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Session 99TS
Municipal-Guaranteed Investment Contracts

Track: Investment

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Recorder: VICTOR MODUGNO

Summary: The municipal reinvestment market is a growing source of funds for life insurers looking for alternatives to traditional guaranteed investment contracts issued to stable value funds.

Topics include:
- *An overview of the municipal reinvestment market—size, current players, and historical development*
- *A comparison of muni-guaranteed investment contracts to stable value guaranteed investment contacts*
- *Types of funds and contracts issued in this market, including contract provisions and risks*
- *Roles that life insurers currently play in this market*
- *Use of structured companies or parent-supported subsidiaries*

Mr. Victor Modugno: I am a consulting actuary in Los Angeles who specializes in municipal-guaranteed investment contracts (muni-GICs). Prior to starting my own firm this year, I worked for Transamerica in institutional products for ten years from 1990 to 2000. When I started at Transamerica, they had just entered this market, having issued a few small contracts. By 1996, deposits were running at $5 billion per year. Transamerica had moved up from 15th place to first place in the LIMRA survey of deposits, surprising many people. While we had success in stable value and in floating rate-funding agreements, the muni-GICs were largely responsible for this accomplishment. Muni-GICs had a much lower cost of funds and higher profit margins than pension GICs with different noncorrelated risks. By diversifying into muni-GICs, we had increased profits and a better risk profile.

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Note: The chart(s) referred to in the text can be found at the end of the manuscript.

Prior to Transamerica, I was at Executive Life where I witnessed inauspicious beginnings of the muni-GIC business in 1986. Executive was in the taxable market, where the municipality was fronting for the GIC. Today we're talking about the tax-exempt market, where bonds are for valuable public purposes for the most part. Prior to Executive, I was at Pacific Mutual and Metropolitan, where I got my FSA.

I will talk about the basics. David Rubin, our featured speaker, will follow with more details on what insurers are doing in the market today. We are very fortunate to have David as a speaker. Not only is he an innovator and leader in municipal reinvestment, he also works with life insurers in this market and was instrumental in getting Transamerica in this market in 1990 as well as other insurers. David Rubin is the president of Chambers, Dunhill, Rubin & Co. (CDR), which he founded in 1986. CDR has completed over $55 billion in contracts since its inception. CDR has evolved into a mult-faceted capital markets group.

We have a surprise addition. One of David's assistants, Doug Goldberg, who is vice president of Chambers, Dunhill, Rubin, & Co. since 1994 is here. He's in charge of financial analysis and structuring. He has extensive municipal derivative pricing experience, including product specialization in forward interest rate structures, such as rolling bills and debt-service deposit agreements as well as various option agreements. He's an expert in spreadsheet cash-flow/trade valuation analysis. Prior to joining CDR, Mr. Goldberg worked for Plexus Group, where he advised money managers on trading practices. He earned his business degree, with an emphasis on finance from the University of Southern California.

The municipal market is a very complicated market, and if you really want to learn about it you need to do a lot of reading. We can only scratch the surface in an hour and a half. Here are some resources on the municipal markets. The most important publication is the *Bondbuyer*. It's a daily newspaper that has all the municipal issues that are being bid. It's also available on-line at bondbuyer.com, and I believe they have a free trial subscription. Another publication is the *Red Book*. This is a listing of everybody who's anybody in this market, including underwriters, financial guarantors, rating agencies, bond counsel, and so forth. This is also available on-line at munimarketplace.com. The *Bondbuyer* also publishes a yearbook with statistics. It usually comes out in April, and is an annual book of everything that happened in the muni-market during the prior year. The statistics in my presentation are based on the *Bondbuyer*.

There's also an excellent book, *The Handbook of Municipal Bonds by Susan C. Heide, Robert A. Klein, and Jess Lederman, editors*. This really gives you a good feel for the market and its complexity. There are over 50,000 issuers and the market can be quite complex.

The most useful website is tm3.com, Thompson Municipal Market Monitor. It contains much information in addition to links to other websites. Cdrla.com, which is David's website, contains a lot of valuable information, as does one of his competitor's, Feld Winter’s, site, which is thedesks.com. Then there is my website, internetactuary.com that has several papers on muni-GICs.

The origin of the muni-GIC market goes back to the rise in structure financing in the 1980s. In a revenue bond or a structured financing, the project, such as a stadium or whatever the municipality is building, has to stand on its own. The municipality doesn't put its credit on the line. As a result, when a bond is floated the money has to be put somewhere until it's used for the municipal purpose. Reserves and other funds are set up to make sure that the bondholders get paid. The growth of revenue bonds in the 1980s was responsible for the muni-GIC market.

The Tax Reform Act of 1986 limited private activity bonds and created the taxable muni-market. That's where Executive Life got in and wrote $3 billion of these contracts in a period of a month or two. At that point, this market came to the attention of life insurance companies. Funding agreement legislation was enacted in New York and California and some other states to enable insurance companies to issue these contracts in the late 1980s.

To give you an idea of the size of this market, municipal bond outstandings crossed the $1.5 trillion mark last year. There's usually annual issuance in the neighborhood of $200 billion. For muni-GICs, we look at new money bonds. Refundings tend to go up and down with interest rates, but new money has been running about $150 billion a year. New money revenue bonds are about $90 billion. This is where you would get potential GIC purchases. Of this $90 billion, we're estimating $50 billion require collateral, and in this market, most collateral is tri-party repurchase agreements.

