International
Special Report

Financing of Mexican States, Municipalities, and Agencies: Alternatives and Strategies

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For a Spanish-language version of this report, see Fitch Research on "Financiamiento a Estados, Municipios y Organismos Mexicanos: Alternativas y Estrategias," dated Sept. 5, 2001, available on the Fitch web site at www.fitchratings.com.

■ Summary

In Fitch's opinion, the recent changes in Mexico's institutional environment are favorable and foster the expansion of the domestic securities market. Insofar as the recent fiscal reforms increase the generation of free (non-earmarked) flows, the financial flexibility of the subnational entities would also increase, thereby improving their credit profile. The master trust (MT) structure that has been promulgated by the federal government, along with the creation of new securities, such as the exchange certificate (or certificado bursátil), should encourage the participation of the states in Mexico's capital markets in the short term. Financing structures that have been tested in other countries — such as municipal bond funds (MBFs, or the funds) — which, if adequately adapted to the country's realities, promise to provide many municipalities with access to credit in the capital markets. Lastly, the changes that are becoming evident in the management of state-owned water utilities further foster the creation of models to finance projects with state and municipal infrastructures.

■ Background

Mexico's subnational entities (states and municipalities) are currently undergoing a far-reaching process of institutional change. The outcomes of the decentralization process, which has been gaining momentum in Mexico since 1994, are of crucial importance for the country's future economic development. Since 1997, Fitch has been actively participating in the assessment of credit quality of Mexico's subnational entities — Fitch was the first rating agency to develop a methodology specifically applicable to the Mexican states. To date, Fitch maintains credit ratings for 15 states, 22 municipalities, and the federal district (Mexico City), as well as one water utility *(see table, page 13)*.

The new financial management policies fostered by the federal government since 1999 have encouraged the introduction of new financing and credit underwriting structures, as well as the development of a new credit culture in financial markets relating to subnational entities. Accordingly, this recent development has cultivated a substantial change in the degree of independence and accountability of the states and municipalities in their own finances and debt profile.

In connection with the new financing and credit underwriting structures in effect since March 2000, there is no longer any mandate between the subnational entity and the Ministry of Economy and Public Credit (SHCP; or Secretaría de Hacienda y Crédito Público).

The federal government has thus clarified the rescission of any implicit or explicit credit guarantees that may have been inferred from the federal rulings regarding the states' debts prior to the aforementioned date. The end of the mandate requires that the subnational entities have their own creditworthiness assessed.

In this report, Fitch describes and analyzes the MT proposed by the federal government. In addition, it discusses the characteristics of a variety of financing structures that have been implemented with excellent results in many countries and might be adaptable to the Mexican context, particularly for the financing of the municipalities.

The new financial culture among the subnational entities has reached the state and municipal public agencies. Therefore, Fitch is monitoring closely the financing and operational schemes these entities might decide to put in place, as well as financing models for specific municipal and state infrastructure projects.

■ Evolution of the Public Finances of Subnational Entities

Mexico has been modernizing its public administration at all levels of government in recent years. The process has underscored such goals as greater transparency, discipline, and efficiency in the utilization of public resources. Furthermore, the states and municipalities both have been enjoying a greater degree of autonomy in managing their expenditures — a step that required an improvement of their own administrative capabilities.

Since 1994, these changes have been gaining momentum in the states with the decentralization of education and health services. Subsequently, with the incorporation of Ramo XXXIII (Branch XXXIII) in 1998 (which consisted of the aforementioned resources of education and health), the processes continued with the inclusion of new support funds linked to the educational and social infrastructure, public safety, and technological education. More recently, the creation of the Support Program for the Strengthening of the States (PAFEF; or Programa de Apoyos para el Fortalicimiento de las Entidades Federativas) in 2000 has provided the states with additional resources that may be directed to address various needs, such as: financial reconstruction; strengthening of the pension and retirement systems; and infrastructure and public works.

The municipalities, on the other hand, have experienced significant change in many areas. Since 1998, their budgets were considerably enhanced with additional funds from Ramo XXXIII and, more specifically, the Social Infrastructure Fund and the Municipal Strengthening Fund, which are intended for social welfare, public safety, financial reconstruction, and public works. Moreover, the recent amendment of Article 115 of the Constitution has provided the municipalities with, among other benefits, increased empowerment in the management of their treasuries as regards their own revenue, particularly from local property taxes, which are the most important source of income for the municipalities of Mexico.

While the decentralization process has strengthened the states and municipalities in general, the most important focus of the reforms has been in the area of public spending. With the creation of different funds under Ramo XXXIII, the federal government transferred important expenditure prerogatives to the subnational entities and allocated to them the necessary resources. Despite the fact that those resources are earmarked for specific sectors and purposes, the entities enjoy greater autonomy in controlling expenditures as a function of the needs of their respective populations. On the other hand, the subnational entities continue to exhibit a greater dependency on federal revenues in comparison with other countries because their taxing powers are significantly circumscribed *(see table below)*.

In 1980, the federal government began to implement the national Fiscal Coordination System through the signing of agreements between the federal government and the subnational entities whereby the entities, for the sake of better control and greater efficiencies, ceded certain powers of taxation to the federal government in exchange for receiving their funds through the General Federal Allocations Fund (Fondo General de

Tax Revenues by Government Levels
(%)

	Central Level	Local Level
Canada	50.0	50.0
Argentina	60.0	40.0
India	62.7	37.3
Switzerland	64.5	35.5
U.S.	66.3	33.7
Brazil	71.4	28.6
Germany	72.8	27.2
Mexico	94.7	5.3

Source: State Government of Nuevo León.

Participaciones Federales). Since then, the formula for the distribution of those allocations has evolved from the original compensatory model to one based more on redistribution.

