Brookfield

The Opportunity in Infrastructure Debt

PUBLIC SECURITIES GROUP

We see a compelling opportunity in the debt of infrastructure companies that form the backbone of the global economy.

Infrastructure debt is a growing asset class powered by tailwinds to infrastructure growth—what we call the "Three Ds"—the megatrends of decarbonization, digitalization and deglobalization. Through 2040, public and private entities are expected to spend nearly $80 trillion to modernize utilities as well as build, expand and improve essential energy, data and transportation infrastructure. At the same time, the unique characteristics of infrastructure enable infrastructure debt to offer several potential investment benefits to portfolios.

The Unique Characteristics of Infrastructure

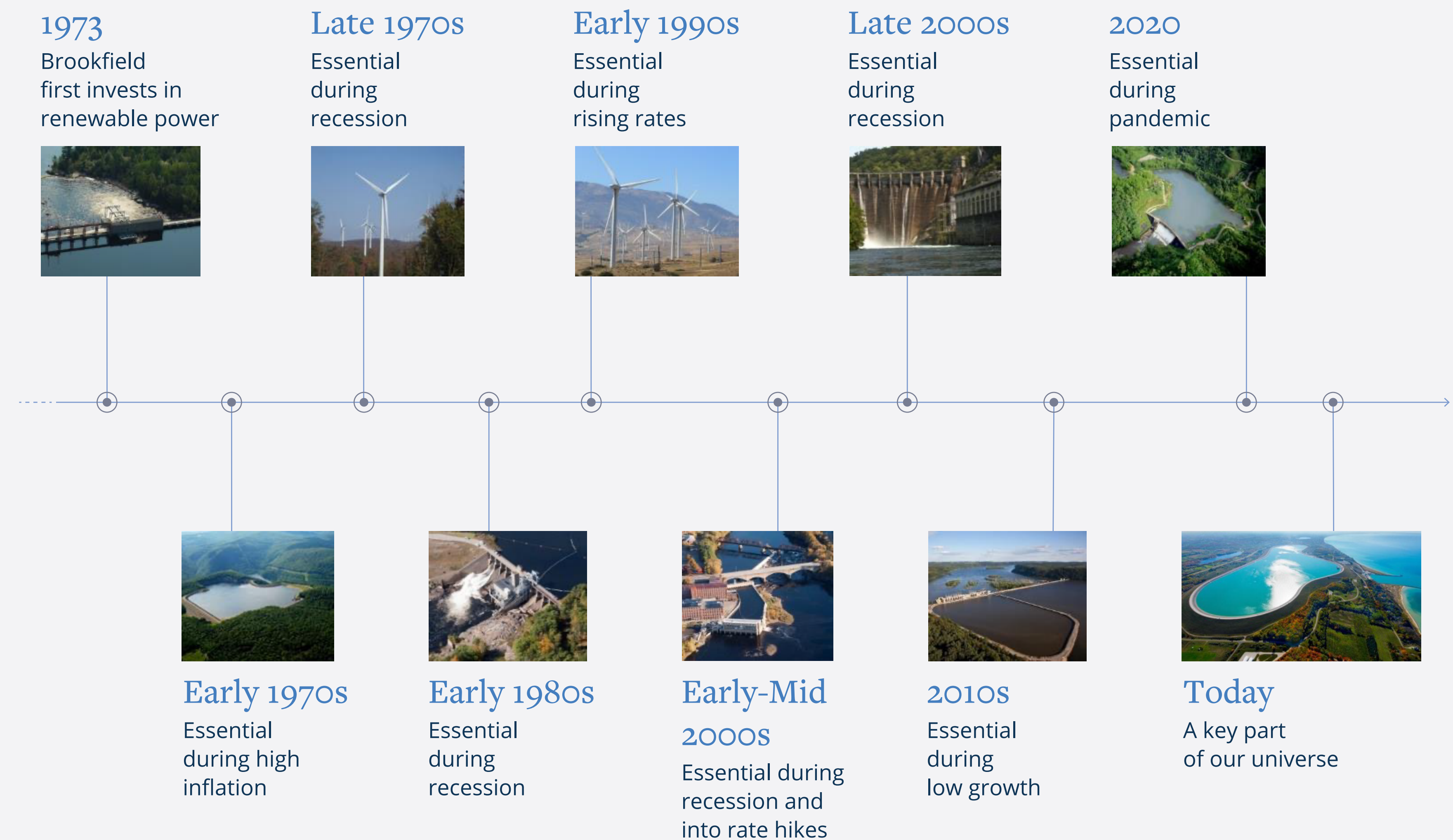
Infrastructure assets form the backbone of the modern economy. They include the networks and systems that provide essential services and facilitate economic activity, and they tend to involve the movement or storage of goods, water, energy, people or data. Examples of these assets include toll roads, bridges, airports, power lines, solar and wind farms, fiber networks, communication towers, data centers and much more.

Across the heterogeneous infrastructure universe, assets have varying levels of sensitivity to risk and return drivers, depending on the subsector. Yet while infrastructure assets are diverse, they are bound together by several hallmark unique characteristics.

They are essential. Infrastructure assets generally serve as the backbone for basic, irreplaceable public services that support economic and social activity. As a result, these infrastructure assets benefit from relatively inelastic demand throughout cycles.

Infrastructure Assets Are Essential Throughout Cycles

Illustrative Example: Utilities & Renewables



As of November 30, 2024. For illustrative purposes only. Historical examples refer to Brookfield Asset Management Inc. and its affiliates. The mention of any specific security is not intended as investment advice and it is not a recommendation, offer or solicitation for any person to buy, sell or hold any particular and it is not an indication of trading intent or current holdings or future holdings of Brookfield or the prediction of investment performance. The reader should not assume that an investment in the securities identified was or will be profitable. Views, opinions, forecasts or other information expressed herein are current as of the dates mentioned and are subject to change at any time without notice.

