How Credit Ratings Affect Bond Valuations

There is widespread misunderstanding about what credit ratings really mean, and how they affect the returns that you earn and the overall riskiness of your portfolio.

Investors generally rely on bond ratings to evaluate the credit quality of specific bonds. Credit ratings indicate on a scale of high to low the probability of default; that is, the probability that debt will not be repaid on time in full. Failure to redeem principal at maturity would constitute a default. Failure to make interest payments on time (that is, to pay coupons to bondholders) would also constitute a default. In plain English, ratings answer two questions: How likely am I to get my money back at maturity, and how likely am I to get my interest payments on time?

All bonds are not subject to default risk. Any security issued *directly* by the U.S. government is considered free of default risk. Although these bonds are not rated, they are considered the safest and highest-quality securities that you can buy because a default by the U.S. government is deemed impossible. This includes all Treasury securities, as well as savings bonds.

Bonds issued by entities other than the U.S. government, such as corporate bonds and municipal bonds, are rated by a number of agencies that specialize in evaluating credit quality. The best-known rating agencies are Moody’s, Standard & Poor’s (S&P), and Fitch (now Fitch IBCA). Bonds are rated when issuers initially come to market, and subsequently, as issuers bring additional issues to market. Issuers pay the agencies for the rating.

Table 1. Credit Quality Ratings and What They Mean

Moody’s	**Standard & Poor’s**	**Fitch**	
Aaa	AAA	AAA	Gilt-edged. If everything that can go wrong does go wrong, they can still service debt.
Aa	AA	AA	Very high quality by all standards.
A	A	A	Investment grade; good quality.
Baa	BBB	BBB	Lowest investment-grade rating; satisfactory, but needs to be monitored.
Ba	BB	BB	Somewhat speculative; low grade.
B	B	B	Very speculative.
Caa	CCC	CCC	Even more speculative. Substantial risk.
Ca	CC	CC	Wildly speculative. May be in default.

C	C	C	In default. Junk.

On a scale of the best credit quality to the lowest, Table 1 lists the symbols used by each of the major credit rating agencies. These symbols are on the left-hand side. The right-hand side of Table 1 is a translation into plain English of what the ratings mean. Standard & Poor's adds plus (+) and minus (-) signs to its ratings. A plus signifies higher quality; a minus signifies somewhat lower quality. For instance, a rating of B+ is slightly higher than a rating of B. A rating of B- is slightly lower than a B rating. Moody's adds a 1 to indicate slightly higher credit quality; for instance, a rating of A1 is a higher quality credit rating than an A rating.

In order to protect their investments, many individual investors limit their purchases to bonds that are at minimum rated "investment grade," which corresponds to BBB (Standard & Poor's) and Baa (Moody's). The term "investment grade" stems from the fact that fiduciary institutions, such as banks, are permitted by law to invest only in securities rated at the minimum "investment grade." That rating denotes a fair margin of safety. Note that some ads for bond funds use the term "investment grade" to imply extraordinarily high quality, which is misleading.

Why Ratings Change

Ratings are assigned on the basis of extensive economic analysis by the rating agencies mainly to determine revenues available to the issuer to cover debt service. The more money available to cover the debt service, the higher the rating.

When forecasting economic conditions for the next six months or for perhaps one year, experts stand on reasonably secure ground. But the further they predict into the future, the more imprecise and unreliable their forecasts become. Any prediction of economic conditions that goes out more than five years becomes guesswork. Bear in mind, however, that bonds are rated for their entire life, even if that is 30 years.

As a result, some forecasts turn out to be incorrect. When ratings are reviewed, they may change. As the economic fortunes of the issuer vary, so will the ratings.

Over time, changes in ratings can be major. For example, State of Louisiana bonds was rated AAA in the mid-1980s. In early 1990, they were rated barely investment grade. Occasionally, changes in ratings are more sudden. For instance, State of Massachusetts ratings went from AA to barely investment grade within the space of one year.

More dramatic rating changes sometimes occur in the corporate bond sector. For example, if a company buys another with debt, the amount of debt may increase sharply virtually overnight. And that increase would cause the rating to deteriorate virtually overnight as well.