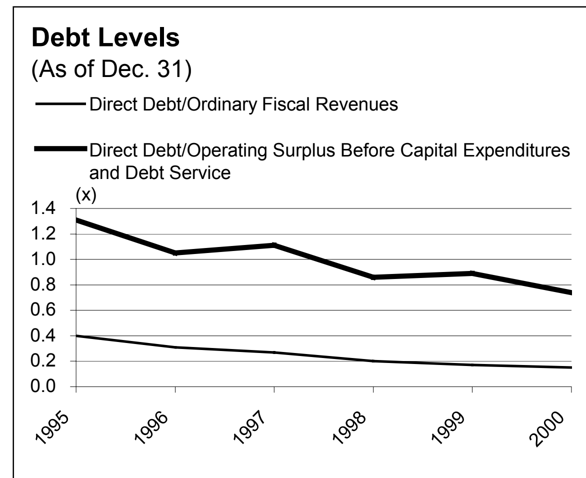
The subnational entities' dependence on federal transfers is high (averaging 88% of total state and municipal revenue). The dependence of the states is greater, averaging 91%, while that of the municipalities is about 71%. Obviously, revenues per capita at the state level are much higher than those of the municipalities, but their expenditure commitments are also very different.

One consequence of this revenue structure is the reduced budget flexibility for the subnational entities. Furthermore, the structure also discourages collection efforts at the local level while favoring increased transfer management by the entities vis-a-vis the federal authorities. As a result, there is an increasing awareness of the need to make federalism more effective and provide greater financial autonomy and accountability for the entities. In this regard, a number of favorable changes have already begun, though they are only in the early stages.

Pursuant to the federally sponsored Credit Support Program for States and Municipalities, following the financial crisis of 1995, a large proportion of the debt incurred by the state entities was restructured and converted to investment units (UDIs; or Unidades de Inversión) with terms of up to 18 years. (UDIs are units of monetary correction.) These liabilities account for the greater part of the Mexican states' outstanding debt to date. Since 1995, Fitch has been witnessing a process of steady reduction of debt in most Mexican states relative to discretionary revenues.

An evaluation of the group of 16 state entities rated by Fitch indicates that debt relative to discretionary revenues (i.e. transfers received from the federal government, plus revenues from state sources, plus PAFEF) and the operating surplus before capital expenditures and debt service (i.e. surplus cash flows freely available to pay interest and principal on public debt and/or make capital investments) decreased considerably for the group between 1995 and 2000. The chart above right shows the trend of these indicators by plotting the median debt levels of each of the 16 states rated by Fitch.

Notably, the indicators relative to operating surplus before capital expenditures and debt are especially relevant because they reflect the entity's real



capability to service its debt through the generation of free flows. While this indicator has also shown a downward trend in recent years, its performance is more variable and less predictable in time. Therefore, it is possible to establish significant differences in evaluating the credit profiles of the entities, which become less evident in an analysis of debt levels relative to revenues.

On the other hand, the public debt of the municipalities has generally performed quite differently from that of the states. The life of municipal debt is generally shorter, as there are limitations for indebtedness with duration that spans beyond the administrative terms of the mayors (three years). For this reason, municipalities generally used credit as a temporary or seasonal resource to supplement their cash flows, rather than an instrument to finance long-term public investment projects. As a result, the overwhelming majority of municipalities in Mexico tend to have considerably lower debt levels relative to the states.

Among all the contingent liabilities confronted by the Mexican subnational entities, the most significant are the unfunded retirement and pension systems and the financial gaps of their decentralized agencies.

In recent years, it has been increasingly recognized that there is a potential problem with the long- and medium-term viability of the pension and retirement system. The problem lies essentially in the combination of a number of factors, including: disparity between the pension laws and recent demographic trends; contributions that provide insufficient support; recognition of vested seniority prior to the inception of these systems without matching support; use of resources for other purposes

(loans, medical services, etc.); and, in some cases, the absence of any formal pension system.

Generally speaking, this contingency is significantly greater for the states than it is for the municipalities because of the lower turnover rate of the state bureaucracy and of the existence in many states of an important roster of state-employed teachers with a very low turnover rate. However, among the states there is a wide diversity of problems resulting from their internal differences. For instance, workers may be affiliated to a state or federal social security system; contributions to the systems may vary greatly (from zero to 25% of the payroll); there may be far-reaching discrepancies in the guidelines of the state pension laws; and there may be differences in the relative weight of the number of state-employed teachers.

Notably, a growing awareness of this issue, even at the federal level, has developed recently, which led to significant reforms in the pension laws. In some cases, the most important changes have been designed to achieve the following: formalizing the pension systems; increasing contributions by the government and by public employees; extending the contribution periods; strengthening the technical reserves through special contributions; and adjusting the benefits received by the workers to the actual capacity of the system.

Contingent liabilities of the subnational entities must be considered and analyzed in connection with the financial health of the decentralized agencies. In Mexico, the credit profile of the agencies varies greatly because, on the one hand, there are agencies that are in operational and financial good health while, on the other hand, there are agencies that have had to receive subsidies from the states, the municipalities, and even the federal government. One of the critical problems that surfaces in a large number of agencies is the discrepancy in the fees charged for a specific public service, with the ensuing decapitalization that prevents the agencies from maintaining their own infrastructures or making the new investments required by the growing public demand.

The new financial culture developing among the subnational entities has also exerted an important influence on the management of public agencies, leading to greater operational efficiency in an environment of enhanced independence and financial management self-sufficiency.

Between 1997 and 1999, more than 10 entities (mostly states) took the initiative of obtaining their own credit ratings for the first time. Subsequently, since the modification of the bank capitalization rules (between December 1999 and October 2000), most of Mexico's states had their general obligation debts rated. On the other hand, while the municipalities and decentralized agencies have been significantly less inclined to subject themselves to a credit rating assessment, Fitch estimates that the number of rated entities and agencies will continue to increase significantly in the immediate future. As of Jan. 23, 2002, 28 states, 33 municipalities, and two water utilities were rated.

Between December 1999 and October 2000, Fitch observed a growing trend by Mexico's subnational entities toward employing greater transparency in the use of public resources; auditing of financial statements by outside auditors; modernizing management, collection, and control systems; increasing collection efficiency at the local level; and training of personnel; among others.

Credit ratings will contribute to the creation of a database that will promote a more efficient credit culture through a better understanding of the differences in credit profiles and comparisons. Entities with the best ratings will most likely receive more favorable financing terms. Furthermore, establishing a track record of credit rating assessments will contribute significantly to entities' participation in the debt capital market, thereby opening a new source of funding that improves upon the terms and conditions traditionally obtained.

