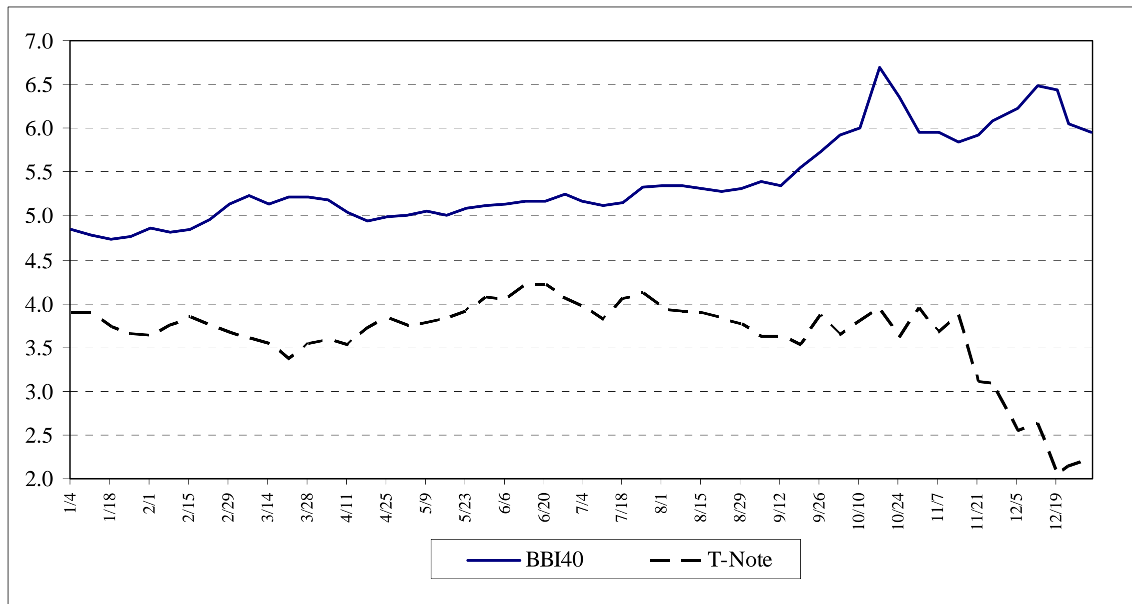
The impact of financial market crisis on local government borrowing and pension costs

Jun Peng, University of Arizona

While the twin economic and financial market crises dealt a severe blow to state and local government finance on the revenue side, they also have a direct impact on state and local governments' spending side. In this part we focus on two areas of government spending under pressure now or in the near future as a result of the financial market meltdown: government borrowing cost, and public pension benefit cost.

Government borrowing cost

State and local governments rely on borrowing in the municipal bond market to finance short-term and long-term needs and capital projects. This market has been severely disrupted by the financial crisis, which leads to a disruption in cash management and capital financing and substantial increases in borrowing costs. The subprime mortgage crisis and particularly Lehman Brothers' filing for bankruptcy in September of 2008 have severely disrupted the municipal market. All major bond insurers, which insured close to half of all new municipal issues prior to the disruption, were downgraded below AAA rating due to their financial loss related to mortgage debt. This caused a decrease in the overall credit quality of the municipal bond market. This was further exacerbated by Lehman Brothers' filing, which led to a credit market freeze. This credit freeze had two severe consequences for the municipal bond market. First it led to flight to quality, meaning investors put faith only in the federal government's ultra safe treasury securities and demand a high risk premium on all other debt securities, including municipal debt. Second, to raise capital, some large traditional institutional buyers of municipal debt, such as property and casualty insurers and hedge funds, became net sellers of municipal debt. The combination of flight to quality and decrease in demand for municipal debt led to a sharp increase in the yield of municipal debt, which can be seen in the following chart. For much of 2008 until early September, the interest rate in the municipal market remained relatively stable in the five percentage range, as measured by the Bond Buyer Index for 40 municipal bonds.



