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RISK AND REWARDS OF INTEREST RATE SWAPS: ONE ISSUER'S PERSPECTIVE

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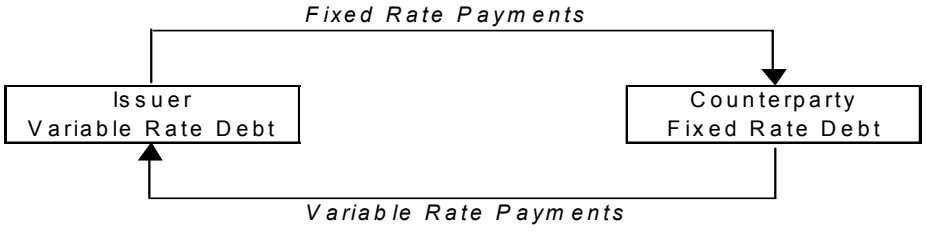
Editor's Note: Periodically, CDIAC invites guest authors to contribute articles on topical issues of interest to the public finance community. ***DEBT LINE*** publishes these articles as an educational resource for its readers and does not specifically endorse any of the tools or products described within them. The following article, written by Brian Mayhew, Director of the Bay Area Toll Authority, discusses some of the challenges of using derivative securities from his experiences with the Authority and his former employer, the City of Westminster. He has been involved in the development of over $700 million of swap transactions.

On September 22, 2003, CDIAC hosted a workshop, entitled ***Delving into Derivatives***, in advance of the 13th Annual California Bond Buyer Conference in San Diego. This workshop considered current issues in the use of derivatives and drew upon the experiences of numerous public finance professionals including city, special district, and state representatives as well as representatives from governing bodies/associations such as the Municipal Securities Rulemaking Board, the National Association of Bond Lawyers, the National Federation of Municipal Analysts, The Bond Market Association, and the Government Finance Officers Association. This article is an outcropping of that workshop and CDIAC's continuing interest of the subject derivatives.

Recommending a complex, structured financial product, such as a "derivative", to a conservative Orange County City Council is not an easy task, particularly immediately following the Orange County bankruptcy. However, in 1996, after almost a year of work and several presentations, the Westminster Council authorized the City to enter into an interest rate swap agreement (a type of derivative product), the first recorded "full-term/insured" swap issued in California. This transaction produced interest savings of over $8 million in interest costs and helped restore the redevelopment agency's financial health. With this success, I have had the opportunity to make several similar recommendations since then as Director of the Bay Area Toll Authority (BATA). In my experience, recommendations to use structured financial products can only be made when the issuer properly evaluates the risk, understands those risks, and, when necessary, is able to mitigate them. Under these circumstances, structured financial products can be a powerful instrument in managing debt costs.

Figure 1
Simplified Model of Interest Rate Swap



From a basic working perspective, a "derivative instrument" is simply an agreement or contract between party "A" (the "issuer") and party "B" (the "counterparty"). In the case of an interest rate swap agreement, the contract calls for party "A" to pay a contractual rate of interest to party "B" in exchange for receiving a payment from party "B" (see Figure 1). Hence, the term "swap." That is, party "A" and party "B" enter into a contract to swap payments, such as a fixed interest rate payment to party "A" and a variable interest rate payment from party "B", or vice versa. The variations (and there are hundreds) usually involve who pays what, when, and based upon which index (e.g., the London InterBank Offered Rate (LIBOR) or the Bond Market Association index (BMA)).

We know an interest rate swap agreement is a contract to "swap" payments, however, it may be even more important to know what a swap is not. A swap is not:

- A magic solution to fix a financial crisis
- A sole means to get a project built
- A simple process to administer
- A "one size fits all" or a banker's "product-de-jour" financial solution
- A means to get out of administering your debt
- A product undertaken for speculative purposes
- A product without discoverable risks

A swap is a valuable financial tool that can help mitigate interest rate swings with variable rate debt by lowering interest costs and capturing potentially below market "synthetic" fixed interest rates. However, a swap will not absolve your agency of its responsibility to administer and pay its debt and should not be utilized as a means for undertaking speculative financial risks.