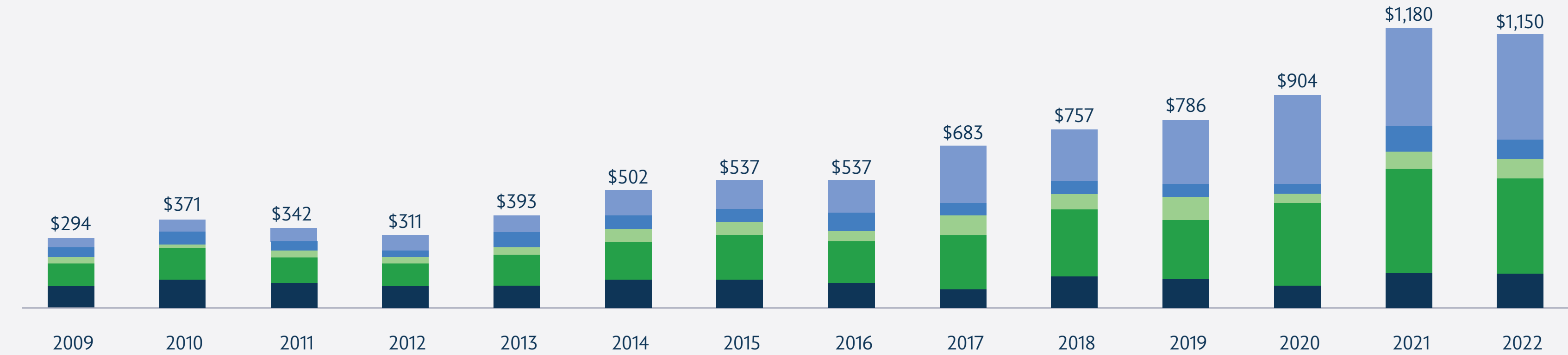
They have high barriers to entry. Due to high capital costs, economies of scale, geographic location advantages and contractual and/or regulatory frameworks, infrastructure assets typically have high barriers to entry and often face little or no competition.

They generate stable and predictable long-term cash flows. The regulatory framework or concessions under which infrastructure services are provided tend to last for more than 30 years, with pricing provisions aimed at generating a predictable return over time.

Owners of infrastructure assets typically have high up-front investment costs and navigate a complex regulatory environment to develop, maintain and upgrade their assets over time. Their needs as borrowers vary, ranging from financing of capital expenditures and acquisition finance to refinancings and recapitalizations. Infrastructure lending across the board has increased steadily and significantly over the past decade-plus thanks to the strong long-term fundamental drivers powering investment in the asset class. The investment universe of this debt spans from investment grade to high yield, hybrids and term loans, with each offering potential portfolio benefits.

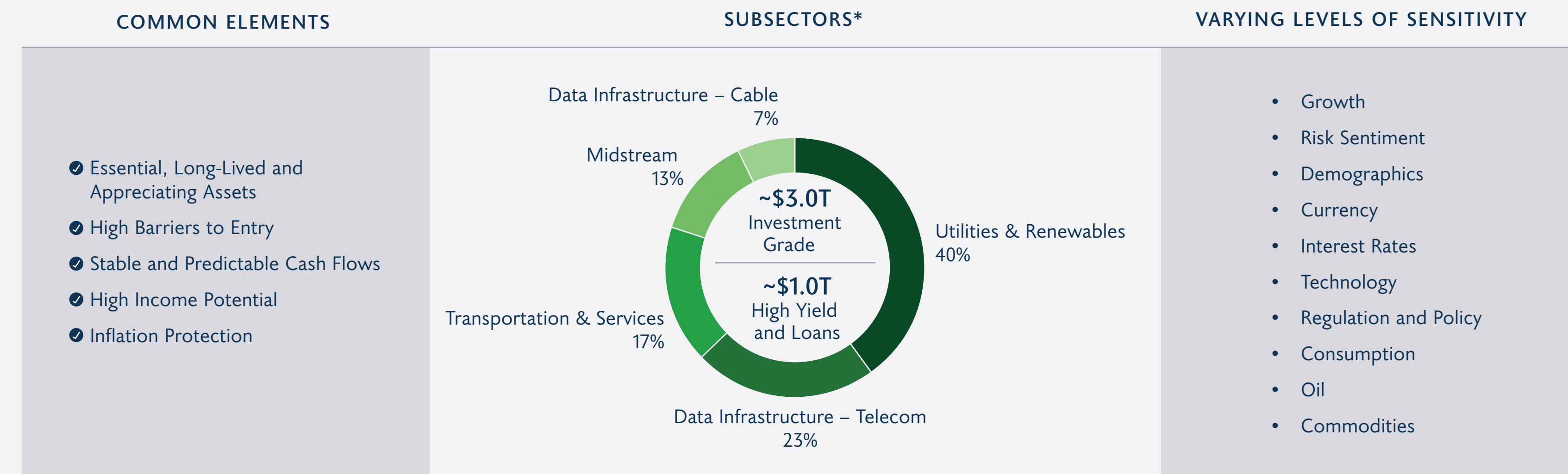
The Growing Infrastructure Debt Universe

Billion $



Source: IJ Global Data Transactions; accessed June 2023.

Infrastructure subsectors share attractive common elements but have diverse fundamental drivers of risk and return.