(*Source: The Bond Buyer*)

However, since Lehman Brothers' bankruptcy filing, in about a month's time, from the week of September 12 through the week of October 17, the average weekly Bond Buyer Index shot up from 5.34 percent to 6.69 percent, a level that has not been seen for almost a decade. The spread between the municipal yield and the 10-year Treasury note also shows the flight to quality. Since mid September, the spread has widened considerably, a reflection of the extra risk premium on the municipal bonds. This extra risk premium is also shown among municipal debt of different credit quality. For example, on December 31, 2008, the yield on 10-year, triple-A rated municipal bond was 3.52% whereas the yield on single-A rated, 10-year municipal bond was 4.95% (Herman and Seymour, 2009). In comparison, the average monthly spread between these two ratings was only 0.3 percent from the turn of the century through September of 2008.

This spike in yield makes it much more costly to borrow. For the three months of September, October and November in 2008, municipal bond issuance was down 31.2 percent compared to the same period last year, although the reduction was less in November (down 22 percent) than in October (Herman 12/2/2008). In some cases, the government issuer had to borrow less than they originally planned so that the debt service can be fit into the budget. In other extreme cases, the issuer had to cancel the issue entirely and wait until sometime in the future when the interest rate comes down.[1] This

[1] For more specific examples, please see Aneiro (11/28/2008) and Gogoi (11/19/2008).

puts a severe drag on the financing of capital projects. In the past, state and local governments can depend on debt financing to replace all or part of the pay-as-you-go financing for capital projects in time of difficulty to realize budget savings. This strategy is more difficult to implement this time around.

Since the Federal Reserve reduced the federal funds rate to almost zero percent in mid December, 2008, the yield on the municipal debt has also come down somewhat, as can be seen from the previous chart. The yield decreased from 6.49 percent just before the Federal Reserve decision to 5.96 percent by the end of 2008. Whether the yield will continue to decrease in 2009 depends on a few factors, the most important of which is the length and depth of the economic recession, which will determine the confidence of investors (i.e. the size of risk premium demanded on municipal debt) and the overall credit quality of municipal issuers, which is affected by the overall revenue and budget situation. Another factor that can also have a potential impact on the municipal bond market is the Obama administration's stimulus plan for state and local governments. The impact will depend on the size and makeup of the federal aid to state and local governments.

This impact of the financial market meltdown is shown not only in the long-term end of the municipal bond market but also in the short-term end. For long-term capital project financing, some local governments use the short-term end of the market to turn long-term debt into short-term debt and realize significant borrowing cost savings, as the interest rate on short-term debt is much lower than that on long-term debt. Much of this kind of long-term debt is issued in the form of variable-rate demand note (VRDN). VRDN has the following main features. First, the interest is reset periodically, such as daily or weekly. Second, the purchaser can "put" (or sell) the securities to the issuers at each reset date. It is this "put" feature that turns a long-term debt into a short-term debt. Third, a remarketing agent (typically brokerage firm) sells the "put" securities to a new purchaser, and a commercial bank, acting as a liquidity provider, guarantees the repurchase of any securities that are put and cannot be resold. Due to the significant cost savings, VRDNs are very popular with government issuers. Between 1997 and 2007, about $420 billion of VRDNs were issued.[2]

VRDNs are mostly purchased by municipal money market funds. The U. S. Securities and Exchange Commission imposes rule 2(a)-7 on money market funds, requiring that all

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[2] This is a number cited in a letter from California State Treasurer Bill Lockyer and other California finance officials to members of Congress, dated November 21, 2008.

the bonds in these funds must have ratings in at least the AA category from at least two rating agencies. In effect, municipal issues who do not have this rating must purchase bond insurance or letters of credit from commercial banks. Bond insurance is the dominant method. Up till this year, all the major bond insurers were rated AAA. However, due to the loss of capital from their insurance on mortgage backed securities, most of the bond insurers were downgraded to below AA this year. This has led the money market funds to "put" the VRDNs to government issuers. The government issuers then have to find new letters of credit for the "put" securities and then find new buyers. Or they will end up on the balance sheet of the commercial banks which act as liquidity facilitators. However, due to the deteriorating bank balance sheets caused by the "toxic" assets banks held, and deteriorating credit ratings, it is increasingly difficult to find commercial banks able or willing to provide LOC. When the VRDNs go on the commercial bank's books, the interest rate will go up significantly, higher than even long-term rates, and the amortization schedule will also be accelerated, usually from 20-30 years to less than five years. This substantially increases the borrowing cost or makes it impossible to afford the debt service payment for some issuers on an accelerated schedule. One method for issuers to reduce cost in this situation is to borrow long-term debt at fixed rates to retire the VRDNs. However, due to the disruption in the long-end of the market, described above, replacing VRDN with long-term and fixed rate debt did not work as well as it should in the last few months of 2008.