Finally, the implementation of the fiscal reforms at the federal level should strengthen the finances of Mexican subnational entities. The fiscal package approved by the national congress late in December 2001 provided additional taxing powers to the states, under which, at their option, the states may levy a 5% tax on personal incomes and a new sales tax at a top rate of 3%. As additional revenues increase the generation of free cash flows to the states, the financial flexibility of the entities should also increase, thereby improving their credit profile.

■ Financing on the Basis of Future Flows of Federal Contributions

The majority of the state and municipal debt outstanding to date had been contracted under a structure whereby the banks lent to the entities under an agreement between the entity and the SHCP. Under

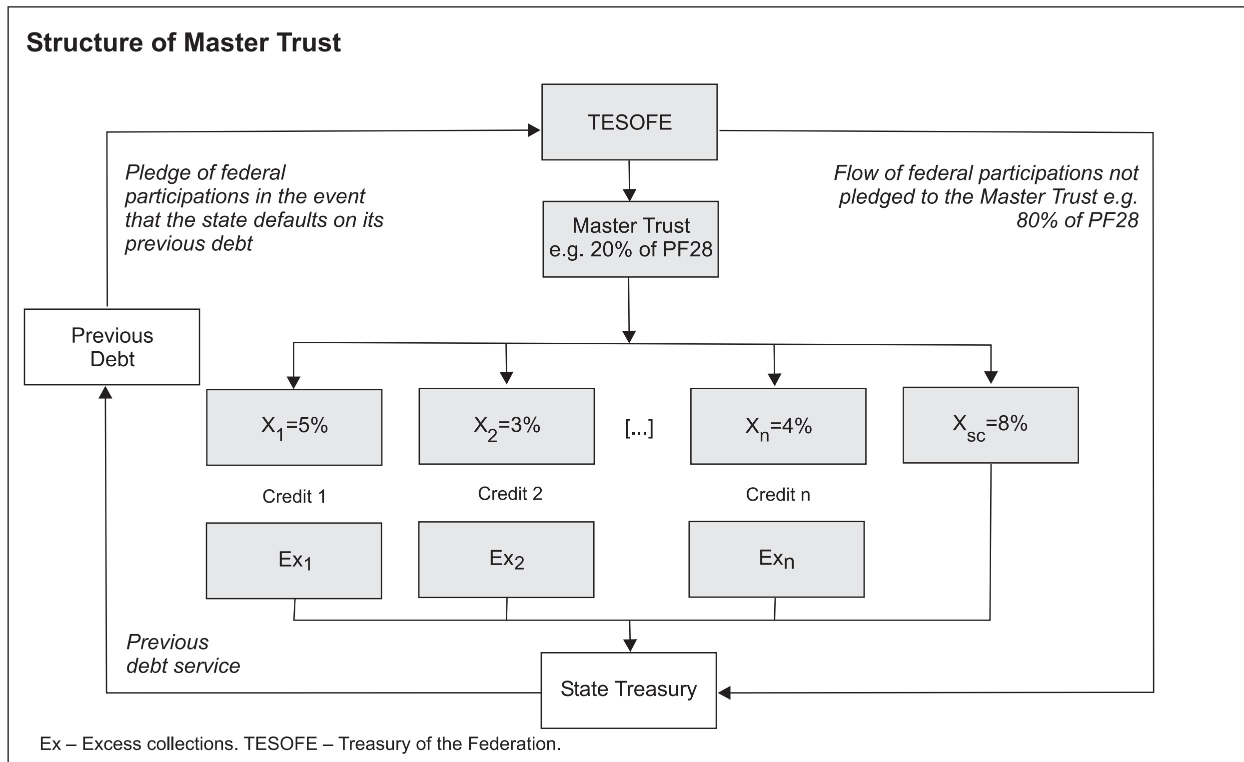
that structure, in the event of a default, the banks would have recourse to the SHCP for all amounts in arrears. The SHCP would then discount from the state's allocation of the federal participations corresponding to the period in which the SHCP paid the delinquent amounts to the banks. Therefore, in a default, the banks would consider this kind of debt federal government risk more than state risk.

During the second half of 1999, Mexico's financial authorities informed the states and municipalities that the old structure would expire in March 2000. In addition, important changes were to be introduced in the legal framework regulating financing contracts. More specifically, the changes stipulated: a) the modification of the rules governing the requirements for bank capitalization; and b) the modification of the regulation of Article 9 of the Fiscal Coordination Law as regards the registration of the financing operations of municipal and state entities. These new capitalization rules do not allow for consideration of the new financing for the entities as a risk of the federal government because they acknowledge the difference in the credit risk of the entities as determined by their own creditworthiness.

The new environment requires the determination of viable schemes for creditors and debtors that would make it possible to reactivate and provide liquidity for financing for the country's states, municipalities, and agencies. Traditionally, federal contributions by the Ramo XXVIII (FC28) have been used to underwrite the borrowings of subnational entities. Currently, these revenues remain an attractive method of collateralization in the new financing structures, since the contributions can be drawn upon — subject to the authorization of the local legislatures — for debt repayment given their importance in the state and municipal budgets, their source at the federal level, and their reliable performance historically.

Consequently, the federal authorities have proposed a financing structure for states based on a MT. Under this scheme, the state pledges X% (a specified portion to be determined by each state) of its FC28 revenues to a trust whose specific objective is to isolate, through subaccounts, the source of repayment of each borrowing; any unused pledged revenues are returned to the state treasuries. The chart below illustrates the operation of this structure.

Notably, the debt in the MT is subordinated to the debt contracted before April 1, 2000 because, in the event of a default in the latter, the Treasury of the Federation (TESOFE) would discount the delinquent amounts from the FC28 corresponding to the state. As a result, the



Ex – Excess collections. TESOFE – Treasury of the Federation.

resources flowing to the MT to service the new financing would be reduced. However, in as much as TESOFE deposits the FC28 of the state directly into the MT, and given that the trustee manages debt service — in both cases acting on irrevocable orders of the state — the risk associated with the issuer's willingness to pay is considerably mitigated. Subject to compliance with a series of requisites, the credit characteristics of the financings undertaken under the proposed structure should achieve ratings superior to those of the general obligation rating of the entities.

