

# Bond Perspectives

## An Educational Look at Bond Credit Ratings

Bonds are debt obligations of governments, agencies, municipalities and corporations. The issuer is obligated to pay the investor interest at a specified interest rate over the life of the bond and to return the bond principal at maturity.

In order to assess the ability of an issuer to make timely interest payments and return principal, investors rely on credit ratings. A rating is an assessment of the likelihood that an issuer will repay the principal and interest of a particular bond on time and in full. In measuring credit quality, U.S. Treasury securities are considered to have the least risk of all fixed income investments in terms of principal protection and interest payments as they are backed by the ‘full faith and credit’ of the U.S. Government.<sup>1</sup> Therefore, within the investment community, the credit quality of Treasury securities is accepted as a benchmark against which all other fixed income securities are measured.

Credit quality may be implied, as in the case of many agency securities and mortgage backed securities (which are often implied to carry ratings equal to the senior debt of their issuers), or it may be specified through a rating assigned by a rating agency. It is important to remember that credit ratings are subject to change without notice at any time. Before investing you should review a bond’s credit rating and understand the effect a rating change would have on your investment. In this guide, we take an informative look at the bond credit rating system.

### How do the rating organizations determine credit quality?

The U.S. Securities and Exchange Commission (SEC) defines a Nationally Recognized Statistical Rating Organization (NRSRO) as an entity that meets guidelines deemed necessary to offer ratings upon issuers. Here we will consider the ratings assigned by three NRSROs:

- > Moody’s Investors Service (‘Moody’s’)
- > Standard & Poor’s (‘S&P’)
- > Fitch Ratings (‘Fitch’)

In determining the creditworthiness of an issuer, Moody’s, S&P and Fitch focus on the issuer’s overall financial condition, as well as that of the industry or sector in which the issuer operates. A rating represents the opinion of the rating agency at a particular point in time. Ratings on individual issues are continuously revised to reflect any industry, sector, company or municipal developments, and these rating changes can have a distinct effect on a security’s market price.

Moody’s, S&P and Fitch classify bond issues as either “investment grade” or “below investment grade.”

### What are Investment Grade Bonds?

These bonds may be appropriate for conservative investors. They typically provide the highest degree of principal and interest payment protection at maturity, and are generally the least likely to default.

<sup>1</sup>If held to maturity, Treasury notes and bonds offer a fixed rate of return and fixed principal value. The ‘full faith and credit’ of the U.S. government pertains only to the timely payment of interest and principal and does not eliminate market risk.

## What are Below Investment Grade Bonds?

Securities rated below investment grade are often referred to as ‘high yield’ or ‘junk’ bonds and may be suitable only for aggressive investors willing to accept greater degrees of credit risk. Below investment grade bonds are considered speculative investments, involve a greater risk of default, have limited liquidity and tend to be more volatile than investment grade bonds. The yields on these bonds are typically higher to compensate for the additional risk.

## INVESTMENT GRADE RATINGS CHART

Within the investment grade category, ratings are further delineated by quality, ranging from ‘best quality’ to ‘medium quality.’

Investment Grade Rating		
<b>Highest Grade/Best Quality</b>		
Moody’s	These obligations are judged to be of the highest quality, with minimal credit risk.	Aaa
S&P	The obligor’s capacity to meet its financial commitment on the obligation is extremely strong.	AAA
Fitch	Highest credit quality; denotes the lowest expectation of default risk. Exceptionally strong capacity for payment of financial commitments.	AAA
<b>High Grade/High Quality</b>		
Moody’s	These obligations are judged to be of high quality and are subject to very low credit risk.	Aa1 Aa2 Aa3
S&P	The obligor’s capacity to meet its financial commitment on the obligation is very strong, differing from the highest-rated obligations only to a small degree.	AA+ AA AA-
Fitch	Very high credit quality; denotes expectations of very low default risk. Very strong capacity for payment of financial commitments.	AA
<b>Upper Medium Grade</b>		
Moody’s	Obligations rated ‘A’ are considered upper-medium grade and are subject to low credit risk.	A1 A2 A3
S&P	The obligor has strong capacity to meet its financial commitments; however, it is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than higher-rated obligators.	A+ A A-
Fitch	High credit quality; denotes expectations of low default risk. The capacity for payment of financial commitments is considered strong.	A
<b>Medium Grade</b>		
Moody’s	These obligations are subject to moderate credit risk. They are considered medium-grade and as such may possess certain speculative characteristics.	Baa1 Baa2 Baa3
S&P	Adequate capacity to meet financial commitments. Adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitments.	BBB+ BBB BBB-
Fitch	Good credit quality; denotes that expectations of default risk are currently low. The capacity for payment of financial commitments is considered adequate but adverse business or economic conditions are more likely to impair this capacity.	BBB

