



September 2010

Investment Commentary

Understanding and Evaluating Potential Risks in Municipal Bond Markets State and Local Governments' Fiscal Stress Makes Careful Research Especially Important

We have spent the last year and a half sharpening our focus on municipal bonds and the potential risks for that \$2.8 trillion market going forward. Diversified investment-grade muni funds play an important role in our taxable clients' fixed-income allocations. We always consider the tax implications of investment decisions made on our clients' behalf but tax-exempt income alone is not a reason to invest. Default rates for all municipal bonds have averaged 0.01% annually since 1970 (versus 1.57% for all corporate bonds), according to Moody's, and over the same time period, the depth and breadth of state and local debt has grown. That has given active managers a larger universe of investment-grade securities to choose from and (in our opinion) more opportunities to produce higher total returns.

That said, risks have clearly increased. The percentage of muni bonds currently backed by insurers has dropped from about 50% to 10%; some bond insurance companies like Ambac and MBIA forayed into businesses like mortgage-backed securities insurance and they have struggled to stay afloat following the housing meltdown. State and local municipalities face budget shortfalls brought about by the economic downturn and longer-term structural challenges due to unfunded pension and health care liabilities. A PIMCO study conducted in late 2008 reviewed U.S. municipal defaults as far back as the early nineteenth century and it found default rates ranging from 1.4% to 7.3% during economic depressions. While the contributors to the rising default rates varied across time periods, there were some familiar-sounding developments mentioned: large increases in debt, real estate booms, and the collapse of many banks.

All of that has led to our concern that defaults in the investment-grade muni bond market will increase above their historical average rate in the years ahead. On the one hand, we rely on all of our bond managers to avoid defaults so, in that sense, one could argue that as long as we have confidence in their credit teams, an increase in default rates might not be a concern. But even those muni managers who avoid defaults can watch portfolios lose value if investors' fears become contagious, leading them to demand higher yields (and depressing prices accordingly).

Headlines about state and local budget problems have not translated into a rash of large municipal bond defaults, but three events in the past three years have grabbed headlines. The northern California city of Vallejo declared Chapter 9 bankruptcy in May 2008, but it has continued to make all payments on approximately \$120 million in revenue bonds and reduced interest payments on about \$50 million in general fund debt. (We give more detail on types of muni bonds below.) On a much larger scale, in April

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2009, the sewer enterprise in Jefferson County, Alabama, defaulted on \$3.1 billion in outstanding sewer revenue bonds. That default remains unresolved. More recently, the Pennsylvania capital city of Harrisburg announced its intention to default on \$3.3 million in bond payments due this month. Those payments are expected to be covered by the city's bond insurer.

While the muni funds we invest with have not been exposed to these defaults, one lesson we have learned is that understanding where future defaults might occur requires looking closely at the variety of municipal bonds held in our portfolios and the types of receipts that back them. As we mentioned in last month's commentary, the muni market is not like the Treasury market. (For our analysis on the potential problems associated with rising federal government debt, see our June commentary.) There is one issuer of U.S. Treasuries and those bonds are backed by the full faith and credit of the U.S. government. In contrast, there are approximately 50,000 municipal issuers and bonds can be backed by income taxes, sales taxes, property taxes, appropriations from the legislature, or a dedicated revenue stream from something like a toll road or a hospital.

Pre-refunded bonds have proceeds from a more recent bond sale held in escrow to pay interest and for that reason are considered among the safest muni bonds. But outside of pre-refunded bonds, investors need to be aware of three main categories of muni bonds and their characteristics when examining portfolio allocations. Here is a quick overview of each:

General Obligation Debt

General obligation (GO) debt is secured by the full faith, credit, and taxing power of the issuer. What that means in practice is that issuers use money collected for their general fund to pay interest, and bondholders have the right to force additional tax collection or legislative appropriation if the issuer defaults. Personal and corporate income taxes as well as sales taxes provide the revenues that go into a state's general fund. For smaller municipalities like cities, property taxes, and aid from the state can be used to pay GO debt service.

