Credit Ratings and Bond Issuing at the Subnational Level

Training Manual

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Training Manual

Part of the Global Program on Capital Markets Development at the Subnational Level

Moody's Investors Service

SIPA
SCHOOL OF INTERNATIONAL AND PUBLIC AFFAIRS
COLUMBIA UNIVERSITY

DEVFIN Advisors

Contents

List of Illustrations

List of Tables

A Message from the World Bank

The Global Program on Capital Markets Development at the Subnational Level is a joint initiative of the World Bank (through several of its departments) and several partners in the private and public sectors. Its main objective is to contribute to a better understanding of the specific characteristics and complexities that surround the access of sub-national entities to the capital market. Launched in January 1998, the program has already produced a report on Latin America study cases (included in this folder), a conference on Regional experiences.

We are proud to launch now the third component of the Global Program: the Training Workshop on Credit Rating and Bond Issuing at the Subnational Level. It is an additional piece aimed at contributing to help central and local government authorities as well as task managers from bilateral and multilateral organizations assess the advantages and disadvantages of access to the domestic and international capital markets by subnational governments and to get a better understanding of the technical aspects of this practice.

This workshop has been designed to:

- provide a framework to assess whether the necessary conditions to issuing bonds have been met and to identify the stages and processes that need to be followed when subnational governments access capital markets (e.g. credit rating);

- define the role of multilateral organizations and policy makers in the process;
- provide a forum for participants to discuss best practices in global subnational bond market development experiences.

As supporting educational materials, the workshop draws from two original pedagogical tools. The first is a training manual on Credit Ratings and Bond Issuing at the Subnational Level which has been designed as an independent tool as well as a complement to the upcoming CD ROM. Both of these training tools have been structured to promote interactive learning and to contribute to institutional capacity building in the financial sector among subnational governments in emerging economies.

The workshop combines presentations and group discussions on a wide range of issues, identified by World Bank staff working on capital markets development at the subnational level. Topics include: different types of subnational financing, capital markets and municipal finance, terms and conditions of bond transactions, description of the sovereign context for the bond issue, bond transaction preparation, financial management and financial reporting, inherent risks to capital market operations, credit rating, marketing, bond registration, administration and eligibility of investments and bond regulation, among others.

The work has been developed in close partnership between the World Bank and its partners in the private and public sectors. Investment bankers, academics, and representatives of major international credit rating agencies, insurance companies and multilateral organizations have been invited to review and analyze selected municipal bond market deals in emerging and mature markets and address the major issues involved in the issuing (domestically and internationally) process by subnational governments.

The ultimate objective of this workshop is to enhance participants' knowledge of how municipal bond markets are developed, how they can complement tax-based funding in different regions, and how to successful and unsuccessful municipal bond issues can deepen their understanding of the sector.

The Global Program will continue with several workshops being planned in developing countries where subnational governments have the proper macroeconomic conditions, regulatory framework and intergovernmental relations to have access to credit.

The fourth and final component of the Program comprises a series of City Financing Strategies (CFS) to be selected case by case and aimed at addressing such issues as:

- city institutional capacity building

- modernization of financial management systems
- improvement of debt management and borrowing policies
- application of ALM frameworks
- intergovernmental arrangements and
- improved creditworthiness

Special thanks are due to our colleagues who have invested their energy and enthusiasm in the preparation of this workshop, notably Demir Yener (task leader), Enrique Asturizaga, Sevil Etili, Jeff Noonan, James Quigley, and Emiko Todoroki. We would also like to acknowledge the financial support received from the Government of Sweden for the sponsorship of the training manual and CD-ROM, to Moody's for sponsoring the production of the CD-ROM, to Columbia University for the production of the training manual and to Benjamin Darche, Clemente del Valle, DEXIA, Merrill Lynch, and Xin Zhang for their collaboration in preparing each one of the sessions.

The Coordinators
Augusto de la Torre, LAC
Mila Freire, WBI
Marcela Huertas, Urban Division/TWURD

A Message from Columbia University

Columbia University's School of International and Public Affairs (SIPA) is pleased to partner with the World Bank in preparing this book on accessing the capital markets.

We at SIPA are dedicated to sharing our knowledge and expertise with public servants around the world. In particular, through our Center for Urban Research and Policy and its Urban Habitat Project, we and regional governments and their policymakers and officials offer a special focus on issues relevant to local.

By combining our world-recognized regional studies with expertise across a wide range of substantive issue areas, we are eager to work with local and regional governments to assist them in meeting their own particular challenges. While we offer a series of established degrees and other training programs, we are also willing to tailor programs to the needs of individual localities.

For more than fifty years SIPA has formed a point of intersection among Columbia University's academic departments and schools, and among a distinguished university, the nation's largest city, and a complex world beyond. As scholars, our faculty, students and alumni work to understand the world. As practitioners, they act to change it. It is a remarkable combination.

We hope that this book will help you in meeting the particular financing challenges you face, and we extend an offer to assist you in designing your own

individual approaches to those challenges. We look forward to a continuing partnership with the World Bank, and with localities around the world.

Sincerely,
Lisa Anderson
Dean
Columbia University School of International and Public Affairs

Authorship and Acknowledgments

Professor Mark C. Gordon and the Urban Habitat Project at Columbia University's School of International and Public Affairs (SIPA) prepared the content of this book. In writing the book significant contributions were made by five Columbia University graduate students:

- Nicol Malas (especially chapters 3, 7, and the glossary),
- James Gilliland (chapters 6 and 7 and Appendix A),
- Mark Woodward (chapter 4),
- Joshua Lupkin, (General Editor) and
- Sumant Inamdar.

A wide range of individuals offered their time and expertise to Columbia in the book's preparation. Benjamin Darche of Capital Advisors, Ltd. provided comments and additions for each chapter. Among the most helpful were Yves Lemay, Debra A. Roane, Steve Hochman, Marie Francoeur and Chee Mee Hu of Moody's Investors Service; William Streeter and Frank Rizzo of Fitch IBCA, Inc.; Jane Eddy of Standard & Poor's; Mike Morcom and Gershan Zurita of Duff & Phelps Credit Rating Company; Francisco Illarramendi of Credit Suisse First Boston; Frank Minerva and Tom Cochran of MBIA; Brian Keegan and Keisha Martin of Merrill Lynch; and L. Patrick Oden of Ziegler Securities. While they are cited throughout the footnotes, it should be understood that their contributions pervade the work. In addition, the speakers and participants at the First World Bank Conference on

Capital Markets Development at the Sub-national Level in Santander, Spain, 26–29 October, 1998, as well as the papers presented at that conference, provided a wealth of information reflected in this book.

How to Use this Book

This book is intended to assist sub-sovereign government officials in Latin America and Central Europe to gain access to capital markets. It recognizes that there is great diversity among these officials. Some have a great deal of experience and expertise in accessing capital markets, while others have relatively little. Given this varied audience, this book endeavors to provide both general information for those accessing capital markets for the first time, as well as more technical information for those with substantial prior experience.

This book has been prepared as part of the World Bank's Global Program on Capital Markets Development at the Sub-national Level, coordinated by Maria Emilia Freire of the World Bank Institute and Marcela Huertas of the Transport, Water and Urban Development Department of the World Bank. A CD-ROM version of this book will is also available as a complementary training tool.

While this book can be read from cover to cover, the individual chapters are meant to stand on their own for reference purposes. A glossary at the end provides numerous definitions of technical terms used throughout the book.

Any suggestions regarding how future editions of the book should be improved, can be sent to Professor Mark Gordon at Columbia University's School of International and Public Affairs, 420 West 118th Street, New York, New York, 10027, USA. (email: mcg12@columbia.edu).

Chapter 1
Key Challenges and Opportunities for Sub-sovereign Governments

Sub-sovereign governments around the world face tremendous new challenges and opportunities as they confront the twenty-first century. Urbanization is changing the shape of cities and increasing local needs at the same time that many political systems are becoming both more democratic and more decentralized. Significant responsibilities are being shifted from national governments to provinces and municipalities, and from all governments to the private sector. These trends, which are revolutionary in themselves, are not occurring in a vacuum. Rather, they have developed against a backdrop of an *information revolution* that has led to tremendous expansion in the globalization of capital markets, which in turn has increased both the opportunities and the risks for sub-sovereigns seeking access to capital.

This book is intended to serve as a guide for sub-sovereign governments in Latin America and Central Europe[1] as they seek to access the capital markets at home and abroad to finance their growing needs. Sub-sovereigns are defined as any level of government below the national government, and include regions, provinces, oblasts, and municipalities, among others. While most of this book will focus on specific information to help officials decide when and how to access capital markets, it is important to understand the larger context in which these capital markets operate.

In this chapter, you will read about the following topics:

I. Key Challenges and Opportunities for Sub-sovereign Governments

A. Urbanization
   1. Latin America
   2. Central Europe
   3. What This Trend Means

B. Decentralization
   1. Impact by Region
   2. Impact on Local Financial Resources
   3. What This Trend Means

C. Democratization
   1. What This Trend Means

D. Privatization
   1. What is Decentralization?
   2. Methods of Privatization

E. Information Revolution and Globalization
   1. Opportunities
   2. Pressures

F. Expansion in Sub-sovereign Participation in the Capital Markets over the Past Decade

I. Key Challenges and Opportunities for Sub-sovereign Governments

While the particular situation differs for every sub-sovereign around the world, it is important to understand the trends that affect these governments on every continent. These trends include:

A. Growing pressures of urbanization;
B. Historic tendencies toward decentralization;
C. Expanding democratization;
D. A surge in privatization;
E. Globalization that has been propelled by the Information Revolution; and
F. Dramatic expansion in sub-sovereign participation in the capital markets over the past decade.

Table 1.1: World Urbanization, 1980–97

	Urban Population, 1980		*Urban Population, 1997*		*1980–1997*
	Number (millions)	*% urbanized*	*Number (millions)*	*% urbanized*	*Increase (millions)*
Latin America and the Caribbean	233	65	366	74	133
Europe and Central Asia	248	58	230	68	72
Middle East and North Africa	84	48	164	58	80
South Asia	198	22	348	27	150
East Asia	285	21	578	33	293
Sub-Saharan Africa	87	23	196	32	109
Developing World	1,135	32	1,972	38	837
Developed World	619	75	722	78	103
World	1,754	39	2,694	44	940

Source: Shahid Javed Burki, "Challenges of Rapid Urbanization: Local Strategies to Access Financial Markets," World Bank, First Conference on Capital Markets Development at the Subnational Level: Bringing Together the Experiences of ECA and LAC, 26 to 29 October, 1998, Santander, Spain (hereafter WBC), p. 6.

A. Urbanization

The world is becoming increasingly urban. The World Bank estimates that 46% of the world's population of 5.8 billion lived in towns and cities in 1997.[2] Within slightly more than another generation, the world's urban population is anticipated to be twice the size of its rural population.[3]

1. Latin America

Beyond the percentages, the number of new urban dwellers is tremendous. From 1980 to 1997, the world's urban population increased by an estimated 912 million, of which 809 million or 89% was in Emerging Markets. *In fact, the most urbanized region of the world is not among the most developed economies, but rather in Latin America and the Caribbean, where 74% of the population lives in towns and cities and where an added 135 million people have swelled urban populations in the last 17 years.*[4]

Table 1.2: Growth in Population of World Regions, 1980–97 *(millions)*

	Urban Population, 1980		*Urban Population, 1997*		*1980–1997*
	Number (millions)	*% urbanized*	*Number (millions)*	*% urbanized*	*Increase (millions)*
Latin America and the Caribbean	358	8.1	494	8.5	136
Europe and Central Asia	428	9.7	471	8.1	43
Middle East and North Africa	175	4.0	283	4.9	108
South Asia	902	20.4	1,289	22.1	387
East Asia	1,359	30.7	1,753	30.1	394
Sub-Saharan Africa	379	8.6	614	10.5	235
Developing World	3,602	81.2	4,904	84.2	1,302
Developed World	825	18.6	926	15.9	101
World	4,427	100.1	5,380	100.1	1,403

Source: Shahid Javed Burki, "Challenges of Rapid Urbanization: Local Strategies to Access Financial Markets," WBC, p. 6.

Table 1.3a: Latin America: Total and Urban Population for 1990 and Urban Change since 1950

Country	*Total population 1990 ('000s)*	*Urban population 1990 ('000s)*	*% urban 1950*	*% urban 1990*	*Change in % urban 1950–1990*
Caribbean					
Cuba	10,598	7,801	49.4	73.6	24.2
Dominican Republic	7,110	4,293	23.7	60.4	36.7
Haiti	6,486	1,855	12.2	28.6	16.4
Jamaica	2,366	1,217	26.8	51.5	24.7
Puerto Rico	3,531	2,518	40.6	71.3	30.7
Trinidad and Tobago	1,236	854	63.9	69.1	5.2
Central America					
Costa Rica	3,035	1,429	33.5	47.1	13.6
El Salvador	5,172	2,269	36.5	43.9	7.4
Guatemala	9,197	3,628	29.5	39.4	9.9
Honduras	4,879	1,985	17.6	40.7	23.1
Mexico	84,511	61,335	42.7	72.6	29.9
Nicaragua	3,676	2,197	34.9	59.8	24.9
Panama	2,398	1,240	35.8	51.7	15.9
South America					
Argentina	32,547	28,158	65.3	86.5	21.2
Bolivia	6,573	3,665	37.8	55.8	18.0
Brazil	148,477	110,789	36.0	74.6	38.7
Chile	13,154	10,954	58.4	83.3	24.9
Colombia	32,300	22,604	37.1	70.0	32.9
Ecuador	10,264	5,625	28.3	54.8	26.5
Paraguay	4,317	2,109	34.6	48.9	14.3
Peru	21,558	14,068	35.5	69.8	34.3
Uruguay	3,094	2,751	78.0	88.9	10.9
Venezuela	19,502	17,636	53.2	90.4	37.2
Latin America and the Caribbean	439,716	314,161	41.6	71.4	29.8

Source: United Nations Habitat, *An Urbanizing World: Global Report on Human Settlements 1996* (New York: Oxford University Press, 1996), p. 46.

Growth is not spread evenly spread among all cities, but has increased dramatically in the largest cities. Fully three-quarters of the 2 billion people living in urban areas of Emerging Market nations are concentrated in cities with populations of a million or more.[5] *One half of Latin America's urban population, or 135 million people, live in the region's 20 largest cities alone.*[6]

2. Central Europe

Though not as dramatic, a similar trend has reshaped the Central European landscape, which experienced the most rapid growth in total population and urban population of any region in Europe. By 1992, the population in this region had reached 124 million people, with 56% in urban areas (half of this urban population was concentrated in Poland and Romania). Other examples:

Table 1.3b: Eastern Europe: Total and Urban Populations in 1992 and Urban Change since the 1930s

	Population in 1992 (millions)		*Percent of population in urban areas*	
Country	*Total*	*Urban*	*Pre-war*	*c. 1992*
Albania	3.3	1.2	15.4 (1938)	35.0
Bulgaria	9.0	5.9	21.4 (1934)	66.0
Czechoslovakia (old)	16.0	11.4	38.9 (1930)	72.2
Czech Republic	10.4	7.8		75.2
Slovakia	5.3	3.7		69.2
Hungary	10.4	6.4	33.2 (1930)	59.0
Poland	38.4	23.1	37.3 (1939)	60.9
Romania	23.2	12.3	21.4 (1930)	54.4
Yugoslavia (old)	23.9	11.0	13.2 (1931)	47.5
Bosnia-Herzegovina		1.5		34.2
Croatia	4.8	2.4		50.8
FYR Macedonia	2.0	1.1		53.9
Slovenia	2.0	1.0		48.9
Montenegro		0.3		50.7
Serbia		4.6		46.5
Yugoslavia (new)		4.9		48.6
Eastern Europe	123.7	71.1		56.4

Source: United Nations Habitat, *An Urbanizing World: Global Report on Human Settlements 1996* (New York: Oxford University Press, 1996), p. 66.

- **Baltic Republics.** In 1989, approximately 70% of the population in each republic was urban (from 68% in **Lithuania** to 72% in **Estonia**).
- **Russia**. While 74% of the population lived in urban areas, 23% lived in urban centers of 1 million or more.

Box 1.1: Infrastructure Needs in Prague, Czech Republic

"Capital expenditures represent nearly one-half of total expenditures, reflecting the large investments required to improve the city's outdated infrastructure. Investments are planned in transport, road, and sewerage infrastructure."

Source: Susan Riska and Monica Richter, "City of Prague," credit profile (New York: Standard and Poor's, 1997).

- **Bulgaria, Hungary,** and **Romania**. The national population by 1990 had become particularly concentrated around the capitals—40% around Sofia and Plovdiv (Bulgaria) and Bucharest and its environs(Romania); and 30% in Budapest and the surrounding county of Pest (Hungary).
- In 1970, only one city in the region had more than 2 million people. By 1990, that number had grown to four (**Katowice** and **Warsaw, Bucharest** and **Budapest**); **Sofia, Prague**, and **Lodz** all had populations exceeding 1 million.[7]

3. What This Trend Means

While the numbers in terms of urbanization are impressive, more important is what this trend means for the residents of these growing urban areas. The growth of cities has led to added pressures on urban infrastructure and other systems, further straining efforts to help those in need. For example, in 1995, only 65% of the third world urban population had access to sanitation. Poor residents of cities such as **Jakarta**, **Karachi**, and **Port-au-Prince**, it has been documented, sometimes pay 25 to 50 times more than affluent residents for drinking water.[8]

The special needs of the poor, combined with the rapid rates of urbanization, together magnify the need for infrastructure investment around the world. The Asian Development Bank has estimated that in Asia alone, an annual average of US$280 billion will have to be invested in infrastructure projects over the next 25 years.[9] Sub-sovereign governments in Latin America and Central Europe face similar problems.

B. Decentralization

Over the past two decades, there has been a widespread trend toward greater decentralization of authority from central governments to regional and local governments. *In fact, approximately 70 nations with populations over 5 million*

have launched decentralization initiatives.[10] For example:

- **Latin America**—Argentina, Bolivia, Brazil, Bulgaria, Chile, Colombia, Mexico, Peru, and Venezuela;
- **Central Europe**—Czech Republic, Hungary, Poland, Romania, Russia, Slovakia;
- **Other Regions**—Philippines, Vietnam, Côte d'Ivoire, South Africa, Zimbabwe, Burkina Faso, Uganda, and Thailand.

1. Impact by Region

While the trend is consistent around the world, its impact varies dramatically by region. In **Latin America**, despite a clear trend toward decentralization, local governments continue to account for only 14% of public spending compared with 35% in the average developed economy of the Organization of Economic Cooperation and Development (OECD) membership.[11]

Box 1.2: Trends in Decentralization and Devolution: Italy

"The central government is decreasing transfers and current resources while granting greater tax autonomy to the [Italian] municipalities—and municipalities have been given direct access to the capital market. Municipalities are no longer suppliers of standardized services [as] decision making is being decentralized to a more local level. We are witnessing the progressive disengagement of the central government from municipal finance."

Source: "Special Report: Italy's Regional Capital Municipalities," (New York: Duff and Phelps Credit Rating Co., 1997).

Even within the region, the specific responsibilities devolved to local governments have not been consistent. In **Bolivia**, **Brazil**, and **Colombia**, for example, there has been significant decentralization of service responsibilities, while in **Venezuela**, local governments have lost part of their power in these fields.

2. Impact on Local Financial Resources

Most dramatic, however, is what decentralization has meant for local financial resources. For example:

- **Central Europe**. The growth of local responsibilities and the sub-sovereign share of expenditures have exceeded the transfer of financial resources from the central government.[12] Under the rubric of decentralization, central governments cut their budgets by passing highly subsidized and costly responsibilities such as housing supply and water provision to local control.
- **Latin America**. Decentralization has tended to favor local budgets.[13] **Colombia's** 1991 Constitution required that sufficient central government revenue transfers accompany service responsibility transfers to maintain

services at current or mandated levels. **Brazil's** 1988 Constitution shifted 6% of total public revenues from the central government to sub-sovereigns, but without the explicit transfer of expenditure responsibility. **Venezuela** increased the transfer of central government revenues by 15 to 20% while making the transfer of expenditure responsibility voluntary and negotiable. **Guatemala** and **Bolivia** transferred central government revenues but not expenditure responsibilities to lower level governments.[14]

3. What This Trend Means

There are significant differences of opinion as to the desirability of decentralization as a tool for promoting economic efficiency, macroeconomic stability, and equity. On one side are those who argue that decentralization leads to a more efficient and accountable allocation and delivery of local public services. Officials in the provinces would no longer be able to simply blame higher levels of government for service delivery failures. Along the same lines, a decentralized system can be seen as improving macroeconomic stability. Such a system pushes sub-sovereigns to be more effective in restraining debt[15] and clarifies the roles of various public players, including that of a politically independent Central Bank.[16]

Others, however, worry about decentralization's impact on macroeconomic stability. For example, local public officials might use their new expenditure powers to build up excessive debts and use those debts to argue for greater transfer of

Table 1.4: Allocation of Responsibilities in Argentina

Exclusively federal government	*Federal/provincial governments*	*Provincial/municipal governments*	*Municipal governments*
Defense	Higher education	Basic education	Markets, Cemeteries
Foreign affairs	Preventive health	Health care	Solid waste collection and disposal
Currency and banking regulations	Economic development	Water and sewerage	Local streets, drainage
Public debt and property	Justice, security, housing	Regional and local roads	Parks
Inter-province transportation	Passenger and cargo terminals	Land use	
Trade regulation	Gas and electricity		
Mail and telex			

Source: Hernán Cámpora and Marcelo Menéndez, "Managing Cases in Argentina with High Default Risk," WBC, p. 8.

resources from central governments. These concerns come to the fore in the context of sub-national access to capital markets. *Because of their increased needs and responsibilities, potential reductions in central government support, and reduced financial intermediation by public agencies specialized in lending to local governments, sub-sovereigns may feel intense pressure to seek access to the capital markets.*[17]

Therefore, the verdict about broader effects remains mixed. Those in favor of sub-sovereign access have stressed potential benefits for the national treasury because of sub-sovereigns' efficiency and because the capital markets offer sub-sovereigns an alternative source of capital.[18] Others, however, warn of a "moral hazard" based on the fear that sub-sovereigns will allocate resources inefficiently on the belief that they will not be held responsible for failures, thus placing their sovereigns in an untenable position.

Thus, while there is little question that decentralization has had a dramatic impact around the world, the debate continues regarding the extent to which sub-sovereign access to capital markets should be constrained. (See Chapter 5 for a discussion of the types of limits that national governments have placed on sub-sovereign capital market access.)

C. Democratization

In the last two decades, a sweeping process of democratization has swept across Latin America and Central Europe. The end of the Cold War and the demise of Soviet-imposed socialist systems in Central Europe have led to the creation of democratic governments throughout the region. A similar trend can be seen in Latin America, where increasing national democratization has extended to the provincial and municipal levels. In the early 1980s, only three countries in Latin America elected their local public officials; today virtually all of the countries in the region do so. That translates into elections for nearly every mayor and council member in about 13,000 units of state and local government in Latin America.[19]

1. What This Trend Means

This trend toward democratization has affected the capital markets on several fronts:

- Local elected officials can be expected to be particularly sensitive to the needs of their constituents, leading to increased demand for long-term financing of infrastructure projects.
- Democratization and the pressures that it places on governments to distribute costs equitably can further stimulate sub-sovereign borrowing, as these large-scale long-term projects are financed over the project's lifetime.
- Some investors fear that newly elected officials might be more willing to

repudiate the debt incurred by their predecessors, as demonstrated by the experience of the city of Cebu in the Philippines (see Chapter 6).

D. Privatization

Democratization and decentralization together have added to pressures for both sovereign and sub-sovereign governments to relinquish direct ownership and control over significant industries and operations. In fact, a wave of privatization has swept over both Latin America and Central Europe, from airports and parks in **Buenos Aires** to copper mining in **Chile**, steel companies in **Brazil**, and petrochemicals in **Venezuela**.[20]

1. What is Decentralization?

The term privatization has become so popular that it masks a wide divergence of policy goals and platforms:

(1) In terms of government size, privatization can be seen as a way to make government smaller by reducing its control over key sectors and its overall economic power. Alternatively, privatization might enable government budgets to grow, through the infusion of cash to public coffers that accompanies the sale of private assets and the taxation of newly privatized businesses.

(2) There is the prospect of greater efficiency. While some experts stress enhanced service to consumers, others point to industries making politically difficult cuts to insure profitability.

(3) There is much talk of increased competition in previously monolithic sectors, which may attract foreign investment or release sub-sovereigns from the burden of money-losing operations.

2. Methods of Privatization

Methods of privatization have varied dramatically. From full-scale asset sales to partial divestitures; from service contracts to leases and concessions—privatization can be undertaken in many different ways to achieve a variety of goals (see Chapter 2 for a more detailed discussion of different ways to include the private sector in financing large projects.) For example:

- Full-scale move from a centrally planned economy toward a capitalist one (**Poland**).
- Transfer to the private sector government-owned businesses that are in markets without significant market failures, such as the sale of parastatal enterprises or those owned indirectly by state agencies in **Venezuela** (hotels), **Argentina** (telephone), and **Brazil** (steel).

- Transfer government-owned businesses with natural monopoly power, such as the sale of **Mexican** state airlines and the opening of routes, to new private companies.
- Subcontracting of various government-provided services to the private sector either directly or indirectly, through leasing, transfer of technology agreements, and other similar arrangements.[21]

The trend toward privatization and the varied reasons for its appeal dramatically affected the demand for capital. Whatever type of privatization is adopted, the push for privatization is essentially a push for private capital, as governments need to find investors with the capital to construct new facilities.

Box 1.3: Checklist: Questions to Ask When Considering Privatization

What are the goals being sought?
- Infusion of cash to government coffers
- Competition and improved efficiency
- Better or more universal service provision
- Foreign investment
- Decrease of government control in economy

What mix of private and public participation can best achieve these goals?
- Continued government ownership but with private service or management contracts
- Broad private participation through leases or concessions
- Full or partial asset divestiture

E. Information Revolution and Globalization

The trends of urbanization, decentralization, democratization, and privatization are occurring within a broader international context of globalization, brought on by the Information Revolution. Dramatic increases in computing capacity, together with exponential advances in communication technology, have combined with a period of relative global peace to create an increasingly global economy. The globalization of the capital markets has led to new opportunities for sub-sovereigns seeking to attract capital, as well as new dangers.

1. Opportunities

There has been an enormous increase in capital flows to emerging economies over the past decade. In 1996, for example, total private net capital flows to Emerging Markets reached US$244 billion, a five-fold increase since 1990 alone.[22] Infrastructure investment, which has been the fastest growing component of capital flows to emerging countries, increased from US$1.3 billion in 1986 to US$27 billion in 1996. While the increase in these capital flows is clear, there is substantial disagreement about its underlying causes. Some argue that the main factors are

outside of emerging countries' control, such as the decline in US interest rates or the financial innovations made possible by the partial multilateral guarantees under the Brady Plan. Others give more credit to the actions of Emerging Markets and their domestic economic reforms, privatization, currency liberalization, and macroeconomic stabilization.[23]

2. Pressures

There is no disagreement regarding the risk and market volatility that has accompanied the increase in global capital flows as new technologies enable investors to withdraw funds from nations almost instantaneously. Events far beyond national borders have led to tremendous pressures on domestic economies. For example:

- **Mexico**. The "Tequila Crisis" emanating from the financial crisis in December 1994 led to tremendous outflows of foreign currency from countries throughout Latin America.
- **Argentina**, for example, saw its GDP fall 4.4% in 1995 while provincial revenues fell 8%.[24] Unemployment reached record levels of 18.4% and bank deposits fell from $45.6 billion to $36.8 billion.[25] While the government responded to this crisis energetically through a mix of government spending cuts, tax increases and new multilateral financial agreements,[26] its spending cutbacks (and those of other sovereigns) increased the pressure on sub-sovereigns to find other sources of capital.[27]

Box 4: Varied Approaches to Macroeconomic Instability Impact Sub-sovereigns Differently

Argentina

The Convertibility Plan in 1991 fixed the exchange rate to the dollar, required that the monetary base not exceed the dollar value of international reserves and removed the power to devalue the currency from the Ministry of Economy. Massive privatization and government lay-offs were used to address high inflation and interest rates. Sub-sovereigns were directly affected by the prohibition on the central bank from guaranteeing bank deposits and from purchasing new domestic assets, which meant that the central bank could no longer rediscount loans by provincial banks to provincial governments.

Brazil

The national government responded to a series of debt crises through rescheduling. The 1989 rescheduling eased the cash flow problem on states through varying grace periods on principal and an 11% cap on debt service to current revenues, with the national government paying the balance. The rescheduling of approximately US$28 billion in debt in 1993 established a new 15% cap on state debt service payments, which reduced states' annual payments but capitalized interest at very high real interest rates. Massive defaults of state bonds following the 1994 stabilization plan led to the effective federalization of US$123 billion in state debt.

Source: Maria Freire, Marcela Huertas, and Benjamin Darche, "Subnational Access to the Capital Markets: The Latin American Experience," WBC, pp. 14–18.

- **Russia.** The defaults during August 1998 have led to a complete closing of the international capital markets to Emerging Market debt, as the spreads available to even major countries in Latin America have increased on average by a factor of five, from 300 basis points to 1500 basis points above LIBOR.[28] A similar impact has been seen on outstanding sub-sovereign debt.

F. The Dramatic Expansion in Sub-sovereign Participation in the Capital Markets over the Past Decade

The trends discussed above have combined with the increasing availability of developed market cash looking for investments, to propel a remarkable increase in sub-sovereign participation in capital markets over the past decade.

Based on information provided to the authors by Merrill Lynch, there were 88 issues by sub-sovereigns in **Latin America** and the **Caribbean** between 1992 and 1998, of which 57 were issued in the domestic markets of the host municipality and 31 were foreign deals conducted in the Euromarket or United States market. In 1993, Latin American borrowers raised approximately US$4.8 billion in the Euromarkets for infrastructure development; by 1997 that had increased to US$7.8 billion.

Table 1.5: Recent Sub-sovereign Market Issues, 1990–1998

Year	*Latin American issues (#)*	*Central European issues (#)*
1990	n/a	1
1991	4	n/a
1992	2	1
1993	8	n/a
1994	11	5
1995	15	5
1996	22	3
1997	35	9
1998	n/a	9

Source: World Bank, Global Program on Capital Markets Devleopment at the Subnational Level.

While not on the same scale, **Central European** sub-sovereigns raised approximately US $12.8 million in 1993 and US$408 million in 1998.

The largest offerings have ranged from US$298 million by the **St. Petersburg** Municipal Government in Russia to US$417 million by the Ministry of Finance of **Guatemala** in January 1998.[29] Tables 1.5 and 1.6 provide more details.

Table 1.6: Bond Issues in Latin America and Central Europe

Region	*Country*	*Date Issued*	*Subnational*	*Issuer*	*Currency*
LAC	Argentina	08/10/93	Province	Cordoba	USD
LAC	Argentina	06/23/94	Province	Buenos Aires	USD
LAC	Argentina	06/23/94	Province	Buenos Aires	
LAC	Argentina	10/04/95	Province	Buenos Aires	USD
LAC	Argentina	11/23/95	Province	Buenos Aires	DEM
LAC	Argentina	02/12/96	Province	Buenos Aires	DEM
LAC	Argentina	05/01/96	Province	Entre Rios	ARS
LAC	Argentina	05/01/96	Province	Entre Rios	ARS
LAC	Argentina	05/01/96	Province	Entre Rios	ARS
LAC	Argentina	08/02/96	Province	Mendoza	USD
LAC	Argentina	08/08/96	Province	Mendoza	USD
LAC	Argentina	09/18/96	Province	Buenos Aires	CHF
LAC	Argentina	09/27/96	Province	Buenos Aires	
LAC	Argentina	09/27/96	Province	Buenos Aires	CHF
LAC	Argentina	12/01/96	Municipality	Guaymallen	USD
LAC	Argentina	03/18/97	Municipality	Guaymallen	USD
LAC	Argentina	04/03/97	City	Buenos Aires	USD
LAC	Argentina	04/30/97	City	Buenos Aires	
LAC	Argentina	05/11/97	Province	Buenos Aires	USD
LAC	Argentina	05/13/97	City	Buenos Aires	ARS
LAC	Argentina	05/21/97	City	Buenos Aires	
LAC	Argentina	05/23/97	City	Buenos Aires	LIT
LAC	Argentina	05/28/97	City	Buenos Aires	USD
LAC	Argentina	06/10/97	City	Buenos Aires	LIT
LAC	Argentina	08/14/97	Province	Tucuman	USD
LAC	Argentina	08/22/97	Province	Mendoza	USD
LAC	Argentina	08/22/97	Province	Mendoza	
LAC	Argentina	08/22/97	Province	Tucuman	USD
LAC	Argentina	10/24/97	Province	Tierra del Fuego	USD
LAC	Argentina	07/01/98	Municipality	Guaymallen	USD
LAC	Argentina	07/06/98	Province	Buenos Aires	EUR
LAC	Argentina	11/25/98	Province	Buenos Aires	
LAC	Argentina	04/14-30/99	Province	Buenos Aires	EUR
LAC	Bolivia	11/23/94	Municipality	La Paz	USD
LAC	Bolivia	05/12/97	Municipality	La Paz	USD
LAC	Bolivia	06/11/97	Municipality	La Paz	USD
LAC	Bolivia	07/11/97	Municipality	La Paz	USD
LAC	Bolivia	08/10/97	Municipality	La Paz	USD
LAC	Brazil	06/01/93	City	São Paulo	BRL
LAC	Brazil	01/21/94	Municipality	Minas Gerais	
LAC	Brazil	01/21/94	Municipality	Minas Gerais	
LAC	Brazil	01/21/94	Municipality	Minas Gerais	
LAC	Brazil	02/11/94	Municipality	Minas Gerais	
LAC	Brazil	06/01/94	City	São Paulo	BRL
LAC	Brazil	12/15/95	Municipality	Santa Catarina	

Table 1.6: Bond Issues in Latin America and Central Europe (continued)

Region	Country	Date Issued	Subnational	Issuer	Currency
LAC	Brazil	06/12/96	City	Rio de Janeiro	USD
LAC	Brazil	11/01/96	City	Rio de Janeiro	BRL
LAC	Brazil	06/01/97	City	Rio de Janeiro	BRL
LAC	Brazil	06/26/97	State	São Paulo	BRL
LAC	Brazil	06/26/97	State	São Paulo	USD
LAC	Brazil	09/01/97	City	Rio de Janeiro	BRL
LAC	Colombia	02/13/91	Region	del Valle	COP
LAC	Colombia	03/27/91	Region	del Valle	COP
LAC	Colombia	04/06/91	Municipality	Santiago, Cali	COP
LAC	Colombia	09/18/91	District	Bogota	COP
LAC	Colombia	10/30/91	Province	Pereira	COP
LAC	Colombia	10/31/91	Municipality	Santiago, Cali	COP
LAC	Colombia	11/28/91	Municipality	Palmira	COP
LAC	Colombia	12/09/91	District	Bogota	COP
LAC	Colombia	02/12/92	Municipality	Cartago	COP
LAC	Colombia	10/02/92	District	Bogota	COP
LAC	Colombia	12/31/92	Municipality	Cartago	
LAC	Colombia	03/17/93	Municipality	Medellin	COP
LAC	Colombia	04/22/93	Municipality	Medellin	
LAC	Colombia	05/03/93	District	Bogota	COP
LAC	Colombia	05/18/93	District	Bogota	
LAC	Colombia	08/30/93	Municipality	Cartagena	COP
LAC	Colombia	09/01/93	Municipality	Bucaramanga	COP
LAC	Colombia	10/20/93	Municipality	Bucaramanga	
LAC	Colombia	11/17/93	Province	Arauca	COP
LAC	Colombia	12/02/93	Province	Arauca	COP
LAC	Colombia	08/01/94	Municipality	Santiago, Cali	COP
LAC	Colombia	08/11/94	Municipality	Santiago, Cali	
LAC	Colombia	08/31/94	Municipality	Cartagena	COP
LAC	Colombia	11/03/94	District	Bogota	COP
LAC	Colombia	11/09/94	District	Bogota	
LAC	Colombia	09/22/95	Municipality	Itagui	COP
LAC	Colombia	09/26/95	Province	Rionegro	COP
LAC	Colombia	10/01/95	Municipality	Itagui	
LAC	Colombia	10/25/95	Province	Rionegro	
LAC	Colombia	11/15/95	Municipality	Santiago, Cali	
LAC	Colombia	11/16/95	Municipality	Santiago, Cali	COP
LAC	Colombia	12/01/95	District	Bogota	COP
LAC	Colombia	12/01/95	District	Bogota	
LAC	Colombia	12/07/95	District	Bogota	
LAC	Colombia	12/12/95	Municipality	Huila	COP
LAC	Colombia	12/21/95	Province	Rionegro	
LAC	Colombia	04/24/96	Municipality	Medellin	COP
LAC	Colombia	05/23/96	Province	Rionegro	COP
LAC	Colombia	06/24/96	Province	Rionegro	

Table 1.6: Bond Issues in Latin America and Central Europe (continued)

Region	*Country*	*Date Issued*	*Subnational*	*Issuer*	*Currency*
LAC	Colombia	07/01/96	Municipality	Ibague	COP
LAC	Colombia	10/28/96	Municipality	Barrancabermeja	COP
LAC	Colombia	12/01/96	Province	Valle del Cauca	COP
LAC	Colombia	12/12/96	Province	Cordoba	COP
LAC	Colombia	12/20/96	Province	Valle del Cauca	COP
LAC	Colombia	03/14/97	Province	Risaralda	COP
LAC	Colombia	03/15/97	Municipality	B/Quill	COP
LAC	Colombia	06/01/97	Municipality	Ibague	COP
LAC	Colombia	07/01/97	Municipality	Ibague	COP
LAC	Colombia	07/03/97	Municipality	Pereira	COP
LAC	Colombia	07/10/97	Province	Meta	COP
LAC	Colombia	07/14/97	Province	Pereira	
LAC	Colombia	07/17/97	Province	Meta	
LAC	Colombia	09/23/97	District	Bogota	
LAC	Colombia	10/01/97	Province	Cundinamarca	
LAC	Colombia	11/04/97	Province	Pereira	
LAC	Colombia	12/29/97	Municipality	Cali	
LAC	El Salvador	in preparation	El Salvador		
LAC	Honduras	01/96	Municipality	San Pedra Sula	USD
LAC	Paraguay	10/30/98	Municipality	Asunción	GS
ECA	Bulgaria	06/03/99	City	Sofia	EUR
ECA	Czech Republic	1992	City	Ostrava	CZK
ECA	Czech Republic	04/26/93	City	Sumperk	CZK
ECA	Czech Republic	1994	City	Veselí	CZK
ECA	Czech Republic	01/17/94	City	Liberec	CZK
ECA	Czech Republic	01/24/94	City	Smrzovka	CZK
ECA	Czech Republic	04/94	City	Prague	USD
ECA	Czech Republic	04/01/94	City	Prague	DEM
ECA	Czech Republic	04/01/94	City	Prague	
ECA	Czech Republic	04/14/94	City	Prague	USD
ECA	Czech Republic	08/15/94	City	Cáslav	CZK
ECA	Czech Republic	10/03/94	City	Pardubice	CZK
ECA	Czech Republic	11/28/94	City	Rokytnice nad Jizerou	CZK
ECA	Czech Republic	11/28/94	City	Ústi nad Labem	CZK
ECA	Czech Republic	02/13/95	City	Rychnov nad Kneznou	CZK
ECA	Czech Republic	05/22/95	City	Marianske lazne	CZK
ECA	Czech Republic	06/05/95	City	Plzen	CZK
ECA	Czech Republic	03/27/96	City	Brno	CZK
ECA	Czech Republic	08/23/96	City	Kladno	CZK
ECA	Czech Republic	09/30/96	City	Frydek-Mistek	CZK
ECA	Czech Republic	11/28/96	City	Decin	CZK
ECA	Czech Republic	12/02/96	City	Ostrava	DEM
ECA	Czech Republic	03/17/97	City	Zidlochivice	CZK
ECA	Czech Republic	06/11/99	City	Prague	EUR
ECA	Estonia	08/94	City	Tallinn	EEK

Table 1.6: Bond Issues in Latin America and Central Europe (continued)

Region	Country	Date Issued	Subnational	Issuer	Currency
ECA	Estonia	04/96	City	Tallinn	DEM
ECA	Estonia	02/98	City	Tallinn	DEM
ECA	Estonia	03/24/98	City	Tallinn	DEM
ECA	Estonia	04/16/99	City	Tallinn	EUR
ECA	Estonia		City	Parnu	EEK
ECA	Estonia		City	Tallinn	EEK
ECA	Estonia		City	Tallinn	EEK
ECA	Estonia		City	Tartu	EEK
ECA	Estonia		City	Tartu	EEK
ECA	Hungary	07/20/93	City	Budapest	HUF
ECA	Hungary	08/16/93	Municipality	Tatabanya	HUF
ECA	Hungary	10/15/93	Municipality	Debrecenu	HUF
ECA	Hungary	07/08/98	Municipality	Budapest	DEM
ECA	Poland	01/25/96	City	Gdynia	PLN
ECA	Poland	01/25/96	City	Gdynia	PLN
ECA	Poland	01/25/96	City	Gdynia	PLN
ECA	Poland	01/25/96	City	Gdynia	PLN
ECA	Poland	01/25/96	City	Gdynia	PLN
ECA	Poland	01/25/96	City	Gdynia	PLN
ECA	Poland	11/18/98	City	Krakow	DEM
ECA	Poland		City	Gorzow Wielkoposki	PLN
ECA	Poland		City	Lodz	PLN
ECA	Poland		City	Lublin	PLN
ECA	Poland		City	Miescisko	PLN
ECA	Poland		City	Ostrow Wielkopolski	PLN
ECA	Poland		City	Tarnobrzeg	PLN
ECA	Russia	03/04/92	Region	Khabarovsky Krai	RUB
ECA	Russia	06/10/92	District	Pushkin, Moscow Region	RUB
ECA	Russia	11/02/92	City	Sergiev Posad, Moscow Region	RUB
ECA	Russia	11/25/92	City	Novosibirsk	RUB
ECA	Russia	04/07/93	City	Syktyvkar, Komi Republic	RUB
ECA	Russia	04/12/93	City	Novokuznetsk, Kemerovo Region	RUB
ECA	Russia	05/10/93	Region	Beloyarsk, Sverdlovsk Region	RUB
ECA	Russia	07/23/93	Region	Samara	RUB
ECA	Russia	11/05/93	City	Pushkin, Moscow Region	RUB
ECA	Russia	12/01/93	City	Ulan-Ude, Buryatia Republic	RUB
ECA	Russia	12/02/93	City	Taldom, Moscow Region	RUB
ECA	Russia	12/23/93	Region	Nizhni Novgorod	RUB
ECA	Russia	01/04/94	City	Syktyvkar, Komi Republic	RUB
ECA	Russia	02/08/94	City	Ivangorod, Kengisep District, Leningrad Region	RUB
ECA	Russia	02/16/94	City	Sosnovy Bor, Leningrad Region	RUB
ECA	Russia	03/10/94	Region	Nizhni Novgorod	RUB
ECA	Russia	04/15/94	Region	Ulyanovsk	RUB
ECA	Russia	05/13/94	City	Ukhty, Komi Republic	RUB
ECA	Russia	07/15/94	City	Kursk	RUB

Table 1.6: Bond Issues in Latin America and Central Europe (continued)

Region	Country	Date Issued	Subnational	Issuer	Currency
ECA	Russia	07/22/94	Region	Perm	RUB
ECA	Russia	08/18/94	City	Cherepovets, Vologda Region	RUB
ECA	Russia	08/19/94	Region	Nizhni Novgorod	RUB
ECA	Russia	09/06/94	City	Dzerzhinsk, Nizhni Novgorod Region	RUB
ECA	Russia	09/08/94	City	Kemerovo	RUB
ECA	Russia	09/16/94	Regional Gov.	St. Petersburg	RUB
ECA	Russia	10/10/94	District	Tosnensky, Leningrad Region	RUB
ECA	Russia	11/14/94	City	Omsk	RUB
ECA	Russia	11/21/94	Republic	Chuvash	RUB
ECA	Russia	11/24/94	Region	Orenburg	RUB
ECA	Russia	11/29/94	Region	Astrakhan	RUB
ECA	Russia	12/05/94	Region	Belogrod	RUB
ECA	Russia	12/13/94	City	Dolgoprudny, Moscow Region	RUB
ECA	Russia	12/15/94	Region	Sverdlovsk	RUB
ECA	Russia	12/21/94	City	Magnitogorsk, Chelyabinsk Region	RUB
ECA	Russia	12/23/94	Region	Yaroslavl	RUB
ECA	Russia	12/26/94	City	Ekaterinburg	RUB
ECA	Russia	12/27/94	Regional Gov.	Moscow	RUB
ECA	Russia	12/27/94	Region	Ulyanovsk	RUB
ECA	Russia	12/28/94	District	Stavropol	RUB
ECA	Russia	01/12/95	Republic	Saha (Yakutia)	RUB
ECA	Russia	01/20/95	City	Kaliningrad	RUB
ECA	Russia	01/20/95	Region	Orenburg	RUB
ECA	Russia	02/01/95	Region	Voronezh	RUB
ECA	Russia	02/03/95	Region	Novgorod	RUB
ECA	Russia	02/03/95	Region	Novgorod	RUB
ECA	Russia	02/03/95	City	Saratov	RUB
ECA	Russia	02/16/95	City	Luberetsky, Moscow Region	RUB
ECA	Russia	02/17/95	City	Irkutsk	RUB
ECA	Russia	03/15/95	Region	Volgograd	RUB
ECA	Russia	03/16/95	Region	Orenburg	RUB
ECA	Russia	03/27/95	Region	Stavropol	RUB
ECA	Russia	04/04/95	Region	Astrakhan	RUB
ECA	Russia	04/12/95	Region	Tula	RUB
ECA	Russia	04/13/95	City	Chelyabinsk	RUB
ECA	Russia	04/17/95	City	Nakhodka	RUB
ECA	Russia	04/27/95	Region	Ulyanovsk	RUB
ECA	Russia	04/28/95	Region	Krasnovarskyi	RUB
ECA	Russia	04/28/95	Region	Saha (Yakutia)	RUB
ECA	Russia	05/04/95	Region	Tumen	RUB
ECA	Russia	05/05/95	City	Penza	RUB
ECA	Russia	05/06/95	Republic	Tatarstan	RUB
ECA	Russia	05/12/95	City	Cheboksary	RUB
ECA	Russia	05/30/95	City	Chukotsky	RUB
ECA	Russia	05/30/95	City	Kemerovo	RUB

Table 1.6: Bond Issues in Latin America and Central Europe (continued)

Region	Country	Date Issued	Subnational	Issuer	Currency
ECA	Russia	05/30/95	Republic	Tatarstan	RUB
ECA	Russia	06/05/95	Republic	Tatarstan	RUB
ECA	Russia	06/05/95	Republic	Tatarstan	USD
ECA	Russia	06/09/95	City	Orsk	RUB
ECA	Russia	06/15/95	Republic	Saha (Yakutia)	RUB
ECA	Russia	06/15/95	City	Sergiev Posad, Moscow Region	RUB
ECA	Russia	06/22/95	Region	Astrakhan	RUB
ECA	Russia	06/30/95	Region	Tomsk	RUB
ECA	Russia	07/07/95	Region	Altay Krai	RUB
ECA	Russia	07/12/95	City	Dubna, Moscow Region	RUB
ECA	Russia	07/12/95	District	Predgorny, Stavropol Region	RUB
ECA	Russia	07/13/95	Republic	Kabardino-Balkarsk	RUB
ECA	Russia	07/19/95	Region	Khanty-Mansyisky	RUB
ECA	Russia	07/19/95	City	Samara	RUB
ECA	Russia	07/21/95	Republic	Khakasia	RUB
ECA	Russia	07/21/95	Region	Sosnovy Bor, Leningrad Region	RUB
ECA	Russia	07/27/95	City	Nizhnevartovsk	RUB
ECA	Russia	08/01/95	Region	Irkutsk	RUB
ECA	Russia	08/02/95	City	Cheboksary	RUB
ECA	Russia	08/02/95	Region	Novokuznevsk, Samara Region	RUB
ECA	Russia	08/07/95	Region	Kranodarsky Krai	RUB
ECA	Russia	08/29/95	District	Kirishcky, Leningrad Region	RUB
ECA	Russia	08/29/95	Republic	Severnya Osetya-Alanya	RUB
ECA	Russia	09/06/95	Region	Nizhni Novgorod	RUB
ECA	Russia	09/07/95	Region	Ryazan	RUB
ECA	Russia	09/14/95	Region	Orlov	RUB
ECA	Russia	09/15/95	City	Urga, Kemerovo Region	RUB
ECA	Russia	09/20/95	City	Kaluga	RUB
ECA	Russia	04/16/97	City	Moscow	RUB
ECA	Russia	05/97	City	Moscow	RUB
ECA	Russia	05/15/97	City	Moscow	RUB
ECA	Russia	05/27/97	City	Moscow	USD
ECA	Russia	06/97	City	St. Petersburg	USD
ECA	Russia	06/97	City	St. Petersburg	RUB
ECA	Russia	06/05/97	Municipality	St. Petersburg	USD
ECA	Russia	06/05/97	Municipality	St. Petersburg	
ECA	Russia	06/18/97	Municipality	St. Petersburg	USD
ECA	Russia	07/02/97	City	Moscow	RUB
ECA	Russia	09/19/97	Municipality	Nizhniy	USD
ECA	Russia	12/03/97	City	Moscow	RUB
ECA	Russia	01/28/98	City	Moscow	RUB
ECA	Russia	02/98	City	Moscow	RUB
ECA	Russia	04/02/98	Municipality	Moscow	DEM
ECA	Russia	05/05/98	Municipality	Moscow	ITL
ECA	Russia	05/18/98	Municipality	Moscow	RUB

Table 1.6: Bond Issues in Latin America and Central Europe (continued)

Region	Country	Date Issued	Subnational	Issuer	Currency
ECA	Russia	05/18/98	Municipality	Moscow	ITL
ECA	Russia	05/20/98	City	Moscow	RUB
ECA	Russia		Republic	Kabardino-Balkarsk	USD
ECA	Russia		Region	Kabardino-Balkarsk	RUB
ECA	Russia		Municipality	Moscow	RUB
ECA	Russia		Municipality	Orenburg	RUB
ECA	Russia		Municipality	St. Petersburg	RUB
ECA	Slovakia	11/01/95		Bratislava	Euroyen
ECA	Slovakia	11/28/95		Bratislava	
ECA	Turkey	09/10/90	Municipality	Greater Ankara	
ECA	Turkey	10/16/92	Municipality	Greater Ankara	
ECA	Ukraine	04/97		Odessa	RUB

Chapter 1 Notes

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Chapter 2
The Capital Planning Process

It is critical to realize that capital market borrowing represents just *one* of the possible approaches to financing major government expenditures.

