Taxable Municipal Bonds: An Overlooked Asset Class

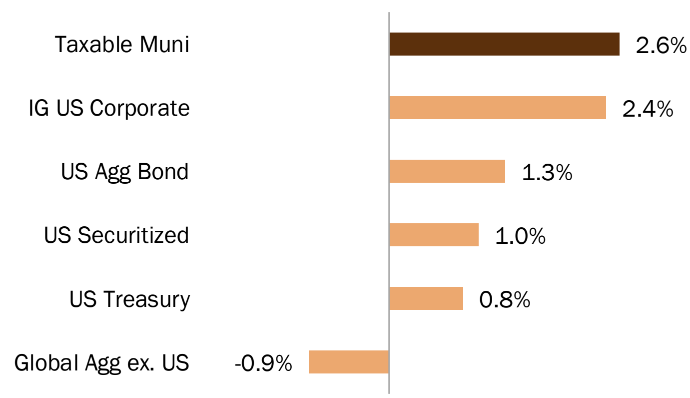
Municipal bonds are typically known for offering tax-exempt income, making them a popular choice in taxable investment accounts for retirees, while historically being excluded from the possible mix for qualified retirement plans and IRAs. However, contrary to conventional thinking, taxable municipals are a compelling solution within fixed income portfolios, both within and outside of retirement plans, as they offer a high-quality issuer base, low historical default rates, attractive yield potential, and total return potential.

Taxable municipal bonds represent a lesser known, yet growing segment of the $4 trillion municipal market and offer a way for investors, including retirement plan participants who may not require tax-exempt income, to gain exposure to this segment's desirable investment attributes.

Taxable municipals are backed by the same issuers as their tax-exempt counterparts, typically with the same high-grade credit quality, but with higher taxable-yield potential.

By keeping taxable municipals outside the scope of consideration, investors have sacrificed strong historical performance relative to other investment- grade, taxable bond categories. Over the last 10 years, the taxable municipal sector's 2.6% annualized total return outperformed the 2.4% return for investment-grade U.S. corporate debt and the 1.3% return for the core Bloomberg U.S. Aggregate Bond Index (see Figure 1). But strong historical returns are just one of many reasons that investors may want to consider the asset class. Taxable municipal bonds are garnering interest from non-traditional municipal investors due to their high-quality credit ratings, inefficient

FIGURE 1: TAXABLE MUNIS HAVE PERFORMED WELL
10-YEAR ANNUALIZED TOTAL RETURN (%)



Data as of December 31, 2024
Taxable Muni: Bloomberg Taxable Municipal Index; Inv Grade U.S. Corp: Bloomberg U.S. Corp Investment Grade Index; U.S. Asset-Backed: Bloomberg ABS Index; U.S. Agg Bond: Bloomberg U.S. Aggregate Bond Index; U.S. MBS: Bloomberg U.S. MBS Index; U.S. Treasury: Bloomberg U.S. Treasury Index. Index definitions can be found at the end of this document. As the above represents index returns, no fees or expenses were included in the above results. **It is not possible to invest directly into an index. Past performance is not indicative of future results. See additional disclosures below.**
Source: Bloomberg

New Interest in an Old Sector

Institutional interest in U.S. taxable municipal bonds was whetted in 2009 when the Obama Administration created the Build America Bond (BAB) program to stimulate an economic recovery from the Great Recession. At the time, many states and cities were having difficulty tapping the traditional, tax-exempt municipal bond market to fund capital projects.

Through BABs, the federal government subsidized the interest cost on taxable municipal bonds to make them affordable to issuers and broaden their potential investor base. Over the two years the program was in effect, issuance of taxable municipal bonds surged from $24 billion in 2008 to $85 billion in 2009 and $152 billion in 2010. Over the past decade the market continued to grow, and today stands at approximately $800 billion.[1]

1. Bloomberg as of 12/31/24; U.S. Municipal Issuance

Supply piqued demand. Non-traditional municipal investors learned that taxable municipals offered an array of structural benefits, including incremental return potential from inefficient pricing in a fragmented market and attractive yields without the need to sacrifice credit quality (see Figure 2). The diversification benefits and possibility of lower capital charges[2] have also resulted in increased foreign demand for taxable municipals.

