AllianceBernstein

Broader Horizons

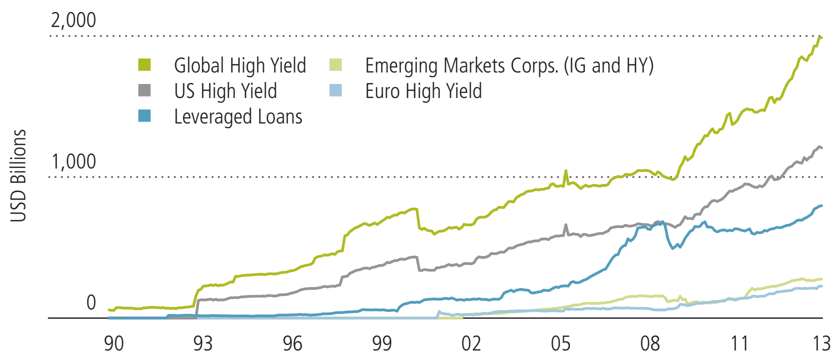
The Evolving High-Yield Landscape

Introduction

The high-yield bond market has experienced extraordinary changes since its American inception. The US market has benefited from robust expansion over the past two decades. The European market has been rapidly growing and deepening in terms of industry and issuer diversification since 2008, driven by a surge in company downgrades and a transition from bank financing to capital markets. Emerging markets (EM) corporates have also become a more significant part of the high-yield universe over the past decade for a variety of reasons, namely diversification of funding sources, companies gaining the scale to access the bond market, and issuers' preference for the longer tenors and unsecured nature of the bond market.

While the US is still dominant, accounting for roughly 75% of the global high-yield bond market in 2013, Europe has expanded to 18% of market share and EM has increased to 7%. The fledgling market once confined to US shores has clearly become more expansive, mature and established. The *Display* below illustrates the global high-yield market's dramatic growth, by market value, from 1990 to 2013. *(continued)*

The High-Yield Market Has Experienced Substantial Growth



Through May 31, 2013
Source: Barclays, Credit Suisse, J.P. Morgan and AllianceBernstein

IN THIS PAPER

Over the past 40 years, the high-yield landscape has grown exponentially, offering diverse investment opportunities for investors and innovative funding sources for issuers. How can investors manage the major risks and capitalize on the potential rewards of an asset class that is increasingly complex, more regulated and continually evolving? Knowing the key risks and emerging opportunities—and understanding how different investment strategies can help crystallize investment goals—can help in mapping the path forward.

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(continued from cover) As a result of stellar growth, investors seeking high income or attractive total return can now find an extensive, global opportunity set of public and private credits that can be used in numerous ways to pursue diverse risk and return objectives.

This sea change from a high-yield market historically dominated by US corporates to a much broader investment spectrum is exemplified by four growth areas that we view as compelling:

- European high yield
- Global financials
- EM corporates
- The mainstreaming of the private credit market

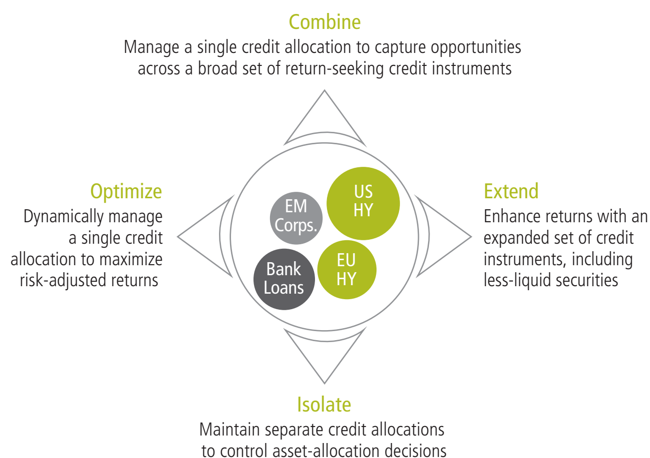
All four illustrate how the nature of the asset class has shifted to a *high-yielding* global opportunity set.

While the high-yield complex now spans the US, Europe and the emerging markets, there are common risk factors, such as default and liquidity, that investors must manage—and, while common, these risks often vary by market and security type. The market has evolved to the point where investors can now focus or diversify these risk factors and beta attributes to meet a variety of investment objectives. In the final section of this paper, we highlight four investment paths designed to provide exposure to specific types of risks and opportunities. The four directions of our "compass" are designed to provide a guide, enabling investors to orient to the path that best matches their asset-allocation framework and investment goals.

The divergent paths available can be summarized as *Isolating, Combining, Extending* and *Optimizing* (*Display 1*). The journey to better outcomes might begin with an investment path that simply Isolates high-yield opportunities, such as EM high yield or US bank loans. An alternate route Combines high-yielding credits without sector constraints, with the aim of exploiting promising opportunities across a broad set of credits. Or it may Extend to more complex and less-liquid sectors that feature private credit, which may offer an illiquidity premium. Lastly, an investor can choose the Optimizing path, which actively pursues attractive opportunities across multiple sectors with a focus on maximizing risk-adjusted returns.

Display 1

Navigating Investment Goals



Source: AllianceBernstein

To calibrate true north, and to put today's market in perspective, it's insightful to look back at how the market's structure has changed since the first flight to lower-quality assets.

High Yield 1.0: The Dawning of a US Bull Market

Prior to the late 1970s, the vast majority of the high-yield universe consisted of fallen angels, previously investment-grade companies that had slipped to BB+ or lower. In the 1980s the high-yield market boomed as more diverse companies with below-investment-grade profiles began issuing speculative-grade bonds—revolutionizing financing for the marquee leveraged buyouts and other acquisitions that are often associated with investment banker Michael Milken. As the market progressed, high-yield bonds became an accepted tool for financing balance sheets and corporate actions such as funding capital-intensive expenditures.

