National Federation of Municipal Analysts
White Paper on Project Finance
Risk Assessment and Disclosure

The National Federation of Municipal Analysts (NFMA) is an organization of over 900 members, primarily research analysts, who evaluate credit and other risks of municipal securities. These individuals represent, among others, mutual funds, insurance companies, broker/dealers, bond insurers, and rating agencies.

One of the main initiatives of the NFMA is to promote timely and complete disclosure of the financial and operating information needed to assess the credit quality and risk of a municipal debt issue. The NFMA's efforts have ranged from global disclosure-related issues to more detailed, sector-specific work. For further information on the NFMA's continuing work in the area of disclosure, please see the "Disclosure Guidelines" and "Position Statements" on the NFMA's web site at www.nfma.org.

The following discussion takes the form of a "White Paper" rather than a "Recommended Best Practice in Disclosure". In order to develop our Recommended Best Practices in Disclosure, diverse groups of NFMA analysts worked with non-analyst professionals in each sector to develop "best practices" guidelines for certain market sectors. The same process was followed to produce this White Paper that includes descriptions of the specific information needed to help analysts do their jobs. The NFMA believes that the best practice in disclosure will always be the one that provides a steady flow of timely information from borrowers to the entire market.

Following is the most recent version of the White Paper on Project Finance Risk Assessment and Disclosure. This document is not intended to supplant the amendments to Rule 15c2-12, but to be used in conjunction with the guidance provided in this rule and its amendments. It is important to note that the NFMA's disclosure efforts are a continuing process. This White Paper and the Recommended Best Practices papers are not static documents, and will be revisited and changed as market conditions warrant. We encourage interested parties to submit comments at any time to lgood@nfma.org so that they can be considered in the development of future versions of this White Paper on Project Finance Risk Assessment and Disclosure.

The recommendations included in this White paper are not intended to be a "one size fits all", and all the information requested may not apply to every transaction in the sector. We encourage the providers of information to indicate when a specific item requested in the White Paper is not applicable to a specific transaction.

INTRODUCTION

The NFMA Project Finance Task Force was established to produce a White Paper identifying the most pertinent credit risks associated with project finance transactions. The term "project finance" encompasses a broad array of financing techniques common to many different industry sectors. The NFMA's Recommended Best Practices will provide the reader with specific recommendations as to which financial and operating data are sought most often by credit analysts within specific bond sectors. The sectors covered by the NFMA's Recommended Best Practices that address some aspects of project finance are: Airports; Hospitals; Housing; Long-Term Care/Senior Living; Private Colleges and Universities; Public Power; Solid Waste; and Toll Roads. By contrast, this White Paper will identify those risks that are common to all types of projects regardless of the specific industry sector within which the individual asset must operate. A discussion of these risks, together with recommendations regarding their disclosure, constitutes the main focus of this paper. A separate appendix also is included; the appendix provides a brief review of the most common strategies employed to mitigate the risks set forth below.

The term "project finance" has been defined in myriad ways by capital market participants. In the absence of a more widely-accepted definition, we define project finance here as the means by which a single large capital project is financed with debt and secured solely by cash flow generated by the individual asset being built. The capacity to make required debt service payments relies substantially on the efficient and successful operation of the enterprise. Investors have very limited, if any, recourse to the financial resources of a municipal enterprise or general government. Exposure to free market economics requires that the project demonstrate its relative value to patrons or customers who retain some degree of choice over whether to use the facility or the service it provides.

PRINCIPAL OBJECTIVES FOR MUNICIPAL BORROWERS

Unlike conventional revenue bonds, where the operation of a new asset is integrated into a larger municipal enterprise, project financings are designed to operate independently, at least to some degree. Fixed income investors generally have a senior lien upon the cash flow generated by the project. Equity investors, to the extent they participate, usually have a subordinate lien on cash flow but their own return on capital will improve if the capital project is operated more efficiently. Within this context, why would a state or municipal government choose to employ a project financing technique in lieu of a conventional revenue bond sale? There are numerous reasons but four common ones are set forth below.