Ratings and Interest Rates

Above all, credit ratings affect the cost of borrowing—that is, the interest rate that will have to be paid by the issuer to attract buyers. The interest cost to the issuer is the coupon you will earn.

The principle for this is easy to explain. Think of a bond as a loan and imagine that you are a bank that is lending to a borrower. You would ask a lot of questions relating to the probability of repayment. To whom would you rather lend money: to a struggling businessman with no collateral who wants to start a business, or to IBM? The answer is obvious. Now suppose you are the struggling businessman or John Doe. Chances are that if your banker turns you down, you will find a different banker, who will charge you higher interest costs. You may even go to your neighborhood loan shark (or equivalent), who will lend you the money, but charge you a much higher interest rate than the bank.

This is also true for bonds. The most creditworthy issuers—say, large states with diverse economies, blue-chip corporations with very little debt, or the U.S. government—borrow at a lower cost. Less creditworthy clients have to pay higher interest. Consequently, bonds with the highest quality credit ratings always carry the lowest yields; bonds with lower credit ratings yield more. Note that the yield, in a sense, provides a scale of credit-worthiness: higher yields generally indicate higher risk–the higher the yield, the higher the risk.

Ratings Changes & Price

If bonds are downgraded (that is, if the credit rating is lowered), the bond price declines. If the rating is upgraded, the price goes up. In fact, bond prices sometimes change if there is even a strong possibility of an upgrade or a downgrade. This is because anxious investors sell bonds whose credit quality is declining and buy bonds whose credit quality is improving.

Unless there is a genuine risk of default, however, price changes in response to upgrades or downgrades are far less major than those occurring due to changes in interest rate levels. With rare exceptions, ratings go up one notch or down one notch in the rating scale, and prices go up or down by perhaps 1% or 2% per bond in response to rating changes. The change in price corresponds to the amount necessary to bring the yield of a bond (and therefore its price) in line with other bonds rated at the same level. For bonds rated AA, for example, a downgrade to A+ may not make a noticeable difference in the price.

This point needs to be emphasized because many individual investors are needlessly worried about relatively minor downgrades and this fear is sometimes exacerbated by the financial press. For bonds that have very high credit quality (AA or AAA), a deterioration in the rating is not a major cause for concern. It would not result in a serious deterioration in the price of the bond. A more serious concern would be a series of downgrades, particularly if downgrades drop the credit rating to below investment grade.

There is one notable exception to the preceding statements. During the takeover craze of the 1980s, corporate bond prices were exceptionally volatile because of the possibility of downgrades due to takeovers.

Here are some questions and answers that deal with common investor concerns about bond credit ratings:

Doesn't a downgrade mean my bonds are no longer safe?

However, certain downgrades are more significant than others and should be viewed as red flags:

That is usually not the case. The rating scales used by the agencies are very conservative. Distinctions between rating levels are often based on nuances. Any bond rated investment grade or better continues to have good margins of safety, even after a downgrade.

- A downgrade that drops a bond rating to below investment grade;
- A downgrade of more than one notch (say from AA to A-);
- A string of downgrades in close succession.

If any of these occurs, you might want to review whether you wish to continue owning that security.

My bonds are insured, or AAA, or government guaranteed. Won't that guarantee that principal remains safe?

No. What is guaranteed is that interest payments will be made on time and that principal will be redeemed in full at the bond's maturity. There is no connection between that guarantee and what happens to the price (or value) of bonds due to fluctuations in interest rates. Changes in interest rates affect all bonds, whether they are those of Fly-by-Night airlines or obligations of the U.S.

government. If interest rates rise, the value of your bonds will decline. If interest rates decline, the value of your bonds will rise. Period. No exceptions.

How frequently do defaults occur?

Default rates for junk bonds, which by definition are bonds rated below investment grade, are higher.

