California is not Greece

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Much has been made lately of the financial difficulties facing municipal governments. Many U.S. localities are confronting notable budget deficits and/or looming pension shortfalls at a time when many voters are also resisting tax increases. Headlines regarding municipal bonds have been dire. The year 2008 saw the largest dollar-amount municipal bond defaults on record (e.g., Mysak, 2010). Continued media attention has led many investors to be concerned about the prospects for municipal bonds—some analysts are even predicting widespread municipal bond defaults in 2011.

At Vanguard, we hold a different view. We believe the doomsday headlines overreach reality and that—although the fiscal challenges, including significant pension liabilities, facing municipalities are important and should not be ignored—the expectation of systemic defaults among state and local governments is hyperbole. This is because, in our view, issuers overall have the ability and willingness to make their debt payments. Tax collections have begun to improve, and the broad U.S. economy is showing signs of sustained, albeit slow, recovery. As a result, we do not anticipate a rash of municipal bond defaults.

For investors interested in municipal bonds, Vanguard continues to stress, however, the prudence of focusing on three crucial factors when evaluating these securities: broad diversification, substantive credit analysis, and low cost. These factors are mentioned in more detail at the end of this commentary. We begin here with a review of the repayment history and credit structure of municipal bonds, followed by a broad discussion of other factors affecting state and local governments' ability and willingness to pay their debts.

Repayment history is strong

Municipal bonds trade in a large, fragmented market with a long history of repayment. The structure of the $2.7 trillion municipal bond market dates back hundreds of years in the United States and today comprises thousands of issuers. Moody's Investors Service alone has ratings on more than 18,000 different issues from state and local governments. Bonds in the municipal market are, overall, highly rated and have rarely defaulted. As **Figure 1** shows, the average credit quality for municipal bonds is AA and the major credit structures used are general obligation and essential-services revenue bonds (these are described in the next subsection of this commentary).[1]

In aggregate, default rates for municipal bonds have been minuscule. It has been more than 75 years since a state credit failed to make a bond payment.[2] In the 40 years ended 2009, for Moody's-rated municipal bonds, only 54 defaulted (Moody's Investors Service, 2010). During that period, the average five-year cumulative default rate for investment-grade municipal bonds was 0.03%, a rate low in absolute terms and 1/30th that of corporate bonds over the same time frame. But, as Vanguard often emphasizes, history alone is no predictor of the future—simply because something has not happened in the past doesn't mean it won't happen in the future. What matters in the future is whether issuers will have the ability and willingness to repay. We think they do and will.

Notes on risk: All investments are subject to risk. Investments in bond funds are subject to interest rate, credit, and inflation risk. Foreign investing involves additional risks, including currency fluctuations and political uncertainty. While U.S. Treasury or government agency securities provide substantial protection against credit risk, they do not protect investors against price changes due to changing interest rates. Although the income from a municipal bond fund is exempt from federal tax, you may owe taxes on any capital gains realized through the fund's trading or through your own redemption of shares. For some investors, a portion of the fund's income may be subject to state and local taxes, as well as to the federal Alternative Minimum Tax. There is no guarantee that any particular asset allocation or mix of funds will meet your investment objectives or provide you with a given level of income. Diversification does not ensure a profit or protect against a loss in a declining market.

1 Bond ratings: Independent bond-rating agencies evaluate the financial health of bond issuers and rate the quality of their bonds. Ratings may range from AAA (or Aaa) to D.

2 In 1933 Arkansas failed to make a $10.5 million highway bond debt-service payment; the issue was refunded the subsequent year.

Issuers' ability to pay

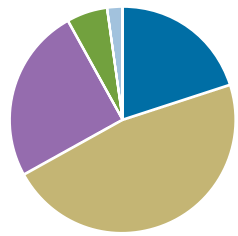
The credit and transaction structures of municipal bonds have been favorable to investors. Municipal credit structures are of two major types: general obligation bonds and revenue bonds. For general obligation credits, state and local governments pledge their full taxing power. Revenue bonds are backed by first liens on fees and revenues for the issuing enterprise, in most cases tied to essential services such as water, sewer, and electric services.