Investor appetite for high-yield bonds continued growing over time as their benefits became more apparent:

- The potential for higher returns than investment-grade bonds, which compensates investors for default risk
- Lower correlation to most other fixed-income sectors

- Similar return profile to stocks but with generally lower volatility
- Greater liquidity than private placements
- For insurance companies, a lower capital charge versus equities

With Change Comes Global Opportunity

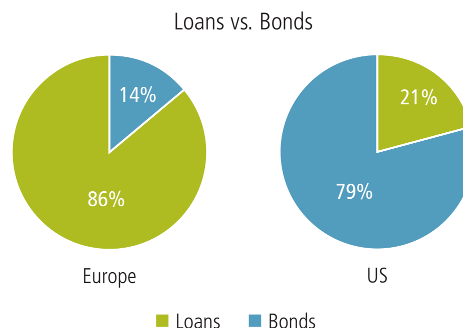
Despite some fits and starts, the European high-yield market remained relatively small during the US boom cycle. Even with the introduction of the euro single currency in 1999, less than 1% of the corporate high-yield market was issued outside the US. Lending in the euro area is still heavily skewed toward bank syndicates rather than the bond market, given the long-standing legacy lending relationships between European banks and their locally domiciled corporates. As *Display 2* illustrates, the European market remains almost the exact opposite of the US market.

Since the financial crisis, however, the European high-yield bond market has almost quadrupled in size. This has occurred for two reasons. First, well-known companies throughout Europe—many of them domiciled in the Periphery—lost their investment-grade ratings in the aftermath of the global financial crisis and European sovereign crisis. Second, many junior subordinated bonds throughout Europe were downgraded to subinvestment grade. As a result of these events, we see opportunities among Europe's fallen angels. Additionally, the disintermediation of the banking sector is driving many new issuers into the European high-yield bond market, and we expect outsized market growth to continue as a consequence of ongoing disintermediation.

The global finance sector is another area that we see as promising. Specifically, in developed European countries, we think select financial institutions are compelling, as the junior parts of their capital structures contain subordinated debt that is often sub-investment grade. Accordingly, the European high-yield index now boasts a financial sector allocation of 22.8%—a tenfold increase from 10 years ago. By comparison, US financial-debt issues account for approximately 10% of US high-yield indices. Before the credit crisis, global financial services firms in high-yield markets were underwriters, liquidity providers and researchers—rarely did they take on the role of high-yield issuer or index constituent.

Display 2

Europe Has Historically Been Financed by Loans



As of December 31, 2013
Source: Haver Analytics and AllianceBernstein

To us, the increasing number of financial firms issuing subordinated financial instruments, and new securities such as contingent capital notes (commonly referred to as "CoCos"), will have a lasting impact and present significant long-term investment opportunities. This growing market segment is partially a consequence of the sustained need for increased Basel III–compliant capital instruments. Although we have already seen more than $140 billion of post-financial-crisis issuance across US bank preferred stock and European bank Basel III–compliant AT1 and other contingent capital securities, we estimate the likely growth of this market to be in the range of $350–$400 billion. Investors who can navigate this increasingly complex area of the global high-yield market will likely find ample opportunities over time. (For more on how to assess these instruments, please see the sidebar "Analyzing Risk in Subordinated Financial Instruments" on page 4.)

The high-yielding market in EM—wherein the vast majority of issuers are investment grade—began to emerge over the past decade for a number of reasons in addition to those mentioned on the cover page. The strong tailwinds of the past 10 years—the substantial rise in GDP, the commodity boom, improved credit fundamentals, structural reform and the increasing evolution in the capital markets of select EM countries—helped lead to robust corporate issuance, establishing a corporate bond market that spans the entire credit spectrum, including subinvestment-grade-rated companies. The EM corporate bond market exceeded $1.5 trillion in 2013.

Analyzing Risk in Subordinated Financial Instruments

Given the many changes happening across global high-yield markets, assessing and pricing risk now requires a thoughtful and thorough analysis of both familiar and, in some cases, far less familiar variables.

When we think about subordinated financials in particular, we don't simply apply the same kind of analysis that we do to a typical nonfinancial corporate high-yield bond. For example, given that many of these instruments are coming to market as a result of regulatory changes, one of the most critical inputs into the analysis is an assessment of the prevailing regulatory framework. That is, do the instruments meet regulatory standards and requirements?

In addition, credit analysis of financials varies from the analysis of typical nonfinancial high-yield corporates in other ways. While we always consider all the major facets of a credit, in analyzing financial issuers greater focus is typically placed on capital and liquidity requirements versus current income and cash-flow metrics, as financials, particularly subordinated financial paper, tend to exhibit more severe "jump to default" risk, in our view. There are two components for analyzing default risk in a security: the probability of default and the severity of default. Subordinated financial instruments, such as those being issued in accordance with Basel III, are intended to lower the probability of default, but they typically have high loss severity, which can be painful for investors if the issuer does in fact default.

Specifically within EM corporates, we think that US dollar–denominated corporate bonds offer value. They often afford more yield per unit of leverage than do developed-market corporate bonds, and can represent exposure to sectors and business cycles that US and European firms may not. As EM economies continue to evolve, we also anticipate increased investor interest in local-currency corporates, especially in countries with strong growth projections and solid credit fundamentals. Additional complexities arise when analyzing high-yield bonds issued by emerging companies, however, as sovereign risks can influence the performance of these investments. Consequently, EM corporate investing requires both bottom-up credit research and top-down country analysis. (For more on the nascent opportunity in the emerging markets, please see the sidebar "The Emergence of High Yield in EM" on page 5.)