One of the fundamental aspects of the new structure is the determination by the state of the percentage of its FC28 funds it would be willing to pledge to the MT, which is closely associated with the state's outstanding debt stock, the sustainability of the debt, the capacity for additional debt, and the credit profile desired by the state over the medium- and long-term. Within the MT, each loan is managed through a subaccount, to which a certain percentage (agreed upon by the state and the creditor) is assigned of the monthly inflow into the MT. In this regard, each loan can count on a limited amount for its servicing, and, therefore, the aforementioned percentage must take into account the characteristics of each loan, as well as the safety margins between the expected debt service of the financing and the amount limited by the MT).

The risk profile of each financing may differ within the same MT structure as a function of the degree of protection afforded by the collateral pledged, the terms and conditions, agreed-upon prepayments (no prepayment of the debt is provided for in this structure), and any mechanisms to protect against market risk, among others. They do, however, share similar risks, such as: the credit rating of the issuer; volatility of the FC28 funds; degree of subordination to the debt contracted before April 1, 2000, among others. Notably, no order of preference among loans or borrowings is stipulated within the structure of the MT because all revenues are distributed pari passu, according to the initially agreed-upon collateralization percentage for each loan and not proportionally to the outstanding balances of the credits.

In Fitch's opinion, with this structure, the determination of the credit quality of a specific borrowing depends not only on the financial analysis and simulated performance in adverse critical environments but also on other factors, such as the credit rating of the entity (i.e. general obligation) before and after the MT financing, the strength of the legal structure of the MT and its congruence with the legal framework prevailing in the entity, and the collateralization percentage of the FC28 pledged to the MT by the entity and plans for future indebtedness, among others.

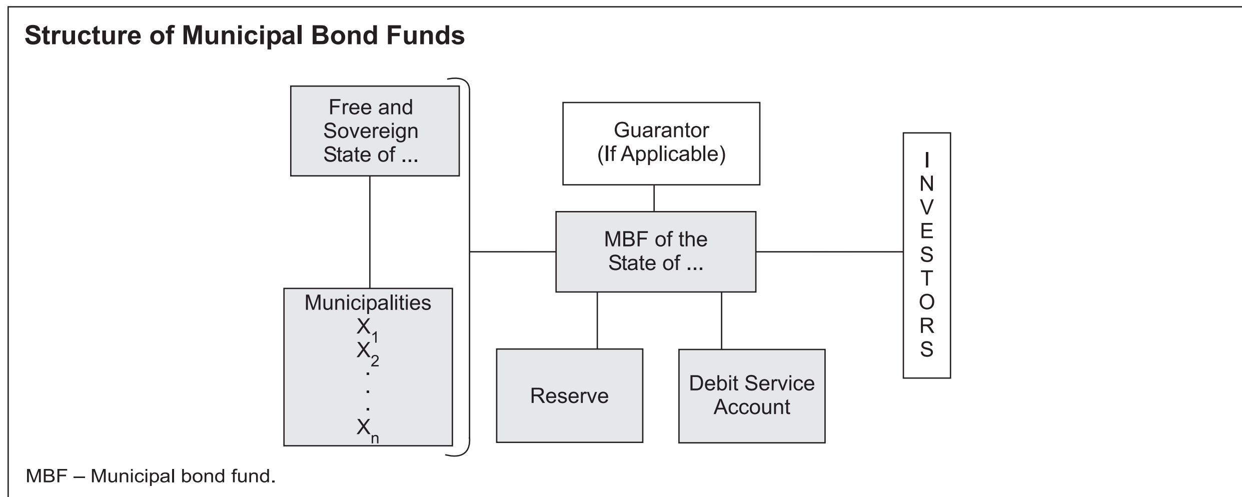
The MT structure proposed for the states might be replicated for the municipalities. Currently, different alternatives are being evaluated to develop a mechanism by which a municipality could deposit a percentage of its FC28 in a trust to service its debt. The rating factors for the analysis in this case would be similar to those mentioned for the states. However, there would be an additional rating factor — the mechanics at the state level to transfer revenues to the municipal budgets, since federal participations continue to be distributed to the municipalities through the states.

Additionally, the proposed structure enables the subnational entities to meet the expectations and conditions required by the domestic capital market. Currently, the potential for issuing debt is being analyzed by several financial intermediaries, given the subnational credit history that has been recorded in recent years. Furthermore, the concept of the exchange certificate, created under the recent reform of the Securities Market Law, will encourage subnational entities to issue debt, given its competitiveness as a financing instrument over the medium- and long-term. The factors discussed above allow us to expect a dynamic and active participation by the subnational entities in the Mexican capital market in the short term, which would provide access to a competitive source of financing as an alternative to bank credit.

■ Municipal Bond Funds

Considering the favorable results of the MBFs in many countries, Fitch considers it opportune for the implementation of this financing structure in Mexico. MBFs are currently in use successfully in the U.S. and Canada, as well as in a number of European countries, South Africa, and Japan. So far, the basic structure of this financing instrument has not been implemented in Latin America. Given the need for financing at the municipal level and the credit profile of many Mexican municipalities, Fitch believes that Mexico can be a pioneer in the region and take the lead in the issuance of debt securities for the benefit of the municipal entities.

Structure of Municipal Bond Funds



MBF – Municipal bond fund.

The basic structure of the MBFs is illustrated in the chart above. Commonly, the state will adopt a law for the creation of a competent authority that will govern the administrative functions of the fund. The authority is established with the sole purpose of issuing bonds in the capital markets and of segregating from the municipalities the source of repayment. The capital raised from the issue is recycled in a revolving manner through credits whose terms generally coincide with the respective terms of the bonds issued by the fund. The funds could, in essence, be characterized as pass-through structures because the risk associated with the timely payment of the bonds includes the risk embedded in the credits that the fund extends to the municipalities. Therefore, the financial risk assumed by the bondholders is essentially the risk of timely payment by the municipalities that comprise the MBF.

Part of the capital raised is separated in reserve accounts that serve as a cushion for the timely payment of the bonds. The obligation of servicing the bonded debt is met with the flows associated with the credits that the fund distributes to the municipalities; that is to say, the payment of principal and interest on the credits are the main source of payment for the fund’s bonds.