Source: Standard & Poor’s, Moody’s Investors Service, Fitch Ratings

## HIGH YIELD RATINGS CHART

Below Investment Grade Rating		
Speculative Grade		
Moody's	These obligations are judged to have speculative elements and are subject to substantial credit risk.	Ba1 Ba2 Ba3
	These obligations are considered speculative and are subject to high credit risk	B1 B2 B3
S&P	Less vulnerable to nonpayment than other speculative issues; however, the obligor faces major ongoing uncertainties or exposure to adverse business, financial or economic conditions which could lead to inadequate capacity to meet its financial commitment.	BB+ BB BB-
	More vulnerable to nonpayment than obligations rate 'BB', but the obligor currently has the capacity to meet its financial commitments. Adverse business, financial or economic conditions will likely impair that capacity.	B+ B B-
Fitch	Speculative. An elevated vulnerability to default risk, particularly as a result of adverse changes in business or economic conditions over time.	BB
	Highly speculative. Material default risk is present, but a limited margin of safety remains.	B
Highly Speculative Grade		
Moody's	These obligations are judged to be of poor standing and are subject to very high credit risk.	Caa1 Caa2 Caa3
	These obligations are highly speculative and are likely to be in, or very near, default, with some prospect of recovery of principal or interest.	Ca
S&P	The obligor is currently vulnerable to nonpayment, and is dependent upon favorable business, financial or economic conditions for the issuer to meet its financial commitments.	CCC+ CCC CCC-
	The obligation is currently highly vulnerable to nonpayment.	CC
	The obligation is currently highly vulnerable to nonpayment. May be used where a bankruptcy petition has been filed, or where cash payments have been suspended.	C
Fitch	Default is a real possibility.	CCC
	Default of some kind appears probable.	CC
	Default is imminent or inevitable.	C
Default		
Moody's	These bonds are typically in payment default, with little prospect for recovery of principal or interest.	C
S&P	The issuer has selectively defaulted on a specific issue.	SD
	General default.	D
Fitch	These obligations are in payment default.	D

### Other Rating Categories

Expected/Preliminary Ratings		
Moody's	Expected Ratings are intended to anticipate Moody's forthcoming rating assignments, based on information from third party sources. The ratings will exist only until Moody's confirms the Expected Rating, or issues a different rating.	e
	Moody's will assign a provisional rating when it is highly likely that the rating will become final after all documents are received, or an obligation is issued into the market.	p
Fitch	Expected Rating: A preliminary rating, usually contingent upon the final documents, has been assigned.	Expected

Unsolicited		
Moody's	This rating was initiated by Moody's and was not requested by the issuer.	unsolicited
S&P	Unsolicited ratings are those ratings assigned at the initiative of S&P and not at the request of the issuer.	unsolicited

Not Rated		
Moody's	NR is assigned to an unrated issuer, obligation and/or program.	NR
S&P	No rating has been requested, or there is insufficient information on which to base a rating.	NR

Withdrawn Rating		
Moody's	The rating has been withdrawn. Reasons for withdrawals include: debt maturity, calls, puts, conversions, etc., or business reasons (e.g. change in the size of a debt issue), or the issuer defaults.	WR
Fitch	The rating has been withdrawn and the issuer or issuer is no longer rated by Fitch	WR

Selective Default		
S&P	An obligor has failed to pay one or more of its financial obligations when due. Assigned when S&P believes the obligor has selectively defaulted on a specific class or issue, and will continue to meet payments on other issues/classes in a timely manner.	SD
Fitch	Restricted default; the issuer has experienced an uncured payment default on a bond, loan or other material financial obligation but which has not entered into bankruptcy filings, administration, receivership, liquidation or other formal winding-up procedure, and which has not otherwise ceased business.	RD

Regulatory Supervision		
S&P	This rating reflects a company that is under regulatory supervision.	R

Source: Moody's Investors Service, Standard & Poor's, Fitch Ratings

### What events may affect ratings?

The agencies continually monitor rated securities and issuers. Ratings are subject to change without notice as many events can affect the ability of an issuer to repay principal and interest on its debt. These events can include:

- > Changes in the economic environment or business climate.
- > An acquisition or management change.
- > Demographic changes within a municipality.
- > An increase or decrease in taxes or projected revenues.
- > Regulatory changes.

### How do the rating agencies flag potential changes in credit quality?

When the agencies determine that a rating change may be warranted, the debt issue is placed on the "Watchlist" (if reviewed by Moody's), "CreditWatch" (if reviewed by S&P), or "Rating Watch" (if reviewed by Fitch). These lists are considered a leading indicator of adjustments in credit quality, and include the names of issuers which the agencies believe have a likelihood of changing. These changes are usually due to developing events or trends, which may warrant a more extensive examination of the issuer's outstanding debt and financial condition. Bond obligations are assigned directions:

	Possible Upgrade	Possible Downgrade	Direction Uncertain
Moody's	Upgrade (+)	Downgrade (-)	Uncertain (*)
S&P	Positive	Negative	Developing
Fitch	Positive	Negative	Evolving

These lists indicate the names of debt issues that the rating agencies believe have a likelihood of a rating change. They do not indicate that an actual rating change will take place. In certain cases, names may be removed from the lists without a change in rating. Please note: a rating change may also occur without first appearing on the list.