Another portion of the market is the AAA/Aaa unsecured market. Those issues that are insured generally require AAA/Aaa ratings. The unsecured AA piece is about $20 billion and that's where most insurance companies operate.

Major players in this market include securities firms, which are generally rated single A so they're in the collateral market. You have the German banks like BLB and WLB that are AAA/Aaa. The bond insurers have subsidiaries that are AAA/Aaa that compete in this market. There are few structured companies that the underwriters have that are also in this market that are AAA/Aaa.
Most of you are familiar with stable-value GICs so I'm going to compare stable value to muni-GICs. First, you must have a signed contract before transfer of funds for muni-GICs. This means you have to have enough variable fill to issue the contract after the case settles within a day or two so the funds can be transferred.

Second is enforceability opinions. Downgrade provisions are another requirement. After Executive Life's failure, downgrade provisions were required. These downgrade provisions don't have to be puts. They can be called an assignment in California where you buy a new contract, from a qualified obligor that replaces the existing contract.

Collateral is another downgrade provision. This market is also less rate- sensitive. Many of these municipal bonds cannot keep any interest above a certain level, which must be rebated to the government. In many cases the best rate is not what they're looking for.

The box below shows a typical enforceability opinion. This might seem like a no-brainer. How many people here, when you buy an auto or life insurance policy, ask for a legal opinion that it is enforceable? You all assume it's enforceable. This has caused a lot of problems because many times counsel is unwilling to sign an opinion unless there's specific authorization in the insurance code for the insurance company to issue that product. Sometimes when you're trying to do an innovative product, you can't get an enforceability opinion. That can become a major obstacle.

Enforceability Opinions
The Contract has been duly authorized, executed and delivered and constitutes a legally valid and binding obligation, enforceable against [XXX] in accordance with its terms (subject to applicable bankruptcy, reorganization, insolvency, moratorium or similar laws affecting creditors' rights generally) and subject, as to enforceability, to general principles of equity…
To the best of my knowledge no consent, authorization, license or approval of or registration or declaration of the United States of America federal or [State] governmental authority is required in connection with the execution, delivery and performance of the Contract.

Cliff-risk is risk from the buyer's point of view. This refers to when an insurance company goes into insolvency before the downgrade provision is exercised. *Yield burning*' is something that should be illegal. This is a practice of marking up the price of securities to lower the yield so as to meet the interest arbitrage requirements of the fund.

Some common contract types include debt service reserve funds (DSRs). This is the best fund for insurance companies. This liability typically runs the same term as the bond, which is 30 years. It's callable if the bond issue is called, which could be in 10 years. What you have is a liability that gets called if interest rates go down which is obviously very favorable and which could be perfectly matched with a callable bond.

A float fund runs the same term as a DSR. In a float fund, you accumulate funds in monthly installments and you pay out the interest or principal semi-annually or annually. It's a fund that goes up and then goes down to zero and then goes up again. This can be managed by swaps or if you could spread out the timing of the payouts you could have a fund equal to the average.

Construction funds are typically two-year to three-year final maturity funds with nine- to twelve-month average lives. There's an engineering study that gives you a payment schedule, an expected schedule of draws. The fund might be full-flex where a draw can be made at any time, or it could be no sooner/no greater or fixed draws. Draws can only be made to fund construction and construction almost always takes longer than scheduled.

Housing funds can be used for low-income housing loans. There's usually a three-year origination period and then a 30-year final maturity. These can be somewhat interest-sensitive but the low-income housing loans are not as interest-sensitive as regular housing loans because the borrowers don't have the same alternatives if rates go down.

Tax revenue anticipation notes (TRANS) are issued by school districts to manage cash flow. They're one-year bullets. They usually have small draws that are repaid before the end of the year. It's the one type of bond where the issuer can keep the interest arbitrage. These are usually competitively bid and issuers are looking for the best rate on these types of bonds.

The risk-based capital (RBC) model and the economics are very favorable to an insurance company writing this business, assuming that it's a relatively small part of the insurer's business. The funds tend to be short. Ninety percent of the funds are paid out within one year, except for the debt-reserve piece. One way to manage the short funds is to have a floating rate portfolio of three- to five-year assets and then to swap the liabilities into floating and then manage the cash using some alternatives such as floating-rate funding agreements for cash management purposes. You'd be taking a credit duration risk on the floating rate bonds, which, if you have good credit management, can be a very effective way to manage these short liabilities.

To meet the need for AAA ratings required by the insured market, which is about half of the market, there are structured companies that are stand-alone and parent-supported companies. There are a couple of guaranteed separate accounts. Transamerica has a separate account GIC where there is a credit enhancer that issues a guaranteed policy making the GICs rating AAA/Aaa.

To sum up it up, I think that this business is an excellent diversification for life insurance companies. It's a different noncorrelated risk to the pension 401(k) GICs. A life insurance company with a lot of other liabilities is able to manage the cash-flow problems very well. The RBC model is very favorable relative to some of the other competitors. If these liabilities are managed with other general account assets and liabilities, they can be a very profitable business.

