

An Alternative Model for Financing Water Projects

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A financing technique for water projects has proven successful in several states in the United States. It is a model for consideration by those interested in substantially increasing the money available for water projects throughout the world.

This model permits access to capital market financing through the use of a pool structure joined with substantial reserve funds. Experience in the United States suggests that such a credit structure can be substantial enough so as to permit financing without government guarantees of individual projects.

Introduction

There is a recognized need for water projects throughout the world. This need is reflected in new policy and program directions of the World Bank and many of the multi-lateral financial institutions. This need arises out of increased public health and environmental concerns and urbanizing populations. Public health, environmental and financial institutions see new and upgraded water treatment facilities and systems as important to meeting this need.

A new financing technique has proven successful in several states in the United States. It has increased the money available for water facilities. This technique presents an attractive model for multi-lateral agencies structuring water facilities financing programs. This paper describes steps which can be undertaken to implement a water financing program utilizing this technique.

This technique allows money to be raised in the capital markets. The fund of money so raised is then lent to qualifying projects, whether publicly or privately owned. This money for the fund is raised in the capital markets on (1) the credit of the aggregate promises of the several public or private owners who borrow to finance individual projects and who each promise to repay their loans and (2) the credit of the reserve fund. Notably, the structure of the pool of individual project loans adds credit support for the capital market borrowing to fund the pool. The money raised in the

capital markets is used to make project loans with each borrower promising to repay its individual loan.

In the United States this structure permits the leveraging of the Federal capitalization grant by a significant multiple, and achieves a superior credit rating permitting the pool to borrow (and lend) at very favorable interest rates. The pools are organized by state. Some states leverage the capitalization grant. Some use interest generated by the investment of the capitalization grant to subsidize interest rates to the municipal borrowers. The state pools are frequently referred to as “State Revolving Funds” or “SRFs” because the repayment of principal to the pool is used to fund additional projects.

This method appears to be most useful when applied to those municipalities which are able to repay project loans, or in connection with which specific revenues can be identified and dedicated to the repayment of the loans. This program is not intended as a substitute for grants to municipal projects which are made for social, environmental or economic reasons.

Structure

The structure used by the entity administering this program will contain the following elements:

(a) Project loans -- Individual project loans are made to support water projects. These water projects may be public or private, they may relate to water supply or waste water treatment. The projects can be defined broadly or narrowly. For example, the project may be a free-standing water treatment plant, it may be the upgrading of existing infrastructure, or it could be the partial or complete operation and management of a water system. Each project loan is individually documented and contains real loan covenants. These covenants relate to certainty of repayment, coverage requirements, operational requirements and appropriate security.

(b) The Pool – The individual project loans are legally aggregated into a pool.

(c) Reserve Fund -- A reserve fund is created. In the United States, the reserve is funded by capitalization grants made by the Federal and/or state governments. In the international context, this reserve could be created by the Inter-American Development Bank and other multi-lateral agencies, by individual governments and by other institutions. The reserve fund can be capitalized, or the reserve could be a credit facility provided through letters of credit or other standby credit mechanisms.

(d) Access to Capital Markets -- Access to the capital markets is provided by the entity’s structure and management. This structure contains these elements:

1. the promises to repay the individual loans,
2. a first reserve consisting of the money which has been repaid as principal and interest payments on the individual loans,
3. the funded reserve fund as a second credit support and
4. possible additional support or guarantees.

This constitutes a structure which is recognized by the international financial rating agencies (such as Standard and Poor, Moody and Fitch), as providing a very strong and free-standing credit. This credit recognition permits access to capital market financing.

(e) Administration -- The entity and its leadership will have to be credible to the reserve fund providers and to the international capital markets. It will be sufficiently independent so as to be able to make project decisions without being controlled by the national government, although the program should be fully responsive to the environmental priorities and regulatory requirements of that government. The entity will have to have credible credit analysis capabilities and be credible in loan administration and the enforcement of loan terms.