First, some projects are unlikely to be financed by more conventional means in a timely manner due to competing demands from other projects, the limited financial resources of the state or local government, or onerous procurement rules. Second, states or local governments may seek to protect their own balance sheet through non-recourse financing. By limiting the amount of debt for which it is responsible, the government's own credit profile may be insulated.[1] Third,

[1] While this paper is devoted exclusively to the use of project finance techniques by government agencies, it is worth noting that private companies also use project finance as a means of protecting their own balance sheets.

the project may be designed to stimulate economic activity by providing jobs, encouraging real estate redevelopment, or satisfying consumer demand. Such a project may fall outside the traditional role of government and be deemed desirable but not an appropriate candidate for direct financial support. A specific project may be viewed solely as an economic development tool and lack widespread public support, thus making it ineligible for a General Fund subsidy. Fourth, the borrowing agency may favor the project's construction but lack the necessary competence to build and operate the project, particularly if the engineering requirements are reasonably complex.

Credit analysts are encouraged to discern the principal motives for the use of non-recourse financing and those entrusted with the task of preparing disclosure documents are encouraged to address this question. A satisfactory understanding of the rationale for the use of project finance techniques is an important consideration for analysts as they perform their own due diligence. In the next section, we will identify the principal risks associated with project finance.

PRINCIPAL RISKS ASSOCIATED WITH PROJECT FINANCE

State and local governments in the United States have adopted project finance techniques to accelerate the construction of new highways, power plants, and port facilities. These types of capital assets, among others, often represent essential infrastructure investments that otherwise would be delayed due to budgetary constraints. In electing to use project finance techniques, however, investors cannot rely upon a larger enterprise to subsidize an inefficient operation. The individual asset must generate sufficient cash flow without recourse to a deeper pocket.

A cursory review of many unsuccessful projects leads us to believe that many risks associated with conventional revenue bonds are exacerbated when project finance techniques are employed. The risk associated with a single project cannot be mitigated by access to surplus cash flow generated by existing facilities already in operation within a municipal enterprise fund. In the interest of clarity, we have categorized the principal credit risks into three broad categories. These categories, *Construction Risk*, *Start-Up (or Acceptance) Risk*, and *Operating Risk*, are simply a means of dividing our discussion. Each category will be discussed in turn, along with a discussion of important disclosure considerations. The paper will conclude with an examination of Feasibility Studies.

CONSTRUCTION RISK

In the absence of financial support from an existing enterprise fund or a direct public subsidy, the completion of construction on-time and within budget is a paramount consideration. Construction delays and cost overruns constitute the two principal risks related to construction. They are both reasonably common and are attributable to a number of causes. The borrower should address the degree of risk posed by a failure to complete construction in a timely manner. Although the list of possible causes set forth below is by no means exhaustive, it may provide some guidance to those individuals responsible for initial and continuing disclosure. Appendix A provides a list of possible ways to mitigate construction risk. Additional examples of common mitigation techniques are provided in subsequent paragraphs within the Appendix. While it is virtually impossible to create legal documents that will eliminate construction risk entirely, the use of credit enhancement reduces this risk to the investor.

Zoning and Regulatory Risk

In the event a project sponsor fails to complete construction in a timely manner, the fixed income investor's only recourse usually is to the project itself. As a consequence, the ability to designate a successor to complete construction and operate the capital asset without impairment is essential. Zoning regulations which might impair the exercise of such remedies represent a significant obstacle to credit remediation in the event of default and should be explained clearly. For example, a zoning restriction that imposes a requirement for a public entity to "own" the facility at all times is an important consideration and should be disclosed. Similarly, if operation of the asset is subject to regulation by a third-party, the ability of an investor to direct remedies without interference is an important consideration. The credit analyst will be interested to know whether a change in ownership or management will trigger further administrative oversight or jeopardize the operation of the project.

Permitting Risk

Capital construction on design-build projects is often commenced before all building permits are issued. In such instances, the disclosure documents should enumerate the permits that are still necessary for the commencement or completion of construction and describe the present state of the governmental review process.

Environmental Risk

Many infrastructure projects are built on, or adjacent to, environmentally-sensitive areas. These types of sites pose special construction challenges that should be described in some detail. For example, a port authority may sponsor the construction of a project on a site formerly occupied by an industrial enterprise. In such cases, there should be clear disclosure of the party responsible for environmental remediation of toxic substances encountered during construction. Similarly, construction may commence in areas where endangered species thrive. If construction could be delayed for this reason, disclosure of the relative risk and likely response is appropriate.

Title Risk

Clear title to the land upon which a project is built is often preferred by investors in project finance transactions but may not always be possible. If the title is held under leasehold, rather than as a fee interest, the term of the leasehold and any restrictions accompanying it should be disclosed. This risk is aggravated if easements are uncovered during a title search which might impair the use of the facility. For this reason, a thorough explanation of any material easement, and the relative risk that it poses, is appropriate. Furthermore, the presence of title insurance policies, and the exceptions set forth in those policies, should be disclosed.