Mr. Doug Goldberg: I'd like to start it off saying that there has been about $200 billion a year issued in the muni-market. Of that, 65% are revenue issues and 35% are general obligation issues. General obligation bonds are backed by the taxing power of the authority, while revenue bonds are backed by the revenues of the project. Of those revenue deals, like Vic was saying, half are insured.

There are different sectors within the revenue market. There are different risks associated with each sector. For example, in the housing market or in the single-family housing market, which insurance companies play quite a bit, such as

Transamerica, Aegon, and AIG, there are certain interest-rate risks that you have to be sensitive to.

When you're talking about issuing single-family loans, it's done to originate low- and moderate-income housing. Let's say you issue a fixed-rate deal at a 7% mortgage rate when conventional mortgages are 8% with two years to originate that money. If rates go up to 10%, your 7% is going to blow out in maybe six months, but if rates go down to 5%, you might end up having that money for the full two or three years.

There are different interest rate risks in the housing market that you need to analyze. For instance, in the public facilities market, we were involved in a transaction where they issued bonds in 1999 for a project and decided not to invest the construction fund at that time. A year later we convinced them to go back and invest the construction fund. Within that one-year, they had more money on deposit than they had when they issued the bonds. They hadn't spent a dime because of regulatory issues; they had gotten grants from the government that they started using first.

One of the two main risks in this business is the *flex-risk*, because these funds are always 100% fully flexible for purposes under the indenture. A construction fund is set up to draw out for construction purposes, but if you're getting money from the government, you don't have any ability to track whether they use that money first or this money first. Part of what needs to be priced is the flex-risk.

The second big risk is the *downgrade language*. I know that's the most sensitive to insurance companies. There are different ways to handle downgrade language that is more acceptable to insurance companies like the right to have a guarantee or the right to assign.

Within each one of these sectors there are different things you need to analyze. The health care market right now is much more sensitive because the market has gone down over the last year. The risks in the health care market are much more than they were two years ago when we were in a hot market. There are different things you have to analyze.

Mr. David Rubin: I think the idea that's being presented is that, in this sector, from an actuary's prospective, there's optionality. In every single sector, there's different optionality that's inherent in a specific transaction. Most insurance companies that we have worked with over the years recognize that to come into the market, they have to take a portfolio approach towards the business. Specifically, on the construction-fund market, you need to take that approach because it's going to be very difficult to dedicate your resources to a specific sector.

I just want to follow-up on what Doug was talking about in the general obligation (GO) and revenue sector. You won't see as an insurance company an ability to generate funds if you decide to participate in the GO market. The GO market generally goes to the state funds, to the state treasurer, or requires collateral.

The sectors for an insurance company to play in, as Doug pointed out, would be the revenue sector, which would be housing and transportation that act more like private activity bonds, for example, an airport revenue bond issue. It's Delta Airlines that's empowered to invest the proceeds as opposed to a public facility that is the general obligation seller of the debt.

Housing is done on a rated basis and not on an insured basis. When a mortgage originates in the housing sector, they are generally put in Ginnie Maes, **Fannie Maes**, and Freddie Macs. These are mortgage-backed securities issued by government agencies. These are rated AAA by Standard & Poor's (S&P) and support the structured rating of the bond issue by S&P. S&P establishes guidelines on what kind of investment agreement provider can participate in that sector. If you have AA-credit rating, you could participate in writing a GIC up to three years for that market. That's why many insurance companies have a substantial portion of their liability portfolio from the housing sector.

Mr. Goldberg: We saw a $70 billion dollar market last year in muni-GICs. It's been growing, and we'll probably have another $70 billion this year. Again, touching on what Vic was talking about, there's a wide range of providers in this market. We have helped bring in quite a few of them on the insurance side from Transamerica, Security Life of Denver, and SunAmerica. There's a good seven or eight providers that we've helped bring into the market.

We actually have a provider consulting division that focuses on that. We've done a good job of helping insurance companies come into the market, bringing them up to speed, educating them, and finding the niche where, based on their credit ratings, they'll be able to do the best.

Mr. Rubin: We've seen a tremendous rate of consolidation. We just did a review of those providers in the short sector of the muni-business, totaling up to 25 providers. I would say in 1992 you had 40 providers participating in the marketplace.

In the domestic bank market, not only has there been a huge consolidation, but also banks have not had an issue with their local deposit base and they have not been in the business. For bond insurers, we didn't have many to start with, so we still have three. Your broker dealers are only in the collateral sector. They're generally single A credits.

Even insurance companies have had consolidation. Just this past year alone there were mergers between AEGON and Transamerica, and between SunAmerica and AIG. AIG was a dominant player in the market. Transamerica was a dominant player of the market and AEGON was a dominant player in the market. You've had a consolidation in that sector.

I know there was a panel discussion on downgrades and the issues of downgrades and the concerns by the regulators of writing downgrade language, so this is a concern for insurers. Travelers has not been as active as in the past. Salomon

Smith Barney really has taken over that responsibility, and it has been doing a much more aggressive job in that sector.

I think that there's room for a provider to come into this sector because of consolidation. There are many less providers to talk to and less providers that are making their mark in this sector.