## The following “Q & A” will answer some frequently asked questions regarding ratings:

### Q. What happens if my bonds are downgraded/upgraded?

A. Typically, bond prices fall following a rating downgrade and rise in response to an upgrade. However, this is not always the case as many other factors also impact bond prices. Often, investors’ perception is key. For this reason bond prices can change prior to a rating adjustment as investors make their own assessments of changing risks.

### Q. Should I sell my bonds if they are downgraded?

A. Your Morgan Stanley Smith Barney Financial Advisor may assist you in determining if the downgraded bond is still aligned with your investment objectives. However, you should review the downgrade with reference to your level of risk tolerance and your opinion on whether the downgrade relates to a temporary or long-term situation.

### Q. What about bond insurance?

A. Some municipal bonds are issued with bond insurance<sup>2</sup> which guarantees the timely payment of interest and principal when due, should the insured bond issuer default. Consequently, insured bonds are typically assigned the higher of either the issuer’s or the insurer’s credit rating. Therefore, for municipal issuers with credit ratings lower than the insurer’s, the insurance provides a higher credit rating than would otherwise be assigned for the bond issue. A bond insurer rating downgrade may have a credit risk impact on the investor as, depending on the credit quality of the underlying issuer, the insured bond may also be downgraded. If the underlying credit quality of the issuer is higher than the downgraded insurer, the bond is unlikely to be downgraded. But, if the underlying issuer’s credit rating is lower than the downgraded insurer, the bond may also be downgraded which could have a negative impact on the bond’s price, yield and liquidity in the secondary market.

### Q. Where do I stand if my bond defaults?

A. In the event of a default the issuer would be required to access any reserve funds in order to return principal and accrued interest to investors. However, it is likely that the reserves will not cover the entire issue amount; therefore it is possible you may receive only a portion of the invested principal, or nothing, particularly if the issuer files for bankruptcy. Details of any reserve funds or covenants will be specified in the bond’s offering documentation.

### Q. What other risks should I consider before purchasing a bond?

In addition to credit risk, fixed income investments are exposed to three other main risks:

#### **Interest Rate Risk**

The risk that the market value of securities in your portfolio might rise or fall due to changes in prevailing interest rates. All else being equal, if interest rates fall, bond prices will rise and vice versa.

#### **Reinvestment Risk**

The risk that the income stream from a given investment may have to be reinvested at a lower interest rate.

#### **Liquidity Risk**

Morgan Stanley Smith Barney provides access to the secondary market if you wish to sell your bonds prior to maturity. However, the level of liquidity can vary between bond issues and the price you receive may be more or less than the par value or your original purchase price. Lower rated securities are generally less liquid than investment grade securities.

### **The Correlation between Credit Ratings and Risk of Default – An Inverse Relationship**

An inverse relationship exists between the credit quality and the default probability of a given bond: the higher the credit rating, the lower the probability of default. While the higher yields and the potential for capital appreciation of lower rated bonds may seem attractive, they should be carefully considered (within the parameters of your individual portfolio) in relation to the greater chance of a rating downgrade and/or default occurring.

### **How are your bonds rated?**

If you have a portfolio of individual taxable or tax-exempt bonds, held at Morgan Stanley Smith Barney or any brokerage firm, ask your Morgan Stanley Smith Barney Financial Advisor for a complimentary analysis of your holdings. This portfolio review will provide you with the current ratings of your individual holdings as well as a summary rating of the entire portfolio. This analysis may help you better understand what you own, and if the ratings are aligned with your risk tolerance.

<sup>2</sup> Insurance does not pertain to market values which will fluctuate over the life of the bonds; it covers only the timely payment of interest and principal.

### Important Information and Qualifications

This material was prepared by sales, trading or other non-research personnel of Morgan Stanley Smith Barney LLC (together with its affiliates, "Morgan Stanley Smith Barney" or "the firm"). Morgan Stanley Smith Barney was formed pursuant to a Joint Venture between Citigroup Inc. and Morgan Stanley & Co. LLC ("Morgan Stanley"). This material was not produced by a research analyst of Morgan Stanley, Citigroup Global Markets Inc., ("Citigroup") or Morgan Stanley Smith Barney, although it may refer to a Morgan Stanley, Citigroup, or Morgan Stanley Smith Barney research analyst or report. Unless otherwise indicated, these views (if any) are the author's and may differ from those of the aforementioned research departments or others in the firms.