Note, however, that even when defaults occur, bond investors seldom lose 100% of the principal value of the bond. Defaulted bonds usually have some salvage value. There is a good deal of speculation in the bonds of defaulted or bankrupt issuers. That is because such bonds may be purchased very cheaply, perhaps as little as 10 to 30 cents on the dollar. Many defaults have taken the form of a suspension of coupon payments. Such bonds are said to be trading flat. If coupon payments are resumed, the price of the bonds can soar. Bondholders may also benefit from the sale of assets of issuers under bankruptcy proceedings. Finally, some bankrupt companies emerge successfully from bankruptcy proceedings, leading to a bonanza for anyone who purchased the bonds while the company was in default.

There is a gradation in risk of default. Any bond that is a direct obligation of the U.S. government is deemed to have zero possibility of default. Bonds issued by federal agencies, or most types of mortgage-backed securities, are deemed to have almost equally high credit quality. Municipal bonds come in a wide variety of ratings, but in the aggregate, they have low default rates. Corporates (particularly so-called junk bonds) are far less predictable. And the debt of so-called emerging markets is highly speculative.

That depends, of course, on the type of bond under discussion. But overall, if you consider primarily bonds that are at least investment grade in credit quality, default rates are relatively low. Since the Second World War, and despite a few well-publicized defaults in the corporate sector, no bonds have ever defaulted while currently rated AA. Only two defaults have occurred to bonds rated A. Similar statistics prevail for municipal bonds. (While some bonds that were initially highly rated eventually defaulted, these had been downgraded prior to the actual default. Hence, it is prudent to monitor the ratings of bonds in your portfolio.)

I want maximum income and maximum safety. My broker advises me to buy 30-year bonds with AAA ratings and just hold them to maturity. Isn’t that the safest thing to do?

As a general rule, if you are concerned about the safety of principal and predictable income, it is usually safer to buy bonds with maturities of five to 10 years, rated at least investment grade or somewhat higher (depending on your preferences and tolerance for risk). Interest income from such bonds is likely to be close to (and occasionally higher) than that of AAA-rated bonds with long maturities so you will not be sacrificing income. But the risk to principal is dramatically lower.

Not necessarily. That can be a costly and high-risk strategy. It is costly because AAA-rated bonds yield less than bonds with lower ratings but with similar maturities. You are therefore sacrificing income. And it is high-risk for two reasons: One is that, as we have just seen, interest rate risk is far higher for bonds with longer maturities. If you need to resell your bonds before they mature, you might have to take a very costly hit to principal. But in addition, it is very difficult to predict how much you will really earn on bonds with the longest maturities because that will largely be determined by varying reinvestment rates earned on interest income.

Does all of this mean that I should ignore credit ratings?

No. Remember that ratings are opinions. The rating agencies do not have any connection to actual debt service payments, which are made by the issuer. Nor do the ratings constitute any kind of recommendation either to buy or sell a particular security. A low rating does not mean that default will occur; and a high rating guarantees nothing, not even that a downgrade won't occur.

A Ratings Summary

Here is a summary of what you will want to remember concerning ratings:

- When you purchase bonds, you should check credit ratings by the major agencies. Most of the time, ratings issued by the different rating agencies are close. If they are not, then to be safe, assume the lowest rating is accurate.
- Buy bonds rated investment grade (or higher), depending on your risk tolerance. A rating of A or better represents a sound rating, particularly for bonds with maturities under five years.
- Be sure that you understand the main reasons for the rating. What sources of revenue will pay the debt? What is the credit history of the issuer? Has it been upgraded or downgraded? Why?
- When you own a bond, monitor its rating. Ask your broker to let you know if any rating changes occur (and check periodically). If a significant downgrade occurs, and you feel uncomfortable holding, you may want to consider selling that security. Note that occasionally the price of some bonds drops in advance of a rating change. The market is sometimes ahead of the rating agencies in sniffing out that a particular security may face potential problems.
- Diversify. Don't put all your assets in one bond. If you have a total of $50,000 to invest, it is

more prudent to buy five $10,000 lots than one $50,000 lot. Buy bonds of different issuers to diversify credit risk. And buy bonds with different maturities to diversify interest rate risk.