Mr. Goldberg: To go over the types of funds, we'll do the short-term first. Again, construction funds are funds established for private purposes. You are going to have to allow them to draw the money out as needed for the construction purposes. Capitalized interest funds are much easier to manage because they're a fund that was set up to pay the first couple years of interest since there are no revenues from the project until the project is built. There are fixed draws that are very easy to manage.

Acquisition funds are specific to housing issues, which I brought up earlier. These are the funds where you will originate your single-family mortgage loans. Again, the flex-risk depends on where you think interest rates are going and how fast you think this money is going to come out. One way to hedge that is finding out how past issues have done. All these issuers have come to the market multiple times. Transamerica/Aegon can go back and look at the deal they've done six times and look at where they think money will come out. There are ways to look at it and ways to hedge the flex-risk.

TRANS are basically school loans. They can issue a one-year note to fund expenditures over the following year. It's a California market for the most part. In June we just ended the TRANS season. You'll see about $5-6 billion in a three-week period bid out in investment agreements, and that is really almost like a one-year bullet. Some money will come out but it will be redeposited. It's really a true arbitrage play for schools. They issue one-year notes at 3%, then invest in GICs at 5% and earn the spread. This market is consistent. It happens every year. Insurance companies have done very well in getting this money and picking it up every year. It might not be the same issue but they win the same amount of business every year.

Long-term funds are the DSRs and float funds. Revenue bonds have optional calls in them. You're never really going to have this money for 30-years. DSRs are specifically established and only used if there's debt-service deficiency. That's the only reason (with the execpetion of refunding) it'll be drawn out. After you've underwritten a deal, it's not going anywhere. There is on-average default 1% of the time. If you're looking at a specific sector, maybe health care, it picks that average up and some of the others like public purpose projects are never going to go into default.

What you need to look at is, if you're hedging these for 30-years, and you price this based upon it's longer term, you're also going to have a windfall at that point where they do a refunding. They're going to do a refunding, and almost every one of these deals will be refunded at some point. There's going to be a profit on your hedge for which you haven't priced. in. The entities that have been in this business for 10 years are starting to see that profit roll in from these contracts.

Mr. Rubin: In terms of the credit scoring, we've seen a lot more sophistication by providers in terms of credit review. I go back to my previous statement that you have to look at this strictly on a portfolio basis because an insurance company will find itself limited to the revenue sector. If you're at an AA entity, you'll find the company is not acceptable to the bond insurers. Therefore, you're going to be required to bid on transactions that are not bond insured, which means they are selling on a rated basis only.

There are two reasons for that: it's either a very strong municipality that is selling the debt or it's a very weak deal. There's very little in between, because the bond insurers have very specific guidelines. Unless you're AAA/Aaa, they will not accept you as a counter party for the investment of the proceeds of the underlying bond issue.

What this means to you is that when you're building up your reserve fund portfolio, it does take a discussion of credit and it does take a discussion on credit scoring. If you were to buy an asset in the sector, you'd be concerned about your exposure, which is the principal amount invested. Here your exposure is strictly the change of value of your underlying asset, should there be a liquidity event where interest rates are. The sector can influence the time that you will decide to participate in the market.

Let's say you write a nonrated municipal transaction for $10 million with a $1 million reserve fund. You are going to invest the $1 million fund long. Let's say it's at 6%. Then five years later, the deal goes into default and rates have come up 300 basis points. You have to liquidate your asset in order to pay off the fund because the trustee is going to call that reserve money in order to pay debt service on the underlying bonds. Your contract will be called first to pay debt service on the bonds. If rates had gone up dramatically, you'll have a loss on the asset side.

Counter to that, if you feel that rates are at a high point or are getting to that point, then writing in that sector has less risks associated with it. There's very little correlation in this market between change of interest rate and default in a particular sector.

Health care is a good example of that. There is no relationship between the changing rate environment and the federal government's change of the policy processing sheet schedules for health care. There is an amount of default in the health care arena starting from Allegheny to the most recent debacle in Massachusetts. In Long Beach, Long Beach Memorial Road just closed.

You've seen a huge increase in default in that sector, so if it's happening to you when rates are going down, and you're holding the reserve funds, that's not going to have a negative impact on income. If it's happening to you when rates are going up and you have to liquidate your assets, you definitely see that it does have a negative impact.

Mr. Goldberg: I'll go over pricing and deposit size. Your average short-term fund is going to be the $5-250 million range. There are deals bigger than that. We've seen construction funds up to $1 billion in size. Your average life is going to be in the 6–18-month range with finals around two to three years.

To get into funding levels, it depends on the type of money you're looking at. TRANS are priced a little richer. They're closer to the London Interbank Offered Rate (LIBOR) flat to LIBOR less 0.1% depending on the size, and how much you price in for flex. There are different things to consider in different sectors, but the levels are typically in that LIBOR range.

Mr. Rubin: We had a conversation just the other day with Pat McWeeney at S&P. We were talking about different funding agreement markets. We talked about all these glbal funding deals and about the stable value market. TheS&P identify with the muni-GIC market as a core business line most favorable out of any of the areas of the GIC line. For those that are in the GIC business and have focused on the muni-market, the S&P believes it's viewed as the most favorable funding source and the most consistent market.

