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# Where Credit Is Due

The Opportunity in  
“Alternative” Fixed Income

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### **Summary**

Historically, the job of the bond allocation was to buffer investors from periodic swings in equities and to provide some modest income they could harvest and spend. But it’s a new world for bonds, with yields at historic lows and rates on the rise.

This paper reviews some of the questions bond investors are asking today (about rising rates, higher inflation, and lower bond returns overall) and considers whether and how the fixed income allocation should evolve going forward. Specifically, we look at a category of fixed income that we define as “alternative credit” and examine its characteristics, potential appeal and risks for investors who are rethinking their fixed income allocation.

# Exploring “Alternative” Fixed Income

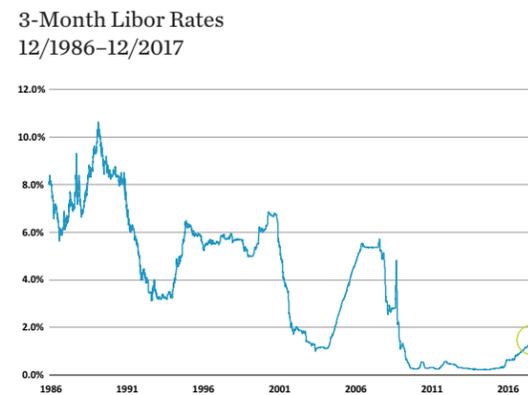
## Rates Are Coming Off of Historic Lows

For many investors, the fixed income component of their portfolio has led to a generally quiet, untroubled existence. But in today’s uncertain environment, that is something that may change.

Let’s start with the known: interest rates in the developed world have been at secular lows since the Global Financial Crisis almost a decade ago (Display 1). And while central bankers in the US, Japan, and Europe have on occasion vowed to keep rates low as long as the economic situation required, this state will not last forever. Furthermore, the protracted low-rate term structure over the last several years could negatively impact the pace and scale of the rise in rates to come.

Treasury yields have declined over the long bond bull market stretch since 1981, from over 15% to just under 3% today.<sup>1</sup> We are now at the point where real, or inflation-adjusted, returns are barely in positive territory. Investors looking to harvest income to spend from their bond portfolio have had slim pickings at best (Display 2). But

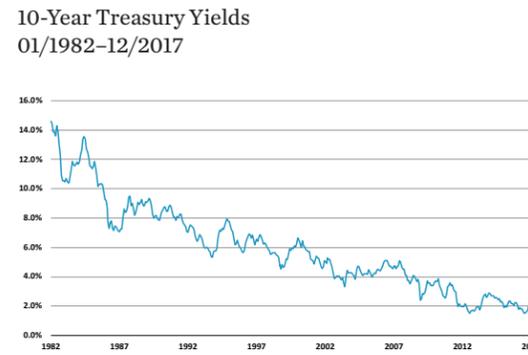
DISPLAY 1  
Rates Are Coming Off Historic Lows



Source: Federal Reserve as of 12/31/17. Historic yields are no assurance of future yields.

<sup>1</sup> Federal Reserve as of 12/31/17.  
<sup>2</sup> Diversification does not assure a profit or protect against loss in declining markets

DISPLAY 2  
End of the 30-Year Bull Market in Bonds?



Source: Federal Reserve as of 12/31/17. Historic yields are no assurance of future yields.

today, it seems the bull market in bonds has reached its end, and many have argued that a new chapter awaits for this important piece of the portfolio pie.

## Where Credit Is Due

So what are some of the key questions fixed income investors are asking today, and what are the driving forces that will refashion the fixed income portfolio going forward? They tend to fall into one of several clear categories.

- **Yield:** It should be clear from headlines about the “search for yield” that one investment imperative is to generate more income from the bond portfolio—not an easy thing to do in an era of enforced low rates or “financial repression.”
- **Rising Rates and Inflation:** Another demand is to reduce the fixed income portfolio’s vulnerability to rising rates, and to inflation, that other enemy of bonds, which silently erodes the purchasing power of a fixed coupon payment.
- **Diversification:**<sup>2</sup> A complementary goal is simply to diversify the fixed income portfolio away from a more exclusive reliance on duration-heavy Treasuries, municipals, and investment grade corporates.

DISPLAY 3  
Investors Are Re-thinking the Fixed Income Opportunity Set



Note: For illustrative purposes only.

- **New Opportunity:** Finally, bonds may play a particularly critical role during the next several years as the largest cohort of U.S. Investors, “Baby Boomers,” moves into retirement with a corresponding need for safety and yield. What new products will appear on the horizon to address this wave of opportunity?

