Toward Infinite IRR: Institutional Real Estate Investors as Credit Enhancers of Bond-Financed Real Estate

By

Ryan J. Whitaker

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Master of Science in Real Estate
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Carey Business School
The Johns Hopkins University
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Author's Note:

The author is an employee of National Real Estate Advisors, LLC, a wholly-owned subsidiary of the National Electrical Benefit Fund (NEBF), a Taft-Hartley multi-employer pension plan which actively invests in real estate development projects across the United States. In my capacity as an Investment Officer, I proposed the implementation of a real estate credit enhancement program, similar to what is proposed in this paper. Though I led the effort to obtain a credit rating of NEBF from Moody's Investor Service and NEBF provided credit enhancement of in support of a small handful bond-financed real estate development projects, a full credit enhancement program, as proposed herein, was never fully implemented and NEBF is no longer an active provider of real estate credit enhancement. Elements of NEBF's credit enhancement program are discussed in Chapter 3 of this paper.

Introduction

As institutional investment in real estate has become commonplace, opportunities may exist for institutional investors to deploy capital via new and evolving structures within the asset class. This paper proposes that qualified institutional real estate investors consider providing credit enhancement in support of bond-financed real estate projects. The concept of bond credit enhancement is certainly not new: traditionally, it has been the domain of banks, some insurance companies and a select number of government agencies and sponsored entities. Yet, the broad entry of institutional real estate investors into the market for credit enhancement as a form of real estate investing is a novel concept. A small handful of institutional investors have set up credit enhancement programs, but the approach has not been implemented as part of real estate investment strategy per se, nor has it been widely adopted. This paper explores the concept of institutional investors as credit enhancers of real estate bonds and proposes it as an investment structure as an extension of a real estate investment program and a method for leveraging non-real estate assets to enhance fund-level investment returns.

Credit enhancement, typically in the form of letters of credit or loan guaranties, is a required component of a real estate development financed by either publicly-issued or privately-placed bond debt. As the market for bond-financed real estate projects increases, so will the demand for credit enhancement needed to backstop these bonds. Recent dislocation of some enhancers in the market and the costs imposed by regulation on commercial banks, may create an opportunity where some institutional investors, especially pension funds, but potentially opportunity funds, endowments and other types of well-capitalized entities, may be well-suited to the provision of credit enhancement. Though the concept of credit enhancement may be applied to any debt obligation (e.g., loan repayment guaranties), whether private loan or publicly-traded bond, this paper focuses solely on its application to bond-financed real estate.

A unique element of credit enhancement is that it represents a contingent commitment of capital from the provider of the enhancement. The structure is not converted to a cash investment unless and until certain conditions are met whereby the enhancement is called upon to assure the collateral value of the underlying bonds (i.e., usually a default situation). So long as the capital commitment remains contingent, as the provider would hope and expect that it would, no cash is invested. In exchange, the provider is paid a recurring fee during the period of the enhancement. Assuming all goes as planned, this investment structure generates an infinite internal rate of return (IRR) to the enhancer; that is, positive fee income is received despite no negative cash investment outflows.

This paper will describe bond-financed real estate structures and the associated credit enhancement requirement. It will also explore the potential opportunity which may exist for institutional real estate investors to participate in such structures which are intended to produce investment income without the actual investment of cash. In order to provide credit enhancement, institutional investors must

meet certain requirements, address certain risks and consider potential internal issues. Ultimately, this paper will seek to determine the feasibility and prudence of a credit enhancement program for institutional investors pursuing diversified real estate investment structures whose goal is the minimization of risk and the maximization of investment return.

Literature Review

The concept of bond credit enhancement provided by non-bank, institutional real estate investors is essentially new, or at least extremely rare. Published articles, which either propose the idea, examine the structure or review its implications as applied to real estate investment, are not readily available, if they exist at all. However, a number of articles exist which discuss elements of related concepts. These articles can generally be divided into two categories: (i) those assessing the evolution of the tax-exempt municipal bond market and, in some cases, its application to real estate finance; and (ii) those discussing the various existing forms and sources of bond credit enhancement. The existing literature considers these topics from many different perspectives including those of the real estate developer and investor, bond issuers, bond investors, banks and other traditional credit enhancers (i.e., mono-line bond insurers), etc. While it is the focus of this paper, the opportunity for the emergence of non-traditional credit enhancers is only tangentially discussed in existing published literature however.

While discussed later in this paper, bonds financing real estate make up only a tiny percentage of the overall bond market and the municipal bond market in particular. However, it is safe to assume that trends in the overall municipal bond market heavily influence the application of tax-exempt bonds to real estate development projects. Some existing literature addressing the overall market serve as primers for the market for municipal bonds as it has evolved over the past 50 years or so. Summers

and Noland (2008) offer a comprehensive overview of the municipal bond market, including a description of the size of the market, common municipal bond market participants, features of municipal bonds, including a brief discussion of credit enhancement, and a brief assessment of risks, both from issuers' and investors' points of view. As a type of debt securitization, Telpner (2003) comprehensively describes the interactions between the various parties in a bond transaction, including the role of the credit enhancer and a brief description of both bond insurance and letters of credit as instruments of credit enhancement. It is important to note that these authors rightly focus on the traditional municipal bond market and the parties involved, and do not address, directly, bonds financing real estate development projects. However, these writings indirectly apply to municipal bonds financing real estate as a small subset of the broader bond market. While the evolution of the municipal bond market provides important background, the critical point is that the market continues to evolve as a result of numerous factors including, but not limited to, tax policy of the U.S. Federal Government, general economic trends, market innovation, entry and exit of market participants, the interest rate environment and others. The various participants in the municipal bond market, including credit enhancers, should anticipate continued changes in the market.

Much of the literature, such as Hildreth and Zorn (2005) and Maguire (2006), focuses on the pricing differential between tax-exempt municipal bonds and taxable sources of financing, and discusses how the differences between the two have been affected by various pieces of legislation enacted by the U.S. Congress over time. Specifically highlighted by Maguire are the Revenue and Expenditure Control Act of 1968, which essentially created the tax-exempt bond instrument, the Tax Reform Act of 1986 and more recent legislation aimed at re-development such as the Liberty Zone in New York City created after the 9/11 attacks and the Gulf Opportunity ("GO") Zone created in the aftermath of Hurricane Katrina. Again, the lesson to potential credit enhancers lies in the necessity to monitor and assess the continuing evolution of the market. Both Hildreth and Zorn and Maguire's writings will

mainly interest issuers of, and investors in, the wider municipal bond market who are keenly interested in the market as a source of financing for local government and tax-advantaged investments, respectively. However, these writings also address how Federal legislation alternately curtailed and expanded the application of tax-exempt municipal bonds to finance real estate development.

A small collection of existing literature narrows its focus down from the overall municipal bond market to its application to real estate finance. While providing similar background on the history of the municipal bond market, Olson (2010) goes further to provide sample calculations illustrating the pricing differential between tax-exempt municipal bond financing and conventional real estate financing sources. Olson uses the SIFMA Muni Swap Index and LIBOR as indices for market pricing, respectively. He goes further to describe the "rate stack" of other fees and charges above the SIFMA index to estimate the total cost of tax-exempt bond financing and to compare it with the cost of conventional debt. Olson estimates the rate stack ranges between 150-250 basis points for bonds, while conventional financing carries a spread of between 300-400 basis points over the index. He concludes that the cost of tax-exempt bond financing is approximately 3% per annum while conventional debt costs around 5% per annum. While these pricing estimations appear to be gross generalizations, Olson makes a critical observation that during times (i.e., now) when the LIBOR index is hovering at historically-low levels, conventional lenders will institute interest rate floors thereby widening the spread over the LIBOR index and maintaining the relatively attractiveness of tax-exempt debt. Lastly, Olson attempts to quantify the "value" of the tax-exempt bonds, presumably to the underlying real estate, by applying two simple techniques, direct capitalization and discounted cash flow, to the interest savings achieved using tax-exempt financing. He concludes that the "bond premium" is between 15 to 20 percent of the principal amount of the bonds. While Olson's observations regarding relative pricing for real estate bond and conventional debt are relevant, though

generalized, his extension of the pricing differential to a relative valuation of the bonds seems superfluous.

Regarding pricing of tax-exempt municipal bonds which finance real estate, as opposed to General Obligation or other categories of Revenue bonds, Gerwitz (2003) identifies and explains the reasons behind the higher interest rates of the latter compared to the former. Gerwitz attributes it to the perception of greater credit risk by bond investors, who are generally more risk averse, of bonds financing and secured by real estate projects. Gerwitz notes that this perception exists despite the application of high-quality credit enhancement to the bonds. He also notes, that some bonds may not be fully tax-exempt as some investors will have to pay the Alternative Minimum Tax (AMT). Lastly, tax-exempt real estate bonds have a shorter average life compared to other types of tax-exempt debt, caused by pre-payment, principal amortization and call provisions. Gerwitz makes similar cost of capital comparisons between tax-exempt bonds and conventional debt, though his discussion is interesting only because it occurs roughly 10 years ago during a significantly different interest rate environment (compared to Olson's writing in 2010) and not because it is particularly revelatory.

While intended to address the use of tax-exempt municipal bonds as a re-development tool from a socio-economic perspective, rather than a pure examination of the finance, Gotham and Greenberg (2008) examine the broadened applicability of such bond financing in post-9/11 New York and post-Katrina New Orleans. They argue that these efforts did not achieve their intended re-development goals and instead skewed their benefit toward the affluent and away from those most disadvantaged by the two crises. While the social argument made by Gotham and Greenberg is well beyond the scope of this paper, their conclusions are relevant in that Congress' actions clearly demonstrate its belief in the application of tax-exempt municipal bonds as a tool for economic re-development. To the extent that such socio-economic notions may be proved or disproved, will greatly the impact the

Federal Government's tax policy as legislated by Congress and the applicability of tax-exempt bond financing beyond the traditional property types such as multi-family housing. The critical conclusion to be drawn from writings which detail the evolution of the tax-exempt bond market is that a variety of forces, particularly government policy and priorities, influence the overall market and that a potential participant (e.g., a credit enhancer) in the market must adapt to changes in the market in order to minimize risk and exploit opportunities to generate investment return.