Beyond the rapid growth and development we've seen in EM and Europe, the high-yield market overall has undergone an extraordinary transformation—with new investors, issuers, instruments, and the growing use of derivatives—changing the nature of the asset class. Its scope now extends beyond US subinvestment-grade bonds to diverse and global high-yielding instruments. These can include investment-grade and below-investment-grade securities, public and private credit markets, a corporation's entire debt and equity capital structure, and non-corporate instruments.

Headwinds, Supply and Demand

Despite the depth and breadth of today's global high-yield market, there are imminent challenges, such as diminishing liquidity (*Display 3, page 6*), which has been caused by:

- Basel III: Holding large bond inventories is more costly and challenging for banks, which must now comply with more stringent international regulations. Consequently, since the financial crisis, transacting in bonds beyond the most liquid developed-government markets has become more difficult as broker-dealer inventories have decreased in size (Display 3, page 6).
- The loss of three major broker-dealers during the financial crisis: Bear Stearns, Lehman Brothers and Merrill Lynch
- A secular decline in the risk appetite of trading desks to take principal risk
- Similar to Basel III, Solvency II: Regulatory changes that could impact insurance company investments in high-yield debt

The Emergence of High Yield in EM

Originally, high-yield emerging market issuance was dominated by sovereigns that needed to tap the capital markets. However, over the past several years, and on the back of more developed capital markets, corporates can now come to market more easily. EM capital markets now feature better accounting standards, tougher regulation and improved legal structures.

In addition, Latin America, Asia, Eastern Europe, the Middle East and Africa have experienced considerable privatization over the past decade, with newly formed companies transitioning from bank funding to capital markets, adding to the robust high-income supply in the market. EM corporates also boast broad industry diversification, strong credit quality and default rates historically comparable to those in the US and Europe.

This has not gone unnoticed by several major high-yield indices, which have changed their weightings to embrace EM economies. For example, the Bank of America Merrill Lynch Global High Yield Index was altered in 2012 to include EM corporate bonds, which represented 13% of the index.

That said, investment analysis of EM US dollar–denominated corporates requires research beyond the scope of traditional corporate credit analysis. We believe that successfully investing in EM high-yielding corporate debt calls for painstaking evaluation of a range of risks, including macroeconomic, political and legal/jurisdictional risk, in particular. Additionally, while recovery rates have been comparable to those in developed markets, the overall level of bondholder protection in each country may vary.

Given the continually evolving landscape and the complex risks involved, it bears repeating that country-, industry- and security-specific analyses are all critical to accurately assessing EM corporates.

Looking past the headwind of deteriorating liquidity, our research indicates that global high-yield issuance should remain strong as a result of combined supply and demand forces. We anticipate global bank disintermediation to continue to fuel the supply pipeline, as banks are forced to step back from their pre-crisis levels of loan activity.

Beyond the global corporate high-yield market, bank disintermediation is triggering the convergence of less liquid "private" credit with "public" credit markets such as high yield. This confluence of private credit sectors with public credit investing is unlocking investment opportunities once dominated by banks, and is now expected to lead to a meaningful change in investor leadership, as today's global investors gain direct exposure to a wider set of low-correlation asset classes, most of which were typically exclusive to banks and only available indirectly through bank equities. (For our views on this emergent opportunity, please see our white paper *Capitalizing on Credit Disintermediation*.)

Banks have historically played a critical role in driving economic growth through capital intermediation. However, with greater regulation and higher capital charges in the wake of the financial crisis, the private credit markets (meaning non-banks such as private equity firms, hedge funds, investment funds, asset managers, large commercial mortgage REITs, insurance companies and pension plans) are increasingly taking on the funding role once held by banks—providing credit for endeavors ranging from middle-market lending to large-scale government infrastructure projects.

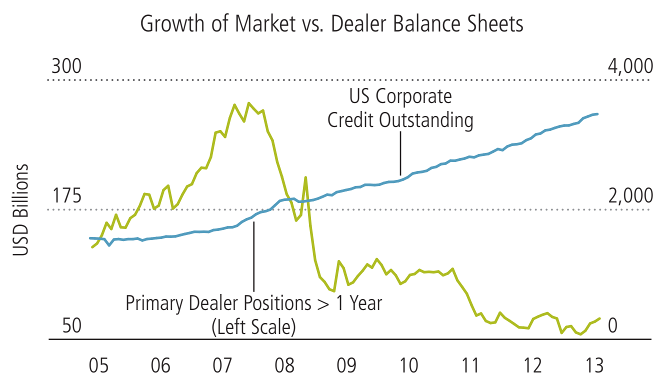
From the demand side, sustained low global interest rates suggest that investors will continue to seek investments in the expanding high-yield universe. Our outlook for the global high-yield market remains positive, and we believe that a robust review of risk factors can increase the probability of investor success.

Understanding Key Risks to Meet Specific Objectives

As the asset class has evolved, so too has the ability to have high yield and its subsectors play a range of roles within a portfolio. However, in order to isolate the risks and rewards best suited to meeting an investment objective, an understanding of how numerous risk factors have historically impacted returns across the various high-income sectors is critical, both to the decision-making process and to formulating the most effective path forward—while avoiding unintended risks.

Display 3

Market Liquidity Is Challenged



Historical analysis does not guarantee future results.

Through December 31, 2013

Source: Barclays, Bloomberg, Haver Analytics, Investment Company Institute, US Federal Reserve Board and AllianceBernstein

Summarized in *Display 4*, we have analyzed a range of systematic exposures that investors are broadly subject to when investing in high yield: benchmark-rate sensitivity/duration, default, spread/volatility, liquidity, and growth risks. Some of the conclusions are intuitive, such as benchmark-rate sensitivity/duration risk (i.e., interest-rate risk) and the lack of correlation of many high-yield sectors to interest-rate movements. Historically, the area of the global market with the most significant exposure to interest-rate risk has been bonds rated CCC, and in that case it's for a substantially *negative* beta exposure.