Contractor Risk

Most large construction projects are managed by a general contractor pursuant to a construction contract. The contract often is awarded by the sponsor on the basis of a guaranteed maximum price. The general contractor is responsible for delivering the project on time and within budget and bears the risk of paying for any expenditures that exceed the guaranteed maximum price.

Conversely, financial incentives often are provided to the contractor for early delivery of the project.

Ultimate responsibility for project delivery rests with the general contractor and its financial health is a principal disclosure consideration. If the financial position of the general contractor deteriorates markedly during the course of construction, even for reasons unrelated to the project at hand, timely delivery may be jeopardized. Moreover, the investors in project finance transactions rely upon the general contractor to properly manage an often disparate group of subcontractors, each with very specialized knowledge pertinent to the project. If the general contractor's own operations are in disarray, the ability to manage an often contentious group of subcontractors may be impaired.

Credit analysts will normally seek substantial disclosure regarding the financial health of the general contractor and the availability of any third-party financial guarantees assuring project delivery. Disclosure of any intercreditor agreements whereby a consortium of construction companies together constitute the "general contractor" is advisable. For example, if two or more contractors have executed a joint and several obligation to complete construction, this information is likely to be deemed pertinent by most credit analysts.

Design and Engineering

Once construction is commenced, the flexibility to alter the design often depends upon the method employed by the borrower. In a conventional Design-Bid-Build process, contractors are obliged to bid on a project based upon a completed set of architectural and engineering plans. While this method has its advantages, particularly for projects that exhibit unconventional characteristics, the bidding process often is quite time-consuming. Moreover, any subsequent change to the design as a consequence of unanticipated obstacles will likely increase the total cost of the facility and may reduce net cash flow upon completion.

In a Design-Build process, where the engineering and construction firms bid for the project together and work in unison, there may be greater flexibility to respond to such challenges without significant cost increases. Monetary incentives for early completion can be a powerful financial tool to motivate the contractor to stay on schedule. The quality of the development team's due diligence in advance of contract execution is an important consideration for the investor.

In either instance, however, the analyst will seek to ascertain the degree of difficulty posed by construction. As most (though not all) investors will lack a civil engineering background, the borrower is encouraged to provide a basic discussion of any unusual characteristics posed by the construction site (i.e. expansive soils or steep slopes), the methods employed to build the new facility, and the schedule adopted.

Materials Risk

Potential shortages of material necessary to complete construction represent another important consideration. Most large public projects are reliant upon an uninterrupted supply of certain structural components such as steel and cement. If the price of these materials is not adequately hedged through an advance purchase contract, the cost of construction may increase without regard for the degree of skill exercised by those on site. When a handful of large construction

projects are commenced simultaneously within a specific city or geographic region, the cost of material can increase due to competing demand for fungible commodities.

Labor Risk

Labor unrest is often treated as a force majeure event, one that is uncontrollable by a borrower. While this type of risk is implicit in many large construction projects, the investor is interested in understanding the workplace environment. For this reason, a discussion of the legal framework within which unions must operate is an important consideration. For example, statutory requirements mandating the use of unionized labor are common in many states. Even if no such requirements exist, recent labor organizing activities within the industry in which the facility must operate is likely to be deemed relevant. Apart from unions, the labor force may be affected by ethnic, religious and cultural factors. In some regions, it may be difficult to employ a sufficient labor force to meet construction deadlines during certain times of the year due to religious holidays or other external influences.

Natural Hazard Risk

The degree of risk posed by natural hazards often cannot be precisely defined but they should be addressed in the offering documents. To the extent new information is published by authoritative sources after sale, continuing disclosure documents should address the relative risk. In certain areas of the country, seismic risk poses a hazard to individual assets located on or near a known earthquake fault. While earthquakes cannot be predicted with any degree of precision, the risk posed by an earthquake can be described in relative terms based upon proximity to known active faults, the composition of the soil upon which the facility is built, and the standards of construction employed on the project. Other natural hazards, such as the risk from potential flooding, are known and generally well-mapped. In the case of hurricanes, proper building codes need to be followed in areas subject to this natural hazard and this risk needs to be disclosed. For example, some projects may be required to shut down or close (i.e. electric utilities) if a hurricane approaches within a specified distance of the project.