This structure has many advantages not only for the borrowing municipalities but also for the development of domestic capital markets. The main advantage for the municipalities is that, for many of them, it would be the first time they would be able to access financing in the capital markets, a source of funds that would be impossible to access independently for several reasons, among them:

- The amounts of capital required by some municipalities are too small relative to the cost of floating a bond issue.
- Those amounts, plus the risk profile of many municipalities, would not meet the requirements of the Mexican institutions that would invest in municipal bonds if they were to attempt to place their debts on the capital markets on their own.
- The intrinsic credit weakness of the municipalities.

These limitations are mitigated by the dispersion and diversification effect of the borrower portfolio created by the MBF. The remaining risks are essentially systemic in nature (common to the whole country), and, therefore, the MBFs generate greater interest among investors.

The structure is designed to improve substantially the credit quality of the bonds through capital reserves and other additional supports. The rating assigned to the bonds should be higher than that assigned to a municipal bond issued independently; therefore, the funds should be attractive to a larger group of investors and more liquid.

The creation and development of domestic capital markets is a priority for many governments in Latin America and the multilateral agencies, such as the World Bank and the Inter-American Development Bank. The availability of high-quality bonds that will offer varying terms and yields, as we have suggested, would contribute to the creation of new types of liquid assets for Mexican investors, such as retirement funds, financial institutions, asset managers, and insurance companies.

Strictly within the Mexican context, the current social and economic conditions in many municipalities demand improvements to the public infrastructure. While it is true that the decentralization process in Mexico has not yet

concluded — thereby making it difficult to predict what the responsibilities and sources ultimately delegated to the entities will be — the present institutional framework already allows for the creation of new financing structures specifically designed for the municipalities.

The municipalities of Mexico have been given the responsibility of providing water and sewer services through their decentralized agencies, as well as maintaining the streets and roads and other services of vital importance to urban populations, which require important public infrastructure investments. To meet these demands, the municipalities do not currently have stable and predictable financing sources that would allow them to accelerate the development of that infrastructure.

One of the conditions that would favor the introduction of MBFs in Mexico is the sustainable debt levels currently prevailing. Furthermore, the present income structure of the municipalities is composed of not only the federal contributions but also their own revenues (accruing mainly from property taxes), which they can legally dispose of in any manner they see fit and which may be used for debt service. This suggests that financial flexibility levels are generally adequate, which allows many municipalities to commit themselves responsibly to higher debt levels and to improve urban living conditions in Mexico.

MBFs are known in the U.S. as “municipal bond banks” and “state revolving funds.” They have yielded very favorable results, not only for relatively small states, such as the New England states in the northeast, but also for entities with greater populations and economic weight, such as New York City and the states of Texas and Massachusetts. Similarly, the Canadian provinces of Ontario, Alberta, and British Colombia have also implemented such mechanisms to provide their municipalities with greater access to financing in the domestic and international capital markets.

Fitch has rated the financial obligations of all the MBFs in the U.S. and has developed the most advanced methodology with which to perform the credit analysis of these structures. For Mexico, Fitch has modified its rating approach by focusing the analysis on the following factors:

Evaluation of the Legal Structure

The legal analysis addresses the legality and validity of the fund as a juridical person created by the federative entity pursuant to Mexican law and administrative aspects, such as the creation of an authority to regulate the fund and defend the interests of the municipalities, the states, and the investors. Fitch examines the mode and process of loan generation for the municipalities, for example, either by means of an agreement between the authority and any entity legally competent for those ends or as provided for by the relevant legislation of the state involved.

Availability of Reserve Accounts

The capital reserves (liquid assets of the fund set aside in favor of the bondholders) are a common characteristic of the MBFs and provide collateral support for the financial obligations of the fund. The reserves are kept available for payments of the interest and principal on the bond fund in the event that the periodic flows generated by the municipal credits should not be sufficient. The reserves are invested in high-grade liquid instruments of the money markets to generate additional income for the fund, which are also in favor of the bondholders. Consequently, Fitch examines the investment policy implemented by the authorities and the quality and return of the invested reserves.

Guarantees

In addition to the reserve accounts, Fitch evaluates the quality of any guarantees or additional supports, such as a guaranty of the state, the federal government (or one of its agencies or enterprises), or any other public or private guarantor. Fitch considers it a credit strength for the MBFs to incorporate joint and several obligations, as well as the possibility for the federative entity to draw upon the federal contributions allocated to the municipalities and on other sources of income to prevent payment defaults by the weaker municipalities.

Composition of the Municipal Credit Portfolio

The analysis focuses especially on the concentration of risk in one or several municipalities. In some states, political, economic, and industrial activities are concentrated in the capital city; therefore, its participation in the fund’s credit portfolio may be substantial. If that is the case, Fitch will evaluate the municipality using its rating methodology *(see text box, page 9)*. In addition, the assignment or transfer of resources or powers of taxation in favor of the fund is an important factor when the governing authority has the power to assign or redirect sources of income for the obligations of the fund, if necessary.

Essential Factors in the Evaluation of Mexican Municipalities

Fitch evaluates the financial risk of Mexico's municipalities and summarizes its opinion of their ability and capability to meet their financial obligations as general obligations within the national rating scale. This scale is recognized only in Mexico and is applied to bond issues and entities whose debt is denominated purely in Mexican pesos. The ratings based on the Mexican scale are not comparable to other Fitch ratings based on the global ratings scale. The suffix "Mex" alongside the rating denotes that the rating is based on the national Mexican scale.

Economic and Social Context

The economic and social context includes:

- Geographic situation.
- Demographic profile and trends.
- Main economic activities.
- Basic services coverage.
- Infrastructure.

Public Finances

Public finance factors include the most relevant indicators, such as:

- Volume of revenues generated by the property tax and the total taxes from own sources.
- Level of ordinary fiscal revenues (discretionary) and total revenues.
- Operating expenditures, capital investments, investments under F-IV, and total expenditures.
- Operating surplus before capital expenditures and debt service (OSBCEDS; available for payment of the debt and capital expenditures) and in relation to ordinary fiscal revenues (OFRs).

Public Debt

Public debt factors include:

- Institutional framework.
- Debt stock outstanding and its trends.
- Profile of amortization schedule.
- Levels of indirect debt and contingent liabilities.
- Debt stock and debt service rating relative to the OFRs and OSBCEDS.