Default risk—frequently touted as the greatest risk to high-yield investors—varies dramatically across different rating segments of the market. While global investment-grade-rated paper usually experiences extremely low default rates over time, global, higher-quality high-yield bonds have also experienced relatively low default rates, with bonds rated BB and B experiencing 11% and 25% average five-year cumulative default rates, respectively, from 1983 to 2013. (*Display 5, page 8*).

Rather, it is in paper rated CCC and below where default losses have been concentrated and the risk is the highest, as CCCs have experienced 48% average five-year cumulative default rates over time. As a result, investors can control this risk by monitoring and, in some cases, even restricting CCC investing within a portfolio. The market is also providing an encouraging backdrop, as nearly 90% of today's US high-yield bonds are rated single-B or above.

While default risk results in permanent impairment of capital, spread changes (or "mark-to-market" risk) are another important factor that contributes to the volatility and risk profile of the high-yield market. The entire global high-yield investment universe—including higher-quality high-yield bonds—is susceptible to at least moderate amounts of spread/volatility risk. Certain market segments have proven particularly sensitive to spread/volatility risk. Short-duration bonds, Bs and CCCs in particular, have historically exhibited the most sensitivity, while higher-quality bonds, including BBBs, EM and capital securities, have generally exhibited less spread sensitivity over time.

Liquidity risk is the potential difficulty of finding a buyer when an investor wants to sell. This risk and the ability to execute investment ideas into a portfolio have always been important factors in high-yield investing. Importantly, we believe that investors should consider liquidity risk as including not only metrics such as typical bid/offer, cost to trade and tradable volumes, but also the risk that available liquidity is likely to ebb and flow based on market conditions.

Somewhat counterintuitively, declining liquidity has historically actually had a greater impact on higher-quality credit (BBBs and BBs) than lower-quality credit, given that transaction costs typically comprise a larger percentage of yield in those parts of the market. That is, nominally speaking, higher-grade credits have lower transaction costs, but when viewed as a percentage of yield, this actually reverses. That said, we believe investors need to be mindful of broader risk aversion, which has historically had a greater impact on EM credits, especially during times of crisis.

Display 4

High-Yielding Sectors and Subsectors Are Subject to a Range of Risks

	Sensitivity to...					
	Benchmark Rates	Growth	Spread Changes	Changes in Liquidity	Overall Liquidity	Default Exposure
US High-Yield	--	++	--	---	Average	Medium
US High-Yield BB	-	+	--	---	Average	Low
US High-Yield B	--	++	--	---	Average	Medium
US High-Yield CCC	---	+++	--	---	Poor	High
Pan-European High-Yield	---	+++	-	-	Average	Medium
Pan-European High-Yield BB	---	++	-	-	Average	Low
Pan-European High-Yield B	---	+++	-	-	Average	Medium
Pan-European High-Yield CCC	---	+++	-	-	Poor	High
High-Yield 1–5 Year	--	+	---	--	Average	Medium
High-Yield 1–5 Year BB	-	+	---	---	Average	Low
High-Yield 1–5 Year B	--	++	---	--	Average	Medium
High-Yield 1–5 Year CCC	---	++	---	--	Poor	High
Bank Loans	++	+	-	+	Poor	Medium
BBB Corporates	+	+	-	---	Average	Low
EM Corporates & Quasi-Sovereigns	--	++	-	---	Average	Low
Capital Securities	-	++	-	-	Average	Low
Capital Securities–Lower Tier 2	-	+	-	-	Average	Low

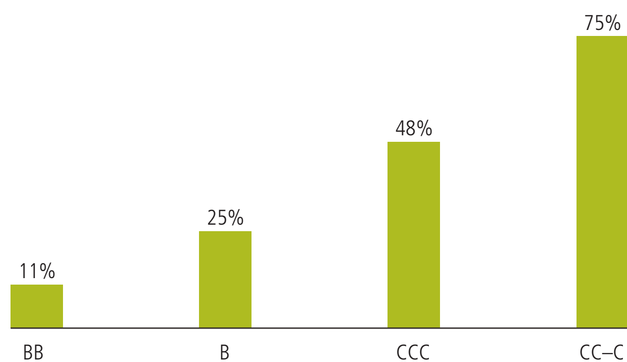
As of December 31, 2013
Source: Please refer to the Index Definitions page in the Appendix section.

Growth risk is a critical consideration as well, as it reflects a high-yield sector's sensitivity to real economic growth, which is a good proxy for many growth-related factors such as earnings. Cyclical sectors (e.g., autos, retailers, media and energy) comprise a large part of the global high-yield market, and lower-quality companies across sectors typically must generate growth in order to make their capital structures sustainable. Companies that issue high-yield bonds can also have smaller market capitalizations, short track records or sustained periods of earnings weakness. Our analysis shows that growth risk is most sensitive in bonds rated CCC and European bonds rated B. Consequently, such corporations are more vulnerable to a stalling economic recovery, low GDP growth or a deep economic downturn, any of which can exacerbate earnings growth and ultimately lead to a ratings downgrade or propel an already financially distressed company into default.

With an understanding of how to source and manage these risks, a strategic asset allocation can be developed to achieve the portfolio's aims. But given the myriad high-yielding opportunities now available across today's global landscape, what's the best investment direction to take? How can investors ensure that they aren't facing the wrong direction, which might cause them to miss an investment opportunity that may be a fit? The four paths detailed below in our "compass" section can help provide clarity and direction.