RECOMMENDED DISCLOSURE – CONSTRUCTION RISK

The frequency of disclosure during construction of a stand-alone capital asset should be no less frequent than quarterly commencing upon the sale of the bonds. In many circumstances, abbreviated monthly construction reports are an appropriate means of communicating with investors. While many borrowers (whether they be governmental entities or private companies acting pursuant to a concession) favor the delivery of very formal reports, the delays accompanying such reports make the use of web sites and electronic notifications the better option. The establishment of a Central Post Office through which continuing information may be delivered eases the burden of providing such information substantially.

START-UP RISK

Construction Contract Penalties

Construction contracts often will contain financial penalties owed by a contractor if the project is not completed by a specified date. Depending upon the circumstances surrounding a delayed project, the contractor may attempt to renegotiate these penalties. Financial penalties generally correspond to the amount of interest or debt service that is due on the debt outstanding subsequent to the scheduled completion date but may be reduced by the amount of capitalized interest available. In any event, an objective method of calculating penalties is appropriate.

At a minimum, investors should be informed of any request to renegotiate such penalties. Formal consultation and consent to any changes may be appropriate depending upon the degree of forgiveness requested. Many construction contracts have incentive clauses whereby the contractor receives incremental compensation for finishing a project early. These incentive clauses are appropriate as long as the rewards are not excessive. The principal disclosure consideration is the clarity with which the imposition of penalties and the provision of incentives are described.

Assumption of Responsibility by Operator/Manager (the Hand-off)

An established and ongoing dialogue between the contractor and the operator (manager) of the project will facilitate a smooth hand-off upon completion of construction. The operator should be aware of the final punch list of items for which the contractor is liable. Occasionally, disputes arise between the contractor and the owner or borrower. These disputes may require arbitration or litigation to resolve and could affect the smooth operation and hand-off of the project. In general, the inclusion of an arbitration process is an advantage because it provides an alternative mechanism to dispute resolution before court action is initiated.

Timing of Project Delivery

If a project is not delivered on time, it can have a long term effect on operations as well as the obvious financial implications. Education-related facilities, such as privatized student housing facilities and charter schools, are particularly vulnerable to financial difficulty in the event of a delay in project delivery. Both assets must be operational prior to the commencement of the school year to ensure maximum utilization by their prospective customers, the students. Other types of facilities, such as utilities, usually have contract terms with outside vendors that need to be met once the facility is operational.

Cultural projects are often subject to cyclical usage, so the time of year in which the new or renovated facility opens can be a critical factor in generating momentum for the project. Recreational facilities may attract higher admissions during a winter tourist season or during summer months when primary schools are not in session. The opening of the project is usually tied to marketing, advertising, and pre-leasing, so the late opening of a project can create a domino effect from which it is difficult to recover.

Technology Risk

Technology risk is often overlooked by those responsible for disclosure. In those cases when an important project component is untested, extensive disclosure related to the rationale for its use is

a critical component of any comprehensive disclosure statement. Ideally, examples of other projects reliant on similar technology and on a similar scale should be available. The adoption of novel or experimental technology often leads to unforeseen problems and unintended consequences. De-inking plants and automated airline baggage handling systems are notable examples of technology that was workable on a small scale, but prone to difficulties when the technology was expanded to a larger scale.

Market Demand Risk

Feasibility studies sometimes anticipate strong demand that fails to materialize once the project is completed. Numerous reasons are cited for inaccurate projections. Changing market conditions and the presence of new competitors are among the most common. For example, if the project depends upon a paucity of inexpensive housing, subsequent unanticipated construction nearby will have a direct impact on the capacity to attract customers. Unanticipated events, such as the onset of economic recession or an act of terrorism, can dampen consumer demand substantially. Similarly, changes in regional demographics and substantive modifications to the project are sometimes cited by the authors of feasibility studies to explain a resulting shortfall in revenue. Even the name of a project can affect demand. Inclusion of recent market studies in the disclosure documents is appropriate; borrowers should expect that this type of information will be read thoroughly for reasonableness. Equally important, the market demand studies should be vetted by independent and knowledgeable observers prior to inclusion in disclosure documents.

RECOMMENDED DISCLOSURE – START-UP RISK

The provision of adequate disclosure during the initial operation of a project is almost as important as the disclosure provided during construction. Now that construction is completed and the project is operational, continuing disclosure usually becomes less frequent, but should still be provided on a quarterly basis if possible. On occasion, continuing disclosure is overlooked in the transition to new management when construction is completed. Unintentional lapses are not uncommon as new management assumes operational duty. Borrowers are encouraged to include specific covenants that compel such disclosure upon completion of construction.

