitics	Gas supply from Russia Increased Energy Prices Risk of Rationing	Special Situations Energy Transition Pan-Regional Exposure
Macro-economy	Monetary & Fiscal Support Interest Rates Demand Outstrips Supply	Alt Yield Real Assets

Following the easing of COVID containment measures, economic growth in the Eurozone surprised on the upside in the first half of 2022. However, elevated uncertainty following the Ukraine crisis, an energy crisis eroding households' purchasing power and weighing on production, a weak external environment, and tighter financing conditions are expected to bring the Eurozone into a recession in the last quarter of the year. Despite the challenging environment, European labor markets have continued to perform strongly, with record-levels of employment and unemployment at its lowest in decades.

The macroeconomic outlook remains highly uncertain as the war in Ukraine continues. The largest threat comes from adverse developments in the gas market and the risk of rationing, especially in the winter of 2023. Longer-lasting inflation and increasing interest rates also remain substantial risk factors. Both are amplified by the potential for inconsistency between fiscal and monetary policy objectives.

Against this macroeconomic context, we continue to favor more defensive business models, underpinned by demand regardless of the state of the European economy, as well as recurring revenues. Whether inflation is temporary or indeed more structural, private assets will be affected, for instance by impacting EBITDA margins. In our view, therefore, inflation remains a key theme in our private markets allocations in 2023.

Across our European portfolios, technology remains one of the strong secular opportunities, only accelerated by COVID. Technology disruption is taking place in an increasing number of sectors, with technology touching healthcare, financials, education, retail, agriculture, and many other industries today. We believe transformational trends such as universal connectivity are irreversible and hence digital transformation continues to present vast growth potential across private markets. While rising technology penetration results in an increase in the spread of cyberattacks, this spurs innovation and, for example, the emergence of cybersecurity-focused venture capital firms.

Lastly, going into 2023, increasingly more European governments, consumers, and investors alike are embracing growth with purpose, which was further fueled by the global climate conference COP26 in 2021. There is a rising climate change focus, with implications for the energy transition and the circular economy. Fiscal stimulus packages will be supporting infrastructure spend, including in renewables. We anticipate this will continue to create attractive "planet positive" European investment opportunities in our 2023 pipeline.

Private Equity

Strategy	Outlook
Buyout	◕
Growth Equity	◐
Venture Capital	◕

Key	
●	Highly Favorable
◕	Favorable
◐	Neutral
◔	Cautious
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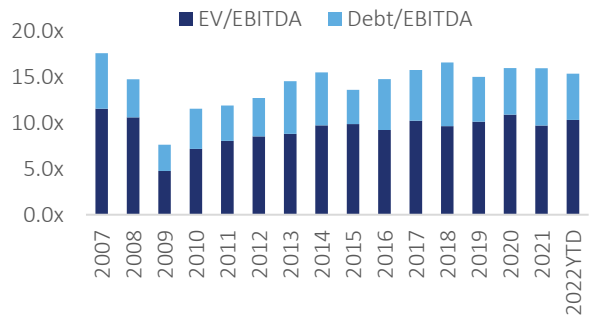
Buyout

European Buyout Purchase Price & Debt Multiple[11]



European buyout activity has decreased in 2022 relative to 2021, driven by a highly volatile and uncertain macroeconomic environment characterized by increased inflation, supply chain issues, and labor shortages. As a result of these headwinds, investors in Europe have focused on strengthening their assets to weather the expected downturn, which has substantially increased add-on activity since the beginning of the year. With the correction in valuations in most industries, smaller assets have represented an opportunity to consolidate fragmented markets at cheaper prices while providing additional strategic value at exit, which has become particularly important after the closing of the IPO window in 2022. In 2023, the focus should remain on businesses with differentiated products and services with the ability to pass-on costs to their customers. Companies active in essential industries, such as pharma, are better positioned to face the recessionary environment expected ahead. However, we continue to have strong conviction on the European buyout market given its diversity as well as its vast and relatively less efficient lower mid-market, which can lead to compelling buyout strategies and returns.

Regional Outlook Buyout

Sector	Investment Opportunity
UK/Ireland	◐
Nordics	●
Benelux	●
DACH	◕
France	◕
Spain/Portugal	◕
Italy	◐
CEE & Turkey	◔

[11] Source: Pitchbook.

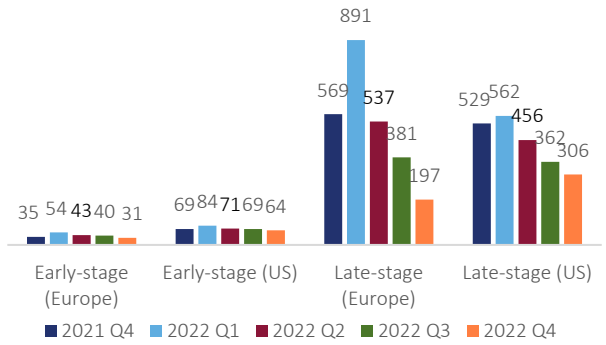
Growth Equity

Growth equity has $1.2 trillion AUM (second only to buyouts) and is the fastest growing strategy within private equity in Europe. While the strong demand for growth strategies has led to more funds in the market, the funding environment for growth stage companies in Europe is still relatively scarce for high quality opportunities. The current high inflation and rising interest rate regime will be broadly negative for fund performance and portfolio company valuations. While higher discount rates put downward pressure on all assets, this is especially true of higher growth companies, which have faced the most downward pressure as per 2Q2022 valuations.