All of these concerns are inclining investors and their advisors to rethink the opportunity set in fixed income.

## Bonds Unbound

Many investors have long held a somewhat traditional allocation to fixed income, consisting primarily of Treasuries, Munis, and investment grade credit—essentially a core portfolio. Over the last decade or so, as global fixed income markets have grown and investing in categories like high yield and other “spread” product has become more common, we’ve seen investors expand their bond allocation beyond the core,

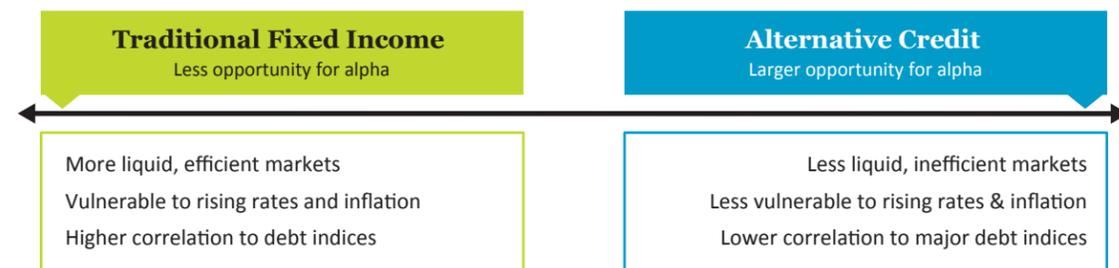
to core “plus”—including emerging debt (EMD) and high yield bonds (Display 3).

But there’s another stage in the evolution of the fixed income portfolio, into what we are calling “Alternative Credit”—essentially a group of below-investment grade investment strategies that includes senior loans, middle market direct lending, event-driven credit hedge funds, mezzanine, and distressed debt. These alternative strategies may also answer many of the questions fixed income investors are concerned about (regarding rates, yields, and inflation), and may fit well into the type of bond portfolio they are considering for the future.

## Seeking an Alternative

The first point to make about “Alternative Credit” is that it’s not meant to replace, but to complement the traditional allocation to fixed income. Their corresponding characteristics present an interesting set of complementary features and benefits (Display 4).

DISPLAY 4  
Alternative Credit May Be an Attractive Complement to Traditional Fixed Income



Note: For illustrative purposes only.

Where traditional fixed income generally works in more liquid, actively traded, efficient markets, alternative credit tends to focus more on less liquid, and thus less efficient areas of the bond market. These “alternative” fund managers often deal directly with corporate management on a confidential basis to negotiate private covenant terms.

While traditional fixed income faces its greatest headwinds in environments of rising rates and higher inflation, alternative credit is often floating rate or has other characteristics that could mitigate its vulnerability to both rising rates and inflation.

And where traditional fixed income attempts to provide market-based returns from clearly identifiable indices, alternative credit largely involves unconstrained, benchmark-free pursuit of value based upon market-agnostic, company-specific credit events.

For these reasons, alternative credit generally operates in a different arena than traditional fixed income and can tap opportunities the traditional portfolio may otherwise miss.

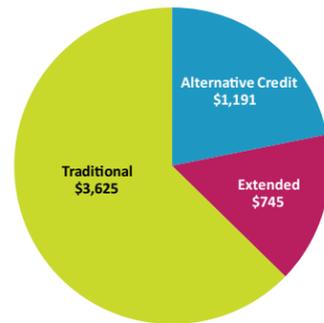
### An Underexploited Opportunity?

Investors can understand the complementary and under-exploited position of alternative credit in another way too—by looking at the amount of assets in the category, compared to both traditional and “extended” fixed income. By far the greatest allocation of individual investors’ fixed income assets, over \$3 trillion, is concentrated in traditional fixed income vehicles (Display 5).

The “extended” fixed income category, which includes high yield, global bonds, and emerging market debt, has assets of over \$740 billion, a substantial amount given the limited capacity available in those strategies. Alternative credit, meanwhile, has almost \$1.2 trillion spread across far more strategies, including senior loans, event-driven credit, mezzanine and distressed debt funds. But while there may be room for greater exposure to the alternative credit space, there are important impediments to greater allocations to this area, of which illiquidity may be one.

DISPLAY 5  
**Investors May Be Underexposed to Alternative Credit?**

AUM by Fixed Income Segment (\$ in billions)



Source: Morningstar Direct, BarclayHedge and Preqin. AUM as of 12/31/17. “Traditional” includes all Morningstar Investment Grade Taxable Bond and Investment Grade Municipal categories (Mutual Funds & ETFs). “Extended” includes World, Emerging Market Debt, High Yield, Bank Loan and Convertibles. Alternative Credit includes Fixed Income, Distressed and Convertible Hedge Funds as well as Distressed Debt and Mezzanine private equity funds.