Evaluating derivative financial instruments is mainly a practice of risk management and mitigation. Before discussing these points, however, in my opinion, there is one important, overriding point that should be made: A derivative instrument should be structured so that at a minimum you are left with the original debt with which you started. If you cannot live with the fixed or variable rate risk factors inherent in your original transactions, no derivative contract will solve your problems. In this case, a derivative instrument is probably not an appropriate tool for your organization.

Risk Management

There are several risk factors that are inherent to all derivative trades and some that are unique to certain trades. General risks include (but are not limited to):

- Termination Risk: Risk that the counterparty will terminate the swap in an adverse market

- Fair Value Risk: Risk that the market value of the trade turns negative (similar to a securitybelow market).

- Credit Risk: Risk that the counterparty will drop below acceptable rating levels, possibly forcing a collateral event or termination (default).

- Basis Risk: Risk that the basis for the variable payment received will not match the variable payment on your bonds.

Risk Mitigation

Virtually all of these risks can be mitigated in today's derivative market. For example, an issuer does not have to give the counterparty the right to terminate a swap arrangement (other than as a consequence of default). Moreover, an issuer can always terminate a swap (market values not withstanding) and employ insurance to guarantee the performance of both the issuer and counterparty.

While many risks can be mitigated, it may not be worth the financial cost to mitigate all risks. For example, the BATA has a term swap (35 years) that trades at 65 percent of one month LIBOR (we receive from our counterparty 65 percent of LIBOR and pay our counterparty the actual variable rate on our debt). At one point in time, the "basis spread" was -0.3 percent (that is, we paid our counterparty 0.3 percent more than we received, resulting in a temporary net "loss" of payments). We could have eliminated the additional cost resulting from this "basis risk". The cost of such a contract would have been 4.54 percent for the 35-year life of the contract, rather than the 4.32 percent that it cost BATA for less than a month that the basis spread was negative. The "spread" has now reduced to virtually nothing, with the counterparty's and bond payments in near-parity. The point is, in the end, the cost to eliminate the "basis risk" through a "cost-of-funds" swap, for example, would have been substantially more expensive than the actual cost of the swap into which BATA entered.[1]

Once you understand, evaluate, and take appropriate, cost-effective steps to mitigate risk, there are a number of reasons to entertain the idea of using derivative instruments. Chief among these reasons are:

- Cost Savings: We have estimated the spread between the traditional fixed rate market and the $700 million in our "synthetic fixed rate" debt on our books will saveour toll payers nearly $200 million in interest costs

- Interest Rate Hedge: The synthetic fixed rate allows BATA to "cap" the interest rate exposure on our variable rate bonds.

- Contract Terms: Having a contract rate offersa flexibility in refinancing or restructuring that is not possible in the traditional fixed rate market.

Above all, a derivate instrument such as an interest rate swap can allow the issuer to manage, accept, or mitigate its risk levels and still achieve significant cost savings over traditional fixed rate debt.

So, what have I learned over the years?

- All contract items are negotiable; just be careful that it is worth the price.

- Know what you want to achieve with your derivative instrument, and then pick products that meet your plan.

- There are too many derivative products, many offering very low rates, but with consequences potentially adverse to your financing plan.

- Swap administration is additional work and, while it is not rocket science, it does involve accuracy and working arrangements with the counterparty's back office (or offices) that are not alwas timely or accurante.

- Know the risk associated with the variable and fixed rate debt issued so to be able to live with the consequences in the event of a counterparty default.

When all the processing is done and the inevitable frustration with late or inaccurate calculations has gone away, we never lose sight that our derivative debt structure will save our toll payers nearly $200 million in debt costs. Not a bad day's work.

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[1] A "cost-of-funds" swap seeks to match variable and contract payments.

This Offprint was previously published in DEBT LINE, a monthly publication of the California Debt and Investment Advisory Commission (CDIAC). CDIAC was created in 1981 to provide information, education, and technical assistance on public debt and investment to state and local public officials and public finance officers. DEBT LINE serves as a vehicle to reach CDIAC's constituents, providing news and information pertaining to the California municipal finance market. In addition to topical articles, DEBT LINE contains a listing of the proposed and final sales of public debt provided to CDIAC pursuant to Section 8855(g) of the California Government Code. Questions concerning the Commission should be directed to CDIAC at (916) 653-3269 or, by e-mail, at cdiac@treasurer.ca.gov. For a full listing of CDIAC publications, please visit our website at http://www.treasurer.ca.gov/cdiac.