Capital market borrowing represents just one of the many possible approaches to financing major government expenditures. Governments should consider all of the approaches discussed in this chapter as part of a coordinated capital improvement plan before deciding on any one financing method. If a sub-national government decides to borrow, it is then extremely important that it develop a debt management program and carefully evaluate the financial risks associated with debt obligations prior to entering the capital markets.

Therefore, this chapter outlines the types of decisions that sub-sovereigns need to make *before* they decide to enter the capital markets and how to develop a debt management plan if they decide to borrow. These decisions are often most effectively made when integrated into a comprehensive and coordinated capital improvement plan. This chapter discusses the key steps toward the development of such a plan. In particular, this chapter will explain:

I. Differences Between Large Capital Expenditures and Operating Expenditures
- A. Needs and Financing Requirements
  - 1. Operating Expenditures

2. Capital Expenditures
    a. Capital Assets
    b. Intergenerational Equity
    c. Budgets

II. Key Elements and Initial Steps in Developing a Separate Capital Plan

A. The Capital Improvement Plan
    1. Developing the Plan
    2. Initial Steps
        a. Examining needs
        b. Setting Priorities
        c. Funding Decisions

III. Financing a Capital Plan: Sources of Public/Governmental Funding

A. Key Public Funding Sources
    1. Own-Source Revenues
    2. Intergovernmental Transfers
        a. Structures of Intergovernmental Transfers
        b. Key Attributes of Intergovernmental Transfers:
            i. Amount of total transfer
            ii. Distribution
            iii. Restriction
    3. Subsidized Loan Programs
        a. Structures for Subsidized Loans
            i. Revolving loan funds
            ii. Special banks
            iii. Bond banks
            iv. Municipal development funds (MDFs)
    4. Loan Guarantees
        a. Forms of loan guarantees
    5. Outside Donors and Funding Agencies

IV. How the Private Sector Can be Involved in Financing Capital Projects

A. Types of Private Sector Participation
    1. Impact Fees and User Charges
    2. Private Investment through Loans
    3. Service Contracts
    4. Management Contracts

5. Leases
6. Concessions
7. Joint Venture Leases and Concessions
8. Full or Partial Ownership
9. Variations

V. The Pros and Cons of Borrowing to Finance Capital Projects

A. Borrow from a Bank or Issue Debt?
   1. Bank Borrowing
   2. Issuing Bonds
      a. Longer Maturity and Risk Management
      b. Other Benefits
   3. Competitive Arrangements

B. Domestic Capital Markets

VI. Debt Management Policy in Sub-sovereign Borrowing Decisions

A. Importance and Objective of Debt Management Policy
   1. Consistency with Overall Economic Factors
   2. Risk Management
   3. Cost Minimization
   4. Building Market Confidence

B. The Conceptual Framework for Designing Debt Management Policy: Asset-Liability Approach
   1. Strategic Analysis
   2. Technical Issues

C. Implementation: The Organization Building

D. Practical Issues Encountered by Sub-sovereign Debt Managers
   1. What is the Asset and Liability Condition?
   2. For What Purposes Should Debt be Issued?
   3. What is the Optimal Level of Debt?
      a. The Ratio of Debt Service to Recurring Revenues
      b. The Ratio of Total Outstanding Debt to GDP
      c. The Ratio of Total Debt to the Local Tax Base
      d. The Ratio of Total Debt per Capita
   4. What is the Optimal Structure of the Debt?
   5. What Should be the Mix of Pay-as-You-Go vs. Debt Financing?
   6. How Can a Risk Assessment Model be Used to Structure the Debt Offering?

a. Operating Revenue Assessment
b. Expenditure Assessment
c. Financial Assessment
d. Risk Assessment—Some Considerations

I. Differences Between Large Capital Expenditures and Operating Expenditures

A. Needs and Financing Requirements

Sub-sovereigns in Emerging Markets face numerous critical needs, from providing emergency shelter for the homeless and poverty relief to the poor to improving education, social services, roads, and potable water supplies. The specific demands on sub-sovereign budgets are a function of both the extent of needs in the area and of the allocation of responsibilities among the different levels of government, as discussed in Chapter 1. Thus, while a municipal government in one country may face tremendous financial demands related to water systems, in other countries that responsibility may rest with the regional government.

While the specific needs of each sub-sovereign may differ, *the aggregate size of the needs is monumental.* The World Bank has estimated that the capital finance needs of developing and transition countries exceed $100 billion per year, mostly for local public infrastructure generally, with water and sewer projects alone accounting for one-half of the total.

Box 2.1: Characteristics of Operating and Capital Expenditures

Operating	***Capital***
Recurring	Non-recurring
Relatively small price	Large relative to overall budget
Short lifetimes	Create long-lived assets
Equitably funded all at once issues	Create intergenerational equity
Does not generate future revenues	Generate future revenues and therefore possible candidate for borrowing

1. Operating Expenditures

As a first step, distinguish among needs and financing requirements. A wide range of critical services requires recurring operating expenditures year after year. For example:

- Subsidies for routine provision of health care for the elderly citizens can be expected to represent a relatively constant expenditure (with some variation as demographics change).
- Similarly, the funds required to hire local police or to maintain the city hall remain similar from year to year, increasing gradually as the jurisdiction grows and its resources permit.

2. Capital Expenditures

Investment in critical infrastructure tends to be "lumpy." The demands of such investments tend to exceed the resources of the government in any particular year.

For example:

- Construction of a major roadway will require a huge amount of resources in the initial years, but that need will stop once the roadway is built. Indeed, if the project is structured as a toll road, it might even begin to generate self-supporting revenues.
- Construction of a water treatment plant could, if paid for in a jurisdiction's single-year budget, represent 20% if not more of the entire budget. Clearly, jurisdictions do not want either to cut 20% of their other expenditures or raise tax revenues dramatically to cover such a one-time expense.

Box 2.2: Different Approaches to Distinguishing Operating and Capital Expenses

- ***United States***—The Federal Government has a single budget, combining both operating and capital expenses.
- ***Latin America***—Sub-nationals tend to submit consolidated financial statements of revenues and capital and operating expenditures, generally including infrastructure projects, purchase of assets, and, sometimes, transfers to state-owned companies.
- ***Bulgaria***—The Law on Municipal Finance does not require separate sections for operating and capital expenditures in municipal budgets. Since the law also allows municipalities to run a 10% deficit, in theory, they could stay within the law even though their current operating expenditures exceed current revenues by up to 10%.
- ***Czech Republic***—A proposed law will require subsovereign governments to separate their capital and operating budgets and also require that they maintain a balanced operating budget.

Source: Michel Noel, "Developing a Municipal Credit Market in Bulgaria: Systemic Challenges and Proposed Bank Support," World Bank internal document, 1998, p. 4.; Elisabeth Rudman, "Ostrava, City of (Czech Republic)," credit profile (New York: Moody's Investors Service, 1998); and Benjamin Darche/Capital Advisors Ltd.

A. Capital assets

While capital investments come with a high price tag, they also create assets that are both long-lived and have the potential to generate revenues. Thus, the water treatment plant might, if maintained in good condition, continue operating and generating revenues from user fees for at least 30 years. Investors, knowing that the project can produce the funds to pay them back, may be more willing to lend money. (See the discussion of Project Revenue bonds in Chapter 3).

B. Intergenerational equity

Capital expenditures, with their long lives and large size, raise different equity issues for governments than do operating expenses. If a water treatment plant is going to serve the community for 30 years, does it make sense to impose on today's taxpayers the entire burden of paying for its construction? If the plant is going to generate revenues during that period, should the taxpayers of today bear all

the burden of construction, while the taxpayers of tomorrow get only the benefits of the new revenues?

c. Budgets

Numerous governments (both national and sub-sovereign) have separate operating and capital budgets. While the description (box) above explains generally how to determine what expenditures should go in the operating budget or in the capital budget, *governments should adopt their own more detailed policies to distinguish between these types of expenditures.* For example:

- A small local government may decide that any project with a useful life greater than 10 years and a cost greater than US$25,000 should be included in the capital budget.
- Others might focus more on whether the expenditure is expected to be a one-time cost or recurring, or on what type of activity is being funded. Can it be characterized as new construction, rehabilitation, or regular maintenance?

Box 2.2 and 2.3 offer some examples and possible formulas.

Box 2.3: Financing of Municipal Investment

Municipal Budget (General Fund)

Local Government Operating Budget

= Current Revenues
  Own Source
  Shared Taxes
  Operating Transfers from Central Government
– Operating Expenses (including interest payments on debt)
= Current Savings or Deficit

Capital Budget

= Operating Savings
+ Capital Contributions from Users
+ Asset Sales
+ Investment Grants from Central Government
+ Proceeds from Borrowing and Bond Issues
– Investment Earnings
– Debt Service (principal and amortization payments)

Fund Financing (Special Funds)

Earmarked Streams of Revenue Set Aside to Finance Debt Service on Specific Capital Projects

Source: George E. Peterson, "Building Local Credit Systems," Urban Management Program Discussion Paper (Washington, D.C.: Urban Institute, 1997).

II. Key Elements and Initial Steps in Developing a Separate Capital Plan

Capital expenses and operating expenses can affect a sub-sovereign's budget very differently. Therefore, it generally makes sense for sub-sovereigns to develop separate capital budgets. However, in order to work well, capital budgets need to be derived from a coordinated capital improvement plan. *In fact, it is the capital plan that should drive the capital budget, rather than the other way around.*

A. The Capital Improvement Plan

A capital improvement plan is a strategic program for funding needed capital improvements which:

1. Looks comprehensively at capital needs;
2. Prioritizes among those needs to identify specific worthy projects;
3. Considers different funding sources for each project, and their pros and cons; and
4 In light of the above, develops approved capital budget expenditures for each year within established debt issuance policies.

It is important to conduct the portfolio analysis after the individual project analysis. Individual projects need to be consistent with the overall development objective and should not bring excessive risk to the whole sub-national budget.

While much of this chapter will be devoted to steps 3 and 4, it is important to consider both the overall role of the capital improvement plan, and its initial steps.

1. Developing the Plan

Development of a capital improvement plan offers numerous practical benefits.

- *The process requires the government to define its needs and priorities, establish criteria for judging among needs, and make sure its proposed projects are coordinated with available resources and broader governmental policies.* This process can help rationalize and increase the transparency of government decisionmaking and build public support for the agreed-upon projects.
- Second, the plan serves an important management function, as it requires government managers to assess key needs in light of changing demographics and other development requirements. The plan also matches desires with resources and expertise, and makes sure that each individual project makes sense as part of a broader comprehensive development strategy. Since capital plans cover multiple years, they also give managers the ability to identify staffing and other needs for the future.
- The capital planning process can assist governments in looking beyond day-to-day demands and consider a broader vision for what their city or region should look like in the future.
- A well-structured capital plan can give private sector investors greater faith in the jurisdiction's financial management capacity, thereby encouraging increased investment. In fact, as is discussed further in Chapter 6, credit rating agencies look at a capital planning process as one indicator of the strength of a government's financial management capability.

2. Initial Steps

a. Examining needs

Development of a capital improvement plan is a complex process, *beginning with a comprehensive examination of capital needs.* This can include:

- analysis of existing capital infrastructure and its condition;
- assessment of current infrastructure deficiencies and the costs imposed by such shortfalls; and
- forecasts of future infrastructure demands as well as development opportunities.

This examination process is frequently structured to include many parts of the government, as each department presents its own perspective while those responsible for broader planning issues look at the area's overall needs.

b. Setting priorities

One of the most difficult steps in the process is determining how to set priorities among different capital needs and identifying projects that meet those priorities. Since no government has unlimited resources, *the prioritization process is extremely important, as it will effectively highlight those projects with a real prospect of going forward.* A broad strategic vision should drive the prioritization among needs, taking into account the jurisdiction's long-term development needs and goals, as well as the timeliness with which various projects can be completed and the interrelationships among different projects. For example, development of port facilities should be coordinated with the development of infrastructure to transport products to potential customers throughout the region and beyond, as well as development of housing for port employees.

Box 2.4: Benefits of a Capital Improvement Plan

- Rationalized Decision-making
- Increased Public Support for Expenditures
- Improved Management
- Strategic Policy Development
- Increased Market Confidence

Source: James C. Joseph, *Debt Issuance and Management: A Guide for Smaller Governments* (Chicago: Government Finance Officers Association, 1994), p.11. Used by permission of Government Finance Officers Association.

Note: *These initial steps do not consider financing methods*. Of course, it is possible that at the end of the process, those projects that have potential funding sources will be placed in the capital budget. However, *it is important that the initial decision to support a project be separated from the decision about how to fund it, especially as there may be a variety of possible funding approaches for any given project.*

Box 2.5: The Need to Separate Project Analysis from Financing: The Example of San Pedro Sula, Honduras

In 1996, San Pedro Sula, Honduras, issued $15 million in bonds to finance construction and development for the city to host the VI Central American Games. The project ended up costing far more than anticipated. It is unclear whether bond proceeds were used appropriately. The national government ended up having to provide funds, and the city was left with large debt obligations. Part of the problem may have started with the city's capital improvement process. One observer faulted the study prepared for the bond issue for not having separated the investment decision from the financing decision: "Mixing the two things prevented the municipality from having a real analysis of alternatives for obtaining the funds needed."

Source: Giovanni Giovanelli, "Non Performing Municipal Borrower in Central America - Case Study," WBC, p. 8.

A project considered solely as a package (e.g., a proposal to issue bonds to support construction of a sports stadium) may end up pairing a good project with a bad financing mechanism, or vice versa.

c. Funding decisions

Funding decisions should only come after a rigorous assessment of whether the project makes sense in the first place. The following five steps are useful in evaluating potential projects and setting priorities among them:

- Undertake a traditional cost-benefit analysis; look at costs and benefits and discount to present value.
- Focus on the underlying cost-effectiveness of the project in terms of the ability to produce outputs more effectively than existing projects.
- Focus on how important the *need* is (e.g., projects addressing humanitarian needs of underserved populations cannot always and should not have to fit into market parameters).
- Evaluate whether the project constitutes a fundamental building block for *long-term* development.
- Remember that "showy" projects enjoying the support of respected politicians do not necessarily merit inclusion in the capital plan.

III. Financing a Capital Plan: Sources of Public/Governmental Funding

Once capital projects have been prioritized, the possible sources of funding for each project need to be considered. This search includes the public funding options presented in this section, as well as options for private funds described in the next section.

A. Key Public Funding Sources

The sources of public funds will vary dramatically based on the country in which the sub-sovereign is located and the specific project for which financing is being

sought. Thus, no definitive listing for an entire region is possible. The following describes several key sources for public funding:

1. Own-Source Revenues

In some senses, the most readily available sources of funds are locally generated revenues. Presumably, the sub-sovereign will have complete control over how these funds are raised and spent, and will be able to access these funds without seeking the approval of higher levels of government.

Box 2.6: Example: Hungary's Current Account Financing

In Hungary in 1991, gross current account savings(by sub-sovereign governments) financed 75% of municipal capital spending. By 1994, current account savings were negative.

Source: George E. Peterson, "Building Local Credit Systems," Urban Management Program Discussion Paper (Washington, D.C.: Urban Institute, 1997)., p. 7.

While there are often good reasons to fund capital projects from other sources (see, for example, the discussion on intergenerational equity above), the possibility of accumulating savings in a sub-sovereign's current account budget to pay for a project should at least be considered. The markets see investment of retained earnings from current account surpluses in infrastructure projects as an important step in demonstrating a prudent capital funding plan. Rating agencies look favorably on those sub-sovereigns that are able to finance a significant portion of their capital improvements with current account surpluses.

This, in theory, provides the sub-sovereign with additional flexibility in managing the financing of its capital program. By financing capital investment primarily with current account surpluses, the sub-sovereign can use its borrowing capacity for capital investment in times of own-source revenue contractions.

One can expect that certain capital projects will have a small enough price tag and be important enough that financing them from own-source revenues would be appropriate. Even if a project is not funded entirely from own-source revenues, it might make eminent sense to subsidize a portion of its development from these revenues. This would be in the case, for example, with a project that cannot be economically financed by other funds, but which is important enough to the local economy or residents to warrant government subsidy. Operating budgets are frequently funded significantly through own-source revenues.

2. Intergovernmental Transfers

If the sub-sovereign does not have locally generated funds available to finance a needed project, higher levels of government may be able to help. In fact, intergov-

ernmental transfers are often a key feature of sub-sovereign budgets and a key financing mechanism for capital projects. For example:

- **Rio de Janeiro**. The city derived 37.4% of its 1995 revenues from transfers from the provincial and national governments.
- **Hungary**. Local governments receive about 58% of their resources in the form of grants and transfers from the central government.
- **Argentina**. Some provinces receive over 80% of their revenues from the central government.

Box 2.7: Argentina's Co-Participation Revenue System

The Co-Participation Revenue System is the most important form of intergovernmental transfer in Argentina, accounting for 65% of total transfers and 57% of total provincial revenues in 1997. Under the Argentine Constitution, the Federal Congress determines the amount of tax revenue to be shared with the Provinces. Currently, while taxes on international trade such as customs duties, import and export taxes are not shared with the provinces, most major federal domestic taxes (e.g., income, VAT, asset taxes) are shared, with the federal government receiving 43% of the revenues and the provinces receiving the remaining 57%. This 57% is further divided among each province, based on each province's share of total provincial spending in 1988. While a 1994 Amendment to the Constitution provided that the system would be revised by the end of 1996, no such revision has yet occurred.

For example, the Province of Mendoza derives revenues for operations primarily from three sources: federal co-participation (56%), provincial taxes (31%) and provincial non-tax revenues (13%). Tax co-participation revenue is derived from a statutory allocation of 4.33% of total federal co-participation revenues to the province, with a guaranteed minimum amount of Ps 370.8 million.

Sources: Hernán Cámpora and Marcelo Menéndez, "Managing Cases in Argentina With High Default Risk," WBC, pp. 6–7; Garsan R. Zurita and Ricky Man-Ho Wai, "Province of Mendoza" (New York: Duff and Phelps Credit Rating Co., 1998).

A. Structures of Intergovernmental Transfers

There is a wide variety of structures of intergovernmental transfers. Some give sub-sovereigns a specified portion of national tax revenues, such as Argentina's Co-Participation Revenues (see Box 2.7).

Other countries distribute funds not by formula, but through annual appropriations approved by the national legislature or based on the percentage of national revenue raised in each region or locality.

A third option is to provide a wide range of subsidies under specific categorical programs that can be used only for specific types of projects. For example:

- **Tunisia**. Loan funds are distributed to localities only project by project.
- **The Philippines**. Grants earmarked for infrastructure development have been provided from a shared petroleum tax.
- **Eastern Europe**. Countries have environmental funds to finance wastewater treatment plants.

- **Mexico**. The Solidaridad Program (and its counterpart in Peru) funds a variety of infrastructure projects.

B. Key attributes of intergovernmental transfers:

I. Amount of total transfer

This deals with how the national government determines the amount of money to be distributed to sub-sovereigns. For example:

- **Argentina**. Sub-sovereigns receive a specified share of national government tax revenues.
- **Poland**. Sub-sovereigns receive whatever amount the national government chooses to appropriate that year.
- **United States**. Under certain entitlement programs, sub-sovereigns can be reimbursed for expenditures based on established criteria.

II. Distribution

This reflects how transferred funds are allocated *among* the different sub-sovereigns. There are at least four different approaches. Allocation may be based on:

1. the amount of national taxes collected in the jurisdiction;
2. a formula (which often considers need and tax effort);
3. annual appropriations; and
4. reimbursements for certain specified costs.

III. Restriction

This clarifies how much freedom sub-sovereigns have to decide how funds are spent. There is a whole spectrum of possible approaches here, from general revenue sharing (spend the transfers on any activities they want) to block grants (use the funds within broad policy categories) to very detailed requirements (use the funds only for a specific kind of project or even a particular project).

Included in this spectrum are various matching requirements (sub-

Box 2.8: Changing Patterns in Czech Republic

State transfers, formerly the main revenue source for all Czech municipalities and representing 75% of Prague's 1991 operating revenues, have been cut dramatically as part of the redistribution between government levels and in response to a 1993 tax change. Following the most severe cut, 70% in 1994, the rate reduction leveled out in 1995, and their share fell to 5% of operating revenues. It is expected that state transfers will continue at this level going forward.

Source: Susan Riska and Monica Richter, "City of Prague, Credit Profile" (New York, Standard and Poor's, 1997).

sovereigns must match national funds), maintenance of effort provisions, etc.

As is clear from the wide variety of approaches, certain transfers are structured specifically to provide support for large capital projects, while others might have much wider applicability.

Whatever their structure, it is important to consider the stability of transfers in the long term. This is critical in helping the sub-sovereign to develop its capital improvement plan and decide how much it can rely on intergovernmental transfers. For example:

- **Honduras**. While transfers from the central government are set by law at 5% of total national revenues, they are often delayed and only partially paid.
- **Brazil** and **Colombia**. Both countries have tried to increase the certainty of transfers by writing specific revenue-sharing formulas into their constitutions.
- **Hungary**. The local share of the nationally collected personal income tax is decided each year by the government, and the allocations have varied dramatically from 100% in 1991 to 50% in 1992, 30% in 1993–94, and 35% in 1995.

3. Subsidized Loan Programs

While intergovernmental transfers are essentially grants, financing also can be found in various low- or no-interest loan programs offered by higher levels of government. For example:

- **United States**. The federal government's Economic Development Initiative in the Department of Housing and Urban Development allows state and local governments to compete for funds that can be used to subsidize private loans.
- **Latin America**. Municipal development banks, such as FINDETER in **Colombia** and PROMUNI in **Central America**, provide subsidized loans to municipalities.

a. Structures for subsidized loans

There is a wide variety of possible structures for loans to be subsidized.

i. Revolving loan funds

With revolving loan funds or loan pools, subsidized loans are made to sub-sovereign borrowers with the loan repayments used to fund new loans to others. In this way, the loans revolve, as repayments are turned around to fund other loans. For example:

- **United States.**
  New Mexico Finance Agency has a revolving loan program that receives ongoing funds from the state and is also able to increase the amount of revolving loan funds available by leveraging a portion of the loan repayments.

  Kentucky Infrastructure Authority is able to offer rates 2 to 4 percent below the market because the state legislature pays all debt service through its annual appropriation pledge and, by law, all loan repayments are revolved and re-lent.

Box 2.9: Differing Reliance on Sub-sovereign Transfers

The Argentine province of Tucumán has limited financial flexibility due to its dependence on federal transfers. Operating performance is strongly related to increases and decreases in such transfers, which constitute more than 75% of operating revenues.

Alternatively, in more developed areas such as Catalunya and Madrid, Spain, 75%–100% of what used to be received as state transfers (excluding such things as health and EU subsidies) will now come from their own income taxes. This will bring a higher degree of fiscal independence.

Sources: William Streeter, Gabriel Torres, Eduardo D'Orazio, and Fernando Mayorga, "Province of Tucuman, Argentina" (New York: Fitch IBCA Inc., 1998); Gabriele Baur, Maria Cabanyes, and Samuel Theodore, "Spanish Regional Government: A New Financing Agreement" (New York: Moody's Investors Service, 1998).

- **Poland**. The Environmental Bank and regional Environmental Funds have provided subsidized loans for a wide range of environmental projects.
- **Czech Republic**. In 1996, the State Environmental Fund made almost as many municipal loans for only a moderately lower total loan volume than the Savings Bank, the largest private-sector lender.

II. Special banks

Loans can also be subsidized through the use of special municipal banks. In much of Western Europe, small savers' deposits were previously allocated to subsidize municipal investment, as they were put in postal savings bank systems or special municipal banks, which could then offer subsidized loans to municipalities. For example:

- **Germany**. Municipal governments own shares in local municipal banks, which by law must provide municipal governments with long-term credit as part of a permanent partnership.
- **Belgium**. Crédit Communal Belgique enjoys a monopoly on access to individual savings accounts and individual savings bonds.
- **The Netherlands**. While the municipal bank (BNG) used to receive regulated access to personal savings deposits and substantial government con-

tributions, it has now turned more to the international markets for funds (as has Crédit Local de France).

- **Emerging Markets**. Significant steering of domestic funds continues to occur, with some estimates that during the mid-1980s, 66% or more of the national economy's credit flows were steered in such a fashion by governments in **Brazil**, **India**, **Pakistan**, and **Turkey**.

III. Bond banks

A bond bank is a state-sponsored entity created to act as a financial intermediary, essentially selling its own securities and then lending the proceeds to local governments. In effect, bond banks make it possible for even very small local governments to issue market debt, as the administrative costs associated with debt issuance are subsidized by the bond bank and/or spread among numerous localities. Not only do these bond banks provide access to the financial markets, they do so at subsidized rates—providing technical assistance and improved borrowing terms for localities, in addition to credit enhancement through more direct subsidies.

Box 2.10: Subsidies Offered by Bond Banks

- Payment of costs of bond issuances and funding debt service reserves.
- Revolving loan programs make subsidized loans to local borrowers and the loan repayments are then re-lent to other issuers over time.
- State credit enhancements:
  - *State moral obligation to fund debt service reserve*—Bond bank asks for supporting funds from legislature, but offers no guarantees to investors.
  - *State appropriations*—State directly backs debt service, but no guarantees.
  - *State full faith and credit pledge*—State unconditionally guarantees value of bonds.
  - *State aid intercept provisions*—In event of default, bond banks can intercept state aid to local governments.

Source: Adapted from John Petersen, "A Primer on State Bond Banks in the United States," WBC, pp. 4–5.

IV. Municipal development funds (MDFs)

A municipal development fund acts as a sub-national credit institution. Around the world, more than 50 Emerging Markets have established a type of municipal development fund, while in federal states such as Brazil and India, individual regions have also developed their own such funds. Multilateral development banks, as a way to channel loans to local governments, have also used these devices.

While there is a broad range of MDF structures, they can act either as first- or second-tier intermediaries. As first-tier intermediaries, they lend directly to sub-sovereigns. As second-tier intermediaries, these funds generally supply credit to sub-sovereign governments through

commercial banks, in an attempt to engage commercial banks in this financing sector. Municipal development funds may rediscount commercial bank loans to municipalities or provide long-term loans to commercial banks for on-lending to local governments. Or MDFs may provide more direct loans to localities, with special subsidies such as initial grace periods on principal and/or interest payments.

In many cases, the goals of MDF will include not just increasing the credit available to local governments, but also furthering other policy goals, such as increased efficiency of local investment, improved municipal financial management capacity, etc. Thus, in addition to lending funds to local authorities, MDFs have mixed loans with capital grants or subsidies for high-priority projects, provided technical assistance, performed project appraisals, and overseen local project preparation and construction.

Box 2.11: Two Municipal Development Fund Structures

- *Czech Republic*—The Municipal Infrastructure Finance Company (MUFIS) provides commercial banks with long-term funds, at market rates of interest, for on-lending to local governments. The banks perform all municipal credit analysis, and accept all credit risk for their loans.

- *Colombia*—The Territorial Financing Institution (FINDETER) is an independent parastatal institution owned by government and local authorities. For projects it approves, FINDETER agrees to refinance up to 85% of a commercial bank's loan to the municipality to finance the project. The banks perform all municipal credit analysis and accept all credit risk for their loans, including the risk on the portion of the loan refinanced by FINDETER

Source: George E. Peterson, "Building Local Credit Systems," Urban Management Program Discussion Paper (Washington, D.C.: Urban Institute, 1997), pp. 39-42.

4. Loan Guarantees

A form of governmental subsidy occurs when higher levels of government, instead of providing loans, offer to guarantee loans to sub-sovereigns from outside sources. While these guarantees can be explicit, as when the national government explicitly guaranteed the first municipal bonds issued in Hungary after Communism, they are more frequently implicit. For instance, **France** used to review local budgets and plans for borrowing, thereby creating an expectation in the market that the government had "approved" the borrowing and would back it up.

Sovereign guarantees can enable sub-sovereigns to receive more favorable interest rates on loans. However, if freely available, they also raise the possibility of perverse incentives. Some have pointed to **Mexico's** experience with toll roads as a cautionary example. In this case, the Mexican national government guaranteed the private construction of toll roads, with state banks providing financing and

Table 2.1: Loan Repayment Experience: Selected Municipal Development Funds (MDFs)

Country and MDF	*Loan non-performance rate*	*Automatic intercept guarantee*	*Remarks*
Brazil, State of Paraná (PrAM/PIMES)	2%	Yes	VAT tax-sharing transfers from state to local government collateralize loans. The state bank deducts debt service payments directly from municipalities' accounts.
Colombia (FINDETER)	2%	Voluntary in loan contract	Municipalities open special account to deposit inter-governmental tax-sharing transfers. Bank has right to access account. Municipal loans are made and payments collected by private commercial banks.
Czech Republic (MUFIS)	0 (only in operation 2 years)	No	Municipal property commonly used as collateral. Loans are made and payments collected by private commercial banks.
Ecuador (BEDE)	5%	Yes	Local government loans are collateralized by local government accounts at central bank. These receive all government transfers as well as all local government own-source revenues. Repayment of BEDE loans has first claim.
Honduras (BANMA)	50%+	No	No collateralization. BANMA does have the right to intervene in local tax collections if loans are delinquent. It can establish a local office and use incremental tax receipts to repay its loans. In the past, BANMA continued to make loans to local authorities in arrears. Performance now improving.
Indonesia (RDA)	30%	No	No collateralization or other guarantee structure.
Jordan (CVDB)	30%	Yes	Collateralized by government transfers. However, bad loans joined with a falling economy that reduced transfers produced a situation where delinquent loan payments for many municipalities exceeded central government transfers and the guarantee system broke down. Performance now improving.
Kenya (LGLA)	80%+	No	LGLA continues to make new loans to municipalities in arrears. Forms part of an interlocking bad-debt situation, where state also fails to pay amounts legally due to municipalities.
Morocco (FEC)	0% commune 20% régies autonomés	No	Local budgets must provide for loan repayments before they will be approved by central government. Central government implicitly guarantees commune loans through official approval of municipal budgets. The Ministry of Finance deducts debt payments at source. Municipal enterprises (régies) have not participated in central government budget review and implicit guarantee. Rising arrears led to requirements that régie loans be guaranteed by local municipality.
Philippines (MDF)	20%	No	MDF has the legal right to impose intercepts, but in past did not exercise this right. System is now being reformed.

Source: George E. Peterson, "Building Local Credit Systems," Urban Management Program Discussion Paper (Washington, D.C.: Urban Institute, 1997), p. 47.

supplying guarantees to private lenders and contractors. The result was a vastly over-designed and expensive toll road system as well as hemorrhaging of the state banks that provided the guarantees.

Others have pointed to the moral hazard that arises when sub-sovereigns can borrow money that will be implicitly guaranteed by the national government.

Under this scenario, sub-sovereigns have an incentive to borrow as much as possible, but bear no burden if repayments are not made. In fact, this moral hazard turns the efficiency pressures on sub-sovereign governments upside down. This is one of the reasons why some states in **Brazil** are considered to be hopelessly indebted to the federal government and are unlikely to emerge from effective bankruptcy in the near future.

a. Forms of loan guarantees

While the most common form of sovereign guarantee is for repayment of loans, guarantees can take many forms. For example:

- **Colombia** has incorporated protection against currency risk into private infrastructure project documents and contractual agreements.
- **Pakistan** has provided a full guarantee of state-owned power purchases and fuel suppliers in power projects as well as a universal fixed tariff rate.
- **Indonesia**, through the state power company, has assumed part of the exchange rate risk arising from electricity tariffs.

However, there is still considerable political risk for investors that rely on these "guarantees." For example:

Box 2.12: Possible Types of Sovereign Guarantees

Contractual Obligations of Government Entities

Guarantee of off-take in power projects
- Birecik Hydro Power Plant, Turkey
- Electricidad de Cortes, Honduras
- Paguthan & Dabhol Power Plants, India
- Mt. Apo Geothermal Plant, Philippines

Guarantee of fuel supply in power projects
- Termopaipa Power Plant, Colombia
- Lal Pir Power, Pakistan

Policy/Political Risk

Guarantee of currency convertibility and transferability
- Lal Pir Power, Pakistan

Guarantee in case of changes in law or regulatory regime
- Rousch Power, Pakistan
- Izmit Su Water Treatment Plant and Pipeline, Turkey

Guarantee of interest rate
- North-South Expressway, Malaysia

Guarantee of exchange rate
- North-South Expressway, Malaysia

Debt guarantee
- 4 Toll Roads, Mexico
- Termopaipa Power Plant, Colombia

Market Risk

Guarantee of tariff rate/Sales risk guarantee
- Don Muang Tollway, Thailand
- Western Harbour Tunnel, Hong Kong
- Buga-Tulua Highway, Colombia
- Mexico Toll Roads

Revenue guarantees
- South Access to Concepción, Chile
- M5 Motorway, Hungary

Source: Mansoor Dailami and Danny Leipziger, "Infrastructure Project Finance and Capital Flows: A New Perspective," Report #1, Finance, Private Sector and Infrastructure—Latin America and the Caribbean Region Series, World Bank, October 1998, pp. 7–8.

- **India**. Enron Company's Dabol Power Project was canceled by the incoming Maharhastra State Government and then renegotiated with a lower rate of return.
- **Pakistan.** The current economic crisis has led to renegotiation of the power purchase agreements that support the financing for many of Pakistan's independent power projects controlled by foreigners.
- **Mexico**. The government provided a "rate of return" guarantee for its toll road projects by extending the concession period, but the "Tequila Crisis" caused many of the projects to default on outstanding loans, irrespective of the concession contract extensions.

5. Outside Donors and Funding Agencies

Potential outside donors and funding agencies include multilaterals, such as the World Bank, the United Nations (e.g., the UN Development Programme), and the InterAmerican Development Bank; bilateral aid from donor countries; and aid from specialized financing institutions, such as government-owned Export-Import Banks, Regional Banks, and organizations (e.g., European Union, European Investment Bank and Nordic Investment Bank).

Box 2.13: Checklist: Potential Public Funding Sources

✔ Own -Source Revenues
✔ Intergovernmental Transfers
✔ Subsidized Loan Program
  – Revolving Loan Funds
  – Special Municipal Banks
  – Bond Banks
  – Municipal Development Funds
✔ Loan Guarantees
✔ International Donors
  – Multilaterals
  – Bilaterals
  – Non-governmental Organizations

As with other forms of assistance, this aid can come in the form of grants or loans, or other types of concessionary arrangements. In addition, non-governmental organizations have become increasingly active in trying to support government projects that meet their own organizational goals, whether helping to structure environmental protection for debt swaps or providing more direct technical assistance or subsidized funds.

IV. How the Private Sector Can Be Involved in Financing Capital Projects

Once sources of public funding have been assessed, the capital improvement budget process needs to consider potential sources of private sector funds. In this context, however, there are potential reasons other than just funds for involving the

private sector in capital projects. For example, the private sector can:

- bring skills and knowledge;
- improve the efficiency of service delivery;
- insulate operations from political intervention; and
- make the project more responsive to consumers' needs and preferences.

It is a mistake, however, to see private participation as a panacea. With reduced government control comes less ability to direct operations in ways that serve those most in need. With private sector participation, short-term profit constraints can outweigh long-term development strategies. And while reduced government expenditures may provide immediate budgetary relief, there are also long-term costs associated with diminished government control.

Box 2.14: A Public/Private Partnership: Virginia Beach, Virginia USA

Virginia Beach established an innovative tax increment financing structure for the expansion of a mall, representing a $110 million investment in additional retail, movies, restaurants and parking. Under this arrangement, the city agreed to pay for the parking garage through a lease. The city established a tax increment district that included the mall and committed to pay the mall owner the increase in real estate taxes paid each year over the base year in order to reduce the city's lease obligations. However, if the increase in real estate taxes was not realized, the city owed nothing on the lease. This effectively avoided the city's having to issue bonds, while transferring project risk to the private sector.

Source: Patricia Philips, "Vehicles for Joint Public Investment, City of Virginia Beach, Virginia," WBC, p. 3.

In short, the effort to seek private funding sources should be part of a considered judgment about the benefits of private sector participation, rather than an automatic conclusion.

A. Types of Private Sector Participation

Once it has been determined that private sector participation is desired, the subsovereign must still consider what type and level would be best. There is a wide spectrum of possible types of private sector participation. One way to distinguish among the different types of private sector involvement is based on *how responsibility is allocated for functions such as asset ownership and capital investment*. In this regard, there is a range of options.

1. Impact Fees and User Charges

Governments can retain total control and management of an asset, but achieve private participation by assessing fees or charges on affected businesses, such as betterment fees on property-owners whose property value is improved by government-financed infrastructure development. Alternatively, a private developer may

be assessed an impact fee for the burden that new development will place on the local infrastructure. These arrangements are sometimes in the form of capital contributions from developers toward capital improvements in and around a new development. Tax increment financing and special assessment funds are other variations on this structure. Under any of these variations, the government maintains ownership and control of the infrastructure, while the private sector maintains ownership and control of its own assets.

2. Private Investment through Loans

By issuing bonds, a government can maintain complete control over an asset and its maintenance and operations (subject to whatever bond indentures it enters into), while still receiving the benefit of private financing from investors. Similarly, the government can seek bank loans to finance key projects. However, either of these approaches requires the government to pay back the bondholders/bankers, with interest, rather than receiving private equity participation.

3. Service Contracts

These contracts, which are typically entered into for relatively short periods, provide a way to secure private sector assistance for performing specific tasks, such as repairing pipes, collecting accounts, filling potholes, or collecting tolls. For example, the water utility in Santiago de Chile has contracted out computer services, engineering consulting services, and repair, maintenance, and rehabilitation. Together, these services account for about half of the utility's operating budget. In order to maintain competition, however, this utility has at least two service contracts for each kind of task.

4. Management Contracts

Rather than just contracting out a service, these contracts actually transfer responsibility for the operation and maintenance of government-owned business to the private sector, for periods generally up to five years. Since the private contractor has general management responsibility, it is possible to structure these contracts with performance targets based on measures over which the manager will have some control. However, while the private sector is managing the facility, the government retains the responsibility for funding investment.

5. Leases

Under lease arrangements, a private firm would lease a capital asset, such as a utility, and take on the responsibility for its operation and maintenance. *Note that*

while investment responsibility remains with the government, this does shift some of the commercial risk to the private sector lessor. For example, in a water utility, the private sector has the commercial risk of collecting the tariffs paid by customers that are necessary for contractor payments. A hybrid of this approach would shift some investment responsibility on to the private firm, at least for rehabilitation.

6. Concessions

In a concession structure, the private sector takes responsibility not only for operation and maintenance, but also for investments in the facility. This means that asset ownership remains with the government and that when the contract ends, full control reverts to the government (including control over the improvements made to the asset by the private investment). Such arrangements tend to be for relatively long periods (e.g., 25 to 30 years), and require detailed contracts outlining performance standards, required investments, and mechanisms for adjusting user charges or fees. An arrangement of this type was used recently to provide water and sanitation in Buenos Aires. Concession arrangements are also common for private participation in other infrastructure projects, such as toll roads, bridges, tunnels, airports, ports, mass transit (bus and rail), ferries, and garbage collection and disposal.

7. Joint Venture Leases and Concessions

While government retains majority control under this structure, a new joint venture company is created, in which the private sector normally holds a minority equity participation. This joint venture is then responsible for running the leases and concessions, usually to the private sector partner, but the government retains management control. In some cases, the government may sell the remaining shares of the utility to the private sector after the private sector partner demonstrates the required level of performance indicated in the concession contract. Such an arrangement requires clarity in terms of who has control over day-to-day operational decisions, who determines key management and investment policies, etc.

8. Full or Partial Ownership

A much greater degree of private sector participation is involved in a divestiture in which the government actually sells assets or asset shares through a management buyout. With a complete divestiture, the private sector takes on full responsibility for operations, maintenance, and investment, and achieves private ownership of the assets as well. While divestitures deal with the transfer of existing projects from public to private hands, new projects may be developed with either partial or full

Table 2.2: Range of Private Sector Participation

Option	*Asset ownership*	*Operations and maintenance*	*Capital investment*	*Commercial risk*	*Duration*
Service contract	Public	Public and private	Public	Public	1–2 years
Management contract	Public	Private	Public	Public	3–5 years
Lease	Public	Private	Public	Shared	8–15 years
Concession	Public	Private	Private	Private	25–30 years
BOT/BOO contracts	Private and Public	Private	Private	Private	20–30 years
Divestiture	Private or Private and Public	Private	Private	Private	Indefinite (may be limited by license)

Source: World Bank, Toolkits for Private Sector Participation in Water and Sanitation, no. 1, "Selecting an Option for Private Sector Participation" (Washington, D.C.: World Bank, 1997), p. 3.

private ownership from the beginning. These projects are often combined with the government incentives described below.

9. Variations

No one form of private sector involvement is best in all circumstances. In fact, a wide variety of structures have been used for water and sanitation services (see Tables 2.2 and 2.3, and Figure 2.1).

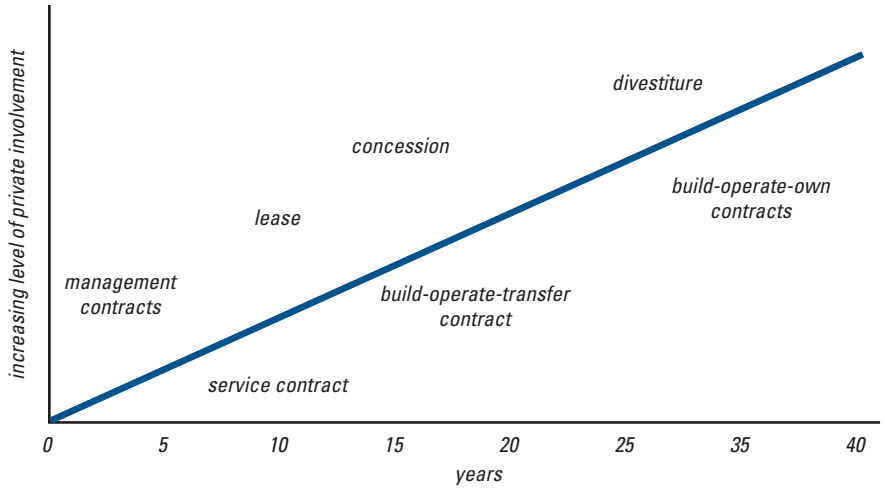
These options can be displayed graphically, as a relation between increased delegation, risk, and irreversibility on one axis and time duration on the other.

Table 2.3: Some Private Sector Contracts in Place in Water and Sanitation

Option	*Water*		*Sanitation*	*Water and sanitation*
Management of service contract	Colombia Gaza	Malaysia Turkey	United States	Puerto Rico Trinidad and Tobago
Lease	France Guinea Italy	Senegal Spain		Czech Republic France Poland
Concession	Côte d' Ivoire France Macao	Malaysia Spain	Malaysia	Argentina France
Build-Operate-Transfer contract	Australia China	Malaysia Thailand	Chile Mexico New Zealand	
Divestiture	England and Wales			England and Wales

Source: World Bank, Toolkits for Private Sector Participation in Water and Sanitation, no. 1, "Selecting an Option for Private Sector Participation" (Washington, D.C.: World Bank, 1997), p. 9.

Figure 2.1: Range of Private Involvement



Source: World Bank, *Toolkits for Private Sector Participation in Water and Sanitation,* No. 1, "Selecting an Option for Private Sector Participation," (Washington, D.C.: World Bank, 1997), p. 2.

Table 2.3 highlights several points along the spectrum. In fact, there is a wide variety of more detailed structures, such as Build Operate Transfer and Build Own Operate (see Box 2.15).

Most private sector participation in infrastructure projects is a hybrid of the structures described above, often including a capital contribution from a private developer, government subsidies, bank loans, etc. Many projects sponsored by local or regional governments, such as transportation facilities, garbage collection, landfills, water and sanitation plants, etc., will often require public-private partnerships, as the projects usually do not generate sufficient returns to lure private capital investors without government incentives.

Box 2.14: Checklist of Types of Private Sector Participation

- Impact fees, special assessments
- Leases
- Loans
- Concessions
- Service Contracts
- Joint Ventures
- Management Contracts
- Full or Partial Ownership

Box 2.16: Variations on Private Sector Structures

Build Operate Transfer—These arrangements resemble concessions for providing bulk services, but are normally used for greenfield projects. For example, the private sector would construct a new dam and water treatment plant, operate them for a number of years, and at the end of the contract relinquish all rights to a public utility (primarily the right to collect customer payments). As used in Chile, the government pays the private sector for the water from the project at a price calculated over the life of the contract to cover construction and operating costs while providing the investor with a reasonable return on its initial investment. BOTs are also common for greenfield projects such as wastewater treatment plants, electric generating facilities, toll road, bridges and tunnels, ports, and airports.

Build Own Operate—Under this structure, assets remain indefinitely with the private partner. The government's primary function is to establish a regulatory and legal framework and mechanism for the design, construction, operation and maintenance of the private sector facility. This begins with detailed tender documents that define the specifications for the facility. The tender documents also contain the legal and regulatory framework upon which the contract is awarded and the projects monitored to insure that the private sector complies with the specifications indicated in the tender documents. Legal and regulatory conditions are also important in the other private sector variants such as Build Operate Transfer; Design Build Operate and other variants of these contractual obligations.

Design Build Operate—While the private sector is responsible for designing, constructing and operating the facility, the public and private sectors would share responsibility for capital investments. In this case, the government and the private sector enter into a joint venture arrangement and contract out design, construction and operation of the facility, usually to the private partner. The government indicates the type and extent of financial support it is willing to provide in the tendering documents.

Other variations include Build Operate Lease; Build Own Operate and Manage; Build Own Operate and Transfer; etc.

Sources: M.P. Van Dijk, "Accessing the Capital Market for Financing Urban Infrastructure and Services in Andra Pradesh (India)" (Rotterdam, Netherlands: Institute for Housing and Urban Development Studies, 1998), p. 3; M.P. Van Dijk, "Private Sector Participation in Urban Infrastructure and Services Provisions in Ho Chi Minh City (Vietnam)" (Rotterdam, Netherlands: Institute for Housing and Urban Development Studies, 1997), p. 20; and Benjamin Darche, Capital Advisors Ltd.

There is a wide variety of government incentives. For example:

- **China** commonly offers direct financing through a government equity contribution.
- **Bangkok** uses local currency term loans, as seen in the Second Stage Expressway Project, which can serve as an inducement to foreign banks.

Tax incentives can include such measures as favorable tax treatment of income for investors, special depreciation allowances, and the lowering or elimination of import duties on imported machinery and equipment, etc.

Ultimately, the capital improvement plan needs to assess each of the options for public and private sector financial involvement for each proposed project. The capital budget is then constructed to include those highest priority projects for which funding

can be made available. Only after having gone through this analysis, should governments seriously consider borrowing to pay for high priority projects.

As the next section explains, borrowing does not necessarily lead to a decision to issue bonds, as it may also be effectively done through banks. Furthermore, whatever the form, borrowing should be undertaken in the context of a considered debt management policy, which determines the acceptable framework for the capital budget.

V. The Pros and Cons of Borrowing to Finance Capital Projects

Borrowing represents only one possible way to finance capital projects. Even if borrowing appears to make the most sense, the type of borrowing that is most appropriate needs to be considered. For example, the simplest way might be to borrow is through a local or national bank. An alternative method would be to issue debt in either the domestic or international capital markets.

A. Borrow from a Bank or Issue Debt?

While there is a wide variety of ways to borrow funds, it is most useful to think in terms of two distinct models: borrowing from banks or issuing bonds.

1. Bank Borowing

The bank borrowing model has been most prevalent in Western Europe where, as mentioned earlier, specialized municipal banks traditionally offered long-term loans. For example:

- **France**. Credit Local de France previously had a monopoly on municipal lending, while in other countries bank lending has occurred in a more competitive environment.
- **Hungary**. The National Savings Bank had a monopoly on local finance in the early 1990s; by 1997, it remained dominant but no longer exclusive, as it retained 92% of the market while UnicBank (Raffeisen) and Citibank were starting to offer competition.

Advocates for specialized municipal banks (or commercial banks choosing to compete in this market) have argued that these banks can provide a wide range of services to municipalities. Not only can they provide financing, but they can also develop close relationships with their sub-sovereign clients, helping them with budget management, capital planning, and the like. Others have argued that while these may be useful services, they end up being paid for by the sub-sovereign as the bank charges above-market rates once the jurisdiction's borrowing plan is established.

2. Issuing Bonds

The alternative model is issuing bonds on either the domestic or international capital markets. Under this arrangement, sub-sovereigns get all the funds they need up-front through the bond offering and are not subject to partial payments based on a bank's monitoring of their project construction progress. In addition, credit ratings, which help determine the issuer's borrowing cost, are determined by independent agencies, rather than the banks, and the various support functions that a municipal bank might provide are spread out among a variety of players, including financial advisors, legal counsel, and underwriters.

a. Longer maturity and risk management

One main argument that has been made for issuing bonds is that they allow longer maturity debt than bank loans. Longer maturity debt helps to minimize the budget risk and contributes to the financial stability of sub-sovereigns. Bond markets also might provide cheaper sources of financing than domestic bank loans. However, in using bond markets, sub-sovereigns needs to work on necessary risk management. For example, while interest rates may be lower in foreign currency denominated bonds than in local debt, the former require the sub-sovereign to bear the foreign currency risk. Thus, both Rio de Janeiro's (Brazil) 10.375% bond offering in July 1996 and the 10% rate for the Province of Mendoza (Argentina) one month later had longer terms and lower interest rates than the issuers could obtain on the domestic bank market. However, the foreign exchange risk during the three and six years of these respective bond offerings are considerable.

Note: It is unlikely that bond markets will be open equally to all kinds of issuers. Experience has shown that larger and better known sub-sovereigns are likely to have better success issuing bonds than smaller, less well-known entities.

b. Other benefits

Notwithstanding the risk and limitations, both international and domestic bond markets can offer many significant benefits:

- First, they provide an added source of financing that can tap into the wealth of a wide range of players, from individual investors to pension and mutual funds.
- Second, they may indeed provide a cheaper source of capital, especially when the offering is backed up by a robust dedicated revenue source.
- Third, the distant nature of the relationship between bondholders and issuers (as opposed to the closer relationship between banks and borrowers) can enhance both the efficiency and transparency of government operations.

3. Competitive Arrangements

While the bank or bond models have different strengths, it is not clear that they must be mutually exclusive. For example, both Colombia and the Czech Republic have developed competitive local credit systems that are characterized by significant market segmentation. In these cases, the smallest local jurisdictions have borrowed primarily from government-subsidized parastatal institutions, while mid-sized jurisdictions have borrowed primarily from commercial banks, and larger cities have entered the bond market.

Box 2.17: Capital Markets as a Source of Trillions of Dollars

In the United States, almost 60% of the funds raised for public sector construction projects come from issuance of municipal securities. In 1997, state and local governments offered 16,485 issues that totaled over US $267 billion (including both short and long term). In 1998, the value of such issues is estimated at more than US $274 billion. The largest holders of these securities were individuals and households (33%), mutual and money market funds (16%), insurance companies (13%),money market funds (12%), and bank trust departments (8%).