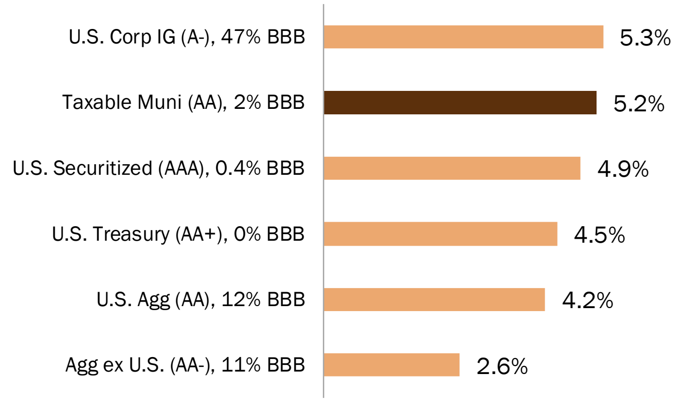
Today, many institutional investors see taxable municipals as an attractive diversifier for their fixed income portfolio. Many of these investors welcome the historically higher credit quality and ratings of municipals versus other fixed income sectors — features that may be attractive for retail investors, including within their retirement plan allocations.

Pricing Inefficiency Creates Opportunity

The municipal bond market is highly fragmented, and most issues are small; many are too tiny to be included in a market index. Yet the municipal bond index is still comprised of nearly 60,000 issuers, representing over 80% of issuers in the broader U.S. bond market. In contrast, the corporate bond market, with more than twice as much value, has far fewer issuers: the corporate bond index includes less than 9,000 issuers. The Treasury market is huge, with over $28 trillion in value, but the index includes just 291 issues (see Figure 3).

Municipal market fragmentation, limited sell-side research, and the prevalence of buy-and-hold investors often lead to inefficient pricing. Pricing inefficiencies create opportunity for active investors with an edge in credit research and trading to seek greater yield and total return potential than the sector's typical buy-and-hold investors reap.

FIGURE 2: COMPELLING YIELD WITHOUT SACRIFICING QUALITY | YIELD TO WORST



Data as of December 31, 2024
Taxable Munis: Bloomberg Taxable Municipal Bond Index; U.S. Corp IG: Bloomberg U.S. Corporate Bond Index; U.S. Agg; Bloomberg U.S. Aggregate Bond Index; U.S. Securitized; Bloomberg U.S. Securitized MBS ABS CMBS Index; U.S. Treasury Index; Agg ex U.S. Bloomberg Global Aggregate Bond Index. Index definitions can be found at the end of this document. **It is not possible to invest directly into an index. Past performance is not indicative of future results.** No fees or expenses were included in the above results. See additional disclosures below.
Source: Bloomberg

Low Correlations and Broad Diversification

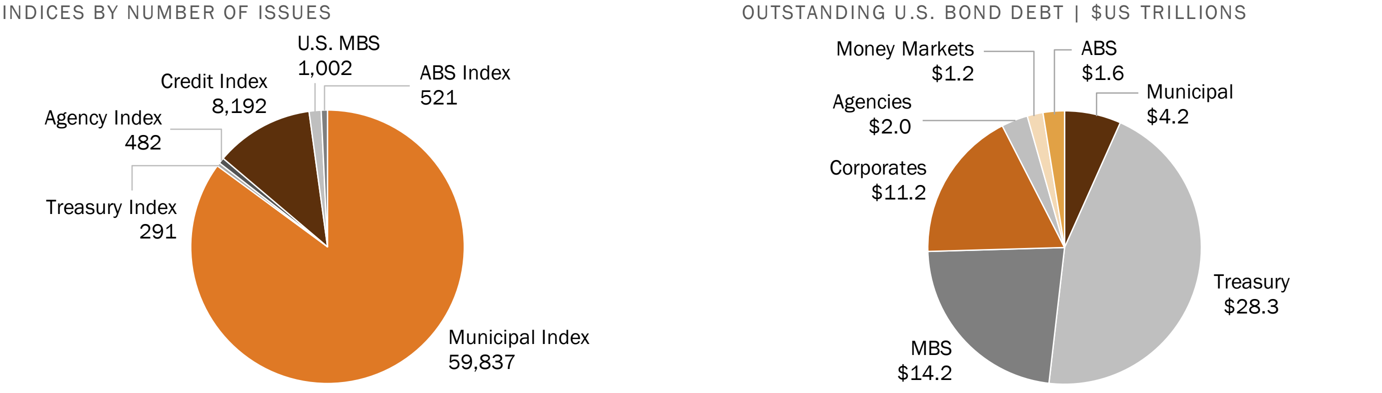
Municipal bonds also provide significant risk management benefits. An allocation to municipal bonds may help manage fixed income portfolio volatility because municipal bond returns generally have a low correlation to other fixed income sectors (see Figure 4).

