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before

THE SENATE SPECIAL COMMITTEE ON
LOCAL GOVERNMENT INVESTMENTS

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Mr. and Madam Chairs and members of the special committee:

It is a pleasure to be with you today and to have the opportunity to offer comments on local government investments, as related to the Orange County situation. Briefly, my background of pertinence today consists of teaching a course on fixed-income securities at Stanford Business School, writing a book and a number of articles on the theory and behavior of interest rates, serving as Deputy Assistant Secretary in the U.S. Treasury Department with attention at times to municipal finance, and presently being Chairman of the Board of an investment company devoted solely to investment in fixed-income securities.

Whenever someone is able to earn returns on financial assets that are too good to be true, invariably they are too good to be true. In most cases excess short-run returns come from reaching out on the risk spectrum. And while such returns are very satisfying, credit and interest-rate risks come back to bite. Like writing options on securities, you make a little, you make a little, you make a little, and then one day you lose a whole lot. This is what happened to Orange County.

Interest-Rate Environment

To give some perspective, the last four years of interest-rate behavior have been quite interesting. At the beginning of 1991, short-term Treasuries (1 year) yielded about 7 percent, 3-year Treasuries about 7.7 percent and long-term Treasuries (30 years) about 8.2 percent. Because of slack in the economy and because the Fed wished to stimulate the economy via reducing the Fed funds rate, interest rates declined. This decline continued through the Autumn of 1993, at which time 1-year Treasuries yielded 3.3 percent, 3-year Treasuries 4.1 percent, and 30-year Treasuries 6.0 percent. Not only did interest rates decline sharply, but the yield curve (the relationship between yield and years to maturity) became steeply upward sloping. Many municipal as well as other investors who had come to depend on interest income searched for ways to preserve such.

New derivative products were developed by investment banks to address the "problem." By bearing more risk of loss of principal if interest rates should rise, the investor could achieve a higher than normal current return. Often the derivative security had embedded in it a degree of leverage, which amplified returns upward if interest rates declined. With the steeply upward sloping yield curve, another “winning” strategy was to borrow short and lend long. These and other strategies to chase yield were successful only as long as interest rates remained the same or, better yet, declined. As we know, this did not occur. At the end of 1993 interest rates began to rise. Visible signs that the economy was gaining momentum caused the Fed to target increasingly higher Fed funds rates (starting in February, 1994). By August, 1994, some felt that there would be an abatement in the rise in rates, and indeed there was for a couple of months. However, in the late Autumn interest rates rose further as the Fed continued to tighten. Currently, 1-year Treasuries yield about 7.0 percent, 3-year Treasuries 7.6 percent, and 30-year Treasuries 7.8 percent. They were higher in November and December. What is clear is that yields rose dramatically over the last year and the yield curve flattened.

In the interest rate environment of the last several years, what went wrong is obvious. Orange County invested in risky derivatives, and it levered these investments further by “borrowing” through reverse repurchase agreements. When interest rates declined returns rose exponentially, and all seemed wonderful, but when interest rates increased and the yield curve flattened losses mounted exponentially. You have heard from the Treasurer and the Board of Supervisors earlier today, so I can add little as to whether they did or did not understand the risks. The risks were rather obvious given the behavior of interest rates in 1994. In May I heard “on the street,” so to speak, from one investment bank which was unwilling to do business with Orange County because of their perceived naiveté. I used this as an example of ethical conflicts in finance when I lectured on this topic in class last Spring. About the same time, Mr. Citron’s opponent was pointing out the risk posture of the investment pool. All of this is to say that if the tattle tale signs were obvious to me as an outsider, why was not the plug pulled in June by the supervisors? The losses involved in unwinding would have been substantially less than they were in late 1994.

<u>Observations Pertinent to Investment Pools</u>

Before making specific suggestions as to what can be done for the future, let me make the following observations:

1) Many municipal treasurers charged with investment pool funds do not understand the bewildering array of derivatives and customized products being offered. There are new ones every day. Despite often high credit ratings, the risks associated with movements in interest rates are not understood.

2) If an investor is successful in the immediate past, he or she becomes more confident of the future. Often hubris develops, that animal-like spirit of arrogant pride and self confidence. Boards of supervisors are lulled into extrapolating recent, favorable investment performance in the hope of balancing budgets.

3) Investment banks will always push products and they will devise new ones to skirt regulations and tax laws. This is given the rather unusual name of “regulatory and tax arbitrage,” and many a municipality falls into the web.

4) Most Boards of Supervisors do not have the background necessary to monitor the risks of the investment pools they are charged with overseeing. It is unrealistic to think that this will change; politically this is not a primary function on which an election revolves.

5) You cannot depend on the rating services to monitor the risks, at least to date. Orange County kept a high credit rating despite the mounting risks of the investment pool. Only now are the services beginning to factor this risk into account in assigning an overall municipal credit rating, and such monitoring is likely to occur only for the largest municipalities.

6) Interest rates never behave in predictable ways. Both the level of rates and the configuration of the yield curve change in unexpected ways. Otherwise it would be easy to make money.

7) California is among the most permissive states when it comes to regulations governing how local governments handle municipal investment pools. The only other large state with roughly the same degree of latitude is Texas.

Recommendations

Given these reflections, what can be done to ameliorate problems of the sort which have occurred in Orange County and before in San Jose? While I am not usually a proponent of regulations, believing the market place is best for efficient capital flows, I feel certain changes are in order. More specifically, I would suggest consideration of the following:

1) The securities in every municipal investment pool should be marked to market at least quarterly. The master trustee or custodian can arrange for this to be done without significant cost. Moreover, Boards of Supervisors should be required to formally review the changes in market values on a regular basis.

2) For investments other than spot market, “plain vanilla,” investment-grade securities, assessments should be made as to the value at risk (VAR), again at least quarterly. Also, Boards of Supervisors should be required to formally review such assessments. Securities involved would be derivative securities -- including mortgage-backed securities, swaps, options, forward and futures contracts, and structured notes -- and less than investment-grade securities. A value-at-risk (VAR) assessment is a probabilistic estimate of how many dollars a municipality can lose over a specified period of time, like a quarter, if market prices should change. With an historic stimulation, past volatility is used to make such estimates. For example, you may be concerned with the losses that might occur with a 5 percent probability. Past interest-rate behavior is used to produce this number. In addition to this inquiry, stress analyses can value securities if interest rates are assumed to change by such and such a percent. Value-at-risk (VAR) analyses are getting rather wide play in the investment community today because they help investors to better define and understand risk. Several services provide such assessments and one can be used by a municipality if it chooses to invest in derivatives or in lower than investment-grade securities. Assessments can be as frequent as daily.

3) Municipalities should be required to delineate securities used for hedging from those used for straight investment purposes. In addition, the risks being hedged should be defined. As before, this should be reviewed formally by Boards of Supervisors and I would say at least quarterly.

4) Finally, I would preclude altogether municipalities using reverse repurchase agreements as I would similar forms of leverage. I realize that a case can be made for their use in hedging an investment portfolio. However, the chances for abuse far outweigh the rare municipality that can intelligently use these devices to genuinely hedge risk.

This concludes my recommendations. Thank you for letting me share these views with you today.