As of December 31, 2023. Source: Brookfield PSG, Bloomberg. See disclosures for additional information.

*Represents the Infrastructure Sectors, as defined by Brookfield, of the ICE BofA Global Corporate Index, ICE BofA Global High Yield Index, and Bloomberg's universe of loans.

The Portfolio Benefits of Infrastructure Debt

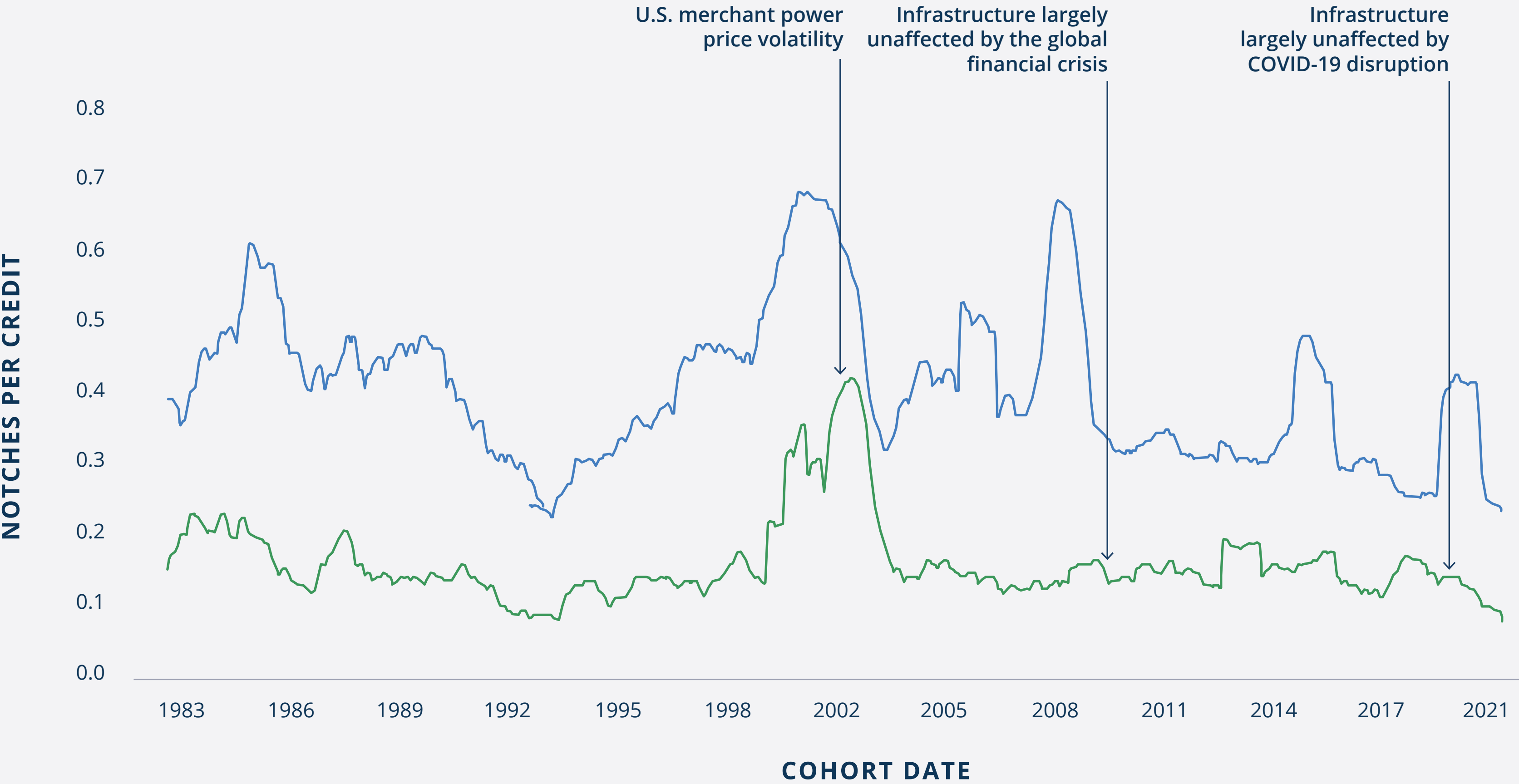
The common characteristics of infrastructure—particularly the providing of essential services in markets with high barriers to entry and consistent cash flows—are behind the potential portfolio benefits that infrastructure debt can offer.

Lower ratings volatility

We have found that infrastructure issuers have generally been higher-quality businesses compared with non-real asset companies, which may face more intense competition because of fewer barriers to entry. As a result, infrastructure ratings have historically been more stable than nonfinancial corporate issuers (NFC) ratings. On average, ratings for total infrastructure securities have been 61% less volatile than NFC ratings.