(f) Leverage -- This structure permits substantial leveraging of international development funds. Where those funds are used to establish the reserve, a multiple can be raised in the capital markets for individual project loans. In addition, if the international funds are supplied in the form of capitalization grants, the interest accruing on the reserve funds can be used either to subsidize the interest charged to the individual project borrowers or to increase the amount of money available for project loans. To optimize the benefits of the program to the individual borrowers, capitalization grants would permit the application of reserve fund earnings to be used to subsidize the cost of capital to the individual borrowers.

(g) Guarantees -- In the United States, more than \$13 billion has been raised in the private capital markets based on this structure and without state or federal guarantees. In the international context, the structure itself is sufficient to permit financing of individual projects if the municipal credit or the project revenues are credible. It is appropriate and necessary to exhibit some level of official recognition and support by the national government for the program being financed by the pool. It may be necessary to have this support evidenced by a standby guarantee of the reserve fund.

Background

The United States law has historically differentiated between water supply and wastewater treatment. Water is treated as two separate industries in the United States. Water supply has developed as public or private infrastructure from the earliest colonial period. Water charges and user fees for water supply are common. No federal

money was available for water supply facilities and there were no national drinking water standards until 1992.

Concern about water pollution arose with environmental consciousness in the 1960s. The first major federal water treatment program was enacted as the Federal Water Pollution Control Act of 1964, under which the federal government authorized the new Federal Water Pollution Control Agency to set regulatory standards for wastewater treatment and to provide grants for municipalities seeking to build facilities to meet such standards. The FWPCA in 1970 became part of the Environmental Protection Agency. Under the Water Act of 1972, the Federal government imposed mandatory minimum wastewater treatment standards, required municipalities to build facilities to treat wastewater to those standards and provided extensive grant aid to the municipalities to do so.

Municipalities were generally able to secure 80 percent of the cost of new wastewater treatment facilities from the federal government grants and up to 20 percent of the cost of such facilities from the state governments.

- Move from grants to loans

With the passage of the Clean Water Act of 1987 and the Safe Drinking Water Act in 1996, the approach to water financing in the United States changed. The federal government had expended over \$50 billion to support the construction of municipal wastewater treatment facilities by the early 1990s. However, during the 1980's the political climate changed. A "pay as you go" approach developed to replace what had been a federal grant approach.

In the water sector, Federal participation changed from a program of grants to the municipality, to a capitalization grant program -- with the money granted to the states to make loans to municipalities. One of the key features of this new program was that capitalization grants made to states had to be managed in such a way that the grant moneys would create a sustainable program.

- The Revolving Loan Fund concept.

Several states decided to create a legal structure to leverage the Federal capitalization grant. They created "State Revolving Funds" (or "SRFs") using the Federal grant to capitalize the fund (hence, the Federal grant is often referred to as the "capitalization grant"). These Revolving Funds have permitted the states to leverage the capitalization grant thereby allowing several times the amount of the capitalization grant to be available for water supply and pollution control needs. The program's capitalization grant contains a mandate that the program be managed so as to ensure that the funds are available in perpetuity. This approach has proven to be very effective.

Each state's revolving fund approach has similar elements. They each use federal capitalization money and a state contribution to act as security for borrowing by the fund. The fund makes loans to private or public entities which are constructing (or

rehabilitating) qualifying facilities to meet water quality standards. The project sponsors/borrowers are required to repay their loans on a fixed schedule. Each borrower is expected to secure its repayment obligations. These assurances might be the commitment of the municipal government to repay evidenced by a private sale of a debt obligation, a pledge of tax revenues, a pledge of otherwise available user fees, private guarantees or other mechanisms.

This credit support mechanism from each of the project loans has resulted in the ability of the State Revolving Funds to borrow at very favorable rates, to subsidize the interest rate available to individual water projects, to make interest free loans to those deemed worthy of such support and to create a sustainable fund for new projects in the future.