Source: Securities Data Corporation, *The Bond Buyer 1998 Yearbook* (New York:, 1998), p. 10. Used by permission of American Banker-Bond Buyer.

A sub-sovereign's freedom to choose between borrowing from banks or in the capital markets depends on a variety of factors, including the sovereign's regulatory restrictions, market demand, and legal constraints (each of which is discussed in more detail in Chapter 5). The options available to a sub-sovereign are also constrained by the macroeconomic conditions in a country and the state of development of its capital markets. The potential of a country to develop a well-functioning domestic capital market depends further on the degree of financial sector development (e.g., the ability to assemble pools of savings for investment).

B. Domestic Capital Markets

Key forces that can lead to development and expansion of domestic capital markets include:

- Growth of domestic pension funds—private pension funds in **Chile** are invested in toll roads, airports, ports and other infrastructure projects in Chile, and in local infrastructure in **Argentina** and elsewhere.
- Decentralization of services and revenue sources to sub-sovereigns.
- Strengthening of local and regional government institutions, including improved capacity to produce financial reports according to standards accepted by the markets, credible accounting systems and independent audits, cash management and financial control systems, etc.

- Development of legal, regulatory, and supervisory frameworks that encourage capital market development. This can include:
  - elimination of interest rate or other caps that might hinder mobilization of private long-term savings;
  - facilitation of the development of private rating agencies; and
  - clear supervision of capital market operations, as well as explicit provisions for handling sub-sovereign bankruptcies.

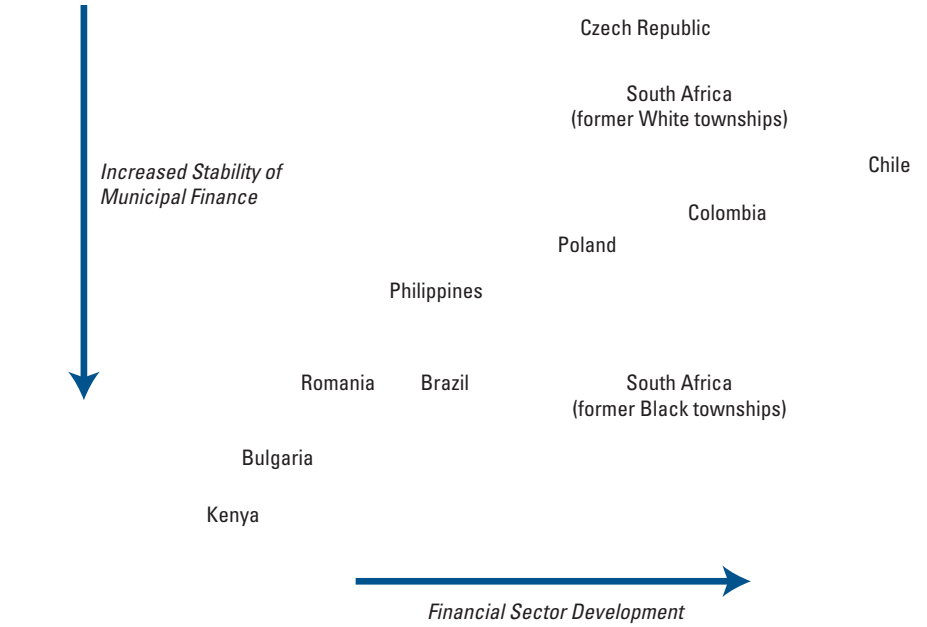
VI. Debt Management Policy in Sub-sovereign Borrowing Decisions

A correct debt management policy can provide conceptual framework and necessary tools to guide the borrowing policies by sub-sovereigns.

A. Importance and Objective of Debt Management Policy

There are several reasons for developing a debt policy.

Figure 2.2: Potential for Municipal Lending



Source: George E. Peterson, "Building Local Credit Systems," Urban Management Program Discussion Paper (Washington, D.C.: Urban Institute, 1997), p. 23.

1. Consistency with Overall Economic Factors

A debt policy is a necessary tool for considering how each issuance of debt relates both to previous and future issuances and also to longer-range strategic development and budgetary goals.

One of the key reasons for a separate capital budget is that decisions to engage in government borrowing should not be made in a vacuum. In deciding whether to enter the bond markets (or borrow from a local bank), a sub-sovereign must consider not just the best way to fund a particular project but also how this financing method fits in with its overall budgetary position. For example, while borrowing might make sense as the most efficient way to finance a high priority project, it might still be an unwise decision for a sub-sovereign already exposed to excessive debt. Additional borrowing may create a financial burden that will require the sub-sovereign to reduce services in the event of a downturn in revenues, delay payments to vendors, or resort to other measures to confront a financial crisis.

2. Risk Management

A debt management policy is that it provides sub-sovereigns with tools for managing risk of their debt portfolio, especially, if they are planning to entering the capital markets. Under most circumstances, borrowing by sub-national governments will entail

Box 2.18: Approaches to Sub-sovereign Borrowing

Commercial Banks

Example—Guatemala. Commercial banks have provided loans for electricity distribution, water, roads, and other infrastructure projects to small municipalities through the lending program of the Banco Centroamericano de Integración Económica.

Specialized Municipal Banks

Example—Hungary. Throughout the mid-nineties, the municipal finance market was dominated by the National Savings Bank (OTP), which developed simple short- and medium-term lending instruments for municipal clients.

Government-sponsored Revolving Loan Funds/Municipal Development Funds

Example—Czech Republic. MUFIS is a legally independent entity that onlends to private commercial banks for municipal credits and can participate in municipal bond purchases.

Domestic Bond Markets

Example—San Salvador. The city structured a seven-year, US $10 million equivalent domestic bond using dedicated taxes and fees for infrastructure investment.

International Bond Markets

Example—Rio de Janeiro. The city issued a three-year US $125 million note to help refinance its existing short-term debt.

Sources: Danny Leipziger, "The Growing Importance of Local Domestic Capital Markets for Sub-National Infrastructure Development," WBC, pp. 6-7; Maria Freire, Marcela Huertas, and Benjamin Darche, "Sub-national Access to the Capital Markets: The Latin American Experience," WBC, p. 29; Burcak Inel, Nicole Barbery, and Michel Noel, "Reforming the Legal, Regulatory and Supervisory Framework for Borrowing by Sub-national Entities," World Bank internal document, October 1998, p. 14.; George E. Peterson, "Building Local Credit Systems," Urban Management Program Discussion Paper (Washington, D.C.: Urban Institute, 1997), p. 71.

Box 2.19: The ALM Approach to Debt Management

Why should debt management decisions be made with reference to the existing asset conditions in the ALM framework?

In most cases, government should be concerned with he net position between the asset and liability. For example, in sub-sovereign external debt management, currency reserve can serve as a natural hedge (in terms of currency composition) against the external debt. Without reference to foreign reserve positions, it is hard to fully understand the risk of external debt. For domestic debt management, a major sub-national government concern is the sustainability of its debt services. The sustainability has to be decided based on the government asset positions (in particular, tax revenue). Russia for example, issued a huge amount of domestic debt, partly based on the false projection of increasing tax revenue. The government eventually had to default on its domestic debt in 1998 because it could not meet the debt service obligations

substantial financial risk, as the capital markets for sub national debt are very undeveloped and volatile. Most loans for local government are variable rate, exposing the municipality to interest-rate risk. If a municipality is not accustomed to borrowing or does not do any risk analysis prior to borrowing, spikes in interest rates for its debt can cause severe cash flow problems and disruptions to municipal services. The situation is exacerbated by foreign exchange risk for those municipalities that may consider entering the international capital markets. *Thus, no decision regarding borrowing for a project should be made without considering how that decision fits within the government's overall debt management policy.* (A further limit, whether borrowing would contravene the debt management policy of higher levels of government, is discussed in chapter 5.)

3. Cost Minimization

A well-designed debt policy allows sub-sovereigns to minimize the cost of borrowings at a given risk level.

4. Building Market Confidence

A well-designed and consistently enforced debt policy provides comfort to investors and credit rating agencies, as well as helping to garner public support for proposed debt issuances. As a result, investors might be more willing to accept the issuances at lower cost and longer terms, which contributes to both debt risk and cost reduction.

B. The Conceptual Framework for Designing Debt Management Policy: Asset-Liability Approach

Based on the best practices in corporate and public debt management, the asset-liability management (ALM) approach is recommended for sub-sovereign debt management,

specifically, with reference to its asset positions. ALM provides a framework to address the main issues/objectives of debt management policy. It is a combination of:

- *Strategic analysis*, which will focus on structural macro-economic analysis such as sub-national development planning and fiscal policy, to develop a strategic thinking of sovereign debt management.
- *Portfolio analysis*, which will focus on technical ALM decisions, such as debt maturity and currency and interest rate structure.

1. Strategic Analysis

The ALM framework can help sub-national decisionmakers to develop a strategic understanding and approach to manage debt. Though most of the active decisions are taken on the debt/liability side in sovereign ALM work, strategic debt management work cannot be successful without examining the asset situation a sub-sovereign faces. For example, in issuing long-term debt to finance development projects, the sub-sovereign has to forecast its asset income (tax collection, investment revenues, etc.) and ensure sufficient means to meet the debt service requirement associated with the new issuance in years to come. Failure to do so can cause financial problems and jeopardize the project.

Although changing the asset situation (for example, raising or lowering tax rates) is more complicated and less frequent, it is still an option that the government can take. Especially when a sub-sovereign experiences a sudden increase of revenue from, for instance, privatization programs, the decision on how to invest these assets should consider debt structure.

2. Technical Issues

The major goal of debt management, at a technical level, is to minimize the cost of borrowing while maintaining the risk at a prudent level. The risk is defined as the volatility of debt service in relation to the asset revenues. This line of thinking is called budget-at-risk (BAR) analysis. BAR analysis has to be conducted in an ALM framework (i.e., one has to look at both sides of the balance sheet: government liability and government revenue).

C. Implementation: The Organization Building

The debt management policy and the ALM framework are often implemented by the debt management office (DMO). The mandate for DMO includes:

- draftng the guidelines and philosophy on debt management;
- implementing borrowing decisions; and
- monitoring the risk and cost of debt portfolio.

It is important to maintain consistency between technical work in DMO and the overall economic policy in a sub-sovereign. Typically, a DMO has three functions: (1) front office deals with transactional issues related to the borrowings; (2) back office deals with accounting and clearing work; and (3) middle office deals with analytical work, such as risk analysis and portfolio optimizations.

D. Practical Issues Encountered by Sub-sovereign Debt Managers

In enforcing the ALM approach to managing sub-sovereign debt, policymakers often encounter the following key questions:

1. What is the Asset and Liability Condition?

The immediate issue is to understand the current asset and liability condition of the sub-sovereign. One needs to look at all sources of liability and assets, including examining the contingent liability, such as debt incurred by a sub-sovereign entity like a water utility, and forecasting possible funding needs for future development.

2. For What Purposes Should Debt be Issued?

Generally, borrowing is particularly appropriate for funding large-cost, long-lived capital projects, in which the useful life of the project approximates or exceeds the payback period of the debt. On the other hand, borrowing that covers current account deficits shifts to the future the costs of services consumed today. This does not mean that such borrowing should never occur, but if it does, it should recognize the costs for future budgets and market confidence. (Borrowing for operating budget shortfalls will make it very difficult and costly for the sub-sovereign to borrow for capital investments and will have a detrimental impact on its credit rating.)

Governments should come to their own conclusions about issuing debt for operating expenses. They should know, however, that financial management professionals, market investors, and credit rating agen-

Box 2.20: Measuring Debt Service in Bulgaria

Bulgaria requires that debt service must not exceed own-source revenue in any given year. However, the usefulness of this measure is hindered by two factors. First, the ratio of debt service may fluctuate significantly from year to year without a change in underlying debt carrying capacity over the medium-term, due to changes in exchange rates or interest rates, as well as fluctuations in local revenues. Second, many bonds issued by local government units carry balloon payments at maturity, which means that debt service will peak in the year of the balloon payment, without any implication for the local government's underlying debt carrying capacity.

Source: Michel Noel, "Developing a Municipal Credit Market in Bulgaria: Systemic Challenges and Proposed Bank Support." World Bank internal document, 1998, pp. 5-6.

cies frown on the issuance of such debt (except short-term debt to facilitate cash flow within a given fiscal year). In some countries, constitutional limits or higher levels of government oversight may limit municipalities' options.

3. What is the Optimal Level of Debt?

A principal task for the debt manager is to design an optimal debt profile that is consistent with the sub-sovereign's overall economic policy and that minimizes the cost given a prudent level of risk. The debt profile refers to the level of debt (total amount outstanding) and the structure of debt (domestic vs. foreign, fixed vs. floating interest rate, and long-term vs. short-term debts).

While there is no universal agreement on what constitutes an acceptable level of debt, there are several widely applied ratios. In considering these ratios, note that it is generally preferable to compare a capital flow to a capital flow, and a capital stock to a capital stock, rather than mixing the two. Following are several key indicators:

a. The ratio of debt service to recurring revenues.

Debt service would include annual principal and interest payments on both outstanding and new debt, while recurring revenues includes only those revenues that are expected to recur year after year. For example, recurring revenues would not include one-time proceeds from the sale of assets or from a one-shot intergovernmental grant. Possible variations include:

If much outstanding debt is covered by initial grace periods on payment, it will not show up in the next year's debt service requirements. This ratio can be computed for several years into the future to capture these debt service obligations when they become payable.

- A further problem arises if principal is not being amortized at all, in which case this measure reflects only interest payments.
- **France** uses a variation on this approach, replacing recurrent revenues with the local government's management savings or operating surplus. **Hungary** has a requirement that municipal debt services should not exceed 70% of own-source revenues in any given year. The Czech Republic uses total revenues instead of recurrent revenues, but this measure may change if pending legislation is approved.
- This ratio is less helpful for certain **Emerging Market** countries where intergovernmental transfers are the main source of revenue and those transfers fluctuate significantly each year, as there would be no certainty regarding how much of the revenues can be expected to recur.

b. The ratio of total outstanding debt to GDP

This measure is intended to get at the relationship between debt burden and the local economy's capacity to generate the revenues necessary to redeem the debt. However, this measure is less relevant if the sub-sovereign's revenue base is derived more from intergovernmental transfers than from own-source revenues. Note, however, that if, in an effort to correct for this, one measures total outstanding debt to total revenue, the measure would be comparing a stock against a flow.

c. The ratio of total debt to the local tax base

This ratio is less significant if the locality cannot raise taxes at will. However, if the locality can raise taxes at its own discretion and has a key single tax source, this can be a useful measure of indebtedness.

d. The ratio of total debt per capita

A benefit of this measure is that it facilitates comparison across jurisdictions. However, general per capita numbers can be misleading. For example, in 1995, provinces in **Argentina** had an average outstanding debt of $430 per capita, compared to $400 for the states in the **United States**. This general number masked the fact that the debt per capita in the **Province of San Luis** was only $50, while that in **La Rioja** was $2,200.

Box 2.21: What is Included Matters as Much as the Ratio

Debt ratios are only as good as the numbers that comprise them. This means that sub-national accounting systems need to be accurate in terms of measuring debt and revenue consistently (e.g., not mixing accrual and cash accounting methods). In addition, debt measures need to include all forms of debt. For example, **Ibagué, Colombia**, issued titularizaciones as a revenue-backed transaction (backed up by future gasoline taxes). Based on local accounting methods, this type of debt is not included in the measure of the city's direct or official debt stock.

Source: Maria Freire, Marcela Huertas, and Benjamin Darche, "Subnational Access to the Capital Markets: The Latin American Experience," p. 69.

4. What is the Optimal Structure of the Debt?

As important as the level of debt is its structure. To decide the optimal structure, one should first examine the risk, which the debt manager tries to minimize. For example, a large amount of relatively short-term debt will expose the sub-sovereign to far greater rollover risk (e.g., the risk that it will face an adverse market when it needs to roll over its debt) than longer term issues. This can be captured in the ratio of short-term to total debt. Additional issues that need to be considered include:

- Are debt maturities well coordinated, with payments evenly spaced and predictable annually, or are there sudden surges in debt servicing that will require refinancing?
- Does outstanding debt have grace periods, balloon or bullet maturities, etc. that will also lead to dramatic increases in required payments?
- What is the mix of foreign to domestic debt, which can give a sense of exposure to foreign currency risk? Foreign exchange assets should be considered here to assess the currency risk.
- Is new debt a high proportion of municipal income? This can occur in cash-based accounting systems, which count borrowing as income.

The optimal structure is designed based on the risk analysis. Typically, long-term, fixed rate, and domestic debts are preferred because they provide the best tools to minimize potential risks. Jurisdictions must also consider the extent to which their debt pledges the full faith and credit of the government, or is limited to project or other dedicated revenue sources. Analysis of these different types of debt can point out the extent to which certain anticipated tax revenue streams might be entirely pledged to outstanding or anticipated debt payments. (These options for debt structuring are discussed in more detail in Chapter 3.)

5. What Should be the Mix of Pay-as-You-Go vs. Debt Financing?

There is no clear standard for what constitutes excessive borrowing. Some have argued that borrowing becomes too much when it exceeds the amount that a sub-sovereign can comfortably repay. The estimate of the ability to pay should include a quantitative risk assessment that evaluates the impact of changes in income, expenditures, and interest rate volatility on the ability of the sub-sovereign to repay it debt. Debt limits should take into account this risk assessment.

Several Latin American and Eastern European countries have set or are in the process of establishing debt limits for sub-sovereign borrowing, but relatively few have incorporated a risk assessment analysis. A different approach would look more at efficiency, arguing that borrowing

Box 2.22: Borrowing Crisis in Colombia

Colombia's 1991 Constitution promised rapid increases in tax sharing with local governments, which caused municipal borrowing to rise dramatically. However, despite this revenue loss to the central government, it neither shifted significant new service responsibilities to local governments nor cut its own spending. This mix of continued central government spending and increased sub-sovereign borrowing precipitated a crisis in which emergency national measures were introduced to limit sub-national borrowing.

Source: George E. Peterson, "Building Local Credit Systems," Urban Management Program Discussion Paper (Washington, D.C.: Urban Institute, 1997), pp. 20-21.

should be assessed based on whether it is financing projects that have lower rates of return than other projects, or whether the rates of return are lower than the true cost of borrowed capital. Others would look at the effects that borrowing might have (e.g., is it crowding out private investment), or the purposes for which the borrowing is being used (e.g., is it covering short-term operating expenses rather than longer term capital projects).

Sudden changes in the proportion of pay-as-you-go and debt financing can signal significant potential problems. Hungary's shift in just three years from financing most of its capital spending on a pay-as-you-go basis to the use of widespread debt financing reflected a change in which the current account went from significant surplus to an operating deficit.

In determining the appropriate mix of pay-as-you-go and debt financing, governments need to consider four factors:

- Legal limitations on debt issuance; service levels, and other factors affecting long-term operating expenses;
- Demographic and economic trends, and the desire for reserves and other "rainy-day" funds to protect against emergencies or economic downturns;
- The extent to which the accumulation of surpluses to pay for projects may be preferable to paying the interest rates and other costs of issuing debt;
- A risk assessment government model should be prepared to evaluate the impact of changes in revenues, expenditures, interest rates, and other variables on the financial condition of the sub-sovereign. It should also be used to help prepare the debt management policy.

6. How Can a Risk Assessment Model be Used to Structure the Debt Offering?

The risk assessment model is a tool to assist sub-sovereign governments in deciding whether to issue debt and, if so, how much and the preferred debt amortization structure. It can also be used to develop a debt management policy, to manage outstanding debt, and to make refinancing and other debt management decisions. Risk assessment is part of the ex-ante evaluation to decide whether or not to borrow in the capital markets (including bank loans).

The concept of the risk assessment model is to consider the probability of multiple negative events occurring simultaneously that can seriously damage the ability of the sub-sovereign to make debt service payments and/or deliver municipal services.

The risk assessment model should be organized on a spreadsheet, which allows an analyst to assess the impact of different financial, economic, political and legal scenarios on the sub-sovereign's financial condition. The time horizon for the

risk assessment model is, at a minimum, the duration of the expected final maturity of the debt the sub-sovereign expects to issue. The time horizon will increase if the sub-sovereign expects to issue additional debt prior to the final maturity of its initial debt issue. The time horizon of the analysis should also cover, at a minimum, the time period the sub-sovereign uses to prepare its master plan or infrastructure capital plan.

Risk assessment models attempt to quantify changes in the risks associated with a particular activity. They assign probabilities for the individual risks and combinations thereof. Sub-sovereigns should be particularly aware of the external events that could negatively affect their ability to meet debt service obligations. Additionally, defaulting on its debt obligation may diminish a sub-sovereigns capacity to continue payments to higher levels of governments and maintain an acceptable level of municipal services.

The risk assessment model has the following generic components:

- Operating Revenue Assessment
- Operating and Capital Expenditure Assessment
- Financial Assessment

For each of the model components shown above, an analyst assigns the probability to the occurrence of a risk event and quantitatively determines the impact of this event on revenues, expenditures, debt service payments, and other financial parameters.

Risk assessment models can become very complex. However, sub-sovereign governments do not need sophisticated risk assessment models. They can be simple models that quantitatively describe the critical events that can impact the sub-sovereign's ability to make debt service payments. They are used before issuing debt so that the sub-sovereign government has an idea of how changes in the financial, economic, political, and legal environment can affect its financial condition and ability to deliver municipal services. The risk assessment model could also be used to develop a debt management policy. It could demonstrate the risks of certain types of borrowing instruments and provide debt management parameters such as maximum debt outstanding; maximum amount of debt amortization in any given year; guidelines for debt refinancing, etc.

a. Operating revenue assessment

This model component evaluates the impacts of changing circumstances on the forecast of the sub-sovereign's own-source and intergovernmental operating revenues over the risk assessment time horizon. Probabilities are assigned to events that will increase or decrease own-source and intergovernmental transfers. For example, a decline in economic activity may decrease these revenues. They also

can be affected by changes in laws and other factors. Once the events are defined, the analysis assigns a probability to any event occurring. The probability factor is then applied to the revenues and an "order of magnitude" revenue decline is registered.

The model should also take into account the probability of receiving capital revenues from other government agencies for planned infrastructure and other projects. The sub-sovereign government may assume that it will receive partial or complete funding for a project from other government agencies. If this funding does not materialize and the project is under construction, the government will potentially have to stop building, delay contractor payments, or borrow additional capital. Capital revenue risk assessment analysis can be incorporated within the sub-sovereign's capital planning effort.

b. Expenditure assessment

On the expenditure side, the risk assessment model should define the probability of the occurrence of major events that will increase operating expenditures. For example, the national government may have a law pending that shifts the delivery of certain services from the central government to the sub-sovereign entity without an accompanying increase in sub-sovereign revenues. The expenditure assessment would assign a probability that the law will pass and show the resulting increase in operating expenditures. Another potential operating expenditure impact is the probability of accelerating inflation as a result of currency devaluation. This event can also have a significant impact on debt service payments if the sub-sovereign is considering borrowing on the international markets in a foreign currency. The risk assessment model would show the multiple impact of the currency devaluation on debt service payments and increasing operating costs.

c. Financial assessment

Financial risk assessment evaluates the impact of changes in the financial environment that will increase or decrease debt service payments, impact the sub-sovereign's ability to refinance or "roll over" debt, or carry out other borrowing related activities. Probabilities are assigned to events that will increase variable interest rates, make it difficult to refinance maturing debt, eliminate or reduce the use of certain types of borrowing instruments, reduce the tenor for loans; reduce market liquidity; increase local currency required for payment of external foreign denominated loans because of a local currency devaluation, and other major events that can have a direct impact on the sub-sovereign's financial condition. Analysis of the risks

associated with these financial outcomes can then be incorporated into the debt management policy.

The financial risk assessment can indicate the impacts on the sub-sovereign's ability to make debt service payments. It should also develop "what-if" scenarios to assess the impact of a payment default. There might be some immediate legal matters that can affect the delivery of municipal services. A default may also trigger immediate contractor/vendor payments or have other financial implications that can be quantified.

d. Risk assessment—some considerations

Risk assessment is a relatively subjective exercise in that the analyst has to assign a probability to an event happening and then quantify the impact of this event on the risk factor (revenues, expenditures, financial). Sophisticated risk assessment techniques use historical data and carry out statistical analyses using stochastic, multiple regression, and other methods to assign probabilities and quantify risks. This sophisticated analysis is not necessary for the sub-sovereign.

What is most important is the thinking process required for a risk assessment that forces the analyst to better understand the events that will have an impact on the sub-sovereign's ability to make debt service payments and the implications for the sub-sovereign if it does not make these payments. Risk assessment should also add a modicum of caution to the amounts and timing of any proposed borrowing.

Political considerations may negate the results of the risk assessment, but decision-makers should be aware of the possible outcomes on their sub-sovereign's financial condition if they pursue a particular borrowing policy.

Summary

Once all the decisions above have been made, a sub-sovereign is prepared to finalize its capital budget, indicating high priority projects and the ways in which they will be financed. A decision to seek funds through the capital markets should reflect the policy judgments undertaken as part of the comprehensive capital budgeting and risk assessment process. Accordingly, it must balance the need for certain projects, with the public and private resources available for their construction (and maintenance/operation), all within the context of a comprehensive debt management policy and risk assessment. Such a process will enable jurisdictions to maximize the amount of services they provide, without inadvertently undercutting future fiscal health and growth potential.

Chapter 2 Notes

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20. This discussion is based on information from World Bank, *Toolkits for Private Sector Participation in Water and Sanitation*, no.1, "Selecting an Option for Private Sector Participation" (Washington, D.C.: World Bank, 1997), and Benjamin Darche, Capital Advisors Ltd.
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33. Ibid., p. 5; Inel et al., pp. 18–19.
34. Freire, Huertas, and Darche, p. 25; Inel et al., pp. 18–19.
35. J.B. Kurish and Patricia Tigue, *An Elected Official's Guide to Debt Issuance* (Chicago: Government Finance Officers Association, 1993), p. 12.
36. This is the ideal. In most developing countries, the capital markets do not provide long-term debt that approaches the useful life of the asset being financed.
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44. Peterson, "Measuring Government Credit Risk," p. 15.
45. Peterson, "Building Local Credit Systems," p. 20.
46. Ibid., p. 7.
47. Kurish and Tigue, p. 11.
48. The components of the risk assessment model discussed above are for illustrative purposes only. It is not a recommendation on how to prepare a quantitative risk assessment model. Sub-sovereign governments interested in developing a risk assessment model should consult professionals experienced in this activity.

Chapter 3
Introduction to Bond Characteristics

Chapter 1 provided information to explain the macroeconomic conditions that affect local governments, such as decentralization, urbanization, and globalization. More importantly, Chapter 2 demonstrated the importance of identifying funding needs within a municipality and thinking critically about the best method for filling those needs. These decisions as well as debt management considerations are of central importance to sub-sovereigns.

Chapter 3 will discuss several basic features of bonds and the different types of bonds that are available to sub-sovereigns. Specifically, this chapter will answer two questions:

I. What Is a Bond and What Are Its Primary Features?
- A. Variation in Bond Structures
  1. Serial vs. Term Bond Issues
  2. Redemption Provisions
  3. Fixed and Variable Interest Rates

II. What Are the Different Types of Bonds and How Do They Differ?
- A. General Obligation Bonds
- B. Project Revenue Bonds

C. Dedicated Revenue Bonds
D. Other Structures

I. What Is a Bond and What Are Its Primary Features?

According to the United States Municipal Securities Rulemaking Board, a bond is defined as: *Evidence of the issuer's obligation to repay a specified principal amount on a date certain (maturity date), together with interest at a stated rate, or according to a formula for determining that rate. Bonds are distinguishable from notes, which usually mature in a much shorter period of time.*[1]

This definition essentially encompasses five key items as a bond is:

- a promise by the issuer (in our case, a sub-sovereign government);
- to pay back the bondholder (that is, the person or institution that purchases the bond);
- the principal that is being borrowed;
- plus a specified interest rate;
- by the maturity date.

In technical terms, the principal being borrowed is often referred to as the par value of the bond, while the interest rate is referred to as the coupon rate. (This is because, physically, a bond comes with a detachable coupon that specifies the amount of interest payable at a specific date and place. The coupon can be detached and presented to the issuer's paying agent for payment.)[2] Coupon payments are typically made twice a year in the United States (every six months), and annually in the Eurobond market coupon payments are generally made annually. The maturity date is the date on which all of the principal and interest has been paid down.

Since most bonds have coupons, interest payments and some principal payments generally will be made throughout the term of the bond. There are, however, several possible exceptions to this typical bond. For example:

- **Zero coupon bond**. This bond pays no interest or principal until the maturity date.
- **No maturity date.** This type of bond is very unusual and continues to pay interest perpetually. The only way an investor can receive principal payments is to sell the bond on the secondary market.
- **Bullet maturity**. This bond does not pay down any principal until final maturity, but will make interest payments throughout its lifetime.[3]

In Emerging Markets, bonds usually have a very short duration, which is a credit concern. Sub-sovereigns might need to borrow money over a long period of time, but many investors are unwilling to lend them money for more than a few years, often no longer than three or at most five years. This may be due to long-term investor concerns about inflation and political stability, as well as the general uncertainties in forecasting economic conditions for such a long period.

In addition, since most Emerging Markets do not have secondary markets for bonds (discussed in more detail in chapter 7), bondholders will be wary about buying long-term issues that they will have to hold to maturity. That is, in a country with a robust secondary market, an investor can buy a 30-year bond, but may keep it for less than a year or two, selling it to someone else on the secondary market. Without this option, the investor would have to keep the bond until its maturity 30 years later, which means that in purchasing the bond the investor would be tying up significant funds for a long period of time, not knowing how interest rates, inflation, and other economic factors will change during that period.

A. Variation in Bond Structures

While all bonds will meet the above definition, each issue might have its own unique structure, that is, approach to structuring the amount and conditions under which bondholders will receive interest and principal payments. While there is nearly an infinite number of variations, several are particularly important to understand:

1. Serial vs. Term Bond Issues
2. Redemption/Call Provisions
3. Fixed vs. Variable Interest Rates

1. Serial vs. Term Bond Issues

When deciding to issue bonds, the issuer needs to determine how much money it needs to borrow and for how long. It could, for example, borrow $10 million for ten years, paying interest during the ten years, and paying the principal at maturity. If the bond is structured this way, then a sinking fund is normally created into which funds to repay the principal at maturity are deposited throughout the life of the bond. *This is a term bond issue.*

What if the issuer will be able to pay back some of the principal in year four (perhaps because it is using the money to finance a project from which revenues will begin to flow in that year), and some additional principal in subsequent years? In this case, the issuer will not want to borrow all $10 million for ten years; instead it might want to borrow $3 million for four years and another $1 million for five years and maybe another $2 million for five years, etc. *This is a serial bond issue.*

Unlike term bonds, in which the entire issue has the same maturity, a serial bond will include bonds with differing maturities. A sub-sovereign will save money by avoiding the higher interest charged for long-term borrowing. Thus, instead of issuing a ten-year bond and paying the higher interest for the whole issue, the issuer can issue a serial bond and pay less interest on the shorter maturities. *For this*

very reason, however, institutional investors that want to buy larger blocks of bonds may prefer a term issue.[4]

Example. Table 3.1 shows an example of serial and term bond structures. The total amount of the issue is US$10 million, with bonds maturing at different annual rates depending on whether they are serial bonds (column A) or serial and term bonds (column B). In column A, a portion of the $10 million matures each year for 15 years (1995 through 2009); that is they mature in a series, one after the other. The difference between column A and column B is that the latter has serial maturities from 1995 through 2009 and also a single term bond maturity in 2014 in the amount of US $3,455,000. The serial bond maturities between the years 1995 and 2009 are smaller in column B because a third of the original issue amount (US $10 million) is shifted to the single 2014 term bond.

The issuer's debt management policy and market conditions will inform the choice of payment structure. In a project financing where the revenues generated repay the debt, the issuer has to include capitalized interest in the structure and defer principal payments until the project generates sufficient revenues to amortize the debt. In General Obligation bonds (see below), the issuer may select a level principal or bullet payment, depending on investor requirements and the issuer's debt management policy (see Chapter 2).

Serial and term bond structures are very common in the U.S. municipal bond market, as are other types of structures with different amortization and interest payment schedules, such as zero coupon bonds. Domestic municipal issues in Europe are structured primarily as fixed rate bullet, balloon, or term bonds because of retail investor interest in these amortization structures. Bond structures

Table 3.1: Serial and Term Bond Structures for a $10 million Issuance

	Maturity amount ($)	
Year	*(A) Serial bond structure*	*(B) Serial and term bond insurance*
1995	500,000	325,000
1996	510,000	335,000
1997	530,000	345,000
1998	550,000	360,000
1999	570,000	375,000
2000	595,000	390,000
2001	620,000	405,000
2002	645,000	425,000
2003	675,000	440,000
2004	710,000	465,000
2005	740,000	485,000
2006	780,000	510,000
2007	815,000	535,000
2008	860,000	560,000
2009	900,000	590,000
2014	—	3,455,000
Total	10,000,000	10,000,000

Source: James C. Joseph, *Debt Issuance and Management: A Guide for Smaller Governments*, (Chicago: Government Finance Officers Association, 1994), pp. 63–4.

Box 3.1: Checklist for Issuers: Different Payment Schedules

- ***Level Principal Schedule.*** An issue can be structured so that the issuer has a level principal maturity schedule, *meaning that equal amounts of the par value of the issue mature in each year.* Under this schedule, the *total debt service of principal and interest would decline over time as interest is paid on a declining outstanding principal amount.*
- ***Level Debt Service.*** Alternatively, the issue might be structured with a level debt service schedule, in which *total annual debt service requirements are equal*. In order to achieve level debt service, *payments in the early years will initially cover interest costs, and principal payments will increase over the life of the bonds*.
- ***Graduated Principal***. Issues can be structured to have graduated principal redemption, in which very *small amounts of principal are paid back to the bondholders in early years, with more in later years*. This can be a version of level debt service but need not be.
- ***Deferred Principal/Capitalized Interest***: Alternatively, a deferred principal schedule could capitalize the interest due in the initial years, as *neither principal nor interest would be paid during the early stages*. Under this scenario, the amount of the bond issue would be calculated so that the *initial bond proceeds received by the issuer would be enough to pay not just for the underlying project being financed but also the interest due during the early years*. Often, this continues until the project begins generating revenues.
- ***Bullet Maturity***. A version of a graduated payment schedule in which *the principal is not amortized over the life of the bond and is instead paid all at the end*.
- ***Balloon Payments***. A version of a graduated payment schedule in which *the amount that the issuer needs to pay in the final year (adding together interest and principal due) is much higher than the amounts paid in earlier years*.

Sources: Adapted from James C. Joseph, *Debt Issuance and Management: A Guide for Smaller Governments* (Chicago: Government Finance Officers Association, 1994); and J.B. Kurish and Patricia Tigue, *An Elected Official's Guide to Debt Issuance* (Chicago: Government Finance Officers Association, 1993) Used by permission of Government Finance Officers Association. Emphasis added.

in domestic emerging markets include bullet bonds and a variety of U.S. serial bonds.

2. Redemption Provisions

An issuer might decide to borrow $10 million that matures in ten years, but might also want to retain the option of paying back the entire principal before maturity.

That is, suppose the issuer is using the money to finance a project that is expected to generate revenues starting in year five, and the revenues come in much stronger than expected in the early years. Or suppose the economic situation changes in such a way that the issuer could borrow money much more cheaply than when the bonds were first issued. In this case, the issuer would like to be able to redeem the bonds, meaning pay back the bonds in full now even though they haven't reached their maturity date, and then borrow money on the markets at a cheaper interest rate. If the issuer thinks these scenarios are possible, it will try to structure the initial sale of the bonds with a redemption provision.

What is the down side for the issuer? *In exchange for this provision, the investors will require a premium, namely a slightly higher interest rate, to compensate for the risk they are taking that their money will be paid back before the bonds mature*. After all, if an investor can only get 5%

for his money today, he does not want an issuer to retire bonds he holds that are getting 9%.

Redemption provisions can be structured in different ways:

- A *mandatory provision* would require the issuer to call (that is, redeem) the outstanding bonds according to a schedule in the official statement.
- An *optional provision* would give the issuer the right to call the bonds, but would not require that the issuer do so at any specific point.[5]

3. Fixed and Variable Interest Rates

Bond issues can be structured to pay interest at a rate fixed over the life of the bond. In other words, *the coupon will be a constant specified percentage of the par value, paid on a regular basis. Under a floating or variable rate interest structure, the interest is not fixed until maturity, but rather is determined periodically based on some specified formula* (frequently, a specific margin over some well-known rate, such as LIBOR, which is a key rate at which banks lend to each other).[6] The benefit of this structure for an issuer is that floating rates are typically lower than a fixed rate at the time of issuance. However, the issuer runs the risk that the market rate will change unfavorably during the life of the issue, thereby increasing required interest payments to the bondholders. This makes it more difficult for issuers to budget with certainty for debt service payments over time.[7]

Box 3.2: Variable Rate Bonds: City of Tallinn, Estonia

In April 1998, the City of Tallinn in Estonia issued its second Eurobond with the following characteristics:

- Variable rate;
- Par value of DM 30 million, due in 2003 (bullet payment); and
- Floating rate interest of 6m DM, LIBOR+65 basis points.

Source: Kaarel-Mati Halla, "The City of Tallinn Story to Access International Financial Markets," WBC.

Typically, *rating agencies do not like to see more than 20% of an issuer's total outstanding debt structured as short term variable rate obligations* (see Chapter 6 for a discussion of the impact of variable rate debt on sub-sovereign credit ratings). *However, for sub-sovereign governments in the Emerging Markets it is almost impossible to secure loans or bonds on a fixed rate basis for terms beyond three to five years, except for those entities that are able to access capital from the Eurobond market.* Therefore one cannot expect most sub-sovereign entities to comply with the 20% rule of thumb, but they should be aware of the financial risks associated with short-term variable rate debt, especially refinancing risk in volatile markets.

II. What Are the Different Types of Bonds and How Do They Differ?

The discussion that follows focuses on different types of long-term sub-sovereign bonds. *It should be noted, however, that there also is a wide variety of short-term bonds, often called notes, that are typically used for cash management purposes in government operations and, with certain exceptions (see box), are not intended to finance major government capital projects.*

We will discuss three generic categories of long-term bonds, which are based on the security pledged to repay the debt:

- **General Obligation Bond**—The sub-sovereign issuer's "Full faith and credit" secures debt service payments.
- **Project Revenue Bond**—These are secured by the anticipated revenues generated by the project being financed.
- **Dedicated Revenue Bond**—This offers a specified revenue stream *not from the underlying project itself* to pay the debt, such as revenues from oil royalties, liquor taxes, or other dedicated resources.

In some circumstances bonds are secured by a physical asset, such as land, that acts as collateral for repayment. In the event that the sub-sovereign does not make a debt service payment, title to the land is transferred to the bondholders and the land is sold to repay the outstanding obligation.

It is important to understand that these are generic models and that hybrids exist. For example, some bonds are "double-barreled," secured both by an issuer's full faith and credit and by specified dedicated or project revenues.

A. General Obligation Bonds

In the case of General Obligation bonds, repayment is guaranteed by the "full faith and credit" of the issuing government. *This means that the full taxing authority of the issuer is pledged to pay back the bonds. This can be a very secure pledge if the sub-sovereign issuer has both the capacity and the willingness to raise taxes as needed.* However, many sub-sovereigns may be restricted in their ability to raise taxes without limit. This is often the case when national governments limit local government tax-raising powers either directly or indirectly (e.g., by providing widespread national exemptions to local taxes or by having local tax bases determined at the national level). Clearly, if a sub-sovereign does not have the legal right to raise taxes without limit, the General Obligation pledge will be less valuable to the investors.[8]

The strength of the General Obligation pledge is also affected by the perceived willingness of the sub-sovereign to raise taxes, cut spending, or take other steps necessary to insure that bondholders will be paid back on time and in full. For example, if there

is likelihood that a newly elected official will not support the commitments made by his or her predecessor, then the General Obligation pledge is less valuable. Similarly, even the best-intentioned local officials are frequently under real pressure to increase spending on desperately needed social or human services, and may be unwilling to raise taxes or cut spending in order to pay back the bondholders.

In some countries, General Obligation bonds must be approved by the voters in a referendum before they are issued. This requirement of voter approval frequently limits the bonds' attractiveness to elected officials, but it provides comfort to bondholders that there is political support for the bond issue and for paying them back. *In addition, many localities are subject to laws which limit their ability to issue General Obligation bonds to a specified ratio, either in terms of per capita debt issued, or relationship of outstanding debt service to revenues.*

The ability of cities in Emerging Markets to successfully issue General Obligation bonds is based on several factors.

- First, the extent of decentralization, especially as it relates to providing local governments with more robust tax revenue sources, can enhance the value of the municipality's full faith and credit. *In such situations, however, a national government's explicit denial of responsibility can limit market confidence in the issue*.
- Second, experience has shown that it is difficult for the less well-known sub-sovereigns to access international capital markets with General Obli-

Box 3.3: Types of Short-term Notes

Short-term notes are generally issued to cover short-term gaps in governments' operating budgets. They can be issued to maintain government cashflow over until new tax revenues, other revenues, or intergovernmental transfers are received by the sub-sovereign, but they should not be used on an ongoing basis to cover operating deficits. Continuous operating deficits need to be addressed with attention to the underlying reason for the deficits and consideration of fundamental policy changes, including such steps as decreases in operating expenditures or increases in revenues.

These cash management notes are frequently called TANs (Tax Anticipation Notes), RANs (Revenue Anticipation Notes), or GANs (Grant Anticipation Notes) in the U.S. municipal market. In Europe and the Emerging Markets, short-term borrowing for cash management purposes is usually provided by working capital bank loans and not the capital markets.

Under certain circumstances, short-term notes can be used to help cover capital expenditures. For example, a GAN could be issued in anticipation of an intergovernmental transfer that is intended to fund capital construction. Alternatively, BANs (Bond Anticipation Notes) are sometimes issued to obtain interim financing so that a capital project can begin before long-term bond financing has been arranged.

Source: James C. Joseph, *Debt Issuance and Management: A Guide for Smaller Governments* (Chicago: Government Finance Officers Association, 1994), p. 28.

Box 3.4: General Obligation Bonds: City of Rio de Janeiro

In July 1996 Rio issued a 10 3/8% $125 million three-year Eurobond to refinance its domestic debts that had shorter maturity periods and higher costs of funding. This fixed rate issue was backed only by the city's General Obligation, and was not secured by dedicated revenues or collateral. Because of this structure, international investors required that city financial statements be converted to international accounting standards. A summary of the key features follows:

Amount:	US $125 million
Market:	Eurobond
Issue Date:	Offered July 2, 1996, Closed July 12, 1996
Issue Price:	99.96% Fixed Re-offer
Interest Rate:	Fixed at 10.375% per annum
Interest Payment:	Quarterly on 25th of January, April, July, and October
Period:	Commencing on 25th October 1996
Maturity Date:	3 years to 12 July 1999
Principal Payment/ Amortization:	Same as interest payment
Major Risks:	Currency risks, city credit risk, country risk, poor debt service history

Source: Maria Freire, Marcela Huertas, and Benjamin Darche, "Sub-national Access to the Capital Markets: The Latin American Experience," WBC, p. 64.

gation Bonds.[9] Of course, such a bond may remain an option in the domestic market.

- Third, changes in laws that allow specific revenue streams to be dedicated to bond repayment may make Project Revenue or Dedicated Revenue bonds more attractive.

B. Project Revenue Bonds

Unlike General Obligation bonds, *Project Revenue bonds are not backed by the full faith and credit of the issuer, but are secured only by the expected stream of revenue from the project being financed*. For example, bonds to build an electric utility might be backed by the anticipated revenues that the utility will collect from user charges as electricity is distributed. *The issuer may be a sub-sovereign or some sort of public authority, such as a water authority, which is independent of the government.*

Project Revenue bonds can sometimes be considered as Project Financing, Non-Recourse or Limited Recourse Bonds. *The primary difference between*

a Project Revenue Bond and Project Financing Bond in Emerging Markets is project ownership.

- **Project Revenue Bond**. *The public sector is the sponsor of the project (either as a wholly owned public enterprise or a department of a sub-sovereign government) and may or may not contribute "equity@ (or a grant) to the project.* The public issuer does not usually require a return on its equity contribution. Revenue bonds in the U.S. are issued by public agencies and do not usually have any private sector participation.[10] *Dedicated tax revenues that secure a debt obligation can also be considered as Revenue bonds.*

  A Project Revenue bond can be classified as ***Limited Recourse*** *if the issuer, in order to cover a project risk (revenue, political, operating, etc.) unacceptable to the lenders, provides security beyond the revenues generated from*

Box 3.5: General Obligation Bonds: City of Buenos Aires

The City of Buenos Aires issued $500 million in Euro Medium Term Notes in the international debt markets. Under the EMTN program, issuers offer notes with maturities from 30 days to 30 years in a variety of currencies. Due to favorable market conditions, Buenos Aires was able to sell all the notes in four series within two months. The first series was comprised of a $250 million tranche with a 10-year maturity, with the notes selling at 11.25%. The remaining series were denominated in Argentine Pesos, US Dollars, and Italian Lira with maturities ranging from 3 to 6 years. The note proceeds, which were used to refinance the city's debt stock and the liabilities of its bank, Banco de la Ciudad de Buenos Aires, were backed by the city's General Obligation (G.O.). Given the G.O. backing, the market was particularly concerned about the city's future financial prospects and its program of fiscal reform.

Amount:	US $500 million
Market:	Eurobond
Issue Date:	Initiated March 1997, with multiple series during the next 30 days
Issue Price:	At par, discount or premium over par per series
Interest Rate:	Each series can be fixed, variable or zero coupon
Interest Payment:	For fixed rate, can be payable in arrears on agreed dates; for variable rate, interest borne separately in each series by reference to benchmarks such as LIBOR, LIBID, etc.
Period:	As agreed between issuer and dealer
Maturity Date:	Variable per series 1–5 years. Variances to be approved by Central Bank
Principal Amortization:	Variable per series
Major Risks:	Currency risks, city credit risk, country risk

Source: Maria Freire, Marcela Huertas, and Benjamin Darche, "Sub-national Access to the Capital Markets: The Latin American Experience," WBC, p. 49.

the project. For example, in many "off-take" contracts for power, the government purchases the output (electricity or wastewater) whether or not it needs the output. This insures the lender that their revenues are available so long as the plant operates. In a **Non-Recourse Bond**, however, the lender has no recourse to any other security other than the revenues from the project.[11]

- **Project Financing Bonds/Loans**. *The private sector usually participates in the infrastructure project with an equity contribution and requires a return on its equity investment*. Project financing bonds/loans are more common in Emerging Markets because of the use of private sector investments in infrastructure projects.

Project financing has increased dramatically in recent years. Worldwide, project financing reached $47.6 billion in 1996, which represented an 83% increase over 1995, which itself had seen an increase of 50% over 1994.[12] There has been a similar trend in the United States, where by 1996, 65% of bond issues were backed by a revenue pledge (as opposed to roughly two-thirds of all bond issues being backed by a General Obligation pledge in the 1970s).[13]

As Project Revenue bonds are secured by the income generated by the project, the principal basis for investors to determine whether to purchase Project Revenue bond debt is the economic feasibility study required to market the bonds. This study:

- determines the cost of project construction and operations/maintenance;
- forecasts the user fee revenues generated by the project (e.g., toll income from a toll bridge);
- determines whether sufficient user fee revenues are available to operate and maintain the facility (including major replacements and repairs over the life of the bond issue), repay the debt, and, with private sector projects, provide a sufficient return on investors' equity.

These studies are influenced by the accuracy of historical data regarding demand for the service (e.g., motorized vehicles using the toll bridge), and outside consultants' assumptions about future market demand conditions, design, construction and operating/maintenance costs.

In addition to the feasibility study, bond issuers will also include financial and other covenants in the legal bond documents. The most common covenants include:

- **Establishment of a debt service reserve fund into which various project revenues, bond proceeds, and other funds flow.** This reserve fund is used to pay debt service to the bondholders in the event that the anticipated revenues from the project are not sufficient. Under the terms of the

issue, issuers will generally be required to maintain this reserve fund at a specified level, such as 12 months of annual debt service.

- **Commitment to various rate covenants that make clear that the issuer's will charge project users rates sufficient to meet its obligations to the bondholders.** For example, a water and sewer system may enter a covenant to generate net revenues (gross revenues less operating and maintenance costs) available for debt service equal to at least 115% of annual debt service requirements.[14]
- **Operation and maintenance covenants that will assure bondholders that the project will be adequately maintained throughout the life of the bond issue.** These covenants might also include promises about how the facility will be managed, and about its independence from government authorities.
- **Non-competition covenants**, in which a local government, for example, may agree that as part of a bond issue for construction of a toll road, the government will not construct a non-toll road that could compete with the toll road for the next 20 years.[15]
- **Covenants regarding future financial commitments**, such as an additional bonds test, hich requires the issuer to demonstrate that future project revenues will be high enough to maintain required debt service coverage levels even after any further additional obligations might be issued.[16]
- **Covenants regarding the legal structure** of the project and the way by which funds will flow from the project into the debt service reserve and sinking funds.[17]

As indicated earlier, *a Project Revenue bond can be linked with a General Obligation promise to create a double-barreled bond. Under this structure, the bond is secured both by the anticipated project revenues, and, then, if those revenues are not sufficient, by the sub-sovereign's full faith and credit*. In the case of Schiphol Airport in **Amsterdam, Netherlands**, a favorable credit rating (Moody's Aa1) reflected the substantial involvement of the Dutch State in the airport's development.

Box 3.6: Key Aspects of General Obligation Bonds

- Secured by full faith and credit of issuing government
- Relies on sub-sovereign taxing ability (VAT, property taxes, sales taxes, etc.) and intergovernmental revenue transfers
- Subject to central government limits or other limits such as requiring voter approval
- Typically used to finance non-revenue generating projects
- No trustees or debt service reserve funds required
- Investor concern with the underlying fiscal stability of the issuer, good financial management procedures, and potential likelihood of fiscal reforms

Box 3.7: Bondholder Covenants: Guangzhou-Shenzen Superhighway, China

Debt Service for the first two years was to be pre-funded out of Note proceeds. A cash trap equal to six months' debt service was held in the Issuer Security Account and funded from operating revenues.

Source: Chee Mee Hu and Tom Marshella, "Guangzhou-Shenzen Superhighway (Holdings) Ltd." (New York: Moody's Investors Service, 1997)

Box 3.8: Key Aspects of Project Revenue Bonds

- Debt is secured not by full faith and credit of the issuer, but rather from specific project revenue
- Debt service reserve fund required at specified levels;
- Various covenants required, dealing with rates, operations and maintenance, non-competition, etc.;
- Extensive analysis of project feasibility, day-to-day operations, future maintenance, market demand, etc.; and
- Used only for revenue generating projects.