### The Illiquidity Trade-Off

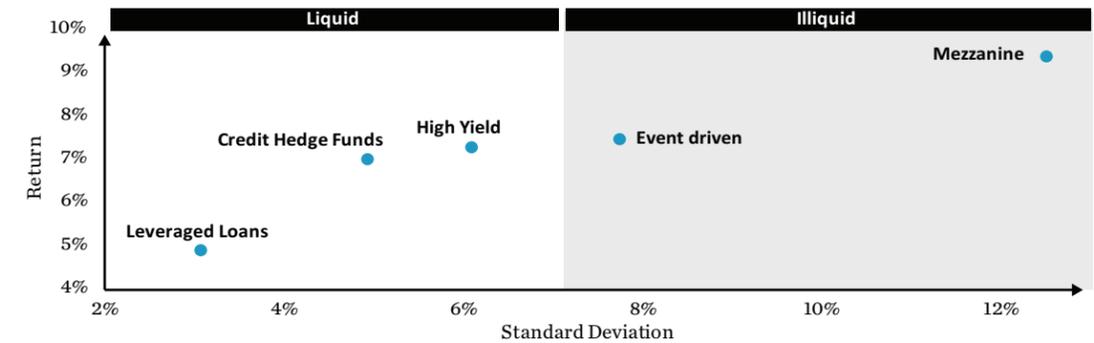
In Display 6, we’ve plotted an array of credit-oriented investments across a vertical axis measuring annualized returns and a horizontal axis reflecting their volatility or standard deviation. We then shade in less liquid investments, such as mezzanine and distressed debt strategies, which are akin to private equity vehicles, with committed capital locked down for years and typically a higher degree of leverage. Though it’s not a simple correlation, the lower the liquidity of these below-investment grade assets, the higher their returns have been historically.

The potentially higher returns associated with less liquid strategies may be due to a number of reasons. One is that by providing financing to companies during periods of distress, when they may be orphaned by the capital markets, investors can demand a yield premium over that available in traditional, liquid markets.

One important note: Less liquid alternative strategies involve high risk, exacerbated by leverage. However, typical measures of volatility, like standard deviation, may actually be lower in some non-public bond strategies, as the pattern of their returns typically does not follow the same gyrations of more liquid markets. For example,

DISPLAY 6  
**Alternative Credit Can Provide Attractive Return Opportunities**

Return vs Risk of Select Credit Strategies (1/1/2000–12/1/2017)



Source: Morningstar Direct as of 12/31/17. For Leveraged Loans: S&P/LSTA Leveraged Loan TR; for Credit Hedge Funds: Greenwich Global HF Long Short Credit; for High Yield: BBgBarc U.S. Corporate High Yield TR USD; for Distressed / Rescue Lending: HFRI ED Distressed Restructuring USD; for Mezzanine: Credit Suisse HY USD + 200 bps. Scatter-plot uses average standard deviations and asset returns from 1/1/00 to 12/31/17. These are not returns by any Blackstone Fund, but instead represent the returns of asset classes estimated from the following sources taken from Morningstar.

in mezzanine and distressed strategies, yields are often based on the funds’ own private origination of the debt, and may be contractually fixed—they can’t be altered or repaid for a specific period of time, potentially offering predictability and stability to the returns. And there are other risks for traditional fixed income, like rising rates, that alternative credit may be less vulnerable to.

### Helping to Mitigate Interest Rate Risk

Reviewing the historical record shows that in periods of rising rates, the alternative credit category tends to perform better than the traditional cohort. Display 7 looks at the spike in rates, from July 2016 through December 2016,

DISPLAY 7  
**Alternative Credit Tends to Be Less Vulnerable to Interest Rate Risk**

Fixed Income Asset Class Total Return in Rising Rate Environment 07/01/2016–12/31/2016



Source: Morningstar Direct, HFRI as of 12/31/17. Corresponding indices: For Intermediate Treasuries: ICE BofAML 7-10Y US Trsy TR; for Inv Grade Corporates: Barclays US Corp 5-10 Yr TR; for EMD: JPM EMBI Plus; for High Yield: BBgBarc US Corporate High Yield TR; for Bank Loans: S&P/LSTA Leveraged Loan TR; for BDCs: Wells Fargo Business Development Company TR; for Event Driven: Credit Suisse Event Driven; for Distressed-Rescue: HFRI ED Distressed Restructuring. See “Notes and Disclaimers” section for description of such indices. **Past performance does not guarantee future results.**

when the ten-year Treasury increased by 99 basis points. The consequence of this rate rise across the traditional fixed income spectrum, across the traditional fixed income spectrum was generally modest returns for most investors, and worse for those in sovereign US bonds. When we consider high yield and then look across at those strategies we identify as “alternative credit,” we see a strong positive correlation with rising rates—resulting in about a 5% total return for bank loans and event driven in this period, and more than double that for BDCs and distressed funds. While this analysis looks at just the rate rise that occurred in 2016, it is representative of the way these strategies behave in many of the prior periods of rate increases that we examined. We believe alternative credit strategies may help mitigate the damage an increase in rates will have on a fixed income portfolio.

