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Investment Institute

ALTERNATIVE INVESTMENTS | IN DEPTH

Well that was fast. Now what?

The most severe recession in history was also likely the shortest. But opportunities exist for alternative investments in 2021 as we simultaneously begin a new cycle and adjust to a post-pandemic world.

Deeper analysis of investment trends and topics **February 23, 2021**

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Alternative investments, such as hedge funds, private equity and private real estate funds are not suitable for all investors and are only open to "accredited" or "qualified" investors within the meaning of U.S. securities laws.

Key takeaways

- The rising tide is not expected to lift all boats in 2021, and we still see opportunities for active management and security selection.
- Low rates coupled with monetary and fiscal policy truncated the default cycle, but for how long? While we are moderating our near-term return expectations for Distressed strategies, we envision a better opportunity set in the second half of 2021 and into 2022.
- Within private capital strategies, we continue to focus on small to mid-sized companies and strategies such as venture capital and growth equity, as well as special situations private debt and opportunistic real estate.

It's not that we're disappointed, or even frustrated. After all, the U.S. economy was in a free fall, liquidity was evaporating, volatility was surging, and fear was skyrocketing. We believe the liquidity the Federal Reserve injected into the system was the right thing to do. But as Alternative strategists insisting that qualified investors gauge the success of their allocations over a *full market cycle*, we can't help but chuckle at the fleeting glimpse of economic contraction this cycle will likely experience. Since the June 2009 trough of the previous cycle, our economy experienced 128 months of expansion, the longest on record.[1] When it's all said and done, we think this latest contractionary phase may have been over in three months, less than half of the average and a shockingly small window for those of us seeking investment opportunities arising from economic and credit deterioration. So now what?

[1] Business cycle reference dates according to the National Bureau of Economic Research. There have been 34 peak to trough periods since June 1857.

As the new year begins, we admit to struggling with an unprecedented geopolitical tug-of-war. On one hand, we have the promise of a COVID-19 vaccine with encouraging early results. Consensus views point to strengthening economic growth next year alongside gains in both equity and credit markets. But details around vaccine distribution and the time needed to reach global immunization seem vague at best, with risks skewed to the downside should unexpected challenges emerge.

Corporate defaults ended the year significantly below what was expected in the throes of the crisis, as the lifeline of central bank liquidity and debt issuance rescued precarious balance sheets. But did we actually experience the 'natural cleansing' of a true default cycle, or has the proverbial can once again been kicked down the road? And most importantly from our seat, what's the role of alternative investments going forward, and has it shifted from the late-cycle "speedboat and battleship"[2] role that we referenced this time last year? In the following pages, we'll address these questions and provide qualified investors with our cyclical guidance after an unforgettable year.[3]

Table 1. 2020 Hedge Fund Year in Review

Strategy	Benchmark	2020 Return	2020 Cyclical Guidance
Relative Value	**HFRI Relative Value (Total) Index**	**3.4%**	**Neutral**
Arbitrage	*HFRI RV: Fixed Income - Sovereign Index*	*1.1%*	Neutral
Long/Short Credit	*HFRI RV: Fixed Income - Corporate Index*	*7.8%*	Favorable
Structured Credit	*HFRI RV: Fixed Income - Asset Backed Index*	*-1.1%*	Neutral
Macro	**HFRI Macro (Total) Index**	**5.5%**	**Neutral**
Discretionary	*HFRI Macro: Discretionary Thematic Index*	*14.0%*	Favorable
Systematic	*HFRI Macro: Systematic Diversified Index*	*2.6%*	Unfavorable
Event Driven	**HFRI Event Driven (Total) Index**	**8.9%**	**Neutral**
Activist	*HFRI ED: Activist Index*	*10.1%*	Neutral
Distressed	*HFRI ED: Distressed/Restructuring Index*	*12.7%*	Favorable
Merger Arbitrage	*HFRI ED: Merger Arbitrage Index*	*5.2%*	Neutral
Equity Hedge	**HFRI Equity Hedge (Total) Index**	**17.8%**	**Favorable**
Directional	*HFRI EH: Multi-Strategy Index*	26.9%	Favorable
Equity Market Neutral	*HFRI EH: Equity Market Neutral Index*	0.0%	Neutral

Sources: HFRI Inc., Wells Fargo Investment Institute, February 15, 2021. **Past performance is no guarantee of future results.** An index is unmanaged and not available for direct investment. Please see end of this report for index definitions.

Theme song: The three main roles of hedge funds in 2021

Before we touch on our strategy guidance, we first wanted to tackle the roles — or themes —we expect of hedge funds in 2021. As a reminder, in our 2020 Capital Market Assumptions report, we shifted away from providing strategic recommendations on individual hedge fund strategies, and instead created a broader "global hedge fund" allocation ranging from 6% for the Moderate Growth investor, to 8% for the Moderate Growth and Income investor, and finally up to 12% for the Moderate Income investor.[4] Not having to divide those allocations among four different strategies allows us to focus instead on our top themes for hedge funds within the broader portfolio. Given our views on interest rates, the global economy, and the credit cycle, we believe there are three distinct themes for hedge funds in 2021:

[2] "Speedboats and Battleships", *Alternative Investments In Depth Report,* January 2, 2020.

[3] Cyclical guidance refers to how our recommendations change over the span of an economic expansion and then recession – a business cycle – a process that typically takes 3-5 years but historically has run as long as a decade.

[4] 2020 tax-efficient strategic allocations are lower, with 5% for Moderate Income, 4% for Moderate Growth & Income, and no hedge fund allocation for Moderate Growth investors.

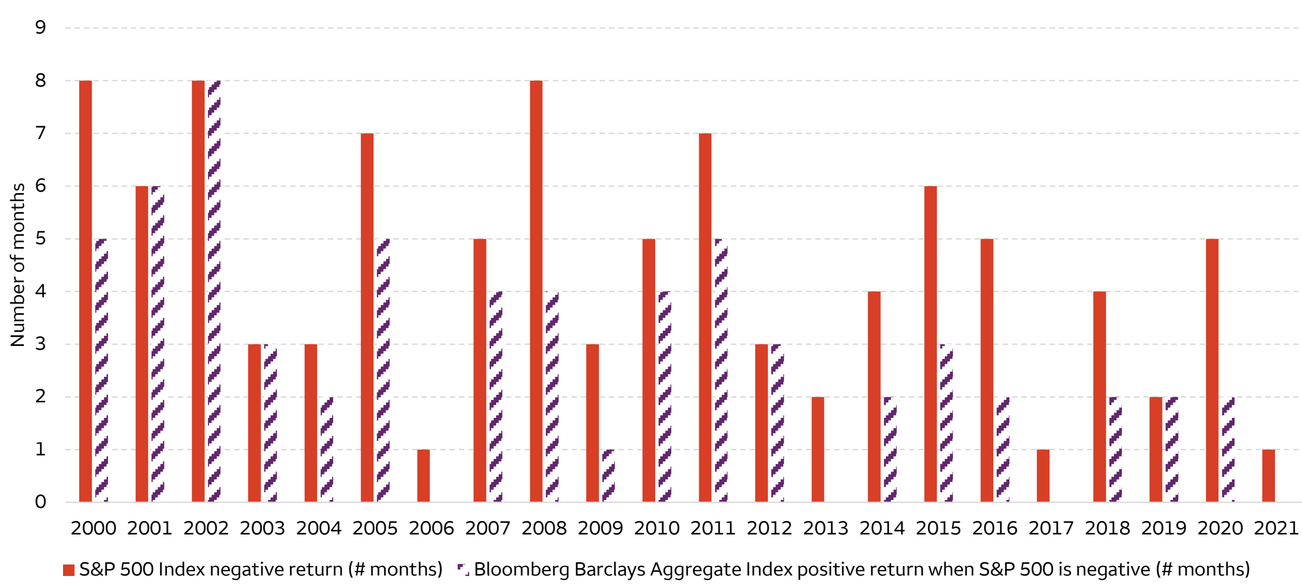
1. Income enhancement: To address this theme, in our opinion, qualified investors should consider allocations to Relative Value hedge fund strategies with a focus on securitized credit, as well as private capital strategies that offer periodic income distributions. Income is derived from exposure to a variety of securitized assets with yields comparable to or potentially better than traditional corporate debt. One can augment this structured credit exposure by incorporating private capital strategies focused on direct lending, which have the potential to pay income, as do certain private real estate strategies.

2. Additional equity diversification: Correlations between equity and fixed income have historically more volatile than most people recognize, but in recent years, the relationship has been more "non-correlated" than "negatively correlated." Chart 1 shows that from 2000 through 2008, in months where the S&P 500 generated negative returns, the Bloomberg Barclays Aggregate Total Return Index was positive on average 73% of the time. However, since the 2008 Global Financial Crisis ("GFC"), that average has been reduced to nearly 50%, and only 32% over the last three years.