In addition to promising two-thirds of all future infrastructure investments, the national government has a majority stake in ownership and control.[18]

C. Dedicated Revenue Bonds

The Dedicated Revenue Bond is increasingly popular. *Under this structure, bond repayments are guaranteed by a particular revenue stream, which is unrelated to the project being financed. For example, a bond may be backed by the pledge of funds from intergovernmental transfers which the sub-sovereign is due to receive, or by specific tax revenues such as liquor, sales or gas tax.* Examples of such Dedicated Revenue Bonds abound:

- **Guaymallen, Argentina**, secured its domestic bond market notes with central government revenue transfers.
- **Ibagué, Colombia**, secured two series of five-year domestic bond market notes with gasoline taxes.
- **Mendoza Province, Argentina**, used oil royalties paid by oil companies to secure a six-year Eurobond offering.
- **Tierra del Fuego** pledged oil revenues to secure its international bonds.[19]

It is important to note, however, that certain of these Dedicated Revenue Bond structures (such as interception of intergovernmental transfers) may not be possible without national legislation authorizing such structures.

When bonds are backed by a dedicated revenue stream, a series of new concerns arises.

- **First, how certain is it that the specified revenue stream will be sufficient to meet debt payment obligations and that it will continue at that level for the life of the bond?** For example, if intergovernmental transfers from the national government are being pledged, investors will have questions

about the intergovernmental transfer system:

- Is it guaranteed in the constitution or merely a matter of law?
- Even if it is in the constitution, how easy is it to change it?
- Are there certain circumstances, such as declarations of economic emergencies, under which the stream of revenues could be interrupted?
- How subject is the level of intergovernmental transfers to political budget battles each year and to possibilities that the sub-sovereign might see its share of intergovernmental transfers decrease?
- What other claims are there on the intergovernmental transfers? In **Tucuman, Argentina**, for example, intergovernmental transfers were used to secure a bond issue, but 95% of those transfers had been pledged to other sources.

Box 3.9: Project Revenue Bond: Santiago International Airport Project, Chile

In 1998, an international consortium called SCL Terminal Aereo Santiago S.A. was hired to reconstruct, renovate and operate Santiago's international airport. Incorporating an initial US$39 million investment by SCL, the public-private partnership issued approximately US$220 million dollars worth of debt. Moody's Baa2 rating was based on the projected passenger growth, financial position of the airport, and the airport's place as the main air hub.

Source: Moody's Investors Service, ASCL Terminal Aereo Santiago S.A., Fundamental Credit Research Rating Action (New York: Moody's Investors Service, 1998).

Box 3.10: Potential Revenue Streams That Can Be Pledged

- Intergovernmental Transfers
- Specific tax revenues:
- Oil royalties or other concession payments
- Local share of VAT tax
- Property lease payments
- Specific tax revenues
  - Property tax
  - Sales tax
  - Gas tax
  - Motor vehicle tax
  - Liquor tax

- Second, how stringent is the trust fund mechanism under which these revenues are segregated? For example, will the revenues first go into municipal government coffers and then be transferred to a bank for deposit into a special trust; or will the revenues go directly to the bank without ever passing through the government's hands? These structural issues help underscore how securely segregated the revenues are. Consider, for ex-

ample, the different ways that tax intercepts could be pledged:[20]

- Debt service could be paid directly by the national bank out of the tax revenue proceeds collected by the central government. Under this structure, the tax revenues needed for debt service would never be transferred into an account maintained by the bond-issuing sub-sovereign.
- A bank could be given a right to intercept a specified tax revenue stream only in the event that the sub-sovereign fails to pay required debt service.
- The sub-sovereign's access to *any* of the specified tax revenues could be blocked until debt service is paid.
- A trustee could, in the event of non-payment by the sub-sovereign, draw down an established line of credit with a bank, and the bank would intercept a specified tax revenue stream to repay the credit line.

Box 3.11: Checklist—Key Aspects of Dedicated Revenue Bonds

- Funded from revenues separate from the project
- Debt service fund required
- Extensive analysis regarding the likelihood that the revenue generating source will continue over the life of the bonds
- Concern regarding different structures and the extent to which revenue-generating source is truly segregated
- Covenants include endeavor to maintain flow of segregated revenues.

The confidence that the market has in the segregation of the revenue stream, and the debt service coverage ratio, can have an impact on the interest rate demanded by the market to buy the bonds. For example, the **City of Ibagué, Colombia**, received an A+ domestic rating for its issuance of bonds secured by gasoline taxes, while the **Department of Valle del Cauca, Colombia**, received an A domestic rating for its issuance of bonds secured by liquor sales. It is possible that one reason for the difference in ratings was that Ibagué created a trust, which would actually collect the gasoline taxes and pay the debt service, while in Valle del Cauca, the Department maintained the tax collection responsibilities.[21]

D. Other Structures

While the three structures above are the most common, there are many variations. In Eastern Europe, for example, banks typically require municipalities to put up municipal property as collateral for municipal loans.[22] However, this raises questions as to whether the property can be transferred easily to private ownership.[23] Other types of collateral can include a requirement that the local government

Box 3.12: Tucuman Province, Argentina

The Province of Tucuman was the first Argentine sub-sovereign to issue bonds backed by intergovernmental transfers (known as Co-Participation Revenues). The $200 million issue was placed in local markets, as well as the United States and Europe. The trust mechanism was structured so that all of the assigned co-participation revenue went directly from the Central Bank to the Collection Agent, which then transferred certain revenues to the Province and the rest to the Trustee for payment to the bondholders.

Amount:	US $200 million
Market:	Eurobond
ssue Date:	Offered 20 August 1997, Closed 1 September 1997
Interest Rate:	Fixed at 9.45% per annum
Interest Payment:	Quarterly on 1st of November, February, May and August commencing 1 November 1997
Maturity Date:	7 years to 1 August 2002
Principal Amortization:	Same as interest payment
Major Risks:	Currency risks, province risk, country risk, impact of potential changes to the Coparticipation Laws

Source: Hernán Cámpora and Marcelo Menéndez, "Managing Cases in Argentina with High Default Risk," WBC, p. 11

Box 3.13: Dedicated Revenue Bond: Mendoza Province, Argentina

The Province of Mendoza issued $125 million in six year Eurobonds secured by a priority interest in 88% of all future oil royalty payments due to the province from oil companies. A three-month debt service reserve was also funded from excess royalty payments. In this case, the oil royalties flowed into an Argentine collection account which was then transferred offshore to a US collection account.

Amount:	US $125 million
Market:	Eurobond
Issue Date:	Offered August 2. 1996. Closed August 8.
Issue Price:	100% Fixed Re-Offer
Interest Rate:	Fixed at 10% per annum
Interest Payment:	Quarterly on 25th of January, April, July and October.
Period:	Commencing on 25th October 1996
Maturity Date:	7 years to 25 July 2002
Principal Amortization:	Same as interest payment
Major Risks:	Currency risks, fluctuation in world oil prices and regulation structures, country risk, poor debt service history

Source: Maria Freire, Marcela Huertas and Benjamin Darche, "ASub-national Access to the Capital Markets: The Latin American Experience," p. 55.

maintain its regular operating accounts at the bank and give the bank the right to automatically deduct any loan payments due from the local government's account.[24]

In the United States, several different types of revenue bonds and financing have developed that are not very common in the international or Emerging Markets (domestic or international).

- **Special Assessment Bond**. This is a cross between a G.O. and a Revenue bond. The revenue is a special assessment imposed on each parcel of property within the special district. While the bond does not carry the full faith and credit of the government, it does, like a G.O. bond, usually carry a lien against the property that is second only to the government's general property tax.[25]
- **Tax Increment Financing Bonds**. Under this structure, the revenues for debt service come from the increase in general tax revenues anticipated from the economic growth in the district being developed.[26]
- **Lease Financing**. While not a bond in structure, lease financing has developed in such a way that it can be marketed similarly to municipal bonds. The sub-sovereign leases a facility from a private entity over a specific period of time at a predetermined annual cost, with the lease payments sufficient to pay principal and interest. Investors then purchase the right to a portion of the lease payment (thereby obtaining tax-exempt interest income in the United States).[27] Under the sale-leaseback variation, the sub-sovereign first sells the facility to a private entity and then leases it back. While this generates a cash windfall for the sub-sovereign early on, it also imposes long-term costs

Summary

This chapter has outlined several major features and varieties of bonds. In short, a bond is a promise by a sub-sovereign government to pay back the bondholder the principal that is being borrowed plus a specified interest rate by the maturity date. In Part I, we distinguished between the most elemental bond *structures*. Bonds differ in payment schedule, in the ability of issuers to pay the debt prior to maturity, and in interest rates (variable versus fixed). In section II, we examined several *categories* of bonds, defined on the basis of the security pledged to repay the debt and the general character of the proposed government project. In addition to short-term notes, which can be used sparingly if at all to cover unexpected needs, there are three types of long-term bonds. For General Obligation bonds, issuers pledge their full taxing authority. A second group relies on the expected revenues from government projects as security. A particular revenue stream unrelated to the project

guarantees Dedicated Revenue bonds, which constitute a third group. As is noted in the chapter, all of these types have disadvantages as well as advantages.

Chapter 3 Notes

1. Municipal Securities Rulemaking Board, Glossary of Municipal Securities Terms, p. 15.
2. Increasingly, bonds do not have physical coupons attached, but are registered electronically with a central clearing and paying agent who remits principal and interest payments to the registered bondholder.
3. John L. Mikesell, *Fiscal Administration: Analysis and Applications for the Public Sector*, 4th ed. (Fort Worth: Harcourt Brace College Publishers, 1995), p. 467.
4. James C. Joseph, *Debt Issuance and Management: A Guide for Smaller Governments*, Government Finance Officers Association, p. 63–64. Serial and term bond structures are common in the U.S. municipal market. Sub-sovereign Eurobonds usually have a bullet maturity structure and rarely include serial maturities, but may have level principal payments (see below). Domestic bonds in developing countries usually have very short-term bullet maturities.
5. J.B. Kurish and Patricia Tigue, *An Elected Official's Guide to Debt Issuance* (Chicago: Government Finance Officers Association, 1993), p. 52.
6. *Introduction to the Capital Markets*, International Capital Markets workbook series (London: Euromoney/D.C. Gardner, 1997), p. 50.
7. Kurish and Tigue, p. 51.
8. George E. Peterson, "Measuring Government Credit Risk and Improving Creditworthiness," WBC, p. 20.
9. Ibid., p. 32.
10. Private Sector investment in infrastructure projects in the U.S. is not very significant because of the higher cost of private financing as compared to public financing in the tax-exempt municipal market. Project financing activity in the U.S. is more closely related to the oil, gas, telecommunications, and power sectors that are owned and operated, for the most part, by the private sector. Private Project financing in Europe for essential public services is also limited.
11. Benjamin Darche, Capital Advisors Ltd.
12. George E. Peterson, "Building Local Credit Systems," pp. 12–13.
13. Steve Levine, Materials prepared for U6200, "Public Finance II: Issuers and the Marketplace," Columbia University, School of International and Public Affairs, Spring 1998.

14. Joseph, p. 31. In project financing bonds in Emerging Markets, specific rate covenants are often not possible as increases in user fees are determined either by a third party regulatory body or are governed by a Concession Agreement. The regulatory body is not the issuer and therefore a covenant pledge by the issuer is not possible. The Concession Agreement may not allow the concessionaire (the bond issuer) to unilaterally increase revenues. The lack of rate covenants in municipal infrastructure bonds in Emerging Markets is one of the reasons why these bonds are not very common in these markets.
15. George E. Peterson, "Measuring Government Credit Risk," p. 24.
16. Joseph, p. 31.
17. Kurish and Tigue, p. 15.
18. "Luchthaven Schiphol N.V.," Fundamental Credit Research (New York: Moody's Investors Service, 1998).
19. Maria Freire, Marcela Huertas and Benjamin Darche, "Subnational Access to the Capital Markets: The Latin American Experience," pp. 28–29; and Hernán Cámpora and Marcelo Menéndez, "Managing Cases in Argentina with High Default Risk," p. 16. Both from WBC.
20. Burcak Inel, Nicole Barbery, and Michel Noel, "Reforming the Legal, Regulatory and Supervisory Framework for Borrowing by Sub-national Entities," World Bank internal document, p. 14 ; Peterson, "Building Local Credit Systems," p. 14.
21. Freire, Huertas and Darche, pp. 29–30.
2. George E. Peterson, "Building Local Credit Systems," Urban Management Program Discussion Paper (Washington, D.C.: Urban Institute, 1997), p. 11.
23. Peterson, "Measuring Government Credit Risk," p. 22.
24. Ibid.
25. Joseph, p. 32.
26. Kurish and Tigue, p. 16.
27. Ibid., p. 17; and Joseph, p. 33.

Chapter 4
The Bond Issuance Process

The issuing of debt in the domestic or international capital markets, whether in the form of General Obligation, Project or Dedicated Revenue, is accomplished through a complex process involving a wide variety of players. While the story of every bond issue is somewhat different, there are several general trends. This chapter answers the following two questions:

I. Who Are the Key Players Involved in Bond Issuance and What Are Their Responsibilities
   - A. Financial Advisors
     1. Competitive Sales
     2. Negotiated Sales
     3. Compensation
   - B. Consultants
   - C. Bond Counsel
     1. Legal Opinions
     2. Covenants
     3. Compensation
     4. Underwriter's Counsel
   - D. Underwriters
   - E. Syndicates

1. Lead Manager or Book-Runner
2. Co-Manager
3. Other Underwriters
4. Selling Group
5. Compensation

F. Investment Banks/Securities Firms
G. Institutional and Retail Investors
1. Market Risk
2. Call Risk
3. Credit Risk

H. Fund Managers
I. Trustees and Paying Agents
J. Bond Insurers
K. Rating Agencies
L. Bolsas
M. European Registration Actors
N. Other Players

II. What Are the Key Stages in the Bond Issuance Process?

A. Preliminary Decisions
B. Structuring the Bidding Process
1. Competitive Sale
2. Negotiated Sale
3. Competitive-Negotiated Sale
4. Private Placements

C. Choosing among Bids
D. Structuring the Issue
1. Type of Issue
2. Sizing the Issue
3. Obtaining Credit Enhancement
4. Issuing at a Discount or a Premium
5. Determining Final Maturity
6. Redemption Provisions.
7. Variable Rates

E. Credit Rating
F. Document Preparation
1. Notice of Sale
2. Official Statement/Offering Circular

3. Legal Opinion/Statement of Bond Counsel
4. Bond Resolution
5. Trust Indenture
6. Rate Covenant
7. Additional Bonds Clause
8. Bond Purchase Agreement
9. Financial Statements/Annual Report

F. Distribution/Marketing
G. Closing Date and Ongoing Activities

I. Who Are the Key Players Involved in Bond Issuance and What Are Their Responsibilities?

A thorough understanding of the process of bond issuance requires familiarity with the key players involved. *It is important to understand that player responsibilities may vary somewhat based on the type of the bond issue and method of sale.*[1] *For example, underwriters selected through negotiation will play a greater part in structuring the issue than those selected in a competitive bidding process.* Because underwriters and financial advisors have common expertise in some areas, there may be overlapping responsibilities. *Furthermore, the precise outline of different players' roles will be determined both by the expertise of the issuing sub-sovereign and by the complexity of the bond itself.* Sub-sovereigns that are frequent users of the capital markets may have developed considerable in-house expertise. Alternatively, sub-sovereigns without such experience may require substantial assistance from Financial advisors, consultants, underwriters, and others.

While the definitions are fluid, it is still possible to describe the core responsibilities that each player has most of the time.

A. Financial Advisors

Issuers often choose to rely on financial advisors to guide them through a bond issue. This may be particularly true for issuers new to the bond market. *Financial advisors get involved with the issuer's administration early in the process, and may help in the development of a capital plan and accounting practices*. Their roles may include assisting the issuer with:

- Assessment of borrowing capacity and projecting revenue flow estimates from particular projects;[2]
- Development of a long-term borrowing program and not simply with the single bond transaction;
- Development of policies for debt management, cash management, and improved credit condition.
- Development of a credit rating strategy see Chapter 6), which will depend on several factors, including:
- General development of the domestic and international capital markets for sub-sovereign debt (demand for specific types of bonds);
- The legal framework that determines whether General Obligation, Project Revenue, or Dedicated Revenue bonds can be issued; the taxing authority of the issuer, the nature of intergovernmental transfers and their use as security for the bonds;
- The broader regulatory framework for sub-sovereign bond issues and the legal details of regulation for each specific bond issue; and a variety of

Table 4.1: Financial Advisors–Services and Benefits

Services	*Benefits*
Financial planning	
Develop policy regarding financing and debt	• Provides formal written policy and procedures for measuring and making financial decisions • Demonstrates sophisticated financial management
Review existing debt structure	• Documents current debt structure • Identifies strengths and weaknesses of structure so that future debt issues • • Can be structured to maximize ability to finance future capital needs • Identifies funding opportunities
Analyze future debt capacity	• Determines ability to raise future debt capital • Identifies rating concerns and/or opportunities
Review capital budget	• Matches the sources of capital funding to infrastructure needs
Create long-term rating strategy	• Strengthens creditworthiness of the issuer
Identify financing alternatives	• Informs issuer of pros and cons of the universe of financing techniques • Selects optimal financing strategy
Debt management	• Brings debt issues to market in most timely and cost effective manner
Debt management services	
Develop and monitor financing schedule	• Creates a plan for timely completion of the financing
Analyze debt structure alternatives	• Designs a structure which maximizes market interest and future financing flexibility while being consistent with debt policy
Recommend a negotiated or competitive sale	• Tailors debt issue to the most efficient way to market the debt and maximize investor interests or minimize the interest cost
Assist the issuer with the selection of working group members	• Selects a team that can most effectively bring an issue to market
Develop terms of the financing	• Ensures credit quality and presents terms that are attractive to investors to create broad-based interest in the debt • Maximizes issuer' s future flexibility
Develop financing documents	• Assures issuer that all contractual and business terms are reviewed from the issuer' s perspective
Develop marketing plan	• Maximizes underwriter and investor interest in the securities
Develop rating presentation	• Obtains highest possible credit rating for debt issue • Formulates and implements long-term credit rating strategy
Assist with pricing of bonds	• Assures issuer of lowest interest rate for given market • Provides written documentation of acceptability of pricing
Investment advisory services	
Investment policy development	• Ensures preservation of capital • Defines investment strategy • Identifies allowable and appropriate investments
Record documentation	• Provides appropriate documentation for the Internal Revenue Service and other accounting needs
Money management	• Improves portfolio performance through integration with investment strategy and investment management • Maximizes earnings; preserves capital • Maintains liquidity so unexpected expenditures can be addressed

Source: Public Financial Management Inc., Financial Advisory Services.

other technical factors related to the specific capital investment being financed with bond proceeds; and
- Investment of the bond proceeds and cash flow general management once the bonds have been issued.

The issuer should make sure that the financial advisor does not have any conflict of interest in the sale of the bonds and is interested in the long-term financial health of the sub-sovereign. ***A conflict of interest arises when the advisor to the bond issuer is the same entity that sells the bonds to investors. In this case the financial advisor to the sub-sovereign has to balance the interests of the issuer with the interests of the investors.*** *This is difficult to accomplish since the investors want as high a price as possible (reflected in the interest rate and bond price) and the issuer wants exactly the opposite. The underwriter or investment bank often plays both roles (advisor to the issuer and seller of the bonds to investors) so as to better understand the needs of both the sub-sovereign and the investor community.*

There are few companies outside of investment banks that understand both the "supply and demand" side of the bond offering equation and can properly evaluate a fair price. These companies are familiar with the domestic and international capital markets and do not underwrite bonds to investors. They function as independent financial advisors. In the United States, a substantial financial advisory industry has emerged to provide an independent opinion about bond offering prices. They also provide financial planning (including budget and capital planning), debt management, investment management, and other services. A summary of financial advisory services is provided in Table 4.1.

1. Competitive Sales

The role of the financial advisor is particularly important when bonds are issued through a competitive bidding process (see discussion in Part II). In this instance, the advisor assists in structuring the issue, advising on the amount and date of the issue, coupon rate, maturity, interest payment dates, and other essential characteristics. The financial advisor also helps establish and maintain a relationship with rating agencies, presenting the issuer's capital plan to the agencies in advance of the issue. The advisor may also be an important link to players in capital markets in gauging and generating interest in the issue.

2. Negotiated Sales

When bonds are issued through a negotiated sale process (see discussion in Part II), the financial advisor's role may be more limited. In a negotiated sale, the underwriter is involved much earlier in the process and may be the party responsible for advising on

the structure of the bond and communicating with rating agencies. A financial advisor independent of the principal underwriting firm may not even be employed. However, an independent financial advisor may be able to assist the issuer in its negotiations with the underwriter and insure that the issuer's interests are protected as pricing and spread is negotiated.

With either type of sale, the financial advisor's role will be significant. An experienced financial advisor may be particularly important to an issuer new to the bond market looking to make a splash, both in providing nuts-and-bolts expertise and in raising the profile of the issue.

3. Compensation

Financial advisors are often compensated on a fee basis, either fixed or by the hour. Compensation may also be based on the number of bonds sold. *Issuers should note, however, that this method of compensation may create a conflict of interest for the advisor. If paid per bond sold, advisors may have an incentive to encourage the issuance of more bonds than would be optimal under an appropriate capital plan.*[3]

B. Consultants

A range of consultants or consulting engineers may also be hired early in the process for Project Revenue or Dedicated Revenue bonds. *While these consultants' responsibilities can be shaped however the issuer desires, consultants are generally used to provide technical advice regarding the feasibility of specific projects to be funded by bond issuances.*

For example, if the sub-sovereign wants to borrow money to construct a sewer facility, a consultant or consultants might be hired to assess its feasibility (including environmental concerns), to suggest specific designs or design features, to project user demand over time, to make revenue and operating cost estimates, and to determine the ability of the project revenues to make bond debt service payments.[4]

C. Bond Counsel

The main role of bond counsel is to provide an opinion as to the legal authority of the sub-sovereign to issue bonds and to draft covenants from the issuer to investors regarding the former's intentions in the event of foreseeable contingencies. The involvement of bond counsel boosts investor confidence in the issuer and reduces the risk that investors will lose their money.

Issuers often hire bond counsel to protect their interests in negotiations with the underwriters' counsel. Underwriters often retain their own counsel to prepare the disclosure document for the offering and negotiate the details of the legal documents from the

underwriter and investor perspectives. Underwriters' counsel are most concerned about protecting the interests of the investors, although they must also be aware of the municipal laws governing the offering to insure that the legal documents are enforceable.

The use of issuer and underwriter counsel may vary depending on whether the offering is being sold in the domestic or international markets. In international issues, the underwriters usually retain the services of law firms that are familiar with international and local law. In the domestic market, the sub-sovereign may use its existing counsel, such as the "city attorney" if this official is familiar with municipal, securities, civil, and other laws of the country that govern the bond issue. Another variation in the domestic market is to rely on the underwriter's counsel to prepare all legal documents. In both cases on the domestic side, the sub-sovereigns may initially save money, but they run the risk that the legal documents prepared for the transaction are not enforceable, or worse, that they provide the underwriter and the investor with government protections and guarantees not anticipated by the sub-sovereign.

1. Legal Opinions

Bond counsel opinions vary considerably depending on the regulatory structure governing the issue. Generally, counsel will examine the issuer's authority to issue bonds, its authority to raise taxes, its expenditure requirements, and the legality of any security offered.

In the case of a project or Dedicated Revenue bond, bond counsel's opinion will also assess the legality of the issuer's rights to revenue sources and examine the terms of the revenue contract.

2. Covenants

Covenants drafted with the assistance of bond counsel are also important to investors. *In the event of financial distress on the part of the issuer, investors want to know what steps the issuer will take to ensure that all bond payments are met.* Particularly for new issuers, investors may seek some sort of covenant or assurance from the sovereign. *Covenants from the issuer may mandate positive action such as raising taxes or negative action such as avoiding additional expenditures. These types of covenants are generally market driven; investors want to see them before buying bonds.* In some statutory frameworks, bond counsel may be required by law to produce a legal opinion on certain matters.

3. Compensation

Bond counsel is usually compensated on a flat or hourly fee basis, though they may alternatively receive a certain percentage of bonds sold. The issuer negotiates

fees with bond counsel, and considerations of expertise are again balanced with cost in choosing suitable bond counsel.

4. Underwriter's Counsel

Underwriters often employ counsel to make similar examinations as to the legal authority of the issuer to issue bonds in order to give the underwriting firm legal confidence in the issuer, to ensure that the bond purchase agreement between the issuer and underwriter is legally binding, and to advise the underwriter on potential legal liabilities associated with the issue.[5] The issuer, as a part of the underwriting fee, pays the expense of underwriter's counsel.

D. Underwriters

The basic function of the underwriter in a sub-sovereign bond offering is to purchase bonds from the issuer and resell them to investors. In the vast majority of cases, the underwriter commits to purchasing the bonds, whether or not it can sell them on the market. This risk spurs underwriters to price bonds carefully and to create syndicates with other firms.

Most underwriters are investment banks, securities firms, or commercial banks. Whatever the nature of the offering, the underwriter will have a great deal of influence over its ultimate success.

The role of the underwriter, like that of the financial advisor, varies with the type of offering. *In a competitive sale, an issuer publishes notice of the offering, and underwriters present the issuer with firm bids for the right to underwrite the issue. The lowest bidding underwriter then purchases the bonds for resale.* The competitive bidding procedures for selling bonds is fully developed in the United States municipal bond market, but is uncommon in most other countries. International sub-sovereign bonds are not sold with a competitive bidding procedure, although underwriters often present a "firm" underwriting commitment for an "indicative" bond price when they are seeking appointment by the issuer to underwrite the bonds (see below).

In a negotiated sale, an underwriter is typically involved earlier in the process, assisting the issuer with structuring the offering. In this type of arrangement, underwriters negotiate directly with the issuer regarding the size of the "spread," which is the underwriter's compensation. Because of its earlier involvement, a lead underwriter in a negotiated sale may assist in pricing determinations, make presentations to rating agencies, and develop interest in the issue through a "road show" or existing contacts with investors.

E. Syndicates

Many sub-sovereign bond issues involve more than a single underwriting firm. Especially when an issue is large, *the lead underwriter may choose to form a syndicate comprising several underwriting firms so as to spread the risk (and profits) from the sale of the bonds to investors.* Within a traditional syndicate, there are several tiers of players:

1. Lead Manager or Book-Runner

This underwriter normally forms and manages the syndicate. Management includes keeping records regarding the allocation of underwriting risk of each participating firm (the amount of bonds each firm is responsible for selling), tracking ongoing sales, and handling all payments and receipts.

Generally, the lead manager will be a firm with a track record in assembling strong syndicates and a good reputation for supporting its issues in the secondary market. *The lead manager also plays a market stabilization role during the sale of the bonds, ready to purchase any portion of the issue at the issue price should an investor try to resell the bonds before the entire issue is declared sold.*

2. Co-Manager

This underwriter may help to structure the issue based on its particular specialist expertise. *Frequently, co-managers are selected for the contacts and bond distribution capabilities they can bring in a particular market, such as Asia or the Euromarket.*

3. Other Underwriters

Below the lead manager and co-managers are underwriters who commit to purchasing a block of the bond issue at a set price, even if the lead underwriter cannot find investors.

4. Selling Group

A group of investment banks, securities firms, or commercial banks may agree to sell the bonds to their clients. *However, unlike underwriters, they are not legally obliged to purchase bonds that they cannot then sell.*[6]

Issuers choosing an underwriter should ensure that the chosen firm fits its particular needs. Cost is always a consideration, but there may be others. For example:

- An issuer may wish to target certain investors, such as individual or retail buyers or institutional investors. *The underwriter is the key player in reaching these investors.*

- An issuer new to the bond market may wish to select an underwriting firm with wide name recognition to ensure that the sale is noticed and to develop investor confidence in the issuer.
- A new issuer also may need to rely heavily on the expertise of the underwriter in structuring the bonds.

Balancing the relative cost and expertise of an underwriting firm is often the prime consideration in selecting an underwriter in a negotiated sale.

Box 4.1: Syndicate Members—Rio de Janeiro, 1996 Issue

Syndicate Member	*Amount (US$)*
Merrill Lynch Inc	101
Bayerische Vereinsbank AG	3
BB Securities Ltd	3
Commerz Bank AG	3
Dresdner AG	3
Nomura International Plc	3
Salomon Brothers International Ltd	3
Swiss Bank Corporation	3
Yamaichi International (America) Inc	3
Total	*125*

Source: Maria Freire, Marcela Huertas, and Benjamin Darche, "Subnational Access to the Capital Markets: The Latin American Experience," WBC, p. 66.

5. Compensation

The underwriter's compensation is mostly in the form of a "spread" which is the difference between what the underwriter pays to the issuer for the bonds and the price at which the bonds are offered to investors. Given the possible need to cut prices (and thus the profits) in some issues, underwriters may request a larger spread to take into account the greater risk of placing the bonds.

Box 4.2: Range of Underwriter Responsibilities

- Guarantee purchase of bonds from issuers and work to sell them to investors
- Provide advice regarding market methods and timing
- Provide assistance in structuring the bond, including size, security, maturity, and call provisions
- Facilitate cultivation of potential investors and conduct road shows
- Prepare key documents
- Act as liaison with rating agencies
- Insure compliance with legal requirements

Source: Jerome McKinney, *Effective Financial Management in Public and Nonprofit Agencies*, 2nd ed. (Westport, Connecticut: Quorum Books, 1995), p. 204. Used by permission of Greenwood Publishing Group.

In a *competitive bid*, the spread and other underwriter costs will be factored into the price that the underwriter is offering to the issuer at the time of the bid. In the *negotiated transaction*, compensation will have to be negotiated between the parties. *Whether explicit through negotiation or implicit in the bid, the underwriter's compensation will normally include the sales effort being made, the*

Box 4.3: Evaluating an Underwriting Firm—Key Characteristics

- Capital (total firm capital, net available for Emerging Markets, net available for the bond sector, other capital measures)
- Experience/Market Share in the Sector (volume of bonds underwritten in the sector)
- Experience of Staff in the Sector
- Structuring Ideas for the Bond Issue
- Number of Sales Staff
- Secondary Market Support in the Sector (inventory)
- Compensation/Cost

financial advice provided ("management fee"), the risk to the underwriter(s), and general operational expenses.

Fees in the domestic United States markets can vary considerably. The Eurobond market, on the other hand, has traditionally had more standardized fees (for typical issues) ranging from 1 1/8% of the face value of the bond issue for a 2-year issue to 2% for a 10-year issue.[7]

The amount the issuer will pay for each component of the spread in an international issue will depend on several factors including, but not limited to:

- The credit quality of the issue and the demand for the bonds;
- General capital market conditions—volatility and risk profile of general Emerging Market debt at the time of the offering; extent of regional and sovereign market risk differentiation by investors for Emerging Market debt;
- Current volume price of issues with similar credit characteristics ("benchmarks");
- Secondary bond market activity for any of the issuer's outstanding debt;
- Competition among underwriters for the Book-Runner position;
- Extent to which underwriters are willing to lower their price to gain market share;
- Risk management profile of the underwriting firm; and
- Quarterly profit targets and other internal management factors.

With a couple of important variations, these elements of the international markets also affect the pricing of sub-sovereign domestic debt. *Domestic capital markets in the Emerging Markets are usually undeveloped and volatile. It is very difficult to determine the risk of sub-sovereign debt as it compares to less risky sovereign debt without a sovereign government debt yield curve, which often acts as a benchmark for pricing issues*.[8] Such yield curves, of which Figure 4.1 is an example, often serve as benchmarks for pricing issues in more mature markets. *Limited bond volume accompanied by high inflation rates, unstable economic conditions, high budget deficits and other risks further contribute to volatile capital market conditions for sub-sovereign debt*. The paucity of independent market and price information, moreover, places sub-sovereigns at the mercy of underwriters.

Box 4.4: Four Components in Negotiating—Underwriter Compensation

- *Take-down*
  This is the component of the spread that is most like a sales commission, compensating the underwriter's sales force. In a syndicate arrangement, the syndicate member that sold the bonds is normally entitled to the entire takedown for those bonds.
- *Management Fee*
  This is the amount paid to the lead manager(s) for leading the syndicate. The size of the fee will be dependent on the complexity of the issue and the amount of assistance the lead manager was required to provide to the sub-sovereign in structuring the issue.
- *Underwriting Fee*
  This is intended to compensate the lead manager, co-managers and any other syndicate members who have assumed underwriting liability, i.e., who have committed themselves to purchasing a portion of the issue even if they cannot then find investors to sell it to.
- *Expenses*
  This is to reimburse the lead manager (and perhaps the co-managers) for their actual expenses during the financing. For example, it might include costs of travel and lodging involved in the "road show," and overnight delivery services.

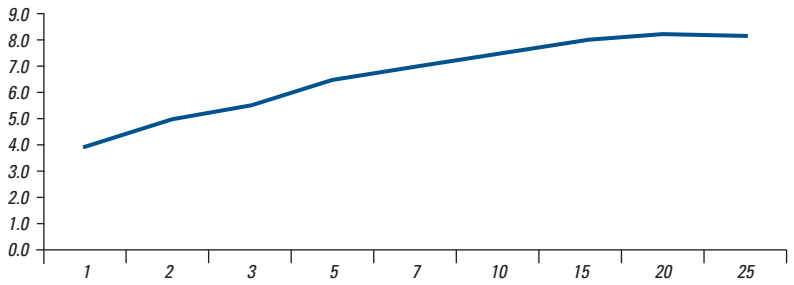
Sources: James C. Joseph, *Debt Issuance and Management: A Guide for Smaller Governments* (Chicago: Government Finance Officers Association, 1994), pp. 57-60; Steve Levine, Materials prepared for U6200, "Public Finance II: Issuers and the Marketplace," Columbia University, School of International and Public Affairs, Spring 1998.

F. Investment Banks/Securities Firms

Investment Banks and Securities Firms may serve as underwriters. It is important to understand their numerous distinct departments, each of which offers a wide range of services:

- *Syndicate Dealers*—take on the task of underwriting, marketing and trading.
- *Sales Staff*—directly engaged in selling the firm's underwritten bonds to investors,
- *Trading*—maintains a secondary market for bonds by actively buying and selling them to other dealers and investors.
- *Public Finance Department*—establishes relations with potential issuers and will negotiate with issuers for negotiated underwriting business; it also will perform financial advisory work for issuers for a fee.
- *Municipal Research Department*—undertakes in-house research for the investment bank on the creditworthiness of various issuers, thereby

Figure 4.1: Yield Curve—Zero-coupon Yields (11/92)



Source: Solomon Smith Barney.

informing their ability to price bonds and decisions to bid on particular offerings.

- *Operations Department*—undertakes a range of activities, from processing orders and payments to checking and delivering the bonds, issuing confirmations, and maintaining customer accounts and other documentation.[10]

Bond brokers, while not part of investment banks themselves, also play a role in creating markets for securities. *In particular, brokers act as independent agents trying to arrange trades in bonds and other securities*. For example, a dealer seeking bids on bonds from other dealers might contact a broker, or a dealer might ask a broker to find for him other dealers willing to sell bonds at a specified price.[11] In a bond offering made by the city of **Ibagué, Colombia**, the entire first tranche, constituting 4.8 billion Colombian pesos, was placed through five brokers.[12]

Table 4.2: Hypothetical Underwriter' s Compensation Arrangement

Element	*Per bond*	*Total*
Selling commission	$6.50	$650,000
Management fee	1.00	100,000
Underwriting risk	0.50	50,000
Expenses	0.87	87,000
Total	*$8.87*	*$887,000*

Total compensation=0.89% of issue

F. Institutional and Retail Investors

As the following boxes show, institutional and retail investors are a major constituency in bond markets at various stages of development. Both groups of investors share several broad concerns when investing in sub-sovereign bonds. The primary risks facing any sub-sovereign investor are market risk, call risk and credit risk.

Table 4.3: Sample Fees for International Eurobond Issues in March 1997

Issuer	*Amount*	*Maturity*	*Fees (%)*
Daimler Benz	$150 m	2000	0.225
China Travel Service	$150 m	2001	0.35
Kingdom of Spain	FFf 4 bn		0.375
World Bank Slovak Koruna	1.5 bn	1998	0.2

Source: International Bond Markets, International Capital Markets workbook series (London: Euromoney/DC Gardner, 1997), p. 42; Steve Levine, Materials prepared for U6200, "Public Finance II: Issuers and the Marketplace," Columbia University, School of International and Public Affairs, Spring 1998.

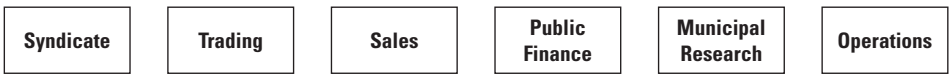
1. Market Risk

Market risk refers to the risk that interest rates will go up, leaving an investor with bonds paying an interest rate that is below the market rate. Suppose an investor buys a bond with a coupon rate of 9%. If interest rates later rise, with new bonds from the issuer paying a coupon rate of 10%, the investor will be left holding a bond which can be sold only at a lower price. If the bonds are sold at the lower price, the investor incurs a loss. *The only time an investor is not overly concerned about interest rate risk is if he will hold the bonds to maturity.* Issuers cannot eliminate market risk from the bond market. *However, an investor will be more comfortable with the market risk on a particular bond when the interest spread between the coupon rate on the bond and the relevant benchmark rate is large. From the issuer's perspective, the need to satisfy investor interests regarding a high coupon rate must be balanced against the issuer's interest in obtaining economical financing.*

2. Call Risk

Call risk regards the issuer's ability to call bonds prior to maturity. Most United States municipal bonds include a call provision, but international Eurobonds usually do

Figure 4.2: Typical Municipal Securities Department Divisions[9]



Source: Public Securities Association (renamed the Bond Market Association), *Fundamentals of Municipal Bonds* (New York: PSA, 1990), p. 40. Used by permission of the Bond Market Association.

Box 4.5: The High Costs of Underwriting—Examples from Latin America

- *Rio de Janeiro*
  Merrill Lynch acted as the lead underwriter for the US $125 million 1996 issue under a fixed-price re-offer arrangement. The underwriting discount was 0.75%, 60% of which represented selling commission and the remaining 40% underwriting/management fee. The underwriter's discount was lower than a typical fee of 3% for this type of Emerging Market transaction. However, the low fee was necessary in view of Merrill Lynch's long-term interest in Latin-American sub-sovereign debt issues.

- *Central America*
  In this region, underwriting, listing fees, and the cost of a risk classification can lead to additional costs of up to 5% of the bond issue. How can this cost be reduced? One option is to carefully gauge potential demand and limit the underwriting to the amount that the market can absorb with little effort. Guatemala is successfully experimenting with another approach: pre-placing bonds with institutional investors whose preferences are ascertained through preliminary contacts and then reflected in the design of the specifications of the bond. A third alternative is to offer the bonds to small investors first and seek an underwriter to deal only with the institutional demand, thereby reducing the underwriting fee to a limited portion of the issue.

Sources: Maria Freire, Marcela Huertas and Benjamin Darche, p. 65; Giovanni Giovanelli, "Non Performing Municipal Borrower in Central America—A Case Study," WBC, pp. 10–11.

not. Call provisions for domestic bonds will vary depending on the conventions of the marketplace in each country. *A bond call is most likely to happen when interest rates fall, and an issuer is able to obtain more affordable financing through sources other than currently outstanding bonds.* Investors who were planning on a 9% interest rate for 10 years, for example, must now reinvest assets in a lower interest rate environment. *Investor concerns regarding call risk are usually met by the inclusion of certain call provisions in the bond documents*. For example, an issuer of a ten-year bond may pledge not to call the bond at all, only after a certain time period, or only if certain other conditions are met.

3. Credit Risk

Credit risk refers to the risk that the credit rating of an issuer will fall over time. If the risk that an issuer will be unable to meet its payment obligations on the bond increases, the price of the bond will drop. Issuers can address this risk in a number of ways. *The first step is simply to develop a reputation for sound financial manage-*

ment and a history of meeting debt obligations. For issuers new to the market, investors will likely expect more security provisions regarding credit risk. For example:

- **A debt service reserve fund**, which is a fund created at issuance and set aside for meeting debt obligations in case normal revenues are insufficient at a particular time.
- **A pledge to limit the number of additional bonds** to be issued in the future.
- **Other limitations on its total debt.**
- **A line or letter of credit from a bank** solely to meet repayment obligations in case of revenue shortfall.
- **Clear rights to a steady revenue stream** in the case of a Project or Dedicated Revenue bond.

When deciding on a price, an issuer will try to balance these investor concerns with its own desire for economical funding. *If credit risk and call risk are deemed high, investors will expect a much higher coupon rate on the bond.* An issuer might lower the rate by providing some assurances to investors, but this would be risky in a high interest rate environment.[13]

Box 4.6: Holders of U.S. Municipal Debt, 1997

In the United States, almost 60% of the funds raised for public sector construction projects come from issuance of municipal securities. In 1997, 16,485 issues by state and local governments in the country totaled over US $267 billion (including both short and long term). In 1998, the value of such issues is estimated at more than US$274 billion.

Investors	*%*
Individuals and households	33
Mutual funds	16
Insurance companies	13
Money market funds	12
Bank personal trusts	8

Source: Securities Data Corporation, *The Bond Buyer 1998 Yearbook* (New York: SDC, 1998), p. 10. Used by oermission of American Banker-Bond Buyer.

Box 4.7: Investors in Ibagué, Colombia, 1997 Offering

Investors	*Amount (millions of C pesos)*
4 Insurance Companies	3,080
5 Pension Funds	2,850
1 Broker	600
3 Fiduciaries	300
1 Bank	200
7 Employees Funds	850
2 Cajas Compensación	1,550
3 Companies/Others	120

Source: Maria Freire, Marcela Huertas, and Benjamin Darche, "Sub-National Access to the Capital Markets," WBC, p. 72.

Though they share many common risk concerns, investor groups may have diverse goals when investing in municipal bonds. For instance, while certain institutions may be looking for short-term, liquid investments, others may be looking to maximize long-term returns. An issuer's pricing and maturity may vary considerably with different targeted

constituencies. Goals of particular investor groups change over time and vary by region. With the help of a financial adviser and/or an underwriter, an issuer can evaluate investor concerns to aid in critical pricing and structure considerations.

H. Fund Managers

Fund managers also are players among the institutional and retail investors. *Mutual funds' rapid growth in sheer number and total assets has made them increasingly important players in international capital markets. Mutual funds are in essence "retail proxies." The money in a mutual fund comes from household investors, often in small quantities, but when pooled together the fund as a whole is able to invest much like a large institution.* A typical manager selects appropriate investments based on a set of investment parameters advertised to investors in the fund.

The goals of a fund manager in selecting investments will depend on the fund's investment strategy and formula. For example:

- Many *broad-based mutual funds* might look to sub-sovereign issues primarily to *diversify the fund's portfolio with relatively safe securities* of comparatively high return. *Sub-sovereign issues will constitute a small percentage of such funds' portfolios.*
- Other funds are focused on a particular region and will invest a substantial portion of their assets there, usually in both stocks and bonds.

Box 4.8: Mutual Fund Holdings: Fidelity New Markets Income Fund, United States

The fund invests primarily in debt securities in countries generally considered to have Emerging Markets. Most of the fund's holdings are currently in sovereign issues. As of 6/30/98, the fund had US$292 million in total assets.

Fund Holdings as of 12/31/98	Latin America	67%
	Eastern Europe	14%
Sub-sovereign Holdings as of 6/30/98	City of Moscow	$4.3 mil.
	City of Buenos Aires	$3.3 mil.
Holdings by S&P Rating, 12/31/98	AAA	77.5%
	AA	3.8%
	A	3.5%
	BBB	9.3%
	BB	0.2%

Sources: Fidelity New Markets Income Fund Semiannual Report, June 30, 1998, and Fidelity Investments Internet Site, http://www.fidelity.com.

- Many funds are set up to *invest primarily in debt securities throughout the world or particularly in Emerging Markets. These "bond funds" will be most likely to invest in sub-sovereign issues in Emerging Markets.*

Like many institutional investors, fund managers make detailed analyses of the risks of a particular issue prior to purchase. They also rely heavily on the assessment of international rating agencies. Many mutual funds have internal restrictions, tied to ratings from specific rating agencies, on purchasing lower-quality debt. Larger fund complexes also have their own research departments, which make independent evaluations of an issuer's ability to repay its debt.

Although mutual funds currently have a limited role in purchasing sub-sovereign debt in the domestic capital markets of Emerging Markets, it is expected that this will change as the domestic capital markets develop further. *A more important investor in the domestic capital market in Emerging Markets is the private pension fund manager. As they mature, private pension funds will create a demand for longer-term securities to match their long-term liabilities.*

I. Trustees and Paying Agents

In an international bond issue (and in the U.S. municipal bond market), the trustee is usually an independent bank selected by the issuer. The trustee's responsibility is to represent the interests of bondholders and insure that covenants are fulfilled. The trustee remains independent of the issuer, and will represent the investor's concerns regarding revisions or negotiations.

The function of trustees in domestic capital markets of Emerging Markets will vary depending on their legal authority. In some circumstances, trusts are established as independent legal bodies that insure that all parties involved in a financing plan comply with the terms and conditions of the legal documents prepared for the transaction. In other cases, a trust provides a guarantee for debt service payments, or it collects and distributes the revenues used to make interest and principal bond payments. Trustees can also retain collateral used to secure a transaction.

The paying agent is responsible for distributing payments on issued bonds from the issuer to bond holders. It also maintains records of bondholders. The paying agent is often a bank, and in some instances may be the same institution as the trustee.

J. Bond Insurers

Bond insurance is a particularly effective, though not always available, way to address issuer credit risk concerns in well-developed sub-sovereign markets (see Chapter 7). *In the international markets, bonds that are insured carry the credit rating of the bond insurer, which is usually a triple A monoline insurance company. The insurance*

Box 4.9: Differing Regulations

Sub-sovereign issuers in the international markets are subject to the regulations and tax laws of their sovereign governments on securities trading abroad. The Financial Services Act in the United Kingdom, for example, tightened reporting requirements for International Euromarket issues, but these requirements remain less restrictive than those for the domestic market. Given the relatively less restrictive rules, self-regulation has been undertaken by the International Securities Market Association, which has assumed a leading role in setting market standards and developing standardized Eurobond calculation methods. ISMA has also introduced a computerized trade matching and confirmation system known as Trax.

Source: Introduction to the Capital Markets, International Capital Markets Workbook Series(London: Euromoney, 1997), p. 45.

policy insures the timely payment of interest and principal to the bondholder in the event that the original issuer does not make its debt service payment. The triple A bond credit rating reduces investor risk and therefore reduces the interest rate that the issuer has to pay. In exchange for the reduced interest rate and lower debt service costs, the issuer pays an insurance premium.

For example, bond insurance provided by commercial banks is available in **Colombia's** domestic capital markets. In this case the bondholder relies on the credit of the commercial bank and the issuer pays the bank a fee for the timely payment of principal and interest to the bondholders.

Mutual funds sometimes purchase insurance policies on a portfolio-wide basis when bonds in their portfolio have not been previously insured. *While insurance can be purchased on a primary or secondary market, and may be purchased by bondholders, its main value for issuers lies in its potential to cut interest costs. Insured bonds are routinely rated highly by rating agencies, increasing the bonds' marketability. However, an issuer must evaluate the cost effectiveness of purchasing bond insurance. An issue with an already high rating may not need bond insurance, and the issuer needs to compare the potential interest savings with the cost of insurance.*

The financial health of a bond insurer is important to investors. When choosing an insurer, issuers should consider the history and reliability of the insurance company, lest the purpose of bond insurance be defeated. Bond insurers are discussed in further detail in Chapter 7.

K. Rating Agencies

Rating agencies evaluate an issuer's ability to repay its debt obligations, and rate this ability by reviewing various criteria for the different types of bonds: General Obligation, Project and Dedicated Revenue bonds. *Bonds are rated in recognized categories (triple A, double A, etc.) which are published to investors. Rating agencies examine an issuer's financial statements and capital plan, outstanding debt obliga-*

tions, rights to steady revenue streams, a sovereign's willingness to back sub-sovereign debt, covenants made by the issuer to investors, and other criteria. Issuers often work closely with rating agencies prior to issuance, and in some instances, the structure of the issue is made with the direct involvement of a rating agency.[14] The ratings process is discussed in greater detail in Chapter 6.

Rating agencies have a tremendous amount of influence over the success of a sub-sovereign issue. Particularly when considering new issuers, investors use these reports to make key decisions.

L. Bolsas

In Latin America, sub-sovereign bonds may be sold on national stock exchanges, or bolsas. Secondary market trades are also done through the bolsa. International investors will evaluate such an exchange based on the reliability of its account settling system and ability to accurately settle accounts under the stress of large transaction volumes (primarily in the equities market). In turn, the bolsa may require that issuers meet its own registration and regulatory requirements. For example:

- **Colombia**. Sub-sovereign bond issues sold on the bolsa must have either a credit rating or a bank guarantee.
- **Argentina**. There are several regional bolsas in addition to the primary bolsas in **Buenos Aires** that register and trade bond issues.[15]

M. European Registration Actors

A listing on an exchange can widen an issuer's range of possible investors. Many institutions and mutual funds are authorized to invest only in equity issues listed on a stock exchange. Such organizations vary in their policies. While issues sold to the **United States** public must first be registered with the **Securities and Exchange Commission**, the disclosure requirements in the **International Eurobond** market are considerably less stringent. The **Luxembourg Exchange**, on the other hand, is a frequently used exchange with less rigorous disclosure requirements. The **London Stock Exchange's** more rigorous reporting requirements have increased its prestige among many issuers.[16]

Two important actors in the Eurobond market are Euroclear and CEDEL (Centrale de Livraison de Valeurs Mobilières), which act as centralized clearing systems. The systems use a book-entry system in Brussels (central record keeping) and Luxembourg (tracking). The two systems exchange information daily.[17]

N. Other Players

A wide range of other players can be involved in the bond offering process, including the counsel of the issuing entity, printers responsible for printing required

offering circulars and other documents, etc. Sometimes a securities depository may be used, where records of bond ownership are maintained.[18]

II. What Are the Key Stages in the Bond Issuance Process?

In addition to knowing about the players, potential issuers should also be aware of the key stages in the process of issuing bonds. Here, again, there are differences based on the specific bond issue and the market in which money is being borrowed. For example, *if underwriting of a bond issue is done through a negotiated sale rather than a competitive bid, the underwriter will be more involved in the earlier stages of the process.* Others differences are based on customs of each market. *In Europe, syndicates are formed immediately after an underwriter wins a bid on an issue, whereas in the United States syndicates are formed before a bid is submitted. In the Eurobond market, the Offering Circular is distributed to investors days or even weeks after the issue has been launched, while in the US market, a preliminary prospectus must be filed before the bonds are offered.*[19]

Given the differences among the systems, there is no single series of stages. What follows, therefore, is a general description that must be tailored to different approaches and markets.