### Less Vulnerable to Inflation?

And the story is similar with inflation, which often goes hand in hand with spikes in rates. Display 8 looks at the behavior of different fixed income categories with respect to US Consumer Price Inflation (CPI). As with the prior display around interest rate risk, traditional fixed income categories (Treasuries and investment grade corporates) suffer during inflationary regimes, as the nominal value or purchasing power of their fixed coupon declines. On the other hand,

all of the alternative categories show a positive reaction to inflation—with correlations ranging from .12 to .36, as their return is often tied to drivers other than simply the nominal value of their coupon. In other words, the after-inflation value of their holdings historically has risen with inflation. Again we see high yield as a sort of cross-over, possessing many of the characteristics of our “alternative” category of funds—in part because its returns are more tied to equity market movements. As a group, alternative credit strategies in general show behaviors that run counter to traditional fixed income, and that’s another reason they can be so attractive to investors: as portfolio diversifiers.

### Diversifying the Fixed Income Portfolio

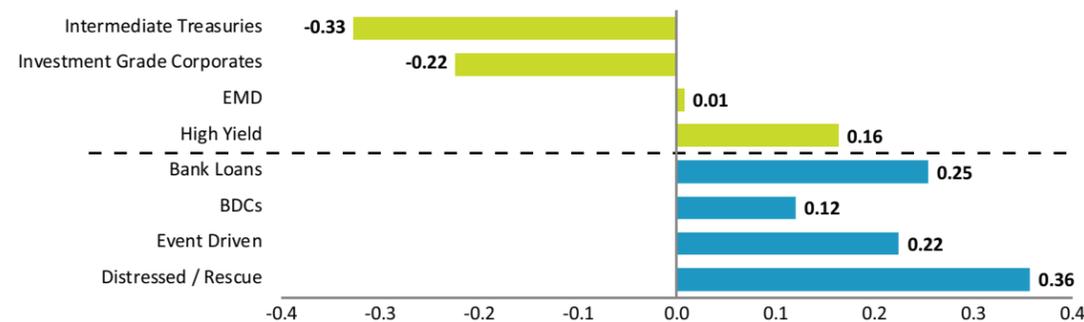
Many traditional and extended fixed income categories move largely in tandem with the benchmark indices they are tethered to, which means they’re behaving just as the investor who bought them expected.

Alternative credit vehicles as a group tend to have very low or negative correlation to the major bond indices, for all the reasons stated earlier, and therefore can help diversify the performance of a traditional fixed income portfolio—so they don’t behave in a monolithic way when rates or the markets are moving