A logical question, and one that frankly we asked ourselves, was whether investors really need or want equity diversification if we are indeed in the early stages of the economic cycle and bull market. We still think they do, mostly because of the unique nature and starting point of this cycle. Under the assumption that June 2020 marks the starting point of our current expansionary phase, U.S. equities — defined by the S&P 500 Index — have produced an annualized return of nearly 38.5% through January 29, 2021, approaching the previous record of 45% during the 1920s.[5]

While we are constructive on equities this year, we also recognize the potential for periodic weakness. Unfortunately, investors may find themselves in an environment lacking true equity diversification. Hedge funds can be of assistance, but strategies with negative correlation may be hard to come by, and have generally lacked an attractive return. Part of our focus this year will be on uncovering strategies that have the potential to offer true equity market diversification, which may also include strategies that perform better when equity markets decline.

Chart 1. Fixed income hasn't recently been the equity "hedge" it used to be

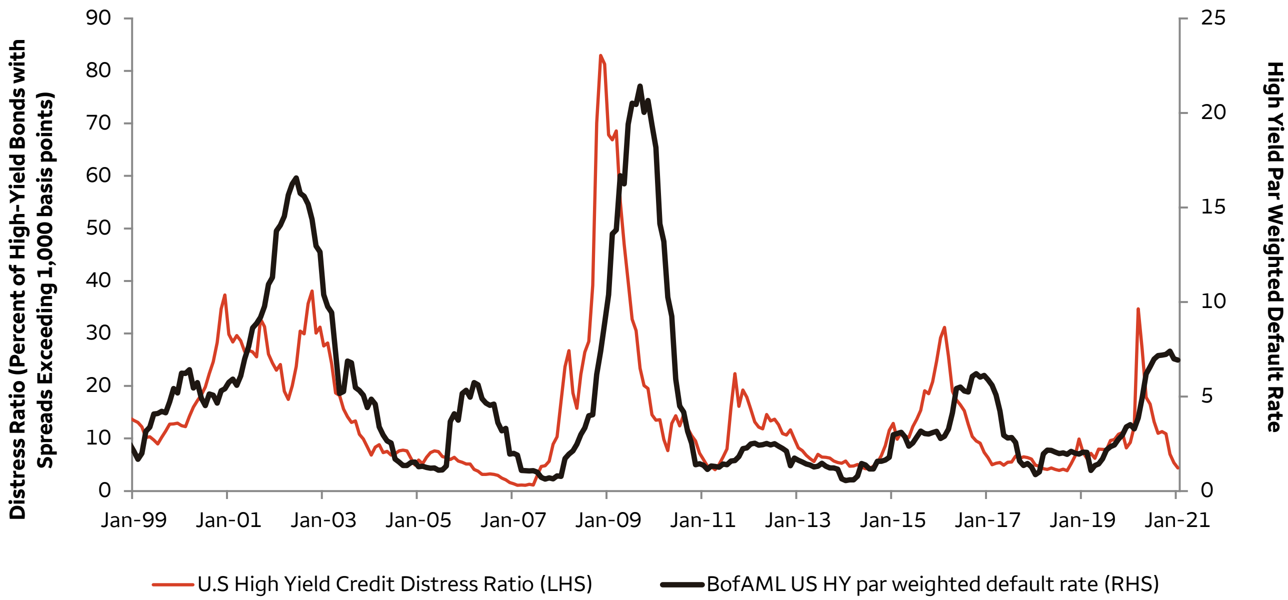


Sources: Bloomberg, Wells Fargo Investment Institute, January 2021. **Past performance is no guarantee of future results.** An index is unmanaged and not available for direct investment. Please see end of this report for index definitions.

[5] NBER and Bloomberg. Dates: November 1927 – August 1929, Dow Jones Industrial Average.

3. Opportunistic credit: While the default curve has flattened, we think it is too soon to sound the "all clear" on corporate credit markets. Much of the debt issued last year was short term in nature, staving off bankruptcy for the time being, but certainly not alleviating much of the late-cycle stress that began building even before the COVID-19 pandemic took hold. Though Chart 2 suggests that defaults should continue to moderate toward the historical average, we still think opportunities will exist in 2021 with potential to capitalize on companies facing deteriorating credit metrics. Again, this is where we believe Relative Value strategies focused on capital structure arbitrage credit may provide value, but also where Event Driven strategies focused on stressed and distressed debt can take advantage of restructuring opportunities. Of course, private capital strategies are capable of providing opportunistic credit exposure, as well, typically through private debt strategies focused on special situations.

Chart 2. Default curve stabilizing as distress ratios retreat

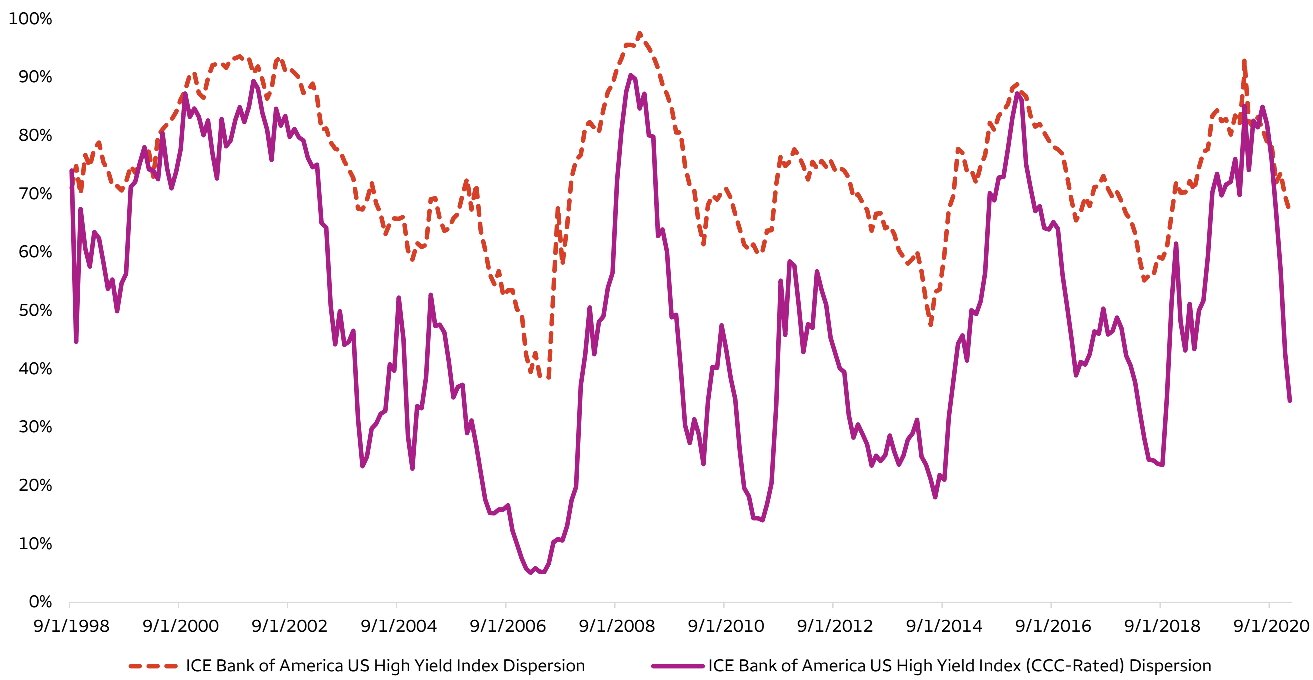


Sources: Bank of America Merrill Lynch, Wells Fargo Investment Institute, January 2021. **Past performance is no guarantee of future results.** An index is unmanaged and not available for direct investment. 100 basis points equal 1 percent. Please see end of this report for index definitions.

Old school redux

As seen in Chart 3 below, we envision another year of credit dispersion that should benefit Long/Short Credit strategies. Moreover, we see a better opportunity set for both Structured Credit, as well as the somewhat forgotten strategy of Convertible Arbitrage.

Chart 3. High dispersion suggests 2021 is still likely to be a credit-picker's environment

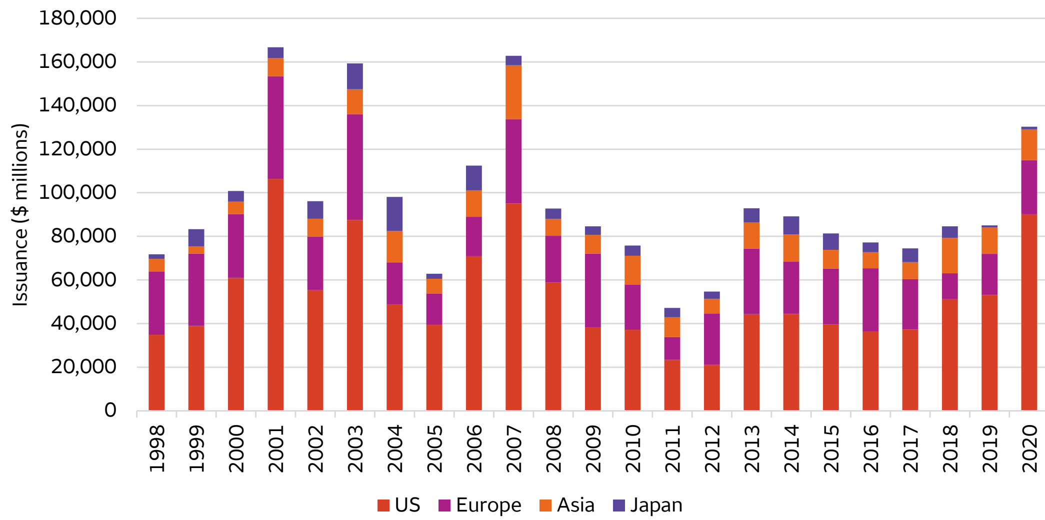


Sources: BofA Merrill Lynch Global Research, January 2021. **Past performance is no guarantee of future results.** An index is unmanaged and not available for direct investment. 100 basis points equal 1 percent. Please see end of this report for index definitions.