Moving on from literature which focuses on the tax-exempt municipal bond market, numerous published articles also address the need for and structure of credit enhancement of those bonds. A closely related topic is also addressed: the assignation of a published credit rating from a Nationally Recognized Statistical Rating Organization ("NRSRO" or, colloquially, rating agencies) to credit enhancers. Existing literature, such as Quigley and Rubinfeld (1991),and Kotecha (2002) focus on the traditional sources of credit enhancement to asset-backed securities and municipal bonds, which include bond insurance from so-called mono-line private insurance companies and letters of credit from banks.

Martell and Kravchuk (2010), update this discussion in light of the global financial crisis ignited by the collapse of the mortgage-backed securities (MBS) market in 2008. They explain that municipal borrowers faced strain from an unexpected source: the credit downgrades of the enhancers of their municipal debt, especially where these enhancers provided liquidity on variable-rate bonds. Martell and Kravchuk attempt to analyze empirical data to assess the impact of a credit enhancer's creditworthiness on the marketability, and therefore pricing, of the underlying variable-rate bond. While these findings will primarily interest issuers of municipal bonds in an era where most bond insurers are now defunct, the effects on the municipal bond market as a whole will undoubtedly spill over to affect that small portion of bonds which finance real estate. In fact, a narrowed market for

bond credit enhancement may provide the opportunity for new providers to meet the demand for credit enhancement, at least in the context of bonds financing real estate development as proposed herein.

Koppenhaver (1987) examines the motivations behind a commercial bank's provision of a letter of credit serving as credit enhancement of a number of publicly-traded debt structures, including municipal bonds. He concludes that, at least at the time of the article, banks are incentivized by the regulatory environment to engage in credit enhancement as an off-balance sheet structure. While published in the late-1980's, Koppenhaver's conclusion at the time is less appropriate today for commercial banks, since risk-based capital rules have raised the cost to banks of off-balance sheet obligations, and may be more appropriate for less-tightly regulated institutional investors such as pension funds. In fact, the ability for well-capitalized non-bank providers of credit enhancement to compete effectively against banks, due to a current lack of capital reserve requirements, is one of the prime underpinnings of the structure proposed in this paper.

Several published papers also address a heretofore indispensable component of credit enhancement: a credit rating. Cantor and Packer (1994) provide background on the development of the credit rating agencies from their beginnings in the mid-19th century up through the late-20th century. While the formulas which the agencies use to assign a particular rating is closely-held by each agency, Cantor and Packer point out that agencies apply both qualitative and quantitative assessments of creditworthiness, suggesting the assignation of a rating is as much art as science and may even vary between agencies for the same rated entity. Cantor and Packer attempt to match historical credit ratings with default histories in order to quantify the risk of default associated with a particular rating, and possibly even to validate, on average, the prescience of rating agencies. Interestingly, the article also makes two other seemingly unrelated, but prophetic, observations: (i) questioning the adequacy

of rating agency oversight by the government; and (ii) the highly-rated nature of MBS issues which were just beginning to come on the scene in the mid-1990's. The authors had no way of knowing that these two issues would become closely related and seen as a primary cause of the 2008 financial crisis.

Young (1996) comes the closest to fully describing the structure proposed by this paper: credit enhancement by public pension funds. However, Young's analysis concentrates on the factors involved in achieving a rating from a rating agency rather than how it could be applied as a form of institutional real estate investment. Briefly mentioning credit enhancement programs by a small number of public pension funds, notably CalSTRS and the Tennessee Consolidated Retirement System, Young's paper implies that such enhancement is provided in support of bonds financing typical state-sponsored projects such as infrastructure and schools. While Young discusses the nascent formation of a few credit enhancement programs, an important precedent, he does not address the application of the technique as a form of real estate investment.

Writing in the midst of the financial crisis, Bolton, Freixas and Shapiro (2008) detail the problems inherent in the credit rating agency industry which contributed to MBS market turmoil at the time. They posit, among other things, that achieving a given agency rating is essentially a "game" which can be manipulated through competition within the ratings industry, payment of fees, and flaws in the agencies' own ratings methodologies. If accurate, their assessment is damning, and calls into question the assignment of a credit rating as a standardized method for broadly communicating the creditworthiness of a particular instrument or entity. The authors conclude by briefly recommending potential solutions, in the form of certain regulations, to the problems they have identified. While the machinations of the credit rating industry is far beyond the scope or reach of potential providers of credit enhancement, changes and possible reforms within the industry are critical to the provision of

credit enhancement, so long as agencies' ratings are relied upon by the market as an indicator of credit quality.

Lastly, writing for the American Bar Association, Aicher, Cotton and Khan (2004) provide a detailed explanation of the features of the prime instruments of credit enhancement, including letters of credit, guaranties, surety bonds and insurance, but also the features of credit default swaps serving as credit enhancement. The authors' discussion primarily focuses on the legal aspects of each of these credit enhancements; and they conclude that they are not created equal, with differences sufficient enough to suggest that various forms of enhancement are not as assured as they may seem to the beneficiary. Substantial legal roadblocks may be thrown up by an enhancer under various enhancement structures casting doubt on the beneficiary's ability to collect on such enhancement. The authors point out that among the credit enhancement techniques discussed, letters of credit appear to offer the most certainty of fulfillment from a legal standpoint, since the legal arguments against honoring the obligation are virtually nil. While this legalistic discussion applies to various forms of credit enhancement, wherever they are applied, the authors' conclusion is relevant to this paper as it examines the application of forms of credit enhancement supporting real estate tax-exempt bonds.

While no existing literature examines the specific structure proposed in this paper, various writings have reviewed in detail the various components, including: the continuing evolution of tax-exempt municipal bond market, municipal bonds as a technique to finance real estate, the application of credit enhancement to bond financing, and tools of credit enhancement including credit ratings and various enhancement structures. Drawing together the various observations made in the existing literature informs the proposed structure outlined herein.

Chapter 1: The Growth of Bond-Financed Real Estate

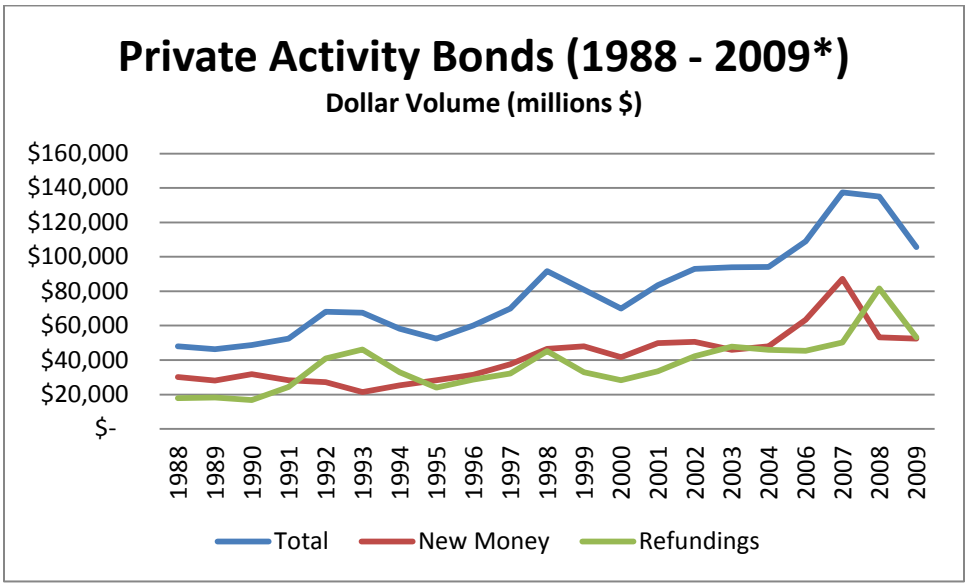
This paper proposes institutional real estate investors as credit enhancers of bond-financed real estate development projects as an alternative method by which those investors can invest in real estate. Because credit enhancement is a component of an overall bond structure, it is imperative for the credit enhancer to have a thorough understanding of both the evolution of bond-financed real estate as well as structural elements of the bonds themselves. The opportunity for institutional real estate investors to provide credit enhancement exists only if bond financing continues to be an attractive method to finance real estate development projects.

Publicly-issued or privately-placed bond financing, as an alternative to conventional bank-originated construction loans used to capitalized real estate development projects, can be structured in a myriad of different ways. Frequently, these bonds are a subset of the large, municipal bond market known as Private Activity Bonds (PABs). PABs, like other bonds issued by municipalities, are usually tax-exempt, meaning bondholders are exempt from paying federal and, in some cases, state income taxes on the bond interest payments they receive. Unlike other forms of revenue bonds or general obligation bonds issued at the municipal level, PABs are not obligations of the issuing municipality but are supported by the real estate collateral and external sources, such as credit enhancement, rather than by tax or other revenue sources. Because of their tax-exempt status, the issuing municipality or governmental authority is only able to issue a limited number of tax-exempt bonds based on per capita, annual limits by state established by the U.S. Federal Government. The tax-exempt nature of PABs means that their use amounts to a government subsidy, in the form of lower-cost financing, in support of projects which the government deems of economic and/or social value. PABs have traditionally been used to finance large projects which are generally beyond the sole capacity of the private sector to develop. Examples include airports, sea ports, revenue-generating transportation

infrastructure such as toll roads and bridges, and more recently (and not without controversy) professional sports venues. The use of government-subsidized financing for private purposes attracts a fair degree of scrutiny, which may impact its availability in the future, as has been discussed in existing literature. In fact, in 2008 after several years of record-high PABs issuances, Congress ordered an examination of the use of tax-exempt PABs to finance certain properties including hotels and golf courses (G.A.O. 2008). The opportunity for an institution to credit enhance PABs financing certain property types in certain locations will continue to depend on the Federal Government's allowance of those bonds to be tax-exempt. The evolution of the PAB market as well as new innovations, such as newly-created Build America Bonds (BABs), will impact participants in the PAB market, including credit enhancers, over time.