DISPLAY 8

#### Alternative Credit Historically Has Tended to Rise with Inflation

Correlations to U.S. CPI  
Five Years Ending 12/31/2017

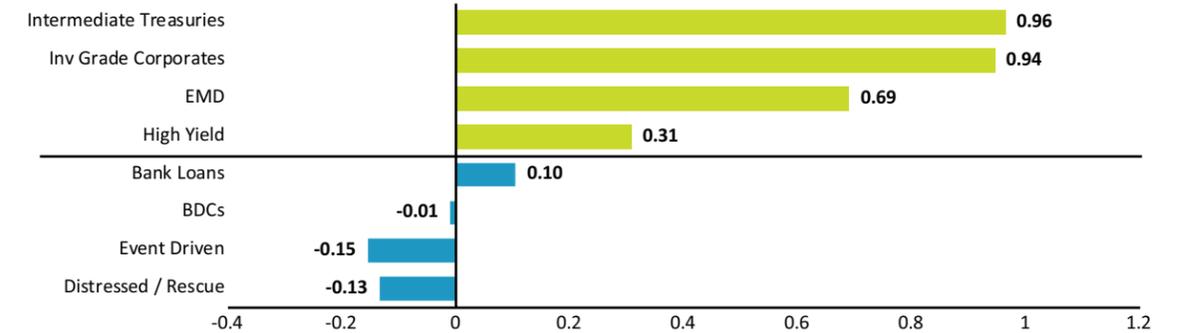


Source: Morningstar Direct, HFRI, CPI All Urban as of 12/31/17. Corresponding indices: For Intermediate Treasuries: ICE BofAML 7-10Y US Trsy TR; for Inv Grade Corporates: Barclays US Corp 5-10 Yr TR; for EMD: JPM EMBI Plus; for High Yield: BBgBarc for US Corporate High Yield TR; for Bank Loans: S&P/LSTA Leveraged Loan TR; for BDCs: Wells Fargo Business Development Company TR; for Event Driven: Credit Suisse Event Driven; for Distressed-Rescue: HFRI ED Distressed Restructuring See “Notes and Disclaimers” section for description of such indices.

DISPLAY 9

#### Alternative Credit Tends to Have Low Correlations to Traditional Fixed Income Categories

Correlations to Barclays U.S. Aggregate  
Five Years Ending 12/31/17



Source: Morningstar Direct, Barclays US Agg as of 12/31/17. Corresponding indices: For Intermediate Treasuries: ICE BofAML 7-10Y US Trsy TR; for Inv Grade Corporates: Barclays US Corp 5-10 Yr TR; for EMD: JPM EMBI Plus; for High Yield: BBgBarc US Corporate High Yield TR; for Bank Loans: S&P/LSTA Leveraged Loan TR; for BDCs: Wells Fargo Business Development Company TR; for Event Driven: Credit Suisse Event Driven; for Distressed-Rescue: HFRI ED Distressed Restructuring. See “Notes and Disclaimers” section for description of such indices.

against them (Display 9). In short, a strategic allocation to alternative credit may help reposition the total fixed income portfolio, to lessen its sensitivity to interest rates, inflation, and other traditional bond headwinds.

So let’s take a look at specific alternative credit examples and see how they stack up. First, leveraged loans.

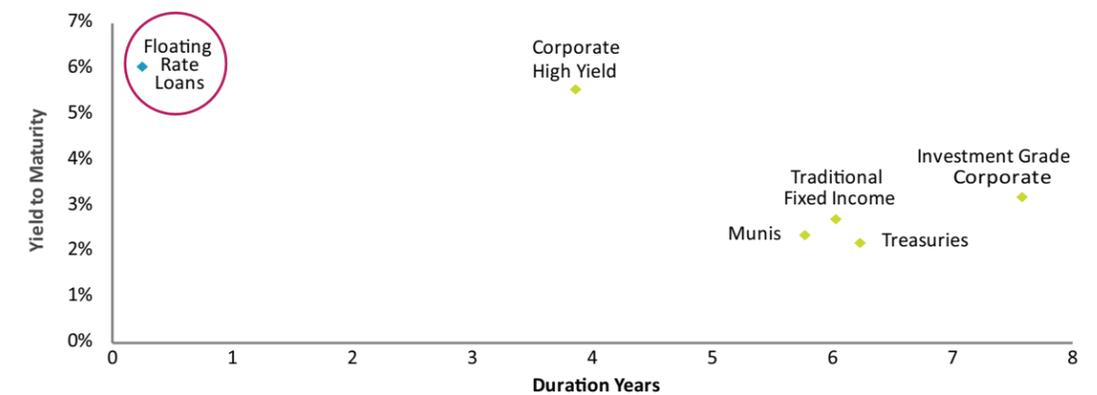
### The “Interest” in Leveraged Loans

Leveraged loans, also known as “Senior” or “Floating Rate” loans, consist of debt extended to companies that are already carrying a large debt load. They tend to have higher interest rates, reflecting the higher level of risk of the companies issuing them. Display 10 shows the yield of Floating Rate Loans and other bond

DISPLAY 10

#### Leveraged Loans May Offer Attractive Yield with Lower Duration

Yield vs Interest Rate Risk Across the Fixed Income Landscape



Source: YTW, Duration, Index Size data as of 12/29/17. Corresponding indices: For Floating Rate Loans: Credit Suisse Leverage Loan Index; for Corporate High Yield: Bloomberg Barclays US Corporate High Yield Index; for Traditional Fixed Income: Bloomberg Barclays US Aggregate Bond Index; for Municipals: Bloomberg Barclays US Municipal Bond Index; for Treasuries: Bloomberg Barclays US Treasury Bond Index; for Investment Grade Corporate: Bloomberg Barclays US Corporate Investment Grade Bond Index. Represents Yield to Worst for all indices except the CS Leveraged Loan Index, which represents Yield (3-Year Life). Duration represents U.S. Mod. Adjusted Duration for Bloomberg Barclays Indices.

market indices on the vertical axis and their duration or sensitivity to interest rates on the horizontal axis. What stands out in the upper left quadrant are the higher yields offered by both corporate high yield and leveraged loans.