Municipal bonds, taxable municipals included, are well-diversified in their purpose. They fund toll roads, bridges, light rail lines, airports, university and government buildings, water

FIGURE 3: US$4.19 TRILLION U.S. BOND MARKET OVER 6X THE NUMBER OF ISSUES AS CORPORATES

INDICES BY NUMBER OF ISSUES

OUTSTANDING U.S. BOND DEBT | $US TRILLIONS

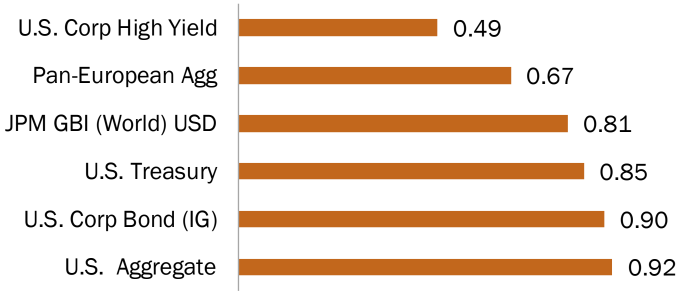


Data as of December 31, 2024.
Source: Bloomberg

2. Under Solvency II, capital requirements are determined on the basis of a 99.5% value-at-risk measure over one year, meaning that enough capital must be held to cover the market-consistent losses that may occur over the next year with a confidence level of 99.5%, resulting from changes in market values of assets held by insurers.

FIGURE 4: TAXABLE MUNIS DIVERSIFY OTHER BOND SECTORS

TAXABLE MUNI 10-YEAR CORRELATION WITH OTHER SECTORS | BPS



Data as of December 31, 2024
U.S. Treasury: Bloomberg U.S. Treasury Bond; U.S. Aggregate: Bloomberg U.S. Aggregate Bond; U.S. Corporate Investment Grade: Bloomberg U.S. Corporate Investment Grade; U.S. Corporate High Yield: Bloomberg U.S. High Yield; Pan-European Aggregate: Bloomberg Pan-European Aggregate; JPM GBI (World) USD: JPMorgan GBI Global USD; Taxable Municipals: Bloomberg Taxable Municipal Index. Index definitions can be found at the end of this document. **It is not possible to invest directly into an index. Past performance is not indicative of future results. See additional disclosures below.**
Source: Bloomberg

and sewer systems, fiber-optic telecom lines, and electric supply and distribution systems. The issuers are also diversified by region, credit rating, and security structure (e.g., callable vs. non-callable bonds). As a comparison, the Bloomberg Taxable Municipal Index (ticker: BTMNTR) has 13 distinct investable sub-sectors; in contrast, the Bloomberg U.S. Corporate Bond Master (ticker: LUACTRUU) has only three.

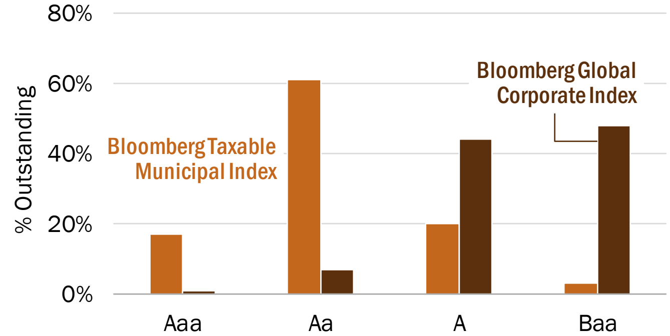
Higher-Quality Asset Class and Stable Historical Ratings

The relatively high-quality nature of municipal bonds is also attractive for risk-conscious investors and institutions seeking to meet their capital requirements efficiently. 77% of U.S. taxable municipal bonds outstanding are double A-rated or better; only a tiny portion is below investment grade. In contrast, only about 9% of the global corporate investment grade bond market is double-A rated, and nearly 50% is rated BBB (see Figure 5).

Historically, municipal bond ratings have been far more stable than corporate bond ratings, as Figure 6 shows. Corporations are vulnerable to event risks, while municipal bond issuers have more latitude to meet shortfalls. State and local governments can raise taxes, if necessary, to support the general obligation bonds that are backed by the issuer's full faith and credit. Revenue bonds, on the other hand, are