We think structured credit spreads should benefit in 2021 from our expectations for a continued economic recovery as well as further improvement in unemployment. The twin tailwinds of lower issuance and higher yields than traditional corporate debt are expected to provide technical support for structured credit, while low rates and the need for higher coupon from income-starved investors should drive demand. Of course, risks remain —notably uncertainty around the lingering impact of COVID-19 on office and hotel properties, the ongoing degradation of brick and mortar retail properties, and even the shift by millennials away from major gateway cities like New York and San Francisco.

Further supporting our view has been the resurgence this year of the "old school" convertible arbitrage strategy. Convertible bonds are hybrid securities that are analogous to a traditional bond, combined with an equity warrant. Because the call option embedded in the warrant becomes more valuable as the stock volatility increases, convertible bonds historically have tended to provide upside potential during periods of sustained, yet slightly heightened, volatility. Convertible bond issuance exploded in 2020, driven in part by pandemic-related capital needs. The combination of large net issuance, much of which comes from growth companies already trading at high enterprise multiples, and higher volatility, sets the stage for the "long bond, short equity" traditional trade structure for convertible arbitrage that harkens back to the late 1990's "Golden Era" for the strategy.

Chart 4. Spike in convertible bond issuance generally good for arbitrageurs

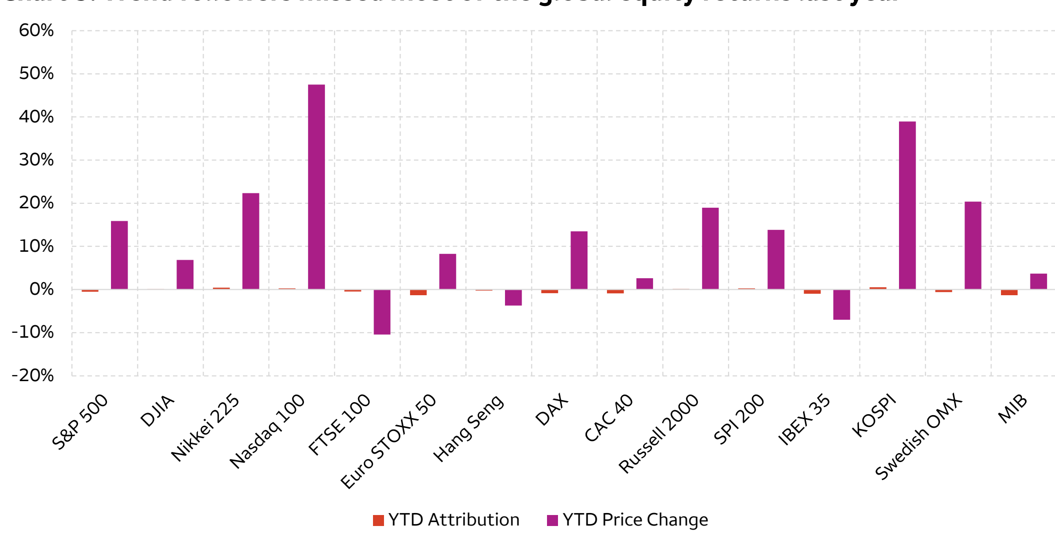


Sources: Bank of America Global Research, December 2020.

"Where have you gone, Joe DiMaggio?"

Joltin' Joe was initially annoyed by the lyrics in the famous 1968 song "Mrs. Robinson" until he ran into Paul Simon at a New York restaurant. Simon, an avid Yankees fan, approached the icon and explained the reference had more to do with "heroes being in short supply "heroes being in short supply."[6] That's how we feel about Macro traders these days. Trend followers missed most of the 2020 equity rebound (Chart 5) — where have the good ones gone? Of course, some have done well, as this strategy has historically seen wide dispersion among manager returns, but as a whole, we continue to be disappointed with performance, and even surprised that some of the great systematic Macro trend following firms are having their worst year ever. The culprit (again) is equity trading, where many trend followers largely struggled in 2020, flipping to short equity positions in late March and missing the entire second-quarter 2020 recovery. That said, the industry is evolving, and we are paying careful attention to new approaches and models that trade global securities in a unique fashion.

Chart 5. Trend followers missed most of the global equity returns last year



Sources: Societe Generale, Bloomberg, December 31, 2020. **Past performance is no guarantee of future results.** An index is unmanaged and not available for direct investment. Please see end of this report for index definitions.

[6] Paul Simon, New York Times Op-ed, March 9, 1999

The bright side of Macro is that it may offers qualified investor better diversification. And this is the critical reason why we maintain our neutral cyclical guidance. Non-correlated assets have been in short supply, and even though Macro performance has been anemic for years, we believe it can serve a distinct role within a portfolio that should not be overlooked. Will Macro ever be our top idea? Doubtful. But it's worthy of an allocation, especially among qualified investors who are more risk averse and want a portfolio with a higher degree of diversification.

We continue to favor discretionary macro over systematic macro, as an environment so easily swayed by central bankers requires speed that macro trend following models simply don't have. If the reflation trade takes hold in 2021 as we expect, there could be several opportunities for discretionary traders to capitalize, especially within currencies and commodities.[7] Weakness in the U.S. dollar and its impact on global currencies, especially emerging market currencies, is something to watch this year. It's also worth noting that many macro funds are beginning to dip their toes into cryptocurrency trading, given its momentum.

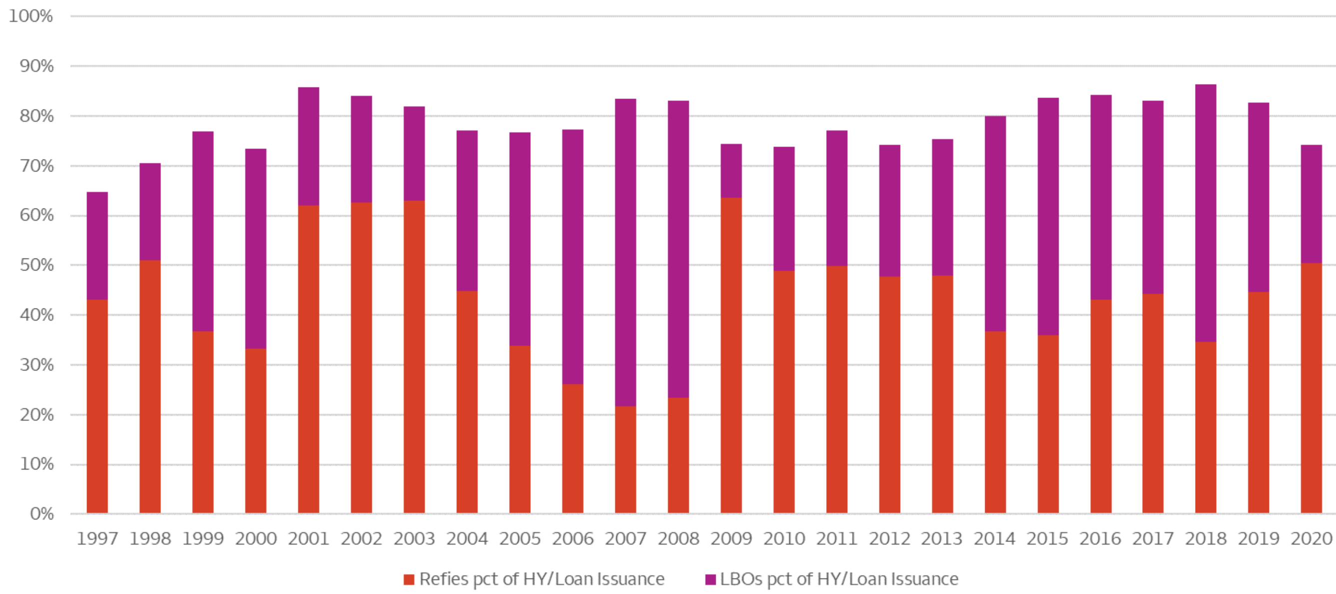
The most anticlimactic default cycle … ever … but for how long?