Growth in the PAB market has ebbed and flowed with the overall economy, but has grown substantially over the past 20 years. In 2009, approximately $106 billion in PABs were issued, approximately half of which were new money issues while the remaining half refunded existing PAB issues (IRS, Statistics of Income Division, 2011). PABs amount to roughly one-quarter of the $407 billion of total municipal bonds issued in 2009, and less than half of the $252 billion of municipal revenue bonds issued that year (SIFMA, 2012). While the $52 billion of new PABs issued in 2009 is 74% greater than the $30 billion of new PABs in 1988, it is substantially less than $63 billion and $87 billion of new PABs issued during the economic boom of 2006 and 2007, respectively. Figure 2.1 illustrates the growth of the PAB market over the past 20 years, including segmentation between new money issues and refundings (i.e., existing bonds which are replaced with new issues).

Figure 2.1



* Data from 2005 not available.
Source: IRS, Statistics of Income Division

Though the data is somewhat opaque, it appears only a tiny fraction of overall PAB market is used to finance conventional real estate development projects. Quantifying or identifying the exact purpose of PABs is difficult based on how the data is categorized. A review of 2009 municipal bond data from the IRS shows more than $3.8 billion of PABs were issued for qualified residential rental properties (IRS, SOI, 2011).[1] PABs financing other types of real estate are undoubtedly subsumed within other categories. Though the amount of PABs applied to real estate is small relative to overall PAB issues, it still represents billions of dollars annually as a source for qualified real estate projects.

This paper focuses primarily on PABs which finance the development of so-called conventional income-producing property types, such as multi-family rental apartments, office buildings, retail

[1] PABs are only generally categorized by purpose by the IRS, with some categories, such as New York Liberty Zone bonds, included in other categories so as to avoid disclosure of information about specific bonds. While it is not possible to directly quantify the amount of PABs used to finance conventional real estate property types, it is clear from the data that non-real estate uses account for the vast majority of PAB issuance, including hospitals, airports, public utilities, port facilities and other uses clearly not related to commercial real estate.

centers, and possibly more specialized income-producing properties such as hotels and senior housing. Institutional investors have a long history of making debt and equity investments in these types of properties. Numerous newspaper and real estate industry publications have documented the use of PABs to finance conventional property types. Therefore, credit enhancement of bonds financing these familiar property types requires no great leap on the part of institutional investors other than familiarization with the intricacies of the bond and credit enhancement structure itself. This is especially true for institutional investors who commonly provide construction loans. In many ways, the provision of credit enhancement is merely one level removed from that of direct construction lender, though the risk analysis, underwriting and servicing are nearly identical.

A significant segment of the PAB market has been allocated to the construction of multi-family rental housing developments because the availability of affordable housing has been a social goal of government. The multi-family housing segment of the PAB market has been the most consistently applicable to private commercial real estate developers and investors. In return for receiving low-cost construction and/or permanent financing, developers and investors must set-aside a certain percentage of their rental units, usually 20%, to tenants whose income is some fraction below the Area Median Income. The number of affordable units, the maximum income limitation and the calculation of below-market rents can vary depending on the characteristics of the project such as location, or the government requirements at that time. Despite these requirements, multi-family PABs, colloquially known as “80/20 bonds,” remain an attractive source of financing to developers of and investors in multi-family rental housing projects due to their relatively low cost of capital and other terms such as long-term maturities which can boost their leveraged investment yields while reducing interest rate and refinancing risk.

Several more recent types of PABs indicate that the Federal Government is likely to continue to use tax-exempt, low-cost financing as a tool to achieve their priorities. Two PAB programs, in particular, illustrate the government's use of PABs to spur re-development in geographic regions impacted by disasters. The first of these programs, known as Liberty Bonds, were implemented through legislation passed by the U.S. Congress in the wake of the 9/11 terrorist attacks in New York City. Intended as a tool to facilitate the re-development of lower Manhattan, Liberty Bonds were used by private developers to construct all manner of projects, including office buildings, rental apartment towers and hotels. Examples of projects which utilized Liberty Bonds to capitalize their development include: the Freedom Tower and other buildings at the former World Trade Center site; New York by Gehry, a 900-unit luxury rental apartment tower; the W Hotel Downtown and others (Phillips, 2010; *Real Estate Weekly*, 2007). In one case, government social priorities led to the application of PABs in areas with limited food-oriented retail, so-called "food deserts," which could make such bonds available for the development of retail properties (Dutton, 2009). It appears PABs will continue as method for financing real estate development for the foreseeable future and, consequently, the opportunity to provide credit enhancement to those structures will also continue.

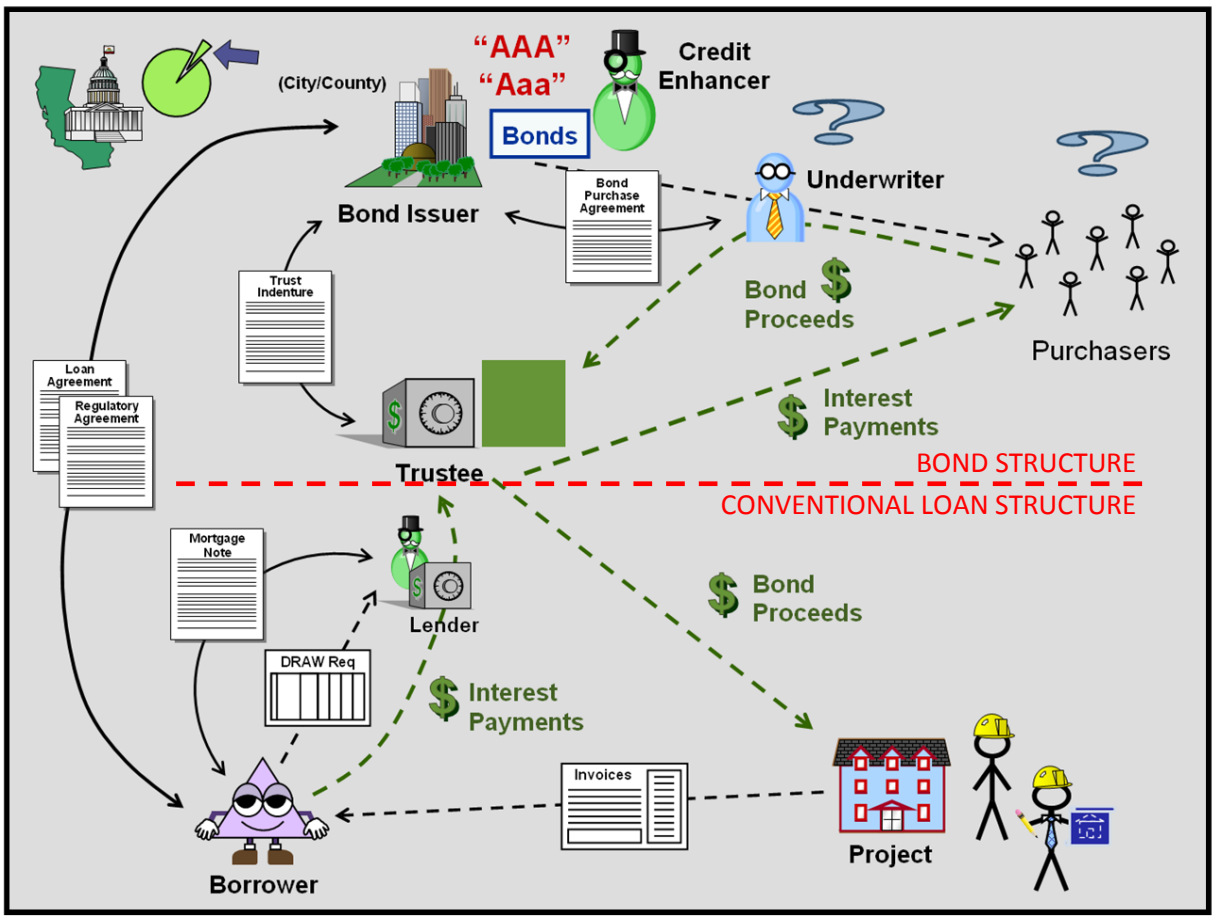
Chapter 2: Bond Structures and the Role of the Credit Enhancer

The bond structures used to finance real estate development are as unique as the underlying properties themselves. While it is not the aim of this paper to discuss in detail the myriad structures which bond financing may take, it is critical for a participant in the structure, such as a credit enhancer, to clearly understand how a particular transaction is structured. This is especially true when multiple financing techniques[2] may be applied to a single project, greatly increasing the structure's complexity and potential risk.

The basic role of credit enhancement in the overall bond structure is to provide credit support to enhance the marketability of the bond instrument. Such credit support is necessary in the case of revenue bonds since the bonds are not obligations of the municipal issuer. Credit enhancement is especially necessary in the case of PABs financing real estate since there is little to no collateral value (other than the cash proceeds of the bond sale itself) prior to the construction of the intended project and the generation of rental revenue. Bond-holders' are intolerant of the risks associated with construction and project lease-up and the resulting potential for loss of principal value. While the enhancement is outstanding and in the event that a payment or other default occurs under the terms of the bond documents, the responsibility lies with the credit enhancer to guarantee the value of the bonds. The credit enhancer, along with other parties in the bond structure, including the bond trustee, the issuer, the servicer and the underwriter all work together to assure that bond proceeds are applied to the intended project, while the bond holders receive interest payments and, ultimately, repayment of their principal. Figure 2.2 illustrates common bond transaction participants, their relationships and some of the legal agreements governing those relationships.

[2] Examples include: taxable "tails" (i.e., a second tranche of subordinate, taxable bonds); Low Income Housing Tax Credits, Historic Tax Credits, etc.