Infrastructure Ratings Have Been Less Volatile Historically

One-Year Rating Volatility



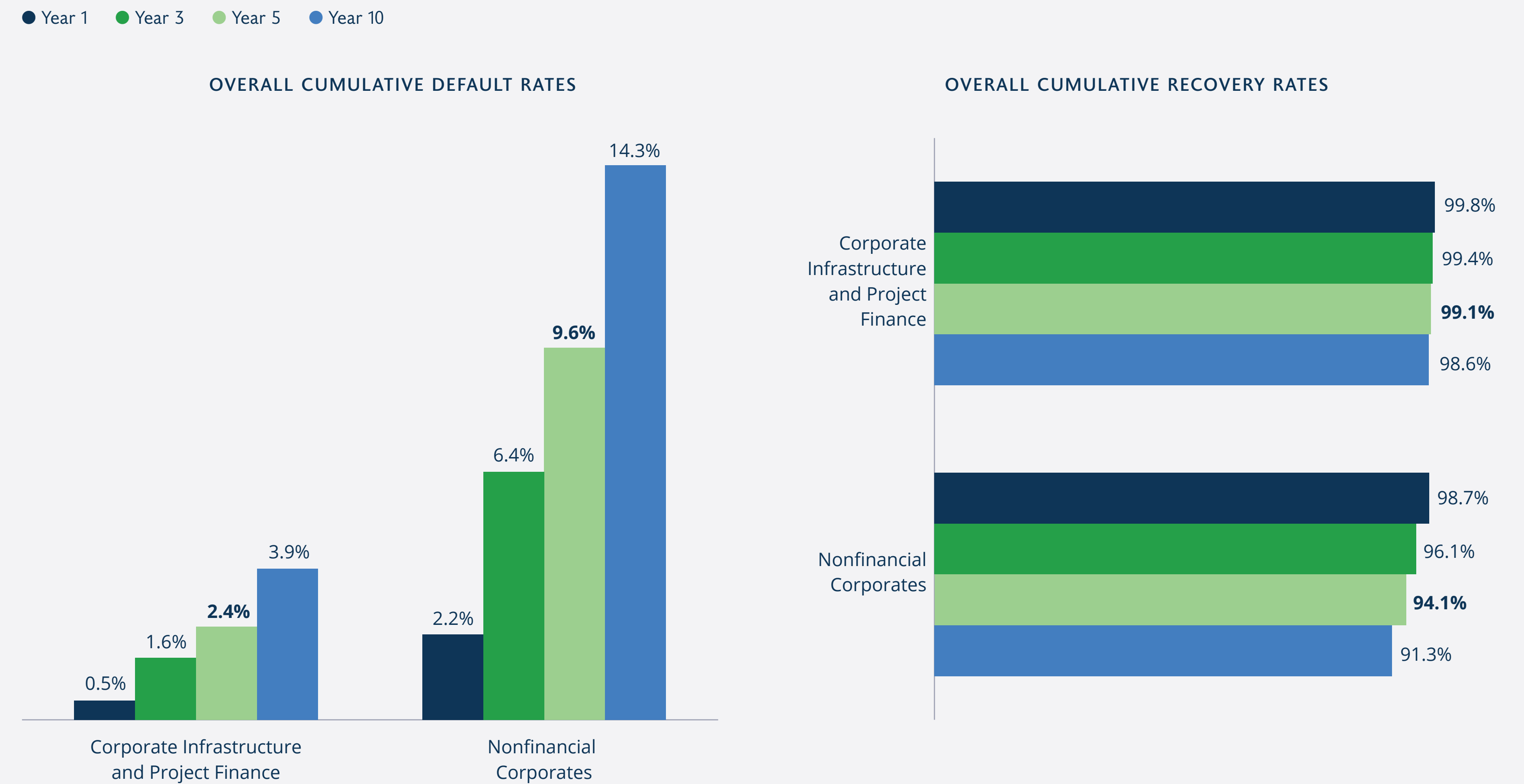
Source: Moody's "Infrastructure Default and Recovery Rates, 1983-2022."

Lower default rates and higher recovery rates

Infrastructure debt across the ratings spectrum has historically exhibited lower incidence of default and higher recovery rates than the debt of non-real asset companies. The cumulative five-year default rate for nonfinancial corporates has been 9.6%, while infrastructure corporate and project finance has been 2.4%. In aggregate, infrastructure debts have historically been less likely to incur credit losses than NFCs, especially over longer horizons. On average, a total infrastructure debt security suffered credit losses amounting to 0.3% of its face value over five years and 0.5% of its face value over 10 years, compared with 6.0% and 8.9%, respectively, for a typical NFC.

We attribute the lower default rates to the attractive fundamental characteristics of the underlying assets that infrastructure companies own and operate. Meanwhile, when these companies do default, we attribute investors being able to recoup more of their investment to the high-quality assets that back infrastructure companies. This stronger underlying collateral generates cash flows that creditors typically have a priority claim on.

Infrastructure Debt Has Relatively Low Default Rates and Higher Recovery Rates



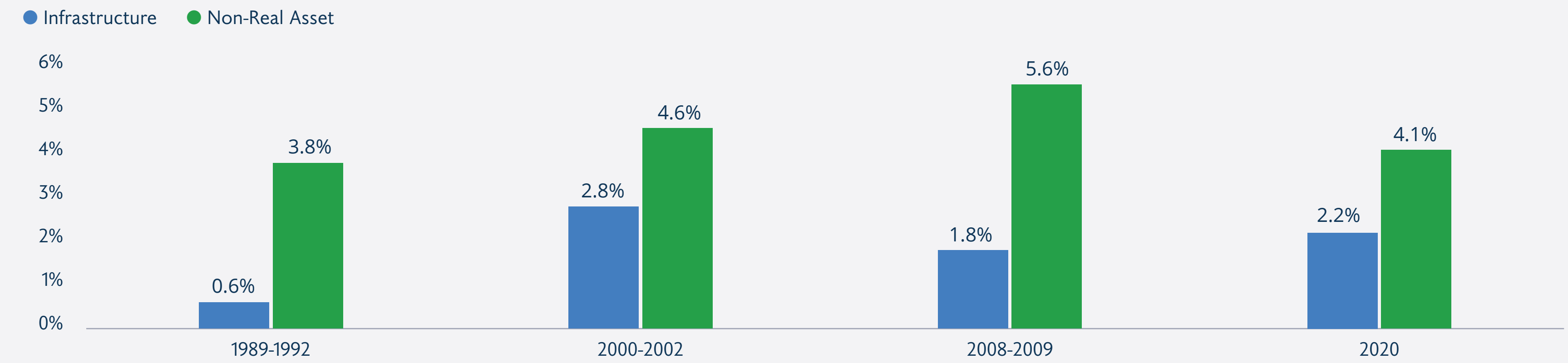
Source: Moody's "Infrastructure Default and Recovery Rates, 1983-2022."