Stable value has very dramatic and difficult issues. They definitely look upon this much more favorably than your short-term funding agreements and money market fund products. Although we're seeing that a lot of global funding deals have been done in the past, there is a concern about the cost of funds and the fact that it's not a business unit. It is much more of a strategic initiative to take advantage of. Either plug in some liability issues because you're not getting the same amount of funding from the sectors that you originally depended on or it is strictly opportunistic. It's not considered a strategic strength compared to having a real position in the municipal sector.

Mr. Goldberg: This isn't a market where you can just stick your toe in the pool and say, "Let's give it a try." You have to dive in. The successful business models that have worked are the ones that don't say all we want to do is look at construction funds for less than three years with a one-year average life. You have to look at all the markets. All of these deals will have float funds with them. You've got to be able to price the float funds, and you have to be able to price the reserve funds. You have to be able to price the entire array of products in order to get the most amount of business for yourself. You've got to take the good. There's no bad. You've got to take the good to get the best.

The DSRs are typically about 10% of the bond issue. We're talking about as low as a half a million to as high as $50-70 million. We did a deal with a $71 million reserve fund. The float funds are an average balance. To give you an estimate, they are probably a third of the size of the reserve fund, because you're getting monthly deposits into the fund that pay off semi-annually for interest and annually for principal. Fund maturities are typically 10–30 years. DSRs have final maturities of 30 years, but with the call provisions, they're going to disappear earlier.

Let’s discuss funding levels for these products where you have the credit-scoring system like Dave talked about. You're going to get a cost of funds LIBOR minus 0.2% on a housing deal, or LIBOR less 100 basis points on a health-care deal in today's market. It really just depends on building up a portfolio like Dave said and doing a credit-scoring system.

Re-investment products. You all know about investment agreements. You know what GICs are. There are other products used in the municipal market besides just investment agreements. There are repurchase agreements, which are basically collateralized investment agreements where you post collateral in the form of Fannies, Freddies, and Ginnies at 104–105%.

Because they're playing in a market where they are capped at what they can earn at the arbitrage yield, municipalities have a different view on risk reward. They really don't have the same philosophy as you might have on your own personal investments. They're going to look at getting to a minimum yield with the most safety. That's their goal. If they can blow through their arbitrage yield with an investment agreement, they're probably going to look at doing a repurchase agreement, getting some other form of collateral, or asking for more flexibility and more options, such as the right to draw for any reason.

We've done transactions where we throw in different options to bring the yield down. It's not yield burning; it is allowed. It's using yield to create the most safety for the issuer. You can cap the yield at let's say 5% and then say how much extra flexibility, and how much extra collateral we can use between a market rate of say 6.5% on a reserve fund and the arbitrage yield of 5%.

Mr. Rubin: Each transaction has a different agenda because according to the regulations, there are different tests that municipalities need to meet in order to determine whether they have the ability to keep excess yield or whether they have to rebate excess yield. The concept of yield burning is really not a viable concept except in refunding, which doesn't apply here. There they buy mostly state and local government series (SLGS), but also special low-coupon U.S. Treasury obligations or government securities.

If you have a bond deal today in the muni-market, munis are selling at let's say 5.7%, so reaching an investment agreement yield of 5.7%, if that's your benchmark yield, is obviously not difficult. You have a flat or inverted yield curve. So if you're doing a construction fund and your bond yield is 5.7% and LIBOR is 7%, obviously writing a construction fund at 5.7% is not going to be difficult.

The question is, if you're going to price this at LIBOR, let's say it's 7% and bond is at 5.7%, can the issuer keep those earnings or can't they keep those earnings? Every deal is different. There are draw down requirements that are established by the federal guidelines if an issuer can meet those criteria. They are 65% the first year, 20% the year thereafter, and 95% by the end of the third year. If they can meet those criteria and they choose to meet those criteria, they have to make an election. If they make an election to meet those criteria, then they're going to invest for the highest yield. They chose not to meet those criteria in the Atlanta 1999 deal.

We also did their 1996 deal, and I just use them as an example. In their 1996 deal, they had $480 million, and it's now the year 2000, and they still have $480 million. They just haven't built any roads in Atlanta. Or they've used up the monies to do all the necessary maintenance for which the particular program is supposed to be utilized. In that situation, they're obviously not going to be able to keep any yield because they haven't met, what we call in our industry, the spend-down test. If they haven't met the spend-down test, then they have to rebate.

Those issuers that we meet with, we discuss that up front. What is your intention? Is your intention to meet the draw-down test and the spend-down test or not to meet the spend-down test? If they don't meet the spend-down test then, depending on the sector, that will determine the type of investment agreement we choose.

For the most part it would not be one that an insurance company would participate in using an investment agreement. Because the municipality will choose an alternative investment option that doesn't have credit as an issue to them. They'll choose a repo, or as Doug will talk about, a number of other contracts that insurance companies and dealers who had credit issues have used to participate in the market for transactions. In this case, the municipality is not meeting the spend-down test and yield is not an important factor to the municipality.

Mr. Goldberg: Beyond repurchase agreements are debt service reserve agreements (DSRAs) and debt service deposit agreements (DSDAs). They are basically the same product except that DSDAs are for a float fund and the DSRAs are obviously for the DSRs. But the concept of these agreements is taking collateral to a next step with direct ownership of the assets being delivered.