This has pushed sponsors toward assets that display significant inflation-hedging capabilities and pricing power. The growth-at-all-costs mantra of 2021 has materially cooled, with sponsors more focused on fundamentals and profitability levels of companies. Having deep sub-sector expertise, understanding sweet spots, and forecasting where disruption will come from in a particular sector have never been more important for sponsors. GPs will need to quickly assess how profit pools are shifting, cost structures are developing, consumer behaviors are changing, and supply chain needs are evolving to pick the winners in a subsector.

Venture Capital

Europe & U.S. VC Post-Money Valuation (€ Millions)[12]



The deteriorating macro environment, driven by geopolitical instability, inflation, and market volatility, has slowed down venture capital markets globally and led to a correction in valuations. As valuations come off peak levels, Wilshire's outlook on the space remains positive, particularly at the seed- and early-stage. Strong fundamentals combined with a less frothy market environment creates an opportunity to acquire good companies at attractive valuations, benefitting VC

[12] Source: Pitchbook.

managers with fresh capital to deploy. Looking back at previous cycles shows superior returns in the vintages emerging from recession, with early-stage funds outperforming later-stage and multi-stage managers in those vintages. A group of best-in-class firms is emerging in Europe, similar to what we saw happen in the U.S. fifteen to twenty years ago. Nevertheless, the market remains opaque, which demands investment to form networks with today's brand names and identify the top managers of tomorrow.

Private Real Assets

Strategy	Outlook
Real Estate	◐
Natural Resources	◐
Infrastructure	◔

Key
● Highly Favorable
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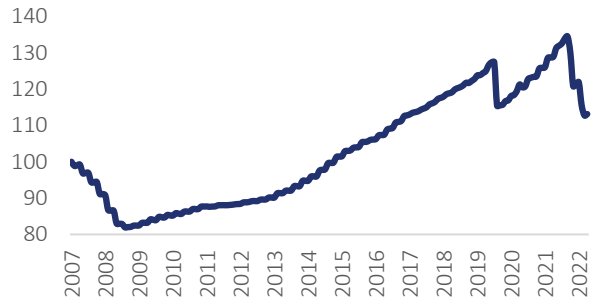
◐ Neutral
◕ Cautious
○ Unfavorable

Real Estate

Pan-European Commercial Property Price Index[13]

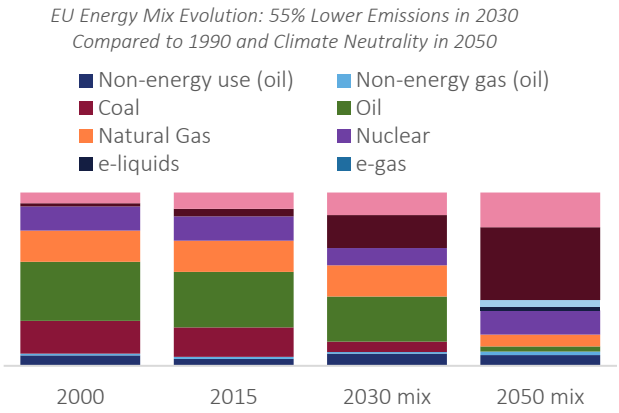


Higher (real) risk-free rates and increased debt costs paired with significant macroeconomic uncertainty are starting to weigh on European real estate. While operating fundamentals have remained roughly stable across most sectors to date, yields have had to move higher and thus bid prices lower. However, we note that real estate is very 'local' and property cycles are moving at different paces across European countries and asset classes. Europe remains characterized by material property undersupply, and it continues to be a highly fragmented region with a lack of transparency compared to the United States.

On a macro level, exposure to private real estate will continue to provide a hedge against high levels of inflation for investors. In Europe, we remain focused on value-added and opportunistic strategies, which provide an opportunity for excess returns in this environment. On a more micro level, attractive opportunities may be present in the residential and industrial sectors, which have proven to be more resilient and continue to benefit from tailwinds such as affordability (multifamily), low interest rates (single family), demographic trends (student and senior) and secular shift to e-commerce (industrials).

Natural Resources

Energy Mix Evolution[14]



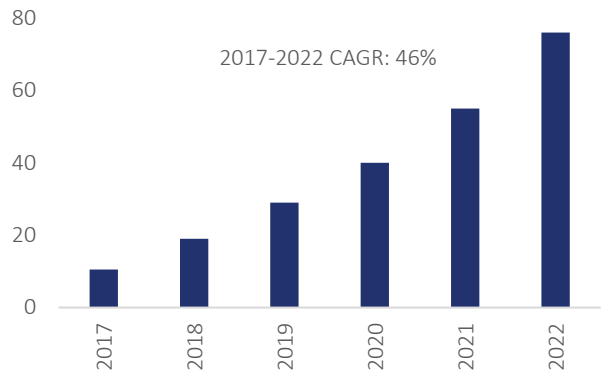
In recent years the world has seen an increased integration of the global energy industry. The combination of continuing growth in energy demand and the drive to solve climate issues, including widespread commercialization of wind, solar and other renewable energy forms, is breaking down segment barriers. A transition to a low-carbon economy appears inevitable, and has been accelerated by Europe's current energy security concerns. The EU has joined others in committing to net-zero carbon emissions by 2050, and was even more ambitious by announcing that it would reduce emissions more aggressively up front, by 55% from 1990 levels by 2030. Among others as part of the Next Generation EU stimulus package, EU leaders committed to focusing on spending on climate-related projects. Against this context, we consider the trend towards decarbonization and energy transition to increasingly offer compelling investment opportunities in natural resources, supported by renewables having rapidly approached cost-competitiveness with higher gas and carbon prices. Preqin forecasts that Europe will continue to grow as the stronghold for the future of natural resources. Focused more on energy strategies, Europe is coming into its own, while the relative size of fundraising is expected to decline in Asia and North America.