Box 4.10: The Bidding Process in Brazil—Required Approval

Prior to choosing the lead manager to coordinate bond offerings, Brazilian sub-sovereigns require a series of approvals. First, the issue must be authorized by the National Treasury and by the Central Bank upon submission of the main characteristics of the proposed deal, including amount, currency, term, etc. Based on this information, a preliminary analysis is done on the impact of the proposed operation on the issuer's budget, and permission is granted to initiate the bidding of a lead manager.

The bidding process itself has to be cleared by the Central Bank. Any credit operation also needs to be screened by the Senate, the National Treasury, and the Central Bank. If external loans by multilateral agencies are involved, the Foreign Affairs Secretariat of the Planning Ministry is also involved in review.

Generally, the above process can take up to 6 months, during which time the market conditions may have changed dramatically. There are other even more direct limitations on sub-sovereign issues, as the national government will only permit new bonds to be issued if they are used to redeem existing domestic bonds and, under certain circumstances, if the proceeds are used to settle legal claims.

Source: Renato Villela, "Transparency, Credibility, Fiscal Management, and Financing: Notes on the Brazilian Experience," WBC.

A. Preliminary Decisions

As described in Chapter 2, issuers need to undertake a substantial capital planning process before even deciding whether to issue debt. This process will also include consideration of the issuer's outstanding debt and how any new issues will affect its existing debt policies. Issuers, perhaps with the assistance of a financial advisor or consultant, must choose General Obligation, Project Revenue, or Dedicated Revenue bonds. A financial advisor might be hired to help an issuer in making some of these determinations.

B. Structuring the Bidding Process

Once a sub-sovereign decides to issue debt, the services of a financial advisor (or team of advisors and consultants) will normally be engaged. Among their first tasks will be the selection of an underwriter.

There are two principal methods of soliciting bids from underwriters: negotiated sales and competitive sales.

- **Competitive Sale.** The sub-sovereign structures the issue, with assistance from a financial advisor, and then advertises it in trade journals. Underwriting firms submit bids based on their evaluation of the chance of successfully placing the bond with investors; the issuer selects the bid with the lowest spread.[20]
- **Negotiated Sale**. An issuer negotiates pricing directly with an underwriting firm, which typically takes place relatively early in the process.

A hybrid bidding process may also take place in which an issuer discusses pricing with several underwriting firms and weighs relative price substantially when making the final selection of the underwriter.

Issuers in Emerging Markets may find it difficult to engage underwriting firms in a competitive bidding process, particularly for international issues.[21] *Underwriters, especially when not involved in the structuring process, are hesitant to commit themselves to the purchase of an entire issue of bonds from sub-sovereigns without an established credit. For such issuers, the debate between a competitive and negotiated bidding process may therefore be entirely academic. By establishing a credit history through a negotiated sale process, issuers may gain the option of entertaining competitive bids in subsequent issues.*

1. Competitive Sale

The principal advantage of a competitive sale is that it increases the possibility that the issuer will receive the lowest available price for an underwriter's services. The process is transparent in nature, and the selection of a particular underwriter is easily jus-

tifiable because the lowest price wins. Some municipalities may require a competitive bidding process by law when General Obligations are issued.

Competitive bidding also has disadvantages. For one, the issuer must set the date and time of sale prior to advertising the sale to underwriting firms. This prevents a sub-sovereign from exploiting sudden changes in the market by adjusting the time of sale. *Additionally, competitive bids may not be as universally economical as they may seem at first glance.* When an underwriting firm submits a competitive bid, it commits to the purchase of the entire issue at a time when it has not been involved in structuring the issue. The prospective underwriter is therefore likely not fully informed regarding investor interest in the issue. *For this reason, underwriting firms routinely factor in a risk cushion in their bids, bidding at a higher spread in case the issue proves difficult to sell. Again, this will particularly be the case for a new issuer.*

2. Negotiated Sale

A negotiated sale optimizes the issuer's ability to take advantage of rapidly changing market conditions. Using a negotiated sale, the underwriter is involved much earlier in the process and assists the sub-sovereign in structuring the issue. *The date of issue is not set in stone, and if market conditions warrant, the sale may be delayed or expedited. A negotiated sale may be particularly appropriate in times of general interest rate instability. Negotiated sales are also often used when issues involve complex security provisions*. An underwriter can then assist in structuring these provisions, and is

Table 4.4: Long-term U.S. Municipal Issues by Type of Sale, 1982–1996
($ millions)

Year	*Competitive*	*Negotiated*	*Private placement*	*Total*
1982	24,575	51,615	989	77,179
1984	22,892	74,759	4,230	101,881
1986	35,937	162,772	5,572	204,280
1988	33,058	115,150	3,093	151,301
1990	26,662	88,865	2,236	177,763
1992	30,263	95,262	2,446	127,971
1993	44,365	187,308	2,994	234,667
1994	55,628	233,971	2,617	292,216
1995	49,468	112,526	2,770	164,764
1996	46,891	133,537	3,057	183,485

Source: Steve Levine, Materials prepared for U6200, "Public Finance II: Issuers and the Marketplace," Columbia University, School of International and Public Affairs, Spring 1998.

better able to effectively advertise the provisions to potential investors. *A negotiated sale may be particularly beneficial to a new issuer because it allows the underwriter to make pre-sale marketing efforts to wary investors on the issuer's behalf*. Finally, an underwriter's early involvement in a negotiated sale may save some of the costs of a financial adviser.

The principal disadvantage of a negotiated sale is that the bidding process is widely perceived to result in a comparatively higher underwriter's spread. In contrast to a competitive market situation, an issuer working with a single underwriting firm may find it difficult to calculate an appropriate spread. Even if a justifiable price is negotiated, the process may appear suspicious to elected officials and even lead to charges of favoritism. In many parts of the United States, concerns about corruption in negotiated sales have led to the passage of laws requiring a competitive bidding process for General Obligation issues.

3. Competitive-Negotiated Sale

This hybrid combines the advantages of the competitive and negotiated sale methods. In this case the issuer selects an underwriter on a competitive basis, but provides the underwriter with flexibility in the structuring and pricing of the bond issue. The issuer hires a Financial Advisor to prepare the general structure of the issue, outline and publish this structure in a Request for Underwriter Proposals (RFP), and then ask for more specific proposals within that structure. The fnancial avisor might also help the issuer to obtain the appropriate government permits and approvals, develop a rating agency strategy, select issuer counsel (bond counsel), and assist in the preparation of the initial legal documents. These preparatory activities expedite the offering process and allow the issuer to request, in the Underwriter RFP, an "indicative" offering price (interest rate, discount/premium, and sales commission) and a firm management fee. Because of volatility, the underwriter will usually not offer a "firm" price until the launch in the marketplace.

Table 4.5: Comparison of Negotiated and Competitive Sales

	Positives	*Negatives*
Competitive sales	• Lowest bid wins • Transparent sales process works well for established issuers	• Limited flexibility • May not be available to new issuers • Underwriting risk built into cost
Negotiated sales	• Flexibility to adjust timing or structure • Allows pre-sale marketing by underwriter • Particularly appropriate for complex issues	• May not result in market price • Potentional for corruption

4. Private Placements

Depending on legal constraints, an issuer may be able to sell bonds directly to a limited number of sophisticated investors. Private placements may not be subject to certain disclosure requirements and can be issued at reduced cost. Private placements may not be possible for large issues, and some regulatory structures may not contain disclosure exceptions for private placements. Issuers looking to sell bonds in the United States may do so in a private placement under Rule 144A.

C. Choosing among Bids

The idea of competitive bidding is that the issuer will choose the lowest bid, that is, the underwriter that offers the issuer the lowest cost for issuing the same amount of bonds. But how is the lowest bid determined? There are two competing approaches:

1. Net Interest Cost

Net Interest Cost (NIC) looks at the average annual debt cost to the issuer as a percentage of the outstanding principal of the debt. *The problem with this average, however, is that two bids can have the same NIC, but cost the issuer different amounts.* For example, while the average interest payments might be identical, one bid might involve higher interest payments in the early maturities and lower interest payments in the later maturities, while a second bid might do the reverse. In this circumstance, the first bid would be more costly to the issuer on a present value basis as its higher interest payments must be made sooner.

Table 4.6: NIC vs. TIC

		Issue A (NIC=5%, TIC=5.04%)		*Issue B (NIC=5%, TIC=4.98%)*	
Years to maturity	*Par value ($)*	*Coupon rate (%)*	*Annual debt service ($)*	*Coupon rate (%)*	*Annual debt service ($)*
1	1,000	12	1,190	2	1,130
2	1,000	3	1,070	5	1,110
3	1,000	4	1,040	6	1,060
Total	3,000				

ISSUE A AND B: Total interest payments for each issues = $300, NIC = 5% for each issue
ISSUE B: Coupon payments made later, TIC = 4.98%

Sources: Public Securities Association (now renamed The Bond Market Association), *Fundamentals of Municipal Bonds, 4th ed.* (New York, PSA, 1990), pp. 181–186; John Mikesell, *Fiscal Administration: Analysis and Applications for the Public Sector, 4th ed.* (Fort Worth, TX: Harcourt Brace College Publishers, 1995), p. 491. Used by permission of Harcourt, Inc.

2. True Interest Cost

True Interest Cost (TIC) takes into account this time profile of interest flows.

C. Structuring the Issue

Decisions made during the bidding process will affect the structure of the issue. With a competitive bidding process, the key structural matters will need to be resolved with the Financial Advisor before underwriters can bid. Under a negotiated sale arrangement, however, the underwriter will be able to play a major role in the structuring decisions with the issuer.

Sometime during this process, a marketing roadshow may be undertaken to key financial centers to tell the borrower's story and ascertain investor concerns and demand. Investor responses can then be factored into the structure decisions. Financial advisors can also prepare a preliminary structure in the competitive-negotiated process and allow the underwriters to suggest changes or refinements in their proposals. Rating agencies may play a role in structuring if the issuer is trying to achieve a certain rating grade.

While the number of decisions in structuring the issue are almost infinite, several are particularly important:

1. Type of Issue

As discussed in more detail in Chapter 3, a key decision is whether the bond issue will represent a General Obligation of the sub-sovereign, or whether it will be backed by project or other Dedicated Revenues. This determination in turn drives many other decisions, including the market's eagerness to purchase the debt, the types of information required by rating agencies, and the types of legal documents needed. In addition, a decision, for example, to issue bonds backed by project revenues will often lead to the need for consultants to prepare feasibility and other studies on the project and its expected revenues and expenses.

2. Sizing the Issue

The first step in structuring a sub-sovereign bond issue is determining its size. The size of an issue will depend primarily on an issuer's particular needs. If bonds are being issued to finance a particular project, the costs of the project must be budgeted in order to size the bond issue. If the issuer's goal is to refinance existing debt, the size of the existing debt will help determine the size of the issue.

Regardless of the reason for a bond issue, an issuer may have to cover a number of costs with proceeds from bond sales. For example:

- Pay the expense of the issue, such as fees for bond counsel and financial advisers;
- Fund a debt service reserve fund,
- Pay interest on bond security, or
- Fund other forms of credit enhancement.

It may be possible, moreover, to capitalize interest by adjusting the size of the issue. This might be achieved by including the funds needed to pay early-maturity interest costs in the initial amounts borrowed.

The size of an issue may be related to concerns about its success. If an issuer hopes for a strong secondary market for bonds to develop after the initial sale, the size of the issue must be sufficient to attract buyers in the secondary market, but not so large as to erode the sub-sovereign's debt coverage ratios and debt capacity. An active secondary market will likely increase investor confidence in the issuer, helping future issues sell. The size of the issue, together with an issuer's currently outstanding debt, may also affect the credit rating of a municipal issuer.[22] *This will be particularly true for a large issue that substantially increases a municipality's total debt obligations.*

3. Obtaining Credit Enhancement

As discussed above, an issuer may address investor concerns about credit risk by obtaining a form of credit enhancement. *Credit enhancement will not only increase a bond's marketability, it may also save the issuer money by allowing it to sell the bonds at a lower coupon rate.*

One form of credit enhancement is bond insurance, which is discussed above, and in greater detail in Chapter 7. Other possibilities include obtaining a line or letter of credit from a bank. In certain situations, new issuers may find it difficult to issue General Obligation bonds even with traditional forms of credit enhancement. In such cases, a Dedicated Revenue stream may provide the necessary enhancement.[23]

4. Issuing at a Discount or a Premium

Bonds may be sold at, above, or below par value. **Bonds issued below par value are sold at a "discount."** The issuer collects proceeds from the sale below the total of the par value of all bonds issued, and yet pledges to pay back the total value at par. *This approach allows an issuer to offer the bonds at a lower coupon rate.*

Bonds issued at a premium are sold above par value. In this instance, the coupon rate is higher than it would be if bonds were issued at par. The general interest rate environment at the time of sale normally determines whether an issuer decides to sell bonds at a discount or a premium.

Box 4.11: Issuing at Discount or Premium (Total Issue at Par: $100 million)

Discount	*Premium*
Issuer receives proceeds of $99 m	Issuer receives proceeds of $101 m
Issuer pays back $100 mil.	Issuer pays back $100 m
Lower interest rate	Higher interest rate

Source: J.B. Kurish and Patricia Tigue, *An Elected Official's Guide to Debt Issuance* (Chicago: Government Finance Officers Association, 1993), p. 47.

5. Determining Final Maturity

The final maturity of a bond is based primarily on the financial condition of the issuer, market conditions, and the type of project being financed. If an issue is used to finance an infrastructure project, the final maturity of the debt should be tailored to the expected life of the completed project. If, for example, bonds are issued to finance a highway that is expected to last for 40 years, the final maturity may be at any time within 40 years. If, however, a fleet of police cars is purchased which are expected to last seven years, the maturity should not be beyond seven years. The market generally does not want issuers to be paying for projects when they are no longer in use.[24] Issuers should also avoid using long-term bonds to finance a continuing operating deficit.[25]

For most Emerging Market issuers, however, it is usually not possible to issue a bond for the expected life of the asset. International and domestic capital markets for Emerging Market issuers are too volatile and underdeveloped to allow for bond tenors to match the life of the assets being financed. Nevertheless, as these markets develop and demand from pension funds for longer-term bond tenors grows, issuers may be able to increasingly offer longer-term bonds for their infrastructure projects.

An issuer's decisions regarding final maturity may also be affected by investor demand or by negotiations with rating agencies. *An issuer must assess whether maturity provisions are structured optimally for the issuer or for investors. Issuers will make similar evaluations when deciding on call provisions.* While a pledge not to call bonds before maturity may attract investors, issuers must balance investor concerns with their own interest in retaining the ability to refinance their debt by calling bonds when interest rates drop.

As described in Chapter 3, the issuer must decide whether to issue term or serial bonds and what payment structure to use.

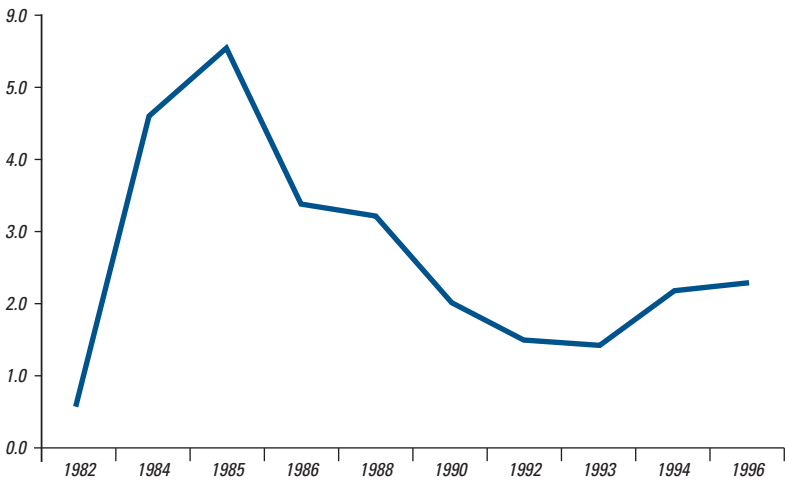
6. Redemption Provisions

Issuers frequently maintain the right to call bonds prior to maturity. When bonds are called, the issuer must pay investors all principal and accrued interest. *Call provisions that give the issuer the option to call bonds often require the issuer to buy bonds back at a premium. These provisions provide issuers with the flexibility to repay debt early and thus save on interest costs. Investors generally have an interest in limiting an issuer's right to call.*

7. Variable Rates

A variable rate bond allows for the interest rate to be adjusted at specified intervals, generally based on a predetermined formula, such as a certain number of basis points (e.g., 120) above LIBOR, the rate at which banks lend to each other. *The benefit of issuing variable rate debt is that the initial interest costs will be lower, as investors are willing to receive less knowing that they do not run the risk of being stuck with a fixed rate of interest as the economic environment changes.* In addition, if the formula-based interest rate goes down in the future, the issuer can save even more money.

Figure 4.3. Variable Debt as a Percentage of Total Long-term Debt



Source: Steve Levine, Materials prepared for U6200, "Public Finance II: Issuers and the Marketplace," Columbia University, School of International and Public Affairs, Spring 1998.

From the issuer perspective, significant increases in interest rates in the future can dramatically increase the costs of debt service, and also make budgeting difficult, as there is tremendous uncertainty about how much will be needed to ultimately pay back the debt. *A general rule of thumb in regards to variable rate debt is to limit this amount of debt to 20% of total outstanding debt. However, in many cases in the Emerging Markets, an issuer may not have access to fixed rate debt and may only be able to borrow on a variable rate basis. Therefore it is extremely important to understand the potential negative impacts a substantial amount of variable rate debt may have on an issuer's credit quality.*

Box 4.12: Variable Rate Debt—Province of Québec, Canada

In 1997–98, losses due to the decline in the exchange rate were offset by favorable interest rates. In 1998-99, however, debt service is projected to increase by C$523 million as a result of higher interest rates and a less favorable exchange rate.

Source: "Province of Québec, Canada, Regional and Local Government Analysis," Moody's Investors Service (New York: Moody's, 1998).

D. Credit Rating

The financial advisor and/or underwriter generally play a substantial role in helping the issuer through the credit rating process, which is described further in Chapter 6. The credit rating agency will need information about the structure of the issue in order to rate the particular issue.

E. Document Preparation

Decisions in terms of bidding and structure will also shape the preparation of bond documents, in which the financial adviser, underwriter, and bond counsel all play a role. While documents differ based on structure and the particular market, issuers should be familiar with the major ones:

1. Notice of Sale

A notice of sale is used when bonds are being issued in a competitive sale. The notice is published to underwriters and contains essential information describing the bond issue, so that underwriters will be able to bid. A typical notice would include information about the size of the issue, maturity and call provisions; authorization for the bond sale; type of bond and description of its purpose and security; names of bond counsel; bid form and a description of the basis of award; the amount of any good-faith check that might be required of underwriters to bid (this acts as a security deposit); the maximum interest cost per-

mitted; and information about the time, place and date where bids will be accepted.[26]

2. Official Statement/Offering Circular

The official statement is similar to a prospectus in a stock offering.[27] *It describes in detail the essentials of the issue, including security provisions, the financial condition of the issuer, important risks and legal issues.* (See Box 4.13.) In the Eurobond market, the prospectus-type document is known as an Offering Circular, which is often summarized in a selling memorandum.[28]

3. Legal Opinion/Statement of Bond Counsel

In the legal opinion, the bond counsel confirms that the issuer has complied with all legal requirements. This includes assurances that the issuer has the legal authority to issue bonds, that the revenue source for bond repayment is legal and irrevocable, and that the issuer is legally bound by provisions of the bond. *Note that this is not a judgment about the issuer's ability to repay the bond.*[29]

4. Bond Resolution

The governing sub-sovereign passes the bond resolution, which authorizes the issue, describes its essential terms, lists the obligations of the issuer, and approves any trust indenture.

5. Trust Indenture

This is the contract between the issuer and the lender (represented by the trustee). It establishes the exact nature of the security of the bonds and the trust provisions.

Box 4.14: Key Legal Issues—Mendoza Province, Argentina

When the Province of Mendoza, Argentina, issued US $125 million in fixed rate bonds in 1996, backed up by oil royalty payments, the legal due diligence process was especially important. Counsel needed to review the oil concessions (including terms and conditions, validity of permits, oil royalties), relevant hydrocarbon laws, the province's rights to the oil royalties and other revenue sources, the validity of the collateral documents and arrangements, as well as the regulatory and constitutional framework governing the province's tax raising powers, expenditure responsibilities, and debt issuance capability.

Source: Maria Freire, Marcela Huertas, and Benjamin Darche, "Subnational Access to the Capital Markets: The Latin American Experience," WBC, p. 58.

Box 4.13: Cover of an Official Statement—Recommendations of the Government Finance Officers Association

1. The total principal amount of the securities being offered
2. The name of the issuer (with appropriate identification), the title of the issue, and the date of the official statement as of which it speaks
3. The type of issue being offered (e.g. General Obligation, water revenue, etc.)
4. The dates of the obligations, interest payment dates, the date from which interest is paid and identification of any special interest payment features (e.g., zero coupon, limited interest, variable rate, etc.)
5. The denominations in which the securities are being offered
6. A brief statement of the security or other source of payment
7. Names and cities of the principal offices of the trustee, registrar and payment agents
8. Identification of mandatory, optional and extraordinary redemption or prepayment features and put or tender features
9. Maturity date and principal amount by maturity in columnar form
10. Statement of the tax status of interest on the securities being offered (including alternative minimum tax, original issue discount, bank qualification, etc.)
11. Reference to any credit enhancement
12. Indication if the securities are in book-entry form or eligible for custodial deposit with a registered securities depository, identifying the depository
13. Identification of counsel
14. Statement, if applicable, that the securities are offered when, as and if issued and subject to satisfaction of certain conditions
15. Ratings by the various rating agencies
16. Designation as a new issue
17. Brief statement of the authority for issuance
18. Anticipated date, manner and place of delivery
19. Registration and exchange features
20. Purpose of the issue

Source: Public Securities Association, *Fundamentals of Municipal Bonds, 4th ed.* (New York: PSA, 1990), pp. 65–67.

While generally not needed for a General Obligation bond, this is a critical document for Project and Dedicated Revenue bonds, as it defines the terms of the security and the financing structure of the issue, outlines the revenue to be used to pay principal and interest, and sets forth both security terms and the flow of funds.

Box 4.15: Revenue Bond Trust Indenture: Common Items

1. Description of the project to be built.
2. Definition of terms.
3. Definition of pledged revenue and its segregation, if necessary.
4. Definition of the way in which revenue is to be applied in meeting various claims against it.
5. Provision for advance retirement of bonds by either a refunding, call, or a sinking fund, if any.
6. Permitted investment for idle funds.
7. Conditions under which additional bonds may be issued.
8. A commitment as to the maintenance of rates so that income covers debt service.
9. Remedies on default.
10. Conditions under which an amendment to the contract will be permitted.
11. Covenants concerning faithful observance of agreements and general good management of the project in the bondholder's interest.

Source: Robert Lamb and Stephen Rappaport, Municipal Bonds, 2nd ed. (New York: McGraw-Hill, 1987), p. 235. Used by permission of McGraw-Hill Publishers.

Trust Indentures can also have other functions depending on the responsibilities of the trust, as discussed above. The primary clauses usually included in a Trust Indenture that interest the bondholders include the rate covenant and additional bonds clause, discussed below.

6. Rate Covenant

The rate covenant is a promise by the issuer that the rate structure of the project will be increased as needed to continue to support operations, maintenance, and debt service.

7. Additional Bonds Clause

The additional bonds clause is often contained in a lien that determines the position and status of the bondholder, especially in the event of default. This clause establishes the conditions under which the issuer can issue more bonds in the future, insuring that the original investors are protected against any dilution of the debt service coverage.[30]

8. Bond Purchase Agreement

This agreement is made between the issuer and the underwriter. It contains information regarding the price of the bonds, the terms of the sale, the interest rates, and the conditions that each party must meet.

9. Financial Statements/Annual Report

The issuer needs to make information about its budget available to the market. The auditor normally accompanies the financial statements of the issuer with a letter. The annual report summarizes the issuer's operations for the prior fiscal year.[31]

F. Distribution/Marketing

While sovereign governments often go to their domestic capital market based on set auction dates, sub-sovereigns have more flexibility to time their offering based on market conditions. During this phase, the underwriters actually sell the bonds to investors. The lead manager is responsible both for stabilizing the market during this process, and also for coordinating the activities of those involved in the syndicate. *Bonds can be offered either all at the same time, or in tranches, based on the experience of initial tranche*. For the sub-sovereign, a significantly oversubscribed issue is frequently interpreted as a vote of confidence by the market. Alternatively, it could be argued that oversubscriptions signify that the interest rate paid by the issuer is too high.

G. Closing Date and Ongoing Activities

The closing date is the time at which the issue is officially considered closed, meaning that the underwriters are responsible for purchasing any bonds that have not been sold to investors by that date. After the closing, accounts among the syndicated members are balanced.

Even after the issue is closed, however, activities continue. The trustee remains responsible for protecting the interests of the bondholders, while the required interest payments must be made regularly (often through the paying agent). In addition, the credit rating agencies will continue to assess the issue throughout its life. If there is an active secondary market, then the closing of the issue is merely the prelude to perhaps years of continued trading of the bonds.

Summary

This chapter has outlined the key stages in the bond issuance process and the key players who make them happen. Because success often depends on personal relationships and technical language, sub-sovereigns frequently hire teams of financial services professionals and attorneys to navigate through the complex stages.

Chapter 4 Notes

1. Most international and domestic bonds issued in Emerging Markets are sold on a "negotiated" basis; the issuer negotiates the terms of the sale with an underwriting investment bank or broker/dealer. In the well-developed U.S. municipal capital market, issuers often sell bonds on a competitive basis, that is, they request a bid for the interest rate and the price of the bonds from an underwriting syndicate. The terms and conditions of the legal bond documents are summarized in an Official Statement. The Official Statement also

contains other disclosure information about the issuer (see section E below for a further discussion of these points).

2. Jerome McKinney, *Effective Financial Management in Public and Nonprofit Agencies*, 2nd ed. (Westport, Connecticut: Quorum Books, 1990), p. 198.
3. J. B. Kurish and Patricia Tigue, *An Elected Official's Guide to Debt Issuance* (Chicago: Government Finance Officers Association, 1993), p. 21.
4. McKinney, p. 198.
5. Robert Lamb and Steven P. Rappaport, *Municipal Bonds*, 2nd ed. (New York: McGraw-Hill, 1987), p. 243.
6. *Global Bond Markets: A Multimedia Training and Information Guide to the World of Fixed Income Securities*, CD-ROM (London: Euromoney Publications PLC, n.d.).
7. *International Bond Markets*, International Capital Markets workbook series (London: Euromoney/DC Gardner, 1997), p. 14. The reader should note that fees depend on the amount of the issue and the kind of risk involved. For instance, the Kingdom of Spain in 1997 had a rating of AA2/AA+, and the amount of the issue was Ffr 4 billion. Sub-sovereigns in Emerging Markets, in contrast, can raise less money and have lower credit ratings.
8. The yield curve shows how interest rates increase, but at a declining rate as maturity of debt increases from short term (30, 60,90, 180, 360 days, etc.) through longer term notes (2, 5, 10 years). It should be noted that in Emerging Markets, the yield curve often is inverted.
9. The description below reflects primarily the composition of firms in the U.S. that underwrite municipal bonds. Firms that underwrite international sub-sovereign issues undertake similar activities, but these activities are usually part of an Emerging Markets or Fixed Income department, as the limited volume of sub-sovereign debt in the international markets does not warrant a separate department.
10. Public Securities Association, *Fundamentals of Municipal Bonds, 4th ed.* (New York: PSA, 1990), pp. 39–43.
11. Ibid., p. 43.
12. Maria Freire, Marcela Huertas, and Benjamin Darche, "Subnational Access to the Capital Markets: The Latin American Experience," WBC, p. 71.
13. Kurish and Tigue, p. 57.
14. Maria Freire, Marcela Huertas, and Benjamin Darche, p. 35.
15. The primary Buenos Aires Bolsa is referred to as the Bolsa de Comercio de Buenos Aires (also known as the Bolsa or the Buenos Aires Stock Exchange). It has three securities markets-the Mercado de Valores de Buenos Aires ("Merval"

or the Buenos Aires Securities Market); the Mercado Abierto Electronica ("MAE" or the Open Electronic Market); and the Caja de Valores, the central public and corporate securities depository. See Cámpora and Menéndez, p. 10.

According to Erica D'Ambrosio, Assistant to the CEO at the Banco Comercial de Buenos Aires (BCBA), there are 12 stock exchanges and 7 securities markets in Argentina. The stock exchanges are: Bolsa de Comercio (hereafter BDC) de Bahía Blanca, BDC de Buenos Aires, BDC de Córdoba, BDC Confederada, BDC de la Patagonia Sur, BDC de la Plata, BDC de Mar del Plata, BDC de Mendoza S.A, BDC de Rosario, BDC de San Juan, BDC de Santa Fe, and BDC de Tucumán. The securities markets are the Mercado de Valores (hereafter MDV) de Bahía Blanca, MDV de Buenos Aires, MDV de Córdoba, MDV de Mendoza S.A, MDV de Rosario, MDV del Litoral, and the Mercado Regional de Capitales (La Plata).

16. *Introduction to the Capital Markets*, International Capital Markets workbook series (London: Euromoney/DC Gardner, 1997), p. 26.
17. *International Bond Markets*, pp. 49–50.
18. Kurish and Tigue, p. 28.
19. *International Bond Markets*, p. 15; ibid., p. 18.
20. There are several different ways to evaluate the lowest bid. See the discussion of bid evaluation procedures, below.
21. Freire, Huertas, and Darche, p. 52.
22. Lamb and Rappaport, pp. 262–3.
23. One example of the use of a Dedicated Revenue stream is an issue made by the Department of Valle del Cauca, Colombia, in December 1996. The issue was guaranteed by taxes collected on regional liquor sales. See Freire, Huerta, and Darche, p. 77.
24. James C. Joseph*, Debt Issuance and Management: A Guide for Smaller Governments* (Chicago: Government Finance Officers Association, 1994), p. 70.
25. Kurish and Tigue, p. 49.
26. McKinney, p. 205.
27. We use the term Official Statement as the generic term for the disclosure document that provides investors with information about the issuer and the details of the bond offering. Disclosure documents have different names in different markets, but serve essentially the same purpose—to inform the investor about the risks of purchasing the issuer's bonds. The information required in the disclosure documents and the quality of the documents are not closely regulated and there are significant differences in the content of this document in the international and domestic markets.

28. *International Bond Markets*, p. 43.
29. John Mikesell, *Fiscal Administration: Analysis and Applications for the Public Sector, 4th ed.* (Fort Worth, Tex.: Harcourt Brace College Publishers, 1995), p. 490.
30. Lamb and Rappaport, pp. 234–36.
31. Ibid., pp. 236–37.

Chapter 5
Limitations on Sub-sovereign Borrowing

As indicated in the previous chapters, there are many decisions that sub-sovereign governments need to make in order to successfully access the capital markets. While sub-sovereigns can exercise a great deal of control over the process (such as the decision to develop a capital improvement plan or the determination to borrow funds through bonds rather than through commercial banks), they must also accommodate a series of externally imposed limitations. This chapter provides an introduction to those limitations. In particular, it asks:

I. What Are the Limitations That Higher Levels of Government May Place on Sub-sovereign Debt Issuance?
- A. Motivations
- B. Tactics
  1. Absolute Limits on Local Borrowing
  2. Limits Based on Quantitative Measures
     - a. Debt Service Limits
     - b. Debt-Stock Limits
     - c. Limits on New Borrowing
     - d. Limits on Capital Spending

3. Limits Based on Qualitative Measures
    a. Limits on Types of Borrowing
    b. Limits on How Borrowing is Structured
    c. Limits on the Bonding Process
    d. Other requirements
4. Indirect Limits

II. What Are the Restrictions That the Market Imposes on Sub-sovereign Debt Issuance?

A. Budgetary and Institutional Frameworks
    1. Accounting
    2. Budget
    3. General Financial Management
B. Other Limitations Based on Status of the Issuer
C. Non-issuer Related Limitations

III. What Are Broader Systemic and Legal Frameworks That Impact Sub-sovereign Access to the Capital Markets?

A. National Frameworks
B. Specific Laws
C. Investor Covenants
D. The General Framework

I. What Are the Limitations that Higher Levels of Government May Place on Sub-sovereign Debt Issuance?

Higher levels of government, whether regions/provinces or central governments, have the capacity to severely limit or even totally prohibit the issuance of debt by sub-sovereigns. Even where sub-sovereigns have a good deal of flexibility, they are often still required to act within certain constraints imposed by higher governmental levels. In **Argentina**, for example, domestic borrowings require approval from the provincial legislature, while municipal borrowings need local and provincial legislative approval.[1]

A. Motivations

Why might higher levels of government impose these limitations? First, they may be concerned with what is known as the *"moral hazard" problem*, *which refers to the risk that central governments may be put in a position in which they feel compelled (either for political, macroeconomic, or other reasons) to bail out sub-sovereigns that have issued too much debt*.

In fact, the market sometimes assumes that there is an implicit sovereign guarantee of sub-sovereign debt. This presents a moral hazard because it gives sub-sovereigns a perverse incentive to borrow as much as possible in the hope that they will be able to shift the burden of repayment to a higher level of government. When such actions occur on a massive scale, moreover, they can significantly undermine national macroeconomic health.

Borrowing on the international debt markets can have implications for the national current account as well as its foreign currency reserves. In **Brazil**, for example, a series of sub-national debt crises in the 1980s and 1990s led to assumption by the federal government of over $120 billion in debt, a huge per capita debt burden, and significant fiscal deficit problems.[2] Domestic capital market debt can pressure national monetary policies, crowd out private sector investment, and enable poorly managed sub-sovereign governments to dig themselves into deep financial holes.

There are other reasons why the national government may want to *encourage* sub-sovereign borrowing. Such borrowing can:

- Lessen demands on the national treasury by providing an alternative source of revenue for needed capital projects;
- Encourage the more efficient use of capital on the local and regional levels; and
- Enable governments closest to the people to make more decisions about their own unique needs.[3]

Box 5.1: Pros and Cons of Sub-sovereign Borrowing from the Perspective of Sovereign Governments

PRO

- Raises moral hazard risk of implicit national guarantees and over-borrowing
- Can create unintended pressures on national efforts to limit monetary growth
- Burdens national current account and foreign currency reserves
- Can raise the cost of capital for private sector
- Can impose costs on the national government, either through automatic national subsidies of local governments or by competing with national borrowing for the same funds
- Enables the most imprudent and poorly managed sub-sovereigns to avoid hard budget choices

CON

- More efficient allocation of domestic capital Helps limit public subsidies to those projects that are not financially viable, yet worthwhile for other policy reasons
- Enables those closest to the problems to determine solutions
- Increases intergenerational and geographic equity
- Provides practical way to finance large capital outlays without resorting to national funds
- Increases national capital stock that can contribute to growth in macroeconomic productivity
- Provides productive method for domestic financial institutions and pension funds to diversify investments

.

Source: Jaroslaw Bauc, "Macroeconomic Implications of Sub-sovereign Borrowing," WBC, p. 2.

Box 5.2: Efforts to Avoid Moral Hazard of Sub-sovereign Borrowing

Local government finance laws in the Czech Republic, Romania, and Bulgaria contain an explicit statement that there is no sovereign guarantee of local debt. Exceptions are considered on a case-by- case basis subject to approval by the Council of Ministers.

In an effort to convince the markets that the sovereign truly will not bail out failing sub-sovereign borrowers, sovereigns such as Hungary, Argentina, Colombia and South Africa have developed formal bankruptcy laws and procedures. These procedures typically clarify the process in the event of default, including definition of who has priority of claims, and procedures for foreclosing on collateral.

Sources: Burcak Inel, Nicole Barbery, and Michel Noel, "Reforming the Legal, Regulatory and Supervisory Framework for Borrowing by Sub-national Entities: Key Priorities in Europe and Central Asia, World bank internal document, p. 9; George E. Peterson, "Measuring Government Credit Risk and Improving Creditworthiness," WBC, p. 10.

B. Tactics

Because of the need to balance the potential benefits to the national economy from sub-sovereign borrowing with the potential problems it causes, sovereigns have developed a spectrum of limitations on sub-sovereign borrowing. The following describe key points along this spectrum:

1. Absolute Limits on Local Borrowing

Some sovereigns, such as **Chile**, have imposed a blanket prohibition on local borrowing. In **Latvia**, municipal governments have been prohibited from borrowing from commercial entities since 1997. **Brazil's** limitations are more time-sensi-

tive—since 1993, new bond issues have been forbidden through the end of 1999 (although outstanding debt can still be rolled over).[4]

2. Limits Based on Quantitative Measures

If sovereigns decide not to prohibit local borrowing entirely, they still need to consider how to ensure that sub-sovereign borrowing is not excessive. Different measures have been introduced to restrict borrowing:

a. Debt Service Limits

Some examples in Eastern Europe:

- **Czech Republic**, **Lithuania**, and **Poland** limit the amount of debt service that any sub-sovereign can be required to pay in any year to 15% of that sub-sovereign's own revenues.
- **Bulgaria** limits debt service to 100% of own-source revenues.

Similar limitations have been imposed in Latin America. For example:

- **Brazil** limits total debt service to the state operating surplus during the past year or 15% of its revenues, whichever is less; new borrowing within any 12-month period cannot exceed the lesser of the level of existing debt service or 27% of revenues.
- **Honduras** requires that no more than 20% of the annual revenue of a municipality can be used for the service of loans and bonds for projects "where investment is non-recoverable."
- **Argentina**, **Costa Rica**, **Ecuador**, and **Mexico**, to name a few,[5] have imposed other debt-service limitations.

b. Debt-Stock Limits

Rather than, or in addition to, looking at debt service, sub-sovereign borrowing can be limited based on the total amount of outstanding debt allowed at any time. For example:

- **Lithuania** limits debt stock to 30% of own revenues.
- **United States** has numerous state and local constitutional or statutory limits on ability to issue General Obligation debt, often stated as a per capita debt limit or a limit on debt as a percentage of local property values.[6]
- **Poland** has imposed a variation of a debt-stock limit by establishing a series of increasingly restrictive rules that are triggered (see Box 5.3 below) based on the relationship of general debt (both sovereign and sub-sovereign) to GDP.[7]

Table 5.1: Controls on Subnational Borrowing in Latin America

Country	*Who must authorize borrowing*	*Debt numerical constraints*	*Constraints on use of debt*	*Can use tax sharing as guarantees?*
Argentina	Yes, by central gov't. in case of external debt	Debt service <20–25% revenues	For investment and reforms	Yes
Bolivia	By central and local		For investment	Yes
Brazil	By national and state		For project	Yes
Chile	No			No
Colombia	Domestic–by local legislation External–by national legislature	Debt service < 40% current revenues; debt/current rev. <80%	For investment	Yes
Costa Rica	Domestics–by local legislation External–by national legislature	Debt service <10% of municipal revenues		No
Dominican Republic	Domestic–by local legislation External–by national legislature	No	No	No
Ecuador	No authorization required	Debt service <20% of revenues	For investment	No
El Salvador	No formal authorization required	No	External; for investment	
Guatemala	National legislature		No	No
Honduras	Domestic–by local legislation External–by national legislature		No	No
Mexico	States and municipalities are not allowed to contract external debt	Some states limit debt service of municipalities to 35% of revenues	For investment	Yes for municipalities
Nicaragua	Yes	No	For investment	No
Panama		None		No
Peru	No authorization for domestic or external unless the guarantee is required			
Uruguay	By national legislature	Determined in the annual budget		No
Venezuela	Special law; not authorized to borrow abroad	No	No	No

Source: Maria Freire, Marcela Huertas, and Benjamin Darche, "Subnational Access to the Capital Markets: The Latin American Experience," WBC, p. 24.

c. Limits on New Borrowing

As noted above, **Brazil** has imposed restrictions on new borrowing through 1999, while annual new medium- and long-term borrowing has been limited to 70% of adjusted own revenues in **Hungary** and 30% of revenues in **Ukraine**.[8]

Box 5.3: Different Approaches to Limiting Sub-sovereign Borrowing

The Case of Poland

One of the limits Poland places on sub-sovereign borrowing is based on the amount of overall outstanding debt (including loan guarantees) for the entire public sector, including both central and local governments. The general rule is that public debt cannot exceed 60% of GDP (Maastrict Treaty Guidelines). A series of triggers have been established to tighten restrictions as this limit is approached:

- If the ratio of public debt is below 50% of GDP, then no restrictions are placed on central and local borrowing.
- If the ratio is between 50 and 55% of GDP, then the central budget deficit relative to GDP cannot exceed the same amount from the previous year; and the local budget deficit relative to local revenue cannot exceed the same level for the national budget.
- If the ratio is between 55 and 60%, then all units of the public sector are required to initiate a debt reduction plan.
- If the ratio exceeds 60%, all units of the public sector must present budgets that are balanced.

Source: Jaroslaw Bauc, "Macroeconomic Implications of Sub-sovereign Borrowing," p. 3, WBC.

The Case of Estonia

Estonia uses several measures to restrict municipal borrowing including:

- Annual debt service by municipalities may not exceed 20% of budget revenues for that year;
- All existing debt service payments (including interest payments) together with the new loan or bond issue may not exceed 75% of that year's budgetary revenues; and
- Proceeds from the new loan or bond issue may be used only for capital investment purposes.

Source: Kaarel-Mati Halla, "The City of Tallinn Story to Access International Financial Markets"; WBC.

The Case of Colombia

Colombia has taken a variety of measure to restrict subnational debt, including higher collateral requirements, and a requirement that credit institutions increase their ratio of net worth to loans to sub-national governments. Law 358 of 1997 established a series of debt control procedures based on the ratio of interest payments to operational savings (income, less operational costs and transfers). This law established three different levels:

- If the debt interest to operational savings ratio is 40% or less, then there are no restrictions on new debt.
- If the ratio is between 40 and 60%, then a fiscal adjustment plan is required, debt increases are not permitted to exceed the growth in the inflation rate, and previous central government authorization is required to contract new debt.
- *If the ratio exceeds 60% or the ratio of debt to income exceeds 80%, then the locality is considered insolvent. This means that a two-year adjustment plan is required, the sub-sovereign has no investment capacity, and debt increases are limited to 60% of inflation rate growth for the first year and 40% for the second (with possible exemptions from these limits based on prior national government approval).*

Sources: Sergio Lleras, "Second-Tier Banking for Municipalities in Colombia," p. 8; Maria E. Freire, Marcela Huertas, and Benjamin Darche, "Subnational Access to the Capital Markets: The Latin American experience," p. 19, WBC.

The Case of Argentina

In 1991, Argentina did not enact any specific regulations that limited the debt raising ability of local governments directly. However, the Convertibility Plan adopted that year effectively imposed a series of limits. For example, provinces were prevented from rolling over existing borrowings from local banks, and amendments to the central bank charter one year later effectively limited provinces' access to provincial banks, which had been the traditional source of financing.

Source: Hernán Cámpora and Marcelo Menéndez, "Managing Cases in Argentina With High Default Risk," p. 9. WBC.

d. Limits on Capital Spending

Borrowing can also be limited by imposing restrictions on sub-sovereign capital spending. The **United Kingdom**, for example, centrally specified limits are imposed on capital spending by each municipality.[9]

3. Limits Based on Qualitative Measures

Rather than focusing on limiting the amount of debt, sovereigns can place restrictions on what kinds of debt get issued as well as the process by which issuance must occur.

a. Limits on Types of Borrowing

Sovereigns will take pains to restrict those types of borrowing that they judge to pose the greatest hazards to the macroeconomy.

First, some countries are especially sensitive to the impact of local issues on the aggregate foreign debt picture:

- **Argentina**. The Central Bank must give approval for provincial bonds issued abroad or in foreign currency.
- **Russia**. A series of Presidential decrees extended case-by-case permission for foreign borrowing to selected regions. One such decree in June 1998 extended the right to issue Eurobonds to all regions that comply with its requirements and obtain Ministry of Finance approval.[10]

Second, some nations take specific steps to prohibit sub-sovereign debt for undesirable purposes:

- **Lithuania** and **Poland**. Localities, can borrow to cover capital account deficits only, with short-term cash-flow shortages financed by borrowing up to one year only.
- **Honduras**. Local bond issuance is limited to specifically authorized purposes.
- **Canada**, **United States**, **Germany**, and **Switzerland**. Borrowing is limited to capital projects.
- **Ontario** (Canada). As a further level of restriction, the province requires project submission and approval for individual local issues.[11]

b. Limits on how borrowing is structured

Many of the debt service and other quantitative limits can be evaded through creative structuring of deals and budgets. For example, the **Lithuanian** and **Polish** rules regarding borrowing to finance only capital account deficits require strict separation of capital and current accounts to be effective. Debt service restrictions can be evaded through the use of bullet maturities, zero-cou-

pon bonds, and long grace periods on interest, which artificially lower debt-service costs in the early years. In order to make such evasions more difficult, sovereigns may also place constraints on the structure of borrowing. **Poland**, for example, does not permit zero-coupon bonds or interest capitalization, and the discount on the bond price may not exceed 5%.[12]

Box 5.4: Definitions of Public Debt—Public Debt Can be a Very Slippery Concept

Items that should be included in a comprehensive definition include:

- All recourse-based direct obligations into which a public entity may enter;
- Liabilities of general government in currency and deposits, bills, short, medium and long-term bonds, and short, medium and long-term loans;
- Long-term liability of local governments, including obligations to purchase commodities or services, and obligations to cover a cash shortfall in infrastructure projects co-financed with the private sector; and
- Public loan guarantees.

Source: Burcak Inel, Nicole Barbery, and Michel Noel, "Reforming the Legal, Regulatory and Supervisory Framework for Borrowing by Sub-national Entities: Key Priorities in Europe and Central Asia," World Bank internal document, p. 8.

c. Limits on the bonding process

One of the easiest ways for a sovereign to restrict sub-sovereign borrowing is to require sovereign approval throughout the borrowing process. For example:

- **Brazil** requires previous authorization by the Senate, the National Treasury, and the Central Bank for any credit operation, as well as additional approvals for external loans.
- **India** and **Pakistan** require central government approval even for borrowing at the state level so long as states and provinces owe any debt to the federal government.
- **Denmark** and **France** requires approval of the amount of borrowing and rates.
- **United States**, **Canada**, and **Switzerland** have legal requirements for voter approval of borrowing.
- **Poland** requires that sub-sovereign credit receive an advisory review of creditworthiness from a public agency.[13]

d. Other requirements

A wide range of requirements regarding bond registration, disclosure, need for credit rating, and other such items can also place effective limits on sub-sovereign debt issuance.[14]

Box 5.5: Required Approvals for Sub-sovereign Issues: Guaymallen, Argentina

When the city of Guaymallen decided to issue US-dollar denominated notes in the domestic market, the municipality had to make sure it received all the relevant permits and authorizations:

- *The Executive Council*—approved a certificate within the provisions of a decree regarding municipal finance;
- *The Province*—approved the transaction, as required by a separate decree;
- *Ministry of Finance*—was required to issue a permit in order for the debt to be issued in hard currency.

Source: Maria Freire, Marcela Huertas, and Benjamin Darche, "Subnational Access to the Capital Markets: The Latin American Experience," WBC, p. 60.

4. Indirect Limits

It is important to realize that sovereigns can hamper (or promote) sub-sovereign ability to issue debt through policies that on their face appear unrelated to borrowing. For example, the tax code can either promote through tax-exemption or hinder the issuance of sub-sovereign debt. Stringent environmental regulations, through requiring the construction of more environmentally sensitive infrastructure, may have the indirect impact of pressuring sub-sovereigns to issue more debt. Alternatively, national regulations that fix local tax rates or prescribe local tax bases may decrease the flow of revenues that localities require to pay back borrowing, thereby hindering such undertakings. The same holds true for national limits on sub-sovereigns' flexibility regarding expenditures and budgeting.[15]

II. What Are the Restrictions That the Market Imposes on Sub-sovereign Debt Issuance?

Even if a sub-sovereign government meets all the requirements imposed on it by the higher levels of government, its debt issuance is still subject to requirements imposed by the marketplace. Unlike sovereign laws and regulations, the requirements of the marketplace are not written down anyplace. However, a review of the experience of the past several decades suggests a series of possible requirements.

A. Budgetary and Institutional Frameworks

When determining whether to purchase an issuer's debt, one item that the markets look at is the strength of the budgetary and institutional frameworks. This includes the use of generally accepted accounting, good budgetary practices (e.g., separation of capital and operating expenses), sufficient disclosure, transparency and clarity of criteria for decision making processes. While each of these items is generally praiseworthy for financial management reasons, the extent to which the market demands them depends on a series of factors, including the amount of

surplus funds seeking investments. That is, if the market is flush with cash, it has tended to be less likely to care about good financial management practices than if it is experiencing a credit crunch. While there is no single list of the types of practices favored by the market, several key ones include:

1. Accounting

- Do not run one-time exceptional revenues together with recurring revenues;
- Provide clear presentation and consistency in terms of whether accounting is done on a cash or accrual basis;
- Distinguish operating from capital budgets;
- Do not report new borrowing as revenue in balancing the budget source; and
- Conduct independent auditing of accounts.[16]

Box 5.6: Preferred Disclosure Practices

There is no single standard for adequate disclosure. However, sub-sovereign governments should generally disclose any material facts that are or may be relevant to their ability to honor the terms of their debt obligations. This should include, but is not limited to, items such as:

Local government's own resource base;
Net inflows from higher levels of government;
Rules of tax sharing;
Services local government is obligated to provide;
Capital investments already committed to;
Operational income versus non-recurrent income (such as sales of fixed assets from privatizations);
Existing debt issuances and debt profile; and
Any outstanding litigation that may result in punitive damage awards that have a negative impact on the sub-sovereign's financial condition.

This information should be provided on a continuing basis through the life of the debt.

Source: Burcak Inel, Nicole Barbery, and Michel Noel, "Reforming the Legal, Regulatory and Supervisory Framework for Borrowing by Sub-National Entities: Key Priorities in Europe and Central Asia," World Bank internal document, p. 17.