These credit structures have stood up well in times of stress, making municipal bankruptcies extremely rare. New York City in the 1970s, Philadelphia in the 1990s, and New Orleans after hurricane Katrina all suffered significant financial difficulties, yet none of them declared bankruptcy *or* missed a bond payment.

Several factors have contributed to this positive record, not the least of which has been the typically manageable size of the outstanding debt. At the state level, tax-supported debt ranges between 3% and 4% of personal income. On the local level, debt burdens typically are between 3% and 5% of property values. These figures may seem surprisingly low, given the nation's recent economic turmoil, and some may expect these figures to worsen significantly as the full effects of the U.S. economic crisis are felt. However, recent economic news tells a different story.

Figure 1. Credit quality and type of U.S. municipal bonds, as of December 31, 2010

Municipal credit quality



20% AAA
47% AA
25% A
6% BBB
2% Below investment grade

Municipal credit type

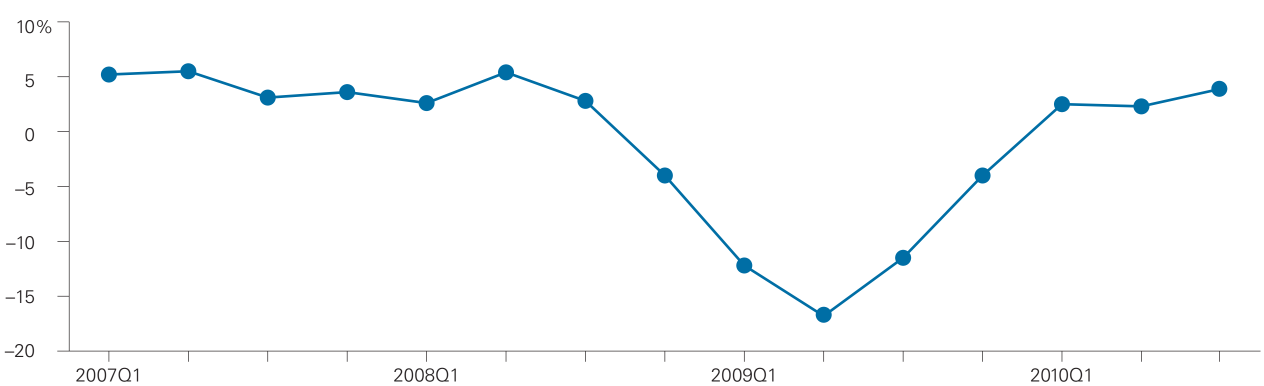
Sector	Weight (%)
Tax-secured	47
Utility	13
Transportation	9
U.S. government	11
Health care	9
Higher education	5
Corporate-backed	3
Project finance	1
Other	2

Sources: Moody's Investors Service, Standard & Poor's, and Vanguard.

After an economically devastating 2009, state tax receipts, on average, actually were rising through the first three quarters of 2010. In fact, preliminary third-quarter figures for 2010 showed a 3.9% increase in year-over-year tax receipts, with a total of 42 states showing revenue gains. Although aggregate receipts are not back to 2008 levels, the growth trend has turned positive. This trend is expected to continue in fiscal year 2011 (see **Figure 2**).

Figure 2. Year-over-year percentage change in U.S. state tax collections

2007 through third-quarter 2010



Source: Reproduced by permission of the Nelson A. Rockefeller Institute of Government.