This is an interesting product for insurance companies. This is off-balance-sheet fee income and I think that it is a good way for an insurance company to get into a market and get some off-balance-sheet fee income. Here is how the product works for the reserve fund. You're only going to need that reserve fund every six months on the interest payment dates if there's a debt service deficiency. What you're agreeing to do today is sell them Fannie Mae or Freddie Mac discount bills or notes that are maturing within that time every six months.

Let's say you're going to deliver a $2 million reserve fund. You'll get the $2 million. You'll deliver a security that matures for $2 million plus whatever the guaranteed interest is in six months. When that security matures, if they need the reserve fund for debt service deficiency, they'll use it. They actually have the cash because they've owned the security and it matured. If not, the process will continually roll over and what will happen is you'll deliver a new security and they'll deliver the cash back to you. This process will continually roll over for the life of the agreement.

Now the debt service deposit agreement works basically the same way except you're getting monthly deposits for the float funds and you'll deliver a 10-month security and continually roll over for whatever the payment is there for, whether interest payments or principal payments. And again, this is an interesting product for an insurance company. It's an off-balance-sheet fee income product.

Mr. Rubin: It was created specifically for insurance companies. For the longest time, the only one that had incremental success was Transamerica when it developed the ability to hypothecate assets and have what would have been viewed as a repurchase agreement in the marketplace. But it met with little success. It didn't have broad applications. There were too many contingencies. Insurance companies would only be able to participate in the noncollateralized and unsecured agreements. Those sectors were fairly uniform. It would be in housing or revenue issues that are not acceptable to the bond insurer.

Insurers are going to play in the nonrated reinvestment game or they were in the TRANs game. If you look at the general liability side of an insurance company that has had activity in the reinvestment sector, you would have seen these three sectors: housing, revenue bonds that are not insured, and TRANS. There's normally going to be a mix of some single A-rated and triple-B deals, but for the most part, they would be unrated. The creation of this product allowed an insurance company to compete directly with transactions where yield was not the issue.

What was the issue was the credit scoring. The people that play in the forward-deposit agreement or the forward rate say, "Okay, you want a low rate, you need a lower yield on your reserve fund." I know that I'm comfortable in going to the swap market or going to the forward-purchase market and delivering agency discounts, or commercial paper for the next 10 or 20 years' bills.

Mr. Rubin: There was a very nice fee income for those that have participated in the sector. You even have MBIA participating in this marketplace, and a number of the other foreign banks participate. This has been a very good product line for them because they don't have to worry about blowing up their balance sheets by taking on deposits.

Mr. Goldberg: This is an open market. There is room for new players to get in because of the consolidation that David talked about. Based on the numbers we showed you, it is a cheaper cost of funds in some of the markets you're already in. It's definitely worth exploring. The business comes from four different places: direct, financial advisors, brokers, and negotiated. We do brokers trades but we also play in the negotiated market. We've transformed ourselves from just a broker to a product development organization.

I'm going to hand it over to Dave here to talk about one of our more advanced products, where we'll talk about a negotiated transaction that is a little bit different. It takes a little bit more analysis but it's going to give you bigger benefit in the end.

Mr. Rubin: Over the last several years, we've had the consolidation and like in any market, you have efficiencies, and you have the commoditization of any enterprise. What you've seen even in this sector is the commoditization. I started in this business in 1983 and developed my own company in 1986. I remember when we first got into the business, Prudential was one of the first companies we brought into the market. I remember calling Prudential and asking them to bid one of these transactions. They gave me their rate and I asked them, "How long is the rate good for?" They said 30 days. I still remember that to this day. When I first got into this business the insurance companies would have these open-order periods. They would set a rate and they would leave it open. I remember when that period turned into a week, then a day, and then an hour.

You've seen advancement in terms of the sophistication of the marketplace and the recognition that this is commodity-based and option-adjusted pricing. Every insurer takes into consideration a number of the options that we've talked about, whether it's credit scoring or liquidity risks.

For the most part, in today's marketplace, we could see winners of transactions of regular construction funds where the difference between the winner and the cover bid is one basis point or a half basis point. It's very similar to the experiences you've had in stable value, which is also a sector that we are in or have been in. We've seen a dramatic change in terms of the differences between a winning bid and a cover bid, and the fact that it has become more competitive from a pricing standpoint.

What is unique about the municipal market that did not exist in stable value (it existed a little bit, I think, in stable value but it really exists in the municipal market) is that you have your "in the box" general transactional business.

In the municipal business, which is very nice from our standpoint, is that there's a lot of stuff that goes on "out of the box." We have found the greatest profitability for us and the insurance company has been to play out of the box. Playing out of the box means, first, you have to get comfortable with everything in the box and build up some portfolio of general business. Once you understand different sectors, you can begin appreciating the uniqueness of some of the transactions and why they exist.

As I touched on before, there are transactions where the investments are triggered by the fact that they are not going to meet the spend-down test and some issuer might do a deal where he wants yield because he will meet the spend-down test. One needs to understand what the focus and the goal of that particular municipality is.

The same thing is true in other sectors of the market. I'm not going to try to bore you with a particular transaction, but what I wanted to do was to show you why there are opportunities in our market. I'll use an example of what we call a structured product. This is a product that we have done in the marketplace and continue to do in the marketplace. This is a product that we did with Transamerica when they were in the business. It's a product that, due to the consolidation and issues with the risks, we do it with a different provider today. It happens to be a noninsurance company provider. What I want to do is walk you through some of the issues that exist in our marketplace and show you an example of a structured product and its profitability and its risks.