The inclusion of covenants which specify the delivery of information as a precondition to the release of cash held in trust is one method that is likely to motivate the manager towards timely disclosure. Equally important, covenants that provide for the subordination of certain management fees may provide additional incentive for efficient operation. These covenants may be based on either operating statistics or financial ratios (or both). For example, certain occupancy targets or debt service coverage ratios may need to be met for the developer of a housing project to receive its full compensation or for the manager to receive its full management fee. Sometimes covenants need to be met before interim financing such as construction loans or bridge loans can be retired. The degree to which the operator complies with these covenants should be disclosed on a timely basis so the financial stability of the project can be accurately assessed.

Finally, those responsible for the preparation of disclosure documents are encouraged to grant the trustee substantive responsibilities. For example, the trustee should be obliged to disclose the

balances available to pay debt service in various trust accounts once construction is completed. Construction delays may result in a depleted capitalized interest account and the availability of other funds to pay debt service if net cash flow is insufficient is an important consideration for investors. The proper use of funds held in the construction account should be made explicit in the bond documents and the disclosure of the procedures that will be followed by the trustee is essential.

OPERATING RISK

Management Experience

Although the competence of management is often difficult to assess, prior experience on similar types of projects is an important consideration. Operational experience on similar projects, demonstrable history within the industry sector, and proven expertise at "ramping-up" operations are useful items of information. The degree of corporate support for the activities of an on-site manager is another consideration. In those instances when a project is not operating as well as projected and has violated one or more financials covenants, it may be necessary to hire an outside management consultant to assess the situation. The governing documents should address the degree of latitude provided to investors in appointing qualified third parties to make objective assessments and recommendations. Equally important, the degree to which these recommendations must be followed should be disclosed.

Economic Conditions

Even if the management company is doing everything it can to promote and operate the project efficiently, there are four major economic conditions that may affect the project. First, forecasted demand may fail to materialize. Second, macroeconomic conditions may have deteriorated. Third, the supply of materials and inventory for operations may differ from forecasts. Fourth, unanticipated competition may arise seeking to exploit the same market targeted by the project. While the reasons for changes in forecasted demand were discussed in the section entitled *Start-up Risk*, demand can still change over time. When a project is new, there may be heavy demand because of its novelty. Once the project has aged, the novelty wears off and competition becomes a factor. For this reason, cultural facilities often are obliged to deliver new and interesting exhibits as a means of encouraging admissions and donations. Facilities that are too thinly staffed or have staff that is poorly trained may result in unfavorable experiences by patrons and deterioration in the reputation of the facility.

Macroeconomic conditions such as inflation and unemployment also affect the financial stability of a project. These conditions must be taken into account when pricing services, setting ticket prices, and soliciting donations. Some projects (such as utilities) require a reliable supply of raw materials or resources in order to operate. Interruptible supplies, delivery problems, price volatility, and unreliable vendors can put a project under stress. Finally, unanticipated competition affects demand. Even if a project is unique in nature, it may be competing for the same discretionary entertainment dollars from consumers as are other facilities.

Catastrophic Events

Windstorms and earthquakes are among those risks over which project managers have no control. While the relative susceptibility of a project to hurricanes and earthquakes can be identified, the location of each future episode cannot be predicted with any accuracy. Property and casualty insurance policies are often available for the former and sometimes available for the latter at a substantial cost. Terrorism is also among those risks that project sponsors must now consider despite its unpredictability. Insurance policies for this risk also may be purchased but one may expect the premium for such coverage to vary widely depending upon political events elsewhere in the world. The principal means of mitigating the risk of catastrophic events is through the acquisition of property and casualty insurance and the retention of sufficient cash reserves to accommodate the payment of debt service through reconstruction.

Concession Risks

The use of public-private partnerships to finance infrastructure investment has become more widespread during the past decade. These partnerships already are common in Australia and in the United Kingdom, where the provision of public services by the private sector is known as the Private Finance Initiative (PFI). In the U.S., state and local governments have expressed renewed interest in this type of partnership as they struggle with operating budget deficits and a shortage of funds with which to pay for major capital improvements.

The use of an exclusive "concession" to operate an essential public facility is a principal characteristic of public-private partnerships. The government bestows the concession upon a private sector operator in return for an initial or periodic payment. Parameters are established which set forth the term of the concession, the level of capital investment that must be made over time, and the rates or tariffs that may be assessed upon the public for use of the facility. For example, a private consortium may be granted the right to operate a toll road within a particular jurisdiction for a period of 40 years. The concession agreement will set forth the maximum tolls that may be levied, the frequency with which the tolls may be raised, and minimum level of road maintenance that must be provided.