The securities/instruments discussed in this material may not be suitable or appropriate for all investors. The appropriateness of a particular investment or strategy will depend on an investor's individual circumstances and objectives. This material does not provide individually tailored investment advice or offer tax, regulatory, accounting or legal advice. By submitting this document to you, Morgan Stanley Smith Barney is not advising you to take any particular action based on the information, opinions or views contained in this document. Prior to entering into any proposed transaction, recipients should determine, in consultation with their own investment, legal, tax, regulatory and accounting advisors, the economic risks and merits, as well as the legal, tax, regulatory and accounting characteristics and consequences, of the transaction. This information is not intended to, and should not, form a primary basis for any investment decision. You should consider this material among other factors in making an investments decision. Unless stated otherwise, the material contained herein has not been based on a consideration of any individual client circumstances and as such should not be considered to be a personal recommendation. This material was not intended or written to be used, and it cannot be used by any taxpayer, for the purpose of avoiding penalties that may be imposed on the taxpayer under U.S. federal tax laws. Each taxpayer should seek advice based on the taxpayer's particular circumstances from an independent tax advisor. The firm is not acting as a fiduciary under either the Employee Retirement Income Security Act of 1974, as amended ("ERISA") or under section 4975 of the Internal Revenue Code of 1986 as amended ("Code") in providing this material. Morgan Stanley Smith Barney is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act.

This material was prepared by or in conjunction with Morgan Stanley Smith Barney trading desks that may deal as principal in or own or act as market maker or liquidity provider for the securities/instruments (or related derivatives) mentioned herein and may trade them in ways different from those discussed in this material. The trading desk may have accumulated a position in the subject securities/instruments based on the information contained herein. Trading desk materials are not independent of the proprietary interests of the firm, which may conflict with your interests. We may also perform or seek to perform investment banking services for the issuers of the securities/instruments mentioned herein.

The author(s) principally responsible for the preparation of this material receive compensation based upon various factors, including quality and accuracy of their work, firm revenues (including trading and capital markets revenues), client feedback and competitive factors. Morgan Stanley Smith Barney is involved in many businesses that may relate to companies, securities or instruments mentioned in this material. These businesses include market making and specialized trading, risk arbitrage and other proprietary trading, fund management, investment services and investment banking.

This material has been prepared for informational purposes only and is not an offer to buy or a solicitation of any offer to sell any security/instrument, or to participate in any trading strategy. Any such offer would be made only after an investor had completed an independent investigation of the securities, instruments or transactions, and received all information required to make their own investment decision, including, where applicable, a review of any prospectus, prospectus supplement, offering circular or memorandum describing such security or instrument. That information would supersede this material and contain material information not contained herein and to which prospective participants are referred. This material is based on public information as of the specified date, and may be stale thereafter. We have no obligation to tell you when information herein is stale or may change. We make no express or implied representation or warranty with respect to the accuracy or completeness of this material, nor are we obligated to provide updated information on the securities/instruments mentioned herein.

Any securities referred to in this material may not have been registered under the U.S. Securities Act of 1933, as amended, and, if not, may not be offered or sold absent an exemption therefrom. Recipients are required to comply with any legal or contractual restrictions on their purchase, holding, sale, exercise of rights or performance of obligations under any security/instrument or otherwise applicable to any transaction.

The value of and income from investments may vary because of changes in interest rates, foreign exchange rates, default rates, prepayment rates, prices of securities/instruments, market indexes, operational or financial conditions of companies or other factors. There may be time limitations on the exercise of options or other rights in securities/instruments transactions. Past performance is not necessarily a guide to future performance. Estimates of future performance are based on assumptions that may not be realized. Actual events may differ from those assumed and changes to any assumptions may have a material impact on any projections or estimates. Other events not taken into account may occur and may significantly affect the projections or estimates. Certain assumptions may have been made for modeling purposes only to simplify the presentation and/or calculation of any projections or estimates, and Morgan Stanley Smith Barney does not represent that any such assumptions will reflect actual future events or that all assumptions have been considered or stated. Accordingly, there can be no assurance that estimated returns or projections will be realized or that actual returns or performance results will not materially differ from those estimated herein.

The trademarks and service marks contained herein are the property of their respective owners. Third-party data providers make no warranties or representations, express or implied, relating to the accuracy, completeness, or timeliness of the data they provide and shall not have liability for any damages of any kind relating to such data. Unless otherwise specifically indicated, all information in these materials with respect to any third party not affiliated with Morgan Stanley Smith Barney has been provided by, and is the sole responsibility of, such third party and has not been independently verified by Morgan Stanley Smith Barney, its affiliates or any other independent third party.

This material may not be sold or redistributed without the prior written consent of Morgan Stanley Smith Barney. This material is not for distribution outside the United States of America.