



## **Fixed-Income Survey Guidelines**

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# Fixed-Income Survey Guidelines

Morningstar asks fund companies to send the following information on a monthly or quarterly basis for each of their fixed income or allocation funds.

## Credit Quality Breakdown

Each fixed income security and cash instrument in a fund should be assigned to one of the following eight categories for the credit quality calculation. The percentages represent the assets in that rating level as a percent of all fixed income and cash assets.

AAA	AA	A	BBB	BB	B	Below B	Not Rated	Total
71.72	3.91	7.08	9.49	1.44	0.98	0.00	5.38	100.00

Ratings data provided to Morningstar in one of the first seven categories (AAA through Below B) should only reflect ratings assigned by one of the Nationally Recognized Statistical Rating Organizations (NRSRO). So-called internal, or manager-derived, credit ratings should not be included in those categories; rather, bonds not rated by an NRSRO should be included in the not rated (NR) category.

Morningstar prefers that bonds be classified according to the Lehman Brothers Global Family of Indices ratings rules (i.e. Lowest rating used for bonds with two ratings. Middle rating used for bonds with more than two ratings.)

Here are some additional details about the calculation for credit quality breakdown:

- ▶ Fixed income securities and cash should be included in the credit quality calculations.
- ▶ The holdings used for calculation should be a trade-dated list that includes the impact of pending trades.
- ▶ Accrued income should be included in the credit quality calculation as part of the total market value exposure of each security.
- ▶ Morningstar categorizes any fixed-income instrument with less than one year to maturity as a cash equivalent. Cash and cash equivalents should be included in the calculation of credit quality. Cash securities that do not have traditional letter ratings can be included in the AAA category for purposes of this survey.
- ▶ If a fund holds futures, or other derivative tools such as swaps or options, that have fixed income securities as the underlying asset or holds other fixed income funds as assets, the credit quality that is calculated should include the weighted impact of the underlying assets.
- ▶ Convertible bonds should be included in the calculation.
- ▶ Preferred stock should not be included in the calculation of credit quality.

Morningstar is sensitive to the reality that some vendors use Moody's Investor Service ratings rather than or in addition to S&P ratings classifications. Below is a chart showing the equivalent Moody's rating class for each S&P rating tier.

Standard & Poor's	AAA	AA	A	BBB	BB	B	Below B
Moody's	Aaa	Aa2	A2	Baa2	Ba2	B2	Below B2

### Average Effective Duration

Morningstar asks fund companies to calculate and send average effective duration (also known as "option adjusted duration") for each of their fixed income or allocation funds. We ask for effective duration because the measure gives better estimates of how the prices of bonds with embedded options, which are common in many mutual funds, will change as a result of changes in interest rates.

*Note: Effective duration, or option-adjusted duration is distinctly different from modified duration, Macaulay duration and duration-to-worst.*

Effective duration takes into account expected mortgage prepayments or the likelihood that embedded call options will be exercised. If a fund holds futures, other derivative securities, or other funds as assets, the aggregate effective duration should include the weighted impact of those exposures. Standard practice for calculating this data point requires determination of a security's option-adjusted spread, including the use of option models or Monte Carlo simulations, as well as interest-rate scenario testing. Morningstar requests that you only report data in this field that has been specifically labeled effective or option-adjusted duration, or that you are certain has been calculated in the fashion described.

As noted previously, Morningstar categorizes any fixed instrument with less than one year to maturity as cash for the purposes of calculating a fund's asset allocation breakdown. These short-term fixed securities and other cash instruments should be included in the calculation of effective duration.

Owing to current market practices, Morningstar will accept surveys returned with modified duration (and no effective duration provided) for funds in the municipal and high yield categories. Surveys for all other bond categories that lack a submission for effective duration will not be accepted.

### **Average Effective Maturity**

Morningstar asks fund companies to calculate and send average effective maturity for each of their fixed income or allocation funds on a monthly or quarterly basis. Average effective maturity is defined as a weighted average of the maturities of the bonds in a portfolio, taking into account all expected mortgage prepayments, puts, and adjustable coupons. Maturity is defined as the length of time in years until a debt becomes due for payment.

If a fund holds futures, other derivatives, or other funds as assets, the average effective maturity should include the weighted impact of the underlying assets. Any fixed instrument with less than one year to maturity should be included in the calculation of average effective maturity.

Please do not send average nominal maturity, which is defined as a measure of a bond's maturity which, unlike average effective maturity, does not take into account expected mortgage prepayments, puts, or adjustable coupons.

### **Alternative Minimum Tax (AMT) Exposure**

Morningstar asks fund companies to calculate the percentage of each U.S. municipal bond portfolio's bonds whose income distributions are subject to the AMT. So-called "private-activity" municipal bonds are subject to the AMT.

### **Insured**

Morningstar asks fund companies to calculate the percentage of each U.S. municipal bond portfolio's bonds that are insured.

### **All Pre-Refunded**

Morningstar asks fund companies to calculate the percentage of each U.S. municipal bond portfolio's bonds that are pre-refunded. Pre-refunded bonds are bonds that may have originally been issued as revenue or general obligation bonds but are now secured until the call date or maturity in an escrow account consisting entirely of U.S. Government obligations that are sufficient for paying the bondholders.

### **Currency Exposure**

Morningstar asks fund companies to provide information about how each taxable fund's fixed-income and cash assets are distributed among currencies. (Morningstar calculates in-house how each fund's fixed-income and cash assets are distributed among countries.)

For example, a world bond fund with broad exposure might show 10 different country exposures. If that fund did no currency hedging whatsoever, its currency exposure would mirror its country exposure. If, however, the same portfolio were fully hedged to the U.S. Dollar, the fund's country exposure would remain the same, while its U.S. Dollar exposure would equal 100%. Funds with partial hedges, or active currency bets would likely have multiple listings for currency exposure, and the currency exposure may appear to have no correlation to the country exposure.