Figure 2.2 – Common Participants of Tax-Exempt Bond Transactions



The above chart is excerpted from handout material from Novogradac & Company LLP's *LIHTC 101: The Basics* workshop. The chart is reprinted with permission Novogradac & Company LLP.

The critical point to be made regarding Figure 2.2 from a credit enhancer's perspective is that it features many of the same elements as a conventional real estate loan. A dotted ret line (author's edit) demarcates structural elements which relate to the bond transaction versus those that are commonly found in a conventional debt financing. In fact, bond financing structures often require the services of an experienced real estate lender for the purpose of servicing the loan on behalf of the bond trustee, who in turn, represents the bond holders. The servicer uses most, if not all, of the same procedures to fund loan draws and process interest payments as in a conventional loan. This is an important similarity for any institutional investor looking to play the role of credit enhancer. Many

institutional investors commonly make direct real estate loans and will be familiar with the processes involved in servicing such investments. More importantly, these experienced institutional investors will already be familiar with underwriting loans financing real estate developments. All of the pertinent underwriting factors which apply to conventional construction loans will also apply to projects financed with bonds (e.g., leverage level, projected debt service coverage, construction risks, property market risk, interest rate risk, sponsor quality, takeout risk, etc.).

An institutional investor's experience with direct real estate lending will also be critical in a default situation where the bond structure is collapsed and the credit enhancement is called upon to repay the value of the bonds. In the situation where the credit enhancement is drawn, a Reimbursement Agreement defines the method by which the enhancer is repaid (SIFMA, 2012). Unless the borrower provides some external guaranty to the credit enhancer, it is likely that the credit enhancer will foreclose on its security interest in the underlying real estate, which was established at the outset of the transaction and was a collateral inducement to providing the enhancement in the first place.[3] Once the credit enhancement is called and the bond structure is collapsed, the remaining structure will resemble nearly any other defaulted construction loan. Any of a host of factors which causes a default under the bonds will ultimately be left to the credit enhancer to remedy. Examples include some type of construction-related default or defect, or a borrower or guarantor covenant violation. The enhancer will likely need to pursue insurance, surety bonds, legal action or other protections in order to protect the collateral position it inherited. Whatever the cause, a default which collapses the bond financing compounds the collateral impairment of the default itself since it is likely that the project relied upon the relatively low-cost bond financing to achieve financial feasibility. Without the

[3] It is conceivable a sufficiently credit-worthy borrower could solely provide a guaranty or other source of collateral other than the project financed by the bonds. However, it is more probable that the credit enhancer will rely on both a collateral interest in the real property and a borrower and/or affiliate guaranty. The credit enhancer's collateral will depend on its underwriting of the transaction and the type and amount of security it is able to negotiate with the borrower.

bond financing in place, it is probably that the project may be over-leveraged. These are key risks, which though they may have been encountered before by an enhancer experienced direct real estate lending, may be more severe in the case of a bond-financed project.

The type and terms of credit enhancement required as part of the structure depends upon the specific terms of the underlying bond issue. Some important questions regarding bond structure which will affect the need for credit enhancement include: What is the term of the bonds? Will the bonds be callable? Will the bonds have a rate conversion feature? Will the bonds have a fixed or floating interest rate? Call provisions and rate conversion options will impact the term of the related credit enhancement and the risk the enhancer faces of having its enhancement replaced or released outright.

Real estate projects are commonly financed during their construction and lease-up periods by floating- rate construction loans. In the bond market, floating interest rates are essentially achieved by periodically re-selling the bonds in the market at then-prevailing market interest rates, thereby effectively re-setting the interest rate on a regular, usually weekly, basis. These bonds are known as variable rate demand obligations (VRDOs). Because they are re-marketed on a weekly basis there is a risk that the bonds may not be re-sold. Aside from a fee charged by a remarketing agent, who is responsible for re-selling the bonds, a form of credit enhancement known as liquidity enhancement is required and the provider also charges a fee. The liquidity enhancer assures that if VRDOs cannot be re-marketed and thus the current holder repaid, then the enhancement is called upon for repayment. Though on a normal basis this remarketing risk in the VRDO market is negligible, the failure of the Auction Rate Securities (ARS) market in 2008 demonstrates that unforeseen market conditions can catastrophically impact market mechanisms. In that case, the market for ARS, un-enhanced short-term debt obligations which were re-marketed on a regular basis via a Dutch auction process, crumbled when the financial 2008 crisis caused severe interest rate fluctuations and withdrawal from

the market of several key trading firms. Because liquidity enhancement of VRDOs relates more toward underwriting credit market risks rather than the longer-term credit of the underlying real estate project, liquidity enhancement does not seem to be an appropriate structure for an institutional real estate investor providing credit enhancement. Still, liquidity enhancement will be required for real estate projects financed by VRDOs and the cost of such enhancement should be factored into the so-called rate stack.

A key requirement of any credit enhancer is also illustrated in Figure 2.2: the credit rating. The enhancer must maintain a credit rating issued by at least one Nationally Recognized Statistical Rating Organization (NRSRO) such as Moody's Investor Service, Standard & Poor's, or Fitch Ratings. Unlike a rating for either a General Obligation or other revenue bond, where either the issuer's rating is applied to the bonds, or the bonds are rated on their own merit, PABs financing real estate carry the rating assigned by the NRSRO to the credit enhancer. PABs may carry both a long-term rating and a short-term liquidity rating if they are re-marketed on a regular basis in order to achieve a floating rate. Theoretically, the project sponsor could attempt to finance the project with un-rated bonds, which would rely solely upon the value of underlying real estate collateral. A un-rated real estate bond is impractical, however, since the bond underwriter would almost certainly be unwilling to take the risk of selling bonds to investors who have no knowledge or tolerance of the risks associated with real estate development. A discussion of the requirement for a credit enhancer to obtain and maintain a credit rating is discussed in Chapter 4 below.

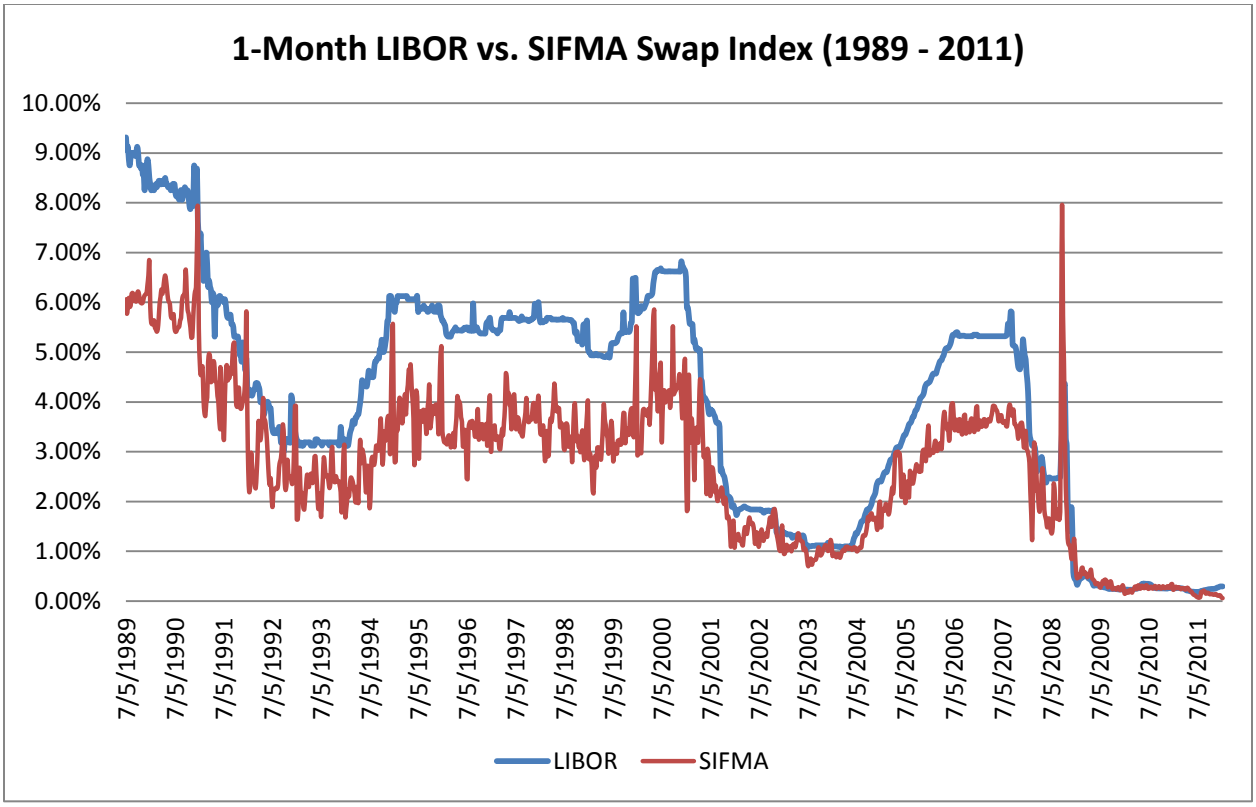
Chapter 3: The Market for Credit Enhancement

Historically, the provision of credit enhancement was limited to commercial banks, mono-line insurance companies and some government agencies or government-sponsored enterprises. Each of these enhancers served their own market niche, with real estate-related PABs generally enhanced by commercial banks. Commercial banks, which commonly have direct real estate construction lending programs of their own, are well-suited to underwrite credit enhancement of bonds financing real estate development. GSEs, including both Fannie Mae and Freddie Mac, also have experience with financing real estate projects, but generally do not take construction/development risk and their enhancement programs are primarily aimed at bonds financing completed multi-family residential properties. Recent dislocations of these credit enhancers from the market, to one degree or another, may have created an opportunity for new entrants to the market, including institutional real estate investors. The 2008 financial crisis caused the withdrawal from the credit enhancement market by most mono-line bond insurers such as AMBAC and MBIA, due to their broad exposure to all manner of toxic debt facilities. Though bond insurers were participants in the broader municipal bond market, they did not actively compete in the market for PABs financing real estate projects. Instead, commercial banks are the prime providers of credit enhancement for real estate financed by PABs. Yet, most banks were also impacted by the financial crisis, to the point where they required government bail-out assistance, their credit ratings were downgraded, and they were reluctant to extend credit, including the provision of credit enhancement facilities such as letters of credit. Assuming demand remains for credit enhancement to support real estate bonds, and the traditional suppliers of such credit enhancement remain on the sideline, the supply/demand imbalance should present an opportunity for those entities willing and able to supply the required enhancement.