[13] Source: Green Street, as of December 1, 2022. Core Sector Average is equally-weighted between the Industrial, Office, Residential, and Retail sectors. Indexed to 100 in September 2007.

[14] Source: World Economic Forum, European Council on Foreign Relations, 2021.

Infrastructure

Global Mobile Data (Exabyte per Month)[15]



Infrastructure, as an asset class on a diversified basis, has proven to be resilient through previous market downturns as well as the COVID pandemic. However, clear differences between sectors exist (e.g., midstream oil versus digital infrastructure). European infrastructure represents a growing market opportunity that benefits from political support. Digital infrastructure and decarbonization, in particular, are expected to be key themes going forward, with sector specialization becoming increasingly important. In the face of today's inflationary environment, infrastructure often benefits from protective asset-level concepts such as CPI-linked revenues or pass-through mechanisms. Nonetheless, with rising interest rates reducing the role of financial engineering in value creation, Wilshire believes active management and a hands-on approach have become increasingly important, and therefore continues to see strong opportunities in the value-add space. Finally, as the European private infrastructure market has matured, established players have moved up-market, leading to compelling dynamics at the mid-market segment.

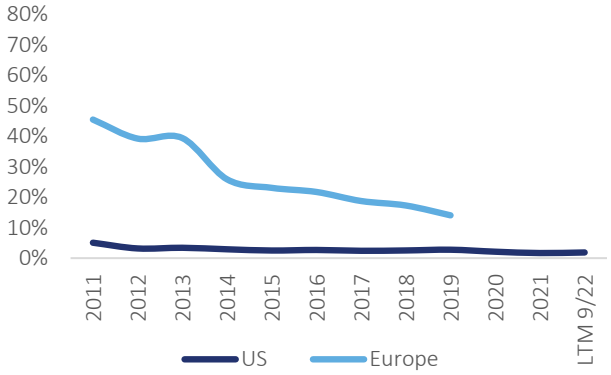
Private Credit

Strategy	Outlook
Direct Lending	◐
Distressed Debt	●
Opportunistic	◕
Alternative Yield	◐

Key
● Highly Favorable
◕ Favorable
◐ Neutral
◔ Cautious
○ Unfavorable

Direct Lending

European Banks' Share of the Primary Market[16]



The European direct lending market is growing fast on the back of investors' appetite for a yielding asset class and low volatility in combination with European bank lenders retracting from middle-market lending due to regulatory constraints designed to de-risk European banks in the aftermath of the GFC. Private equity induced borrower demand has also contributed to the strong increase of the AUM of this asset class. Private equity sponsors have increasingly tapped into the private debt markets in 2022 given the stop/starts in the syndicated markets as a result of the COVID crisis and the war in Ukraine.

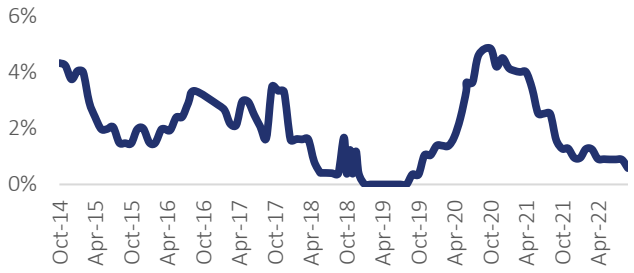
As far as traditional direct lending is concerned, the European market is characterized by a high concentration of deal flow amongst the (very large) top-tier managers, with long-term experience through the cycles and a strong track record. We generally favor more niche lending opportunities, including a focus on mid-market companies that struggle to get access to traditional sources of funding. The managers active in this space have seen a significant improvement in terms and pricing as the macroeconomic headwinds are exacerbating the banks reluctance to lend to European SMEs.

[15] Source: Cisco Annual Internet Report (2018 – 2023), Campbell Lutyens.

[16] S&P LCD Q3 2022. Given the lack of primary issuance in Europe, LCD did not track enough observations to compile a meaningful sample for 2009, 2020 and YTD 2022. As a result, the primary market investor charts are not updated for these periods.

Distressed Debt

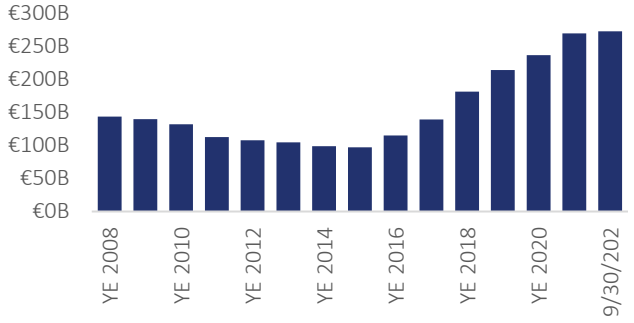
European Lagging Twelve-Month Loan Default Rate[17]



While the tipping point for the next cycle is impossible to forecast, some structural characteristics continue to create distressed debt opportunities in Europe. Despite concerted efforts across the European region to improve bank capitalization in recent years, the prolonged effects of zero/negative interest rates and Basel IV regulations continue to challenge the financial health of the region. Post-COVID, improved banking capitalization throughout the Eurozone is expected to continue creating non-core, non-performing loan sell-offs favorable to distressed debt investors. The scaling back of government stimulus packages and COVID loans reaching maturity may coincide with an inability to refinance and banks lifting moratoria imposed by governments. In addition, similar to market dynamics in the U.S., European companies have been steadily levering their balance sheets since the GFC. The combination of disruption in supply chains and the inflationary pressures from the energy crisis will continue to challenge highly levered companies, ultimately leading to financial stress and distress, which can create opportunities for distressed investors in the continent.