Lease-Obligation Bonds

Interest on lease-obligation bonds is also paid from a municipality's general fund, but there's a catch: the legislature has to formally approve the appropriation of interest payments. Because of that difference, lease-obligation bonds are generally rated one ratings notch below the GO debt rating of the municipality.

There are a number of well-regarded lease-obligation bond issuers. For instance, state university systems often use this type of debt to finance building construction, and investors then look to the state to make the appropriations to pay off the debt.

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happened. The basic idea is that a legislature wouldn't dare forgo appropriation because that would harm their credibility in the marketplace and hike up their cost of borrowing. Still that doesn't mean these bonds are always a safe bet. Carol Flynn, director of municipal bond research at DWS, says her credit analysts avoid smaller municipalities that don't do much lease financing or have limited track records. They also closely examine how well the term of a bond matches the estimated life of the asset it finances. In addition, credit analysts often look for "cross-default" provisions in a security's documentation. Under this provision, a municipality automatically triggers a default on all of its lease-obligation debt if the legislature fails to appropriate funds for even one lease obligation.

Revenue Bonds

Revenue bonds are backed by a dedicated stream of revenues stemming from just about any municipal service one can think of. As a result, the credit quality of these types of bonds can vary widely. For instance, most portfolio managers have recently favored essential service revenue bonds (backed by power, water, and sewer enterprises) because they are considered less volatile and more secure than other revenue bonds. The issuers are generally large, with experienced management teams who provide detailed disclosure. In addition, because society can't easily function without these types of basic services, the issuers often have rate-setting autonomy, i.e., if they need more money to pay their debt, they can increase rates charged for their services.

Sales tax revenue bonds and higher education revenue bonds (backed by tuition and endowment monies) are also considered among the higher-quality revenue bonds. Some managers favor bonds backed by toll roads with established track records but they avoid financing start-up toll roads. For example, Flynn points to the Connector 2000 Association toll-road bonds issued in the mid-'90s. Flynn's credit team at DWS turned down that deal when it was offered. The issuer financing the 16-mile toll road in South Carolina expected to see 21,000 daily toll transactions and transactions have instead averaged 7,500 daily. With approximately \$200 million in debt, the issuer filed for Chapter 9 protection in late June. Other credit-intensive areas include hospital revenue bonds (which Flynn calls very "story specific") and housing revenue bonds, issued to finance multi-family housing or similar projects.

While some investors believe that any bonds with a pledged source of revenue are safer than GO debt, revenue bond holders do not have rights to other government assets or revenues in the event of a default—and there have been defaults. "There have definitely been hospitals that have gone bankrupt that were not bailed out," Flynn points out. Indeed, a recent Moody's study of municipal defaults showed that since 1970, the health care sector (along with housing project finance bonds) has had the highest number of defaults of any municipal sector.

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To reduce the risk of excess borrowing, many states have also implemented limits on GO debt and that has had the impact of pushing more issues into revenue-backed structures not secured by a government's full faith and credit, according to PIMCO. Virtually non-existent at the time of the Great Depression, revenue bonds today account for almost half of the municipal bond market.

There are a whole host of other types of muni bonds that are outside the scope of this research update because they are generally not utilized in diversified investment-grade municipal bond funds owned by our clients. Taxable municipal bonds include pension obligation bonds and recent newcomer Build America Bonds. And then there is a merry band of acronyms including RAN (revenue anticipation note), TAN (tax anticipation note), and VRDN (variable rate demand note). These short-term notes are typically the province of tax-exempt money market funds.

Major Revenue Shortfalls and Political Gridlock Affect Debt Servicing

While there is still debate about whether the U.S. economic recovery will sustain itself or undergo a "double dip," there is little debate about the health of the states. In fiscal 2009, states saw a 16.9% drop in corporate income tax collections, an 11.2% decrease in personal income tax receipts, and a 6.2% decline in sales tax revenue, according to a report by the National Governors Association and the National Association of State Budget Officers. Despite enacting almost \$32 billion in tax, fee, and other revenue increases in 2010, additional declines of 5.8%, 2.8%, and 1% in corporate, personal, and sales tax receipts, respectively, are estimated for fiscal 2010. Overall, that amounts to an almost 12% decline in states' general fund revenue from 2008 to 2010.