FIGURE 5: MOST TAXABLE MUNIS ARE HIGH QUALITY

RATING DISTRIBUTIONS: TAXABLE MUNICIPAL VS. GLOBAL CORPORATE BONDS



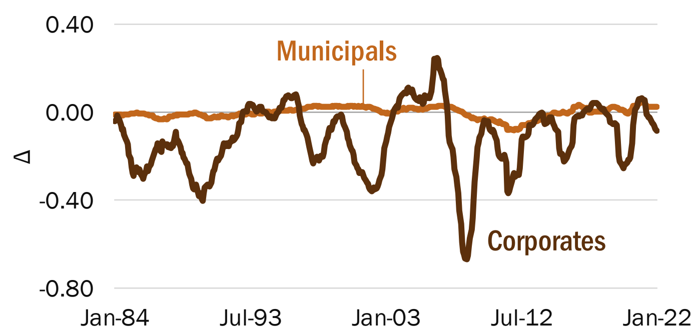
Data as of December 31, 2024
Taxable Municipals represented by Bloomberg Taxable Municipal Bond Index.
Global Corporates represented by Bloomberg Global Aggregate Corporates Index.
Source: Bloomberg

backed by dedicated cash-flow streams from tolls or other user fees for essential services. In many cases, these public enterprises are virtual monopolies. An airport or water/sewer system, for example, can often raise prices without losing customers. These factors help make municipal bonds a strong late cycle asset class.

A look at historical default rates also demonstrates the resiliency of the municipal bond asset class. In fact, the average five-year municipal default rate since 2014 is 0.09%, in line with the historical average, which dates back to 1970. Meanwhile, the average five-year global corporate default rate is 6.89% since 2014.[3]

FIGURE 6: MUNI RATINGS HAVE BEEN RELATIVELY STABLE

MOODY'S RATING DRIFT 1984-2021 FOR U.S. MUNICIPALS AND GLOBAL CORPORATES



Data as of January 1, 2024
Rating drift measures the net average number of notches a credit changes over the study period. It is defined as the average upgraded notches per issuer minus the average downgraded notches per issuer.
Source: Moody's US Municipal Bond Defaults and Recoveries, Moody's Trends in Global Corporates Rating Transitions. Moody's US Municipal Bond Defaults and Recoveries, 1970-2023

3. Source: Moody's, U.S. municipal bond defaults and recoveries, 1970-2023, data report, October 24, 2024

Core Bond Funds Underutilize Taxable Munis in Portfolios

Relying on core bond funds for broad fixed income exposure has led many to sacrifice the performance and diversification benefits of taxable municipals. Morningstar data for intermediate core and core-plus bond funds reveal that these portfolios allocate minimal capital to the taxable municipal sector — historically averaging less than 1% of fund assets (see Figure 7). The limited investment in municipals by taxable bond fund managers may be attributed to organizational structures and a lack of municipal market expertise.

Investment firms often separate their taxable debt teams from their municipal teams, resulting in taxable bond groups that lack highly specialized municipal market expertise. This lack of expertise may deter taxable investment teams from attempting to navigate the municipal market's distinctive issuer base and market characteristics. Additionally, taxable teams may resist transferring assets to municipal teams or otherwise relying on outside specialists. For these reasons, it is important for investors and allocators to seek out taxable muni exposure, rather than count on core taxable bond mandates to effectively utilize the asset class.

"OUTSIDE OF THE BOX": CONSIDER TAXABLE MUNICIPALS FOR INVESTMENT ALLOCATIONS

In conclusion, as taxable municipals have been a growing, more viable segment of the market, investment advisors and allocators may be well-served to consider taxable municipals as a component of their fixed income investment mix.
Adding taxable municipal bonds may help improve the risk/return profile of a diversified fixed income asset allocation. Lower correlations, incremental yield potential, and the potential to generate alpha in a highly fragmented asset class all contribute positively to a portfolio's risk/return trade-off. Over the last ten years, an allocation to taxable municipal bonds has improved the return per unit of risk on a portfolio of diversified U.S. bonds.
We believe taxable bond yields remain competitive, and credit quality remains high; there are good fundamental reasons that we believe will allow credit ratings to remain relatively stable, and correlations to other fixed income sectors to remain low.

FIGURE 7: CORE BOND FUNDS MAY BE UNDERALLOCATED TO MUNICIPALS

	Allocation (%)				
	Government	Securitized	Corporate	Cash/ Derivatives	Municipal
MORNINGSTAR INTERMEDIATE CORE BOND CATEGORY	20.13%	39.46%	27.19%	12.72%	**0.50%**
MORNINGSTAR INTERMEDIATE CORE-PLUS BOND CATEGORY	18.14%	48.40%	30.43%	2.01%	**1.02%**

Direct as of December 31, 2024
Source: Morningstar

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COMPARISONS TO AN INDEX

Comparisons to a financial index are provided for illustrative purposes only. Comparisons to an index are subject to limitations because portfolio holdings, volatility and other portfolio characteristics may differ materially from the index. Unlike an index, portfolios are actively managed and may also include derivatives. There is no guarantee that any of the securities in an index are contained in any managed portfolio. The performance of an index may assume reinvestment of dividends and income, or follow other index-specific methodologies and criteria, but does not reflect the impact of fees, applicable taxes or trading costs which, unlike an index, may reduce the returns of a managed portfolio. Investors cannot invest in an index. Because of these differences, the performance of an index should not be relied upon as an accurate measure of comparison.