Eleven months have passed since the nadir of the coronavirus crash, and we're still trying to understand the implications on the credit cycle. Default rates and distress ratios moderated and ended 2020 near their long-term averages.[8] But have we really experienced the natural cleansing that occurs through a normal default cycle? It seems to us that the proverbial can has once again been kicked down the road, especially considering the amount of debt issued in 2020. Indeed the default curve has flattened, but we still expect to see opportunities for distressed investors in 2021 and beyond as companies struggle under their now-heavier debt burden. And while it's difficult to get a consensus view on where we'll be in the credit cycle when and if we hit herd immunity, one thing is certain: some sectors and industries will emerge as winners, and others as losers.

Balancing the uncertain outlook for distressed debt investing is our expectation that corporate deal volume will continue to accelerate in 2021, providing ample opportunities for both Merger Arbitrage as well as Activist strategies. After a near standstill in first-half 2020, volumes for the second half of the year outpaced any period since 2015, led by technology and financials.[9] Corporate balance sheets are generally flush with liquidity, which combined with the knock-on effects of the major dislocation we experienced in 2020, is fodder for activist investors that prey on inefficient capital structures or business models seeking scale or diversification. It's important to note that while accelerated merger and acquisition (M&A) activity should fuel opportunities, it is also a risk to be mindful of, especially if companies use the proceeds of their debt issued earlier this year. An M&A fueled "re-leveraging," which Chart 6 indicates has not yet materialized, could weaken fundamentals and impact credit ratings, moving us back into an expansionary phase of the credit cycle as opposed to repair.

[7] The reflation trade refers to assets that benefit from coordinated fiscal and monetary policy designed to spur growth and inflation after economic contraction.
[8] J.P. Morgan, *2021 High-Yield Bond and Leveraged Loan Outlook*, November 2020.
[9] Goldman Sachs, *Why the M&A Rebound is Likely to Continue in 2021,* December 2020.

Chart 6. For now, a small percentage of debt issued this year was earmarked for leveraged buyouts (LBOs)



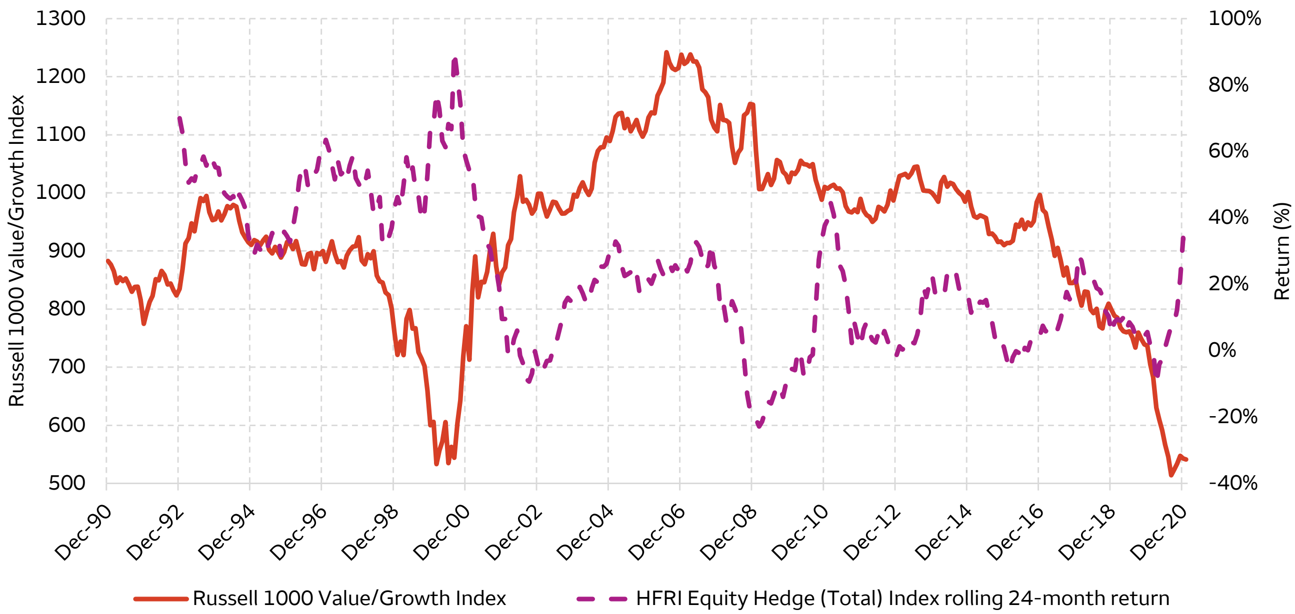
Sources: BofA Merrill Lynch Global Research, Wells Fargo Investment Institute. Data as of December 31, 2020. Data pooled is for USD-denominated debt only. Use of proceeds include eleven categories: acquisition, capex, dividend, GCP, LBO, refinancing bonds, refinancing bridge loan, refinancing converts, refinancing loans, repurchase equity, and repurchase preferreds. These categories are aggregated by S&P LCD

"Value est mort, vive le Value"

Much has been written this year (and in years past) about the death of value investing. Countless well-respected value investors have thrown in the towel, some converting to family offices, and others simply riding off into the sunset, unable – or unwilling – to adapt to a growth-oriented environment. While we'll refrain from expounding on whether or not value is dead, we do want to highlight in Chart 7 a subtle change in the relationship between value and growth that we noticed in the third quarter of 2020.

Value, as measured by the Russell 1000 Value Index, has outperformed the Russell 1000 Growth Index, which corroborates some of the strong second-half 2020 returns we observed from traditional "value" oriented hedge funds. Furthermore, with the exception of the early 2000s, long/short equity funds have generally shown improved returns when value outperforms growth, as denoted by the shaded areas in Chart 7. Should we continue to see a rotation into value alongside further decline in stock correlations, 2021 could be an even better year for Equity Hedge managers than we saw last year. And 2020 turned out to be one of the best in years, with the average Equity Hedge fund capturing 88% of the return of the MSCI World Index, 77% of the return of the S&P 500 index, and 75% of the return of the Russell 2000 index. This "up-capture" percentage is well above the post-crisis trend and fits closer to our long-term objectives for the strategy of capturing two-thirds of the upside and one-third of the downside.

Chart 7. A shift to value could be another positive tailwind for Equity Hedge



Sources: Bloomberg, Wells Fargo Investment Institute, January 2021 December 2020. **Past performance is no guarantee of future results.** An index is unmanaged and not available for direct investment. Please see end of this report for index definitions.

We're starting the year with a favorable view on Equity Hedge, with a preference for directional strategies as opposed to those that are market neutral. Prior to the recession, we were directing qualified investors toward Equity Hedge strategies that offered lower net exposure, which is calculated by subtracting short exposure from long exposure. We felt that funds with net exposure in the 20s to 50s could potentially reduce downside exposure without entirely missing upside potential in the cycle. But under the assumption that the recession is over, and that economic growth will recover in 2021, alongside low interest rates and muted inflation, we think investors should consider more directional exposure. Importantly, we still prefer Equity Hedge funds that have low correlation to broader equity markets.

Private Equity

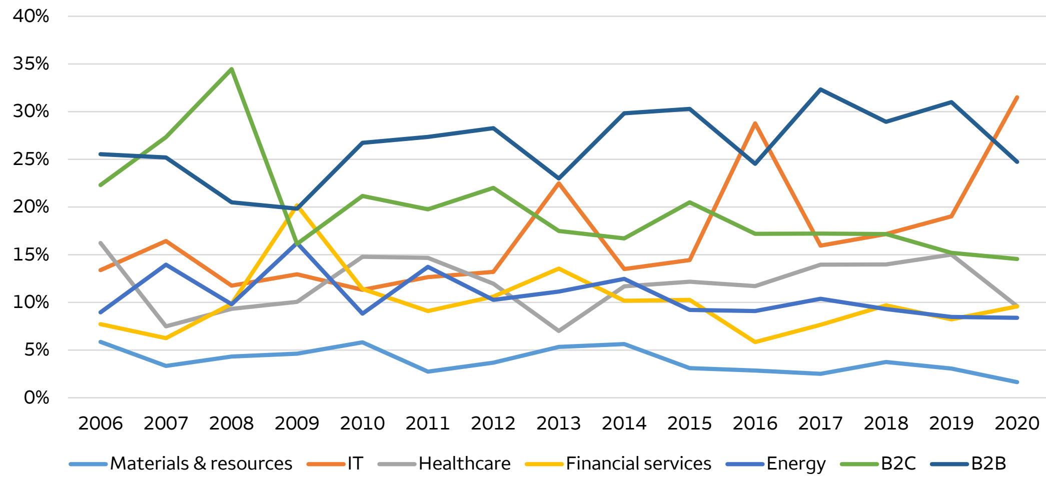
We maintain our neutral cyclical guidance for private equity as a driver of capital appreciation in investor portfolios over time, but favor a nuanced approach in the current environment. The ongoing public health crisis has had a negative impact on private equity fundraising in 2020 as the number of funds and dollars raised have declined 27.4% and 42.7% year over year, respectively. However, despite the deceleration in fundraising, "dry powder" remains at a record $1.3 trillion.[10] With so much dry powder to deploy, and a significant drop off in 2020 deal volume, it is no surprise that purchase multiples have been elevated. The median valuation for U.S. private equity buyout transactions stood at 12.7 times enterprise multiple or the year through September 30, 2020, as well-capitalized sponsors compete for a limited number of high-quality assets.[11] This enterprise multiple was the second highest in at least 15 years, eclipsed only by the 12.9 times median enterprise multiple last year.