2. Budget

- Rely increasingly on own-source revenues to fund local expenditures and generate net operational surpluses for investments;
- Strive for consistency in revenues, whether from intergovernmental grants or own-sources;
- Use transparent and predictable budget allocation procedures;
- Use a budgetary framework that permits and protects establishment of sinking funds;
- Apply a clear debt policy consistently;
- Collect local taxes and user charges in a businesslike fashion; and
- Devise multi-year capital budgeting plan.[17]

3. General Financial Management

- Establish adequate payment, cash management and financial control systems; and
- Institute adequate asset/liability and liquidity management. [18]

B. Other Limitations Based on Status of the Issuer

In addition to looking at the issuer's practices, the market will reward or punish the issuer based on other attributes, which are not always rational or tangible. *For example, well-known sub-sovereigns will tend to have an easier job marketing their debt than lesser-known entities. In addition, the perceived credit condition of the sovereign government will impact the willingness of the market to buy sub-sovereign debt.*[19] *The market's assessment regarding the willingness of elected officials to repay the debt, as well as the existence of benchmark obligations that the market can use for pricing the issuer's debt, will also affect the marketability of sub-sovereign bonds.*

C. Non-issuer Related Limitations

Not all of the constraints imposed by the market are within the control of the issuer or even related to the issuer's specific circumstances. The experience of the international bond market after the Asian collapse in 1997 and the Russian collapse in August 1998 showed that the market does not always distinguish rationally among issuers. In fact, the bond prices of entire regions moved in tandem as the market suffered from general fear of Emerging Markets.[20] By the same token, the supply of investable funds can have a large impact on market willingness to purchase debt.

Again, a market flush with cash will tend to forgive a multitude of issuer sins. The availability of such cash is at least partially dependent on the stage of evolution of the market itself. For example, a domestic market that still places severe constraints on pension fund investments is less likely to have pension money looking for places to invest. Finally, the market imposes requirements for collateral and other sources of protection that might push issuers toward project or dedicated revenue bond issues.

III. What Are Broader Systemic and Legal Frameworks That Impact Sub-sovereign Access to the Capital Markets?

A final series of constraints on sub-sovereigns' abilities to access the capital markets is derived from the institutional frameworks under which the sub-sovereigns operate. While national regulations may directly hinder sub-sovereign borrowing, the absence of various national regulations and institutional frameworks also introduces constraints. This can be best seen on three distinct levels.

A. National Frameworks

Sub-sovereign borrowing prospects are enhanced by the existence of a clear national framework that can support an effective credit market. Investors dislike uncertainty, and an absence of clear rules produces such uncertainty. For example, investors look for issuance and trading rules that ensure an open, competitive and market-based process of price determination. A clearly established settlement procedure that outlines rules with respect to the transfer, redemption and payment of the interest on bonds is also favored. The same could be said for an integrated system of registration and supervision.[21]

Box 5.7: Bulgaria's Law on Municipal Finance: Recommended Improvements

While judging it a to be a stride forward, a World Bank analysis of Bulgaria's March 1998 Law on Municipal Finance suggested further strategies for fostering a capital market. Recommended improvements in the law include:

- Amendments to allow for creation of sinking funds;
- A stipulation that municipal debt include all forms of guarantees by municipalities, both with respect to other government units and with respect to private legal entities or individuals;
- Clear disavowal of central government guarantees for municipal debt;
- Development of regulations to apply in cases of municipal bankruptcy; and
- More precise limitation of debt service to not exceed own-source revenue in any given year. Even such a provision could not adequately account for debt service fluctuations due to balloon payments, short-term changes in exchange or interest rates, or revenues that mask a municipality's diminished capacity to carry the debt.

Source: Michel Noel, "Developing a Municipal Credit Market in Bulgaria: Systemic Challenges and Proposed Bank support," World Bank internal document, 1998.

B. Specific Laws

Certain types of laws are critical for enabling the debt market to operate efficiently. *The primary example of such a law is a clear statutory basis for bankruptcy. This gives issuers and investors precise information about what will happen in the event of default, and enables judgments to be made on the basis of settled expectations.* Other laws, such as those that enable dedicated revenues to be securely set aside, permit creation of sinking funds, or enable intergovernmental transfers to be intercepted for the protection of creditors, can also play a fundamental role in enabling sub-sovereigns to issue debt successfully.

C. Investor Covenants

A final series of constraints on sub-sovereign access to the markets arises through the various legal covenants into which issuers must enter in order to assure investors of their ability to repay. Project and Dedicated Revenue bonds come with a range of promises (both negative and positive) that the issuer must make to the

bondholder. In many cases, the issuer cannot make certain promises unless there is a mechanism under national statutes for that promise to be enforced. *Thus, if there is no way to enforce a rate covenant on a public authority or to keep a stream of inter-governmental revenues separate from other funds, then the sub-sovereign will not be able to enter into the covenants that the market demands. Thus, sub-sovereigns may need to call upon national legislatures to facilitate the creation of a successful sub-sovereign bond market.*

D. The General Framework

In summary, market advisors recommend the following policy framework to facilitate the creation of a sub-sovereign capital market and to limit the constraints discussed above:

- Consistent accounting, auditing, budgeting and reporting mechanisms for municipalities and municipal enterprises;
- Unambiguous legal authorization for municipalities to incur debt in all possible forms—including loans, leases, and bonds—as well as the ability to enter into concession and privatization contracts;
- Thoughtfully designed regulatory limitations on all forms of indebtedness for municipal borrowers, and enactment of effective means of enforcing such limitations;
- Substantial negative consequences imposed on local authority borrowers in the event of non-payment;
- Collateral laws or analogous legally binding provisions which permit local authorities and municipal enterprises to pledge defined tax- and fee-based revenue streams, inter-governmental transfers, financial instruments such as stock shares, and other assets to debt-holders;
- Disclosure standards for all municipal issuers of debt, with appropriate differentiation in disclosure requirements for each category of debt;
- Tax law treatment of principal and interest on debt incurred by municipal issuers that is consistent with the treatment afforded principal and interest on other forms of debt; specifically, potential borrowers and investors in municipal debt must be afforded tax incentives (i.e. the ability to deduct interest expenses and/or tax-free interest income) comparable to those applicable to sovereign and corporate debt investors so as not to create distortions in the market;
- Development of a stable, predictable intergovernmental fiscal system that provides shared revenue and/or the capacity to raise own-source revenues which are reasonably matched to the needs of local authorities and mu-

nicipal enterprises (where "needs" are often best defined as responsibilities that have been devolved downward within political systems undergoing decentralization);
- Collateral law improvements which spell out how specified revenue streams, physical assets, and financial assets can be dedicated on a senior lien basis to the repayment of debt in whatever form the municipality chooses;
- A "sub-sovereign aid intercept system" which would allow municipalities to pledge the use of intergovernmental transfers such as revenue sharing and other resources due to them to cure delinquencies or defaults;
- Transparent and appropriately competitive procurement laws (or regulations with the force of law) for municipalities to ensure that borrowing proceeds are spent in the most cost effective manner possible; and
- A system of tariff-setting regulations for municipal enterprises that is governed by a clear and predictable process that can be relied upon by all involved parties.[22]

Summary

A sub-sovereign's ability to issue debt successfully is subject to a series of limitations posed both by the markets and by higher levels of government. Other limitations and restrictions are also reflected in the broader systems and legal frameworks under which sub-sovereigns operate.

Chapter 5 Notes

1. Hernán Cámpora and Marcelo Menéndez, "Managing Cases in Argentina with High Default Risk," WBC, p. 9.
2. Maria Freire, Marcela Huertas, and Benjamin Darche, "Subnational Access to the Capital Markets: The Latin American Experience," WBC, pp. 16–17.
3. Adapted from Jaroslaw Bauc, "Macroeconomic Implications of Sub-Sovereign Borrowing," WBC, p. 2.
4. George E. Peterson, "Building Local Credit Systems," Urban Management Program Discussion Paper (Washington, D.C.: Urban Institute, 1997), p. 6; Renato Villela, "Transparency, Credibility, Fiscal Management, and Financing: Notes on the Brazilian Experience," p. 3. (WBC); Burcak Inel, Nicole Barbery, and Michel Noel, "Reforming the Legal, Regulatory and Supervisory Framework for Borrowing by Sub-national Entities: Key Priorities in Europe and Central Asia," World Bank internal paper, 1998, p. 6.

5. Inel et al., p. 8; Anwar Shah, "Fiscal Federalism and Macroeconomic Governance: For Better or for Worse?" p. 20; Giovanni Giovanelli, "Non Performing Municipal Borrower in Central America—A Case Study," p. 6; Freire, Huertas, and Darche, p. 24. All from WBC.
6. Inel et al., p. 8.
7. Bauc, p. 4.
8. Inel et al., p. 8.
9. Shah, 20.
10. Freire, Huertas, and Darche, p. 22; Inel et al., pp. 8–9.
11. Inel et al., p. 8; Giovanelli, p. 6; Shah, p. 19.
12. Inel et al., p. 8; Bauc, p. 3.
13. Villela, p. 3; Shah, pp. 20–21; Bauc, p. 3.
14. Cámpora and Menéndez, p. 9.
15. Steve Levine, Materials prepared for U6200, "Public Finance II: Issuers and the Marketplace," Columbia University, School of International and Public Affairs, Spring 1998; George E. Peterson, "Building Local Credit Systems," p. 11.
16. George E. Peterson, "Measuring Government Credit Risk and Improving Creditworthiness," pp. 16–17; Inel et al., p. 15.
17. Inel et al., p. 15; ibid., p. 12; Peterson, "Building Local Credit Systems," p. 64.
18. Inel et al., p. 15.
19. Freire, Huertas. and Darche, p. 31.
20. Ibid., p. 40.
21. Inel et al., pp. 16–19.
22. Capital Advisors, Honduras Municipal Financing Facility, 1998.

Chapter 6
Credit Rating Agencies

This chapter discusses credit ratings, why they are important, and how the credit rating process works. Generally, a rating assesses an issuer's future ability and willingness to pay back on time and in full the investors who buy the bonds.

Receiving a favorable rating is important to issuers for two key reasons:

First, many investors will refuse to buy bonds if they are not rated, and, in some cases, the central government may not even permit sub-sovereigns to try to sell unrated bonds. A recent Presidential decree in Russia, for example, requires regional governments to obtain two ratings from international credit rating agencies before borrowing on the foreign market.*

Second, the rating sub-sovereigns receive serves as a critical determinant of the interest rate sub-sovereigns will have to pay to issue debt in the capital markets. The riskier the credit rating agencies think the issuer's ability to make debt service payments, the higher the interest rate sub-sovereigns will have to pay.

Chapter 6 outlines the following aspects of credit rating:

I. What Is a Credit Rating and Who Determines It?
- A. Major Credit Rating Agencies
  1. Basic Credit Rating Criteria
  2. Credit Rating Symbols

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* Burcak Inel, Nicole Barbery, and Michel Noel, "Reforming the Legal, Regulatory and Supervisory Framework for Borrowing by Sub-national Entities–Municipal Finance Initiative, World Bank internal document, p. 18.
** It is not easy to generalize about the rating agencies because their approaches differ. The discussion that follows endeavors to present some general propositions, but it should be understood that they do not always apply.

I. What Is a Credit Rating and Who Determines It?

A credit rating is an independent opinion on the future ability, legal obligation, and moral commitment of a borrower to meet its financial obligations of interest and principal, in full, in a timely manner. The rating assesses the probability that the borrower will default on the security (or a group of securities) before the maturity date.[1]

While credit ratings are important, they should be not interpreted more broadly than is appropriate or intended.

- First, while credit ratings are intended to serve as a reliable guide to investors in determining the default risk associated with a particular security, *credit ratings are not a recommendation to buy or sell a security. Credit rating agencies do not buy or sell bonds.*
- *Second, a credit rating tells nothing about whether discretionary judgments made by the issuer are right or wrong*. For example, the fact that a project can be financed successfully through the capital markets does not indicate whether the project is ultimately a good idea. And government policies that may hurt issuer credit ratings (e.g., offering extensive government subsidies for the provision of social services) are not necessarily bad policies. They may, in fact, be the right policies given the choices available to the government and the needs of the local population.

Credit Ratings are:

- Assessments of the ability and willingness of a borrower to make full and timely payments
- Opinions as to the credit quality of the issuer throughout the life of the bond

Credit Ratings are not:

- Recommendations to buy, sell or hold a security
- Opinions about the general quality of a government or statements about the quality of life in a community
- Opinions about the correctness of a government's policy decisions

A. Major Credit Rating Agencies

A credit rating is determined by a credit rating agency, an independent appraiser of default risk associated with bond issues. With the growth of free-market economies and the privatization of state-owned companies, rating agencies are increasingly used internationally. While there are roughly 40 non-U.S. based agencies around the world,[2] the four best-known firms are Moody's Investors Service, Standard & Poor's, Duff & Phelps Credit Rating Co., and

Box 6.1: 'Creditworthiness' Regarding Argentina's Foreign Currency Debt

The positive outlook indicates Fitch IBCA's view of likely improved creditworthiness, contingent on continued fiscal consolidation and structural reforms. In particular, improvement in tax collection and provincial finances coupled with labor market reform should ensure economic flexibility to withstand unforeseen economic shocks.

Source: Jorge Celio and Gabriel Torres, "Argentina's Foreign Debt Rating is 'BB' by Fitch IBCA" (New York: Fitch IBCA Inc., 1997).

Fitch IBCA, Inc. While there is considerable variability in quality among rating agencies around the world, what is presented in this chapter is based on the standard used by these four firms and their international affiliates.

In some circumstances, credit ratings are performed not just by credit rating agencies but also by national governments or quasi-governmental agencies. In **Poland**, for example, a special quasi-governmental agency does an independent assessment of a local government's future revenues and capability to repay debt.[3] In other cases, national governments trying to foster development of sub-national capital markets have precertified various issuers so as to give the market greater faith in their repayment ability. *Indonesia*, for example, has done a careful job of pre-screening municipal issuers to insure their willingness and ability to make timely debt service payments.[4] *In each case, the national government needs to consider whether the market will see its rating or pre-certification as an implicit national guarantee of the sub-sovereign debt issue*.

1. Basic Credit Rating Criteria

While the key factors in determining credit ratings are described in more detail later in this chapter, for G.O. bonds, the criteria include:

- economic base, diversity and growth;
- analysis of outstanding debt;
- financial operations, revenue and expenditure flexibility;
- government's administrative structure, legal factors, political dynamics; and
- sovereign ceiling.

Credit ratings for Project Revenue bonds focus on:

- the economic feasibility of the project;
- credit risks during the project's development;
- efficient management and long-term economic health of the project; and
- bond covenants in the context of the legal and policy framework of the country.

"Creditworthiness," a slippery concept that cannot be measured objectively, is often used as a general statement of an entity's financial health that is

Table 6.1: Long-term Debt Symbols

Moody's	*Standard & Poor's*	*Fitch IBCA*	*Duff & Phelps*	*Interpretation*
Aaa	AAA	AAA	AAA	Highest quality
Aa1, Aa2, Aa3	AA+, AA, AA-	AA+, AA, AA-	AA+, AA, AA-	High quality
A1, A2, A3	A+, A, A-	A+, A, A-	A+, A, A-	Strong payment capacity
Baa1, Baa2, Baa3	BBB+, BBB, BBB-	BBB+, BBB, BBB-	BBB+, BBB, BBB-	Adequate payment capacity
Ba1, Ba2, Ba3	BB+, BB, BB-	BB+, BB, BB-	BB+, BB, BB-	Likely to fulfill obligations; ongoing uncertainty
B1, B2, B3	B+, B, B-	B+, B, B-	B+, B, B-	High-risk obligations
Caa, Ca	CCC+, CCC, CCC-	CCC, CC, C	CCC	Current vulnerability to default
D	D	DDD, DD, D	DD, DP	

Source: Interpretation from Richard Cantor and Fred Packer, Federal Reserve Bank of New York. Readers should note that individual credit agencies may not agree with this interpretation. Rating agencies do not design their rating scales to conform with each other or with easy summaries.

not tied to a specific transaction. An issuer might not be creditworthy in general, but a specific bond structure may make a transaction creditworthy. Creditworthiness can vary with different possible structures of the same offering (e.g., how funds for repayment are segregated from general government funds), what type of debt the capital markets will accept, and how flush investors are with cash. A marketplace with much idle money looking for investments will react very differently to the same investment opportunity than a marketplace suffering from tightened credit conditions. Thus, determination that an issuer is not creditworthy in a market experiencing a credit crunch may change once market conditions improve.

2. Credit Rating Symbols

a. Long-Term Debt

Table 6.1 shows the symbols that are used by the major credit rating agencies when rating long-term debt, as well as their cut-off for distinguishing between investment grade debt and speculative debt. Credit rating agencies assign letter ratings to long- and short-term foreign currency and domestic currency debt obligations.

Investment grade cutoff:
- Duff & Phelps, BBB-
- Fitch IBCA, Inc., BBB-
- Moody's, Baa3
- Standard & Poor's, BBB-

Speculative grade begins:
- Duff & Phelps, BB+
- Fitch IBCA, Inc., BB+
- Moody's, Ba1
- Standard & Poor's, BB+

B. Short-term Debt

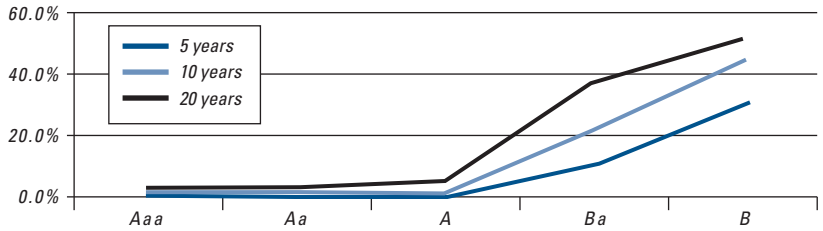
While the long-term debt symbols are most relevant for financing capital projects, there is also a series of separate symbols for short-term debt for sub-national government issuers. *In the U.S. municipal market, this debt is often divided into two classes, cash flow notes and bond anticipation notes (BANS)*. Cash flow notes are issued to smooth cash flows to address seasonal fluctuations between revenue collection and expenditure disbursements. They usually have a maturity or tenor of one year or less. These notes are referred to as either tax anticipation notes (TANs), revenue anticipation notes (RANs), or tax and revenue anticipation notes (TRANs).

BANs are usually issued to raise funds for capital projects, which are generally independent from the operating cash flows of a municipality. They may have ten-

Table 6.2: Short-term Debt Symbols

Moody's	*Standard & Poor's*	*Fitch IBCA*	*Duff & Phelps*	*Interpretation*
P-1	A-1+, A-1	F-1+, F-1	D-1+, D-1, D-1-	Highest credit quality
P-2	A-2	F-2	D-2	Good credit quality
P-3	A-3	F-3	D-3	Satisfactory or fair credit capacity
	B	B	D-4	Speculative capacity
	C	C		Doubtful capacity or payment
	D	D	D-5	Issue in actual or imminent default
not prime				Issue not falling within one of the prime rating categories

Figure 6.1: Moody's Cumulative Default Rates



	Aaa	Aa	A	Ba	B
5 years	0.1%	0.4%	0.5%	11.4%	28.6%
10 years	0.8%	1.1%	1.7%	20.9%	43.9%
20 years	2.2%	2.6%	4.8%	37.7%	51.5%

ors from one to three years. Rating agencies may also assign short-term ratings to municipalities in the Emerging Markets if they issue short-term domestic or foreign currency obligations. *Outside the United States, in the international market, the terminology used for short-term debt refers to Commercial Paper or Promissory Notes.*

B. The Relationship of Credit Ratings to Default and the Consequences of Default

By its very design, a credit rating at the time of bond issuance is intended to measure the risk that the issuer will default, failing to pay all its financial obligations to bondholders in full and on time. Even the highest rating, however, is not a guarantee that default will not occur, and a low rating does not reflect certainty of default. For example, Figure 6.1, which tracks percentage default over time by ratings category, illustrates that nearly half of issues rated B by Moody's at the time of issuance had not defaulted 20 years later.

When default occurs, it can have significant consequences for all the parties involved. The defaulting is-

Box 6.2: Asian Debt Crisis: Effects on Latin America

Lower Asian demand could reduce Chile's exports by over 3% this year, even before taking account of lower prices. Agricultural exporters will suffer losses, but a more manageable 1 to 2%. Lower commodity prices will increase the damage, although oil importers Brazil and Chile will receive some offset.

Source: Richard Fox and Paul Rawkins, "Latin America Well Supported Despite Asian Problems," Press release, 4 March 1998 (New York: Fitch IBCA, Inc., 1998).

Box 6.3: Default Experience—Rio de Janeiro

In February 1987, the federal government of Brazil imposed a suspension on principal and interest payments to commercial banks. In July 1989, the Brazilian government declared additional restrictions on interest payments to holders of external commercial bank debt. As a result of debt service controls, the Municipality of Rio de Janeiro was unable to fully service its external indebtedness and, consequently, defaulted on the debt in 1989. Rio de Janeiro's external debt was assumed by the federal government in connection with Brazil's 1989/1990 Interest Arrangements and the subsequent Brady Plan-style restructuring in April 1994. The City's external debt was replaced by domestic debt obligations owed to the federal government. Rio de Janeiro has not defaulted on any of its domestic indebtedness, including its bonded debt, and has been paying debt service on a current basis. As a result, Rio de Janeiro accessed the Eurobond markets in 1996 and issued bonds for US $125 million (R$139 million) due in 1999. This Eurobond issue made Rio de Janeiro the first Latin American city to raise funds in the Eurobond markets.

Source: Gersan Zerita, Rick Man-Ho and Paulo Rabello de Castro "Municipality of Rio de Janeiro" (New York: Duff & Phelps Credit Rating Co., 1998).

suer loses access to the markets and faces significant barriers to attracting investments generally, and must often take draconian measures to reestablish its standing in the markets. Default can also have dramatic implications even for those not involved. For example, the investor fears engendered by the Russian defaults in August 1998 caused major market upheavals, which effectively closed international capital markets for sub-sovereigns in Emerging Market nations around the world. The 1997 Asian financial crisis affected the credit rating of not only nations embroiled in the crisis but also their trading partners in other regions of the world.

A sub-sovereign default also can affect the credit rating of the sub-sovereign's national government, especially if the national government has implicitly or explicitly guaranteed the municipal or provincial debt. In addition, the national government might assist a sub-sovereign in the event of imminent default to avoid potential problems in the international capital markets. The issuing government itself is dramatically affected as capital markets are generally closed to the defaulting issuer until restructuring has occurred.

In addition, some nations impose automatic oversight and control on the finances of defaulting sub-national governments. For example

- **Hungary**, **Argentina**, **Colombia**, and **South Africa** all have formal legislative provisions for municipalities that default or that are in default risk.[6] Under these provisions, regional governments generally assume a portion of the debt service obligations temporarily, while intervening in the functioning of the local defaulting government to cut expenditures and increase local revenues.

- **New York City** in the mid-1970s and **Washington D.C.** in the 1990s lost effective control over their budgeting decisions as a result of default risk.

Box 6.4: Default Experience—Orange County, California, U.S.A.

Orange County, one of the wealthiest counties in the United States, defaulted in December 1994 with U.S. $1.6 billion in losses. The financial collapse came as a total surprise to the Orange County Board of Supervisors. Over the next several years, numerous lawsuits distributed blame for the loss among the County's Treasurer, financial advisor, auditors, investment bank and rating agencies. Orange County sued about two dozen Wall Street firms and consultants, alleging that they helped drive the county into bankruptcy. Among the cash settlements included over $400 million from the senior underwriter, Merrill Lynch; $75 million from the county's primary accounting agency, KPMG; and $23 million from disclosure counsel Brown & Wood. As of the end of 1998, Standard & Poor's had not agreed to any settlement, claiming it had no obligation to investigate the county's investment pool.

Sources: The Bond Buyer [New York], 23 October 1998, p. 1; ibid., 16 November 1998, p. 1; ibid., January 21, 1999; p. 3*; International Accounting Bulletin* (Lafferty Group, Dublin), 29 December 1998, p. 3.

II. Why Are Credit Ratings Important?

Credit ratings are important from both the investor and issuer perspectives. Ratings provide information to the investment community and facilitate access by investors to debt offerings. They also affect the costs to both sides of buying and selling debt. *This occurs because credit ratings indicate a level of default risk, which is the central ingredient for pricing bonds. High credit ratings indicate low default risk and therefore decrease the cost of borrowing. The cost of borrowing is reflected in the spread, which determines the bond's interest rate. Low ratings, an indicator of higher default risk, increase the issuer's interest cost. These ratings are intended to equip investors with a consistent measure of credit, which provides reliable comparisons of debt and debt-like instruments in the capital markets. The better the rating the less interest an issuer will have to pay when it issues bonds.*

In addition to influencing the interest rate issuers will pay to issue bonds, credit ratings can affect current and future debt offerings and other governmental behavior. For example, ratings can:

- Expand the number of investors available to purchase, as these investors have an understanding of the risks associated with the securities being offered;
- Make debt more attractive to a wide range of investors, both domestic and foreign;
- Provide a form of free publicity about a sub-sovereign's financial performance and can make it politically easier for city officials to institute financial management techniques that could improve future ratings; and

Table 6.3: Sample of Current Latin American Interest Rates on Foreign Currency Obligations

Issuer	*Sovereign*	*Date*	*Rating*	*Maturity*	*Rate*
City of Buenos Aires	Argentina	5 Apr 97	B1/BB-	11 Apr 07	11.25%
City of Buenos Aires	Argentina	17 May 97	B1/BB-	28 May 04	10.50%
Province of Mendoza	Argentina	23 Aug 97	B1/BB-	4 Sep 07	10.00%
Province of Tucuman	Argentina	16 Aug 97	BB-	1 Aug 04	9.45%
Province of Buenos Aires	Argentina	11 Jul 98	Ba3/BB	12 Jul 02	7.88%
Province of Buenos Aires	Argentina	12 Feb 98	B1/BB	5 Mar 01	10.00%
Province of Buenos Aires	Argentina	19 Sep 96	NA	25 Jun 05	7.75%
Province of Mendoza	Argentina	25 Apr 96	NR	8 Apr 97	8.85%
Province of Mendoza	Argentina	2 Aug 96	NR	25 Jul 02	10.00%
City of Rio de Janeiro	Brazil	2 Jul 96	NR	12 Jul 99	10.38%

Source: Shahid Javed Burki, "Challenges of Rapid Urbanization: Local Strategies to Access Financial Markets," World Bank, First Conference on Capital Markets Development at the Subnational Level: Bringing Together the Experiences of ECA and LAC, 26 to 29 October, 1998, Santander, Spain (hereafter WBC), p. 6.

- Influence governmental policies directly, as officials may avoid certain policies that might lower the city's credit rating in the future.

While credit ratings are required to access the international market, the reasons for getting a credit rating vary based on the rules of each domestic market. For example:

- **Colombia**—Ratings are necessary for regulatory purposes.
- **Argentina**—Ratings are voluntary and are used as a disclosure gesture to inform investors about the financial condition of the municipality.

Domestic regulations, the structure of the issue, and the issuer's perception as to whether the cost of the rating is needed to issue the bonds all play a role in determining whether domestic issues receive credit ratings.[8] *In addition, the rating process itself may have a significant impact on the structure of the offering, including specific covenants, terms, and conditions.*

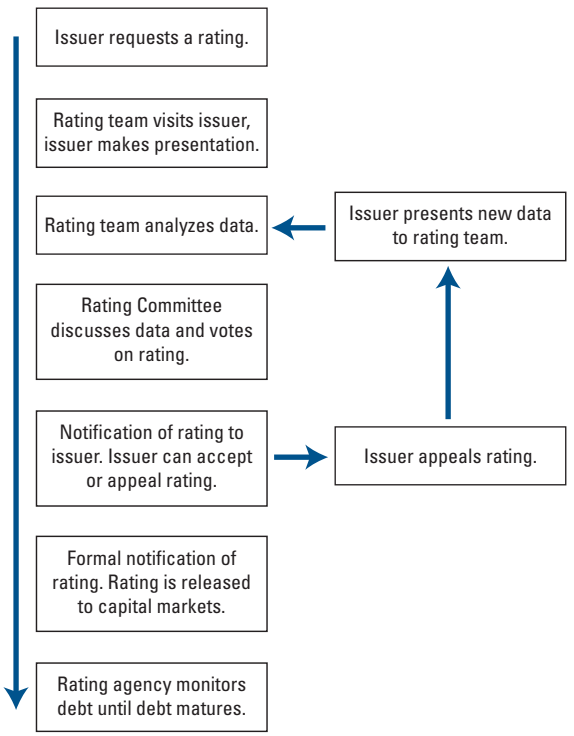
III. How Does the Credit Rating Process Work?

Generally, if a sub-national government wishes to issue debt and determines that it needs a credit rating, the issuer will hire a rating agency. While the rating process takes on average about 60 days, it can sometimes be done much more quickly on request. A lack of issuer information or other difficulties will extend the time required.[9] It should be understood that rating agency policies and processes differ and change over time. While the following identifies key steps in the rating process generally, each rating agency's procedures are unique and issuer experiences will vary.

The rating agency, whose revenue comes from issuers and investors, begins the process by sending a rating team for a credit presentation. This is the issuer's opportunity to describe the issue and make its case for a good rating. In addition to making an oral presentation, issuers often provide a written presentation with background materials (some of which are often provided prior to the rating team visit). The information provided differs based on the particular type of bond being issued, but frequently includes items such as:

- Background and history of the issuer;
- Official statement of the issuer;
- Proposed terms, legal covenants, and bond indentures for the issue;
- Indentures for existing bond issues, if any;
- Five years of audited financial statements and annual reports, and operating and capital budgets;
- Summary of operating and statistical trends; and
- Information about projects in Revenue Bond and Project Financing, such as construction and operating contracts; concession agreements, and other project and legal docu-

Figure 6.2: The Credit Rating Process



ments (shareholders agreement, off-take contracts, inter-creditors' agreement, and other legal financing documents, collateral agreements, and others depending on the type of project).

As part of its review, the rating agency will visit the city or regional government and meet with senior officials to discuss economic and budget trends as well as any factors affecting credit quality. The rating team will consider factors outlined later in this chapter for its analysis. Once the analysis is complete, the lead analyst from the rating team will convene an internal rating committee to discuss and debate the entity's credit quality and determine its rating.

The committee will generally include experts from various parts of the rating agency with differing areas of expertise, such as knowledge of the issuer, knowledge of the issuer's sovereign government, and knowledge of specific sectors or industries whose performance may affect the credit quality profile of the sub-national government. While rating the individual issue, the rating committee also endeavors to insure consistency among ratings given to different issues, so that an A rating in country X's housing sector reflects the same judgments about default risk as an A rating in country Z's industrial sector.

Once the rating is determined, the rating team contacts the issuer to report its decision. At this point, the issuer is given the opportunity to appeal by presenting new or additional information that could lead to a change in the rating. If

Box 6.5: Press Release—'Moody's Assigns Baa1 Foreign Currency Rating to City of Tallinn'

London, 03/13/98—Moody's Investors Service assigned a Baa1 foreign currency rating to the City of Tallin's (Estonia) DM 60 Million 6% Notes due 1999. This is the first time that Moody's rates the debt of an Estonian local government. The Baa1 rating is at the same level as Estonia's foreign currency country ceiling. The rating reflects the fact that although Tallinn is still operating in a transition economy, its finances are prudently managed and debt levels are not expected to rise to a significant degree over the next few years."

Source: Moody's Investors Service

Box 6.6: Reassessing Ratings: Guadeloupe

Fitch IBCA-London/Paris-15 September 1998: Fitch IBCA, the international rating agency, has downgraded long-term foreign currency rating of Department de la Guadeloupe to 'A-' from 'A'. Since 1997, Guadeloupe's budget has been monitored closely by the state, because the Department's administration underestimated compulsory expenditures arising from the implementation of a minimum income in France, leading to a significant deficit. It should be underlined that the state's strong local control procedures act to prevent risks of deep financial difficulties.

Source: Olivier de Combrarieu, "Guadeloupe's Long-term rating Downgraded to 'Á-'from 'Á'," Press Release, September 15, 1998 (New York: Fitch IBCA, Inc., 1998).

the issuer disagrees with the rating, the rating is not published and remains confidential. However, rating agency policies about confidentiality differ. For example, some will generally respect an issuer's desire for confidentiality, but will issue a rating publicly even against the issuer's wishes to protect the market and investors from an issuer that engages in "rating shopping" by going to different agencies until it gets the rating it wants. If the issuer accepts the rating, the capital markets are informed by means of a press release. If there is reason to reassess a previously issued rating, changes will be announced in a similar manner.

The rating process described above is generally followed by international rating agencies. These procedures may vary for ratings conducted by domestic rating agencies. Figure 6.2 outlines the basic steps that generally occur.

The relationship between the rating agency and the issuer does not end with the rating, as the agency will continue to monitor the issue until the bonds mature. This means that the rating agency will expect to receive regular financial updates from the issuer and, in most cases, will visit the issuer annually. The rating agency reserves the right to upgrade or downgrade the rating based on new credit developments.

The following events may contribute to a credit rating upgrade or downgrade:

- Material changes in rating factors;
- Significant change in issuer or project's financial position;
- Shift in sovereign or sub-sovereign policy that will alter credit profile; and
- Substantial economic downturn without sufficient governmental response.

IV. What Criteria Are Analyzed in Determining Credit Ratings for Individual Issuers and Bond Issues?[10]

A. Criteria for Sub-Sovereign General Obligation Debt

In rating General Obligation debt, as noted above, the rating agencies generally analyze five key factors: (1) economic base, diversity and growth; (2) analysis of outstanding debt; (3) financial operations, (4) revenue and expenditure flexibility; government's administrative structure, legal factors, political dynamics; and (5) sovereign ceiling. The following discussion describes some of the components of these factors. A more detailed listing of each agency's criteria is found in Appendix A.

1. Economic Base, Diversity, and Growth

These elements are of primary importance for a region in determining a credit rating to the extent that revenue is raised locally. These factors contribute to or undermine a government's revenue stream and its ability to pay debt service.

Box 6.7: Economic Investments—Credit Strength of Bahia, Brazil

Recent increases in private economic investments, totaling $2.6 billion in 1995 and 1996, which in addition to state investments, have contributed to average annual increases in real gross state product of 3% between 1992 and 1996.

Source: Malachy Fallon and Arthur Dial, "City of Bahia, Brazil," credit report (New York: Standard & Poor's, 1998).

Box 6.8: Credit Report on City of Buenos Aires, Argentina

Contributing positively to the city's debt rating is a large and diversified economic base. Buenos Aires is the largest city in Argentina, with a population of some 3 million or 9% of the national total. Deriving economic stability and vitality from its roles as both the federal capital and the largest business and financial center in the nation, the city ranks second in the nation only to the Province of Buenos Aires (which it is not a part of) in terms of economic output. The city reported a 1997 GDP per capita of $26, 752, nearly triple the national amount of $8,760. It has also long reported higher labor force participation and lower unemployment rates than the nation. These all indicate the relative strength of the economic base on which the city's debt obligations rely for repayment.

Source: Moody's Investors Service

A diverse economy with no dominant employer and a healthy blend of manufacturing, agriculture, services, trade, natural resource processing ,and government jobs is a positive credit factor. Dependence on a few primary employment segments in an economy makes the borrower more vulnerable to economic shocks and recessions. In addition, analysts look at how well-developed private sector employment is versus public sector employment.

Economic prosperity and demographics are significant credit considerations. In general, the higher per-capita income levels and GDP, the more ability (and flexibility) the government has to raise taxes. Income distribution is important in order to determine what social and spending pressures the government is likely to encounter. Demographics are important in terms of aging (pressure on increasing social service expenditures), the labor supply (productive capacity of the economy), the quality of the workforce (productivity measures), and other factors that directly and indirectly influence economic performance and government spending. Growth patterns are generally based on demographics and economic vibrancy. *Consideration is also given to the competitiveness of local industries and infrastructure capacity and whether the environment is conducive to private sector investment and economic growth.*

2. Analysis of Outstanding Debt

Legal structure, debt profile, and contingent liabilities are the three most important factors analyzed. *Debt analysis indicates what type of debt is owed, what the money has been borrowed for, and what has been pledged to repay the debt. For local governments, debt burden is measured by certain debt ratios, such as total outstanding debt to population and property valuation, as well as debt service to financial balances and revenues.* Debt is often measured relative to wealth levels, such as a ratio of personal income and GDP, as well as to operating revenues. Exposure of the debt profile to foreign currency exchange and interest rate movements is also evaluated. local and foreign denominated debt, and GDP.

Debt analysis also includes factors such as off-balance sheet project financing, lease obligations, debt guarantees, and contingent liabilities in enterprise funds or other state-owned entities. Debt ratios, such as debt service to recurring revenues and debt per capita, are also often used. Questions asked as part of debt analysis include:

Box 6.9: Diversity of Economic Base in Tierra del Fuego, Argentina

The 'B' rating of the Province's (Tierra del Fuego) general obligation credit quality recognizes the Province's abundance of natural resources and potential for further economic development in a number of sectors, including hydrocarbons and petrochemicals, chemicals, forestry, fishing and tourism.

Source: Gersan Zurita, Ricky Man-Ho Wai, and Michael Morcom, "Province of Tierra del Fuego," Duff & Phelps Credit Rating Co. credit report (New York: Duff & Phelps, 1998).

Box 6.10: Economic Restructuring—Ostrava, Czech Republic

The City's industry is strongly slanted towards heavy industry, engineering, iron and steel production and mining. Since 1990, these industries have undergone heavy restructuring with the consequence of substantial labour reductions. The risk of a significant impact of a renewed "restructuring" effort in the industrial sector is heightened by the fact that the 10 largest employers in Ostrava account for nearly 58% of the total workforce. Still, there remains a possibility that further restructuring will become necessary in the future resulting in further high unemployment and a negative impact on the City's tax revenues.

Source: Elisabeth Rudman, Janne Thomsen and Samuel Theodore, "Ostrava, Czech Republic," credit report (New York: Moody's Investors Service, 1998).

a. Legal Structure

- **What is the debt parity?** Debt parity tells rating agencies which outstanding issues have priority for payment from the debtor's respective revenue sources. *Subordinate bonds are considered riskier under debt parity analysis and generally have a lower credit rating than priority-payment*

Box 6.11: From Credit Report on Rio de Janeiro, Brazil

Given that the bonds have floating interest rates, the debt remains exposed to high interest rates experienced in 1997 and 1998. In addition, principal is indexed either to inflation or the US$, which has pushed debt levels higher. As a result, this debt has grown considerably. Also constraining the rating has been the city's history of default and debt restructuring, which mirrors that of most subnational governments in Brazil. The city was late on the payment of salaries and supplies from 1989 through 1992. Federal government moratoria on bank debt in 1989 resulted in suspension of payments in commercial bank debts and foreign currency loans. These loans were ultimately assumed and restructured by the federal government as part of the Brady deal in 1994.

Source: Moody's Investors Service

bonds. Senior lien bonds are generally considered less risky because of their priority payment status from the general treasury fund or from the dedicated stream of revenue.

- **What is the security to repay the debt?** Rating agencies examine the pledged security to pay the debt, whether it is a general obligation or if there is a dedicated stream of revenue to service the debt. When the pledged security is a revenue stream, the legal protections and economic feasibility of the revenue stream are determined during the credit analysis.

B. Debt profile

- **What is the overall structure of short-term and long-term obligations?** This includes a general review of the amount of outstanding debt owed as well as an analysis of the issuer's ability to repay that debt. *For example, rating agencies will look at the issuer's ability to service its short-term debt and whether the long-term debt is amortized or a bullet obligation. Many local governments in Latin America rely on domestic commercial banks for short-term financing. Traditionally, the interest rates on this short-term debt have been very high to compensate for inflation levels in the issuing country. A large proportion of bullet maturities and short-term debt are usually seen as indicating significant refinancing/rollover risk and greater potential for payment defaults.*
- **Is the rate fixed or floating?** Rating agencies analyze the interest rate risk involved in the issuer's fixed vs. floating rate debt, and how interest rate fluctuations could inhibit the borrower's ability to meet its obligations. *Interest rate risk also affects the market value of the outstanding debt, secondary market liquidity, and the flexibility an issuer has to either refinance or issue new debt.*
- **In what currency are the obligations denominated?** Rating agencies study how much debt is issued in a foreign currency and the extent of the borrower's foreign reserves (or access to such reserves) in regard to ex-

change rate and interest rate risk. *Foreign currency debt exposes a sub-sovereign issuer to exchange-rate risk and also to the possibility that, because of national government controls over the foreign exchange market, the issuer cannot obtain foreign currency when needed to finance debt service.*

Box 6.12: Debt Analysis in Emcali, Colombia

Of Emcali's total long-term debt at 12/31/96, approximately 65% matures within 5 years compared with 27% in FY95. This exposes Emcali to substantially increased interest expense and ongoing refinancing risk. At 23% of fixed assets, overall debt levels remain manageable at current levels. Continued debt growth is a major credit concern, particularly without accompanying extension of debt maturities. Emcali management is working to extend maturities and to better match debt term to the life of the assets financed.

Source: Susan Carlson, Daniel Kastholm, and James Stork, "Empresas Municipales de Cali E.I.C.E., Colombia," credit report (New York: Duff and Phelps, 1997).

c. Contingent Liabilities

Contingent liabilities are also important in analyzing the overall structure of an issuer's outstanding debt obligations. Explicit loan guarantees from the municipality as well as implicit obligations to bail out public banks or enterprises can lead to large contingent liabilities and have a negative effect on the sub-sovereign's rating. This kind of pledge is often weaker than a General Obligation pledge and could weaken an issuer's ability to secure future obligations with its general revenue stream.

Box 6.13: Contingent Liabilities—Provinces of Saskatchewan and Mendoza

In 1992, the Canadian Province of Saskatchewan became directly liable for the servicing of nearly C$2 billion of bad debt from one of its state-owned enterprise funds. This liability resulted because a significant portion of Saskatchewan's debt is contingent liability debt of its Crown Corporation sector, not all of which is self-supportive. The Province was involved in all sectors of the economy: agriculture, mining, forestry, power and telecommunications. A recession slowed the economy and weakened Saskatchewan's investments. This forced the Province to assume the servicing of the Crown Corporation debt at a time when the Province was already in severe fiscal stress because of the recession. The Argentine Province of Mendoza in 1995 was responsible for the debt of two of its troubled banks, since privatized, and saw its debt burden rise from 4% of GDP to 15%. Mendoza was the sole owner of its two largest banks that had been used for economic development purposes, and were considered by the rating agencies to be poorly managed and poorly regulated. A run on their deposits came in the wake of Mexico's 1994 "Tequila Crisis." Bailing out the banks caused Mendoza's debt-to-revenue ratio to increase from 18% to 100% that year, as well as causing a significant increase in the debt-to-GDP ratio.

Source: Yves Lemay, Vincent Truglia, and Samuel Theodore, "Sub-national Government Issuers –A Rating Agency Perspective" (New York: Moody's Investors Service, 1998).

Box 6.14: From Credit Report on the Montreal Urban Community (Canada)

The Montreal Urban Community's financial flexibility remains constrained by its limited prospects for revenue enhancements and the fairly rigid nature of its expenditure base. Revenues are supported primarily through apportionment payments, collected from the MUC's 29 member municipalities, and debt service subsidies from the province. Each municipality is responsible for furnishing a percentage of its property tax receipts to the MUC. These payments must be made irrespective of any disagreement on the part of the municipality — which makes this a highly predictable and stable source of revenue. Provincial debt subsidies are similarly predictable as they are based on formulas and built into agreements established before capital financing is initiated. While the province does not guarantee the debt it is subsidizing, it is unlikely that existing agreements would be retroactively modified, making this a secure source of revenue.

Source: Moody's Investors Service

3. Financial Operations, Revenue and Expenditure Flexibility

Financial analysis begins with an examination of the issuer's financial statements. Balance sheets, income statements, and audits (if available), which display cash balances, intergovernmental borrowing, current and long-term assets and liabilities, are fundamental to the credit rating process. Incomplete information will inhibit the credit rating. While there is no accounting standard that is used everywhere, international rating agencies[11] will expect the issuer to explain the accounting practices used.

Domestic rating agencies will most likely require only accounting information that the sub-sovereign must legally provide to regulators or government controllers. However, as domestic bond markets become more developed, investors will increasingly require more transparent public financial statements that better reflect the financial condition of the municipality.

The agencies' financial analysis includes review of the budget process, revenue and expenditure structure, and past financial operations. Operating trends are considered generally as an indicator of future performance. Factors that the agencies consider include annual operating surpluses or deficits, expectations of future revenues and expenditures, and inspection of tax revenue and user fee revenue trends (including how they are collected). The issuer's budget and capital plan are also examined to ascertain future borrowing needs, as well as the flexibility of the sub-sovereign to raise additional revenue and reduce expenditures, if necessary.

4. Government's Administrative Structure, Legal Factors and Political Dynamics

Rating agencies must assess the regulatory and legal structures of the country's executive and legislative branches of government; the services provided by the central government, state enterprises, and administrative agencies; and the relationships among the sovereign and its regional and local governments to help determine the issuer's

willingness to pay. Additionally, rating agencies must consider the intergovernmental system's political and administrative stability and supportiveness. Part of this analysis will include consideration of the structure of intergovernmental transfers and the likelihood that such transfers will continue at current rates.

Box 6.15: Financial Operations: Riga, Latvia

Although local fiscal power is severely restricted giving Riga limited expenditure and revenue flexibility, the city has demonstrated a strong commitment to retaining viable finances. Operating surpluses averaging 6% of operating revenues have been reported each year since the city was vested with autonomous budget responsibilities in 1993. Fiscal 1996 produced an operating surplus of about 10% of operating revenues and projections for 1997 suggest a continued solid financial performance.

Source: Anders Sars, "Riga, Latvia," credit report (New York: Standard & Poor's, 1997).

While a sub-sovereign's loan guarantees and other contingent liabilities are generally a negative credit factor, the possibility that the sovereign will bail out the sub-sovereign can be a credit positive for the sub-sovereign's rating. Even if a sovereign guarantee of sub-sovereign debt is explicit, however, the rating agencies still consider how quickly the sovereign can live up to its guarantee. For example, must the national Parliament vote to appropriate funds to bail out a sub-sovereign or can it happen through action by the national Treasury acting alone?

Credit rating agencies also consider the scope of central government oversight of the activities of sub-national governments. Oversight can take many forms, including filing requirements, prudent budgeting rules, controls over debt issuance and, in some cases, the authority to set tax rates for lower tier governments. In **China**, a 1995 national law passed prohibits budgetary deficits at the Local Regional Government (LRG) level and requires the establishment of contingency reserves of between 1% and 3% of total spending.[12]

One should also not conclude that centralized systems with good oversight necessarily provide stronger support than decentralized political structures. A decentralized framework can also offer strong support to the sub-national sector through generous fiscal transfers. By shifting resources away from wealthier regions, transfer programs can help level off the fiscal capacity of poorer areas and, thus, enhance their ability to fulfill their responsibilities, including debt service.[13]

The level of support, however, varies significantly from one country to another. For example:

- **Germany**—The existing fiscal transfers greatly reduce credit quality differentials between the 16 German lander. This reflects not only the generous level of transfers provided to the poorer regions, but also the protection afforded by the German Constitution and its solidarity principle.

- **Canada**—There is an elaborate system of fiscal transfers, but the country's experience in the first half of the 1990s illustrates the danger of relying too heavily on such transfers. As the central government came under significant fiscal stress, there was little protection against unilateral decisions to cut transfers.[14]

A borrower may have the financial capacity but not the willingness to make its debt service payments. Evaluation of willingness to pay is subjective, and is based on the issuer's practices and policies. Willingness to pay usually involves a judgment about various institutions that can support or hinder debt service payments.

Analysis of legal and regulatory limitations is also an important credit factor. This includes consideration of:

- Details on statutory and constitutional limitations regarding sub-national debt issuance laws, taxing authority to borrow and for what purposes, and whether the taxes are shared with any other government (see Chapter 5);
- Bankruptcy and insolvency laws and related court rulings as they affect the issuer;
- Summary of pending or proposed legislation that affects the debt issuance and revenue sources or pledged security of debt.

5. Sovereign Ceiling

The sovereign ceiling is a concept that applies only to foreign currency debt. *It generally represents the upper limit for ratings of any issuer, including sub-sovereign issues in a given country, as sub-sovereign foreign currency debt will not be rated higher than the sovereign's own foreign currency debt. Why can't a sub-sovereign rating be higher than the sovereign rating? The sovereign ceiling exists because the sovereign government controls monetary policy and access to foreign exchange. The country rating reflects the risk that in an economic or foreign exchange crisis, the sovereign government may choose to restrict foreign currency payments by its sub-national entities*. Even if a financially stable sub-national borrower has the resources to pay its foreign currency debt, under such circumstances, it could not do so by law.

Box 6.16: Willingness to Pay Debt Service—Cebu Province, Philippines

After a new governor of Cebu Province, Philippines, threatened to repudiate the 1990 provincial bond issue sold under a previous administration, Philippine investors expressed strong concerns about the relatively short, three-year terms of local officials, and the effects that short terms might have on the willingness of local governments to continue making debt service payments on obligations with longer maturities. These concerns continued, despite the fact that all payments of principal and interest for the Cebu bonds were made in full and on time.

Source: James Leigland, "Accelerating Municipal Bond Market Development in Emerging Economies," *Public Budgeting & Finance*, Summer 1997, p. 63.

It is possible, but not likely, for a sub-national issuer to have a domestic currency debt rated higher than that of the sovereign. Higher ratings of sub-national borrowers represent conservative financial management, solid currency reserves and modest future borrowing requirements. It is not often that sub-national issuers have higher credit ratings than their sovereign, as economic factors such as inflation and fiscal policies that contribute to the sovereign rating also affect the sub-national's ratings.

Table 6.5 shows how the same General Obligation issuer might but need not receive a different credit rating for debt denominated in local currency or foreign currency (see the Polish cities). This difference reflects the rating agency's judgment about the impact of currency risk (e.g., the chance that the issuer's currency may be devalued or have limitations placed on its convertibility over the life of the bond issue) on the issuer's ability to repay its debt.

Box 6.17: Sovereign Ceilings Affect Local Issuers—Chisinau, Moldova

Fitch IBCA–London—30 July 1998: In conjunction with the assignment of a long-term foreign currency rating to Moldova of 'B', the long-term foreign currency rating of the City of Chisinau is downgraded to 'B' from 'B+'. The short-term foreign currency rating remains unchanged at 'B'.

Source: Paul Fox and Valerie Montmaur, "City of Chisinau Downgraded to 'B'," credit report (New York: Fitch IBCA, Inc., 1998).

Box 6.18: Press Release—States of Bahia and Ceara, Brazil and City of Rio de Janeiro

Moody's Investors Service today downgraded the country ceiling for foreign currency bonds and notes of Brazil to from B1 to B2. Consequently, all B1-rated bonds of other issuers domiciled in Brazil have been downgraded to B2. This includes the States of Bahia and Ceara, as well as the City of Rio de Janeiro, whose ratings were revised downward to reflect the revision in the foreign currency country ceiling for Brazil.

Source: Moody's Investors Service

B. Credit Criteria for Project Finance Revenue Bonds

As discussed in Chapter 3, Project Revenue bonds are generally associated with public sector infrastructure projects. Operating revenues generated by the project support debt service payments for the bonds. The criteria for analyzing Revenue bonds are similar to the General Obligation criteria, *with two key differences*.[17] These differences can lead to the same issuer having different credit ratings for its General Obligation debt and Project Revenue debt.