The fundamental ability for a credit enhancer to charge for its contingent commitment of capital is tied, in large measure, to the difference in the cost of conventional financing versus tax-exempt bond financing. If the cost of credit enhancement is so large that it causes tax-exempt bond financing to be more expensive than conventional financing, then there is no advantage to the bond structure. Conversely, if there is a large cost advantage between conventional and bond financing and the credit enhancer does not charge enough for its enhancement, it may not be compensated adequately for the amount of risk it is assuming. The credit enhancer must walk a fine line and should price its commitment appropriately so that it is property compensated without diminishing the financial viability of the project itself. In this way, various providers of enhancement will compete against each other, as would be expected.

In order to compare the difference between conventional and tax-exempt bond rates, the graph in Figure 3.1 shows the delta between 1-month LIBOR, the most common conventional floating rate index for commercial real estate loans, and the SIFMA Swap Index from July 1989 through early January 2012. For most of that period, the SIFMA rate, while exhibiting greater volatility, was consistently lower than the 1-Month LIBOR rate. This volatility could be explained by the mismatch in terms between the weekly SIFMA rate and the monthly LIBOR rate. This term mismatch could also explain some portion of the spread between the two indices, though it would require near constant and extremely steep yield curve conditions to cause any significant spread between a weekly and monthly rate. However, the more likely explanation for the vast majority of the spread between LIBOR and SIFMA rests with the difference between a taxable and a tax-exempt interest rate.

Figure 3.1



The table in Figure 3.2 summarizes a statistical analysis of the LIBOR and SIFMA rate history over the period presented in the graph (FHLB of Des Moines, SIFMA). The "delta" column in Figure 3.2 represents the difference between LIBOR and SIFMA on any given date, with similar statistical analysis applied to this difference. This analysis suggests several conclusions. First, and perhaps most unsurprisingly, LIBOR and SIFMA are highly correlated since both are market-based rates and are positioned on the short-term end of the yield curve. Second, SIFMA rates are significantly more volatile than LIBOR as exhibited by a greater standard

Figure 3.2
Statistical Comparison of 1-Month LIBOR and SIFMA Swap Index
(July 1989 – January 2012)

	1-Month LIBOR	SIFMA	Delta
Minimum	0.23%	0.06%	-4.53%
Maximum	9.31%	7.96%	4.08%
Mean	3.11%	2.75%	1.24%
Standard Deviation	1.58%	2.34%	0.96%

Correlation Coefficient = 0.954

deviation.[4] Most pertinent to this discussion however is the spread between LIBOR and SIFMA which has averaged 1.24% over the period in question. Over the more than 20 years of historical data, LIBOR has exceeded SIFMA by as much as 4.08%. In periods of extreme market turmoil, such as September 2008 during the height of the recent financial crisis, SIFMA actually exceeded LIBOR by as much as 4.53%. Presumably, this rare occurrence was due to market uncertainty of the credit of municipal and the wider government debt markets. While very rare, the volatility of the SIFMA index relative to LIBOR rates should be considered when underwriting a tax-exempt bond issue.

Conventional floating rate construction debt is commonly priced off the LIBOR index plus a credit spread paid. VRDOs are priced based on the weekly SIFMA Swap Index plus certain additional costs which are collectively known as the "rate stack." Fees included in the rate stack are negotiated up-front and are charged by the various parties who play a role in the floating the bond issue including the underwriter, the bond trustee, the lender who services the bonds and processes payments and loan draws, the agent who re-markets the bonds on a weekly basis, and the providers of liquidity and credit enhancement. Mutli-family housing bonds are often enhanced on a long-term basis by one of the government-sponsored mortgage entities, Fannie Mae or Freddie Mac. While these GSEs are unwilling to assume construction risk, they will commit to relive the construction period credit enhancer's obligation once the property has met certain performance hurdles. The GSEs do this in exchange for an additional fee which is also built into the rate stack. These fees are charged

Figure 3.3
Tax-Exempt Bond Sample Annual Bond Cost

SIFMA Index (1/11/12)	0.06%
Credit Spread	1.50
Trustee Fee	0.05
Servicer Fee	0.10
Re-marketing Fee	0.10
Liquidity Enhancement Fee	0.25
Credit Enhancement Fee	1.75
Total	3.81%

[4] Because LIBOR is reported on a daily basis, while SIFMA is reported weekly, only LIBOR and SIFMA rates on the same reporting date were included in the analysis. LIBOR history provided by the Federal Home Loan Bank of Des Moines is reported on a weekly basis prior to 2000. This will impact the calculation of the absolute volatility of LIBOR (i.e., standard deviation), but should otherwise allow date specific comparison of the two indices over an extended period of time, such as the 20-year analysis period.

on a per annum basis and are paid on a periodic, usually monthly, basis and are therefore commonly viewed by the borrower as part of an "all-in" interest rate, even though a substantial amount of the annual cost is paid to parties other than the bondholders themselves. In addition to fees paid as part of the rate stack, one-time, up-front fees and expenses are also charged by various parties involved in arranging the bond transaction. A sample tax-exempt bond annual bond cost, including components of the rate stack is detailed in figure 3.3.

It should be noted that the sample bond cost calculated in Figure 3.3 is abnormally low relative to historical averages. The SIFMA index on which the total bond cost is based has consistently been at 1.0% or lower since the beginning of 2009. As indicated in Figure 3.3, as of the beginning of 2011, the SIFMA rate was hovering near zero at only 0.06%. This contrasts sharply with the BMA Index (predecessor to the SIFMA index) of greater than 6% during the late 1980's and early 1990's as can be seen in Figure 3.1. More recent rate history, which has occurred during a period of very low rates, has seen the spread between SIFMA and LIBOR narrow substantially. As of January 11, 2012, this spread was only 0.24%. While a narrow spread between the two indices would seem to indicate that tax-exempt bond financing would offer little or no pricing advantage relative to conventional financing, this may not be the case if conventional lenders institute rate floors which artificially increases the cost of financing. As discussed earlier in this paper, Olson (2010) makes this key point in his writing on the subject. Olson also discussed a pricing advantage in the rate stack of between 50 and 250 basis points between tax-exempt bonds and conventional financing. The all-in cost of both tax-exempt bond financing or conventional financing are dependent upon (i) their base index, and (ii) additional fees and costs imposed above the index rate. Since amounts above an index rate are heavily negotiated in either a tax-exempt bond issue (i.e., components of the rate stack with the underwriter) or a conventional loan (i.e., the credit spread with a bank), it is impossible to generalize as to the exact pricing advantage which can be achieved between the two forms of financing.

However, one would expect that the advantage would be at least as big as (i) the differential between the tax-exempt and taxable nature of the rates; and (ii) the amount needed for the project in question to achieve financial viability. Afterall, the purpose, in most cases, of applying tax-exempt financing to a project is to achieve financial viability which would not otherwise be possible with conventional financing at market rates. It is this last point which will ultimately be of primary concern to a potential credit enhancer, since much of the negotiation regarding structure of the tax-exempt bond issue will be negotiated before a prospective enhancer evaluates a project. In the end, the enhancer must decide are part of its underwriting whether or not the project in question is sufficiently viable, in financial and other terms, such that the risk of a bond default and call on the enhancement is low. Additionally, the enhancer must determine whether it is able to charge a sufficient credit enhancement fee relative to the amount of risk it will undertake in its investment. Depending interest rate market conditions, the spread between tax-exempt and taxable rates and other supply and demand factors (e.g., such as the number of active credit enhancers), enhancers may enter the credit enhancement market if they can achieve an acceptable enhancement fee or may exit the market if fees fall too low.

An additional factor which will impact the all-in cost of the bond financing, and the fee which can be charged by the enhancer, is the quality of the credit enhancement itself. First, it is assumed that the form of credit enhancement to be employed in a publicly-offered, tax-exempt bond structure is a letter of credit. As Aicher, Cotton and Khan (2004) have written and as was discussed earlier in this paper, a letter of credit is the most secure form of enhancement available from the bond holders' perspective. Aside from the fact that letters of credit have been in use for centuries and are widely-accepted as forms of enhancement in many areas of commerce (e.g., trade payables, import/export, etc.), they are also irrevocable and present the highest likelihood of monetization if they are called. But how creditworthy is the issuer of the letter of credit? This is the question that the application of a credit rating seeks to answer. Unlike traditional municipal or corporate bond issuances, credit enhanced

bonds automatically assume the rating of their enhancer. As with all bonds, the higher the credit rating, the lower the risk perceived by the bondholders and therefore the lower the interest rate charged on the bonds. Credit enhancers can take advantage of the pricing differential between higher and lower rated bonds by charging more for their credit enhancement. However, if the enhancer's rating declines for whatever reason, their ability to charge higher levels of enhancement fees also declines. This was the case for CalPERS and CalSTRS, two California public pension funds who provide credit enhancement and whose programs are discussed in detail later in this chapter. In 2009, in the wake of the financial crisis, both funds experienced ratings downgrades from their top-notch AAA level, which fueled public speculation about the amount of revenue which could be generated by their credit enhancement programs (Karmin, 2009).