Low cyclicality

Given infrastructure debt's higher quality and lower default rates, we find that it has offered defensiveness in periods of distress. Utilities especially tend to be more defensive and have historically outperformed in economic downturns.

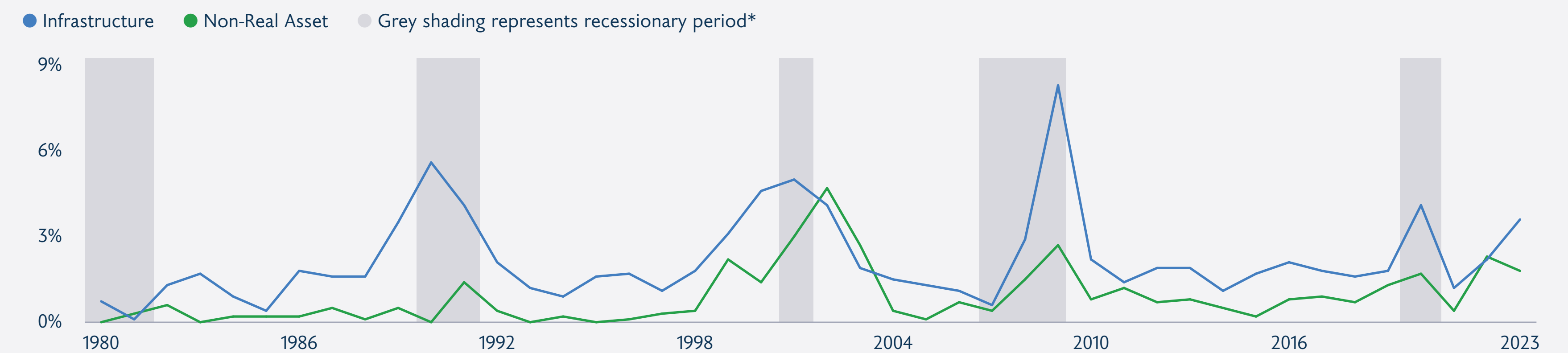
Infrastructure Debt Has Offered Defensiveness in Periods of Distress

Average Annual Default Rates During Periods of Economic Stress



As of December 31, 2023. Source: Moody's and Brookfield PSG research. The time frames represent recent periods of default rates 200 basis points (bps) or higher than the historical average. The long-term annual average back to 1920 is 2.8%. Brookfield classifies the following sectors as infrastructure: cable & satellites; telecommunications; transportation and utilities.

Average Annual Default Rates (1980-2023)



As of December 31, 2023. Source: Moody's and Brookfield PSG research. The time frames represent recent periods of default rates 200 basis points (bps) or higher than the historical average. The long-term annual average back to 1920 is 2.8%. Brookfield classifies the following sectors as infrastructure: cable & satellites; telecommunications; transportation and utilities.

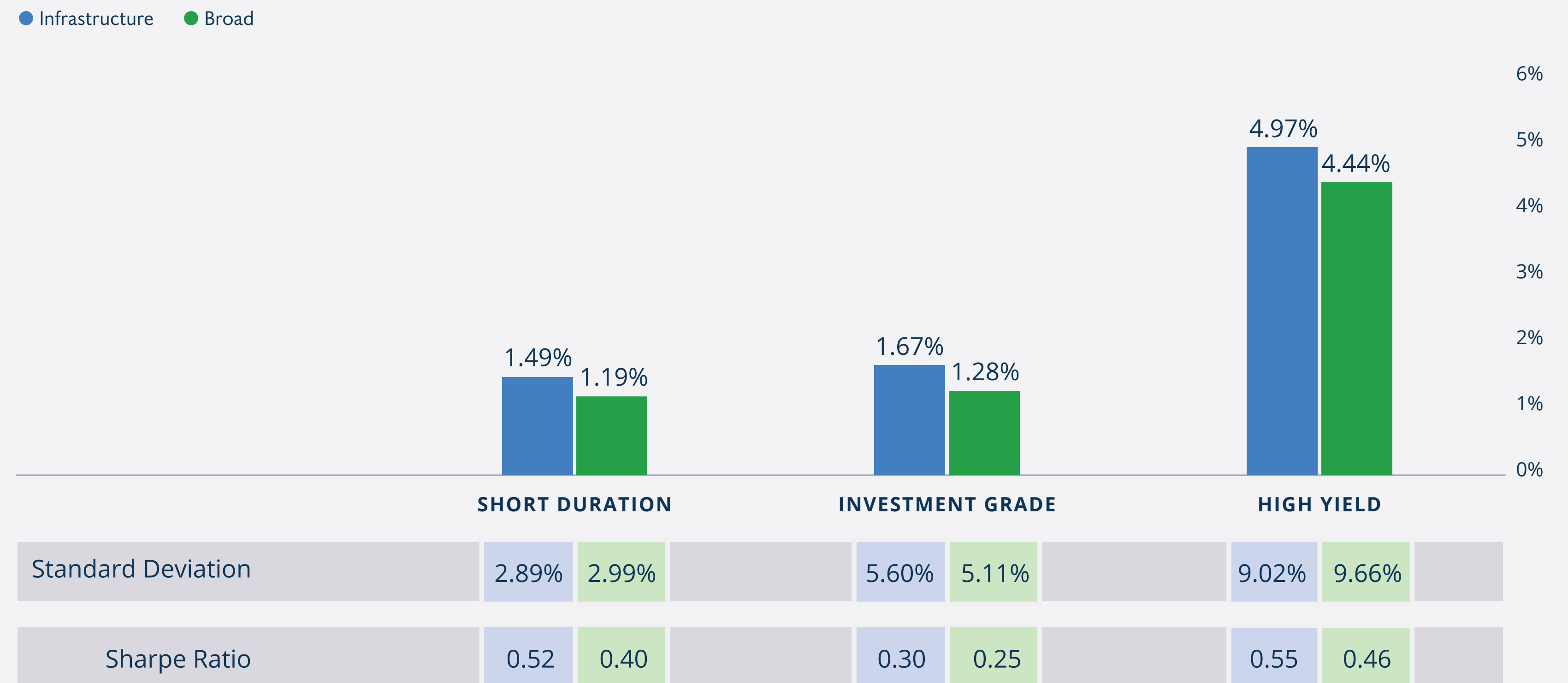
* National Bureau of Economic Research (NBER) based Recession Indicator for the United States from the Peak through the Trough. Full calendar year shaded if at least one month in that calendar year was considered a recessionary period.