But the difference in duration, or interest rate risk, between the two begs the question: why are you getting similar returns for different risk profiles?

Leveraged loans are generally floating rate and have a duration of about a quarter of a year—so their returns tend to rise in rising rates and would likewise suffer in declining rate regimes. Furthermore, leveraged loans are more senior in the capital structure and may be secured by assets of the borrower, so they tend to have a bit less credit risk than unsecured high yield bonds.

Because senior loans are widely traded and available via closed and open-ended mutual funds, they may be considered to be within the familiar domain of most investors. So let’s take one step further into the alternative space with another example: Middle market direct lending.

### The Rise of Middle Market Direct Lending (BDCs)

The decade following the financial crisis saw rapid growth in direct lending, often from

DISPLAY 11  
The U.S. Middle Market Lending Opportunity

Growing Demand for Credit<sup>3</sup>  
The U.S. Middle Market Lending Opportunity (\$ in Trillions)



Source: National Center for the Middle Market, S&P Global Market Intelligence and Blackstone

<sup>3</sup> National Center for the Middle Market – 4Q 2017 Middle Market Indicator, Bureau of Economic Analysis – Components of Value Added by Industry, as of 10/2/17, and The World Bank – All Countries GDP.

<sup>4</sup> S&P Global Market Intelligence as of 12/31/17.

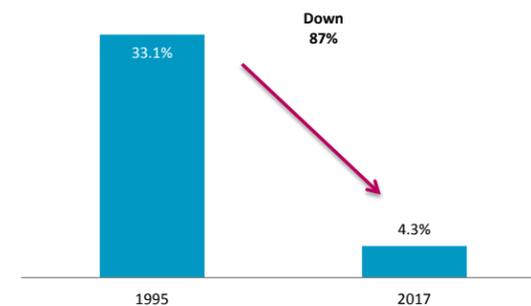
non-bank creditors to below investment grade “middle market” companies. In contrast to the syndicated market for senior loans and high yield bonds, these debt instruments, typically in the form of floating rate senior loans, are negotiated directly and are not freely traded. As a result, the loans tend to be less liquid and smaller in size (typically between \$10 and \$150 million).

Middle market borrowers in the U.S. constitute about 200,000 businesses generating nearly one third of America’s private sector GDP, and providing more than 47 million jobs.<sup>3,4</sup> Nevertheless these companies tend to suffer from a lending “vacuum,” as regulatory changes and a decline in the number of banks servicing them (down 90% in the last 20 years) dramatically reduced the supply of available debt capital (Display 11).<sup>4</sup>

This situation helped to spark the growth of Business Development Companies (BDCs) to facilitate both the origination of and investment in middle market loans.

BDCs were created in 1980 to facilitate the flow of capital to smaller private enterprises. BDCs are pass-through entities, where 90% of taxable income must be distributed to investors in the form of a dividend. Because middle market companies are smaller and have fewer places to turn for their capital needs, they often pay an

Decline in Supply from Traditional Banks<sup>4</sup>  
U.S. Bank Participation in Senior Secured Loans



interest rate higher than that of larger companies, who can access the public markets more easily. That higher income has drawn strong interest from investors hungry for yield in a period of historically low rates.

DISPLAY 12  
What Do We Mean by an Event?

- Covenant Violations
- Monetary Default
- Looming Debt Maturity
- Liquidity Problem
- Adverse Legal Ruling
- Secular Change
- Industry Cyclical
- Corporate Re-Organization
- Spin-Offs
- Capital Structure Changes
- Regulatory Rulings
- Material Contract Maturities

### Event-driven Credit

In addition to BDCs, an event-driven credit hedge fund is another option to consider within the alternatives space. To understand the appeal of event-driven credit, you have to look closely at what we mean by the word “event.” The word can be loosely defined in various ways, but it almost always means one thing for an event-driven credit investor: opportunity.

Here is why: a company could be facing a violation of its covenants, a near-term maturity that it can’t meet, a difficult re-org or perhaps a regulatory ruling that creates substantial headwinds. Or the business could simply be facing a particularly severe downturn in a cyclical industry (Display 12).

Any one of these events could orphan the company—cause it such distress that it becomes particularly vulnerable to extreme negative

outcomes, including bankruptcy, thus rendering it an unattractive risk to banks and other lenders. All of this sets the stage for a critical injection of capital for which the provider may be able to demand a premium. Hence, the term “event-driven” credit.