Display 5

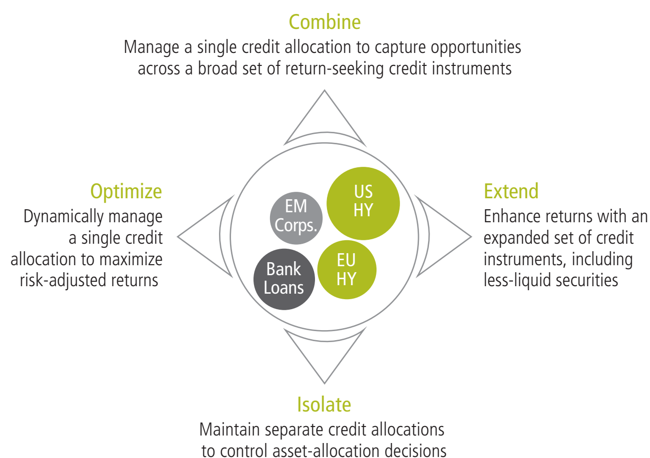
Higher-Quality Bonds Experience Lower Defaults



Historical analysis does not guarantee future results.
As of September 30, 2013
Based on Barclays indices
Source: Barclays and AllianceBernstein

Display 6

Navigating Investment Goals



Source: AllianceBernstein

Navigating Investment Goals

Clearly, using the singular reference "high yield" falls short of the range of applications available to meet specific investment objectives within an overall asset allocation. The evolution of the high-yield market allows investors to isolate or diversify specific factors and beta attributes to best meet their needs. As a result, the diverse paths now accessible to investors can be broadly segmented as *Isolating, Combining, Extending* and *Optimizing* (*Display 6*).

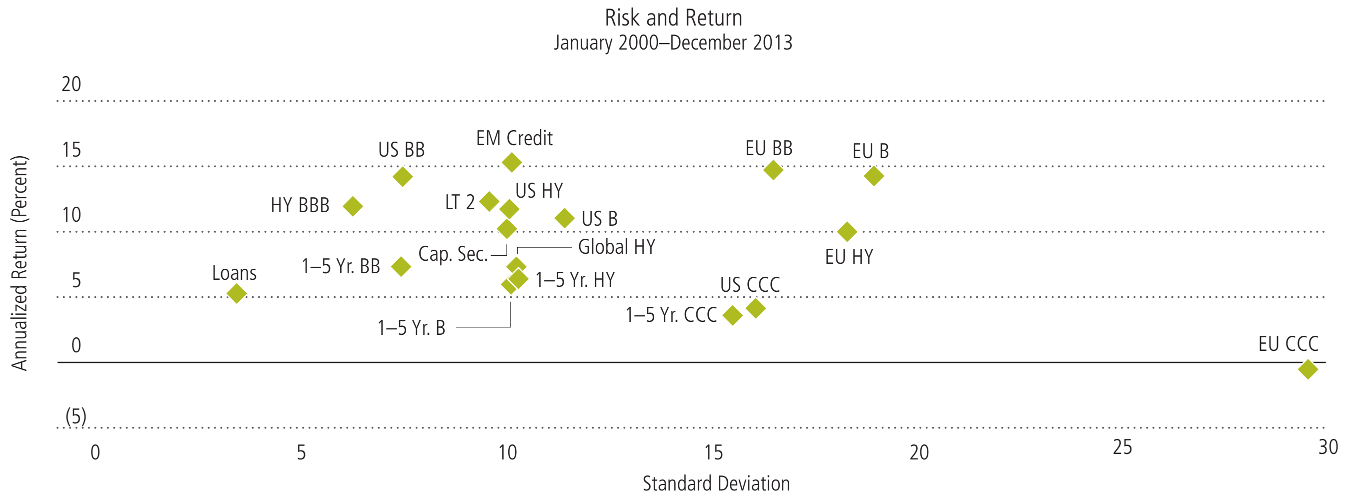
As investors survey the high-yield landscape, exploring the direction of each investment strategy can help them map a high-yield allocation best suited to meeting their portfolio's investment goals. Investors seeking specific geographic or factor attributes may be drawn to Isolating their high-yield investing in well-defined single sleeves such as European high yield, bank loans or US corporate high-yield. For example, investors concerned about default risk who have a desire to structurally lower their volatility might focus on a higher-quality short-duration strategy, which yields the dual benefits of limiting default risk by limiting or even restricting bonds rated CCC, which are the bonds most prone to default risk; lower-maturity bonds have also shown less volatility versus the broader market.

A different path may lead investors who prefer yield with more diversification across their risk-factor exposures to Combine their high-yield allocations into a single portfolio that spans various sectors of the global high-yield market. This strategy may allow the flexibility to rotate to various opportunities, permitting outperformance from both security selection and broad sector-allocation decisions. More important, given the variety of risk factors across sectors, a Combined approach can potentially create a smoother path of returns due to its more diversified portfolio.

A third direction Extends into the emergent opportunity of less-liquid private credit. High-yield allocations are a potential funding source for the private credit opportunities that are becoming more prevalent as a result of bank disintermediation. Opportunities in these fledgling sectors may enhance yield and even extend diversification to the portfolio. In some circumstances, the less-liquid nature of certain private credit investments will require a longer investment horizon and a reduced need for ready access to liquidity. The obvious attraction is the increase in yield offered by such investments—a premium benefit in low-yielding markets.

Display 7

High-Yield Sectors: A Range of Risk and Return Profiles



Historical data for illustrative purposes only. Past performance is no guarantee of future results.
As of December 31, 2013
Please refer to the Index Definitions page in the Appendix section.

While high yield has historically been regarded as the "high-risk/high-return" segment of the fixed-income market, its growth and evolution reveals a far greater breadth of risk and return (*Display 7*). These changes are permitting new strategies to emerge that enable investors to apply more dynamic strategies that Optimize high-yield allocations and maximize risk-adjusted returns. Investors who require yield but who are sensitive to outsize drawdowns need not abandon high yield altogether. Actively managing this type of strategy affords the dual benefits of continually monitoring downside risk, and the flexibility to de-risk the portfolio when the compensation is not commensurate.