- **First, debt service for revenue bonds comes from the respective user fees generated by the project.** *The issuer does not pledge general revenues*

Table 6.4: The Impact of Sovereign Ratings on Sub-sovereign Debt: Examples from Duff & Phelps (General Obligation Foreign Currency Ratings)

Issuer	*Sovereign*	*Rating**	*Date*	*Sovereign' s rating*
Province of Mendoza	Argentina	BB	Feb 98	BB
Province of Tucuman	Argentina	B	May 98	BB
Province of Tierra del Fuego	Argentina	B	Feb 98	BB
Municipality of Rio de Janeiro	Brazil	BB-	Jun 98	BB-
Santa Fe de BogotáCapital District	Colombia	BBB	Oct 98	BBB
Municipality of Emcali	Colombia	BBB	Apr 97	BBB

* note that the issuer' s rating is never higher than the sovereign' s rating for foreign currency debt.

for debt service, so the key focus of credit analysis is not on the issuer's financial stability, but more on the financial health of the project that will generate the revenues. If the debt service comes from a dedicated revenue stream that is separate from the project, such as oil royalties or liquor taxes, then the credit rating analysis will focus not on project revenue but on the strength, reliability, and predictability of the dedicated revenue streams and the certainty that they will be segregated from general governmental revenues to pay off the bonds.

- **Second, unlike General Obligation debt, which generally has no bond covenants beyond the issuer's general pledge to service the debt, Revenue bonds have a series of covenants dealing with items such as project maintenance, establishment of operating reserve and debt service reserve funds, debt service coverage levels, rate covenants, and additional bond issuance covenants.** The legal strength and enforceability of these covenants has a direct impact on the issue's rating.

As with the sovereign ceiling concern for General Obligation bonds, additional concerns arise with foreign-denominated Revenue bonds for projects such as toll roads. When a city issues foreign currency revenue bonds to construct a toll road, the revenue from the project will be in local currency while the revenue bond debt must be paid in foreign currency. If the value of the local currency diminishes over

Table 6.5: Standard & Poor' s Non-U.S. Regional and Local Government Ratings

Issuer (YTD Oct 98)	*Sovereign*	*Date*	*Domestic currency*	*Foreign currency*
Province of Buenos Aires	Argentina	2 Apr 97		BB/Stable
City of Buenos Aires	Argentina	18 Mar 97	BB-	BB-/Stable
Province of Mendoza	Argentina	8 Aug 97	BB-	BB-/Stable
State of Bahia	Brazil	18 Mar 97		BB-/Stable
State of Ceara	Brazil	7 Jul 97		BB-/Stable
City of Rio de Janeiro	Brazil	2 Apr 97		BB-/Stable
Santa Fé de BogotáCapital District	Colombia	12 Nov 97	BBB-/Stable	BBB-/Stable
City of Olomouc	Czech Republic	24 Oct 97	A/Stable	A/Stable
City of Ostrava	Czech Republic	26 Aug 98	A/Stable	A/Stable
City of Prague	Czech Republic	18 Nov 97		A/Stable
City of Riga	Latvia	16 Apr 97	BBB-/Positive	BBB-/Positive
City of Krakow	Poland	28 Aug 98	BBB+/Stable	BBB+/Stable
City of Lodz	Poland	28 Aug 98	BBB-/Stable	BBB-/Stable
City of Szczecin	Poland	19 Oct 98	BBB/Stable	BBB-/Positive
City of Wroclaw	Poland	6 Oct 98	BBB/Stable	BBB-/Positive
Irkutsk Oblast	Russia	17 Sep 98		CCC-/Negative
City of Moscow	Russia	17 Sep 98		CCC-/Negative
Oblast of Nizhny Novgorod	Russia	15 Oct 98		NM
Samara Oblast	Russia	17 Sep 98		CCC-/Negative
City of St. Petersburg	Russia	17 Sep 98		CCC-/Negative
Region of Sverdlovsk	Russia	17 Sep 98		CCC-/Negative
Republic of Tatarstan	Russia	17 Sep 98		CCC-/Negative
Yamal-Nenets Autonomous Okrug	Russia	17 Sep 98		CCC-/Negative

Source: Jane Eddy, Standard & Poor' s, New York City.[15]

time, the toll road will have to bring in increasing amounts of revenues for each foreign currency unit it owes.

Another important factor that the rating agencies consider in evaluating a bond issue is the type of public service the bonds are funding. For example, services, such as water and electricity, that are essential to the economic and physical well being of the community are more likely to receive political support from

Box 6.19: Sub-sovereign Ratings Higher than Sovereign Rating: Regional Municipalities, Ontario, Canada

While the sovereign ceiling applies only to foreign currency debt, as a practical matter it is also unusual for sub-sovereigns to achieve a higher credit rating on their domestic debt than the credit rating of their sovereign. However, it is not impossible. While Canada's domestic currency debt is rated AA1 by Moody's, both Vancouver, British Columbia and the regional municipalities of Peel, Halton, and Durham, Ontario, are rated Aaa. These issuers have very low debt burdens, high reserves in relation to their level of debt, very little reliance on revenues from the national government, and the ability to stay out of the credit market for an extended period of time. They present a history of financial results superior to their peers in times of stress, and do not have to go to the market to rollover short-term debt (i.e., if the market closes, they will continue to be able to pay their outstanding debt obligations). Note that it is generally only possible for a sub-sovereign to achieve this ability to be rated higher than the sovereign in a highly decentralized financial system. The City of Moscow and some local governments in Italy also have higher ratings than their sovereigns.

Source: Moody's Investors Service, New York City.[16]

elected officials, which may reduce political risk (such as reluctance by the government to increase electricity tariffs) and are more likely to generate revenues.

Rating agencies analyze criteria comparable to General Obligation debt when determining a Revenue bond rating. In general, agencies focus on four criteria: (1) economic feasibility of the project; (2) credit risks during the project's development; (3) efficient management and long-term economic health of the project; and (4) bond covenants in the context of the legal and policy framework of the country.

1. Economic Feasibility of the Project

The most significant credit factor for an infrastructure project is its economic potential and essentiality to the community. Only economically viable projects are appealing to potential domestic and international investors. Rating agencies use the following factors to assess these projects: [18]

- Does the project provide an essential service for which there will be continuing demand? Feasibility studies are typically used to forecast consumer demand for the proposed service and consumer willingness to pay.
- Will the service area yield enough revenues to support the project's capital and operating costs, as well as any required cushions for debt service?
- Will the project be competing with other projects? A competing service provider for a number of projects can negatively impact demand.
- Have the operating and maintenance costs been accurately assessed, and are they adequate to maintain the project over time?
- Will the issuer have the legal ability to change user rates when necessary? Many debt covenants require the project operating authority to raise

rates when necessary to maintain covenanted coverage levels. For example, if reserve levels fall below expected levels, the authority is required to raise fees until an adequate financial cushion is achieved.

- How leveraged are the project assets? Highly leveraged assets will require more debt servicing than less leveraged assets, hence limiting financial flexibility.
- Will the project stand alone or is it part of a larger integrated system, so that revenue problems in one part of the system may be offset by continued success in other parts?

Analysis of the demand projection and estimated revenue flows is critical, as is consideration of the issuer's ability to respond to foreseeable developments while continuing to operate and pay debt service. Analysis includes elasticity and financial stress-test scenarios for discretionary and non-essential projects are key. For existing projects, trend analysis is frequently performed, while the analysis of new projects is often highly dependent on the assumptions made by consultants.

As can be seen from Figure 6.3, certain types of projects will tend to be rated higher than and are more likely to generate revenue and satisfy consumer demand. This follows from the simple fact that some project types are more essential than others.

Box 6.20: Protection against Foreign Currency Risk for Aruba Airport Authority Bonds

Devaluation of currency is not a high transaction risk, as the credit structure provides for the capture of U.S. dollars from specific airlines. All international airlines (non-Aruban) are required to remit required payments in U.S. dollars. The airlines have been, and future airlines will be, notified to make payments directly to the trust rather than to the authority, and Aruba has agreed that the trustee has the right to enforce this direct payment mechanism against the airlines.

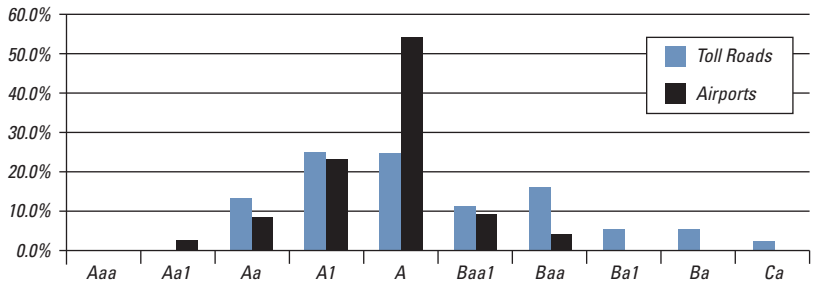
Source: Daniel Champeau, David Freedman, and Jessica Soltz, "Aruba Airport Authority $61.6 M Airport Revs Rated BBB by Fitch IBCA" (New York: Fitch IBCA, Inc., 1997).

Box 6.21: Economic Feasibility—Electricity in Chile

Endesa is Chile's largest electric company, with 46% of the country's generating capacity and 65% of the transmission assets. Endesa's rating reflects strengths such as a dominant market position, a healthy electricity demand growth, relatively low operating costs, and the supportive Chilean regulatory system.

Source: Manuel E. Borrajo, "Empresa Nacional de Electricidad S.A., (Endesa) Chile," in Vladimir Stadnyk and Curtis Moulton, eds., Infrastructure Finance: Project Finance, Utilities and Concessions (New York: Standard & Poor's, 1998), p. 201.

Figure 6.3: Moody's Ratings Distribution (YTD November 1998)



Source: Moody's Investors Service staff, New York City[19]

2. Credit Risks during a Project's Development

Development of any new project passes through a series of stages, from initial planning and design through contracting, construction, start-up, and continuing implementation. Consideration is given to the risks as well as to the ability of the project to repay debt service during each phase. For example, analysis of the construction phase needs to consider the experience of the contractors and the complexity of the project, technology, or geography-related or other difficulties that can lead to construction delays, the potential for cost overruns, and other concerns. Construction contracts with enforceable guaranteed completion dates and construction expense ceilings are generally positive credit factors.

3. Efficient Management and Long-term Economic Health of the Project

Long-term credit quality depends not just on the risks inherent in bringing a project to fruition but also on the ability to maintain and manage the project as a revenue-producing entity during the life of the bonds. This aspect of the credit analysis looks at the long-term economic viability of the project and at the likelihood that it will be managed in an efficient and responsible manner.

Rating agencies, as part of a broader analysis of the project's financial trends over time, consider the project's ability to meet debt service coverage ratios over the long term. They will chart potential long-term developments that can dampen demand for the project, commitments to carry out necessary project maintenance, and potential future borrowing needs for the project. For projects that are not newly constructed, agencies will assess the condition of the existing plant and its

related capital needs. *The structure and stability of management, its previous track record, its capacity to operate without political interference, and its overall capacity for effectiveness are also important.*

Box 6.22: Project Finance Construction Phase—Credit Outlook in Chile

In the case of Chile's toll road project, Ruta 5, because the road and much of the right-of-way already existed, preconstruction risk was minor. This project upgrades segments of an existing highway, converting them into a toll highway.

Source: William Streeter, Josephine Zeppieri, and Jorge Celio, "Rating Public Sector Infrastructure Projects in Emerging Markets" (New York: Fitch IBCA, Inc., 1998).

4. Bond Covenants in the Context of the Legal and Policy Framework

Legal provisions for Revenue bonds include fundamental covenants, such as minimum debt service coverage levels, rate covenants, the existence of various debt service and operating funds, and limitations on the issuance of additional debt. The legal framework alerts potential concessionaires and investors to the rules, obligations, and protections of doing business in a particular country.

The situation of Aguas del Aconquija, the water service providerf for the **Province of Tucuman, Argentina**, is an example of problems arising from differing legal interpretations. After an initial rate increase controversy, the provincial legislature changed many of the original provisions of the contract with Aguas del Aconquija (owned by the French company Vivendi), leading the company to attempt a rescission of its contract in 1997. Shortly thereafter, the provincial government ordered Vivendi to continue providing water services to the province for another 18 months, although it has recently moved to release the company from its obligation.[20]

Box 6.23: Legal Framework—Bond Indenture for Pycsa Panama, Toll Road

A rate covenant would better insure the maintenance of some financial margin during the project's ramp-up period and beyond. This concern is offset to a degree by projected healthy coverage ratios of at least 1.72 times and an initial one-year debt service reserve. The indenture also provides some protections, such as adequate financial and traffic reporting to the Trustee, as well as a flexible process by which toll rates may be increased.

Source: Chee Mee Hu and Charles Emrich, "Pycsa Panama, S.A," credit report (New York: Moody's Investor Service, 1997).

Particularly important in Revenue bonds is the extent to which dedicated revenues are legally segregated from other revenues of the government, as well as the ease with which bondholders can access those revenues. One problem that may arise in this context is that under the country's legal system, the bond issuer may not be

in charge of setting user fees. This has been a particular problem in **China**, where public/private joint ventures have been established to finance infrastructure construction, yet the local government joint venture partner does not have the ability to change the existing tariff structure, which is controlled by the province.

The overall policy framework of the host country must also be assessed. What are the chances that policies could change in a way to undercut the economic feasibility of the project? Do projections in terms of demand depend on any future government actions? If the revenue to pay off the bonds is from a dedicated source other than the project itself, what are the chances that future policy changes may threaten that source of revenue?

V. What Are the Special Concerns that Rating Agencies Face in Rating Emerging Market Sub-sovereign Debt?

Rating agencies have acknowledged particular concerns and challenges in rating Emerging Market sub-sovereign debt.[21] These challenges, which arise from the political, economic, and social pressures to which Emerging Markets are subject, include:

- Unpredictable legal and regulatory frameworks;
- Risky debt profiles;
- Financial data that is not independently audited;
- Burdens imposed by publicly owned companies;
- Shifting intergovernmental political and fiscal relationships;
- Incomplete demographic data;
- Inflation effects;
- Enormous infrastructure needs; and
- Uncollected taxes and user fees.

A. Unpredictable Legal and Regulatory Frameworks

The shortage of judicial history in many Emerging Markets engenders a significant degree of uncertainty concerning the legality and recourse of the security for domestic and international investors. For many general government pledges, such issues do not pose much additional risk. However, they are particularly relevant when specific revenue streams are pledged as security. The security pledge could be questionable in cases of fiscal insolvency or, as might be the case in **Argentina**, upon a declaration of an "economic emergency" by a province.[22]

Many central governments in Emerging Markets tightly control borrowing. Municipalities must receive permits to borrow, often from a variety of central authorities. Obtaining appropriate approvals is key to ensuring that no questions

about legality arise. For example, due diligence in this area has been difficult in **China**, where many complicated layers of approval are required.

Box 6.24: Catch 22 for Emerging Markets?

One of the concerns of rating agencies and the investment market regarding the purchase of Emerging Market debt is the issuers' existing short-term debt profile. This means that issuers need to go to the market frequently to roll over their debt, which puts them at greater risk of market volatility. For example, if an issuer needs to roll over significant amounts of debt each year and international economic factors lead to a closing of the market for several years, the issuer will be unable to roll over its debt and will presumably default. One way out, of course, is to issue longer term debt, but the market refuses to purchase this debt for fear of long-term economic troubles.

B. Risky Debt Profiles

Because of inflation and uncertain creditworthiness in many Emerging Markets, most sub-sovereign issues are generally considered risky by the market. The variable-rate and short-maturity nature of much sub-sovereign debt hinders accurate budgeting and exposes the issuer to exogenous market crises and inflation volatility. Rollover risk occurs when new debt must be issued to repay existing debt. It is common for municipalities to issue short- or medium-term debt with interest rates of 25% to 35%, placing a significant burden on fiscal operations. On the positive side, few municipalities currently have notable foreign currency exposure.[23]

C. Financial Data Not Independently Audited

Rating agencies are particularly concerned about the ability of Emerging Market issuers to provide the financial data needed to provide comfort regarding future repayment capability. Lack of disclosure can lead to downgrading of ratings as additional information comes to light. According to the rating agencies, a first step for sub-sovereigns is a clear explanation of the accounting principles they have used, even if these principles are not according to generally accepted standards. The lack of disclosure has generally deterred investors from investing in Emerging Markets since the Asian debt crisis of 1997.

The lack of appropriate accounting and auditing standards has not been as great a concern for domestic investors, but this may change as more sophisticated institutional investors, such as pension funds, will most likely require better disclosure and accounting and auditing practices prior to purchasing sub-sovereign obligations.

D. Burdens Imposed by Publicly owned Companies.

The extensive relationships that have traditionally existed between sub-sovereigns in Emerging Markets, local banks, and other companies can cause a particular

Table 6.6: Inflation Rates of Latin America, 1985–1996

Country	Average annual percentage		1995 Annual percentage	1996 Annual percentage
	1985–89	1990–94		
Argentina	863	505	3	0.20
Brazil	514	1841	84	18
Chile	20	17	8	7
Colombia	24	27	21	20
Ecuador	43	45	23	24
Guatemala	18	21	8	11
Haiti	2	24	26	17
Honduras	5	20	29	24
Mexico	82	16	35	34
Nicaragua	3358	2096	11	12
Panama	0.50	1	1	1
Paraguay	26	23	13	10
Peru	879	1607	11	12
Venezuela	33	41	60	100
Latin America	407	852	46	22

Source: Mansoor Dailami and Danny Leipziger, "Infrastructure Project Finance and Capital Flows," paper presented at the World Bank, Conference on Financial Flow and World Development, Birmingham, U.K., October 1998, ch. 6.

problem during the rating process, as these relationships may entail significant contingent liabilities for the sub-sovereign. In addition to these risks, these enterprises frequently carry payment receivables and bad debts. While many municipally owned companies are being privatized, they often require a large amount of capital injections to attract investors.

E. Shifting Intergovernmental Relationships

Due to their lack of local revenue raising capacity, many sub-sovereigns in Emerging Markets depend heavily on intergovernmental transfers for their revenues. In nations as diverse as **Brazil**, **Argentina**, **Colombia**, **India**, **Indonesia**, and

Romania, more than 50% of local budget revenue comes from the regional or sovereign governments.[25] In **Argentina**, for example, provinces' direct revenues represent only 18% of total revenues, making the provinces highly dependent on federal government transfers.[26] These transfers raise significant issues in the credit rating process, especially given the potential for dramatic shifts in the amount of such transfers. In **Honduras**, transfers from the central government are set by law, but are often delayed and only partially paid.[27] The **Republic of Sakhas (Yakutia)** Russia's debt rating was lowered from B2 to Caa3 in July 1998, and further to Ca in September 1998 due primarily to the instability of intergovernmental transfers.[28]

Box 6.25: Weak Position of Municipal Enterprises

A 1997 analysis of Buenos Aires, Argentina commented on the city's considerable economic strength, but expressed concerns regarding the "potential exposure created by the guarantee of the city-owned bank's obligations." In this case, the city had been required in the past year to provide $100 million in recapitalization funds for the bank, and the rating agency expressed concern that "in the worst case scenario of a bank failure, the city ultimately would have to assume the bank's liabilities." Other sub-sovereigns such as the Province of Mendoza, Argentina; Victoria, Australia; and Saskatchewan, Canada have all had their ratings affected by the potential liabilities that arise from having an ownership interest in financially weak banks or businesses.

Source: Moody's Investors Service, New York City. [24]

Box 6.26: Shifting Tax Sharing in Hungary

Hungary uses a tax sharing agreement for the personal income tax (PIT). The PIT is a major source of income for local governments. The national government transferred 100% of the PIT in 1991, 50% in 1992, 30% in 1993-1994, and 35% in 1995. This unpredictable fluctuation in annual revenues is a source of financial instability and a credit risk for Hungary's sub-national issuers.

Source: George E. Peterson, "Measuring Government Credit Risk and Improving Creditworthiness," WBC, p. 8.

F. Incomplete Demographic Data

Many Emerging Market nations have little tradition of localized record-keeping. Traditionally, records have been kept by the central government. Lack of demographic data can be a concern when trying to assess both future liabilities and revenues. For example, the progressive aging of the population can indicate future demand for expensive health care services, which can put pressure on sub-sovereign budgets. In addition, incomplete demographics can hamper the ability to make accurate demand and revenue projections for revenue bond-funded projects such as water-main hook-ups for water service providers.

G. Inflation Effects

While the days of hyperinflation in Latin America seem to be in the past, there are continuing concerns about the potential for inflation in the long term to undercut the ability to repay long-term bonds. This is particularly prevalent on the sovereign level, where inflation can affect exports, levels of import substitution, and currency reserves. On the sub-sovereign level, certain jurisdictions in **Brazil**, for example, can still be influenced by previous high inflation rates, as employee salaries are indexed to inflation on a lagged basis, so that previous inflation rates continue to count in computing current salary increases.[29]

H. Enormous Infrastructure Needs

As noted in Chapter 1, many sub-sovereigns face significant infrastructure needs to make up for decades of under-investment. These infrastructure needs are relevant for credit ratings in several respects.

- First, lack of adequate infrastructure acts as a drag on the general economy, which lessens the potential for growth in future revenues that can be used to repay bonds.
- Second, the need to finance significant infrastructure investments portends the likelihood that Emerging Markets will need to access capital markets consistently over many years. This increases their risk to the volatility of these markets, raises the prospect of deteriorating debt profiles, and threatens to siphon off more and more streams of revenue into special infrastructure project construction.

I. Uncollected Taxes and User Fees

A final issue of particular concern to rating agencies is sub-sovereign difficulties in efficiently collecting taxes and other fees. With the trend of decentralization and decreased federal transfers, sub-sovereign governments often lack experience and tradition of tax collection that is vital to maintaining credit strength. These governments generally lack financial and material resources, adequate taxpayer registration, measures that reduce non-compliance, and have poorly trained staff, inefficient procedures and an absence of effective taxpayer services.[30]

In many Emerging Markets, the tradition of federal government transfers meant that many local governments did not have to collect taxes. Before decentralization, the local governments did not have to leverage their revenues in order to borrow money. Today, in order to borrow on the capital markets, local governments must leverage their revenues in order to borrow money and cover debt service obligations, and as a consequence, must be concerned about tax collection.

Summary

A sub-sovereign issuer, after deciding to enter the capital markets, must acquire a credit rating. The rating process considers a range of factors, including the economic base, diversity and growth of the issuer, analysis of outstanding debt, financial operations and fiscal flexibility, government structure and political dynamics, and the sovereign ceiling.

In addition, separate factors, such as economic feasibility of the project, credit risks during the project's development, efficient management and long-term health of the project, and bond covenants in regard to the legal and policy framework of the issuer are considered in rating Project Revenue bonds. Issues such as unpredictable legal and regulatory frameworks, risky debt profiles, incomplete financial data, contingent liabilities of publicly owned companies, shifting intergovernmental political and fiscal relationships, incomplete demographic data, inflation effects, large infrastructure needs, and uncollected taxes and user fees raise special concerns in rating sub-sovereign debt in Emerging Markets.

Box 6.27: Infrastructure Needs—Krakow, Poland

Capital expenditures increased substantially in the past three years, and the trend is expected to continue. In 1996, capital expenditures accounted for 14% of total expenditures, up from 9% in 1994. Going forward, the local government forecasts this ratio to rise to 23% of total expenditures by the end of the decade. The current small portion of capital expenditures, coupled with pressing infrastructure needs, puts serious limits on the city's expenditure flexibility.

Source: Myriam Fernandez and Monica Richter, "City of Krakow, Poland," credit report (New York: Standard & Poor's, 1997).

Chapter 6 Notes

1. The following sources were used to provide background material for this section: Yves Lemay, Vincent Truglia, and Samuel Theodore, "Sub-national Government Issuers—A Rating Agency Perspective" (New York: Moody's Investors Service, 1998); Richard Wilson, "Introduction to Bond Ratings" (New York: Fitch IBCA, Inc., 1998); Caroline Wingardh, "Local Strategies to Access Financial Markets—Lessons and Opportunities for Latin America and Central and Eastern Europe" (New York: Standard & Poor's, 1998); L. Patrick Oden, Ziegler Securities, New York City, interview with James S. Gilliland, October 29, 1998.
2. Information based meeting with Tom Cochran and Frank Minerva of MBIA and James S. Gilliland, New York City, 30 November 1998.
3. Inel et al., p. 18.

4. James Leigland, "Accelerating Municipal Bond Market Development in Emerging Economies: An Assessment of Strategies and Progress," *Public Budgeting and Finance (*Summer 1997), p. 63.
5. Richard Wilson, "Introduction to Bond Ratings" (New York: Fitch IBCA, Inc., 1998).
6. George E. Peterson, "Measuring Government Credit Risk and Improving Creditworthiness," WBC, p. 8.
7. Interview with James S. Gilliland, 17 November 1998.
8. Maria Freire, Marcela Huertas, and Benjamin Darche, "Sub-national Access to the Capital Markets: The Latin American Experience," WBC.
9. Background material for this section was provided by Richard Wilson, "Introduction to Bond Ratings" (New York: Fitch IBCA, Inc., 1998); Moody's Investors Service, interview with Mark C. Gordon and James S. Gilliland, 23 October 1998; Standard & Poor's, "Public Finance Criteria," 1998.
10. It is not easy to generalize about the rating agencies because their approaches differ. The discussion that follows endeavors to present some general propositions, but it should be understood that they do not always apply.
11. Freire, Huertas, and Darche, p. 36.
12. Ibid.
13. Lemay et al., Moody's Investors Service.
14. Ibid.
15. Interview with James S. Gilliland, 12 November 1998.
16. Interview with Mark C. Gordon and James S. Gilliland, 23 November 1998.
17. This section has relied on the following materials: William Streeter, Josephine Zeppieri, and Jorge Celio, "Rating Public Sector Infrastructure Projects in Emerging Markets" (New York: Fitch IBCA, Inc, 1998); "Analysis of Revenue Bonds" in materials prepared for U6200, "Public Finance II: Issuers and the Marketplace," Columbia University, School of International and Public Affairs, Spring 1998; David Ambler, James H. Burr, Katherine McManus, Howard Mischel, and Diana L. Roswick, "Moody's on Revenue Bonds: The Fundamentals of Revenue Bond Credit Analysis" (New York: Moody's Investors Service, 1994); "Public Finance Criteria" (New York: Standard & Poor's, 1997); and Peterson, "Measuring Government Credit Risk and Improving Creditworthiness."
18. The factors presented are the major issues associated with government-sponsored infrastructure projects. Projects with private sector participation have a broader set of critical factors to determine the credit risks associated with a nonrecourse or limited recourse bond. Some of these additional factors include, but

are not limited to: (1) details of the concession terms and conditions or other legal agreements that grant the concession to the private sector; (2) the legal and regulatory framework that controls tariffs and user fees (usually incorporated in the Concession Agreement); (3) the terms and conditions of the construction, maintenance and operating contract; and several other credit risk factors that are not usually found in government Revenue bonds.

19. Meeting with Mark C. Gordon and James S. Gilliland, 23 October 1998.
20. William Streeter, Josephine Zeppieri and Jorge Celio, "Rating Public Sector Infrastructure Projects in Emerging Markets" (New York: Fitch IBCA, Inc., 1998).
21. The primary source of information for this section was Paul Coughlin, Thomas Connell, Jane Eddy, and Carolyn Wingardh, *Standard & Poor's Public Finance Viewpoint on Local and Regional Governments,* Fall 1997/Winter 1998.
22. Coughlin et al.
23. Ibid.
24. Interview with Mark C. Gordon and James S. Gilliland, 21 October 1998.
25. George E. Peterson, "Measuring Government Credit Risk and Improving Creditworthiness" WBC, p. 8.
26. Hernan Campora and Marcelo Menendez, "Managing Cases in Argentina with High Default Risk," WBC, p. 8.
27. Giovanni Giovannelli, "Non-performing Municipal Borrower in Central America," WBC, p. 5.
28. Moody's Investors Service staff, New York City, meeting with Mark C. Gordon and James S. Gilliland, 23 October 1998.
29. Ibid.
30. Carlos Silvani and Katherine Baer, "Designing a Tax Administration Reform Strategy: Experience and Guidelines," International Monetary Fund, working paper, March 1997.

Chapter 7
Complexities of Developed Bond Markets

The previous six chapters described the critical elements of issuing bonds, from the initial decision to build a project and borrow in the capital markets for financing, to the subsequent decisions about how to structure the bonds, the different stages of the bond issuing process, and some of the related constraints.

This chapter moves a step forward, looking at several complexities that can arise in the bonding process. This chapter will provide general information to introduce some of these complexities. While there is no limit to the intricacy of the different credit instruments that the market can create, it is important to remember that, especially for Emerging Markets, standard credit products will generally be most marketable.

I. What Complexities Arise in the Most Developed Markets, Including the Functioning of Bond Insurance, Secondary Markets, and the Creation of Various Derivative Products?

- A. Bond Insurance and Other Credit Enhancements
  1. Bond Insurance
  2. Other Forms of Credit Enhancement
     - a. Letters of Credit
     - b. Sovereign Guarantee

I. What Complexities Arise in the Most Developed Markets, Including the Functioning of Bond Insurance, Secondary Markets, and the Creation of Various Derivative Products?

While there are numerous ways in which developed capital markets differ from Emerging Markets, several are most critical in the realm of sub-sovereign debt: bond insurance, secondary markets, and derivative products such as swaps and hedges. This section discusses each of these.

A. Bond Insurance and Other Credit Enhancements

1. Bond Insurance

Bond insurance, or financial guarantee insurance, is a credit enhancement and legal commitment by a third party (the bond insurer) to pay bondholders the principal and interest due on their bonds, even if the bond issuer defaults on its payments.[1] *An issuing sub-sovereign purchases this insurance for a fee in order to make investors more willing to purchase its debt. By buying bond insurance, a sub-sovereign can decrease the interest rate it needs to pay on the debt, as the market will accept a lower rate of interest knowing that the insurer is guaranteeing that the debt will be repaid. Bond insurance effectively transforms (for a price) lower-rated debt into triple-A debt (if the bond insurer has a triple-A rating).*

Bond insurance serves two primary purposes in the capital markets:

- **First, it can reduce the credit risk and interest costs for issuers**. This occurs because the financial guarantee by the bond insurer gives the bond issuer the financial advantage of issuing triple-A rated debt, regardless of its underlying uninsured rating. This enables the issuer to save money on

Box 7.1: Pomona, California, USA, Unified School District

$20,000,000 General Obligation Bonds—24-Year Issue

	Uninsured	*Insured*
Credit Rating	A1	Aaa/AAA
Coupon Rate	6.01%	5.86%
Net Interest Cost	$22,870,040	$22,299,430
Cost of Insurance	0	$113,600
Total Interest Cost	*$22,870,040*	*$22,413,030*
Net Issuer Savings	$0	$457,010

Source: MBIA[2]

Box 7.2: Department de la Correze, France

FRf 150,000,000 General Obligation Bonds - 8-Year Issue

	Uninsured	*Insured*
Credit Rating	NR	Aaa/AAA
Coupon Rate	6.20%	5.90%
Net Interest Cost	FRf41,850,000	FRf39,825,000
Cost of Insurance	0	FRf891,287
Total Interest Cost	*FRf41,850,000*	*FRf40,716,287*
Net Issuer Savings	FRf0	FRf1,133,713

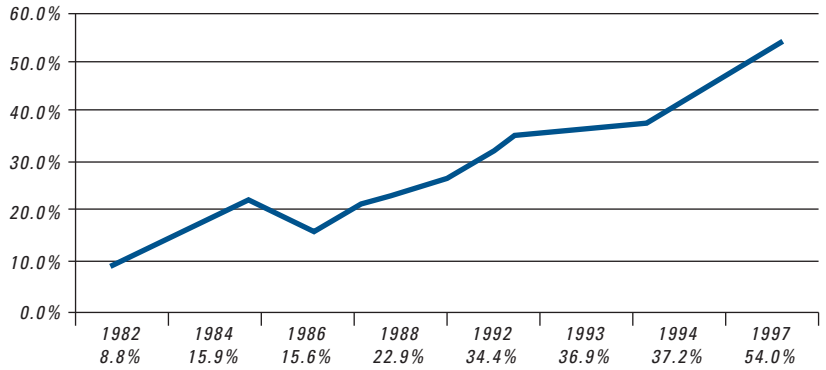
Source: MBIA[3]

interest costs, sufficient to cover the cost of the insurance and more. The following two examples demonstrate how issuers can save money with bond insurance. *Of course, bond insurance should be purchased only when the interest rate savings exceed the cost of bond insurance.*

- **Second, it can enhance investor security and market liquidity.** *Low investment grade or speculative grade debt is generally risky and not very liquid, but with insurance, "borrows" a triple-A rating, which implies security and liquidity in the markets*. Risk-averse investors, such as most mutual funds and pension funds with strict bond rating minimums, can buy insured bonds when they could not have purchased the same bonds without insurance. The upgrade to triple-A enhances bonds' marketability, making the bonds easier to sell to investors in the secondary markets.

Bond insurance was created in the early 1970s and is widely used in the American municipal bond market. In 1997, roughly 54% of the new issues were insured, up from 18% in 1987.[4] Figure 7.1 shows the trend of bond insurance in the American municipal bond market over the past 15 years. The independent rating agencies described in Chapter 6 provide credit ratings for bond insurance companies in regard to their claims-paying resources, as well as for bond issuers. The five biggest providers of bond insurance in the United States in 1996 were MBIA Insurance Corp., AMBAC Assurance Corp., Financial Guaranty Insurance Co., Financial Security Assurance and Connie Lee Insurance Co.[5] The top 5 providers of Letters of Credit (discussed below) in 1996 were Canadian Imperial Bank of Commerce, First Bank, National Western Bank, PLC., ABN-AMRO bank, and Union Bank of Switzerland.[6]

Figure 7.1: American Municipal Bond Issuance Coverage, % of Long-term Issues Insured



Source: Steve Levine, materials prepared for U6200, "Public Finance II: Issuers and the Marketplace," Columbia University, School of International and Public Affairs, Spring 1998.

Bond insurance companies and letter of credit providers maintain strict policies and monitoring of their insured debt. This is required in order to provide adequate warning of financial distress or default so the insurer can be ready to arrange solutions for financially troubled issuers. These monitoring costs are cheaper for the insurance company than having to pay interest and principal costs in the case of issuer default. Additionally, bond insurance companies generally do not insure speculative grade debt, thus many Emerging Markets sub-sovereign issuers would not be eligible for bond insurance.

2. Other Forms of Credit Enhancement

Other forms of financial guarantee or credit enhancement besides bond insurance companies are letters of credit from commercial banks and pledges of guarantee by the issuer's sovereign government.

a. Letters of credit

A letter of credit (LOC) is similar to bond insurance in principle, but it is issued by highly rated commercial banks, not by bond insurance companies. *An LOC is an unconditional, irrevocable commitment from a bank to provide cash payments, up to the face amount of the LOC, to the trustee or investor in the event that there is a shortfall of cash needed to pay interest or principal.*[7]

Box 7.3: Insurance for Privatized Airport Bonds

MBIA-AMBAC International has provided separate guarantees for two bond issues on behalf of Westralia Airports Corp. (WAC), a private airport management company. These transactions transpired with a 1997 decision by the Commonwealth of Australia to privatize several of its airports in order to generate cash and reduce outstanding debt. The government determined that key public assets, such as airport facilities, could be operated more effectively if managed by a private entity.

Source: MBIA-AMBAC International, *Deal Newsletter*, October 1998.

B. Sovereign guarantee

In some, but not all, Emerging Markets, the sovereign government will not permit a sub-sovereign issuer to default fearing that this may drive investors away from the sovereign debt, thus making it difficult for the sovereign to access international capital markets in the future., The recent trend in Latin America and Asia, however, is for sovereign governments not to guarantee their sub-sovereign governments' debt, as means to make them financially prudent.

While a sovereign guarantee is cheaper than commercial insurance because the sub-sovereign does not need to purchase it, it comes with its own problems.

- First, many sovereigns refuse to guarantee sub-sovereign debt. In **Argentina**, for example, the sovereign government does not guarantee sub-sovereign debt, generally because of the often immense contingent liability implications and/or constitutional reasons.[8]
- Second, a sovereign's guarantee is only as good as the sovereign's underlying credit rating, which is rarely as high as the triple-A of the bond insurers.

3. Credit Enhancements in Emerging Markets[9]

Bond insurance for sub-sovereign issuers in Emerging Markets is limited. Bond insurance companies, preferring the less risky debt in developed economies, generally do not insure sub-sovereign debt. The sovereign ceiling applies to foreign currency debt, and when many sovereign governments in **Latin America** defaulted in the early 1980s, sub-sovereign creditworthiness fell, too.

Today, few Emerging Markets underlying loans or bonds would be rated as high as BBB- by international standards for foreign-denominated bonds.[10] *Thus, the loss rate for an insurance company or letter of credit provider would be higher for low- grade insured issuers and the risk of a rating downgrade much greater.*[11] *This means that the insurance costs for the bond issuer would be much higher to offset the additional credit risk of foreign denominated bonds.*[12]

Some critics suggest that bond insurance may have potentially negative effects on Emerging Markets issues. They argue that functioning capital markets rely on people and institutions to assess risk, and if local institutn7ns were to rely on letters of

credit and bond insurance providers, they would not develop sufficient credit analysis skills. In the long run, these critics say, bond insurance could be detrimental to the development of Emerging Markets, as it could create "brand-name" lending and remove the incentive for credit analysis by investors and by local banks. This could be counterproductive for Emerging Markets because banks must have solid credit skills to operate.

Others, disagreeing with such recommendations, would point to the market's inherent safeguards. They would argue that only those sub-sovereigns with appropriate skills and experience will be able to get bond insurance in the first place. The market first has to issue bonds without insurance and investors have to develop credit analysis skills to assess the risks of these bonds. There is no reason to believe, according to this logic, that insurers will cover most bonds in the near future. In Europe, for instance, a small fraction of the total market is insured.

In general, bond insurance is a characteristic of developed markets, although insured transactions are possible in less developed markets if they fill a perceived need. An example of such an need was bond insurance purchased for a **Chilean** Toll Road, Talca-Chillan, to raise the credit rating of the bond to triple A so that pension funds could purchase the bonds.[13] *For bond insurance to develop more fully, there need to exist smoothly running capital markets, investor sensitivity to investor risk and reward, independent credit rating agencies, local investors, a system which allows individuals to invest their savings, and secondary market trading.*

B. Secondary Market

1. General Description[14]

The Secondary Market is the market in which bonds are traded after they have been initially distributed as new issues. Officially, the primary market is considered to end and the secondary market to begin after a new issue's closing or payment date. If a bondholder intends to hold a bond until its maturity date, then the existence of a secondary market is irrelevant to that bondholder. However, many bondholders do not wish to hold bonds through maturity. In this case, the only way they can effectively sell these bonds is through a secondary market.[15]

The existence of a functioning secondary market is important both for issuers and investors.

- **The Issuer Perspective**
  A secondary market enables the issuer to issue longer term debt and to sell this debt to a larger number of investors. For example, if there is no secondary market and a sub-sovereign issuer wants to issue 10-year debt, it can sell

only to investors who are willing to hold the debt for the entire 10 years (assuming no "put" provisions, which enable bond holders to sell their bonds back to the issuer). With a secondary market, an investor who wants to hold the debt for a single year might still purchase a ten-year bond, knowing that he can sell the bond one year later. *This higher liquidity brings more investors into the market, thereby increasing demand for different bond structures and maturities (as well as lowering the interest rates the market demands). Furthermore, strong secondary market purchasing of an issuer's bonds can establish a positive environment for future bond issues. Alternatively, investors sometimes regard weak demand for a particular bond issue in the secondary market as a negative reflection on the issuer's credit.*

- **The Investor Perspective**
  A well-functioning secondary market can enhance the diversity of an investor's portfolio. This occurs because investors can now consider a wider-range of bond offerings, as they know that they do not need to hold each bond until maturity. Thus, portfolios can be altered more easily, and longer term bonds become more appealing. *The liquidity of secondary markets helps investors hedge against interest rate risk through altering their portfolios and allows sophisticated investors to take advantage of intermarket spreads and consequent trading profits through arbitrage.*

Although bond issues are often listed on stock exchanges, the secondary bond market is exclusively Over-the-Counter (OTC). OTC means that counterparties deal directly with one another via electronic link and not at a central trading floor such as the New York Stock Exchange. Bond traders, or dealers, quote two-way prices for a bond: **a bid**—the price at which the dealer will buy the bond; **an offer**—the price at which the dealer will sell the bond. The spread between these prices is the trader's profit.

Major players in the secondary market for domestic U.S. municipal bonds are bond brokers, bond traders, institutional investors, and retail investors.

Institutional investors (and professional money managers investing pooled funds who generally buy long-term bonds) tend to dominate the bond market. *Among the institutional investors are insurance companies, pension funds, professional fund managers, commercial banks, and investment banks. These investors buy and sell bonds in very large quantities at a time.*

While it is not unusual for a few institutions to buy 70–80% of a new issue in the primary U.S. municipal market, institutional investors are even bigger participants in the secondary market.[16] They typically either trade a large amount of the

same issue or buy and/or sell a large amount of issues simultaneously.

Bond traders *buy and sell on behalf of an investment bank's clients and try to make profits for their own trading book. They are interested in capital gain and try not to take "long" positions*. A lead manager will support an issuer's bonds by market-making for the issue for the first few years. Traders also deal on behalf of the investment bank's clients, usually for yield pick-up or a change in credit quality.

Generally employed by large institutional investors, bond brokers find counterparties for the bond traders. Brokers bring principal parties together for a commission, finding the best price for the client and using in-house research to bring ideas to investors to encourage them to transact. Bond salesmen buy and sell bonds on behalf of their clients. Sales desks cultivate good relationships with frequent investors, keeping them informed of market opportunities for profitable switches.

Box 7.4: The Eurobond Secondary Market

Informally beginning in London in 1963, the secondary Eurobond market is as large and generally as liquid as the American secondary bond market. The Eurobond secondary market was formalized in 1968 with the creation of the Association of International Bond Dealers (AIBD), which later became the International Securities Market Association (ISMA). ISMA had nearly 800 members by 1997. The Eurobond market is an Over-the-Counter market and is comprised of market-makers from large European banks, American and Japanese securities firms and subsidiaries of American and Japanese commercial banks. The Eurobond secondary market is administered by ISMA which defines and monitors market conduct, procedures, publishes information on outstanding bonds and their current yields and prices. All banks that are market-makers must report closing prices daily to the ISMA. The ISMA also defines the basis of interest accrual on Eurobonds.

Source: International Bond Markets, International Capital Markets Workbook Series (London: Euromoney, 1997), p. 48.

Individual, or "retail," investors are not common in the secondary American bond market because of their tendency to hold bonds until maturity and also due to the relatively high transaction costs of small retail bond purchases.

2. Development of a Secondary Market in Emerging Markets

Secondary trading in sub-sovereign bonds generally develops only after more familiar securities, such as equity stocks, are traded in a secondary market. Moreover, a large volume of sub-sovereign debt is generally required to enable investors to make judgments about credit quality. Additional factors that facilitate a secondary market include:

- the existence of benchmark bonds from which to price sub-sovereign bonds;
- tax laws and transaction fees that do not deter trading;

- modern communication methods between buyers and sellers; and
- timely payment and settlement of trades.

Numerous Emerging Markets nations, **Poland** and **Indonesia** for example, are investigating ways to help list bonds on their domestic stock exchanges to develop price posting and other municipal finance information, in the absence of effective secondary market trading.[17]

Reducing government investment controls also facilitates municipal bond purchases by institutional investors. Such controls can inhibit the development of a functioning bond market by creating a small group of investors to whom municipal bonds are almost exclusively sold.

Sub-sovereigns in Emerging Markets can also foster secondary market bond trading by issuing floating rate bonds and issuing bonds with different term structures. **Indonesia** and the **Philippines** issue floating treasury and corporate bonds, which protect against inflation and are making the system familiar for potential municipal bond investors.[18] *Selling bonds with different structuring techniques to extend maturities, such as "put" options, can also enhance investor participation. Put options are a type of derivative, which are discussed below.*

Box 7.5: Secondary Market Trading in the Philippines

The Philippine government, in the spring of 1996, introduced a series of changes in the way that Treasury securities are offered and sold, intended to help expand secondary market trading in those securities, and ultimately in corporate and municipal securities as well. Among other things, government bond traders will be accredited on the basis of their market-making performance in the secondary market.

Source: James Leigland, "Accelerating Municipal Bond Market Development in Emerging Economies: An Assessment and Progress," *Public Budgeting and Finance*, Summer 1997, p. 64.

C. Derivatives: Swaps and Hedges

Derivative contracts are financial instruments that derive their value from underlying securities. Examples of derivative products and mechanisms are interest-rate futures, swaps, debt options, and instruments derived from mortgages.[19]

For purposes of sub-sovereign debt issuance, derivatives are most usefully understood as a way (for investors and issuers) to limit risks. For example, derivatives can be used to limit exposure to currency fluctuations or to enable debt to be issued in different currencies. Similarly, futures and options contracts can be used to hedge against interest rate risks. In more established markets, derivatives can enable investors to make substantial bets on whether interest rates will rise or fall or to separate the principal and interest owed on a security into two separate financial instruments.

1. Swaps

A swap is a contract between two parties to exchange their interest payment liabilities on an agreed amount of each other's debt, for a fixed period of time.[20] Swap transactions occur through an intermediary such as an investment bank or commercial bank, which seek two counterparties wishing to exchange future interest payments on their respective outstanding debt. *Swaps are important for issuers and their banking advisors, as they often drive decisions about which bonds are issued in modern bond markets. Two important types of swap agreements are* ***interest rate swaps*** *and* ***cross currency swaps.***[21]

Box 7.6: New Investment Laws in South Africa

The post-apartheid government of South Africa abandoned its "prescribed investment regime" which required institutional investors to hold at least 54% of government securities, including municipal bonds, in their investment portfolios. The high, fixed percentage meant that nearly all municipal securities could be quickly sold via private placement to a relatively small number of institutional investors, who were not particularly interested in credit quality and who had little to gain from trading. The South African government hopes to stimulate bond market development in general and secondary trading in particular by ending this prescribed system.

Source: James Leigland, "Accelerating Municipal Bond Market Development in Emerging Economies: An Assessment and Progress," Public Budgeting and Finance, Summer 1997, p. 64. Used with permission of Transaction Publishers.

- **Interest Rate Swap**

  This permits two counterparties to exchange their future interest obligations in the same currency. They were designed so that issuers can take advantage of a difference in credit quality standards between the fixed-rate markets and short-term floating rate markets.

  For example, a strong triple-A issuer can issue fixed-rate bonds and then exchange them for floating-rate bonds at a lower cost than banks could offer them. The swap counterparts are generally weaker, triple-B issuers for whom access to the capital markets is more expensive or even impossible, and who want to exchange their floating-rate payments for fixed-rate payments.

  Even without differences in credit rating, parties with different ratios of assets to liabilities in their portfolios or distinctive risk aversions might consider a swap. For example, a bank with a triple A rating may be able to offer fixed low-interest bonds, but also may need a floating rate to pay its deposits. On the other hand, a lower rated issuer may give up more favorable floating rates in order to avoid interest risk. The swap helped both parties to achieve their goal.

Another incentive for an issuer to swap interest rates is to hedge against interest rate risk. Interest rate risk occurs when rates rise and floating rate issuers must pay higher interest on their outstanding debt. This is a problem because debt service payments increase, thus creating a budget deficit environment for a sub-sovereign that has outstanding floating rate debt.

- **Cross-currency Swap**
  This is an agreement between two parties to exchange debt instruments denominated in different currencies. For example, a **Polish** issuer may issue a **British pound** bond that is more attractive to investors. However, the issuer may want **U.S. dollar** financing. Through a currency swap, the Polish issuer may exchange its British pound obligations for U.S. dollar obligations.

  Currency swaps have substantially increased the number of different currency markets available to investors, thus increasing investor choice. Cross-currency swaps are generally more risky than a regular single currency swap, but permit issuers access to the global capital markets, and prevent issuers from being confined to one currency's interest rate environment.

2. Hedging

Futures and options contracts are used by bond investors to hedge against interest rate risk, and futures contracts are generally used by fund managers to make a temporary switch in risk exposures on a bond portfolio.[22]

- **Futures Contract**
  This is an agreement between a buyer (seller) and an established futures exchange or its clearinghouse in which the buyer (seller) agrees to take (make) delivery of a specific amount of a valued item such as a commodity, stock, or bond at a specified price at a designated time.[23]

  Bond futures offer investors leverage since positions can be taken in the underlying bond for a relatively small price. *Bond investors use the futures markets to reduce the risk profile of holding long or short positions*. For example, holders of US Treasury bonds who expect interest rates to rise can hedge against this by selling US Treasury futures. If interest rates do rise and the value of the cash securities falls, the short futures contracts will have gained in value—and this gain in value can be used to offset the fall in value of the underlying securities.[24]

  Most long term government bond futures specify physical delivery, unlike short-term money market futures, where a contract is simply cash

settled unless the position is reversed out (i.e., there is no delivery of the underlying commodity as the holder of the future effectively disposes of it, with a compensating opposite transaction).Typically, for any bond contract type, a range of issues—whichever is cheapest at delivery date—can be delivered. Actual delivery is rare, however, and most contracts are reversed out before the delivery date.

Futures contracts are available for all the major international government debt markets and are highly liquid. The liquidity, combined with the leverage provided by any futures contract, make long term government contracts extremely useful for investors trying to alter the returns profile of a bond portfolio.

Many different types of futures are traded in most exchanges around the world. For example, while US Treasury futures are so important that many exchanges offer such contracts, other government debt contracts may be available only through the exchange in that country. Futures have transparency of prices, where all participants can immediately see at what price deals are being struck, and a Clearing House, the counterparty that forces "mark to market" daily settlement between buyers and sellers.

- **Option**

This is a contract in which the seller of the option grants the buyer the right to purchase from, or sell to, the seller a designated instrument (a bond, for our purposes) at a specified price within a specified period of time.[25] The seller grants this right to the buyer in exchange for a certain sum of money, called the **option price** or **option premium**. Options can be: (1) a **put option**, giving the buyer the right to sell the respective bond to the original seller (discussed below) or (2) a **call option**,[26] giving the buyer the right to purchase the respective bond. The price at which the bond option can be bought or sold is called the **strike price** or the **exercise price**, and the date after which the option is invalid is called the **expiration date**.

Investors use options to transfer the risk of holding long or short positions in the contract's underlying instrument. Like futures, options provide a high degree of leverage, allowing investors to take positions with unlimited upside potential for relatively small up-front costs. Unlike futures, both put and call options limit downside risk to the premium paid for the option.