It’s a small but important step from event-driven credit as we’ve defined it, which operates largely in the public credit markets, to the world of mezzanine and distressed debt, both of which require something we call “patient capital.”

### The Private Market: Mezzanine and Distressed Debt

Just as an event-driven credit hedge fund can play off an idiosyncratic company event, some dire milestone in its corporate history, mezzanine and distressed debt funds do the same, but in the “private” market. Unlike public market bond funds, these types of strategies are akin to private equity drawdown funds: they are illiquid, typically with a four- or five-year investment period and a similar period of “harvest.” They are also considered high risk investments in part due to the amount of leverage involved. However, unlike private equity returns, which come almost exclusively in the form of capital appreciation, private debt funds tend to distribute current income to limited partners after investments are made. And in addition to their potential yield premiums versus traditional vehicles, total returns may be augmented by origination fees on the debt they provide, and by call protections, which can generate additional premium in the form of pre-payment penalties.

But it is precisely their “illiquidity” (the patient capital or “dry powder” that they hold and allocate in large amounts, but only when demand for it peaks) that may enable them to command higher returns and better covenant terms. This constitutes a key potential advantage over more liquid, public bond categories: periods of increased volatility or market turbulence, while difficult for liquid strategies, can often present the most opportune investment environment for these illiquid funds, as corporate distress mounts and sets the stage for a “rescue” or some other liquidity solution.

DISPLAY 13

**Double Whammy: Rising Demand for Debt; Fewer Lenders**

Source: Citigroup as of 12/29/2017.

The ability to step in with a capital “solution” just at the moment of crisis is a common practice for mezzanine and distressed debt funds. The opportunity for these funds has grown substantially with changing regulations forcing many banks to increase their capital base and reduce the inventory of debt on their balance sheet, which in turn curbs their ability and desire to lend. Since the financial crisis, this traditional source of funding to corporations has slowed considerably, particularly for smaller or middle market companies, whose need for additional underwriting has continued to rise, in part to refinance their maturing debt (Display 13).

In the past, there were few funds large enough to come in and solve a firm’s financing problem mid-crisis. In the absence of bank-driven lending, the competitive position of these larger funds has gotten even stronger. This is particularly true when banks are lending less, borrowers face a wall of maturities, and the post-crisis deleveraging continues: private sources of liquid capital are in a rare position to take advantage of these dislocations.

**Where Credit is Due**

The essential takeaway from this paper is that the fixed income portfolio is due for a review. The 30-year bull market in bonds is over: the question is what’s next, and what kind of bond portfolio will best serve the interests of investors over the next 30 years, and after. Whether they fear rising interest rates or inflation, or they need greater income and a more “modern” fixed income portfolio, advisors need to be prepared to answer their questions.

As alternative investments become increasingly mainstream, leveraged loans, middle market direct lending, event-driven credit, mezzanine and distressed debt portfolios will become more familiar, and appealing. As we’ve shown here, we think there are good reasons why this may be so.

# Glossary, Index Definitions, Notes and Disclaimers

## Glossary

**Alpha:** A measure of risk-adjusted performance which captures risk attributable to the specific security (or manager) rather than the overall market. A high alpha value implies that the investment has performed better than would have been expected relative to the overall market (beta). It is often called the “excess return” on an investment above a benchmark index or “risk free” rate of return.

**Alternative Investments:** Investment categories other than traditional securities or long-only stock and bond portfolios. This includes private equity, venture capital, real estate, hedge funds, and many illiquid investments.

**Beta:** The measure of sensitivity of a fund’s return to the return of an index. If the beta = 1, then the return will move with that of the index. If the beta is > 1, the return is more volatile than the index, whereas if the beta is < 1, the return is less volatile than the index.

**Correlation:** A measure of how the returns of two or more assets perform in relation to one another. Assets with a correlation of 1.0 move in lock step. Those with a correlation of 0 have a random relationship to each other.

**Duration:** A measure of the sensitivity of the price (the value of principal) of a fixed-income investment to a change in interest rates. Duration is expressed as a number of years. Rising interest rates mean falling bond prices, while declining interest rates mean rising bond prices.

**Hedge:** An investment position intended to offset potential losses that may be incurred by a companion investment. A hedge can be constructed from many types of financial instruments, including stocks, exchange-traded funds, insurance, forward contracts, swaps, options, many types of over-the-counter and derivative products, and futures contracts.

**Leverage:** The use of financial instruments or borrowed capital to increase expected returns. Leverage can amplify a portfolio’s gains or losses.