Maintaining portfolio liquidity is critical in this strategy in order to actively manage the overall "beta" of the portfolio. Investments in high-grade securities and the application of risk-hedging strategies/overlays can expand the toolkit to buffer the portfolio in periods of market stress, and improve the odds of success. In fact, the use of derivatives is almost a necessity in managing such a strategy for two main reasons:

1. Sufficient liquidity to change allocations between markets—such as by buying or selling protection on high-yield CDX indices or the iTraxx Crossover Index.

2. The ability to create tail hedges that protect a portfolio from large drawdowns when simple diversification fails. Here, option-like strategies are best and can often involve other asset classes that are highly correlated to high yield in crises.

Optimized strategies are more active by nature and require advanced research skills to implement effectively.

As investors assess which path is best suited to their investment objectives, they cannot overlook changing liquidity dynamics. Investors must think strategically about how to manage liquidity risk given the complexity and uncertainty of today's high-yield market. Investment managers are now obligated to demonstrate this critical core competency to their clients in both their portfolio management and trading capabilities. Portfolio diversification now provides the benefits of both issuer and liquidity diversification.

Expanding the number of positions that can be sold to de-risk a portfolio or exploit opportunities may serve investors well in a fickle market. Meanwhile, keeping portfolio turnover relatively low by maintaining a core of long-term holdings underwritten to a longer investment horizon allows an investment manager to avoid paying unnecessary bid/offer spreads.

Conclusion: Next Gen Fixed Income

There clearly have been significant changes in the high-yield fixed-income market over the past four decades. The high-yield asset class has transformed from a US silo to one that truly spans the globe. This globalization is underscored by the range of opportunities we see driving high-yield issuance in the medium term, specifically within the European high-yield market, global financials, emerging market corporates and the mainstreaming of private credit. The result is a new and expansive market that offers investors increased choice with greater complexity.

As a consequence of the breadth and depth of these new opportunities, it's more important than ever for investors to know where they are headed to ensure their high-yield allocation decisions best meet their investment goals—and to avoid heading in the wrong direction. The ability to isolate or combine risk factors enables investors to construct a range of risk and return profiles to better meet a spectrum of investment goals. As noted earlier, the landscape for high yield has evolved to include high-yielding securities ranging from high-grade to below-investment-grade, and they are not always corporate in nature. We believe that awareness and in-depth analysis of the risk factors associated with various high-yield sectors and subsectors is a good starting point from which to increase the likelihood of success.

The four directions investors can take (Isolate, Combine, Optimize and Extend), as mapped out in our credit compass section, may still leave investors asking, "So which path is best for me?" We believe three questions can help crystallize investment goals and determine the most appropriate path forward:

- Do I want to Isolate a specific high-yield risk factor or market attribute that will complement my portfolio allocation; or is the goal to enhance yield, whereby the ability to Combine high-yield sectors, and diversify opportunities and risk, makes the most sense for my portfolio?

- For investors seeking to source opportunities from the broad high-yield universe, a second question is: Do I need to Optimize my high-yield allocation to maximize risk-adjusted returns, or do I need to maximize nominal returns? Investors who seek yield and prefer a strategy with less volatility than normally associated with high yield will be drawn to a strategy that Optimizes their high-yield allocation by focusing on risk-adjusted returns.

- Lastly, investors who are comfortable with the general ebbs and flows of the high-yield market should ask: Does my portfolio permit me to capitalize on credit distermediation by Extending into private credit opportunities transitioning from banks to investors? This strategy seeks to enhance yield and performance, but it requires investors to forgo the secondary-market liquidity normally found in the public securities market.

Investors with the flexibility of a broad mandate are in the best position to select the most promising investments within the diverse range of new opportunities. Capturing these global or multi-sector opportunities can also help increase diversification.

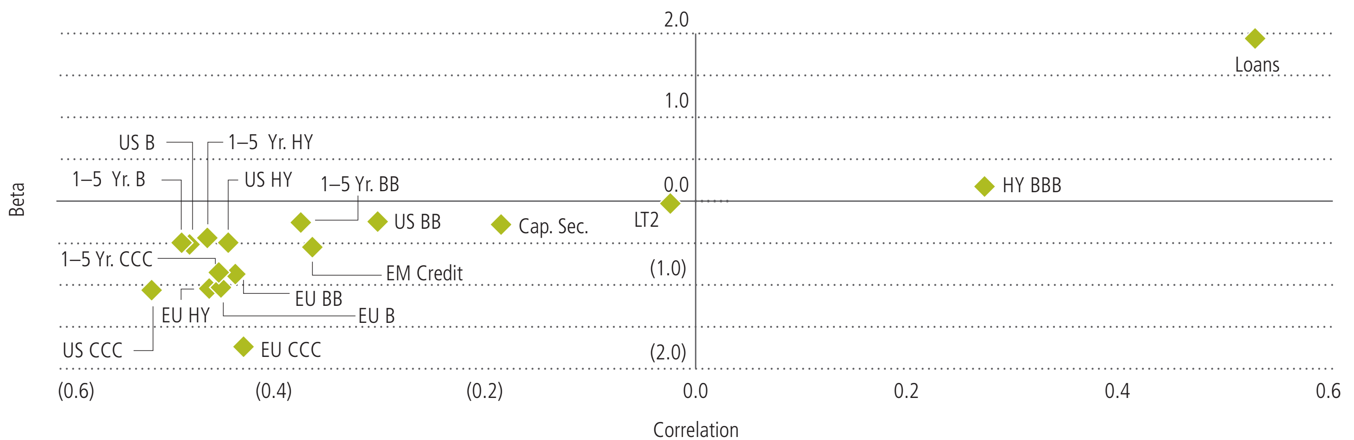
Regardless of the path ultimately chosen, the future of fixed-income investing is sure to include a high-yield market that will reward and challenge investors, stress markets, and create new opportunities.