An institutional investor must consider what level of credit rating they would qualify for as a key determining factor in their ability to provide enhancement at all. Those entities seeking a credit rating must also endure the scrutiny of one or more rating agencies, the generalized and opaque rating process, the public dissemination of the rating determination and the fees paid to the rating agencies. Though CalPERS and CalSTRS currently carry the highest "AAA" rating (or equivalent) these ratings are rare. How low, then, can a credit enhancer's rating be? (A table comparing the credit ratings of the three major NRSROs, Moody's, S&P and Fitch, is located in Appendix A.) Lower rated enhancements will limit the amount of bond investors who are willing or able to buy bonds of lesser quality. Ratings below the "AA" level, while still considered "investment grade," may preclude many bond investors who seek to hold only the highest quality, lowest risk investments. Reduced bond investor demand will contribute to a higher interest rate required to sell the bonds. This, in turn, will limit the enhancer's ability to charge for its letter of credit, which is literally worth less. Certainly an enhancer should expect to achieve an "investment grade" rating, that is BBB+ or better, at a minimum. However, practically speaking, ratings in the "A" to "AA" range will be much

more marketable. The credit enhancer also has the option to contract with a more highly-rated entity, such as a bank, to "wrap" its letter of credit or provide a fronting letter of credit, in order to upgrade to the higher rating. The credit enhancer will be required to pay a fee to the more-highly rated bank which represents the value of the higher rating. For example, an "A+" rated institutional investor may need to pay a "AA" rated bank 25 basis points per annum representing the two-step upgrade from "A+" rated credit to "AA" rated credit. In effect, the higher rated bank is being compensated for the credit risk between an "A+" rating and an "AA" rating, while the primary enhancer is assuming the rest of the risk in the enhancement transaction. The "A+" rated enhancer may be able to charge an enhancement fee commensurate with an "AA" rating, but must pay some of its fee to the "AA" rated entity. An institutional investor looking to upgrade its rating for credit enhancement purposes with a wrap or fronting letter of credit structure is likely to look to its own banking relationships to effectuate the structure. These banks will already be intimately familiar with the institutional investor's financial capacity and may even manage or maintain collateral positions on the investor's assets.

A wrap or fronting letter of credit structure may also solve a potential challenge to an institutional investor's provision of credit enhancement. While, theoretically, letters of credit may be written by virtually any type of creditworthy entity, bond underwriters and ultimately bond holders may not be comfortable, at least initially, accepting a letter of credit from a non-bank provider. This may be true even when the institutional investor and a bank have equivalent credit ratings. Large banks with good credit ratings are well known in the market and would suffer reputational, along with obvious financial, legal, regulatory and other repercussions, if they did not honor a duly presented letter of credit for payment. Because an institutional investor, such as a pension fund, endowment or other well-capitalized investment entity, might be unknown to underwriters and prospective bond investors, they may have less faith that a letter of credit would be honored. Banks offer the opportunity for

multiple locations, including bank branches and commercial offices, where a letter of credit could theoretically (though not practically) be presented for payment. An institutional investor likely has no more than a handful of private offices which are, for the most part, unseen by the public. Though there appears to be no legal difference between a letter of credit issued by a bank and one issued by a non-bank entity, the market may perceive a difference anyway and act accordingly by either not accepting a non-bank issued letter of credit or pricing bonds backed by a non-bank letter of credit so high as to diminish or negate entirely the value of the enhancement. Confronted with this issue, institutional investors may need to utilize a wrap or fronting letter of credit mechanism unless and until the market accepts credit enhancement from non-bank entities.

While challenges may exist for institutional investors to break into the bank-dominated credit enhancement market, these investors maintain at least one significant competitive advantage. Unlike commercial banks, institutional investors are well-suited to assume the risk of default in a credit enhancement structure. In a default scenario where the enhancement is called and title to the collateral property passes to the enhancer, an institutional investor has the option to retain ownership in the real estate. This applies, of course, not just in the case of credit enhancement, but where non-bank entities make direct real estate loans as well. Banks, on the other hand, will classify foreclosed properties as impaired assets, or Real Estate Owned (REO), and will attempt to dispose of them at the earliest opportunity. Often, they will do so at a depressed sales price which further impairs their ability to recover the principal amount of their loan. This contrasts with an experienced institutional real estate investor which may hold the property and take advantage of the lower basis at which it acquired it, not only to recover its principal investment, but also potentially to generate a positive investment return. For all the reasons that real estate has emerged as an asset class well-suited to institutional investors, including as a portfolio hedge, asset/liability term matching, and others,

institutional investors maintain a competitive advantage over commercial banks if they are required to pursue default remedies and take title to the underlying real estate asset.

Market Precedents: CalPERS, CalSTRS and NEBF

A small number of credit enhancement programs have been enacted by institutional investors which serve as important precedents for the viability of such an investment structure. The three most prominent are those programs run by two public pension funds in California, CalPERS and CalSTRS, and a multi-employer Taft-Hartley pension fund, NEBF.

The California Public Employees' Retirement System, or CalPERS, is the largest pension fund in the U.S., with over $228 billion in investment portfolio value as of October 2011. CalPERS investment program is diversified and sophisticated, with investments across all major asset classes including real estate, which represents approximately 9% of the overall fund value. CalPERS established a credit enhancement program in 2003 which is separate and distinct from its real estate investment policy. The fund's Statement of Investment Policy for the enhancement program, which was most recently updated in August 2010, lays out the program's goals as well as specific parameters for its implementation. The Policy states the program's strategic objective is "earning fee income through a zero loss-underwriting standard," and goes on to state that "strict conformity" with the Policy should achieve this goal, but with market factors determining pricing for providing such enhancement (CalPERS, 2010). The Policy defines underwriting responsibilities and guidelines, and allows for the provision of both letters of credit for credit guarantees as well as lines of credit to provide liquidity enhancement. The program's parameters are very broad and are intended to apply to the municipal bond market in general. In fact, based on the Sector Limits established in the policy, it is clear that bond-financed real estate projects likely play a small, possibly negligible, role in the credit

enhancement program. CalPERS has increased its credit enhancement program limit since inception, which now stands at a maximum of $10 billion. The fund's 2011 Annual Financial Report states that only $1.5 billion in credit enhancement-related contingent liabilities were outstanding as of year-end, though the program generated $9.5 million in fee income for the year (CalPERS, 2011). Though CalPERS current maintains the highest possible credit ratings, AAA (or equivalent), its ratings came under pressure as a result of the 2008 financial crisis amid concerns over its ability to meet pension obligations. News reports at the time speculated on the effect of the rating downgrade on CalPERS' credit enhancement program and the amount of fee revenue it would be able to collect.

The California State Teachers' Retirement System, or CalSTRS, is another large, public pension fund with an established credit enhancement program. CalSTRS' policies regarding its enhancement program are, unsurprisingly, similar to CalPERS, with a primary objective of fee generation through enhancement of low-risk municipal securities. CalSTRS enhancement program, which was adopted as early as 1994, is limited to 3% of the market value of the fund's overall investment portfolio, valued at approximately $155 billion as of its most fiscal year end June 2011. In its 2011 Comprehensive Annual Financial Report, CalSTRS discloses $2 billion of contingent liabilities from its credit enhancement program which expire through December 2014, or roughly 42 months from the date of the report. CalSTRS reported that its enhancement program generated $13.3 million in fee income during fiscal year 2011. Like the CalPERS program, CalSTRS credit enhancement program parameters suggest involvement in the broader municipal debt market, with likely only a small focus on real estate financed by PABs. CalSTRS provides both liquidity enhancement and credit guaranties by issuing either a line of credit or various types of letters of credit, respectively. CalSTRS also currently garners top credit ratings from the NRSROs, but encountered similar ratings downgrades immediately following the 2008 financial crisis.

The CalPERS and CalSTRS credit enhancement programs provide an interesting, though not wholly applicable, precedent to an enhancement program focused on PABs financing real estate. Their participation as enhancers of a broad range of municipal debt exposes their programs to credit and market risks of the municipal issuers, which are normally thought of as low-risk, but given rising local and state government deficits and ongoing fiscal crises, are increasingly exhibiting signs of distress. Also, as providers of liquidity enhancement, the CalPERS and CalSTRS programs assume the purely market-based risks inherent in bonds re-marketed on a weekly basis. While the sheer size of CalPERS' and CalSTRS' investment portfolios can allow for a significant commitment (in aggregate dollar amounts, not necessarily as a percentage of their portfolios) to credit enhancement, they have proven to not be immune from credit ratings downgrades caused by severe market downturns. Most other institutional investors' asset portfolios will be only a fraction of CalPERS' and CalSTRS' portfolios, which in turn will allow for a much smaller credit enhancement program, and one which may be solely targeted to PABs financing real estate.

One such institutional investor, the National Electrical Benefit Fund (see author's note), or NEBF, is more typical of the type of institutional investor which may consider providing real estate-related credit enhancement. NEBF received a long-term issuer rating of A3 from Moody's in 2008 in connection with its nascent real estate credit enhancement program. In announcing its rating, Moody's provided details on the parameters of the NEBF enhancement program, including an aggregate limit of $500 million on assets of $11.8 billion, representing up to 4.2% of the fund's investment portfolio. In fact, Moody's noted the novelty of a pension plan providing real estate focused credit enhancement and that a "lack of historical experience," in financial, legal and regulatory terms, caused them to rate NEBF one or two levels lower than its financial condition would normally suggest (Moody's, 2008). Moody's rating of NEBF suggests that new entrants to the credit enhancement market may experience significant challenges to market, legal and regulatory

acceptance of such enhancements. Moody's rating notice of NEBF, which contains an explanation of the factors that led to its rating decision as well as a summary of key aspects of NEBF's credit enhancement program is located in Appendix B.

Chapter 4: Considerations of the Institutional Real Estate Investor

This paper cannot, and does not presume to propose, an objective methodology which can be applied to assess an institutional real estate investor's suitability to provide credit enhancement to real estate projects financed by tax-exempt bonds. Determining the prudence of providing credit enhancement as a structure for investing in real estate will be up to a particular institutional investor to determine. Numerous factors must be considered, many of which will be specific to each investor. Several factors though, are likely pre-requisites among any institutional investor seeking to provide credit enhancement. First, the institutional investor must be of sufficient size and portfolio composition to garner an adequate credit rating and provide credit support to transactions in the tens-of-millions of dollars. A net asset size of at least $1 billion in addition to a portfolio with traditional levels of diversification (i.e., majority of holdings will be stocks, bonds and cash equivalents) seems to be a reasonable minimum.