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Past performance is not indicative of future results.

The following indices may be referred to in this document:

ICE BOFA U.S. HIGH YIELD INDEX

ICE BofA U.S. High Yield Index tracks the performance of U.S. dollar denominated below investment grade corporate debt publicly issued in the U.S. domestic market. Qualifying securities must have a below investment grade rating (based on an average of Moody's, S&P and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of $250 million. In addition, qualifying securities must have risk exposure to countries that are members of the FX-G10, Western Europe or territories of the U.S. and Western Europe. The FX-G10 includes all Euro members, the U.S., Japan, the U.K., Canada, Australia, New Zealand, Switzerland, Norway and Sweden. Original issue zero coupon bonds, 144a securities (both with and without registration rights), and pay-in-kind securities (including toggle notes) are included in the index. Callable perpetual securities are included provided they are at least one year from the first call date. Fixed-to floating rate securities are included provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. Contingent capital securities ("CoCos") are excluded, but capital securities where conversion can be mandated by a regulatory authority, but which have no specified trigger, are included. Other hybrid capital securities, such as those issues that potentially convert into preference shares, those with both cumulative and non-cumulative coupon deferral provisions, and those with alternative coupon satisfaction mechanisms, are also included in the index. Securities issued or marketed primarily to retail investors, equity-linked securities, securities in legal default, hybrid securitized corporates, eurodollar bonds (USD securities not issued in the U.S. domestic market), taxable and tax-exempt U.S. municipal securities and DRD-eligible securities are excluded from the index. Index constituents are market capitalization weighted. Accrued interest is calculated assuming next-day settlement.

Cash flows from bond payments that are received during the month are retained in the index until the end of the month and then are removed as part of the rebalancing. Cash does not earn any reinvestment income while it is held in the index.

ICE BOFA TAXABLE MUNICIPAL INDEX

ICE BofA U.S. Taxable Municipal Securities Index tracks the performance of U.S. dollar denominated investment grade taxable municipal securities publicly issued in the U.S. domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch). In addition, qualifying securities must have at least one-year remaining term to final maturity, at least 18 months to maturity at point of issuance, a fixed coupon schedule and a minimum amount outstanding of $250 million. Callable perpetual securities qualify provided they are at least one year from the first call date. Fixed-to-floating rate securities also qualify provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. Original issue zero coupon bonds and ""global"" securities (debt issued simultaneously in the eurobond and U.S. domestic markets) qualify for inclusion in the Index. Tax-exempt U.S. municipal, 144a and securities in legal default are excluded from the Index. Index constituents are market capitalization weighted. Accrued interest is calculated assuming next-day settlement. Cash flows from bond payments that are received during the month are retained in the index until the end of the month and then are removed as part of the rebalancing. Cash does not earn any reinvestment income while it is held in the index.

BLOOMBERG MUNICIPAL HIGH YIELD INDEX

An unmanaged index of smunicipal bonds with the following characteristics: fixed coupon rate, credit rating of Ba1 or lower or non-rated using the middle rating of Moody's, S&P, and Fitch, outstanding par value of at least $3 million, and issued as part of a transaction of at least $20 million. In addition, the bonds must have a dated-date after December 31, 1990 and must be at least one year from their maturity date.

ICE BOFA EMERGING MARKETS BBB & LOWER SOVEREIGN

ICE BofA BBB & Lower Sovereign USD External Debt Index tracks the performance of U.S. dollar denominated emerging market and cross-over sovereign debt publicly issued in the eurobond or U.S. domestic market. Qualifying countries must have a BBB1 or lower foreign currency long-term sovereign debt rating (based on an average of Moody's, S&P and Fitch). Countries that are not rated, or that are rated "D" or "SD" by one or several rating agencies qualify for inclusion in the index but individual non-performing securities are removed. Qualifying securities must have at least one year remaining term to final maturity, at least 18 months to maturity at point of issuance, a fixed or floating coupon and a minimum amount outstanding of $250 million. Local currency debt is excluded from the Index. Index constituents are market capitalization weighted. Accrued interest is calculated assuming next-day settlement. Cash flows from bond payments that are received during the month are retained in the index until the end of the month and then are removed as part of the rebalancing. Cash does not earn any reinvestment income while it is held in the index.