Due to the severe fiscal crisis, even short-term borrowing for cash management purposes is proving difficult for some governments. For example, the State of California, due to the impasse on solving the budget deficit, found it impossible to borrow short-term in the bond market to cover budget deficit and may have to issue IOUs in the near future.

Public pension benefit cost

The financial crisis also hits the public pension plans really hard. At the end of the third quarter of 2007, stat and local pension plans collectively held assets worth $3.26 trillion, but the value of assets dropped to $2.75 trillion by the end of the third quarter in 2008.[3] These assets were invested in stocks, fix-income securities, real estate and alternative investments, such as private equity funds and hedge funds. The asset allocation, based on

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[3] Federal Reserve. Flow of Funds Accounts of the United States: L.119 State and Local Government Employee Retirement Plans, released on December 11, 2008. Available at http://www.federalreserve.gov/releases/z1/.

97 large pension plans as of the end of fiscal year 2007 is as follows: Equity: 59.5%; Domestic Fixed-income: 25.9%; International fixed-income: 0.7%; Real estate: 5.4%; Alternative: 5.4%; Cash: 1.7%; and Others: 1.3%.[4] The U.S. stock market lost about 40 percent of its value in 2008 as measured by Wilshire 5000 Index. Most of the international markets had similar or even worse losses. As for the fixed-income portion, according to the Lehman Brothers' U.S. Aggregate Bond Index, the return for 2008 was 1.28%.[5] This means that the equity loss is offset to a very minor extent by the gains in the fixed-income part of the portfolio. As of the end of 2007, total assets in stat and local pension plans were $3.18 trillion. Assuming 70% of the assets lost 40% of their value in 2008, public pension plans lost close to 28% of their value in 2008, amounting to $885 billion.

How will this loss affect state and local government pension contribution? Two factors make the impact somewhat difficult to predict. First, it depends on how the stock market performs over the next six months, since most pension plans' fiscal year ends on June 30. Given the volatility in the market, it is difficult to tell. For example, the stock market reached its low on November 20, 2008. However, over the next five trading sessions, it increased by 20 percent. Such volatility also creates volatility in pension asset value. The stock market valuation depends on how severe and deep the economic recession is going to be, what economic stimulus plan is going to be in the new year, and whether the federal government can succeed in stabilizing the financial market.

The second factor is the smoothing technique used by pension plans in valuing assets. To avoid the volatility in asset value, plans use a multi-year smoothing technique to phase in asset gains or losses. For a four to five-year smoothing period, which is quite typical, then only 25 or 20 percent of gains or losses (over what they assume to achieve, which is usually 8 percent), in any given year is recognized when determining the asset value of a pension plan. Since the plans did fairly well in the previous few years, some of these years' gains over the assumed rate of return will be carried over to offset the loss in this year. The new unfunded liability is typically amortized over a 30-year period at about eight percent. What this means is that the pension funding ratio, which averaged 86

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[4] National Association of State Retirement Administrators. Public Fund Survey. http://www.publicfundsurvey.org/www/publicfundsurvey/assetallocations.asp.

[5] Lehman Brothers. http://www.lehman.com/indices/dailyreturn.html.

percent for large state pension plans in 2007,[6] will not necessarily see a substantial drop next year and state and local governments will also not see an immediate substantial increase in pension contributions. However, if the stock market does not see any noticeable improvement, and as the losses are phased in over the next few years, then pension contribution will continue to go up in the near future. Since this increase, no matter how small it is in the beginning, happens at a time when government revenue is also shrinking, it none the less will add severe strain to state and local government finance. In the past when pension contribution increases in the face of revenue shortfall, state and local governments tend to delay or gradually phase in the contribution increase to reduce the budget strain. It is possible that such tactic will be adopted again in the new fiscal year.

References

Aneiro, Michael. Cities and States Feel the Squeeze. Wall Street Journal, 11/28/2008.

Gogoi, Pallavi. Cities, Schools Delay Projects in Tough Climate for Muni Bonds. USA Today, 11/19/2008.

[6] National Association of State Retirement Administrators. Public Fund Survey. http://www.publicfundsurvey.org/www/publicfundsurvey/actuarialfundinglevels.asp.