A second, related factor will be the definition of credit enhancement program parameters by the institutional investor itself. By defining the limits of its enhancement program, the investor can size its maximum exposure relative to its total asset size. For example, an investor may choose to allocate up to 5% of its net assets to its credit enhancement program. For a $1 billion investor, a resulting program would be limited to $50 million – only enough for one or, possibly, two enhancements. Obviously, a larger pension fund with several billion dollars in net assets or more, including sizeable positions in liquid assets will have significantly more capability to provide credit enhancement.

Figure 4.1 presents a list of questions which an institutional investor may wish to answer in order to fully determine whether or not it should consider, or is even eligible, to provide credit enhancement as a viable investment structure. Once an investor determines its eligibility to provide enhancement, it must undertake an evaluation of the risk-adjusted returns possible under such a structure.

Figure 4.1 – Institutional Investor's Considerations: Credit Enhancement Program

- What are the parameters of a credit enhancement program?
  - Size (% of total investment portfolio)
  - Duration (term of enhancement)
  - Form (letters of credit, guaranties, etc.)
  - Property characteristics / General project underwriting guidelines
  - Relationship to other investment allocations (i.e., part of real estate investment allocation?)
- Eligibility
  - Credit rating
    - Which rating will be achieved? Will it be sufficient?
    - Willing to undergo ratings scrutiny and public announcement of rating?
  - Legal authority to issue letters of credit and/or guaranties
  - Other regulatory issues (e.g., ERISA, SEC, PBGC, etc.)
- Financial / Accounting
  - What is an acceptable level of return / revenue generation?
  - Should amounts be reserved against expected losses?
  - What is the impact on other asset class allocations?
  - Accounting / reporting considerations (i.e., contingent liability reporting)
- Risk Assessment

Risk vs. Return

Any institutional investor considering providing credit enhancement as part of its strategy for investing in real estate must evaluate the risks of such an investment structure compared to its potential return. Where does a credit enhancement structure fall on the risk/return spectrum relative to other elements of a real estate investment allocation? The spectrum ranges from passive investments such as the purchase of common shares in a publicly-traded REIT on the low end of the risk spectrum, to equity investments in leveraged development projects with an inarguably higher degree of risk. Institutional real estate investors have demonstrated an increasing capacity to tolerate or mitigate the risk of direct, property-level investments through equity and/or debt investments in a full range of property types, classes, locations and stage of development. No matter what the structure, the balance between risk and return must be consistent with the investor's investment strategy.

Arguably, the assessment of risk of investing in a particular property at a particular point in time is as much an art as a science. Risk factors such as location, property type, asset class, market conditions, level of leasing, stage in the development cycle and a myriad other factors make the assessment of the risk of a particular property as unique as the property itself. Given the uniqueness of individual properties, comparing risk in a definitive, quantifiable way across multiple properties is even more complex. No one metric can adequately measure the relative risk of one real estate investment compared to another. However, the comparison of many obvious factors can give a general sense of the risk profile of an investment in a particular property. Development properties are riskier than existing properties. Equity investments are riskier than debt investments. Vacant properties are riskier than occupied ones, and so forth. All of these risk assessments which apply to conventional real estate investment structures also apply to a credit enhancement structure, since ultimately the performance of the underlying property will determine the security of the investment. However, in addition to property-level risks, a credit enhancer must also evaluate risks which pertain to the bond structure itself. The sheer complexity of a bond structure and the greater number of participants in the structure increases the risk over conventional financing. Market forces which affect the overall bond market, such as severe market disruptions which occurred at the height or in the aftermath of the 2008 financial crisis, may present external risks which deserve the credit enhancer's consideration. Given these facts, it appears that in general terms the risks of credit enhancing bond-financed real estate is similar to a conventional, direct real estate loan, but with added risks imposed by the particulars of the bond structure itself. In the spectrum of risk analysis, a credit enhancement structure probably falls between a debt investment and an equity investment.

While the relative risk of properties may not be adequately quantifiable, the same is not typically true of measuring investment returns. Institutional investors commonly quantify their investment returns using the Internal Rate of Return, or IRR, metric. IRR is an appropriate metric for real estate since it

measures cash investment into and return of and on that cash investment over time. By measuring IRRs over identical investment hold periods, it is possible to gauge the relative risk to return of different real estate investments. For example, a 6% IRR on a five-year debt investment financing a stabilized office property may be more attractive than an 8% IRR equity investment on that same property for the same time period. A more extreme example is the relative attractiveness of a 6% IRR on a stabilized office building relative to a 12% IRR on an office building to be developed.

Unfortunately, an IRR-based return assessment may not apply to a credit enhancement structure. As discussed previously, because the provision of credit enhancement is merely a contingent, and not an actual cash, capital investment, it results in an infinite IRR outcome. An infinite IRR is achieved when no cash investment is made and yet investment income is received. On the face of it, an infinite IRR would appear to be a good thing, and if in all cases no cash were ever invested as a result of a credit enhancement investment, it might be an adequate method for measuring return. However, a possibility does exist that a credit enhancement will be called and the enhancer is required to fund cash and seek its remedies under its contractual arrangement with the borrower. In this instance, the enhancer may find the recovery of capital less probably compared to a default on a convention loan for reasons previously discussed. In any instance where a credit enhancer is required to fund cash to meet its contingent commitment, the resulting IRR will not be infinite, and may not even be positive.

How then should a projected return be calculated so that various credit enhancement investments can be compared against their risks and against each other? A potential methodology could resemble a traditional IRR calculation, except that a probability of cash investment could be calculated to represent an expected cash investment. An example follows in Figure 4.2:

Figure 4.2 – Possible Risk-Adjusted Return Methodology

Letter of credit amount = $20,000,000
Expected probability of cash funding = 2%
Letter of credit fee = 1.25% per annum
Term of enhancement = 5 years

Credit enhancement investment cash flow:

Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr.5
$250,000	$250,000	$250,000	$250,000	-$150,000

IRR = -62.0%

There are both advantages and some fatal drawbacks to this methodology. The advantages include a quantifiable estimate of the risk of a call on the credit enhancement and the inclusion of the time value of money inherent in an IRR calculation. However, there are several severe limitations with this type of return projection. First, the negative IRR result is counter-intuitive. Even though the investment would yield net positive cash flow of $850,000, the IRR is significantly negative. Adjusting the expected probability of cash funding higher actually improves the IRR result. IRR calculations are better suited to assess negative cash investments at the beginning of an investment period followed by positive periodic cash returns. Second, the timing of the cash flows above suggests that the credit enhancement was called only at the end of its term. However, credit enhancement may be called at any point over its term and, if called, would result in the cessation of credit enhancement fee payments from that point forward. Third, and more importantly, because a credit enhancement funding is binary, that is, it either remains contingent and is never funded or is called and the entire amount is funded, there is never a scenario in a particular investment where only a small portion of the commitment is funded in cash. Therefore, this type of calculation may only be appropriate across a group or portfolio of credit enhancement investments where am expected probability of cash funding is based on historical experience. This modified IRR methodology does not adequately quantify returns for a particular credit enhancement investment.

The most simplistic return method would be to calculate the aggregate dollar amount of fees expected to be received. In the case of the example given in Figure 4.2, this would amount total fee income of $1.25 million. There are significant drawbacks to this straightforward method. It ignores pertinent factors such as the size of the enhancement, its term and the time value of money. It provides no opportunity to apply a quantitative assessment of risk by not considering the possibility nor probability that a conversion of the enhancement to a cash investment could be required. This seems to be the methodology employed by CalPERS and CalSTRS since both entities credit enhancement policies depend on market conditions to determine pricing and report only the aggregate dollar amount of credit enhancement fees received in the footnotes of their respective annual financial statements. Despite potential drawbacks, this methodology does lend itself to a simple question: “Is it worth $1.25 million to assume the risks of providing credit enhancement to this transaction?” Ultimately, it will be up to the prospective enhancer to decide.

SWOT Analysis

While no single objective method can be employed to evaluate the provision of credit enhancement, a common subjective method used to evaluate new business proposals and investment structures is a so-called SWOT (Strengths, Weaknesses, Opportunities, Threats) Analysis, which can summarize the

Figure 4.3 – SWOT Analysis

Strengths

- No cash investment; enhancement is recorded as a contingent liability
- Annual fee income received can result in infinite IRR at the investment level
- Structure and processes resemble conventional construction lending
- Ability to hold real estate in default scenario

Weaknesses

- Bond structure is more complex than conventional construction loan
- In default scenario, project's financial viability may be jeopardized by loss of advantageous bond financing
- Minimum credit rating levels must be achieved and maintained by the enhancer

Opportunities

- Market conditions have reduced the number of credit enhancement providers (e.g., banks and bond insurers)
- Continued growth in tax-exempt PAB market and applicability to private real estate development as legislated by the Federal Government will continue to generate demand for credit enhancement
- Government regulation of competing credit enhancers (i.e., commercial banks) may create an advantage for non-bank credit enhancers

Threats

- Market acceptance of a non-traditional (i.e., non-bank) credit enhancement
- Continued evolution of the PAB market (i.e., regulation, market factors, etc.) will affect applicability to private real estate projects, thereby affecting the market for credit enhancement
- Spread between interest rates on conventional loans and tax-exempt bonds will affect magnitude of fees for credit enhancement

key considerations of enacting such a proposal. Again, a SWOT Analysis may differ from organization to organization, however, a possible analysis of entry into real estate credit enhancement by institutional investors is outlined in Figure 4.3 below.