ICE BOFA EMERGING MARKETS CORPORATE PLUS INDEX

ICE BofA Emerging Markets Corporate Plus Index tracks the performance of U.S. dollar and euro denominated emerging markets non-sovereign debt publicly issued in the major domestic and eurobond markets. In order to qualify for inclusion in the Index an issuer must have risk exposure to countries other than members of the FX G10, all Western European countries, and territories of the U.S. and Western European countries. The FX-G10 includes all Euro members, the U.S., Japan, the U.K., Canada, Australia, New Zealand, Switzerland, Norway and Sweden. Individual securities of qualifying issuers must be denominated in U.S. dollars or euro, must have at least one year remaining term to final maturity, at least 18 months to final maturity at point of issuance, and a fixed coupon. In addition, bonds of qualifying issuers must have at least 250 million (EUR or USD) in outstanding face value. The index includes corporate and quasigovernment debt of qualifying countries, but excludes sovereign and supranational debt. Original issue zero coupon bonds, ""global"" securities (debt issued simultaneously in the eurobond and U.S. domestic bond markets), 144a securities and pay-in-kind securities, including toggle notes, qualify for inclusion in the Index. Contingent capital securities ("cocos") are excluded, but capital securities where conversion can be mandated by a regulatory authority, but which have no specified trigger, are included. Other hybrid capital securities, such as those issues that potentially convert into preference shares, those with both cumulative and non-cumulative coupon deferral provisions, and those with alternative coupon satisfaction mechanisms, are also included in the index. Callable perpetual securities qualify provided they are at least one year from the first call date. Fixed-to-floating rate securities also qualify provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. Central bank issued, equity-linked and legally defaulted securities are excluded from the index. Index constituents are market capitalization weighted. Accrued interest is calculated assuming next-day settlement. Cash flows from bond payments that are received during the month are retained in the index until the end of the month and then are removed as part of the rebalancing. Cash does not earn any reinvestment income while it is held in the index.

BLOOMBERG U.S. CORPORATE INVESTMENT GRADE INDEX

The Bloomberg U.S. Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. It includes USD denominated securities publicly issued by U.S. and non-U.S. industrial, utility and financial issuers.

S&P/LSTA LEVERAGED LOAN INDEX

The S&P/LSTA Leveraged Loan Index (the Index) is a market value-weighted index designed to measure the performance of the U.S. leveraged loan market based upon market weightings, spreads and interest payments.

BLOOMBERG MUNICIPAL BOND INDEX

A rules-based, market-value-weighted index engineered for the long-term tax-exempt bond market. To be included in the index, bonds must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following agencies: Moody's, S&P, Fitch. If only two of the three agencies rate the security, the lower rating is used to determine index eligibility. If only one of the three agencies rates a security, the rating must be investment-grade. They must have an outstanding par value of at least $7 million and be issued as part of a transaction of at least $75 million. The bonds must be fixed rate, have a date-date after December 31, 1990, and must be at least one year from their maturity date. Remarketed issues, taxable municipal bonds, bonds with floating rates, and derivatives, are excluded from the benchmark. The index has four main sectors: general obligation bonds, revenue bonds, insured bonds (including all insured bonds with a Aaa/AAA rating), and prerefunded bonds. Most of the index has historical data to January 1980. In addition, sub-indices have been created based on maturity, state, sector, quality, and revenue source, with inception dates later than January 1980.

BLOOMBERG U.S. AGGREGATE BOND INDEX

The Bloomberg U.S. Aggregate Index represents securities that are SEC-registered, taxable, and dollar denominated. Must have at least one year to final maturity regardless of call features. Must have at least $300 million par amount outstanding. Must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following ratings agencies: Moody's, S&P, Fitch. Must be dollar-denominated and non-convertible.

BLOOMBERG U.S. SECURITIZED MBS/ABS/CMBS INDEX

The Bloomberg Securitized MBS/ABS/CMBs Index tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC); investment grade debt asset backed securities; and investment grade commercial mortgage backed securities. The index is constructed by grouping individual pools into aggregates or generics based on program, coupon, and vintage.

BLOOMBERG U.S. TREASURY INDEX

Public obligations of the U.S. Treasury with a remaining maturity of one year or more. Must be a U.S. Treasury security. Must have at least $300 million par amount outstanding. Must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following ratings agencies: Moody's, S&P, Fitch. Must be fixed rate. Must be dollar-denominated and non-convertible.

BLOOMBERG GLOBAL AGGREGATE EX USD INDEX

The Bloomberg Global Aggregate ex USD Index is a measure of global investment grade debt from 24 local currency markets. This multi- currency benchmark includes treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging markets issuers. Bond issued in USD are excluded.