We call this deal a "lease-to-own". As we talked about before, in single-family housing, when there is an issue of single-family debt, in California it would be the California Housing Finance Agency (CHFA) it will sell debt to the marketplace. That is called a private activity bond for the municipality. The federal government sets a guideline about how much private activity bonds can be issued in every single state.

Once you've met that cap, it could be $2 billion a year. It could be issued to that amount and then you can no longer issue single-family bonds. It also means that the gorillas take most of it, and the monkeys get nothing. In any state, there is a state agency and there are local agencies. The first one that allocation is given to is the state agency. He decides how much he keeps. If he doesn't want to give anything out, he doesn't.

If the state decides it wants all its allocation because it feels that it can originate single-family loans throughout the state and wants to use the entire $2 billion, it will. The local agencies, let's say in San Diego, in Long Beach, in Los Angeles, and in San Francisco, have a very difficult time meeting the demands of their local constituents.

We look at that and say, "Can we design and develop a product that could address the concern of the local agencies?" This way, they can have their own program for single-family housing. This is a program that we call *lease-to-own*, which requires a municipality to own property for a period of time while the individual is living in the home. The municipality owning the property converts it from a private activity bond where an individual would own the home and have a mortgage to a governmental obligation. This is because the city owns the home and rents it. That changeover makes it a deal that doesn't require an allocation and the local agency can issue debt for its own purpose because it's going to buy the homes.

The key to the program, as we'll go through it, is that it provides home ownership opportunities for homebuyers that could afford monthly payments but don't have enough money for a down payment. As such, they will lease the home. It provides the prospective homeowners with equity in the home that they will eventually own. It promotes neighborhood stability. It allows prospective homeowners to establish and re-establish a credit rating during their lease period.

Let's go to the bond side. Now, what we'll do is structure a transaction. And in this transaction, we'll look at the uniqueness of the marketplace and say to ourselves, "We're going to sell a bond." The bond in this case is going to be for a period of time that will allow an individual to find a home that he would like to eventually own. In the interim period, the governmental entity will acquire the home, and be a lessor. After a period of time and a certain number of lease payments, he will be able to buy the home and the mortgage will come with it.

There is a key to understanding the deal. After the time this home will convert from a lease to home-ownership, the municipal bonds have to go away because the bonds are not allowed to be outstanding when the individual owns it. That is because it becomes a private activity bond for which you need an allocation. At no time can you have the person own the home while the muni-bonds are outstanding. Which means that the bonds have to be repaid and you need to get the money for that.

I'm going to walk through structurally what the insurance company's participation is in this deal so you'd understand what the risks are and you understand what the potential revenues are for the insurance company.

What we're going to do is sell five-year bonds. Now, we're going to invest that money. We're going to go to an insurance company and say that we want to give the company $90 million in the deal. We're going to give you that money for five years. Over the next two years a bunch of individuals can come in and say to the municipality, "I want this home." If they buy that home, then the municipality would draw down money from the pool of funds over the next two years to acquire the home. In that place, it will put a mortgage-backed security, a Freddie Mac, a Fannie Mae, or a Ginnie Mae, depending on the underlying loan.

If, over the next two years, there are no draws, then the insurance company may keep this money for five years. Here's the first option issue to the insurance company. How many people over the next two years will want to lease a home so the money will be drawn out or how many individuals will not decide to lease a home and the money will stay with you for five years? The first risk characteristic is the the draw schedule. How long will the money be with you? Will it be with you for five years or as little as one year, based on the draw schedule?

The structure is as follows. We have series A bonds. The monies are deposited with you for a period of time, and as people originate a loan, they will convert them to triple-A Freddie Mac certificates at the end of the period. There is a letter of credit. Here is something the insurance company also provides that will pay off the underlying bond obligation.

The second source of income for the insurance company is that it will receive this spread differential between the yield on its GIC and the yield on its bonds. The bonds, for example, in the transaction we just did were 4.9% and the GIC, even if you wrote it at LIBOR minus 0.6%, was 6.5%. The insurance company will receive fee income, (the difference between 6.5% and 4.9%) for a period of five years as long as the monies are invested.

What the insurance company is required to do at the end of the five-year period is to buy any mortgages that originated from the pool. If no mortgages originated, it gets to keep 160 basis points a year for five years. If all the mortgages originated in the first year, then it doesn't get any fee income because there was a draw from the investment agreement in order to buy those underlying mortgages. That's your series B. The series B is the monies that are used to lend to the individual to acquire a home.

Chart 1 "Flow of funds for Interest Payments" is your account structure, or your flow of funds. You have an investment agreement. The investment agreement is where the bond proceeds are placed. It secures the A bonds, and it secures the B bonds. Because in any of these transactions in single-family housing, when the bonds are sold and the monies are deposited into an investment agreement, it is the sole security behind the bonds. There might be a bond insurer that is saying, "We believe that Transamerica, Aegon, or SunAmerica will repay its obligation," but the direct collateral to the bondholders initially is the investment agreement.