Opportunistic Credit

European Par-Amount Leveraged Loans Outstanding in Secondary Market[18]



Opportunistic strategies seek complexity and dislocation, in market segments where demand for capital exceeds supply. It is essential for managers of opportunistic strategies to have the agility to adapt their skillset to a changing market environment. In 2023, we expect a continuation of the opportunities that arose this year as the COVID pandemic and the war in Ukraine have refocused bank lending to core assets and sponsors, reducing the supply of available capital in the market for SMEs. The energy crisis in Europe has also led to a more entrenched inflation profile, negatively affecting credit metrics which in turn leads to volatility and dislocations. This will continue to generate opportunities in the European opportunistic credit space for companies whose liquidity needs are not met by the more traditional capital markets and require alternative sources of financing, such as capital solutions to fund growth. Following COVID, many businesses have a layer of (senior) government debt in their capital structure, which adds complexity in case these businesses run out of liquidity. While the large opportunity set of leveraged loans provides primary opportunities, the secondary side continues to provide a healthy turnover of loans in Europe, also in times of market stress, from which managers can source opportunities.

Alternative Yield

Alternative yield managers pursue a broad array of niche strategies. These managers tend to target one small industry, requiring highly specialized expertise. While the market in the U.S. is significantly deeper, in Europe asset-backed loan portfolios, catastrophe bonds, funds specializing in non-life settlements, and capital relief transactions with European banks are examples that have come to market. We like these types of non-traditional strategies because of the limited exposure to competition, the uncorrelated nature, and the attractive yield component.

[17] Source: S&P LCD Q3 2022. Based upon principal count, S&P European Loan Index.

[18] Source: S&P LCD Q3 2022. S&P European Loan Index.

Asia-Pacific

Regional Context

The post-COVID recovery is trending positively across Asia-Pacific with most of the key economies lifting COVID-related restrictions. For the case of China, its economy faced significant pressures in 2022 due to the strict COVID policies; nonetheless, its overall growth remains solid, and the Chinese government has ample monetary and fiscal tools to support future growth. Nearing the end of 2022, China has also officially shown signs of relaxation towards the COVID policies since early-December and the lifting of its zero-COVID policy may come earlier than originally expected. Overall, all key economies in Asia-Pacific are expected to report respectable economic growth in 2022 and 2023, while maintaining manageable rates of inflation.

	Regional Context	Local Opportunities
Technology	Continuous Tech Advancement Maturing Venture Ecosystem Accelerated Digital Adaptation	B2B Services Supply Chain Transformation New Consumer
ESG	Social Equality Demographic Shifts Carbon Neutrality	Healthcare Elderly Related Services Environmental
Macroeconomics	Economic Recovery Public Market Downturn China's Aging Population	Consumption Upgrade Supply Chain Efficiency PE Secondaries
Geopolitics	Global Supply Chain Reorganization Foreign Substitution Intra-Regional Trade	Domestic Consumption Advanced Manufacturing Business Service Outsourcing

Geopolitics has been the key theme of the Asia-Pacific region in 2022, and is expected to continue to be the case for 2023. While the U.S.-China conflicts remain intense, data shows that it has led to the reorganization (instead of the breakdown) of the global supply chain. In fact, China remains the key trading partners for most of the major economies, and its global trade continues to report healthy growth in 2022[19]. Meanwhile, Southeast Asia benefits significantly from the geopolitical situation, with its trade to both China and the U.S. reporting solid uptrends. Particularly, many U.S and western companies are diversifying their manufacturing facilities and suppliers away from China to India and Southeast Asia, while Chinese companies are building their footprint in Southeast Asia to help facilitate global trade. Overall, with the reorganization of the global supply chain and an increase in intra-regional economic activities, it is expected that the correlation between the U.S / developed markets and China may lower in the coming years, which in turn enhances the diversification benefits of incorporating Asia-Pacific in a global investment portfolio. In the short-term, it is expected that advanced manufacturing and business / outsourcing services in Southeast Asia will benefit from the current geopolitical situation, while China's continued focus on self-sufficiency will benefit the sectors and investments related to domestic consumption, supply chain efficiency, and selected advanced manufacturing and deep tech where China has competitive advantages on a global basis.

When taking a macroeconomic perspective, Asia-Pacific faces less concerns relating to inflation and interest rate risks. In general, the region continues to enjoy the uptrend of a growing middle class, increasing consumption power, and urbanization. With a gradual COVID recovery and lifting of travel restrictions in most countries in Asia-Pacific, it is expected that areas related to supply chain efficiency and consumption are expected to enjoy macro tailwinds.

Technology and innovation are widespread (and remain the key growth driver) in Asia-Pacific. Notably, the mature venture capital ecosystem in China equipped with an abundant supply of talent, strong government support on technological innovations - which has been re-emphasized in China's latest National Congress - as well as the integration of the full investment cycle from early-stage investing to the build-up of local. Southeast Asia is also catching up with a strong adaptation of technological advancement and an increased penetration of mobile-internet, which together with favorable macro factors and supportive government policies, accelerate the process of digital transformation. Overall, Wilshire expects a wave of opportunities to arise from digital consumption, supply chain efficiency, technology enabled B2B services, and healthcare tech sectors.

Meanwhile, ESG has become an increasingly important subject in the region. Particularly, environmental issues are one of the key socio-economic themes. Tech-driven environmental investments (e.g., electric vehicles and its associated ecosystem, waste management, etc.) are expected to pick up, which would contribute to the goal of carbon neutrality.

[19] According to General Administration of Customs People's Republic of China, China's import and export have reported 7.7% and 11.1% yoy YTD as of October 2022.