Given the nature of the management performance in the public sector, the methodology proposed by Fitch for federative entities and municipalities necessarily includes purely qualitative rating factors that may outweigh the quantitative indicators in the analysis. Furthermore, the ratings are, in general, ordinary measurements, as indicated in the definition of each rating level *(see table, page 14)*, and, therefore, they provide information exclusively on the relative position of a given entity. This implies that the rating of a municipality is assigned in comparison to the other municipalities.

Default Tolerance

Statistical simulation models have been developed to determine the degree of stability of flows in the event of adverse economic conditions. Sensitivity analyses must be undertaken to determine the level of protection needed for such a contingency, as well as the quality of the guarantees required to meet the financial obligations of the fund according to the assigned rating.

Fitch participates actively in the initial structuring process of the MBFs, and its analysis contributes significantly to improve the credit quality of bonds under the fund. Moreover, Fitch's analytical surveillance on the ongoing performance of these structures further assists investors by offering them regularly updated information.

In sum, for municipalities, MBFs are a viable financing alternative whose effectiveness has been tested in a number of countries since the 1970s. In all countries that have employed these structures — whether they be advanced or developing countries — the national, state, and municipal governments assume the responsibility of adapting them to the prevailing conditions of the country. This is perhaps the reason why the political will and determination of their leaders and, in particular, the initiative of the states represent the most indispensable prerequisites for their successful implementation.

■ Financing Infrastructure Projects

In addition to an expected increase in general obligation debt issuance by Mexican states and municipalities, Fitch expects the emergence of infrastructure-related debt instruments within the Mexican domestic capital market. This debt will ultimately be supported through user fees generated

by an "enterprise" system of infrastructure projects, or by a stand-alone, nonrecourse "project." While Fitch expects ownership of these facilities to remain in the public sector, not all of the debt issuance will be undertaken by government authorities. Private concessions for both enterprises and projects are likely to play an important role in the upgrading of Mexican infrastructure. In some cases, government operating, debt service, or capital improvement support may also be provided. Fitch believes that the most likely infrastructure financings to be initiated by federally approved concessions in coming years will be for airports. From state and local governments, the most likely sectors are water and sewer, as well as toll roads. The key considerations used by Fitch to analyze the credit quality of such enterprise or project debt are as follows:

Economics

Of primary importance is the economics of the enterprise or project, as expressed by the number of customers and the revenue its services produce. This cash flow determines the ability to repay operating costs, debt service requirements, and future capital investment needs. For existing facilities, historical demand and revenue may provide some analytical guidance as to future ability to pay, but the value of this data will depend upon the level of financial transparency, as well as the historical relationship of the facility to its parent government. The latter includes whether or not the government ran the facility like a self-supporting business with rates reflecting full cost accountability. If a water system was previously run as a municipal department but will now be run by a private concession, past revenue and cost information may not prove so meaningful. For prospective or "greenfield" projects, the ability to pay is analyzed through a financial forecast. The value of this forecast depends on how well the behavior of existing customers is understood, how long it will take them to ramp up their usage of the new facility, how demand is expected to grow over time, what competitive facilities may be present, and how elastic customers are regarding user-fee increases.

Organization

The facility being financed will likely be owned by the public sector, but it can be operated and managed by either the public or private sectors. Public sector management can be as a department within the general parent government or as a separate enterprise of the government. Fitch has ample experience rating infrastructure debt under all forms of ownership and management, and no particular model is viewed more favorably than another. Fitch recognizes that private sector participation can increase the pool of available resources for infrastructure investment. In addition, private sector experience in certain sectors can bring important operating efficiencies. What is more important is how well management responds to customer needs and what flexibility it has to meet operating, debt service, and capital improvement needs.

Nature of Government Support

The presence of government support can be a rating concern, particularly where facility economics are vulnerable. Government support can take the form of capital infusions (in essence, public equity that reduces the amount of public indebtedness), operating subsidies, or debt service guarantees. All three forms of support can enhance credit quality, depending on the conditions for providing public equity, the budgetary mechanisms in place to provide operating support, and the degree to which the government considers the project debt as its own. A debt guarantee, if properly structured, can even substitute the credit quality of the project or enterprise for that of the parent government. In any case, the value of government support depends on the nature of the government's legal obligation, its financial ability and political willingness to assist, and the mechanisms in place to implement the assistance. The parent government should also consider the consequences for operating efficiency from the assistance that it provides to the operator.

Rate-Making Authority

There is always some potential for demand-driven revenue volatility or for unexpected costs to arise. For this reason, an important credit consideration is the legal authority of a facility operator to adjust rates when needed. This not only provides comfort to debtholders but also ensures that adequate financial flexibility is maintained during unexpected circumstances. The organizational structure (local legislation creating a public enterprise or a concession agreement for a privately managed project) will largely determine what rate-making authority exists. Other regulations or project documents may describe the process by which rates are adjusted and what external approvals are needed, if any, to make these adjustments. Economic and social considerations, including the necessity, competitiveness, and affordability of the service, will determine if rate adjustments continue to maximize revenue.

Operating Environment
An analysis of the operating environment for an infrastructure project often starts with its legal and regulatory framework. Statutory control is often distributed among different levels of government, and it is important to understand the legal precedence of each level of government law. For instance, in Mexico, the National Water Commission (Comisión Nacional del Agua) exercises some federal controls over water and sewer activities. Nevertheless, it has also split these services into 13 regional watershed agencies. Further down are the individual state water laws, which contemplate a state water commission and govern the relationships with municipal water authorities. The Mexican Constitution enshrines municipal control over water and sewer services. Some of these water authorities are governed administratively as an enterprise, with others governed by municipal council. Political risk can emerge for enterprise or project debtholders if the legal environment within or between levels of government is changing. For privately concessioned projects, project agreements may also contain triggers for meeting certain performance standards or capital improvements.

Use of Surplus Cash Flow
If cash flows are in a surplus position after operating costs and debt service, it is important to understand how the surplus is applied. It can either be reinvested in the facility or siphoned off by the parent government. If the surplus is diverted to the parent government, Fitch will try to determine whether this has affected needed capital investment and the peak operating efficiency of the facility.