Further buoying valuations in the buyout space has been the increased focus on investments in technology, as specialist firms earn ever-larger fundraising hauls and large generalists shift attention and investment to the sector. Tech companies have largely weathered the pandemic unscathed, and the revenue growth and profitability profile of such businesses tend to command higher multiples. The chart below shows that the Information Technology sector accounted for the largest percentage of buyout dollars deployed during 2020.

[10] Pitchbook, *What is dry powder in private equity?* December 4, 2020

[11] Enterprise multiple is a ratio used to determine the value of a company. The enterprise multiple, which is enterprise value divided by earnings before interest, taxes, depreciation, and amortization (EBITDA), looks at a company the way a potential acquirer would by considering the company's debt.

Chart 8. Technology continues to grow as a percentage of overall buyout activity



Sources: Pitchbook (through third-quarter 2020) Wells Fargo Investment Institute.. B2C = Business-to-Consumer: process of selling products and services directly between a business and consumers who are the end-users of its products or services. Most companies that sell directly to consumers can be referred to as B2C companies. B2B = Business-to-Business: refers to business that is conducted between companies, rather than between a company and individual consumer. Such as one involving a manufacturer and wholesaler, or a wholesaler and a retailer.

We believe several reasons explain the apparent elevated valuations, including the rebound in the public markets (and hence public market comparable valuations) in the middle of 2020, a perceived "flight to quality" among private equity investors that have focused on quality firms (particularly in healthcare and software) with stable revenues (and paying for that quality), and what we believe should be temporarily-depressed earnings figures from the initial pandemic-related shutdowns. Additionally, from a cyclical perspective, if the economy continues to improves as we anticipate, we would expect more opportunities in financials and materials/resources.

Due to pandemic-related pressures, global M&A activity tumbled in the second quarter of 2020 to its lowest level in more than a decade, as companies rolled back expansion plans to focus on protecting their franchises in the wake of the coronavirus outbreak. But, since May 2020, global M&A activity has risen toward pre-crisis levels. Due to the rebound in activity over the last four to five months, global M&A volumes are down only 17% year-over-year, versus 45% as of the end of May.[12] Importantly, there appears to be a rising level of optimism that the momentum experienced over the last five months may continue. According to a survey conducted by the law firm Dykema Gossett released in October 2020, a record 87% of respondents said they expect M&A activity involving privately owned companies to increase in 2021 — the most optimistic year-ahead view ever in the 16 years since survey has been conducted.

Against this backdrop, we expect an uptick in private equity buyout activity in 2021, spurred by our prospects for an economic recovery, still-substantial amounts of private equity dry powder (capital available to be invested by private equity funds), and potential increases in capital gains tax rates under a new U.S. presidential administration. As such, we anticipate valuations may continue to remain elevated.

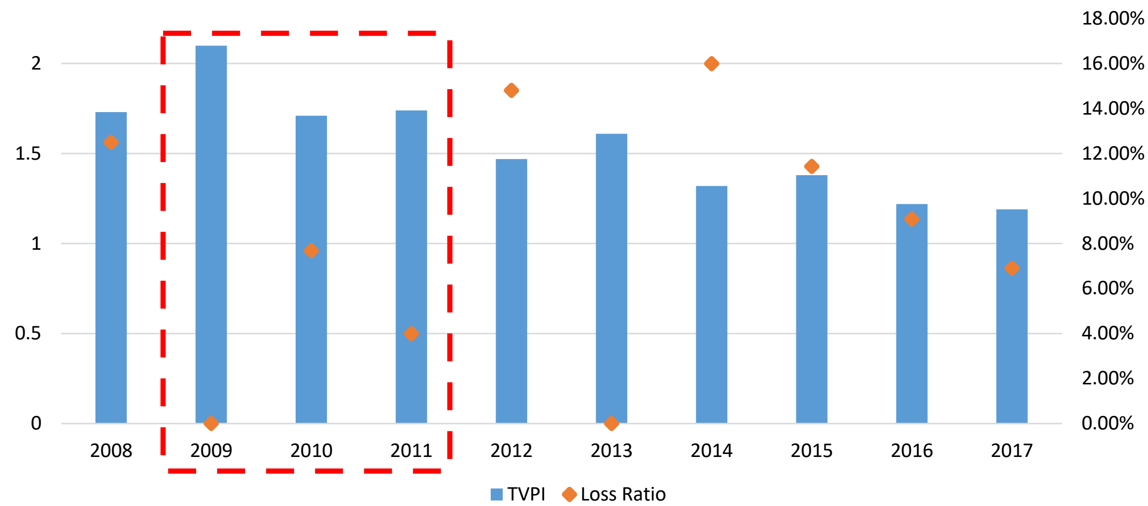
We believe the following areas have the potential to provide opportunities for experienced, cycle-tested fund managers to capture compelling risk-adjusted returns.

Small and mid-cap buyouts: As noted above, there is no shortage of capital chasing deals in the traditional private equity buyout space. However, the majority of the funds raised are attributable to large and mega-cap buyout funds that require large deals to deploy capital. Further down the capitalization spectrum, there is a significantly smaller amount of dry powder and we believe potentially a larger opportunity set. These

[12] Dealogic. Through December 31, 2020.

smaller-sized companies may have potential for a runway for growth and can benefit from the operational "know-how" of their private equity backers. Further, the lower end of the market has been disproportionately impacted by the economic disruption wrought by the pandemic. As Chart 9 suggests, we believe that buyout funds pursuing deals in the lower middle market are better positioned to deploy capital at more attractive valuations and potentially outperform their larger peers.

Chart 9. Small and mid-cap buyout funds achieved strong returns with lower loss ratios coming out of the 2008-2009 financial crisis



Sources: Hamilton Lane & Cobalt LP. Data as of December 2017. TVPI = Total Value to Paid In: TVPI is the ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. Loss Ratio: is a measure of the aggregate dollar losses across all investments valued below cost, divided by the total dollars invested. The chart includes all buyout funds of specified vintages categorized as small cap and mid cap by Hamilton Lane (small cap less than $1 billion; mid cap= $1-3 billion). Market analysis data is industry-level insights based on Hamilton Lane's underlying data based upon a review of the small cap/Mid-cap industry on a capital basis as opposed to number of funds.

Growth equity and venture capital: Nearly a decade ago, Marc Andreessen, co-founder of the venture capital firm Andreessen-Horowitz, penned a Wall Street Journal op-ed in which he famously quipped that "software is eating the world."[13] We believe that his words remain true today, as the pandemic has hastened the digital transformation of the traditional economy and as enterprise cloud and software-as-a-service (SaaS) business models continued to proliferate and improve efficiency across all sectors and industries. The software companies on which the digital economy is built have enjoyed high revenue growth and margins, as well as stable, recurring revenue streams. Against a macroeconomic backdrop of uncertainty, slow growth, and ultra-low interest rates, we favor the relative growth, profitability, and stability of the enterprise cloud and SaaS sector. As we expect public market valuations for such companies to stretch ever higher, we favor exposure to these businesses via sector-focused growth equity and venture capital strategies that seek to invest in these disruptive companies early in their life cycle. With the median age of private tech companies clocking in at approximately 12 years, these companies are staying private longer than previous private tech companies and creating much of the shareholder value prior to a public market debut. Within the venture capital strategy, we continue to favor "all-weather" vehicles that can pivot between direct investments, secondaries (the buying and selling of pre-existing investor commitments), and primary fund commitments while seeking to mitigate some of the risks associated with traditional venture, such as access and high loss ratios (loss ratio is a ratio of losses to gains).

[13] Wall Street Journal, August 20, 2011.

Secondaries: As a result of the pandemic, would-be secondary private equity buyers generally required large discounts to combat uncertainty around portfolio write-downs and expected longer hold periods at the same time many General Partners (a General Partner, or GP, actively manages and exercises control over the fund) retrenched — unwilling to exit portfolio companies at reduced valuations. The result was that post-March 2020 widening of the bid-ask spreads in the secondary market that served to reduce secondary market volume in the first half of 2020 by 57% compared to 2019.[14] However, if the economy and valuations recover and as the IPO market and M&A volumes come back to life as we expect, we anticipate the secondary bid-ask spread to narrow and activity to pick up into 2021. We continue to believe that secondary funds may help to a build well-balanced Private Equity portfolios diversified across vintage, style, and asset class. Of particular interest to us is our expectations for the increasing prevalence of GP-led activity whereby (in the face of stubbornly high purchase multiples), GPs can seek to extend the lives of their best assets and to build value while simultaneously offering liquidity to their Limited Partners (LPs). We expect GPs to continue to leverage the secondary market to in an effort to manage liquidity, exits, and the performance of their funds. While ample dry powder exists in the secondary market, we expect that high-quality managers with experience investing through economic cycles will find opportunities to deploy capital into opportunities with attractive risk/return profile.