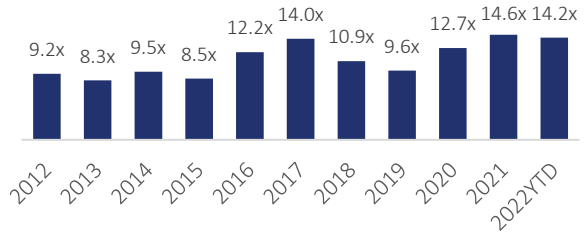
Private Equity

Strategy	Outlook
Buyout	◐
Growth Equity	◕
Venture Capital	◕

Key
● Highly Favorable
◕ Favorable
◐ Neutral
◔ Cautious
○ Unfavorable

Buyout

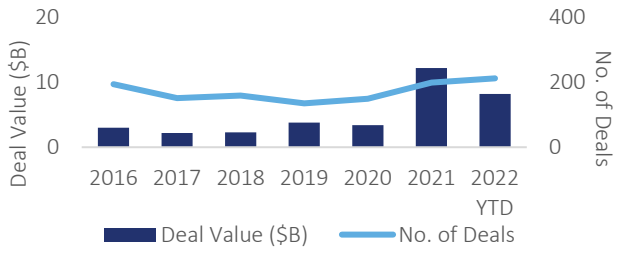
Asia Pacific Median EV/EBITDA of M&A Transactions[20]



The major developed Asia-Pacific economies (including Japan, South Korea, Singapore, Australia, and New Zealand) continue to be the key focus markets for buyout opportunities. With the continuous post-COVID recovery and a relatively lower inflation risk as compared to the U.S. and Europe, the buyout markets in developed Asia-Pacific remain solid. While Wilshire continues to see the mid-market space as the most attractive segment within the Asia-Pacific buyout space given its supply-demand imbalance with strong deal flow and attractive valuations, we note the merits of Pan-Asia buyout funds, including the ability to diversify geopolitical risk, and note that 2023 will be a year of fundraising for many of the large and mega cap pan-regional buyout managers. Meanwhile, corporate carve-outs, succession issues and growth-oriented buyouts (especially those related to market expansion) will continue to be the key themes in this region.

Growth Equity

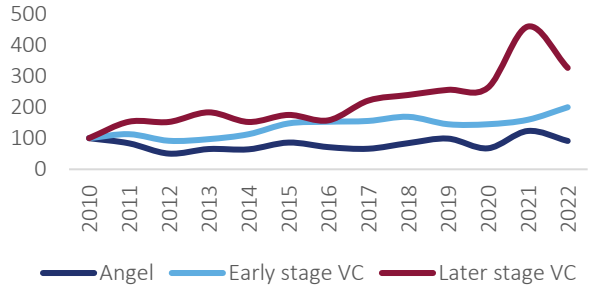
Asia Pacific Buyout and Growth Capital Investment Deal Value[21]



Growth equity remains the largest segment within private equity in Asia-Pacific, mainly driven by deal flow in developing Asian countries. 2022 has shown a decline in growth capital deal value while the number of deals continued to rise, demonstrating a decrease in the average deal size of growth capital investments. One of the key reasons for this phenomenon was the decline in pre-IPO and late-stage investments made during the year given significant public market corrections. Nonetheless, both deal value and number of deals in 2022 are still considered to be within the norm when compared to the years before 2021, demonstrating the healthy growth of the Asia-Pacific market despite the tough investment market and strict COVID policies throughout most of 2022. Overall, Wilshire continues to be bullish to China growth capital investments, which is the largest subset of private equity in the region, particularly as China is expected to show strong recovery in tangency with the relaxation of COVID policies. Meanwhile, Wilshire expects there will be interesting opportunities arising from Southeast Asia with the reorganization of global supply chains.

Venture Capital

Asia-Pacific Venture Capital Pre-Money Valuation Index (2010 = 100)[22]



2022 has been a tough year for the venture capital market in Asia-Pacific, particularly for China. Due to the tech-related regulatory changes, geopolitical issues, and the zero-COVID policies and lockdowns, China VC has experienced a significant decline in fundraising, investment, and exit. Together with public market corrections, Asia-Pacific VC valuations have rationalized in 2022, particularly for late-stage VC which has previously skyrocketed in 2021. Nonetheless, Wilshire has consistently stuck to its focus on the early-stage VC strategy in Asia-Pacific and backed GPs that have both diversified portfolios and long track records that have sustained through multiple cycles. Specifically, Wilshire

[20] Pitchbook, as of December 6, 2022

[21] Preqin, as of December 6, 2022

[22] Pitchbook data, as of December 6, 2022. Indexed with 2010 as base year and used the median of pre-money valuation.

continues to be bullish to China VC, which is the biggest VC market in the region (and the second largest in the world) with a mature ecosystem. Also, China's latest National Congress has re-emphasized its conviction to promote technological innovation to support economic growth. In terms of exits, while the offshore IPO market has not been favorable to Chinese tech companies, the onshore IPO market is gaining sophistication and the return metrics have held up well despite the challenging macro environment. Overall, Wilshire views that the current market correction creates a window to establish relationships with the top VCs that are access constrained. Wilshire will put a strong focus on the GPs' portfolio construction, their understanding of the government policies and national economic directions, their ability to exit investments via multiple channels, and their experience through various business cycles.

For the rest of the Asia-Pacific VC markets, Wilshire continues to spend a considerable amount of time and effort in the Southeast Asian market. While the Southeast Asia tech market has experienced market corrections in both the public and private markets (late-stage investments) in 2022, the overall market and VC players in this region have grown stronger and become more mature. Fundamentally, Southeast Asia's digital economy has grown 3x from 2019 to 2022 reaching $194 billion GMV, of which the level is three years earlier than expected[23]. Wilshire continues to be positive to the continuous development of Southeast Asia's VC ecosystem, which is supported by favorable demographics, high adaptability to technology, and favorable government policies. Particularly, Wilshire will focus on GPs that have a strong local presence and differentiated network in their key markets, as well as their ability to exit investments via different channels and generate meaningful realizations.