Attractive risk-adjusted returns

Infrastructure debt can potentially provide attractive risk-adjusted returns. Indeed, we find infrastructure debt has historically outperformed similarly rated broader corporates, while providing exposure to investments that are deemed to be essential in nature. We attribute this outperformance to infrastructure assets' higher quality and defensive nature in down markets.

Infrastructure Has Historically Outperformed Broad Sectors

Annualized Excess Returns vs. Government Bonds (December 31, 2002-September 30, 2024)



	Short Duration – Infrastructure	Short Duration – Broad	Investment Grade – Infrastructure	Investment Grade – Broad	High Yield – Infrastructure	High Yield – Broad
Standard Deviation	2.89%	2.99%	5.60%	5.11%	9.02%	9.66%
Sharpe Ratio	0.52	0.40	0.30	0.25	0.55	0.46

For the period December 31, 2002 through September 30, 2024. Source: Brookfield PSG, Bloomberg. Period reflects longest available dataset for the majority of the indexes in scope. Standard Deviation represents the annualized standard deviation of the monthly excess returns. Sharpe Ratio shown with this standard deviation as the denominator. Infrastructure refers to the infrastructure sectors, as defined by Brookfield, of each respective index presented. Short Duration refers to the ICE BofA 1-5 Year U.S. Corporate Index (CVA0); Investment Grade refers to the ICE BofA U.S. Corporate Index; Hybrids/Preferreds not shown due to the ICE Variable Rate Preferred & Hybrid Securities Index inception date subsequent to start date; High Yield refers to the ICE BofA U.S. High Yield Index. See disclosures for index definitions. **It is not possible to invest directly in an index. Index performance is shown for illustrative purposes only and does not predict or depict the performance of any investment. Past performance is not indicative of future results.**

Attractive spreads

We find that infrastructure debt currently offers a premium over similarly rated broader corporates, while providing exposure to investments that are deemed to be essential in nature.

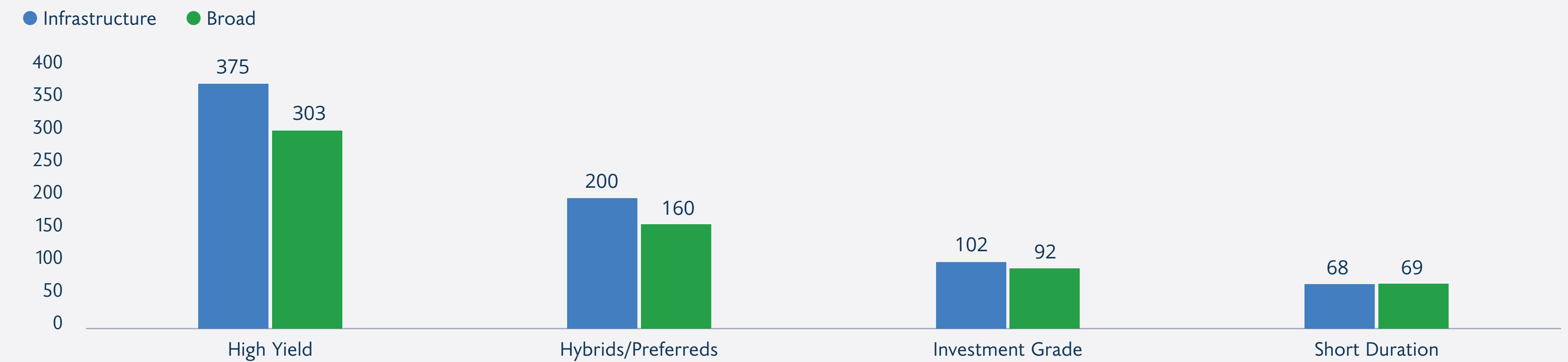
Within high yield, this has been driven by dislocation within the data infrastructure subsector, particularly among legacy telecommunications issuers. Telecommunications is historically a high-capital-expenditure sector, and it is going through structural changes due to competitive repositioning of legacy businesses amid technological disruption, including significant build-out of fiber networks to replace copper networks.

While we expect some telecommunications defaults among several large high-profile issuers, we believe there is attractive relative value to be found among certain high-yield issues backed by high-quality infrastructure assets. Certain owners of high-quality fiber networks are likely to be key beneficiaries of AI-related demand for low-latency bandwidth. Indeed, there have been several recent announcements of large deals with hyperscalers for dedicated capacity on these networks.