International: International opportunities, particularly in the Asia Pacific region, have attracted more and more investor attention in recent years. Preqin projects the Asia-Pacific (APAC) region to lead private market assets under management (AUM) growth in the next five years at a compound annual growth rate (CAGR) of 25% to nearly $5 trillion by 2025. That is more than double of the projected worldwide CAGR of 10%.[15] Private equity investments in APAC region have generated attractive returns in the past two decades. Funds focusing on the APAC region reported pooled IRR of 13.0%, higher than both European and North American focused funds (12.7% and 11.7% respectively).[16] As shown in the chart below, private equity funds focusing on APAC have gradually caught up to European and North American funds since 2006, and outperformed other regions since vintage 2014.

Millennials (people born between 1980 and 1994) are widely recognized as one of the main driving forces of the world economic growth in the coming years. Of the 1.8 billion millennials worldwide, more than 60% reside in Asia, which is nearly three times the number of millennials in the Americas and Europe.[17] As the first generation of technology natives, millennials have been the dominant consumers of digital technology in all areas of life and will continue to drive further technological innovations. With that backdrop, it is our belief that the Asia Pacific region offers tremendous growth potential in both consumption and innovation.

We believe private capital is a better way to access the Asian investment opportunities than the corresponding public market. The public market as represented by the MSCI AC Asia Pacific index would have doubled the investor's capital from 2006 to 2019, while private equity investments would have generated 6 times the cumulative return on capital in the same period.

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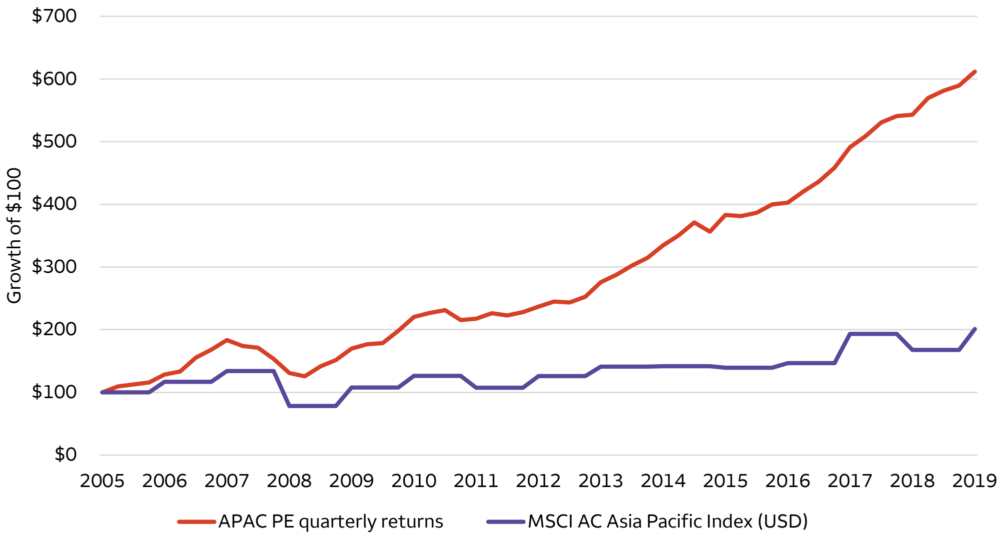
[14] Setter Capital Volume Report, July 2020

[15] Preqin, *Future of Alternatives 2025*, November 23, 2020.

[16] Burgiss, performance as of Q2 2020, including 3454 funds of vintage 2000-2017.

[17] United Nations, *2019 Revision of World Population Prospects.*

Chart 10. Private equity investments in Asia Pacific have significantly outperformed



Sources: Burgiss, MSCI, December 1, 2020. Indexed to 100 as of January 2005. The APAC PE quarterly returns used pooled time-weighted rate of return calculated by Burgiss. The group of funds included are private equity funds investing in "Asia & Pacific" region as defined by Burgiss. 534 funds were included in this group as of Q2 2020. Please see end of report for index definitions.

Most recently, as many Asian countries led the world in pandemic containment and as a result managed to resume economic activities close to a normal level, we believe the region is well-positioned for post-pandemic growth.

Private Debt

Before the coronavirus pandemic, global debt issuance increased substantially and surpassed historic records. With the extraordinary actions from the Federal Reserve and other central banks to support the financial markets and restore confidence, companies and governments issued nearly $10 trillion debt in 2020.[18] Many companies took advantage of the low rates to refinance existing debt, while companies heavily impacted by the pandemic were given the opportunity to borrow and ride out the storm. The newly issued debt, which included large issuance of high yield bonds, were quickly absorbed by investors seeking additional income in the renewed zero interest rate policy world.

Distressed Debt

Over the last 20 years, distressed-debt investors have experienced and invested in several credit cycles. Some cycles have been in localized geographies, some in specific industries, and then there are broader, systemic cycles like 2001 and 2008. If 2020 is indicative of past financial crises, we believe now may be an opportune time to invest in private capital distressed debt strategies. Distressed debt funds raised during or immediately after the last two major market meltdowns in 2001 and 2008 have dramatically outperformed other calendar fund launches or vintages. In our opinion, critical to these returns is the ability to patiently deploy capital into situations where capital structures are under pressure or where secular challenges are likely to exist, such as in aviation and commercial real estate. Even though global interest rates are currently near all-time lows and corporate debt issuance is at an all-time high, we believe there will be opportunity potential for private capital distressed debt focused strategies.

It was our belief a year ago that the rising level of debt and increased use of leverage could bring about a round of distressed opportunities. While we were certainly not predicting a global pandemic and subsequent shutdown, we still believe there will be more distressed investing opportunities in the coming years with a focus on private debt.

[18] Institute of International Finance.

In view of this, we anticipate opportunities for private debt, especially in those strategies employing distressed and special situation strategies. These strategies may extend opportunistic credit (including rescue financings) to stressed firms, and may employ "distress for control" or similar strategies to acquire equity of restructured companies on favorable terms – especially small and mid-size companies that may not have the same access as larger companies. Entering 2021, we favor positioning portfolios to align with the most experienced investment managers and be ready when the next crisis arises.

Direct Lending

Since the GFC of 2008-2009, regulations forced banks to boost their capital and liquidity levels. This reduced banks' ability to keep their newly issued loans on their balance sheets and also led to a dramatic increase in the size of the non-bank financial intermediation market which has increased 75% to $51 trillion globally since 2010. This has allowed non-bank financial institutions such as private debt managers to become increasingly important players in the market.

Entering 2021, investors' need for income is as robust as ever as yields have trended to historical lows. As such, we believe that private debt direct lending strategies have the potential to provide investors with an additional source of stable, diversified, and uncorrelated returns – important in today's low rate/low return environment.

The increased demand has been accompanied by an increased number of private debt lenders over the last several years, and the amount of capital raised has increased meaningfully. A consequence of the increased number of private debt lenders has been a substantial increase in the amounts of "dry powder," or capital yet to be lent out, resulting in transactions becoming more leveraged and the spread of average loan rates over government bond yields tightening. Since 2010, U.S. middle market (defined as a firm in a given industry with annual revenues that fall in the middle of the market for that industry) direct lending senior financing margins reduced by approximately 150 basis points (bps) to between 550bps and 650bps. While this obviously means increased risk, the amount of equity (the value of assets after deducting the value of liabilities) backing these loans has also risen, thanks to rising equity valuations in the U.S. and Europe.

While credit spreads may have tightened over the last decade, we continue to view them as attractive, particularly given the considerable premium over public market spreads. Importantly, the shock of the coronavirus pandemic has caused a partial reversal of these trends. Covenants have tightened, leverage multiples have fallen, and spreads have risen marginally.

In a period of historically low interest rates, investors (especially those below the Qualified Purchaser suitability – less than $5 million of investable assets) may find it very difficult to source quality income streams. Therefore, entering 2021, direct lending strategies that target 8-10% income may offer qualified investors alternative, or non-traditional, income streams.

While we remain constructive on many direct lending strategies, we believe opportunities likely will be more nuanced than in 2009-2010. Entering 2021, there are indications that market conditions for direct lending strategies may have meaningfully improved. Many existing strategies have portfolios with negligible exposure to businesses related to retail, hospitality, and other sectors negatively impacted by pandemic-related shutdowns. Those direct lending strategies with ample dry powder that have avoided troubled sectors we believe may have an expanded opportunity set going forward. As such, we are more constructive on direct lending funds raised post-Covid-19 and are more constructive on funds that have an expertise in recession-resistant sectors, particularly those in software and healthcare. As an indication, the Cliffwater Venture Lending Index exhibited a total return of 9.64% over the last four quarters, handily outpacing the broader Cliffwater Direct Lending Index's 1.90%.