Appendix 1: Additional Displays

The X-Y scatterplots below, and on the following page, are based on regressions of monthly total returns since the inception of each index against the following risk factors: interest-rate, growth, spread/volatility, and, for the period since 2007, "changes in liquidity" analysis. Interest-rate risk was analyzed using monthly total returns of the "on the run" US benchmark 10-year Treasury bond. Growth risk was analyzed using quarterly changes in US real GDP. Spread/volatility risk was analyzed using monthly changes in the Barclays US High-Yield Index OAS. Changes in liquidity risk were analyzed using monthly changes in the average Liquidity Cost Score for the Barclays US High-Yield Index. ■

Display 1

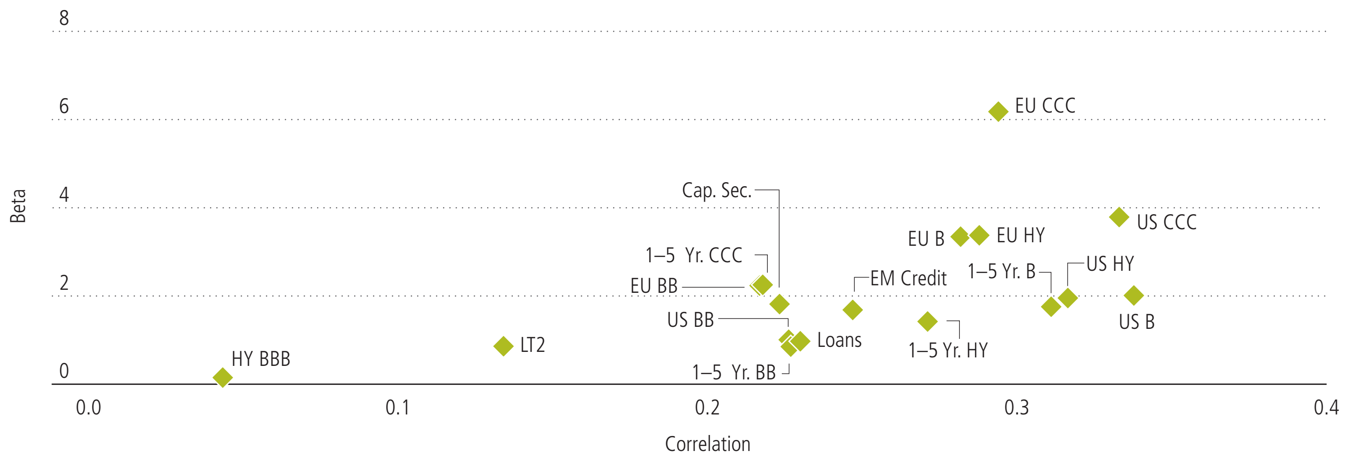
Interest-Rate Risk: Both Positive and Negative Correlation and Beta



Please refer to the Index Definitions on page 14.

Display 2

Growth Risk: Positive Correlation and Beta

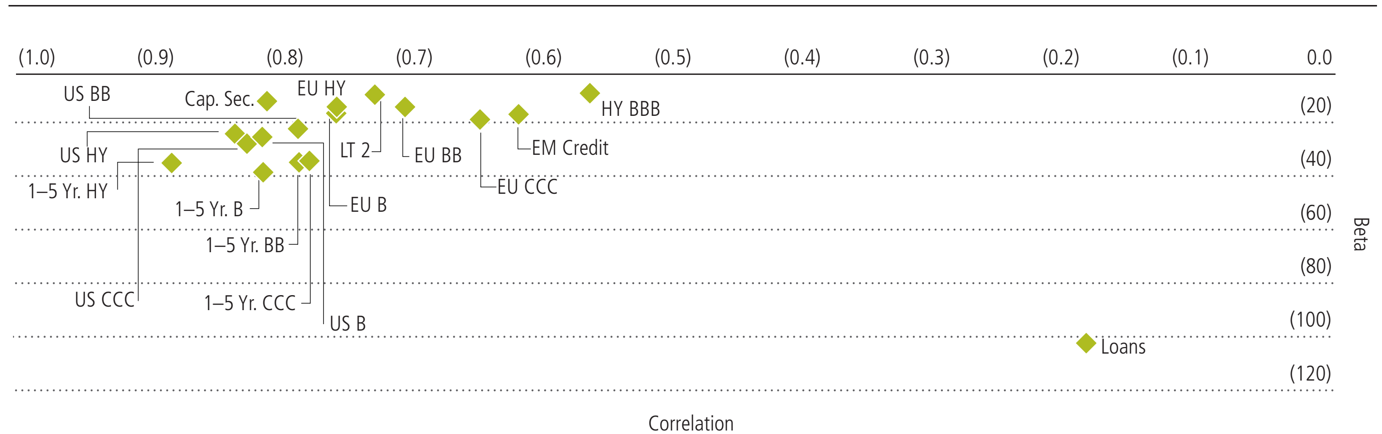


Please refer to the Index Definitions on page 14.