Required Capital Improvements
After the initial investment to either build, renovate, or expand a facility comes the constant need for reinvestment to maintain the peak operating performance of the original facility or accommodate additional demand. Cash flow projections and expected rate increases should anticipate these needs. Maintaining some financial margin in addition to operating and debt service costs is critical to this expectation. In cases of major maintenance projects, reserves can be accumulated from surplus cash flows in anticipation of a costly improvement. If additional debt is required, Fitch will consider both the entity's legal ability to issue debt and its financial ability to support it while also maintaining a financial margin adequate to its business risks.

Evolving Infrastructure Issues Within Mexico
The Fitch rating on both public and private infrastructure debt will address key domestic investor concerns about the adequacy and dependability of pledged revenues to meet financial requirements. For Mexican infrastructure projects, there are also a number of evolving concerns that Fitch plans to follow.

For water and sewer projects, the status of changes in state water laws is an important factor, particularly with respect to the authority to adjust rates and turn-off service for nonpayment. The continued compatibility of water laws and regulations across levels of government is an additional concern. A challenge for the new water authorities will be to better utilize existing production and maximize revenues by reducing water losses, which remain staggeringly high throughout Mexico. This presents two opportunities. Some costly capital investments in new production could be delayed if a higher proportion of existing production were not lost through faulty distribution pipes. Also, by being able to sell a higher proportion of production, water authorities could yield significant increases in revenue for operating expenses and capital improvements within the current rate structure. A final challenge will be the degree to which private capital and expertise is allowed to enter the Mexican water sector. Throughout Latin America, there is a backlash against the privatization of water and sewer services. For this reason, it seems likely that Mexican state and local governments will slowly develop their own version of public-private partnership schemes, as they gain confidence in how to balance public policy considerations with the benefits of private sector capital and expertise.

For toll road projects, Fitch expects to see increased investment activity at the state rather than the federal level. While there is a negative legacy in Mexico with respect to toll road financing, this does not preclude the financing of economically viable projects in the future. Of particular interest is whether projects are financed on a stand-alone basis or pooled, as in the U.S., into turnpike authorities. The latter would certainly provide some opportunity for stronger credits, since projects could financially cross-collateralize one another. Toll road projects often take years to reach meaningful revenue streams, which is important, since most of these projects are heavily leveraged by debt. Implementation and inter-operability of electronic toll equipment will also be a future consideration.

There is also a need for progressively longer-dated debt instruments to finance infrastructure projects successfully. The level of indebtedness needed to either acquire or improve a facility can often result in a heavy debt load that economically takes longer to retire than is possible with existing domestic bonds. While Mexico has made recent improvements in extending its bond yield curve, there is still a financial mismatch, which continues to expose project debt to refinancing risk. One possible solution to this problem is the securitization through a special purpose vehicle of project or enterprise bank loan debt. For certain Mexican corporations, such financing innovations have already been successfully tested.

In sum, Mexico's decentralization process has generated strong interest in improving public infrastructure at the state and municipal levels. From Fitch's perspective, the changes in the institutional framework should lead to the creation of innovative financing structures oriented to the national capital market that can be implemented gradually to facilitate the development of public works of vital importance to the nation.

State, Municipal, and Agency Ratings
(As of Jan. 22, 2002)

	National Scale Ratings	Global Scale Ratings (Local Currency)	Latest Revision
State Entities			
Aguascalientes	'AA–'*	—	6/7/01
Baja California Sur	'BBB'	—	5/18/01
Coahuila	'AA–'*	—	7/3/01
Colima	'A'	—	3/20/01
Mexico City, DF**	'BBB+'	—	1/19/01
State of Mexico	'BB'	—	6/1/01
Hidalgo	'A+'	—	7/3/01
Jalisco	'BBB+'	—	7/3/01
Michoacán	'A+'	—	6/7/01
Morelos	'A'	—	1/16/02
Puebla	'A+'	'BB'	5/18/01
Quintana Roo	'A–'†	—	7/3/01
San Luis Potosí	'A'‡	—	6/7/01
Sinaloa	'BBB'§	—	8/29/01
Tabasco	'A'	—	5/18/01
Veracruz	'A+'	—	5/18/01
Municipal Entities			
Acapulco, Gro.	'A'	—	6/29/01
Atizapán de Zaragoza, Mex.	'A+'	—	3/20/01
Coatzacoalcos, Ver.	'A–'	—	7/31/01
Cuernavaca, Mor.	'A+'	—	10/17/01
General Escobedo, N.L.	'A'	—	12/18/01
Guadalajara, Jal.	'AA–'	—	11/22/01
Guadalupe, N.L.	'A+'	—	11/2/01
Irapuato, Gto.	'A+'	—	10/31/01
Ixtapan de la Sal, Mex.	'A–'	—	8/8/01
Minatitlán, Ver.	'BBB'	—	12/20/01
Morelia, Mich.	'A+'	—	3/5/01
Naucalpan, Mex.	'A–'	—	2/20/01
Pachuca, Hgo.	'A'	—	8/10/01
Querétaro, Qro.	'AA–'	—	9/25/01
San Luis Potosí, S.L.P.	'A+'	—	5/28/01
San Nicolás de los Garza, N.L.	'A+'§	—	12/17/01
San Pedro Garza García, N.L.	'AA'	—	10/25/01
Santa Catarina, N.L.	'A+'	—	12/5/01
Tehuacán, Pue.	'A–'	—	5/4/01
Tijuana, B.C.	'AA–'	—	10/19/01
Tuxtla Gutiérrez, Chis.	'A+'	—	5/24/01
Veracruz, Ver.	'A+'	—	12/20/01
Agencies			
SAPAL – Water Agency/León, Gto.	'AA–'	—	8/28/01
Ratings in Process			
Atlixco, Pue.	NR	—	—
CEA – Querétaro	NR	—	—
SEOCC – Puebla	NR	—	—

*Rating Outlook Positive. **General obligation rating; does not consider the debt of the federal government; if debt of the federal government was considered, the corresponding rating would have been 'AAA(Mex)'. †Rating Watch Negative. ‡Rating Outlook Positive. §Rating Watch Positive. NR – Not rated. Note: Because all national ratings correspond to the national scale, "(Mex)" has been omitted to facilitate clearer reading.