**Sharpe Ratio:** A measure of risk-adjusted return as a ratio of returns to risk. The Sharpe ratio (i) is used to express how much return is achieved for the amount of risk taken in an investment and (ii) is an effective way to compare hedge funds with similar return characteristics. When analyzing Sharpe ratios, the higher the ratio, the better. The Sharpe ratio formula is the fund return less the risk free return divided by the standard deviation of the hedge fund.

**Volatility (Standard Deviation):** Volatility measures how far returns stray from an average. The higher the standard deviation, the larger the difference among individual returns and the greater the financial risk. Volatility indicates the dispersion of the range of returns where low volatility means the returns are tightly clustered around the average return and higher volatility means the returns are dispersed at greater distances from the average.

**Yield to Maturity:** The estimated total return based on the assumption that the bond will be held until it matures.

## Index Definitions

**Barclays US Corp 5-10 Year TR Index** includes U.S. dollar-denominated, investment-grade, fixed-rate, taxable securities issued by industrial, utility, and financial companies, with maturities between 5 and 10 years.

**Bloomberg Barclays US Corporate High Yield Bond Index** measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody’s, Fitch and S&P is Ba1/BB+/BB+ or below.

**Bloomberg Barclays US Aggregate Bond Index** is a broad-based flagship benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and non-agency).

**Bloomberg Barclays US Municipal Bond Index** covers the USD-denominated long-term tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds and prerefunded bonds.

**Bloomberg Barclays US Treasury Bond Index** measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury. Treasury bills are excluded by the maturity constraint, but are part of a separate Short Treasury Index.

**Bloomberg Barclays US Corporate Investment Grade Bond Index** measures the investment grade, US dollar-denominated, fixed-rate, taxable corporate and government related bond markets. It is composed of the US Corporate Index and a non-corporate component that includes foreign agencies, sovereigns, supranationals and local authorities.

**CPI All Urban** is a measure that examines the changes in the price of a basket of goods and services purchased by urban consumers. The urban consumer population is deemed by many as a better representative measure of the general public because most of the country’s population lives in highly populated areas, which represent close to 90% of the total population.

**Credit Suisse (CS) Leveraged Loan Index** is an unmanaged market value-weighted index designed to mirror the investable universe of the U.S. dollar-denominated leveraged loan market. New issues are added to the index on their effective date if they qualify according to the following criteria: loan facilities must be rated “BB” or lower; only fully-funded term loan facilities are included; and issuers must be domiciled in developed countries.

**Credit Suisse Event Driven Index** is a subset of the Credit Suisse AllHedge Index that measures the aggregate performance of event driven funds. Event driven funds typically invest in various asset classes and seek to profit from potential mispricing of securities related to a specific corporate or market event.

## Notes and Disclaimers

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### Certain of these risks may include:

- Loss of all or a substantial portion of the investment due to leverage, short-selling, or other speculative practices;
- Lack of liquidity in that there may be no secondary market for a fund;
- Volatility of returns;
- Restrictions on transferring interests in a fund;
- Potential lack of diversification and resulting higher risk due to concentration of trading authority when a single advisor is utilized;
- Absence of information regarding valuations and pricing;
- Complex tax structures and delays in tax reporting;
- Less regulation and higher fees than mutual funds;
- Risks associated with the operations, personnel, and processes of the manager.

**Greenwich Global Long/Short Credit** tracks the performance of approximately 1,000 hedge funds that invest primarily in yield-producing securities with a focus on current income. Index returns are equal weighted averages and computed monthly.

**HFRI ED Distressed Restructuring Index** employs 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

**ICE BofAML US Corporate 10-15 Year Index** is a subset of the ICE BofAML US Corporate Master Index tracking the performance of US dollar denominated investment grade rated corporate debt publically issued in the US domestic market. This subset includes all securities with a remaining term to maturity of greater than or equal to 10 years and less than 15 years

**JPMorgan Emerging Markets Bond Index Plus (EMD/JPM EMBI Plus)** The JPMorgan Emerging Markets Bond Index Plus is a market capitalization weighted total return index of U.S. dollar and other external currency denominated Brady bonds, loans, Eurobonds, and local market debt instruments traded in emerging markets.

**S&P/LSTA U.S. Leveraged Loan 100 Index** is designed to reflect the largest loan facilities in the leveraged loan market. It mirrors the market-value weighted performance of the largest institutional leveraged loans based upon market weightings, spreads and interest payments.

**Wells Fargo Business Development Company** is intended to measure the performance of all Business Development Companies that are listed on the New York Stock Exchange or NASDAQ and satisfy specified market capitalization and other eligibility requirements. To qualify as a BDC, the company must be registered with the Securities and Exchange Commission and have elected to be regulated as a BDC under the Investment Company Act of 1940.

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