The private management of essential public infrastructure introduces unique risks that are absent from more conventional types of project financings. These risks should be addressed within the offering circular or other disclosure document disseminated to investors. A representative (but not exhaustive) list of common risks to which fixed income analysts will be attuned is set forth below.

- Duration and Durability of the Concession. Bonds may be issued by the consortium in possession of the government concession as a means of financing the initial payment to the state or local government. The term of the bonds and the degree of refinancing risk absorbed by investors is a primary consideration. Ideally the concession will extend beyond the term of the bonds to allow for some recovery in the event available revenue falls short of expectations. Durability of the concession is also a consideration. The concession must be free from legal challenges and early termination of the concession should be accompanied by some remedy available to investors.

- Dispute Resolution Procedures; Arbitration and Appeal Provisions. The term of most concession contracts is reasonably long to allow the private sector concessionaire to recoup its investment. And while the contracts are reasonably detailed as to the responsibilities of both the public and private sector, disputes are bound to arise. The fixed income analyst is well advised to seek a thorough explanation of the procedures that must be followed in the event a dispute arises.
- Rights of Creditors to the Concession in the Event of Default and Termination. The public sector often retains the right to terminate the concession for a variety of reasons such as insolvency of the concessionaire or a failure to adhere to minimum standards of operation. The rights of creditors in the event of termination should be set forth clearly. In some instances, the public sector entity must discharge the outstanding debt while in other instances there is little responsibility to ensure bondholders are made whole.
- Financial Covenants and Concession Parameters. If the concessionaire finances its initial payment through a borrowing in the fixed income markets, certain covenants will apply. These covenants are not particularly unique but the fixed income analyst is well advised to seek clarity in this regard. Minimum debt service coverage ratios or interest coverage ratios are commonplace, as are leverage restrictions and additional bonds tests which are designed to prevent the interests of existing bondholders from being diluted. A restriction on the frequency of tariff increases also is an essential consideration.
- The Flow of Funds; Equity Investment and Mezzanine Funding. Many concessionaires finance a part of their initial payment to the government with equity. Equity may be derived from any number of sources (such as internal corporate cash flow or third-party investors seeking higher returns than may be available elsewhere in the fixed income market). Although each transaction has a unique flow of funds, returns to equity usually are subordinated to scheduled debt service on senior and subordinate bonds, if any. Restrictions on annual dividends paid to equity investors often are prohibited if annual debt service coverage fails to meet a minimum threshold.

The foregoing considerations are illustrations of the types of issues that will arise when a concession contract is introduced into a project financing. Operational risk is transferred to a private party for a specified term during which the government is relieved of its capital investment and maintenance obligations. For greenfield projects employing a concession structure, construction risk also is effectively transferred to the private party. In such instances, many of the risks set forth in the section on Construction Risk would remain relevant.

RECOMMENDED DISCLOSURE – OPERATING RISK

Once operations have reached equilibrium, annual financial statements and operating statistics usually are sufficient. However, the frequency of continuing disclosure should be tied to the relative risk posed by the credit. Credits that carry ratings in the non-investment grade category should provide at least quarterly unaudited financial statements and operating statistics. For

transactions that are done as private placements, which usually have a small number of institutional investors, frequency and content of disclosure can and should be negotiated with investors before the transaction is closed. Low investment grade credits should be providing quarterly disclosure with the bare minimum being annual audited financial statements and project operating statistics. Credit enhancers and rating agencies usually have their own disclosure requirements, to which investors can be a party. The frequency and scope of disclosure should be spelled out in the Continuing Disclosure Agreement and must be consistent with the timing of disclosure that is required under the Loan Agreement.

At a minimum, annual financial disclosures should contain a standard balance sheet, an income statement, and a cash flow statement. The annual approved budget should also be available. It is important that the income statement include detailed operating expenses that can be compared to the budget, so variances can be noted. Operating statistics are more difficult to define due to the unique characteristics of each industry sector. Depending upon the sector, the NFMA's Recommended Best Practices in Disclosure papers regarding Airports, Hospitals, Housing, Long-Term Care/Senior Living, Private Colleges and Universities, Public Power, Solid Waste, and Toll Roads are helpful resources when deciding upon appropriate disclosure content.