If there is a need to buy a home, you draw from the A bonds and you have mortgage-backed securities. You also draw from the B bonds to acquire the home. You, as the insurance company, are providing an obligation to buy all the mortgages at the end of the five-year period to pay back the bondholders in order to pay off the debt. If you remember what I mentioned before, you cannot keep the homes once the individual owns the home, that mortgage-backed security can no longer be the obligation to the underlying debt. It has to be paid off.

Who pays it off? The insurance company takes the risk of the valuation of the mortgage-backed security. If that mortgage-backed security has gone up in value the insurance company gets the windfall. If the value of that mortgage-backed security has gone down in value, then the insurance company has to make up the shortfall.

In Chart 2 "Flow of Funds at Lease Assumption," you have your letter of credit obligation, which is issued by the insurance company. I know you had a discussion this week on liquidity arrangements and activities that insurance companies can participate in. We have, over several years, done a little over $1 billion in insurance company transactions just of this nature where the insurance company has provided the liquidity source. Their revenue generally comes off of the investment agreement side. The letter of credit, provided by the insurance company, has the obligation to purchase mortgage-backed securities in the future. It is something that you are comfortable with in terms of an asset class. You might be uncomfortable with the techniques to hedge change in valuation of mortgage-backed securities. You have the obligation to pay off the A bonds and the B bonds. The B bonds obligation to pay off is simple because you're going to be receiving the spread between the mortgage rate and the bond yield for the life of the obligation. The A bonds are basically mortgage-backed securities. That's kind of a transaction that we would structure.

I don't anticipate anybody here will follow a transaction of this nature if you're not familiar with funding agreements or activities by insurance companies in the sector. The point I would like to get across is that the value of insurance companies participating is that you bring certain uniqueness to the marketplace. That is asset/liability management. You understand mortgage-backed securities, you understand hedge techniques, you understand change in valuations and different asset classes, and you have the ability to do credit scoring.

As our market gets more and more sophisticated, it is in need of insurance companies to structure transactions outside of what we call the commodity side of the business. Municipal re-investment does offer very unique opportunities to stretch the intellectual capacity of the actuaries to get their arms around different unique programs and products that are being created in the municipal sector. I just wanted to share with you one that we have done in the marketplace that has also been done by an insurance company.

Mr. Modugno: In the letter of credit that you talked about, what type of contract is usually issued? Is it a standby purchase agreement?

Mr. Rubin: It's stand-by, direct pay funding contract.

Mr. Modugno: They're agreeing basically to buy securities at a predetermined price?

Mr. Rubin: They're agreeing to make up a shortfall in the future.

CHART 1

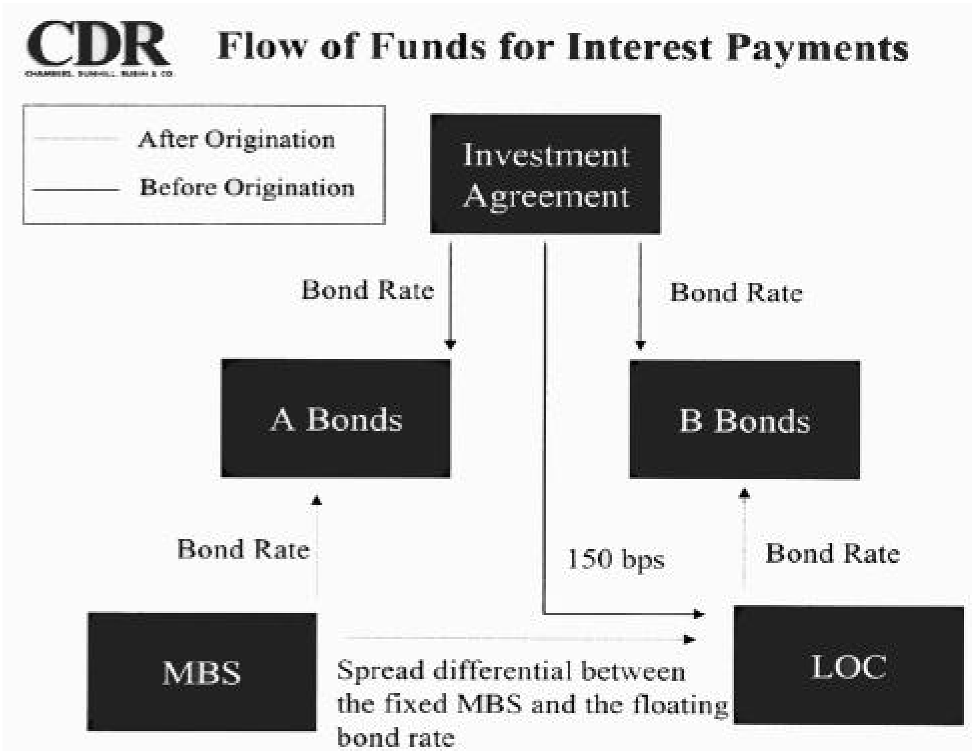
CDR
Flow of Funds for Interest Payments
After Origination
Before Origination
Investment Agreement
Bond Rate
Bond Rate
A Bonds
B Bonds
Bond Rate
150 bps
Bond Rate
MBS
LOC
Spread differential between the fixed MBS and the floating bond rate

CHART 2

CDR
CHAMBERS, DUNHILL, RUBIN & CO.

Flow of Funds at lease assumption