Private Real Estate

Though core strategies dominate private real estate assets, we view value-add and opportunistic strategies (particularly in industrial and multifamily assets) as the private real estate strategies best positioned for 2021. After a pause in activity earlier this year, private real estate funds have resumed making transactions as market conditions stabilize. Importantly, we believe that if historical performance is any indication of future success, funds employing the value-add and opportunistic strategies could enjoy a multi-year opportunity set going forward.

Value-add and opportunistic fund performance has historically shown strong performance after economic downturns. On a pooled basis, value-add and opportunistic Private Real Estate funds of vintage year 2009 recorded a net IRR — after all fees — of 13.8% per year through June 30, 2020; the downturn following the GFC presented them with attractive opportunities and valuations. In contrast, funds of vintage year 2006 garnered a pooled net IRR of only 0.2% per year; buoyant public markets from 2006 through early 2008 made finding compelling private real estate transactions difficult.

We believe that vintage year 2021 value-add and opportunistic Private Real Estate funds should post favorable returns as property owners seek liquidity or dispositions of struggling properties. We believe qualified investors seeking opportunity amidst the economic slowdown should consider these types of Private Real Estate funds for their portfolios.

Within industrial real estate, properties related to logistics continue to enjoy strong demand growth due to ongoing strong adoption of e-commerce on a global basis. We view large distribution centers and smaller urban infill/last mile warehouse locations as still in high demand from major e-commerce and other tenants. Multifamily assets have proved resilient in 2020. A shortage of affordable housing continues in in many locations, and economic uncertainties prompted potential home buyers to defer purchases. We are constructive on private real estate funds investing in affordable multifamily properties in suburban locations (as many city dwellers take flight amidst the pandemic) and in growth markets (particularly in the U.S. southeast).

In contrast, there are scant signs that retail properties (particularly those not anchored by grocery tenants) or hospitality properties will stabilize in the short term.

We continue to see opportunity in international private real estate, particularly in opportunistic strategies featuring new construction to meet supply shortages in many developing markets.

Final Thoughts

Entering 2021, we continue to expect a favorable backdrop for Equity Hedge – 2020's best-performing strategy – but also anticipate a better environment for Relative Value and Event Driven strategies as well. Whereas last year we were focused on strategies that offered reduced downside exposure late in the cycle, we are now balancing that view with strategies that can capitalize on modest economic recovery, increased corporate deal activity, and asset reflation.

As we shift to the early stages of economic growth, we are constructive on private equity strategies focused on small to mid-size companies and strategies such as Venture Capital or Growth Equity that invest in the earlier stages of a company's life. Valuations remain rich entering 2021 for large or mega-cap companies, but the effects of the pandemic have financial institutions reluctant to engage with small and mid-size companies that are likely hardest hit, creating opportunities across the private capital spectrum.

Few would disagree that 2020 was in so many aspects both unpredictable and unprecedented. In short, nothing about 2020 was normal. We believe 2021, in contrast, will feature a steady return to normalcy. The improvement in fundamentals should bode well for risk markets in general, and alternative investments can play an important role in providing diversification, income, and returns in what we hope will be a more normal year.

James Sweetman

Global Alternative Investment Strategist

James W. Sweetman is a senior global alternative investment strategist for Global Alternative Investments. In his role, Mr. Sweetman formulates and leads strategy and asset allocation guidance for GAI representing alternative investments. His responsibilities include the development and management of recommended strategy/manager blends, idea generation, manager sourcing, platform management, and collaborating and partnering within the Wells Fargo Investment Institute in support of Wells Fargo Wealth and Investment Management.

Prior to joining Wells Fargo in January 2006, he worked with Bank of New York's BNY Alternative Investment Services group and Prudential Financial in a variety of investment research, relationship management, and strategy roles. He has more than 28 years of experience in financial services, beginning his professional career in July 1992.

Mr. Sweetman earned a Bachelor of Business Administration from Baruch College, The City University of New York. He is an active member of the Managed Funds Association and holds Series 24, Series 7, Series 63, and Series 3 registrations. He is located in Charlotte, North Carolina.

Justin Lenarcic

Global Alternative Investment Strategist

Justin Lenarcic is a senior global alternative investment strategist for Global Alternative Investments. In his current role, Mr. Lenarcic researches alternative strategies, including developing strategy convictions, sourcing, constructing recommended portfolios, and publishing alternative investment commentary. Prior to joining Wells Fargo in 2007, Mr. Lenarcic worked as a quantitative equity analyst. He has more than 17 years of experience in financial services.

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Risk Considerations

Alternative investments, such as hedge funds, private equity and private real estate funds are not suitable for all investors and are only open to “accredited” or “qualified” investors within the meaning of U.S. securities laws.

All investments are subject to market risk which means their value may fluctuate in response to general economic and market conditions, the prospects of individual companies, and industry sectors due to numerous factors some of which may be unpredictable. Be sure your clients understand and are able to bear the associated market, liquidity, credit, yield fluctuation and other risks involved in an investment in a particular strategy or fund.
Alternative investments, such as hedge funds, private equity/private debt and private real estate funds, are speculative and involve a high degree of risk that is suitable only for those investors who have the financial sophistication and expertise to evaluate the merits and risks of an investment in a fund and for which the fund does not represent a complete investment program. They entail significant risks that can include losses due to leveraging or other speculative investment practices, lack of liquidity, volatility of returns, restrictions on transferring interests in a fund, potential lack of diversification, absence and/or delay of information regarding valuations and pricing, complex tax structures and delays in tax reporting, less regulation and higher fees than mutual funds. Hedge fund, private equity, private debt and private real estate fund investing involves other material risks including capital loss and the loss of the entire amount invested. A fund's offering documents should be carefully reviewed prior to investing.

Hedge fund strategies, such as Equity Hedge, Event Driven, Macro and Relative Value, may expose investors to the risks associated with the use of short selling, leverage, derivatives and arbitrage methodologies. Short sales involve leverage and theoretically unlimited loss potential since the market price of securities sold short may continuously increase. The use of leverage in a portfolio varies by strategy. Leverage can significantly increase return potential but create greater risk of loss. Derivatives generally have implied leverage which can magnify volatility and may entail other risks such as market, interest rate, credit, counterparty and management risks. Arbitrage strategies expose a fund to the risk that the anticipated arbitrage opportunities will not develop as anticipated, resulting in potentially reduced returns or losses to the fund.

Definitions

An index is unmanaged and not available for direct investment.

Bond rating firms, such as Moody’s and Standard & Poor's, use different designations consisting of upper- and lower-case letters 'A' and 'B' to identify a bond's credit quality rating. 'AAA' and 'AA' (high credit quality) and 'A' and 'BBB' (medium credit quality) are considered investment grade. Credit ratings for bonds below these designations ('BB', 'B', 'CCC', etc.) are considered low credit quality, and are commonly referred to as "junk bonds".

CAC 40 Index (French stock market index) tracks the 40 largest French stocks based on market capitalization on the Paris Bourse (stock exchange).

The **Cliffwater Direct Lending Index (CDLI)** seeks to measure the unlevered, gross of fee performance of U.S. middle market corporate loans, as represented by the asset-weighted performance of the underlying assets of Business Development Companies (BDCs), including both exchange-traded and unlisted BDCs, subject to certain eligibility requirements.

DAX German Stock Index represents 30 of the largest and most liquid German companies traded on the Frankfurt Stock Exchange.

EURO STOXX 50 Index is Europe's leading Blue-chip index for the Eurozone, provides a Blue-chip representation of supersector leaders in the Eurozone. The index covers 50 stocks from 12 Eurozone countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain.

FTSE 100 Index is an index that measures the performance of the shares of the 100 largest companies listed on the London Stock Exchange, sometimes referred to as the LSE. It measures the daily share price performance of those 100 firms.

FTSE MIB Index is a capitalization-weighted index of consisting of the 40 most liquid and capitalized stocks listed on the Borsa Italiana.

HFRI Relative Value (Total) Index includes investment managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. RV position may be involved in corporate transactions also, but as opposed to ED exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

HFRI RV: Fixed Income – Sovereign Index includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a sovereign fixed income instrument. Strategies employ an investment process designed to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple sovereign bonds or between a corporate and risk free government bond. Fixed Income Sovereign typically employ multiple investment processes including both quantitative and fundamental discretionary approaches and relative to other Relative Value Arbitrage sub-strategies, these have the most significant top-down macro influences, relative to the more idiosyncratic fundamental approaches employed. RV: Fixed Income: Sovereign funds would typically have a minimum of 50% exposure to global sovereign fixed income markets, but characteristically maintain lower net exposure than similar strategies in Macro: Multi-Strategy sub-strategy.