In order to decide what operating statistics will be meaningful for analysis, the revenue sources and income streams of the project must be understood fully. A few brief (and by no means comprehensive) examples in sectors not yet addressed by a *Best Practices* paper are illustrated below:

- for museums, aquariums and other cultural facilities it is important to track admissions, memberships, ticket prices, and fundraising statistics;
- for research facilities, the number of scientists and grants produced are important credit indicators;
- for charter schools, enrollment and test scores would be appropriate;
- and for golf courses, green fees and number of rounds played would be important.

THE FEASIBILITY STUDY

Definition

Webster's dictionary defines the word *feasible* as "capable of being done or carried out" and the word *study* as "a careful examination or analysis of a phenomenon, development, or question". By extension, our definition of a feasibility study is a document that carefully examines or analyzes whether a project can be built in a timely manner and is financially viable thereafter. A feasibility study should not be confused with either a market study or financial projections. A market study usually is an abbreviated document whose narrow focus is limited to a discussion of competition in the surrounding area and the prices commanded by similar types of assets and services. Financial projections are often prepared by the borrower, developer, or eventual operator of the project based on experience at other projects. A feasibility study usually will contain both a market study and financial projections but will supplement these with additional

information such as an assessment of construction risk and forecasts of future usage. The Feasibility Study also will be prepared by an independent third party.

RECOMMENDED DISCLOSURE – THE FEASIBILITY STUDY

Principals – who wants the project?

The identification of project sponsors and their motivations and rationale for a particular project is an important consideration for investors. The Feasibility Study should identify the principal sponsors regardless of whether they are a private enterprise, a not-for-profit entity, or a state or local government. If possible, potential investors may want to meet sponsors personally to ask questions and find out other information not contained in the Feasibility Study.

Need for the project

The Feasibility Study should include a thorough discussion of why the project is needed along with substantive documentation. Many projects may "seem like a good idea", but there needs to be concrete evidence through surveys, demand studies, and other pertinent data that show the need is real.

Source of Payment

Those who commissioned and paid for a particular Feasibility Study should be identified. The manner of payment, and particularly the degree to which the payments are contingent on a successful financing, should be disclosed. The payor and method of payment should not in any way be a reason to limit or restrict distribution of the Feasibility Study.

Statement of Purpose

The Feasibility Study needs to delineate a definite statement of purpose. Many studies are done to endorse a particular transaction. However, there may be other reasons the study was undertaken that may not be obvious or clearly understood. The purpose needs to be disclosed to potential investors and other interested parties.

Prior Feasibility Studies

Investors and other interested parties should be made aware of any previous feasibility studies undertaken in support of a project. The discussion should set forth the summary conclusions of the prior Study and the reasons for the commissioning of a new study. There are several reasons why subsequent studies are commenced. The planning and design of a project may take several years, which renders the initial feasibility study outdated and less meaningful. Also, the size, scope, and focus of a project can change during the planning stage. The initial feasibility study may simply be obsolete. Finally, if a consultant did conclude through an initial study that a particular project was infeasible, this information is relevant and should be discussed. In such cases, the project sponsor's disagreement with the initial study conclusions may be discussed in detail.

Delineation of Working Assumptions

Any firm that produces a feasibility study should discuss its assumptions thoroughly. These assumptions, by necessity, are incorporated into the analysis. Some feasibility studies use very complex computer models whose variables will not be readily discernible to the fixed income investor. Often derogatively referred to as a "black box", these models should be explained in plain language. The firm needs to disclose what variables were fed into the black box and give a general description of how the data was used in projections. The computer model may be proprietary in nature and many consultants are hesitant to give detailed descriptions of their model's operation. While this reticence is understandable from the viewpoint of a consultant in a competitive operating environment, this type of reluctance is often frustrating to the investor seeking to make an informed judgment as to whether a particular project is feasible. A "plain language" description of the basic operating assumptions and principal variables should be provided in the disclosure documents to allow the credit analyst to make an informed judgment. Feasibility studies may use probability analysis or Monte Carlo computer programs that estimate the likelihood of certain events occurring over a period of time. Once again, it is important to understand what variables were fed into the analysis and what assumptions were made when running the model. These models are only as good as the operating assumptions and the basic data employed; a reasonable explanation from the consultants on their data sources should be included.

Existence of Any Peer Review Process

The companies that produce feasibility studies vary in size, scope, and expertise. These companies range from large engineering firms that focus on public works projects to much smaller enterprises that specialize in certain types of projects. Disclosure as to whether the feasibility study was subject to a peer review process is very important. For large firms, this is quite common and there should be an explanation by the firm of what the peer review process entails and identification of the principals involved. With smaller firms, peer review is less common and as a consequence, the experience and credentials of the team members that produced the report become more critical.