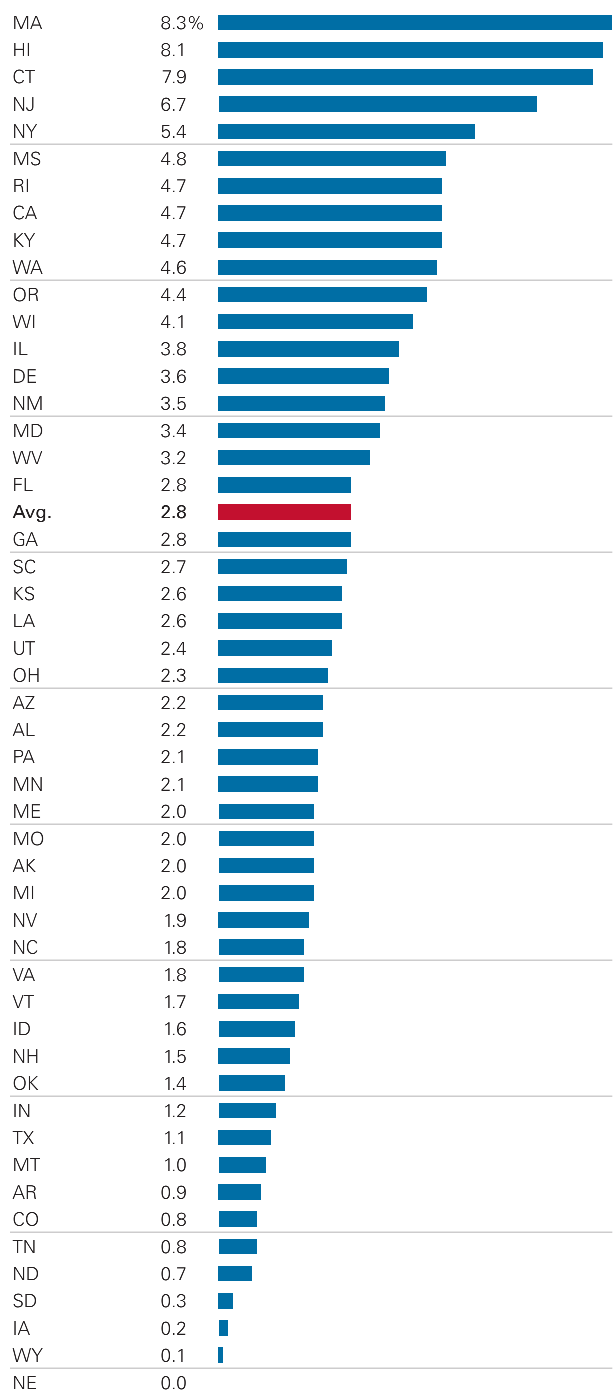
Indeed, Vanguard's own Economic Dashboard supports this positive economic trend with its cautiously optimistic outlook on the U.S. economy. For the first time in five years, the dashboard indicates that the balance of risks to the U.S. outlook is tilted toward better-than-expected job growth and in the direction of a self-sustaining recovery (Davis et al., 2011).

Regardless of the future economy, the nature of bond structures in the municipal market also contributes to issuers' ability to pay. Municipal bonds are most often structured with level, self-amortizing debt service over 20 to 30 years. In fact, general obligation bonds usually have an average duration of approximately 12.2 years, which is considerably longer than either typical U.S. federal debt, at 4.9 years' duration, or other major sovereign credits such as those of the OECD[3] countries, with an average duration of 6.3 years. Longer maturities of level debt service enable issuers to avoid bullet maturities and the rollover financings of maturing bonds that may be required. (In a crisis, it is these rollover financings of balloon payments that can cause significant stress to both the issuer and the market.) In addition, most municipal bonds are issued with a call provision, allowing issuers to refinance the debt when favorable conditions exist, thus helping to keep their obligations manageable.

Issuers' willingness to pay

For municipal bonds to perform, not only must governments have the ability to pay their debt service, but they must be willing to pay it. State-level debt burden is modest as a percentage of gross state product, averaging less than 2.8% nationwide (see **Figure 3**). As a result, simply choosing not to make debt-service payments would typically have a minimal economic benefit to the bond issuer over the short run, but would have devastating long-term results by making future financings extremely difficult. Given the relatively modest size of the debt overall, it ends up being a highly negative asymmetrical trade-off for states to consider ignoring their debt.

Figure 3. States' debt burden as percentage of gross state product, 2010



Note: Numbers for gross domestic product by state have a one-year lag.

Source: Moody's Investors Service.