ICE BOFA U.S. TREASURY INDEX

ICE BofA U.S. Treasury Index tracks the performance of U.S. dollar denominated sovereign debt publicly issued by the U.S. government in its domestic market. Qualifying securities must have at least one year remaining term to final maturity, a fixed coupon schedule and a minimum amount outstanding of $1 billion. Qualifying securities must have at least 18 months to final maturity at the time of issuance. Callable perpetual securities qualify provided they are at least one year from the first call date. Fixed-to-floating rate securities also qualify provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. Bills, inflation-linked debt and strips are excluded from the Index; however, original issue zero coupon bonds are included in the index and the amounts outstanding of qualifying coupon securities are not reduced by any portions that have been stripped. Securities issued or marketed primarily to retail investors do not qualify for inclusion in the index. Index constituents are market capitalization weighted. Accrued interest is calculated assuming next-day settlement. Cash flows from bond payments that are received during the month are retained in the index until the end of the month and then are removed as part of the rebalancing. Cash does not earn any reinvestment income while it is held in the index.

ICE BOFA AA U.S. CORPORATE INDEX

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. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch), at least 18 months to final maturity at the time of issuance, at least one year remaining term to final maturity as of the rebalancing date, a fixed coupon schedule and a minimum amount outstanding of $250 million. Original issue zero coupon bonds, 144a securities (with and without registration rights), and pay-in-kind securities (including toggle notes) are included in the index. Callable perpetual securities are included provided they are at least one year from the first call date. Fixed-to-floating rate securities are included provided they are callable within the fixed rate period and are at least one year from the last call prior to the date the bond transitions from a fixed to a floating rate security. Contingent capital securities ("cocos") are excluded, but capital securities where conversion can be mandated by a regulatory authority, but which have no specified trigger, are included. Other hybrid capital securities, such as those issues that potentially convert into preference shares, those with both cumulative and non-cumulative coupon deferral provisions, and those with alternative coupon satisfaction mechanisms, are also included in the index. Equity-linked securities, securities in legal default, hybrid securitized corporates, euro dollar bonds (USD securities not issued in the U.S. domestic market), taxable and tax-exempt U.S. municipal securities and DRD-eligible securities are excluded from the index. Index constituents are market capitalization weighted. Accrued interest is calculated assuming next-day settlement. Cash flows from bond payments that are received during the month are retained in the index until the end of the month and then are removed as part of the rebalancing. Cash does not earn any reinvestment income while it is held in the index.

ICE BOFA BROAD U.S. TAXABLE MUNICIPAL SECURITIES INDEX

ICE BofA Broad U.S. Taxable Municipal Securities Index tracks the performance of U.S. dollar denominated debt publicly issued by U.S. states and territories, and their political subdivisions, in the U.S. domestic market. Qualifying securities must be subject to U.S. federal taxes and must have at least 18 months to maturity at point of issuance, at least one year remaining term to final maturity to enter the index and one month remaining term to final maturity to remain in the index, a fixed coupon schedule (including zero coupon bonds) and an investment grade rating (based on an average of Moody's, S&P and Fitch). The call date on which a pre-refunded bond will be redeemed is used for purposes of determining qualification with respect to final maturity requirements. Minimum size requirements vary based on the initial term to final maturity at time of issuance. Securities with an initial term to final maturity greater than or equal to one year and less than five years must have a current amount outstanding of at least $10 million. Securities with an initial term to final maturity greater than or equal to five years and less than ten years must have a current amount outstanding of at least $15 million. Securities with an initial term to final maturity of ten years or more must have a current amount outstanding of at least $25 million. "Direct pay" Build America Bonds (i.e., a direct federal subsidy is paid to the issuer) qualify for inclusion in the index, but "tax-credit" Build America Bonds (i.e., where the investor receives a tax credit on the interest payments) do not. Local bonds issued by U.S. territories within their jurisdictions that are tax exempt within the U.S. territory but not elsewhere are excluded from the Index. All 144a securities, both with and without registration rights, and securities in legal default are excluded from the Index. Index constituents are market capitalization weighted. Accrued interest is calculated assuming next-day settlement. Cash flows from bond payments that are received during the month are retained in the index until the end of the month and then are removed as part of the rebalancing. Cash does not earn any reinvestment income while it is held in the index.