Private Real Assets

Strategy	Outlook
Real Estate	◐
Natural Resources	◕
Infrastructure	◕

Key
● Highly Favorable
◕ Favorable
◐ Neutral
◔ Cautious
○ Unfavorable

Real Estate

S&P Asia Property 40 Index[24]

Asia-Pacific real estate shows a mixed trend. Warehousing, logistics, and IDCs continues to benefit from the increase in e-commerce activities, continuous digital transformation, and rising demand for cloud computing in the region. Offices, particularly those in major metropolitan cities and are in high quality and landmark locations, receive strong demand along the post-COVID recovery as the work-from-home culture is generally weaker in Asia Pacific (with the exception of Australia) as compared to the U.S. and Europe. The hospitality sector is expected to benefit from the easing of travel restrictions in the region in the post-COVID era, but the price expectation gap between sellers and buyers remains wide. Residential real estate remains resilient in most Asia-Pacific economies, apart from China. Overall, Wilshire is favorable to (1) the value-add strategy within the Asia-Pacific real estate market, and (2) the pan-regional funds (with an emphasis on developed Asia) due to their geographic diversification benefits.

Natural Resources

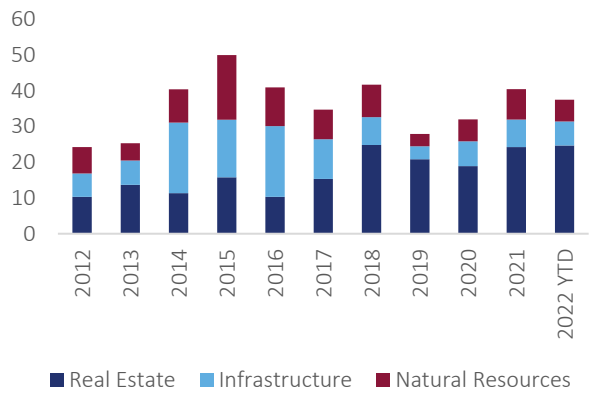
Fundraising activities for natural resources funds in Asia-Pacific have remained low since 2013. This trend in part results from the lack of clarity in the energy sector, as energy supplies in Asia remain insecure.

[23] Bain and Company, 2022

[24] S&P Capital IQ, as of December 6, 2022.

Infrastructure

Asia-Pacific Private Real Assets Fundraising Activity ($bn)[25]



Robust infrastructure investments and development are expected to continue. Together with the recovery in economic activities in the post-COVID era, Asia-Pacific infrastructure looks to benefit from the increasing supply of capital. Nonetheless, participation from global institutional investors (as the percentage of total infrastructure investment in Asia-Pacific) is expected to remain low, given the relatively high political, regulatory and commercial risks involved. Overall, Wilshire perceives that the risk-adjusted return in Asia-Pacific infrastructure investments does not appear to be superior to the developed markets in Europe and the U.S.

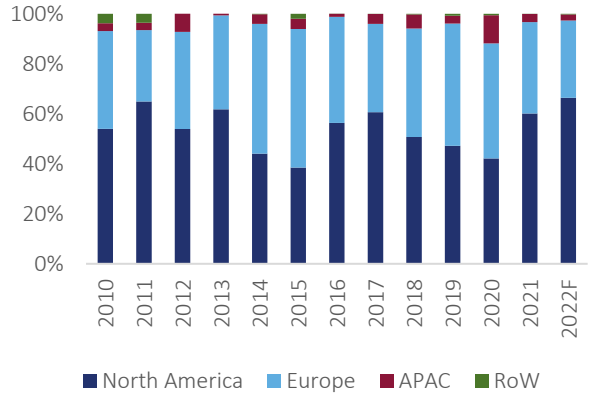
Private Credit

Strategy	Outlook
Direct Lending	◐
Distressed Debt	◐
Opportunistic	◕
Alternative Yield	*N/A*

Key
● Highly Favorable
◕ Favorable
◐ Neutral
◔ Cautious
○ Unfavorable

Direct Lending & Distressed Debt

Proportion of Aggregate Capital Raised by Direct Lending Funds[26]



In Asia-Pacific, credit supply heavily relies on the local banking system. Private credit and alternative financing are still at the nascent stage of development, presenting significant runway for long-term growth. With strong demand for credit in the post-COVID recovery stage, Wilshire expects more opportunities to arise from the Asia-Pacific private credit segment. However, the sample size of managers with the expertise, track record, and local network to successfully navigate the strategy in terms of origination, structuring, and risk management remains small. While leverage is generally lower and less of a key driver of returns in Asia-Pacific, other issues such as legal and regulatory risks are more prevalent in this market. Exposure to direct lending in Asia Pacific could provide diversification benefits to investors that have existing private credit exposure in the developed markets. Overall, Wilshire tends to be highly selective and overweigh (1) direct lending strategy, and (2) managers that put strong focus on the developed markets in Asia-Pacific, from a risk adjusted-return perspective.

[25] Preqin, as of December 6, 2022.

[26] Preqin, as of December 6, 2022.

Marketable Alternatives

Macro Context

We expect higher inflation and interest rates in the U.S. to lead to a mild to moderate recession, with the outlook for regions like Europe marginally worse due to energy constraints and being substantially behind the U.S. within the rate hiking cycle. We also see potential for offsetting demand increases via a gradual reopening in China, though incidents of unrest may undermine investor sentiment in the region. Commodity supply conditions remain tight, and potential shocks on both the supply and demand side may have outsized implications on inflation and public market sentiment. Due to this nuanced global outlook, we see similar opportunities within public and private markets, albeit with more caution given macro uncertainty and the sustained level of volatility across liquid asset classes.