HFRI RV: Fixed Income – Corporate Index includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a corporate fixed income instrument. Strategies employ an investment process designed to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple corporate bonds or between a corporate and risk free government bond. Fixed Income: Corporate strategies differ from Event Driven: Credit Arbitrage in that the former more typically involve more general market hedges which may vary in the degree to which they limit fixed income market exposure, while the later typically involve arbitrage positions with little or no net credit market exposure, but are predicated on specific, anticipated idiosyncratic developments.

HFRI RV: Fixed Income – Asset Backed Index includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a fixed income instrument backed physical collateral or other financial obligations (loans, credit cards) other than those of a specific corporation. Strategies employ an investment process designed to isolate attractive opportunities between a variety of fixed income instruments specifically securitized by collateral commitments which frequently include loans, pools and portfolios of loans, receivables, real estate, machinery or other tangible financial commitments. Investment thesis may be predicated on an attractive spread given the nature and quality of the collateral, the liquidity characteristics of the underlying instruments and on issuance and trends in collateralized fixed income instruments, broadly speaking. In many cases, investment managers hedge, limit or offset interest rate exposure in the interest of isolating the risk of the position to strictly the yield disparity of the instrument relative to the lower risk instruments.

HFRI Macro (Total) Index includes a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up theses, quantitative and fundamental approaches and long and short term holding periods. Although some strategies employ RV techniques, Macro strategies are distinct from RV strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposes to EH, in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

HFRI Macro: Discretionary Thematic Index includes strategies that are primarily reliant on the evaluation of market data, relationships and influences, as interpreted by an individual or group of individuals who make decisions on portfolio positions; strategies employ an investment process most heavily influenced by top down analysis of macroeconomic variables. Investment Managers may trade actively in developed and emerging markets, focusing on both absolute and relative levels on equity markets, interest rates/fixed income markets, currency and commodity markets; frequently employing spread trades to isolate a differential between instrument identified by the Investment Manager to be inconsistent with expected value. Portfolio positions typically are predicated on the evolution of investment themes the Manager expect to materialize over a relevant time frame, which in many cases contain contrarian or volatility focused components.

HFRI Macro: Systematic Diversified Index includes strategies that have investment processes typically as function of mathematical, algorithmic and technical models, with little or no influence of individuals over the portfolio positioning. Strategies which employ an investment process designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes. Strategies typically employ quantitative process which focus on statistically robust or technical patterns in the return series of the asset, and typically focus on highly liquid instruments and maintain shorter holding periods than either discretionary or mean reverting strategies. Although some strategies seek to employ counter trend models, strategies benefit most from an environment characterized by persistent, discernable trending behavior. Systematic: Diversified strategies typically would expect to have no greater than 35% of portfolio in either dedicated currency or commodity exposures over a given market cycle.

HFRI Event Driven (Total) Index includes managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. Event Driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

HFRI ED: Activist Index includes managers who may obtain or attempt to obtain representation of the company's board of directors in an effort to impact the firm's policies or strategic direction and in some cases may advocate activities such as division or asset sales, partial or complete corporate divestiture, dividend or share buybacks, and changes in management. Strategies employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently or prospectively engaged in a corporate transaction, security issuance/repurchase, asset sales, division spin-off or other catalyst oriented situation. These involve both announced transactions as well as situations which pre-, post-date or situations in which no formal announcement is expected to occur. Activist strategies are distinguished from other Event Driven strategies in that, over a given market cycle, Activist strategies would expect to have greater than 50% of the portfolio in activist positions, as described.

HFRI ED: Distressed/Restructuring Index includes strategies which employ an investment process focused on corporate fixed income instruments, primarily on corporate credit instruments of companies trading at significant discounts to their value at issuance or obliged (par value) at maturity as a result of either formal bankruptcy proceeding or financial market perception of near term proceedings. Managers are typically actively involved with the management of these companies, frequently involved on creditors' committees in negotiating the exchange of securities for alternative obligations, either swaps of debt, equity or hybrid securities. Managers employ fundamental credit processes focused on valuation and asset coverage of securities of distressed firms; in most cases portfolio exposures are concentrated in instruments which are publicly traded, in some cases actively and in others under reduced liquidity but in general for which a reasonable public market exists. In contrast to Special Situations, Distressed Strategies employ primarily debt (greater than 60%) but also may maintain related equity exposure.

HFRI ED: Merger Arbitrage Index includes strategies which employ an investment process primarily focused on opportunities in equity and equity related instruments of companies which are currently engaged in a corporate transaction. Merger Arbitrage involves primarily announced transactions, typically with limited or no exposure to situations which pre-, post-date or situations in which no formal announcement is expected to occur. Opportunities are frequently presented in cross border, collared and international transactions which incorporate multiple geographic regulatory institutions, with typically involve minimal exposure to corporate credits. Merger arbitrage strategies typically have over 75% of positions in announced transactions over a given market cycle.

HFRI Equity Hedge (Total) Index includes managers who maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. EH managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.

HFRI EH: Multi-Strategy Index includes manager that maintain positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. EH Multi-Strategy managers typically do not maintain more than 50% exposure in any one Equity Hedge sub-strategy.

HFRI EH: Equity Market Neutral Index includes strategies that employ sophisticated quantitative techniques of analyzing price data to ascertain information about future price movement and relationships between securities, select securities for purchase and sale. These can include both Factor-based and Statistical Arbitrage/Trading strategies. Factor-based investment strategies include strategies in which the investment thesis is predicated on the systematic analysis of common relationships between securities. In many but not all cases, portfolios are constructed to be neutral to one or multiple variables, such as broader equity markets in dollar or beta terms, and leverage is frequently employed to enhance the return profile of the positions identified. Statistical Arbitrage/Trading strategies consist of strategies in which the investment thesis is predicated on exploiting pricing anomalies which may occur as a function of expected mean reversion inherent in security prices; high frequency techniques may be employed and trading strategies may also be employed on the basis on technical analysis or opportunistically to exploit new information the investment manager believes has not been fully, completely or accurately discounted into current security prices. Equity Market Neutral Strategies typically maintain characteristic net equity market exposure no greater than 10% long or short.

Note: HFRI Indices have limitations (some of which are typical of other widely used indices). These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and, therefore, the index may omit funds, the inclusion of which might significantly affect the performance shown. The HFRI Indices are based on information self-reported by hedge fund managers that decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe, and may be biased in several ways. Returns of the underlying hedge funds are net of fees and are denominated in USD.

Hong Kong Hang Seng Index is a market capitalization-weighted index of 40 of the largest companies that trade on the Hong Kong Exchange. The Hang Seng Index is maintained by a subsidiary of Hang Seng Bank, and has been published since 1969. The index aims to capture the leadership of the Hong Kong exchange, and covers approximately 65% of its total market capitalization. The Hang Seng members are also classified into one of four sub-indexes based on the main lines of business including commerce and industry, finance, utilities and properties.

IBEX 35 Index is comprised of Spain's 35 most liquid stocks traded on the Continuous market.

ICE BofA Merrill Lynch U.S. High Yield Index tracks the performance of U.S. dollar denominated, below investment-grade rated corporate debt publicly issued in the U.S. domestic market.

Korea Composite Stock Price Index or KOSPI is the index of all common stocks traded on the Stock Market Division—previously, Korea Stock Exchange—of the Korea Exchange.

MSCI AC Asia Pacific Index captures large and mid-cap representation across 5 Developed Markets countries and 9 Emerging Markets countries in the Asia Pacific region. Developed Markets countries in the index include: Australia, Hong Kong, Japan, New Zealand and Singapore. Emerging Markets countries include: China, India, Indonesia, Korea, Malaysia, Pakistan, the Philippines, Taiwan and Thailand. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

MSCI World Index is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of 23 developed market countries including the United States.

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NASDAQ 100 Index consists of the 100 biggest companies listed on the NASDAQ Composite Index. The list is updated quarterly and companies on this Index are typically representative of technology-related industries, such as computer hardware and software products, telecommunications, biotechnology and retail/wholesale trade.

Nikkei 225 Index is the leading and most-respected index of Japanese stocks. It is a price-weighted index comprised of Japan's top 225 blue-chip companies on the Tokyo Stock Exchange. The Nikkei is equivalent to the Dow Jones Industrial Average Index in the U.S.

OMX Stockholm 30 is a stock market index for the Stockholm Stock Exchange. It is a capitalization-weighted index that consists of the 30 most-traded stock classes.

Russell 1000® Growth Index measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.

Russell 1000® Value Index measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

Russell 2000® Index measures the performance of the 2,000 smallest companies in the Russell 3000® Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index. The Russell 3000® Index measures the performance of the 3,000 largest U.S. companies based on total market capitalization, which represents approximately 98% of the investable U.S. equity market.

The SPI 200 Futures contract is the benchmark equity index futures contract in Australia, based on the S&P/ASX 200 Index.

S&P 500 Index is a market capitalization-weighted index composed of 500 widely held common stocks that is generally considered representative of the US stock market.

U.S. High Yield Credit Distress Ratio represents the proportion of the bonds within the ICE BofA High Yield Index that are currently trading with a spread over treasuries of at least 1000 basis points.

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