Explicit Acknowledgement of Information Discarded as Unreliable or Irrelevant

Sometimes, the computer models used by companies producing feasibility studies generate results that are unusual or unlikely. These results need to be acknowledged and a reasonable explanation given as to why they are being discarded. In addition, if a feasibility study does not include data or information that a reasonable person may expect to be part of the analysis, there should be an explanation as to why the data was not reliable or irrelevant under the circumstances.

Appendix A

CONSTRUCTION RISK MITIGATION TECHNIQUES

All types of Construction Risk:

- Credit Enhancement –Important factors in the selection of credit enhancement are the creditworthiness of the enhancer and the term of the guarantee. Monoline municipal bond insurance policies are unconditional and irrevocable. Bond insurance policies provide for the payment of debt service regardless of whether a particular project is completed. For those projects that are not accompanied by a bond insurance policy, other means of credit enhancement are available. These include letters of credit, lines of credit, surety bonds, and construction guarantees. If bond insurance is not used, other means of enhancement should be in force at least through project stabilization. It should be noted that the providers of credit enhancement will mitigate their own credit risk by seeking some of the same types of credit support set forth below.
- Capitalized Interest - A capitalized interest account typically, though not always, is financed with bond proceeds. Capitalized interest should be available through project stabilization but often expires within 6 months of scheduled completion of construction. A large amount of capitalized interest increases the debt burden of the borrower and may increase the overall cost of the financing if the reinvestment rate fails to meet the true interest cost of the debt.
- Equity contributions – can be provided by fundraising, grants, corporations, the owner, or other interested parties. Provides a cushion and allows the borrower to carry a lower debt burden on their balance sheet.
- Collateralization – the cash flows and/or balance sheets of other assets may be pledged to support a new construction project.
- Reserves – special or supplemental reserves may be set up in addition to or instead of capitalized interest to cover contingencies. These reserves could be funded from cash flow, bond proceeds, equity contributions, or by a third party.

Environmental Risk

- Environmental Impact Studies – these studies may be costly and time consuming, but may be necessary to demonstrate the political will or impetus to move the project forward.
- Phase I Environmental Site Assessments – a necessity for any project finance transaction prior to construction. These assessments address all possible environmental factors including: historic preservations, floodplain management, wetlands, endangered species, explosive/flammable hazards, coastal barrier resources, coastal zone management, sole source aquifers, airport clear zones, asbestos, and lead based paint. Depending upon the results of the Phase I assessment, a Phase II may need to be done and possible remediation may need to be performed before construction can begin.

Title Risk

- Title insurance – usually a requirement if real estate is being purchased or if a deed of trust or leasehold interest is provided as security to investors.

Contractor Risk

- Fixed price contract – also referred to as a Guaranteed Maximum Price, which needs to be disclosed to investors.
- Surety bond – protects the borrower from bankruptcy or non-performance by the contractor. The amount of surety and the credit rating of the surety provider are important considerations. The analyst will also be interested in knowing whether the surety bond provider has waived defenses in the provision of its bond in case a claim is made.
- Performance bond – could also be in the form of completion guarantees, liquidated damages, or reserves. The performance bond should at least cover the cost of construction.

Design and Engineering

- Architectural plans – provides detail not available in other documents and provides a visual presentation of the project.
- Engineering plans – can give insight to possible challenges or unique characteristics of the project that investors could watch for during construction.

Materials Risk

- Supply contracts – these are more common for providing raw materials to a project after completion (i.e. utilities). However, if shortages of construction material is likely, these contracts should be executed.
- Hedging – futures contracts of certain commodities can be purchased the lock in the price of that commodity and to guarantee delivery within a certain time frame.

Labor Risk

- Union contracts – it can be disruptive if a union contract is being negotiated during construction of a major project. The terms under which union workers operate (wages, hours, etc.) are critical to delivering the project on time and on budget.

Natural Hazard Risk

- Insurance – there are many types of property and casualty insurance policies that can cover losses from a natural disaster based on the geographic location and type of project being constructed. Agencies such as FEMA have historically covered losses from earthquakes, hurricanes, and flooding where conventional insurance policies have been either unavailable or cost-prohibitive.
- Building codes – it is important that building codes be followed and enforced especially in high risk areas that experience seismic activity and hurricanes.