	Macro Context	Micro Considerations
Innovation	Digital Economy Life Science	Cloud/Cybersecurity Biotech Software
ESG	Environmental Initiatives Energy Transition Clean Tech	Renewables Electrification Healthcare
Geopolitics	Supply Chain Configuration Policy Dispersion Commodity Constraints	Industrial Onshoring Discretionary Macro Commodity Trading/Finance
Macro-economy	Interest Rates / Inflation Constrained Central Banks Sustained Volatility	Volatility-Based Stressed/Distressed Trend Following

2022 stood in stark contrast to 2021 within public markets as inflation proved to be far from transitory, leading to an aggressive hiking cycle from the Federal Reserve that precipitated a sell-off in both equities and fixed income. Both traditional portfolios and marketable alternative investment strategies, which historically benefitted from a negative correlation between these asset classes, were exposed to a bear market in both simultaneously.

Without a catalyst to significantly augment the Fed's reaction function to equity markets, we do not see the restoration of negative stock-bond correlations nor the coordinated global central bank zero-interest rate policy dampening overall market volatility. This leads to a sustained environment of higher volatility. Additionally, higher interest rates, recessionary concerns, and divergent central bank policies globally will contribute to broaden dispersion across companies, sectors, and countries, leading to a fruitful environment for marketable alternatives outside of indiscriminate market drawdowns.

Even within these constructive views for marketable alternatives, the wider distribution of future outcomes for markets may accompany much higher dispersion across managers. This amplifies the need to consider managers operating within sectors with strong tailwinds, or investment strategies designed to profit from high levels of volatility, uncertainty, and even economic turmoil.

Within more directional equity and credit-centric strategies, managers are well positioned to identify winners and losers in a higher rate environment, with meaningful short opportunities especially headed into a potential recession. Specialists operating within highly dislocated sectors, key industries experiencing innovation, or within sectors with strong ESG and regulatory tailwinds are particularly well positioned in 2023. Stressed credit strategies will also be able to capitalize on significant price declines as higher rates weigh on unsustainable business models.

More diversifying multi-asset strategies will benefit from the ongoing geopolitical uncertainty, lack of central bank coordination, and elevated macro volatility, both directionally chasing markets as they react to events, or on a relative value basis as countries diverge from a policy or economic perspective. Lastly, global macro strategies will continue to add value in the case of a recession as strategies retain the ability to short risk assets with high conviction.

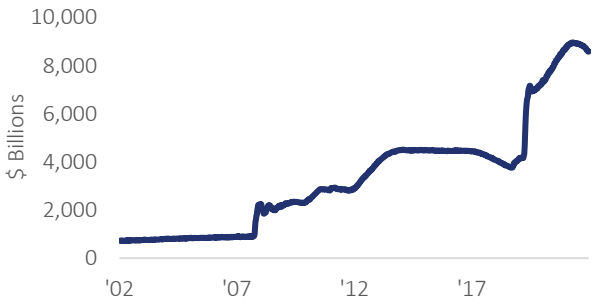
Marketable Alternatives

Strategy	Outlook
Macro/CTA	◕
Equity Hedge	◕
Credit	◕
Event Driven	◐
Relative Value	◐

Key	
●	Highly Favorable
◕	Favorable
◐	Neutral
◔	Cautious
○	Unfavorable

Macro/CTA

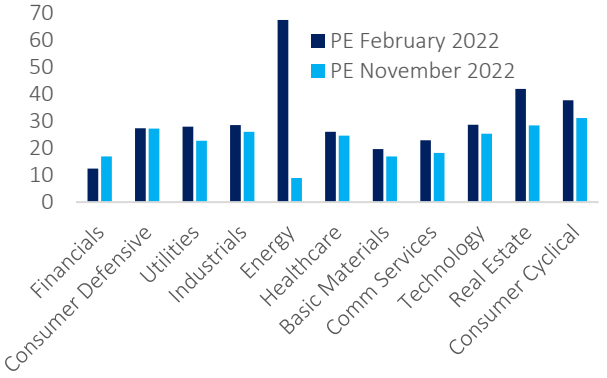
Federal Reserve Balance Sheet[27]



Discretionary macro managers have historically specialized in bond and FX trading, and Wilshire sees ample opportunities in these markets relative to the post-GFC era given divergent monetary policy across countries, general inflation and policy uncertainty, and an overall rise in volatility in these markets. On the systematic side, trend following strategies stand to benefit from the lack of coordinated central bank activity and artificial dampening of volatility, as these strategies succeed with sustained directional moves across asset classes. Short term trading strategies also benefit from higher levels of volatility, although tend of outperform their other macro peers amidst volatility shocks within range-bound markets; as such, they may continue to trail their trend following peers in the current environment. Lastly, we maintain conviction in commodity-focused strategies given tight supply side conditions, China reopening, supply chain onshoring, and material demands of future climate change initiatives.