ICE BOFA U.S. MUNICIPAL SECURITIES INDEX

ICE BofA U.S. Municipal Securities Index tracks the performance of U.S. dollar denominated investment grade tax exempt debt publicly issued by U.S. states and territories, and their political subdivisions, in the U.S. domestic market. Qualifying securities must have at least one year remaining term to final maturity, at least 18 months to final maturity at the time of issuance, a fixed coupon schedule and an investment grade rating (based on an average of Moody's, S&P and Fitch). Minimum size requirements vary based on the initial term to final maturity at time of issuance. Securities with an initial term to final maturity greater than or equal to one year and less than five years must have a current amount outstanding of at least $10 million. Securities with an initial term to final maturity greater than or equal to five years and less than ten years must have a current amount outstanding of at least $15 million. Securities with an initial term to final maturity of ten years or more must have a current amount outstanding of at least $25 million. The call date on which a pre-refunded bond will be redeemed is used for purposes of determining qualification with respect to final maturity requirements. Original issue zero coupon bonds are included in the Index. Taxable municipal securities, 144a securities and securities in legal default are excluded from the Index. Index constituents are market capitalization weighted. Accrued interest is calculated assuming next-day settlement. Cash flows from bond payments that are received during the month are retained in the index until the end of the month and then are removed as part of the rebalancing. Cash does not earn any reinvestment income while it is held in the index.

BLOOMBERG U.S. HIGH YIELD INDEX

Covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeroes, step-up coupon structures, 144-As and pay-in-kind bonds (PIKs, as of October 1, 2009) are also included.

BLOOMBERG PAN-EUROPEAN AGGREGATE INDEX

Covers eligible investment grade securities from the entire European continent. The primary component is the Bloomberg Euro-Aggregate Index. In addition, the Bloomberg Pan-European Aggregate Index includes eligible securities denominated in British pounds (GBP), Swedish krona (SEK), Danish krone (DKK), Norwegian krone (NOK), Czech koruna (CZK), Hungarian forint (HUF), Polish zloty (PLN), Slovenian Tolar (SIT), Slovakian koruna (SKK), and Swiss franc (CHF). Apart from the currency constraint, the inclusion rules for the Pan-European Index are identical to those of the Bloomberg Euro-Aggregate Index.

JPM GBI (WORLD) USD

The J.P. Morgan GBI series provides a comprehensive measure of local currency denominated fixed rate government debt consists of five core index products covering developed markets. The broadest series tracks 27 countries.

BLOOMBERG U.S. TAXABLE MUNICIPAL INDEX

The Bloomberg U.S. Taxable Municipal Bond Index is a rules-based, market-value-weighted index engineered for the long-term taxable bond market. To be included in the index, bonds must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following ratings agencies if all three rate the bond: Moody's, S&P, Fitch. If only two of the three agencies rate the security, the lower rating is used to determine index eligibility. If only one of the three agencies rates a security, the rating must be investment-grade. They must have an outstanding par value of at least $7 million and be issued as part of a transaction of at least $75 million. The bonds must be fixed rate and must be at least one year from their maturity date. Remarketed issues (unless converted to fixed rate), bonds with floating rates, and derivatives, are excluded from the benchmark.

BLOOMBERG US TREASURY: INTERMEDIATE INDEX

The Bloomberg US Treasury: Intermediate Index measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury with maturities of 1 to 9.9999 years to maturity.

BLOOMBERG U.S. CREDIT INDEX

Publicly issued U.S. corporate and specified foreign debentures and secured notes. Must be an investment grade credit security. Must have at least one year to final maturity regardless of call features. Must have at least $300 million par amount outstanding. Must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following ratings agencies: Moody's, S&P, Fitch. Must be fixed rate. Must be dollar-denominated and non-convertible.

BLOOMBERG U.S. CORPORATE HIGH YIELD INDEX

The Bloomberg U.S. High Yield Index covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included. Original issue zeroes, step-up coupon structures, 144-As and pay-in-kind bonds (PIKs, as of October 1, 2009) are also included. Must have at least one year to final maturity regardless of call features. Must have at least $150 million par amount outstanding. Must be rated high-yield (Ba1/BB+ or lower) by at least two of the following ratings agencies: Moody's, S&P, Fitch. Must be fixed rate, although it can carry a coupon that steps up or changes according to a predetermined schedule. Must be dollar-denominated and non-convertible. Must be publicly issued.

BLOOMBERG U.S. TAXABLE MUNICIPAL INDEX

The Bloomberg U.S. Taxable Municipal Bond Index is a rules-based, market-value-weighted index engineered for the long-term taxable bond market. To be included in the index, bonds must be rated investment-grade (Baa3/BBB- or higher) by at least two of the following ratings agencies if all three rate the bond: Moody's, S&P, Fitch. If only two of the three agencies rate the security, the lower rating is used to determine index eligibility. If only one of the three agencies rates a security, the rating must be investment-grade. They must have an outstanding par value of at least $7 million and be issued as part of a transaction of at least $75 million. The bonds must be fixed rate and must be at least one year from their maturity date. Remarketed issues (unless converted to fixed rate), bonds with floating rates, and derivatives, are excluded from the benchmark.