We also currently see infrastructure hybrids and preferreds offering a spread advantage. We believe this is a potential mispricing of many investment-grade-quality issuers, driven by the relative complexity of these securities. The result is attractive yields with less credit risk than in broad sectors.

Infrastructure Offers a Potential Spread Advantage Over Broad Sectors

Option-Adjusted Spread (bps)



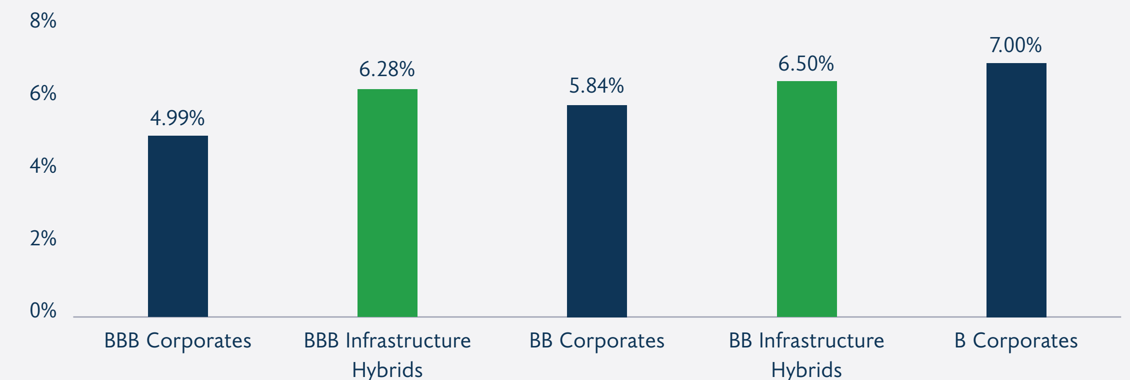
As of September 30, 2024. Source: Brookfield PSG, Bloomberg. Infrastructure refers to the infrastructure sectors, as defined by Brookfield, of each respective index presented. Short Duration refers to the ICE BofA 1-5 Year U.S. Corporate Index; Investment Grade refers to the ICE BofA U.S. Corporate Index; Hybrids/Preferreds refers to the ICE Variable Rate Preferred & Hybrid Securities Index; High Yield refers to the ICE BofA U.S. High Yield Index. See disclosures for index definitions. **It is not possible to invest directly in an index. Index performance is shown for illustrative purposes only and does not predict or depict the performance of any investment. Past performance is not indicative of future results.**

Infrastructure Hybrids Offer a Potential Yield and Spread Advantage with Less Credit Risk

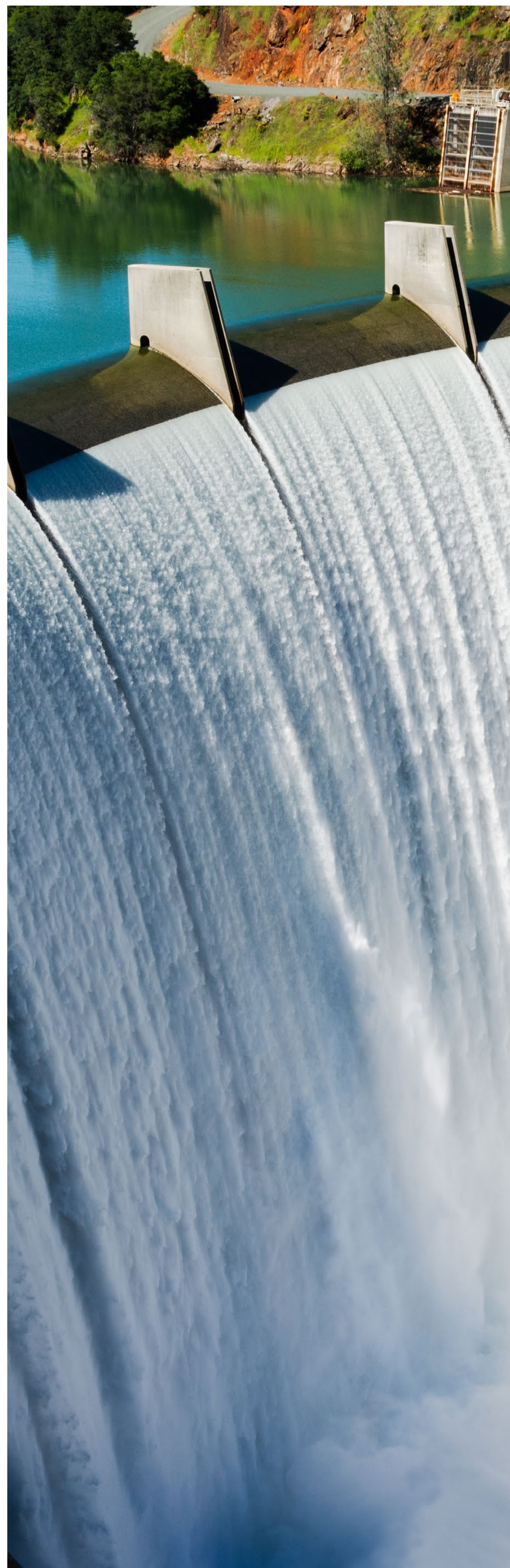
Yield to Worst

Infrastructure Hybrid/Preferred Characteristics:

- Predominantly investment-grade issuer credit ratings
- Concentrated in our sectors of expertise: high-quality utilities and midstream
- Lightly covered market with potential inefficiencies
- Opportunity to take instrument risk while minimizing credit risk