Equity Hedge

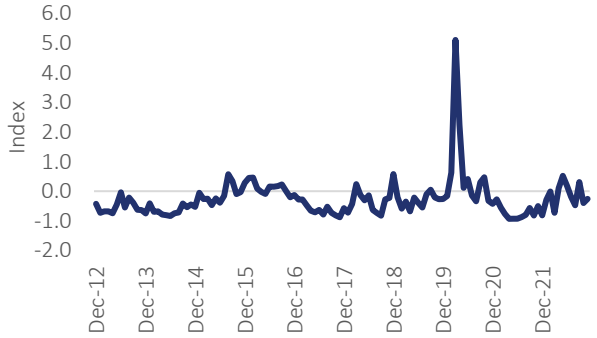
U.S. Equity Total Return Decomposition[28]



Following a difficult year for public equities in response to the hiking cycle and persistently rising yields in 2022, we expect a decrease in indiscriminate macro-driven sell offs in favor of more idiosyncratic price action based on earnings. A slowing of the current hiking cycle by the Federal reserve may offset some of the macro pressures of a 2023 earnings recession, allowing for increased value-add from security and sector selection. The interest rate-driven dispersion will bring compelling opportunities for equity hedge managers on both the long and short side of portfolios. We favor managers operating within highly dislocated sectors, namely life sciences and software, or within sectors experiencing a high degree of innovation and transformative growth in the intermediate to long-term. Lastly, we recognize areas of the market with strong secular tailwinds around ESG as a key area of focus.

Credit

St. Louis Fed Financial Stress Index[29]



The outlook for credit is positive due to supportive security selection fundamentals heading into 2023. Despite low financial stress and muted default rates at present, these are expected to pick up meaningfully in 2023 as implications of inflation-related cost pressure and elevated interest expense levels flow through P&Ls. Wilshire expects volatility to remain elevated with periodic spikes as illiquidity in CUSIP markets become more apparent and selling of specific issues/issuers becomes prioritized by liquid funds. More-directional stressed credit strategies stand to benefit as specific securities trade down in line with more challenged peers but are unlikely candidates for bankruptcy. Performing credit investments with shorter duration, unleveraged fund structures, or highly hedged portfolios with more of an emphasis on trading are also expected to perform well. We remain more selective in structured credit, prioritizing compelling fundamentals,

[27] Source: FRED. As of November 2022.

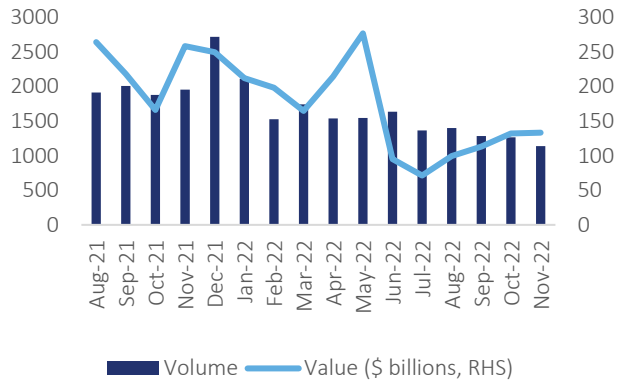
[28] Source: Bloomberg. As of November 2022.

[29] Source: FRED. As of November 2022

amid enticing higher yields in the space generally. Lastly, short duration opportunities within non-traded credit (e.g., receivables factoring, working capital finance) continue to look compelling as yields reset upwards and managers maintain structuring advantages operating outside of public credit markets.

Event Driven

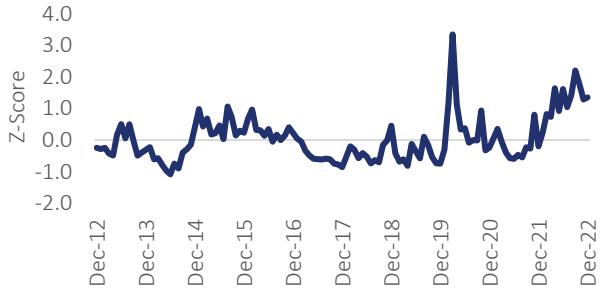
Monthly M&A Activity[30]



Views on event driven managers remain mixed, as spreads are compelling but macro uncertainty looms. While higher rates can serve as a catalyst for increased corporate activity, this also meaningfully increases the cost of leverage for these transactions. General uncertainty regarding the effects of higher rates on each company may also compress corporate activity through the first half of the year. Despite compelling opportunities for managers operating in stressed and distressed names, the broader market stress due to an earnings recession or a credit cycle would also serve as a headwind for risk arbitrage positions. We see opportunities for these strategies picking up as risk of broader market stress decreases throughout the year and note that anti-trust risk is marginally lower following the split result of U.S. Midterms and recent merger challenges.

Relative Value

Cross Asset Volatility Composite[31]



Relative Value strategies, while the most diverse sub-set of marketable alternatives strategies, generally look to profit from valuation disparities between securities or relative to their historical relationships. This requires a degree of general market volatility, though strategies can struggle in extreme scenarios where markets continue to diverge further and further. Given lingering macro uncertainty, this leads to a preference for strategies at lower levels of leverage or focusing on hard convergence trades.

Volatility arbitrage strategies, particularly in equity dispersion, stand to benefit given high expected dispersion in index and single name volatility. Long-biased volatility strategies also remain compelling as fixed income offers reduced hedging benefits while inflation remains high and central banks are less likely to cut rates in response to market stress. Equity market neutral strategies may capitalize on higher levels of dispersion and add meaningful alpha above long-biased equity hedge strategies. On the fixed income side, RV trading opportunities have increased meaningfully as volatility has expanded and uncertainty looms as the Fed steps away from its role as a liquidity provider. However, fixed income RV trading is highly leveraged and can suffer with severe shocks in volatility, leading to a preference for with hard convergence trades such as futures-basis. Lastly, convertible arbitrage strategies may struggle given the sell-off in growth-oriented issuers and broader credit stress, though managers may be able to generate value from a meaningful increase in busted convertibles in the universe.

[30] Source: FactSet. As of November 2022.

[31] Source: CBOE, ICE, JP Morgan. Composite measures the average 10-year Z-Score of various asset class volatility indices across equities, fixed income, FX, and commodities. As of December 2022.

Important Information

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