Mexico National Ratings Scale

‘AAA(Mex)’	Highest credit quality rating: This is the highest rating assigned by Fitch Mexico in its national rating scale. This rating is assigned to the "best" credit risk relative to all other issuers or issues in the same country and will normally be assigned to all financial commitments issued or guaranteed by the Federal Government of Mexico.
‘AA(Mex)’	Very high credit quality rating: This rating denotes a very strong credit risk relative to other issuers or issues in the same country. The credit risk inherent in these financial commitments differs only slightly from Mexico's highest-rated issuers or issues.
‘A(Mex)’	High credit quality rating: This rating denotes a strong credit risk relative to other issuers or issues in the same country. However, changes in economic circumstances or conditions may affect the capacity for timely repayment of these financial commitments to a greater degree than for financial commitments denoted by a higher-rated category.
‘BBB(Mex)’	Adequate credit quality: This rating denotes an adequate credit risk relative to other issuers or issues in the same country. However, changes in economic circumstances or conditions may affect the capacity for timely repayment of these financial commitments more than for financial commitments denoted by a higher-rated category.
‘BB(Mex)’	Speculative: This rating denotes a fairly weak credit risk relative to other issuers or issues in the same country. Within the national context, payment of these financial commitments is uncertain to some degree and capacity, as timely repayment remains more vulnerable to adverse economic change over time.
‘B(Mex)’	Highly speculative: This rating denotes a significantly weak credit risk relative to other issuers or issues in the same country. Financial commitments are currently being met, but a limited margin of safety remains, and capacity for continued timely payments is contingent on a sustained, favorable business and economic environment.
‘CCC(Mex)’, ‘CC(Mex)’, ‘C(Mex)’	High risk of default: These national ratings categories denote an extremely weak credit risk relative to other issuers or issues in the same country. Capacity for meeting financial commitments is solely reliant on sustained, favorable business or economic developments.
‘D(Mex)’	Default: This rating is assigned to entities, issuers, or issues that are currently in default.
‘E(Mex)’	Rating withdrawn: A rating is withdrawn when Fitch deems the amount of information available to be inadequate for rating purposes or when an obligation matures, is called, or is refinanced.
Rating Watch	Ratings may be placed on Rating Watch to notify investors that there is a reasonable probability of a rating change and the likely direction of such change. These are designated as Rating Watch Positive (↑), indicating a potential upgrade; Rating Watch Negative (↓), for a potential downgrade; or Rating Watch Evolving (↑↓), if ratings may be raised, lowered, or maintained. Rating Watch is typically resolved over a relatively short period of time.
CIT	Technical default rating: Assigned to bank loans or bonded debt with timely payment of interest and principal but noncompliance with certain positive or negative covenants stipulated by Fitch Mexico or with other obligations of the entity or issuer.
Plus (+)/Minus (–)	Ratings from ‘AA(Mex)’ to ‘B(Mex)’ (inclusive of both) may be further classified using a plus (+) or minus (–) sign to denote relative status within the major rating category.
Rating Outlook	A Rating Outlook indicates the direction a rating is likely to move over a one- to two-year period. Outlooks may be Positive, Stable, or Negative. A Positive or Negative Rating Outlook does not imply a rating change is inevitable. Similarly, ratings for which Outlooks are Stable could be upgraded or downgraded before an Outlook moves to Positive or Negative, if circumstances warrant such an action.
General Obligation	A general obligation refers to the financial obligations of an entity irrespective of any guarantees associated with some type of revenue stream (federal participations, specific taxes, or enterprise or project fees, etc.) sureties or other assets or subordination to other financial obligations. It implies an entity’s ability and willingness to meet its financial commitments timely and fully.

International Long-Term Credit Ratings

The following ratings scale applies to foreign currency and local currency ratings.

Investment Grade

AAA
Highest credit quality. 'AAA' ratings denote the lowest expectation of credit risk. They are assigned only in case of exceptionally strong capacity for timely payment of financial commitments. This capacity is highly unlikely to be adversely affected by foreseeable events.

AA
Very high credit quality. 'AA' ratings denote a very low expectation of credit risk. They indicate very strong capacity for timely payment of financial commitments. This capacity is not significantly vulnerable to foreseeable events.

A
High credit quality. 'A' ratings denote a low expectation of credit risk. The capacity for timely payment of financial commitments is considered strong. This capacity may, nevertheless, be more vulnerable to changes in circumstances or in economic conditions than is the case for higher ratings.

BBB
Good credit quality. 'BBB' ratings indicate that there is currently a low expectation of credit risk. The capacity for timely payment of financial commitments is considered adequate, but adverse changes in circumstances and in economic conditions are more likely to impair this capacity. This is the lowest investment-grade category.

Speculative Grade

BB
Speculative. 'BB' ratings indicate that there is a possibility of credit risk developing, particularly as the result of adverse economic change over time; however, business or financial alternatives may be available to allow financial commitments to be met. Securities rated in this category are not investment grade.

B
Highly speculative. 'B' ratings indicate that significant credit risk is present, but a limited margin of safety remains. Financial commitments are currently being met; however, capacity for continued payment is contingent upon a sustained, favorable business and economic environment.

CCC, CC, C
High default risk. Default is a real possibility. Capacity for meeting financial commitments is solely reliant upon sustained, favorable business or economic developments. A 'CC' rating indicates that default of some kind appears probable. 'C' ratings signal imminent default.

DDD, DD, D
Default. The ratings of obligations in this category are based on their prospects for achieving partial or full recovery in a reorganization or liquidation of the obligor. While expected recovery values are highly speculative and cannot be estimated with any precision, the following serve as general guidelines. 'DDD' obligations have the highest potential for recovery, around 90%–100% of outstanding amounts and accrued interest. 'DD' indicates potential recoveries in the range of 50%–90% and 'D' the lowest recovery potential, i.e. below 50%.

Entities rated in this category have defaulted on some or all of their obligations. Entities rated 'DDD' have the highest prospect for resumption of performance or continued operation with or without a formal reorganization process. Entities rated 'DD' and 'D' are generally undergoing a formal reorganization or liquidation process; those rated 'DD' are likely to satisfy a higher portion of their outstanding obligations, while entities rated 'D' have a poor prospect of repaying all obligations.

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