As of September 30, 2024. Source: Brookfield PSG, Bloomberg. BBB Corporates refers to the ICE BofA BBB U.S. Corporate Index. BBB Infrastructure Hybrids refers to the BBB-rated securities in infrastructure sectors, as defined by Brookfield, of the ICE Variable Rate Preferred & Hybrid Securities Index. BB Infrastructure Hybrids refers to the BB-rated securities in infrastructure sectors, as defined by Brookfield, of the ICE Variable Rate Preferred & Hybrid Securities Index. BB Corporates refers to the ICE BofA BB U.S. High Yield Index. B Corporates refers to the ICE BofA B U.S. High Yield Index. See disclosures for index definitions. **It is not possible to invest directly in an index. Index performance is shown for illustrative purposes only and does not predict or depict the performance of any investment. Past performance is not indicative of future results.**



The Brookfield Advantage

To access the opportunity in infrastructure debt, we believe it is key to work with a manager with infrastructure expertise rooted in superior fundamental and credit analysis. We believe a deep understanding of the assets backing debt can lead to capital preservation and better investment outcomes.

At Brookfield PSG, we have extensive experience investing in infrastructure across the capital structure—from listed equities to hybrids to term loans and corporate bonds—as well as across multiple market cycles. We believe this gives us an advantage in uncovering potential opportunities to gain exposure to the attractive characteristics of infrastructure assets.

As we seek to capture such opportunities, we aim to add value to real asset debt portfolios through our security selection, sector allocations and credit allocations, while prioritizing capital preservation and income capture. We employ rigorous analysis to determine our exposures, building our portfolios in all environments based on investment conviction, relative attractiveness of individual issues and the investment goals of our clients.

BROOKFIELD CAN INVEST ACROSS THE CAPITAL STRUCTURE

Case Studies:
Capturing the Portfolio Benefits of Infrastructure Debt

Liquid Complement to a Private Infrastructure Portfolio

Investment Need

Client with a large private infrastructure portfolio aiming to maintain liquidity for inflows and outflows and maintain exposure to infrastructure.

Infrastructure Debt Portfolio

A diversified, liquid portfolio of high-yield infrastructure debt that provides liquidity as well as the potential for income and diversification.

Portfolio Optimization

Investment Need

Large insurance client aiming to increase portfolio yield relative to existing bond assets and offer attractive risk profile.

Infrastructure Debt Portfolio

A diversified portfolio of high-quality infrastructure debt designed to be a yield-enhancing allocation that can help optimize the overall portfolio, while providing the attractive potential risk characteristics infrastructure investment grade may offer.

Enhanced Returns

Investment Need

Multi-asset allocation with desire to enhance risk return profile and capture dislocations.

Infrastructure Debt Portfolio

A portfolio of infrastructure hybrids designed to provide diversification and attractive potential risk-adjusted returns as well as serve as an additional way to achieve asset allocation alpha.

Disclosure Information

All investing involves risk. The value of an investment will fluctuate over time, and an investor may gain or lose money, or the entire investment. Real assets include real estate securities, infrastructure securities and natural resources securities.

Fixed income risks include interest rate and credit risk. Typically, when interest rates rise, there is a corresponding decline in bond values. Credit risk refers to the possibility that the bond issuer will not be able to make principal and interest payments.

Bond ratings are grades given to bonds that indicate their credit quality as determined by private independent rating services such as Standard & Poor's, Moody's and Fitch. These firms evaluate a bond issuer's financial strength or its ability to pay a bond's principal and interest in a timely fashion. Ratings are expressed as letters ranging from AAA, which is the highest grade, to D, which is the lowest grade. Credit ratings are subject to change.

Infrastructure companies may be subject to a variety of factors that may adversely affect their business, including high interest costs, high leverage, regulation costs, economic slowdown, surplus capacity, increased competition, lack of fuel availability and energy conservation policies.

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Index Definitions

The ICE BofA 1-5 Year U.S. Corporate Index tracks the performance of U.S. dollar-denominated investment-grade corporate debt publicly issued in the U.S. domestic market.

The ICE BofA BBB U.S. Corporate Index is a subset of the ICE BofA U.S. Corporate Index including all securities rated BBB1 through BBB3, inclusive.

The ICE BofA U.S. Corporate Index tracks the performance of U.S. dollar-denominated investment-grade corporate debt publicly issued in the U.S. domestic market.

The ICE BofA BB U.S. High Yield Index is a subset of the ICE BofA U.S. High Yield Index including all securities rated BB1 through BB3, inclusive.

The ICE BofA B US High Yield Index measures market performance of USD-denominated high yield corporate debt publicly issued in the U.S. domestic market with B ratings.

The ICE BofA U.S. High Yield Index tracks the performance of US dollar denominated below investment grade corporate debt publicly issued in the US domestic market.

The ICE BofA Global Corporate Index tracks the performance investment-grade corporate debt publicly issued in major domestic or eurobond markets.

The ICE BofA Global High Yield Index tracks the performance of below-investment-grade corporate debt publicly issued in major domestic or eurobond markets.

The ICE Variable Rate Preferred & Hybrid Securities Index is designed to track the performance of floating and variable rate investment grade and below investment grade U.S. dollar denominated preferred stock, as well as certain types of hybrid securities that are, in the judgment of the index provider, comparable to preferred stocks, that are issued by corporations in the U.S. domestic market.

Definitions

The Sharpe Ratio is a measure of risk adjusted return comparing an investment's excess return over the risk-free rate to its standard deviation of returns.

Standard Deviation is a measure of the average deviations of a return series from its mean; often used as a risk measure.

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More PSG Insights

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