Potential Structure for application by multi-lateral entity

Should a multi-lateral financial institution wish to consider the use of the revolving fund concept to encourage financing of water projects, it will wish to consider the following institutional arrangements in the host country.

1. The host country should designate an entity to be the administrator of the fund. That entity could be an existing financial agency or an independent entity, such as an infrastructure bank, a publicly owned environmental facilities finance corporation or a private entity. For purposes of this paper we will refer to this entity as a "National Water Bank". The National Water Bank should have the authority to accept the capitalization grant and to hold it as a legally segregated reserve fund. It should have the authority to arrange for such credit enhancement as may be necessary. It should have the power to be the direct recipient of capitalization grants or loans from multi-national entities, to raise money in the capital markets and have the power to commit to repay any such loans on internationally accepted terms.

2. The National Water Bank should have the power to provide financial assistance to municipalities and private companies for the construction of water infrastructure. Projects should be broadly defined and would include the development of local reservoirs and storage facilities, the development or upgrading of water supply treatment facilities, distribution facilities, sewage facilities and new and upgrading of wastewater treatment facilities.

3. The criteria for the making of loans should be set forth. The substantive criteria for eligible projects will likely rely heavily upon the national environmental criteria. The requirements for the making of a loan will involve the legally binding commitment for the loan repayment on specific terms. The legal and financial basis for the loan repayment needs to be explicit and transparent. There should be a standard criteria for credit analysis. While the National Water Bank's credit will not depend on any individual borrower's credit, the pool of loans which the National Water Bank will finance will be rated, in part, on the individual credits in the pool.

4. The National Water Bank should develop a program for the identification of projects. This may be as simple as identifying the appropriate candidate projects from those well known to exist, or it may involve consultation with national health and environmental entities to identify such projects. This identification process is likely to be directed to municipal entities and to private entities known to have interest or expertise in the provision of such facilities. For example, private engineering firms and engineering institutes are likely to be aware of needed projects that have been deferred for lack of funding.

5. Individual projects meeting the environmental criteria should be designated. The entity responsible for developing, constructing and operating the project should be identified. An examination of the applicant's credit background and the basis on which the promise to repay the loan is simultaneously undertaken. The project should then be declared eligible. Upon that declaration, the details of the loan should be documented. The loan documents will set forth the details of the design of the project, the operational parameters and the provisions for operation of the project. The documents will provide for the purchase and sale of a borrower's debt obligation (bond), the terms of the loan, debt covenants, the mechanism for the repayment of the loan and the security for the repayment.

6. The legal structure of an aggregation of individual project loans can be created. The individual project loan documents will contemplate their being "packaged" into a pool. The individual loans provide that the borrower's obligation are unaffected by the performance of other loans in the pool. The pool documents will provide for the "allocation" of a portion of the total reserve to secure each borrower's loan. Upon payment of principal and interest, the amounts allocated in the reserve for each borrower will be "deallocated" to maintain the proportionality balance of each individual allocation of reserve to the amount of principal outstanding. Such "deallocated" reserve funds then become available to the fund for repayment of capital market borrowing or may be made available for new loans.

The National Water Bank will provide for the structure of the pool's credit. In addition to the individual and collective commitment to repay the individual loans by their borrowers, the pool's reserve structure will likely require the application of one or more of

(i) the use of a grant or loan from multi-lateral institutions as a funded reserve for the pool,

(ii) the creation of an additional reserve fund at the borrowers' level (perhaps up to a certain debt-service coverage ratio after which additional repayments could be used for new loans.).

(iii) a mechanism which might permit the pool to intercept money which would otherwise be granted by the national government to the municipal borrower,

(iv) an international guarantee of the repayment of funds borrowed to fund the pool and

(v) a sovereign guarantee of the reserve fund's commitment to repay the borrowings of the pool,

In the opinion of certain investment bankers, the structure of the pool supported by the capitalization grant as a reserve will enable many countries to establish such programs without the application of sovereign guarantees.

