

Has the Municipal Bond Market Mispriced the Impacts of the Current Recession? *We Think it Has!*

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There are several methods an investor can use to assess the market's pricing of credit risk (risk of non-payment of principal and interest due to default). This is important because sometimes the market, with its collective reasoning, will charge too little for credit risk and, at other times, too much. The market's predisposition toward mispricing credit risk is highly correlated to its sense of euphoria or fear.

Credit Quality Spreads

The first method of measuring the market's pricing of credit risk is to look at the level of credit quality spreads (the incremental yield the market pays to entice an investor to purchase securities of lower credit quality). Figure I illustrates the yield increments the market is paying an investor to buy BBB-rated municipal revenue bonds versus AAA general obligation municipal bonds. Currently, an investor is being paid just about 3.00% more income to own a lower investment grade municipal revenue bond over an AAA general obligation municipal bond. An investor must ask themselves whether this is ample compensation in this recessionary environment for the extra credit risk. We would argue that investors

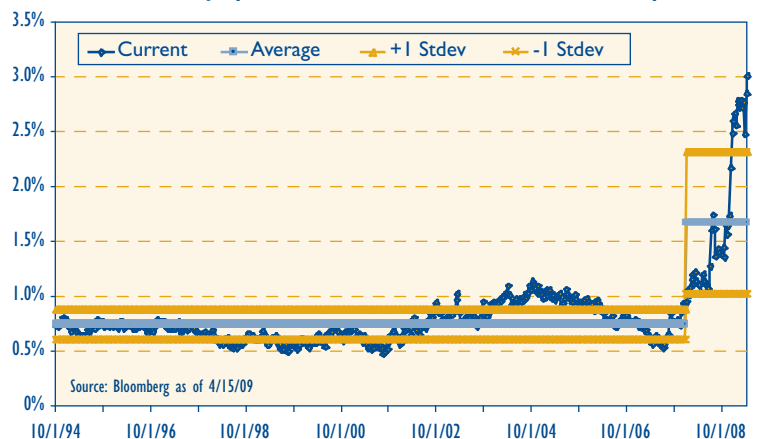
are being well compensated to take on extra credit risk.

The municipal market has undergone several significant changes in the last two years. All municipal bond insurers have lost their Aaa/AAA ratings. Berkshire Hathaway, the newest entrant to the municipal bond insurance business, is now rated AA2/AAA. This is significant because in recent years close to 50% of the new issuance of municipal bonds came to market as insured. To reflect this change in the market we recalibrated our data as of January 2007 in an effort to capture current market conditions. Figure I shows that, in terms of statistical measures, the current spreads of 3.00% are 1.68 standard deviations from the mean of 1.67%. In plain English, only about 10% of all observations lie outside this range. If we were to use the old method of calibration (not taking into account the changes in the market) we would be at a 5.49 standard deviation event which happens between 0.000057330% and 0.000000197% (this is not a misprint) of the time.

Implied Default Rates

Another way to measure the market's pricing of credit risk is to examine the implied default probabilities reflected in current market prices and compare them against the

FIGURE I: Quality Spreads BBB Revenue less AAA GO Municipal 10 Years



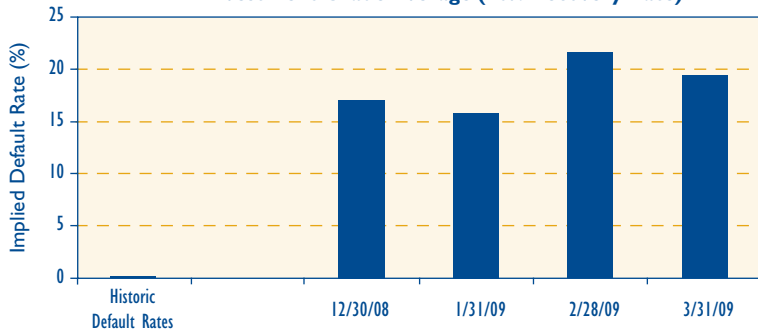
market's actual history. To calculate these probabilities we compared the pricing of various securities, all within the investment grade category AAA-BBB of the municipal market, against credit-risk-free securities (prerefunded bonds). These securities all had maturities of ten years. To do this calculation we also had to assume a recovery rate on the municipal securities. A recovery rate can be thought of as the percentage of a bond's principal that recovered after the default. We have run the calculation assuming 40% and 60% recovery rates (shown in Figures II and III on the following page). In a November 24, 2008, Merrill Lynch article, recovery rates for municipal bond defaults were quoted between 100% and 40%, depending on the type of security. Those securities that were in the higher risk categories and dependant on a single revenue stream

posted the lower recovery rates. These recovery rates were calculated by Fitch. Figures II and III show the results of these calculations for the last four months. These results are compared to the historic default rate of the investment grade category of the municipal market (0.13%).