Moreover, even if the U.S. economy avoids a double dip and sustains its recovery, an improvement in state and municipal budgets can lag overall economic improvement by years. State spending needed three years to recover following the nine-month downturn of 2001, according to the report cited above. And while sales and income taxes reflect economic volatility pretty quickly, property tax receipts generally exhibit a two-year lag versus changes in property values due to the time it takes for assessed valuations to change. That will have ongoing consequences for municipalities in states with large property-value declines like Florida, Arizona, Nevada, and California.

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Does this make widespread defaults on GO debt likely? For a number of reasons outlined below, we think the answer is no. Still, there are two situations that can significantly raise the risk of a ratings downgrade or a delayed payment on a single issuer's debt service and the budget crises impacting the states currently makes those situations more likely to occur. The first event is a liquidity crisis stemming from a state's inability to balance its budget. California went through this crisis last year when it was forced to issue IOUs to contractors, local governments, and others due payment. Ironically, the IOUs protect the state's ability to keep enough cash in



reserve for debt service, but the inability of lawmakers to successfully balance a budget can result in ratings downgrades. (Both Fitch and Moody's downgraded California's GO debt last summer.) Investors then demand a higher risk premium on the bonds so that yields rise and prices fall. In mid-August of this year, California's state controller said the state would again need to issue IOUs within a month if Governor Arnold Schwarzenegger and the state legislature cannot agree to a plan that closes a \$19 billion budget shortfall.

The second situation can arise from the first—that is, smaller local governments dependent on state aid can have trouble making payments on their GO debt if funds are withheld or delayed due to a state's liquidity crisis. New York school districts faced this type of hurdle in June when questions about the state's ability to transfer necessary funds in time to pay off short-term paper arose, according to Flynn. "We averted a crisis there but those are the types of things that come into play with the locals," she says.

While the risk of these events occurring has increased, there are a number of reasons why we believe they are unlikely to broadly occur across the diverse group of GO issuers held in our client portfolios. First, as we have mentioned before, most state constitutions protect GO debt holders above all other claims and states do not have the option of filing for Chapter 9 bankruptcy. Second, debt service on GO bonds as a percentage of revenues is generally in the single digits so defaulting on payments does not have the benefit of producing much savings relative to cuts in education, prisons, or health and human services programs. Third, it does not serve the issuers' interests. Defaulting or delaying payment on GO debt ultimately damages credibility and raises an issuer's cost of borrowing, the last thing an issuer needs when funds are tight.

Finally, large declines in property values by themselves do not necessarily make default on municipal debt backed by property tax more likely, according to managers we have spoken with. American Century Tax-Free Bond manager Alan Kruss points to the Detroit Public School district as one example. "Michigan has been in recession for 10 years and a receiver stepped in at Detroit Public Schools," he says. "Typically, the state will step in and use some of the state aid that would go to the school district to pay debt service on the bonds." (Note: Kruss does not own the bonds but points to them as one example of a school district under duress that continues to make payments on its bonds.) As an added indication of credit quality, managers we spoke with prefer voter-approved school district bonds with unlimited tax pledges from states like California and Arizona. Joseph Gotelli, portfolio manager of the American Century California Tax-Free Bond, notes that school district bonds may also offer relative value compared to city or county GO debt. "You're going to have much more support from the state level for school district bonds," he says. "So it's some more upside but much less downside." At the end of July, his fund had 20% allocated to GO debt with less than half of that allocation to state GO bonds. Of the remaining GO allocation, 6% was invested in bonds issued by school districts and community college districts.



We don't believe defaults will be widespread but price risk across the entire market remains. Any risk of a ratings downgrade to GO debt may cause investors to sell in favor of higher-quality bonds. This would also impact the ratings of lease-obligation bonds since they are automatically rated one notch below GO debt from the same municipality. Generally, however, a ratings downgrade is reflected in bonds' pricing well before the actual downgrade occurs and we have found the municipal-bond fund managers we invest with capable of navigating this type of risk.