Chapter 5: Conclusion

This paper proposed the possibility of well-capitalized institutional real estate investors as credit enhancers of real estate projects financed by tax-exempt, private activity bonds. This structure represents an alternative method, not all that dissimilar from a conventional, direct real estate loan, for investing in real estate. Currently, the provision of credit enhancement by institutional real estate investors is a nascent concept, though at least three prominent investors, CalPERS, CalSTRS and NEBF have developed programs which begin to apply the structure as part of their investment portfolios, though not strictly as part of a real estate investment strategy. Because of the nuances of making a non-cash investment, in a complex, potentially risky structure, the conventional measures of risk and return are difficult to apply. Institutional investors exploring the idea of providing credit enhancement should consider the potential future demand for such a product and should pay particular attention to the evolution of the tax-exempt bond market and its applicability to private real estate projects. Assuming the demand for enhancement remains and traditional suppliers of enhancement are diminished, there should be an opportunity to fill a supply/demand gap.

However, just because a particular institutional investor sees an opportunity to jump into the credit enhancement market, does not mean it will qualify to do so. Only investors of a certain size and portfolio composition which will achieve a minimum credit rating will be able to participate. Those institutional real estate investors who do qualify must devise a methodical approach, specific to their investment policies and objectives which will best suit them, including, but likely not limited to, some of the risks; market, legal and regulatory concepts; return methodologies and other elements of real estate credit enhancement as presented in this paper.

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Appendix A

Comparison of Credit Rating Scales of
Nationally Recognized Statistical Rating Organizations (NRSROs)

Moody's		S&P		Fitch		
Long-term	**Short-term**	**Long-term**	**Short-term**	**Long-term**	**Short-term**	
Aaa	P-1	AAA	A-1+	AAA	F1+	Prime
Aa1		AA+		AA+		High grade
Aa2		AA		AA		
Aa3		AA-		AA-		
A1		A+	A-1	A+	F1	Upper medium grade
A2		A		A		
A3	P-2	A-	A-2	A-	F2	
Baa1		BBB+		BBB+		Lower medium grade
Baa2	P-3	BBB	A-3	BBB	F3	
Baa3		BBB-		BBB-		
Ba1	Not prime	BB+	B	BB+	B	Non-investment grade speculative
Ba2		BB		BB		
Ba3		BB-		BB-		
B1		B+		B+		Highly speculative
B2		B		B		
B3		B-		B-		
Caa1		CCC+	C	CCC	C	Substantial risks
Caa2		CCC				Extremely speculative
Caa3		CCC-				In default with little prospect for recovery
Ca		CC				
		C				
C		D	/	DDD	/	In default
/				DD		

Appendix B

MOODY'S
INVESTORS SERVICE

Rating Action: Moody's assigns A3 issuer rating to National Electrical Benefit Fund

Global Credit Research - 10 Jul 2008

First-time issuer rating applies to Fund's credit enhancement program

New York, July 10, 2008 -- Moody's Investors Service has assigned a long-term issuer rating of A3 to the $11.9 billion National Electrical Benefit Fund (NEBF) in connection with the retirement fund's credit enhancement program. The rating addresses NEBF's overall capacity and willingness to meet senior obligations in the context of its Trustee-approved credit enhancement program of up to $500 million in guarantees.

"Our rating conclusion is based on the relative size of the credit enhancement program given the pension fund's funded status and strong liquidity profile, both of which enable the fund to honor LOC commitments in its real estate investment activities," said Martin Duffy, Moody's VP and Senior Credit Officer. "Actuarial funding levels linked to a large base of contributing employers and NEBF underwriting processes also factor into the rating." In addition, the rating is also supported by NEBF's large, diversified asset base, strong liquidity relative to operating needs and its sound underwriting process. These positive factors are reinforced by stochastic model outcomes designed to capture the probability of honoring obligations under the credit enhancement program due to underlying transaction defaults and a simultaneous funding shortfall for the pension fund.

"Model results suggested a spectrum of rating outcomes with a likely assessment in the mid-to-high single A range," said Duffy. "However, these factors are partially offset by the absence of a clear regulatory position with regard to the engagement in credit enhancement activities in ERISA-governed pension plans."

Duffy added that, "The usage of credit enhancement is a relatively new investment activity in these plans and there is, accordingly, a lack of historical experience with such activities, and that Moody's issuer rating programmatically addresses NEBF's credit enhancements, which are contingent liabilities."

NEBF will provide letters of credit, loan guaranties or other credit enhancement structures directly but only in support of construction debt financing, usually consisting of either tax-exempt or taxable bond financing, or conventional construction loans. The fund will provide credit enhancement only to projects for which NEBF is also providing equity or debt capital or otherwise maintains an ownership interest in the subject project. Further, the letters of credit (LOC) will typically have claim on the underlying assets of the real estate project.

Key Rating Factors

Credit enhancement commitments are duly authorized by NEBF Trustees as an extension of the fund's investment activities in real estate and as a fee generating activity. Contingent liabilities incurred as part of the credit enhancement program are considered legal, valid and binding commitments according to fund legal counsel. In addition, NEBF engages in transaction-specific underwriting requirements and fundamental screening by the real estate team and independent third-party inputs. The NEBF Trustees have issued a "Trustee Certification" certifying the legally-binding nature of credit enhancements issued by NEBF and will specifically approve each individual credit enhancement.

Relative to the pension fund's total assets of $11.9 billion, contingent liabilities under the credit enhancement program may represent up to a nominal 4.2% of total pension fund investment assets. NEBF liquidity to honor potential contingent LOC draws is strong given the fund's allocation to common stocks of 57% and marketable fixed-income obligations of 27% which can be liquidated on short notice. The lion's share of NEBF's investment portfolio is managed by external managers selected by the Trustees with a significant portion of the real estate allocation managed in house by the NEBF Real Estate Team. The real estate allocation historically has constituted approximately 10% of portfolio assets. The fund's asset allocation policy permits the fund to increase its exposure to real estate through debt and equity financings.

The NEBF funding percentage used to determine the plan's status under Pension Protection Act of 2006 expressed

as the ratio of the actuarial value of assets to present value of accrued benefits is adequate based on DOL/ERISA standards with a 90% ratio at year end 2007 or according to the Pension Protection Act of 2006 in the "Green Zone."

"Moody's believes the level of risk associated with a concentration in contributory sources is limited for NEBF," said Duffy. Presently there are 11,000 employers that contribute to the plan and no material concentrations observed. Contribution rates are defined as a percentage and not a fixed dollar amount and will rise concurrent with salaries. The fund's contribution structure is governed by a collective bargaining agreement. In the context of the fund's cash flow and liquidity profile, NEBF currently pays more than $50 million per month to its beneficiaries, with more than 250,000 current plan participants expected to receive benefits upon retirement.

"Moody's rating methodology incorporates a view of the fund's contingent liabilities relative to ongoing funding requirements, including quantitative analysis of specific funding scenarios and simultaneous draws on any LOC commitments under the credit enhancement program," said Duffy. "While Moody's issuer rating does not address benefit payment ability of NEBF, the potential for LOC draws and the adequacy of assets were evaluated in light of the Pension Protection Act of 2006 as it relates to funding zone guideposts."

Moody's used a stochastic model to run various simulations along with funding scenarios to measure the probability of the LOC being drawn upon due to underlying transaction defaults and a simultaneous funding shortfall for the pension fund. The rating agency assessed the probability of such events where a pension fund might have difficulty in honoring its LOC commitments and compared it against idealized default rates to arrive at a quantitative rating level. In addition, Moody's assumed that there were 10 underlying (enhanced) transactions, each with a credit profile that was non-investment grade and five-year maturity profile of $50 million each to arrive at a probability of an LOC draw.

For plan funding ratio levels, Moody's projected the funding ratios for the next 10 years based on current funding levels as well as projected payouts and contributions to the fund in tandem with actuarial inputs. The impact of annual investment income on funding ratios was also smoothed based on actuarial accounting conventions. Results were then stress-tested in an effort to understand variability in funding ratios due to changes in actuarial assumptions.

"The range of likely stochastic model outcomes under stress yielded expected credit loss in mid to high single A range," said Duffy. "This, coupled with no clear regulatory position on credit enhancement activities and the remote uncertainty that LOCs not be honored due to exogenous legal risks given the absence of case law or statutory guidance for ERISA governed plans, resulted in a rating that is in the lower range of 'good.'"

While real estate development financing for construction, pre-stabilization is inherently speculative, he said Moody's believes that NEBF's real estate team has demonstrated solid underwriting standards to minimize risk of loss and garnered excess returns to benchmark for several years. Although there is limited history to date, NEBF has had no draws on their letters of credit. In addition to a well documented and intensive real estate staff review process, Trustees rely upon internal and external consultative inputs to vet specifically proposed letters of credit and real estate related balance sheet commitments.

"The likelihood of credit enhancement draws and their expected magnitude is expected to be mitigated by geographic diversification and structural features in transactions including legal protections which serve to mitigate risks," said Duffy.

For example, he said, "completion guarantees" insulate NEBF from letter of credit draws attributable to cost over-runs. Dilution provisions in joint venture documents might accrue ownership rights to NEBF should development partners fail to meet specific commitments. In addition, he said, Moody's expects a finite duration, typically between three to five years, for LOCs.

Unlike public pension plans, Taft Hartley pension plans are governed by ERISA. The usage of credit enhancement for these plans is a relatively new investment activity and there is accordingly, a lack of historical experience.

Based in Washington, DC, the National Electrical Benefit Fund (NEBF) is the third largest Taft Hartley pension plan in the U.S. with plan assets of approximately $12 billion. Founded in 1946, NEBF was created by the International Brotherhood of Electrical Workers and the National Electrical Contractors Association with the goal of forming a sound retirement plan and to ensure the financial security of workers in the electrical industry across North America.

New York

Martin Duffy
VP - Senior Credit Officer
Structured Finance Group
Moody's Investors Service
JOURNALISTS: 212-553-0376
SUBSCRIBERS: 212-553-1653

New York
Henry Shilling
Senior Vice President
Structured Finance Group
Moody's Investors Service
JOURNALISTS: 212-553-0376
SUBSCRIBERS: 212-553-1653

MOODY'S
INVESTORS SERVICE