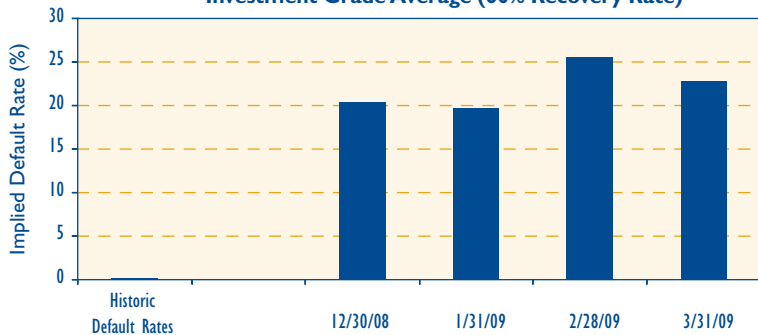
Currently at the 40% recovery rate (municipal defaults typically have a higher recovery rate), the market is pricing a 19% probability of default. This seems quite high when compared to the cumulative default rates for the period January 1, 1986 through January 1, 2009, calculated by Standard and Poor's in March of 2009, of 0.13% for the investment grade segment of the municipal bond market. Have municipal bond default rates ever approached these levels? The answer is yes and the following references tell us when.

Continued

**FIGURE II: 10-Year Implied Default Rates
Investment Grade Average (40% Recovery Rate)**



**FIGURE III: 10-Year Implied Default Rates
Investment Grade Average (60% Recovery Rate)**



Source: Data from Merrill Lynch 3-15 Municipal Bond Index, calculations by Thornburg

“In 1988, a study by Enhance Reinsurance Co. looked at historical patterns of municipal defaults from the 1800s to the 1980s and concluded that municipal defaults usually follow downswings in business cycles and are also more likely to occur in high growth areas

that borrow heavily. Following the 1873 Depression, when more than 24 percent of the outstanding municipal debt was in default, the greatest number of defaults occurred in the South, the fastest-growing region at the time. Factors that caused defaults included

fluctuating regional land values, commodity booms and busts, cost overruns and financial mismanagement, unrealistic projections of the future, and private-purpose borrowing. The report also said that since World War II, revenue bonds have been a new source of default, largely a result of revenue over projections.”

Public Bonds - Presented by Good Jobs First, June 2004. “Municipal Bonds and Defaults” http://www.publicbonds.org/public_fin/default.htm.

“In any case, a study by Prof. George Hempel¹ found the default rate on muni bonds across the period of 1929-37 was 16.2% of outstanding debt. The estimated loss rate, however, was a mere 0.5%. Bondholders involved in the Orange County, CA, default of 1994 - the largest ever - recovered 100% of principal and interest.”

WSJ 3/12/2009 - “Municipals Reflect the State We’re In,” By Liam Denning.

Conclusion

The current levels of credit quality spreads are very wide and translate into implied default probabilities that are multiples of the historic ten-year default rate (0.09%). In fact, one has to go back to the period between 1929 and 1937 to find a historic default rate that nears those implied in current price levels (16.2%). Even in that time period, actual losses were much less. This is why we feel the municipal bond investor is being well compensated in taking on additional credit risk. That said, the days of buying an insured municipal bond and forgetting about it are long gone. Credit risk must be actively managed! This is a significant part of the value-added proposition Thornburg’s municipal bond team brings to our municipal bond portfolios and separately managed accounts. We actively monitor the credit conditions of the securities we own. ■

Before investing, carefully consider the Fund’s investment goals, risks, charges, and expenses. For a prospectus containing this and other information, contact your financial advisor or visit thornburg.com. Read it carefully before investing.

¹“The Postwar Quality of State and Local Debt,” by George H. Hempel of Washington University - published in 1971 by The National Bureau of Economic Research.

Investments in lower-rated or unrated debt obligations may be more sensitive to default, downgrade, and market volatility, and may be less liquid and more difficult to value.

Investments in the Funds carry risks, including possible loss of principal. Bond funds have the same interest rate, inflation, and credit risks that are associated with the underlying bonds. The principal value of bonds will fluctuate relative to changes in interest rates, decreasing when interest rates rise. Unlike bonds, bond funds have ongoing fees and expenses. Investments in the Funds are not FDIC insured, nor are they deposits of or guaranteed by a bank or any other entity.

General Obligation (GO) Bonds - A municipal bond secured by the pledge of the issuer’s full faith, credit, and taxing power rather than the revenue from a given project.

Pre-Refunded Bond - A type of municipal bond that has been escrowed or collateralized either by direct obligations guaranteed by the U.S. government, or by other types of securities. The escrow account is structured so that these refunded bonds are to be called at the first possible

call date. Such bonds, if escrowed with securities guaranteed by the U.S. government, have little if any credit risk.

Quality Spread - The difference between the yields of securities with different quality ratings.

Revenue Bond - A bond on which the debt service is payable solely from the revenue generated from the operation of the project being financed or a category of facilities, or from other non-tax sources.

Standard Deviation - A statistical measurement of dispersion about an average which, for a mutual fund, depicts how widely the returns varied over a certain period of time. Investors use the standard deviation of historical performance to try to predict the range of returns that are most likely for a given fund. When a fund has a high standard deviation, the predicted range of performance is wide, implying greater volatility.

The views expressed by the Portfolio Managers reflect their professional opinions and are subject to change.