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In terms of revenue bonds, the risk of default is much more dependent on how the state of the economy directly impacts the individual issuer and the health of the revenue stream backing the bond. Unfortunately, because of the idiosyncratic nature of this market and the wide variety of issuers and backing, almost all of the bond managers we have spoken with—whether they are muni bond managers or not—agree that there is increased risk of default. But while revenue bonds will continue to present credit risk (something we already rely on our managers to assess), we do not see as much potential here for contagion risk. It will be hard to make comparative assumptions across issuers given all the differences among them. That said, our conversations with muni bond managers have recently included more time spent looking “under the hood” at various revenue bond allocations and we anticipate that will continue to be the case going forward.

Unfunded Pension and Health Care Liabilities Are Structural Issues That Will Have a Longer-Term Impact on State Spending

The near-term budget woes cited above are cyclical problems brought about by economic weakness. But states and municipalities also face longer-term structural issues due to huge, looming unfunded pension and health care liabilities. A well-publicized report earlier this year from the Pew Center on the States estimated a \$1 trillion funding gap between the \$3.4 trillion pension and health care obligations of the states and the funds on hand to pay for them in mid-2008. Because the report did not include the severe investment declines experienced in late 2008, that calculation was likely optimistic. The University of Chicago's Robert Novy-Marx and Northwestern University's Joshua Rauh estimate a higher range of \$1.3 trillion to \$3.3 trillion in underfunding. They note that state funds use a long-term annual investment return of 8% to calculate the present value of future payments, a rate that may dramatically overestimate the funds' actual investment outcomes.

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There's no question that unfunded pension and health care liabilities will impact state spending priorities going forward and there will be an increasing tug-of-war between civil servants wanting to protect their retirement benefits and the taxpayers called upon to finance those



benefits. Solutions to deal with the problem include tax hikes, benefit cuts, a movement toward defined contribution rather than defined benefit plans, and the issuance of taxable pension obligation bonds. None of these solutions, however, should threaten debt service on GO bonds. In most states, these remain first claim on a state's general fund revenues (and relative to other state spending, a small claim in percentage terms). American Century's director of municipal research David Moore believes general obligation debt would even be honored above pension benefits in a situation where a pension fund ran out of money. "Pension benefits are a strong contractual obligation," he notes. "But a GO bond is a full faith and credit pledge in which the state irrevocably pledges its taxing power."

The poster children for this kind of test will most likely be Illinois and New Jersey, according to DWS's Flynn. But while the two states debate the appropriate level of current contributions to their pension funds, a number of years remain before their pension expenses reach a truly significant level. Flynn says the earliest estimates she has seen are for 2017 or 2018.

So the impact for muni bond investors in the near term will most likely be felt via ratings because states' actions to address underfunding in the coming years will determine how far state bond ratings can sink. Illinois' cumulative underfunding of pensions rose to \$19.2 billion at the end of fiscal 2008, up 59% from \$12 billion three years earlier. That was a significant factor in the state's April 2009 ratings downgrade. More recently, Moody's revised the outlook on New Jersey GO debt from stable to negative due to mounting pension obligation pressures. The state's funded ratio for pensions fell from 101% in 2002 to 70% in June 2008. (State pension systems have averaged funded ratios of about 85% in recent years.)

Yet positive outcomes are also possible: Moody's cites San Francisco's well-funded employee retirement system as one of the key strengths supporting its strong rating. And in August 2009, Moody's revised the outlook for West Virginia from stable to positive after the state increased its overall funding level on five retirement systems to 80%. The state had been one of the lowest funded states in the nation for years.

Conclusions and Concerns

Unfortunately, the more we dig into the fiscal problems facing many muni bond issuers, the more potential pitfalls we see for muni bond investors. We cannot disagree with managers who trade in this market on a daily basis and predict an increase in default rates and headline risk going forward. That said, we believe the managers we invest with also possess fundamental tools for navigating these risks: solid credit analysis and experience analyzing the supply and demand dynamics of the muni market. We believe muni markets will test these skills more in the future than they have in the past but we are not ready to abandon the muni market wholesale to eliminate these risks completely.