7. The multi-lateral agency will commit to funding the capitalization grant as part of the initial financing in the capital markets.

8. The pool as structured will be attractive to the capital markets. Experience in the United States shows that the rating services recognize such pools as having significantly higher credit than that of the underlying municipal borrowers. This higher credit permits the financing entity to borrow at significantly less cost than would otherwise be available to the individual municipalities if they borrowed (or could borrow) on their own. We believe that such a structure will allow sub-sovereign entities to access the capital markets which they might not otherwise access.

9. With proper underwriting, the pool should be able to raise significant funds in the international capital markets. These funds would be used by the National Water Bank to fund participant loans in the pool – thereby enabling the sub-sovereign entities who are the borrowers to construct the water facilities for which the funds were raised.

10. The National Water Bank would administer the loan program, insuring that the funds were properly disbursed and spent, the works are properly built and the loans are repaid. In some countries the public works or environmental ministry would oversee the operation of the facility while the National Water Bank would serve as the financing, disbursement and collection agency. The flow of funds out of the pool into individual loans and back to the pool as debt-service payments will have to be transparent. This transparency, through financial reporting and auditing, is necessary to enable the pool to issue sequential tranches of debt.

Different Structures for Revolving Funds

There are different ways that Revolving Funds are structured in the United States.

A direct loan model is employed by several states. Under this loan model, the fund loans out the Federal and state capitalization money at a subsidized or even zero interest rate. As the loans are repaid, the funds can then be used to make new loans in perpetuity. This is an appropriate model used in those states which have an excess of capital for financing needed water or wastewater projects.

Under a cash flow model, a State Revolving Fund makes direct loans from the capitalization grant. It then leverages the repayment stream from those direct loans. It pledges the repayment stream for payment of a bond issued in the capital markets. The funds raised from the issuance of bonds in the capital markets are then loaned out in the form of new direct loans. This model has the advantage of making money available for projects sooner than it otherwise would be from the repayments of the original direct loans.

In the reserve fund model, the State Revolving Fund never loans out the money received from the Federal capitalization grant. Instead, these funds are kept in a reserve fund. The reserve fund is used to provide credit and subsidy support for new bond issues. The capitalization grant in the reserve fund is used to over-collateralize the bond issue. The fund then borrows in the debt capital markets at favorable rates. The proceeds of such new bond issues are used to provide the loan funds to finance municipalities' water supply or wastewater treatment facilities.

Leverage is used in the reserve fund model. The amount of money available for water projects is significantly higher than the available direct Federal (or multi-lateral institution) grant or loan. This leverage is achieved by using the capitalization grant as credit support for the capital-market financing, the proceeds of which is loaned to support a large number of projects. The degree of leverage will depend on the credibility of the aggregate credits of the project borrowers, as enhanced by sovereign or international guarantees. The credit structure should permit capital market funds to be available at favorable rates. Additional financial engineering permits some or all of the borrowings from the pool to be made at subsidized rates.

The main advantage of this approach is that a country can raise funds from the capital markets well in excess of the resources which the multi-lateral institutions might be willing to make available to any individual country. More projects can be financed. Sub-sovereign borrowers can be accommodated. The program can be used to strengthen domestic institutions. It can encourage accountability on borrowers. An interest rate subsidy can be provided which is paid for entirely within the pool model and is not dependent on the state appropriations. The subsidy in a reserve fund model is generated by the investment earnings of the reserve fund.

Conclusion

An attractive model exists for management and financing of sub-sovereign water projects throughout the world. This model is based on the State Revolving Funds for water projects used in several states of the United States. Under this model, multi-lateral agencies can help create national water project pools which then can provide financing for individual projects. Properly structured, the national pools can access the capital markets by using the capitalization grant from the multi-lateral agency as a reserve fund.

This approach should be attractive for nations which have significant water project needs, which want to limit the application of sovereign guarantees to the

program and which have or can create a credible source of repayment of borrowing by municipal or private project sponsors.

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