3 Organisation of Economic Co-operation and Development.

Furthermore, even if a government entity wanted to avoid payments, it is not easy to do. States cannot legally declare bankruptcy. Moreover, close to half the states in the Union do not permit local government bankruptcies, and, for the half that do permit them, many localities must get prior approval from the state. In such instances, a state oversight board typically steps in and takes control away from the local entity. Finally, even if a locality is able to declare bankruptcy, it is not afforded any of the protections a corporation enjoys under Chapter 11. Instead, governments must file for bankruptcy under Chapter 9, which effectively requires them to raise taxes, cut spending, and sell nonessential assets before they file, thus making the process of little benefit.

The profile of municipal investors is another incentive for governments to pay their debt service. The vast majority (70%) of municipal bonds are held by individuals, either directly or in mutual funds. Given the nature of the tax exemption, the likely holders of the debt are local residents of the issuing state or locality. As a result, defaulting on municipal bonds most frequently harms local voters—not something most politicians are interested in doing.

It is perhaps not surprising, then, that municipal bond defaults typically occur in small, nonrated and nonessential project financings. Moody's has reported—for the 40 years ended 2009—that there has been an average of only one default every six years from among the thousands of essential-purpose, rated bond issues. Furthermore, when municipal bonds have defaulted, the recovery rate has been high, at more than 99 cents for every dollar defaulted on (Moody's Investors Service, 2010).

There are concerns

Nevertheless, states and local governments face ongoing financial pressures that should not be ignored. In aggregate, 46 states faced budget deficits totaling $130 billion for fiscal year 2011. And although this is actually an improvement over fiscal 2010, states will need to continue to reduce spending and raise revenue to close the gaps. These pressures could lead to some future downgrades in credit ratings, but we do not see them leading to major bond defaults.

Perhaps the most pressing concern on investors' minds is the magnitude of the retirement obligations facing municipal governments. The Pew Charitable Trusts recently estimated the public system funding gap between future pension, health care, and other retirement benefits and government funds on hand to be $1 trillion nationwide (Pew Charitable Trusts, 2010). Clearly this continues to be an area of pressure, and some difficult choices and serious negotiations between the interested parties to ultimately resolve this important issue will be required. Nevertheless, adequate cash currently exists to meet obligations over the intermediate term.

In fact, as recently as 2008, governments had a total of $3.2 trillion in assets on hand to pay the $175 billion of annual payments required (Fitch Ratings, 2010). The recent *Wilshire Report on State Retirement Systems* (2010) found that state pension plan assets in 2009 averaged 65% of actuarially accrued pension liabilities.[4] So although a pension-funding gap does exist, the money is not actually due until well into the future, leaving some time to solve the issue.

4 These figures are greatly influenced by equity returns. Any subsequent improvement in equity markets would not be reflected in these figures.

What should an investor do?

Individuals interested in the benefits of municipal bonds during these uncertain times should take a thoughtful perspective and exercise prudence when investing. To be sure, municipal bond investors should expect "headline risk" to remain elevated in 2011.

At Vanguard, as stated, we do not see a systematic threat to the municipal market. In fact, despite the challenging fiscal environment facing many governments, we do not expect widespread bankruptcies or defaults. We do, however, see a possibility of some credit downgrades and some isolated defaults on more minor, less essential, projects in the future. In addition, over the coming years, governments will need to come to grips with their sizable pension obligations.

As a result, Vanguard continues to recommend that investors consider three crucial factors when investing in today's municipal market.

- **Broad diversification.** Perhaps now more than ever, it may be wise for investors to hold a high-quality, well-diversified portfolio. Given the limited trading volumes in the municipal secondary market, investors should consider holding a wide range of issues. As a result, a broad-based mutual fund may be an appropriate option for investors.
- **Substantive credit analysis.** Uncertain market conditions make it increasingly important to conduct substantive credit analysis. Understanding a bond's security structure and risks is crucial to being able to determine a bond's proper value. It is not simply a bond's yield that determines its ultimate value, but the yield relative to the risk associated with the bond that should matter most to investors. As a result, professional credit analysis can be increasingly key in these times.
- **Low cost.** In all circumstances, it is valuable to minimize the only certain element in an investment—its cost. This is particularly true in lower-return environments such as that being experienced in the bond market. In these circumstances, fees can grab an even larger percentage of potential returns, if not managed prudently.

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