Appendix 2: Additional Displays, continued

Display 3

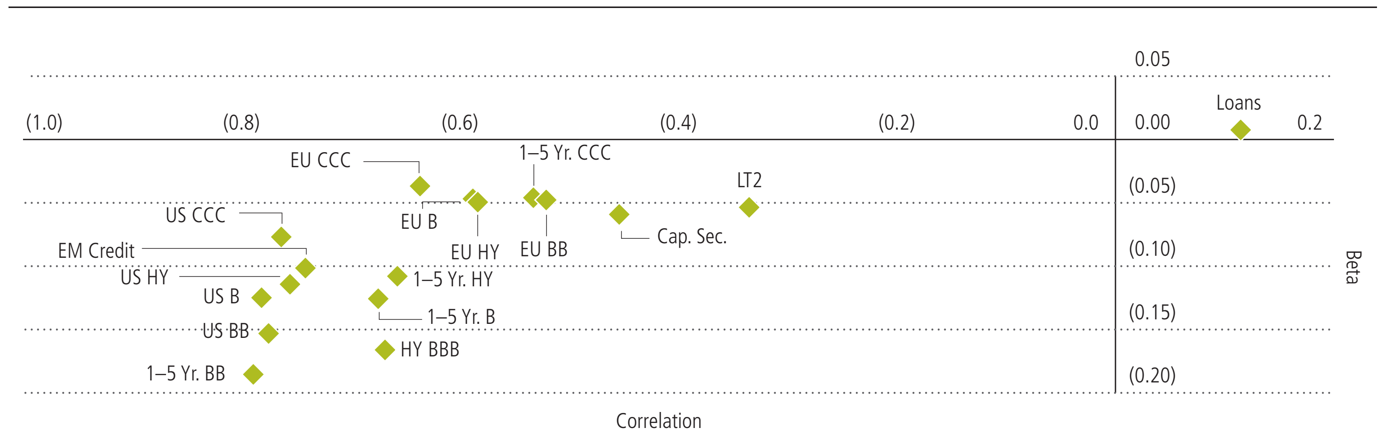
Spread/Volatility Risk: Negative Correlation and Beta



Please refer to the Index Definitions on page 14.

Display 4

Liquidity: Mostly Negative Beta



Please refer to the Index Definitions on page 14.

Glossary of Selected Terms

Basel III: Published in 2009 in response to the global credit crisis, it delineates reform measures designed to improve regulation, supervision and risk management in the global banking sector. It mandates that banks must maintain proper leverage ratios and meet certain capital requirements.

Benchmark Sensitivity/Duration Risk: The sensitivity of investments to changes in benchmark rates represents a common concern for many high-yield investors. Rate sensitivity is most impacted by duration, a measure of a bond's price sensitivity to changes in interest rates. Hence, the shorter the duration of a bond, the less sensitive its price is to changes in its yield. In a high-yield bear market, shorter-duration bond prices will not fall by as much as comparable bonds with a longer duration.

Contingent Capital Notes: Commonly known as "CoCos," these securities convert to equity contingent upon a specified event. Many banks are now issuing CoCos to meet tightened regulatory requirements, such as Basel III.

Growth Risk: Corporations that issue high-yield bonds can have relatively small market capitalizations, short track records or sustained periods of earnings weakness. Consequently, such companies are more vulnerable to a stalling economic recovery, low GDP growth or a deep economic downturn, any of which can exacerbate earnings growth and ultimately lead to a ratings downgrade or propel an already financially distressed company into bankruptcy.

Liquidity Risk: More than other types of securities, high-yield bonds are subject to greater levels of liquidity risk, which refers to the possibility that an investor may have difficulty finding a buyer when the investor wants to sell, and, as a result, the investor may be forced to sell at a significant discount to market value.

Sovereign Risk: This type of risk varies from country to country and is more pronounced in EM investing. For example, a frontier nation with a less stable government may freeze capital, or its central banks may change regulations, effectively reducing or voiding excess returns.

Spread/Volatility Risk: Investors should be prepared for volatility with high-yield assets, especially when liquidity is declining. High-yield returns tend to fluctuate to a much greater extent than those of other bond sectors. Additionally, high-yield bonds tend to thrive when the US economy expands. That's because a growing economy bolsters issuers' business prospects and credit standings, which causes the extra yield offered by high-yield bonds versus Treasury bonds—the yield spread—to shrink. This works in favor of high-yield prices, helping to counter the impact of rising Treasury yields.

Subordinated Financial Instrument: A security that ranks below other securities with regard to claims on assets or earnings. ■

Index Definitions

Display 4	Displays 7–11	Benchmark
US High-Yield	US HY	Barclays US High-Yield 2% Issuer Capped
US High-Yield BB	US BB	Barclays US High-Yield 2% Issuer Capped, BB Component
US High-Yield B	US B	Barclays US High-Yield 2% Issuer Capped, B Component
US High-Yield CCC	US CCC	Barclays US High-Yield 2% Issuer Capped, CCC Component
Pan-European High-Yield	EU HY	Barclays Pan-European High-Yield 2% Issuer Constraint
Pan-European High-Yield BB	EU BB	Barclays Pan-European High-Yield, BB Component
Pan-European High-Yield B	EU B	Barclays Pan-European High-Yield, B Component
Pan-European High-Yield CCC	EU CCC	Barclays Pan-European High-Yield, CCC Component
High-Yield 1–5 Year	1–5 Yr. HY	Barclays US High-Yield 1–5 Year
High-Yield 1–5 Year BB	1–5 Yr. BB	Barclays US High-Yield 1–5 Year, BB Component
High-Yield 1–5 Year B	1–5 Yr. B	Barclays US High-Yield 1–5 Year, B Component
High-Yield 1–5 Year CCC	1–5 Yr. CCC	Barclays US High-Yield 1–5 Year, CCC & Below Component
Bank Loans	Loans	Credit Suisse Leveraged Loan
BBB Corporates	HY BBB	Barclays US High-Yield 2% Issuer Capped, BBB Component
EM Corporates & Quasi-Sovereigns	EM Credit	Barclays Emerging Markets USD Corporate + Quasi-Sovereign
Capital Securities	Cap. Sec.	Barclays Global Capital Securities
Capital Securities–Lower Tier 2	LT2	Barclays Global Capital Securities–Lower Tier 2
	Global HY	Barclays Global High Yield

As of December 31, 2013
Source: Barclays, Credit Suisse and AllianceBernstein

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