For our California clients, we are cognizant of the tax impact trading a California muni fund for a national muni fund would have and we would not make that tradeoff unless we felt the level of



risk justified it. At the moment, we believe significant diversification opportunities exist within the state and the managers we invest with are making good use of those opportunities. At the end of July, for instance, American Century CA Tax-Free Bond Fund had just 20% of its portfolio allocated to GO debt. Essential service revenue bonds accounted for over 25% of the portfolio and pre-refunded bonds made up 11%. Vanguard CA Intermediate Term Tax-Free Bond also recently had less than 25% of the fund invested in GO debt. The average credit quality on both California muni bond funds is AA. (Standard & Poor's rating on California's GO debt is A- while Moody's rating is A1.)

We also want to keep some positive considerations in mind. First, all of the municipal bond managers we have spoken with have said there is no dearth of good, solid municipal bond issues still available in the market. Second, as we have noted previously, muni bond yields versus comparable Treasury yields along many points of the curve are at higher-than-average levels and attractive total returns can be earned if those ratios normalize over time (they have already done so in part). Third, increasing tax rates should also increase demand for municipal bonds while the extension of the taxable Build American Bonds program has removed supply from the tax-exempt market.

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Though it has long been a market with low default rates and seemingly stodgy government issuers, the muni market has seen more volatility in the last few years than many investors ever expected. Going forward, the devil will be in the details. The implication of the higher level of risk we have identified is that our due diligence on muni bond funds requires a close look at managers' portfolio holdings and a thorough analysis of idiosyncratic risks embedded in those portfolios. While we don't go into our due diligence conversations expecting to find mistakes, we do ask managers to provide a high level of detail that gives us confidence that they are protecting our interests as shareholders. The research we have done to date has not caused us to recommend selling muni bonds, but it has armed us with the information to ask more informed questions about the risks managers are assuming. Knowing the right questions to ask is an important part of our process and it applies as much to municipal bond funds as to any of the asset classes where we invest client funds.

—Litman/Gregory Research Team

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Investment in municipal bonds are subject to various risks, including the following:

Interest rate risk- Like all fixed income securities, municipal bonds are susceptible to fluctuations in interest rates. If interest rates rise, market prices of existing bonds will decline, despite the lack of change in both the coupon rate and maturity. Long-term bonds are generally more susceptible to this than shorter-term bonds.

Call risk- Many municipal bonds carry call provisions that allow the issuer to retire the bond prior to stated maturity. Except as stated below, these calls are clearly defined in both the securities detail and usually pay the holder a premium if the issuer exercises this right. An issuer will typically call bonds when prevailing interest rates drop, making reinvestment less desirable for the holder. Some municipal bonds, including housing bonds and certificates of participation (COPS), may be callable at any time regardless of the stated call features.

Credit risk- Credit risk is the risk that the issuer will default or be unable to make required principal or interest payments. Despite the fact that most municipal bonds have high credit ratings, there is a risk of default in any bond investment. Higher rated securities are generally seen as having a lower credit risk associated with the municipal bond investment. An insured bond may add an extra layer of protection. When considering an investment in an insured municipal bond, you should also consider the strength of the underlying insurer. An insured bond's credit rating may not be the same as that of the issuer.

Tax Risks- Tax-exempt interest generated by municipal bonds is usually more beneficial the higher your tax bracket so municipal bonds may not be appropriate for investors in all tax brackets. If you are subject to the federal alternative minimum tax (AMT), the interest income generated by certain municipal bonds (mainly private activity bonds) is subject to it.

Inflation Risk- The risk that the rate of the yield to call or maturity of the investment may not provide a positive return over the rate of inflation for the period of the investment.

Other Risk- Not all risks can be anticipated by the bond's issuer or well articulated in the prospectus or offering circular. Often called "special event risk", lawsuits or significant legal changes, another community's public works project, unusual weather, or other events could impact the issuer's ability to meet their financial commitments. An economic downturn may also cause investors to reconsider risks that previously seemed unlikely to affect fixed income investments.

Any fixed income security sold prior to maturity may be subject to a substantial and taxable gain or loss.

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