Bond put options give investors the right, but not the obligation, to sell their bonds back to the issuer at a specified time period and a specified price. Such

options allow investors to shorten the maturity of their bonds if they wish, but under the conditions specified in the bond offer. Put *options generally increase the costs of bond issuance because funds must be available to repurchase the bonds and remarketing agents must be contracted to resell them.* Letters of credit and other arrangements must be formalized at the time of original sale to convince investors that the put options can and will be honored.[27]

Put options are a common feature of short-term variable rate demand bonds in the U.S. municipal bond market. These are bonds that have a nominal maturity of, for example, 30 years, but the investor has the right to put the bonds back to the issuer at daily, weekly, or monthly intervals.

All of the instruments mentioned above can increase market demand for the underlying bond issue. While they are generally not prevalent for sub-sovereign issues Emerging Markets, they may in the future offer ways to increase access to capital markets in a variety of currencies.

II. What Are Some of the Technical and Mathematical Complexities in Determining Bond Prices and Yields?

While the mechanics of pricing complex derivatives are beyond the scope of this chapter, it is important for issuers to understand the basic mathematical concepts used in pricing simpler bond issues. These mathematics are used by investment bankers and other market participants in determining the conditions under which to underwrite and purchase sub-sovereign debt. *A change in bond structure is likely to impact the underlying mathematics and thereby change the price that investors will be willing to pay. In addition, certain bond structures, such as call or put options, make pricing much more uncertain.*

The key concepts covered in this section include:

A. A brief review of future and present value;
B. An explanation and example of internal rate of return;
C. A description and example of how a bond is priced;
D. The relationship between price and yield;
E. The difference between the dirty and clean price;
F. The concepts of current yield and yield to maturity; and
G. The concept of total return.

A. Future and Present Value[28]

1. Future Value

This is the amount of money that one expects to receive in the future after invest-

ing a set amount at a given interest rate for a specific period of time. The equation for calculating the future value is:

$$\textbf{Future Value} = \textbf{Original Principal } (1+\textbf{interest rate})^{\text{Number of Years}}$$

Example:
If a sub-sovereign issues a $1,000 bond at an interest rate of 7% for eight years and principal and interest are due at the end of the eight years, the previous equation will look like this:

$$\textbf{Future Value} = \$1{,}000(1+.07)^{8}$$
$$\textbf{Future Value} = \$1{,}718.19$$

Issuing this bond would result in interest and principal of $718.19 being owed to investors.[29]

The equation is virtually the same if interest is paid out more than once per year. *This is important because most interest payments on bonds are made on a semi-annual basis (twice per year)*. The equation for calculating the future value with semi-annual interest payments looks like this:

$$\textbf{Future Value} = \textbf{Principal } (1+\textbf{interest rate}/2)^{\text{Number of years X2}}$$

Example:
To calculate the future value of an issue of a $1,000,000 bond at an annual interest rate of 6.4% for six years, on which interest is compounded twice per year, *two very important things must be done. First, divide the annual interest rate by 2, yielding an interest charge of 3.2% for each period. Second, multiply the number of years (six in this example) by 2, which gives a total of twelve periods for which I will earn interest.* Therefore the final equation will look like this: [30]

$$\textbf{Future Value} = \$1{,}000{,}000(1+.032)^{12}$$
$$\textbf{Future Value} = \$1{,}000{,}000(1.459340)$$
$$\textbf{Future Value} = \$1{,}459{,}340$$

2. Present Value

This involves a calculation that allows an investor to determine how much money needs to be invested today in order to achieve a desired amount of money in the future, given a specific positive rate of interest. The formula for calculating the

present value of an investment is as follows:[31]

$$\textbf{Present Value} = \textbf{Future Value } [1/(1+\textbf{interest rate})^{\text{Number of years}}]$$

Present value plays a key role in bond markets because the price of any financial instrument equals the present value of all of the cash flows associated with that instrument. Thus, the timing of payments made by the bondholder will impact the present value of the instrument.

Example:
Suppose an issuer wishes to sell a five year, $1,000 bond that carries an interest rate of 7%, with coupon payments made on an annual basis. Each annual coupon payment would be worth $70 or $1,000 x .07. At the end of five years, the issuer must pay the investor the $70 coupon payment for that year plus the principal amount of $1,000. Additionally, suppose that similar investments in the market are offering an interest rate of 6%. You can use the present value equation to calculate the price of this bond by considering each future coupon payment as a separate future value. The equation would look like this:

$$\textbf{Present Value (Price)} = 70/1.06+70/(1.06)^2+70/(1.06)^3+70/(1.06)^4+1070/(1.06)^5$$
$$\textbf{Present Value (Price)} = \$1{,}042.12$$

Let's see what happens when the interest rate is higher than the coupon rate. Suppose the interest rate used in our formula were 8% instead of 6%.[32]

$$\textbf{Present Value (Price)} = 70/1.08+70/(1.08)^2+70/(1.08)^3+70/(1.08)^4+1070/(1.08)^5$$
$$\textbf{Present Value (Price)} = \$960.07$$

Another important factor in determining the present value of any bond is how often coupon payments are made by the issuer to the investor. In the United States, coupon payments are made on a semi-annual basis, while in Europe they are annual. *This can change the value of a bond.*

If we go back to the original example above of the $1,000 bond with a 7% coupon rate, we will see how the present value can change because of changing from annual to semiannual payments. The equation for semi-annual payments at 6% would divide the coupon payments as well as the 6% internal rate of return by two. In addition, the number of periods would be doubled. The equation is as follows:[33]

Present Value (Price) = $35/1.03+35/(1.03)^2+35/(1.03)^3\ldots+35/(1.03)^9+1035/(1.03)^{10}$
Present Value (Price) = $1,042.65

By paying out coupons more frequently we have unintentionally raised the value of this bond. While the change in our case is $.53, we must remember that the bond issues are closer to $100 million than $1,000. Had this been a $100 million issue the difference would have equaled $53,000.

B. Internal Rate of Return

The interest rate that determines the price (6% or 8% as used above) is called the internal rate of return or the yield to maturity. Usually, the internal rate of return is calculated when the price of the bond is known and the interest rate is unknown. In this case a process of trial and error is used, or you can use special programmable calculators to determine the rate.[34] *Internal rate of return also has another definition, which is the interest rate that makes the Net Present Value of an investment or project equal to zero.*[35] *The net present value of a project is simply the initial cost of an investment plus the present value of the cash flows from that project.*[36] *The formula for net present value is:*[37]

Net Present Value = Initial Cost + Future Value $[1/(1+\text{interest rate})^{\text{Number of years}}]$

While present value and internal rate of return are based on precise mathematical formulas, the answer that emerges from the formula is only as good as the inputs. Different assumptions about future interest rates, for example, will lead to very different answers as demonstrated above by changing the interest rate from 6% to 8%.

C. How a Bond Gets Priced

There are three steps in pricing a bond: (1) determine the bond's cash flow; (2)determine the required yield of the bond; and (3) price the bond.

1. Determine the Bond's Cash Flow

Bond cash flow consists of periodic coupon payments until maturity and par value of the bond at maturity. These were represented in the above examples. Cash flow is an extremely difficult measure to calculate unless the bond is a fixed-rate coupon, non-callable issue. In this circumstance, the bond will pay out a set coupon at specified dates until maturity, without the possibility of being called or redeemed by the issuer prior to maturity.

An example would be a 20-year $1,000 bond with a 12% coupon rate. Each semiannual coupon payment would be equal to $1,000 x .06 or $60. The cash flow from this bond would then be 40 semiannual payments of $60 each and a $1,000 payment 40 periods from now (maturity). If these two criteria are not met, the cash flow from a bond can be very uncertain.

2. Determine the Required Yield of the Bond

The required yield is simply the interest rate that an investor wants from investing in a particular bond. It is usually derived by searching for yields that are offered on other bonds of the same credit quality and maturity. This can be easier said than done in pricing Emerging Markets debt, as many Emerging Markets do not have sufficiently active bond markets to offer reliable benchmarks for pricing newer bonds.

3. Price the Bond

For this, there is a specific formula:

$$C[1-[1/(1+I)^n]/I\ ] + M/(1+I)^n$$

where

C = semiannual coupon payment
N = number of periods (number of years times 2 in the United States)
I = periodic interest rate (required yield divided by 2 in the United States)
M = maturity value

Example:

We will compute the price of a 20-year, $1,000 bond that has a coupon rate of 8% and a required yield of 14%. With this information, we know that:

C = $40
N = 40 periods
I = .07
M = $1,000

The equation will look like this:

$$\$40[1-[1/(1+.07)^{40}]/.07\ ] + \$1{,}000/(1+.07)^{40}$$

The first part of the equation, which is merely calculating the present value of the coupon payments, equals $533.27. The second part of the equation, which is

the present value of the maturity value of the bond, is equal to $66.78. Therefore, the total value or price of the bond is $600.05. What happens to the price of this bond if the required yield is only 6% instead of 14%? The only difference in the equation is that the interest rate (I) will equal .03 instead of .07.

The new equation will be as follows:

$$\$40[\ 1-[1/(1+.03)^{40}]/.03\ ] + \$1{,}000/(1+.03)^{40}$$

The first part of the equation equals $924.59. The second part of the equation is equal to $306.56. Therefore, the total price of the bond is $1,231.15.

D. Relationship Between Yield and Price

As can be seen from these two examples, the price of a bond can change drastically when the required yield changes. These examples also demonstrate the relationship between the price of a bond and the required yield. *The price of a non-callable bond changes in the opposite direction of the change in required yield. This is because the price of the bond is actually the present value of the cash flows, which are determined by using the required yield in the equation.* The following two charts will demonstrate the relationship between price and required yield.

Table 7.1 shows price and required yield for a 20-year, 9% coupon bond.

Figure 7.3 shows the relationship between price and yield as being convex, meaning that as price increases, yield decreases and vice versa.

Table 7.1: Price and Yield

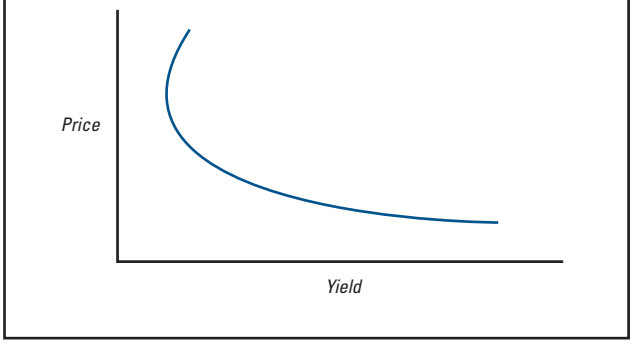
Required yield (%)	*Price ($)*
5	1502.05
6	13496.72
7	1213.55
8	1098.96
9	1000.00
10	914.21
11	839.54
12	774.30
13	717.09
14	666.74

Source: Fabozzi, p. 50.

E. Dirty and Clean Price

Up to this point, all of our examples have shown how to calculate the price of a bond when the settlement date is the same as the date of a coupon payment. Often, these dates differ, meaning that the settlement date or purchase date of a bond falls between coupon dates. When this occurs, we must rely on three measures to help determine the price of the bond: day count, compounding, and

Figure 7.2: The Relationship Between Price and Yield



accrued interest.

1. Day Count

This measure is used to determine the number of days between the settlement date and the date of the next coupon payment. Generally speaking, there are two types of day count conventions:

- **Actual/actual**, which considers a year to be 365 days. Actual/actual means the actual number of days in a month and the actual number of days in the coupon period. This method is normally used for United States Treasury securities.
- **30/360**, which assumes that each month has 30 days and a year has 360 days. This method is used for Eurobonds.

Example:

Suppose the last coupon payment on a bond was made on February 1. The next coupon payment will be made on August 1. However, this bond is purchased with a settlement date of June 12. The number of days is so important because it figures directly into the price of a bond purchased between coupon payments. The number of days until the next coupon payment would be:[38]

Actual/Actual	
June 12 to June 30	18 days
All of July	31 days
August 1	1 day
Total	**50 days**

30/360	
June 12 to June 30	18 days
All of July 30 days	
August 1	1 day
Total	**49 days**

2. Compounding

This is the method for determining the price of such a bond. Once the number of days is determined it is plugged into the following equation:

W = No. of days between settlement and next coupon payment/ No. of days in coupon period

Once this equation has been solved, the answer is used in the present value (pricing) formula to calculate the full or "dirty" price:

$$P = c/(1+I)^{w} + c/(1+I)^{1+w} + c/(1+I)^{2+w} \ldots c/(1+I)^{n-1+w} + M/(1+I)^{n-1+w}$$

where

P = Price
C = Semiannual coupon payment
M = Maturity value
N = Number of coupon payments remaining until maturity
I = Periodic interest rate

3. Accrued Interest.

Accrued interest is the amount of money that the buyer must pay the seller for the portion of the next coupon payment that the seller is entitled to, but will not receive. The formula for calculating accrued interest is:

AI = c [No. of days from last coupon payment to settlement date/ No. of days in coupon period]

where

AI = Accrued interest
C = Semiannual coupon payments

The full or dirty price includes the accrued interest payment that the seller has earned. When the accrued interest has been subtracted from the dirty price, the result is what is known as the clean price or flat price:

Clean Price = Dirty Price – Accrued Interest

F. Current Yield and Yield to Maturity

There are several methods for measuring the yield of a bond once the price is

known. Two of the most common methods are **current yield** and **yield-to-maturity**. These methods help determine the potential return from investing in any given bond.

1. The Current Yield

Current yield provides a relationship between the annual coupon interest and the market price of a bond. The formula is:

Current Yield = Annual dollar coupon interest/Price of the bond

For example, the current yield for a 20-year, 8 percent, $1,000 bond selling at $925 is equal to .0864 or 8.64%. The equation would look like this:

Annual dollar coupon interest = $1,000 x .08 = $80
Current Yield = $80/$925
Current Yield = 8.64%

The major drawback of the current yield measure is that it considers only the coupon interest as a means of return for an investor. It does not consider reinvesting coupon payments, capital gains when the bond matures, or capital loss when a premium bond matures.

2. Yield to Maturity

The yield to maturity is simply the interest rate that will make the present value of the cash flows from the bond equal to the price of the bond. The cash flows are considered to be all those that an investor receives until maturity. The yield to maturity is calculated on a trial and error basis. Practitioners will use different interest rates in the pricing formula until they find one that makes the present value of the cash flows equal to the price.

Because the yield to maturity acknowledges all cash flows until maturity, this measure considers both coupon income and any capital gain or loss realized by holding the bond until maturity. It also assumes that bondholders can reinvest their coupon payments, but that such reinvestment will occur at the same interest rate as the yield to maturity. However, an investor will realize only the yield to maturity that is given at the time of purchase, if the coupon payments can be reinvested at the yield to maturity and if the bond is held until maturity.

There are two types of risk associated with these assumptions:

- **Reinvestment risk**, which is based on the theory that future reinvestment rates will be less than the yield to maturity when the bond is purchased.

Reinvestment risk has two key characteristics:
(1) The longer the maturity on a bond, the greater the reinvestment risk.
(2) The higher the coupon rate, the higher the reinvestment risk. This is because the bond's total dollar return will depend more on reinvesting coupon payments to achieve the stated yield to maturity.

- **Interest rate risk**, which is based on the idea that interest rates will rise in the future, making a bond less valuable and causing the investor to sell at a loss.

G. Total Return

1. Calculating Total Return

If these yield measures cannot determine the potential return from a bond, the **total return** or **horizon return** can be used. In order to calculate this measure, three fundamental pieces of information must be known: (1) an investment horizon; (2) a reinvestment rate; and (3) a selling price for the bond at the end of the investment horizon. Following is the formal method for calculating the total return.

Step 1:
Calculate the total coupon payments plus interest-on-interest using an assumed reinvestment rate. This reinvestment rate is equal to one-half the annual interest rate an investor can earn by reinvesting coupon payments. The equation is:

Coupon payments plus interest-on-interest = Semiannual coupon $[(1+r)^{h-1}/r]$

where
H = length of investment horizon (semiannual periods)
R = Assumed semiannual reinvestment rate

Step 2:
Determine the projected sale price of the bond at the end of the investment horizon. This price depends on the projected yield of comparable bonds at that time.

Step 3:
Add the values from steps 1 and 2. This sum is the total future dollars received from the investment.

Step 4:

Use the following formula to determine semiannual total return:

$$\textbf{(Total future dollars/Purchase price of bond)}^{1/h} - 1$$

Step 5:
Double the interest rate found in step 4 by using the following formula:

$$\textbf{(1 + Semiannual total return)}^{2} - 1$$

2. Applications of Total Return Analysis

Despite objections that certain assumptions must be made about reinvestment rates and future yields, the value of this analysis is twofold.

- *First, it can help determine how sensitive a bond is to various reinvestment and yield scenarios.* This is particularly useful for portfolio managers wishing to buy the security offering the highest returns.
- *Second, total return analysis can be used to determine the potential return from a swap arrangement.* Specifically, total return analysis can be used for four different types of swaps.

1. **Pure Yield Pickup Swap:** This occurs when an investor switches from one bond to another that has a higher yield. This is done to achieve a higher coupon payment or a higher yield to maturity.
2. **Rate Anticipation Swap:** When a portfolio manager or investor has a particular expectation about the direction of future interest rates, he will swap bonds to take advantage of the future shift in interest rates.
3. **Intermarket Spread Swap:** This occurs when an investor believes that the current yield spread between two bonds is not in line with historical yield spreads and that this spread will realign by the end of the investment horizon.
4. **Substitution Swap:** This occurs when an investor swaps one bond for another that has identical coupon, maturity, price sensitivity, and credit quality, but offers a higher yield.

Summary

This chapter began by outlining the role of bond insurance, secondary markets and derivatives in increasing market demand for the underlying bond. These instruments, although generally not prevalent for sub-sovereign issues in Emerging Markets, may in the future offer ways to increase access to capital markets in a variety of currencies. The discussion then focused on the essential basic math-

ematical concepts used in pricing simpler bond issues. Investment bankers and other market participants use such formulas to evaluate the price and stability of sub-sovereign debt offerings.

Chapter 7 Notes

1. The following sources were used to provide background material for this section: George Peterson, "Measuring Government Credit Risk and Improving Creditworthiness," WBC, p. 23; Frank J. Fabozzi, The Handbook of Fixed Income Securities, 5th ed. (Chicago: Irwin Professional Publications, 1997); Tom Cochran and Frank Minerva, MBIA, meeting with James S. Gilliland, 30 November 1998.
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6. Ibid., p. 67.
7. Fabozzi, p. 678.
8. "Province of Mendoza-Offering Curricular" (Boston: Credit Suisse First Boston, BankBoston Trust Company Limited, and Banco de la Plata S.A., August 1997), p. 22.
9. Background information for this section comes from Tom Cochran and Frank Minerva, MBIA, meeting with James S. Gilliland, 30 November 1998.
10. The credit rating of bond insurance companies is based primarily on the credit risk of its insured portfolio and the amount of capital the firm has to cover any losses (claims paying ability). To retain a AAA rating, the bond insurance company usually cannot insure any credits that are below investment grade (BBB-).
11. George Peterson, "Measuring Government Credit Risk and Improving Creditworthiness," WBC, p. 23.
12. A limited number of foreign-denominated Project Revenue Bonds has been insured, such as the bonds issued by the concessionaire for the Santiago, Chile airport. Bond insurance for this issue was possible because of Chile's investment grade rating. Foreign insurance companies have also insured a domestic bond issue for a Chilean toll road: Talca-Chillan.
13. Benjamin Darche, Capital Advisors Inc.
14. Three workbooks from Euromoney/DC Gardner's International Capital Markets series, all published in 1997, provided background material for this sec-

tion: Interest Rate and Currency Swaps, International Bond Markets, Introduction to the Capital Markets.

15. Introduction to the Capital Markets, p. 35; For a general view on the secondary market, see International Bond Markets, p. 21.
16. International Bond Markets, page 20.
17. James Leigland, "Accelerating Municipal Bond Market Development in Emerging Economies: An Assessment of Strategies and Progress" *Public Budgeting and Finance*, Summer 1997, pp. 63–64.
18. Ibid.
19. This section is indebted to Euromoney/DC Gardner's International Capital Markets Workbook Series, note above.
20. Jonathan Fisch, Yield Curves and Swap Markets, Fixed Income Securities Workbook Series (London: Euromoney/DC Gardner,1997), p. 5.
21. Introduction to the Capital Markets.
22. For background on hedging, see Introduction to the Capital Markets and Fabozzi, pp. 1139–1142.
23. Fabozzi, p. 1139.
24. Global Bond Markets: A Multimedia Training and Information Guide to the World of Fixed Income Securities, CD ROM (London: Euromoney Publications PLC, n.d.).
25. Fabozzi, p. 1141.
26. This call option is different from a "call feature" in a bond issue, which gives the issuer (not the bondholders) the right to repurchase a series of bonds on a specified date.
27. Leigland, p. 63.
28. Equations used throughout this section are based heavily on those found in Richard A. Brealey and Stewart C. Myers, *Principles of Corporate Finance, 5th ed*. (New York: McGraw-Hill, 1996), and Fabozzi.
29. Fabozzi, 25–27.
30. Ibid, p. 30.
31. Ibid., p. 33.
32. Brealey and Myers, p. 48.
33. Ibid., p. 49.
34. Ibid., p. 48.
35. Ibid., p. 13.
36. Ibid., p. 92.
37. Ibid., p. 13.
38. Fabozzi, p. 55.

Chapter 8
Case Studies

The previous seven chapters have discussed in some detail many of the critical steps for sub-sovereign issuers to consider when planning to enter the capital markets.

This chapter offers case studies of six real-world bond issues. These case studies summarize key characteristics of each bond issue before presenting a detailed analysis of the debt planning and offering process. These case studies help illustrate the different ways that the steps described throughout this manual have been applied by various sub-sovereign issuers.

Three of these sub-sovereigns are in Argentina, two are in Colombia, and one is in Brazil. Four were international issues and two were offered on domestic markets. While each case is of course related to its own particular local context, there are significant similarities in the issues addressed and processes undertaken.

Case 1: CIUDAD DE BUENOS AIRES, ARGENTINA
Case 2: PROVINCE OF MENDOZA, ARGENTINA
Case 3: GUAYMALLEN, ARGENTINA
Case 4: RIO DE JANEIRO, BRAZIL
Case 5: IBAGUÉ, COLOMBIA
Case 6: VALLE DEL CAUCA, COLOMBIA

Case 1: CIUDAD DE BUENOS AIRES, ARGENTINA

I. DESCRIPTION OF THE BOND

Ciudad de Buenos Aires
USD 500 million Euro Medium-Term Note Programme
Individual Notes Due from 30 Days to 30 Years from Date of Issue

Feature	*Details*
Issuer	City of Buenos Aires
Arranger	Chase Manhattan International/Chase Bank AG
Dealer	Chase Manhattan International
Currency	Various hard currencies, including USD, Pesos, Lira, Sterling, Francs, Yen, ECU, etc.
Amount	Up to USD 500 million equivalent in series
Maturities	Variable per series 1–5 years. Variances to be approved by the Central Bank.
Issue Price	At par, discount or premium over par per series.
Method of issue	Continuous basis with syndication, if need be, and minimum offerings of USD 10 million equivalent
Interest rate	Each series can be fixed, variable, or zero coupon
Fixed rate notes	Can be payable in arrears on agreed dates
Variable rate notes	Interest borne separately in each series by reference to benchmarks such as LIBOR, LIBID, etc.
Interest periods	As agreed between issuers and dealers
Zero coupon notes	Do not bear interest and normally issued at a discount
Withholding tax	Principal and interest free and clear of this tax
Denominations	Definite Bearer and Registered Notes as agreed
Optimal redemption	Pricing Supplement to state redemption options
Listing	Luxembourg Stock Exchange (or as otherwise specified in the applicable Pricing Supplement)
Status	Direct, unconditional, unsecured, unsubordinated ranking pari passu with all obligations of Issuer
Negative pledge	Negative pledge in respect of specific factors
Covenants	Interest cover charge applies. Other specific and standard covenants included in Condition 4 of Offer Document.
Cross default	In respect of present and future indebtedness, etc.
Governing law	English
Selling restrictions	Several restrictions included
Transfer restrictions	Several restrictions on Registered Notes in reliance of Rule 14A
Clearing system	Euroclear and Cedel for Bearer and Registered Note and DTC for Registered Notes under Rule 14A
Pricing supplement	Issue price, date, maturity, principal amount, interest rate applies to any Notes
Use of proceeds	As specified in Pricing Supplement.

A. Purpose of the Issue

The City of Buenos Aires initiated its USD 500 million Euro Medium Term Note Programme in March 1997. The program was divided into individual series of Notes, issued for 30 days to 30 years from the date of the Programme's inception. The individual Notes could be issued in a variety of currencies, including the Argentinean Peso, USD, Italian Lira, etc.

The purpose of the programme was to refinance the City's debt stock and restructure one of its banks—Banco de la Ciudad de Buenos Aires. The latter received USD 100 million. Four series of Notes have been issued under the programme within a two-month time span and the entire programme has been drawn down. The first Note series was issued in US dollars and targeted primarily to the USD market. The intention was to gain credibility in the USD market and to build on this placement in other markets.

The program is the City's first foray into the international bond market. Each transaction sold out well and was 200% over-subscribed on average. The City has a sound administration and reasonable international reputation. These considerations overshadowed a growing fiscal deficit in recent years, brought about mainly by structural problems built into the current account. The City's debt at the time of the issue represented only 1.4% of its GDP. This, coupled with a targeted reform program, helped achieve reasonable ratings, which strengthened market perceptions.

The individual Notes were placed at the higher end of the spread threshold. However, with the exception of the Peso-denominated offer, the City was quite interested in a geographic and investor diversified placement and perhaps less with all-in costs. *The role of the underwriter and its internal financial staff cannot be underestimated. This is indeed a common feature of such landmark issues.*

B. The Underwriting and Marketing Process

The underwriting and marketing process was led by Chase Manhattan. The first issue involved 10 co-managers, including:

- Banco Bansud
- Banco de Credito Argentino
- Banco Frances del Rio de la Plata
- Banco Rio de la Plata
- Credit Suisse First Boston
- Deutsche Bank
- JP Morgan Securities
- Lehman Brothers

- SBC Warburg
- UBS

In the case of the Peso issue (USD 150 million equivalent), there were only four co-managers: Banco Bansud, Banco de Credito Argentino, Banco Frances, and Banco Rio de la Plata.

The first issue under the programme (USD 250 million) sold extremely well in the market, despite the rapidly weakening Argentine sovereign issues priced off the US Treasury benchmark (US Treasuries 2006) during the marketing phase. The latter went from 330 basis points to 370 basis points over the benchmark in just one morning. *The City's main concern was clearly to have a successful issue at all costs. Its second objective was to have a widely distributed placement with a strong US participation. In a tightening market situation with the benchmark Treasuries performing poorly, the issue was a resounding success at the higher spread spectrum. The transaction was two times oversubscribed, with two-thirds of the Notes sold to US investors. Another important feature was that it attracted new money (rather than investors selling out of existing portfolios). This can be considered a major achievement from the point of view of the City.*

The second USD 150 million equivalent in Pesos issue was struck in record time—with marketing starting on a Friday and the price fixing taking place on the following Monday. The market timing was carefully selected to coincide with a healthier market tone. The deal had first been tested in March. However, at the time the City was concerned about the price and the relationship between the peso and the Argentine Treasury 2006 benchmark. The spread differential during the marketing period of the first USD 250 million issue in April was 140 basis points. The USD 150 million equivalent in Pesos was launched in an environment with a narrower 95 basis point differential. In this instance, the City expressed concern about the all-in cost of Pesos over what was achievable in USD. The issue was subsequently fixed at about 70 basis points greater than where the City could do a seven-year dollar tranche. *As pointed out, these considerations were overshadowed by a strategy to diversify the City's presence in as many markets as possible. This is one of the reasons why the Peso transaction was later accompanied by the Lira offering. The latter's performance was equally impressive. Chase was able to place the Peso and Lira denominated Notes in record time with investors pre-targeted during the preparation process.*

The EMTN program as a whole was highly successful. The book or order demand was high in all cases—about two times oversubscribed. The entire individual series of Notes were sold out. This, coupled with the unsecured nature of the Notes, highlights the high level of investor confidence in the Administration. Interest for the individual offers came mainly from institutional investors, who

purchased on average about 90% of the issues. The split between markets was more or less the same. The high coupons on each of the Notes, nevertheless, also attracted considerable interest from retail investors. The Notes thus far seemed to have experienced a strong secondary market demand.

C. Conclusions and Lessons Learned

Both external and internal factors were important in the analysis of this case.

1. External Factors

a. Macroeconomic Conditions

The macroeconomic context (of the country and the City) played a major role in the issue. *The principal effect was its influence on the City's credit rating and investor perceptions. Key variables taken into account were the Convertibility Law and its associated measures and the economic growth pattern of the City.* The City's resilience to the Tequila Crisis, for example, was a major achievement that helped solidify the City's credit rating. The importance of the City to the overall national GDP, employment and income was also taken into account in the credit rating and investors' risk perception. Another aspect of the economic context was the high contribution of the City to the total Co-participation Revenue and its correspondingly low level of revenues in return. *The City simply does not depend on central government transfers, as is the case with other local government authorities.*

b. Bond Market

Bond market conditions at the time of the Note sale had a major impact on the placement dates and price arrangements. They also determined the overall underwriting and marketing process. An issue of this size and complexity could not be sold on a "firm bid" underwriting basis. The underwriting industry does not provide firm underwriting bids for sub-sovereign Emerging Market issues. *The underwriter in this instance carried out extensive market checks and was able to forecast the placement of the issues significantly in advance of the actual sale.* There were nonetheless rapidly changing conditions at the time of placement for the first and third series (USD 250 million and USD 150 million Peso series). The underwriter faced higher bond prices because of increasing Argentine sovereign bond spreads vis-à-vis the US Treasury 2006 benchmark. The issuer had to make difficult pricing decisions. Because the City was more interested in a wide distribution than on all-in costs, the first series in particular sold at the higher end of the "spread to Treasuries" spectrum. The Peso series reversed this pricing process

as market timing was more carefully assessed. The lira issues were targeted to specific investor groups at high spreads.

2. Internal Factors—Issuer Related

a. Administration and Reputation

The administration's professional staff and its reputation were major factors behind the success of the issue. It is important to bear in mind the difference between financial performance and the City's image. The latter showed significant weaknesses. But in this instance, the reputation of the City was strong enough to deflect at least some weaknesses.

b. Financial Flexibility and Reforms

Financial flexibility and reforms were among the single most important factors that had an impact on the preparation of the issue and its rating. The subject was covered extensively by the underwriter and the rating agencies and occupied a major portion of the Offering Circular. *One of the greatest concerns of the rating agencies in particular was the fiscal gap and the reforms being put in place to reduce it. The rating agencies view the fiscal deficit as a function of structural problems on the income and expenditure sides of the accounts, and to some extent questioned/cautioned the City's ability to address these problems in the immediate future.*

It is essential to bear in mind that the issue itself is a function of this deficit and hence a mounting short-term debt—comprising late payments to suppliers and loans/capitalization needs of Banco de la Ciudad de Buenos Aires. *The bond was driven by the need to restructure these short-term obligations*. The fact that the Notes were launched is in some way recognition of the difficulty in tackling the structural problems.

3. Internal Factors—Issue Related

It is important to note the perception and questions by investors during the road shows for the Note sale. *In most cases, the concerns were about the reform program and in particular the measures aimed at collecting a higher share of uncollected taxes, cutting back expenditures and the prospects for the privatization of Banco de la Ciudad de Buenos Aires.* In contrast, in the case of Mendoza, the questions concerned the legal tittle to oil royalties. These questions are all essentially about bond security. *However, none of the investors expressed interest in the likelihood or steps needed for a possible bail out.* The same issue would be treated differently in Brazil, where there is a long track record of bailouts, and thus a stronger element of moral hazard.

4. Financial Credibility

The single most important lesson from the issue is that the issuer needs to demonstrate strong financial operations. When there is a fiscal gap (as is the case here), the important consideration is to have the mandate and reform program aimed at balancing the position. Buenos Aires would not have been able to issue the Notes with a poorly defined programme of reforms. It would also have been in a more difficult position had its fiscal gap not narrowed in the previous financial year. The gap had widened too quickly and would have raised serious concerns at with the rating agencies. The financial gap problem was also largely compensated for by a low debt burden. At 1.4% of GDP, it is one of the lowest in Argentina and Latin America.

5. Due Diligence and Rating

The issuer would not have been able to enter the international or even the domestic market on an unsecured basis without the information base to facilitate due diligence and the rating process. These two tasks are crucial in determining issue strategies, structures, underwriting and sales. The due diligence process always focuses on legal, commercial, financial and operational aspects. It is often structured around rating agency requirements. The City was able to support both processes efficiently.

6. Role of Underwriter

There is no doubt that the role of Chase was of paramount importance in the success of the issue. A landmark transaction of this nature normally puts greater emphasis on the role of the underwriter. The latter can plan the preparation process, support the due diligence, manage the rating process, assess market conditions and define the final strategy and structure. The role and efficiency of the underwriter is, however, influenced by the quality of the information base and the local government's staff. In this instance, both teams integrated well and played to their strengths.

The Buenos Aires issue is a landmark transaction matching issuer with issue strengths. The transaction was well managed both from the point of view of preparation, offer, and placement.

Case 2: PROVINCE OF MENDOZA, ARGENTINA

I. Description of the Bond

Feature	*Details*
Amount	USD 125 million
Market	Eurobond
Issue date	Offered 2 Aug 1996, closed 8 Aug 1996
Issue price	100% fixed re-offer
Interest rate	Fixed at 10% per annum
Interest payment period	Quartely on 25th January, April, July and October commencing 25th October 1996
Maturity date	7 years to 25 July 2002
Amortization	Same as Interest Payment
Ranking	Direct; not subordinated
Security	See Collateral
Collateral	(i) 88% of Oil Royalty payments to the Province (ii) Argentine Collection Acct, US Collection Acct and Debt Service Reserve Acct
Guarantees	None
Source of principal and interest payments	Oil Royalty payments to the Province by certain oil producers under long-term concessions to be deposited in the Argentine Collection Account
Debt service reserve account	Minimum balance of debt service due on the next Quarterly Payment Date
Excess collection trigger events	i) Debt Service Coverage Ratio falls below 1.2 for three consecutive collection periods, or ii) Proved Reserves divided by Production Level (yearly basis) falls short of the remaining maturity.
Positive covenants	• Ensure validity and perfection of Security and Assignment Documents • Maintain all necessary government approvals and permits • Ensure its rights under Oil Concessions are maintained
Negative covenants	• Create, transfer, etc. other Liens on its rights to Oil Royalties and other properties • Modify the Oil Concession Agreements
Major risks	• Termination of Dedicated Oil Concessions • Political risks on the Regulations of the Oil Industry • Fluctuation in world oil prices • Oil Reserves and Future Production • Currency Risks • Country Risk
Pertinent conditions precedent	The Notes were subject to certain international and local credit ratings (see Credit Ratings)
Events of default	• Usual Events of Defaults on non-payment of debt service and non-compliance of terms and conditions. • Default on other outstanding indebtedness in an aggregate principal amount of at least US$ 10m. • Debt Service Reserve Account falls below minimum requirement for six consecutive collection periods. • Adverse changes to fiscal and constitutional laws affecting the Dedicated Concessions and Assignment of Royalties.
Credit ratings	• Duff & Phelps International, BB • Duff & Phelps Argentina, AA (Local) • Ratto & Humphreys, AA+ (Local)

A. Purpose of the Issue

The Province, in common with other Provinces, had a short-term debt structure. As a result of the Convertibility Plan, the Province was unable to roll over existing obligations. An international bond issue with longer term maturity and at fixed cost of funding became an attractive alternative.

Financial considerations aside, the Province viewed the issue as a good opportunity to further expose it to the international market, gain credibility, and diversify its funding sources. This was particularly important in attracting direct foreign inward investments for the Province's privatization program.

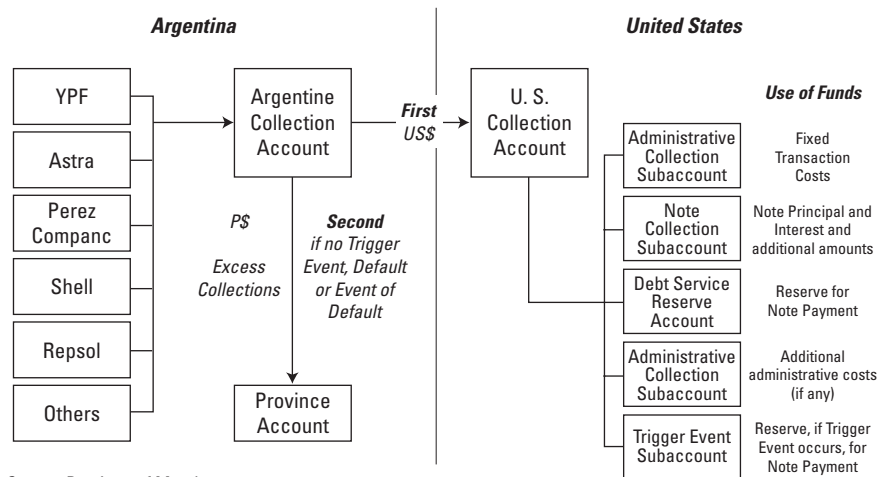
The international bond issue was structured as a single transaction. However, the underlying intention was to pave the way for further issues in the future as existing short-term debts mature and the Province's capital expenditure program expands.

B. Type of Bond

The Province of Mendoza issued the Notes in August 1996 for a period of six years, maturing in July 2002. The Notes were the Province's first public debt issue, and the first oil royalty backed structure for a Latin American issuer in the international market.

The Notes were secured by a priority interest in 88% of all future oil royalty payments due to the Province from oil companies. A three-month debt service reserve was

Figure 8.1: Mendoza—Bond Funds Flow



Source: Province of Mendoza.

also funded from excess royalty collections. A tight security package and bond structure was essential to insure the success of the Province's first international bond issue.

The transaction was successfully placed despite a long marketing period and the disruption of the Cavallo resignation. *Investor interest came mainly from US and European institutional investors attracted to the relatively high 10% coupon.*

One of the primary factors that lead to the success of the issue was the pledge of oil royalties and the flow of these funds to an off-shore collection account, as shown in Figure 8.1.

II. Impact of the Issue

The credit rating and the due diligence process were the most important elements of the marketing strategy.

A. Credit Rating

The international and local credit rating process required detailed and accurate financial and economic information, which took the underwriting team a considerable amount of time to gather. Although this effort yielded dividends, not only in the success of this issue but also in shortening significantly the preparation time of the second issue, there was little evidence that the actual financial reporting and accounting standards used by the Province were restructured. *The Province, however, took further steps in tax reforms and implementing expenditure control programs following this issue. This resulted in an improvement in its fiscal performance and eventually an upgrading of its foreign currency general obligations rating to "BB" by Duff & Phelps.*

B. Due Diligence Process

Legal due diligence, performed by Argentine counsel, was particularly important in the transaction process. The key aspects of the bond issue the legal team examined included the oil concessions (terms and conditions, validity of permits, oil royalties), the relevant hydrocarbon laws, the Province's rights to the oil royalties and other revenues sources, as well as the validity of the collateral documents and arrangements. Other important legal matters were the regulatory and constitutional framework governing the Province's tax raising powers, expenditure responsibilities and debt issuance capability.

The financial and economic due diligence process was by far the most difficult part of the entire bond preparation process. The main obstacles were insufficient statistical information, as well as the lack of Provincial financial information.

Case 3
GUAYMALLEN, ARGENTINA

I. Description of the Bond

Guaymallen Municipality
Titulos De Obras Publicas (TOG2)
Second Tranche of a US$ 3 million Global Programme
Collateralized against Treasury Bonds (Bote 3)
Enhanced with Co-participation Revenues as Required

The US dollar denominated notes were marketed in the local Mendoza area. The complete note program was USD 3 million divided into three series or tranches of USD 1 million each.

The first tranche (TOG1) was issued in December 1996. It had a maturity of two years and seven months and was successfully placed. TOG1 had an interest rate of 10% and five equal principal repayment periods. The placement was made entirely in the Bolsa de Comercio de Mendoza. The issue was underwritten by Mercado de Valores de Mendoza SA, with an oversubscription of 220%. The transaction was backed by Argentina Treasury bonds (BOTE 3) in the amount of USD 1.19 million. These were deposited with Caja de Valores de Mendoza SA, a fiduciary company in Mendoza.

TOG2 was the second issue in the series. It is important to note that a third series did not materialize, principally as a result of the incumbent administration wishing to avoid transferring new debt obligations to an incoming government in 1999. TOG 2 has a relatively short maturity of one year, with 50% of the note's amortization taking place at the end of January 1999 and the balance at the end of July 1999. The interest rate is 9.5% (fixed and significantly lower than the previous series), representing a 300 basis point spread over the Argentine Treasury Note.

The minimum purchase was USD 100 per lot with multiples of USD 100. The issue was sold at par value, with commissions and costs charged to the issuer. The collateral base, to cover principal and interest payments, was Argentina Treasury Bonds held by the municipality (Series 3 or BOTE 3). However, in contrast with the previous series, the amount of pledged collateral rose from USD 1.19 million to USD 1.26 million.

This security package was further enhanced through pledges of co-participation revenues from the Mendoza Province. In common with the previous issue, the BOTE 3 treasury bonds were placed in trust for the duration of the bond period with the same fiduciary firm, Caja de Valores SA. Underwriting was once

again the responsibility of Mercado de Valores de Mendoza SA. The record 48 hour placement was also made in the Bolsa de Comercio de Mendoza.

A. Purpose of the Issue

The purpose of the issue was to gain experience and credibility in the domestic bond market and to help raise funds for civil works/capital projects. In contrast with many other public entities, Guaymallen did not come into the market to restructure or roll over existing debt. *The city wished to "experiment" with the bond market in order to pave the way for an orderly entry into the emerging local capital markets.* The restrictions imposed by the Convertibility Law on local bank municipal and provincial government finance motivated Guaymallen to explore alternative funding sources. The bond market provided this opportunity.

The city structured the bond issue in three series for experience and to establish contact with different operators in the Mendoza Exchange. The Administration was less concerned with price and collateral than with a successful placement. In the longer run, its objective is to issue, as needed, on a non-recourse basis.

B. Type of Bond

Despite the healthy financial standing of the municipality, the issue was structured around a high collateral base, supported by Treasury bonds amounting to USD 1.26 million. The collateral was pledged free of liens and placed with a fiduciary and paying agent, Caja de Valores S.A. The higher collateral base for the second tranche, TOG2, contributed to an interest rate that was lower than the TOG1 tranche.

1. Permits/Authorizations

The municipality handled all the relevant permits and authorizations:

- *The Executive Council*—approved a certificate within the provisions of a Decree No. 350/98 regarding municipal finance.
- *Provincial approvals and consents*—under Decree No. 686/97, published in the Official Bulletin of the Province and order No 4429/97, the province had to approve the transaction.
- *Ministry of Finance*—a permit from the MOF was required in order to issue debt in hard currency (resolution Nos. 1075/93 and 327/95).
- *Rating*—the city selected Magister/Bank Watch and Standard & Poor's.

The second issue was prepared and placed in six months. This compares favorably with the first series, which took over a year. The second series benefited from the experience gained by municipality staff. The timing in the first series was

affected by lack of expertise, administrative hold ups and some internal resistance to raise funds through a bond instrument.

2. Rating

The municipality engaged the services of two separate rating agencies—Magister/Bankwatch Calificadora de Riesgo, and Standard & Poor's.

The advisor and the financial department staff managed the rating process. The rating agencies focused their attention on the image and credibility of the municipality, legal due diligence (a focus on the fiduciary arrangements) financial standing, debt stock obligations, information systems and intergovernmental relations. They also assessed in more broad terms the economic base and structure of the city and the level of investment flowing into the area.

Notwithstanding these variables, the key focus of attention was the collateral base pledged by the administration. This enhanced the risk profile of the credit issue and eliminated most, if not all, of any other concerns that might have arisen in other due diligence areas. In addition to the collateral, co-participation revenue transfers further secured the bonds. The rating agencies assessed the central government revenue transfer payment track record. These transfers would make good any shortfalls resulting from a forced sale of treasury bonds and/or other municipality repayment income. *Both agencies rated the issue AAA.*

C. Subscription and Sale

The municipality mandated Mercado de Valores de Mendoza to underwrite the issue. This entity had also handled the first series, with great success. The entity was also considerably cheaper than three commercial banks that had approached the administration for the same purpose. Mercado de Valores was mandated by the city directly without tenders. The commission charge amounted to 1% of the bond par amount, a very competitive rate in the market for an issue of this nature. Mercado de Valores was thus solely responsible for distribution of the bonds with the Mendoza Stock Exchange, primarily among personal and some institutional investors. The underwriting contract was firm and required the underwriter to purchase the bonds. However, to insure its ability to re-offer the bonds, Mercado de Valores had undertaken an extensive pre-sale contract to assess its own risks. This study involved its traditional agents/clients in the Exchange—some of whom are its shareholders.

1. Marketing and Distribution

In common with the first issue, TOG 2 was more than twice oversubscribed. The issue was placed entirely in the Mendoza market within a record period of 48

hours. *The underwriter placed the issue entirely through a selected list of agents contacted before the underwriting contract was signed. The brokers/agents re-offered the bonds to about 20 individual investors.*

The issue has not changed hands much since the placement date. The secondary market is tight. This situation is unlikely to change between now and the maturity date. The issue was placed during the peak of a bull market period. The actual placement dates coincided with the inception of the Asian crisis and confidence has since been eroded quite considerably. The small amount of the total transaction, its tight structure and collateral fueled investor interest.

II. Impact of the Issue

A. Benefits

The issue was targeted at institutional investors in the Mendoza Exchange. This had been the approach taken in the previous placement—with great success. The main motivation of the municipality was to expand its coverage/image among top investors in and beyond the province. The experience was also intended to increase the staff's know-how and capabilities, paving the way for work on future issues. A third issue was not considered appropriate: it would have overlapped with the administration period of the incumbent mayor and raised the debt profile of the city to historically high levels.

B. Conclusions and Lessons Learned

Guaymallen is a landmark capital markets case study for a small to medium sized municipality in Latin America. Some of the lessons learned from the Guaymallen bond issue are as follows:

1. Market Testing

The issue was not driven by short-term debt financing requirements (a common feature in all other cases except Ibague) or by capital development expenditure programs (although the funds were specifically assigned to complete infrastructure-related civil works). *The main reason for the issue was to gain experience in the capital markets and to prepare staff and politicians for future bond issues.*

The municipality understands the difficulties experienced by other administrations with a past high dependency on short-term expensive debt. It also understands the risks associated with late payment delays to contractors. The latter has been another traditional short-term funding measure used by municipalities and provinces across the country. The city placed all these considerations

within the context of restricted bank lending; itself the result of Central Bank policy reform measures.

In view of these events, and given the need to maintain services, upgrade infrastructure (while continuing to attract increasing private sector investment), the city targeted the bond market as one its future funding options. This experimentation with the process and the players will increase its ability to react and respond to market conditions. It will also pave the way for a future non-recourse bond issue.

2. Importance of Financial Discipline

The city's strong financial discipline and disclosure is a model for other institutions, but there is still room to improve. Guaymallen could benefit from a better information system, budget process, and control. The concept of a supervisory commission for financial management is also an innovative element, and one that should be replicated throughout the region.

The Guaymallen issue is one of the most interesting ones studied. It highlights the aspirations of a well-run administration with a strong financial standing. It also outlines the shortfalls of market demand (tight market) and the incompleteness of the due diligence and rating processes. Guaymallen is well placed to become one of the first such issuers to sell an unsecured general obligation bond in the domestic market.

Case 4: RIO DE JANEIRO, BRAZIL

I. Description of the Bond

A. Purpose of the Issue

The purpose of the issue was to refinance domestic debts that have shorter maturity periods and higher costs of funding. The Municipality is prohibited by the Federal Constitution to issue new debt, both internationally and domestically, except for this purpose. *Furthermore, the Municipality considered that an international debt issue would not only raise the City's profile vis-à-vis foreign investors but also pave the way for further transactions in the international market. The issue was the first of its kind offered by a Latin American municipality.*

B. Type of Bond

Feature	*Details*
Amount	USD 125 million
Market	Eurobond
Issue date	Offered 2 Jul 1996, closed 12 Jul 1996
Issue price	99.96% fixed re-offer
Interest rate	Fixed at 10.375% per annum
Interest payment period	Quartely on 25th January, April, July and October commencing 25th October 1996
Maturity date	3 years to 12 July 1999
Principal payment/ amortization	Same as Interest Payment
Ranking	Direct and unsubordinated, except for certain municipal bonds that may be used to pay taxes under certain circumstances
Depository	DTC
Source of principal and interest payments	Municipal revenues, with Chase Manhattan as paying agent
Positive covenants	• Standard
Negative covenants	•Standard
Major risks	• Currency risks • City credit risk • Country risk • Poor debt service history

The Municipality of Rio de Janeiro issued in July 1996 a $10^{3}/_{8}$% US$ 125 million three-year unsecured Eurobond. *This made Rio the first city in Latin America to issue an unsecured bond in the international capital markets.* The issue's registration

follows standard Eurobond procedures and is listed on the Luxembourg Stock Exchange and traded in the PORTAL Market. The Notes are deposited with or on behalf of DTC. Chase Manhattan is the Paying Agent.

Despite the fact that this was the Municipality's first public international debt issue, the Notes were unsecured. The issue price was 99.96, providing a yield at launch of 10.6611% which was 25bp above the Brazilian bench mark, or 400bp over the 1999 US Treasury Note at the time of the sale.

The transaction was considered to be highly successful as evidenced by the relatively small spread 25 basis point spread to the sovereign bond. The book demand was high—two to three times oversubscribed. The underwriters without the need to retain any bonds in their account sold out the entire issue. The successful sale was accomplished in the last year of the Maia administration and with no collateral. Foreign investor confidence in Rio combined with a comparatively attractive yield were the main reasons for the underwriting success. *Interest came mainly from institutional investors who purchased 95% of the issue. This was split 58% US, 25% Japan and 17% Europe. The high coupon also attracted interest among retail investors who took up the remaining 5%.*

There was a deep secondary market for the issue, and the bond performance improved over time. The spread on US Treasury narrowed to just 225 basis point one year later, reflecting a continuing rise in investors confidence in the City brought about by consistent improvements in City finances and a positive Emerging Market tone (which has rapidly deteriorated since the spread of the Asian crisis).

C. Subscription and Sale

Merrill Lynch acted as the lead underwriter for the issue under a fixed-price reoffer arrangement. The underwriting discount was 0.75%, 60% of which represented selling commission and the remaining 40% underwriting/management fee. The underwriter's discount was on the low side in comparison to a typical fee of 3% for this type of Emerging Market transaction. However, the low fee was necessary in view of Merrill Lynch's long-term interest Latin American sub-sovereign debt issues. The market was viewed by many of the leading investment banks as having a high growth potential. As such, competition was strong. Merrill Lynch competed against 19 other investment banks for the Rio underwriting mandate.

Merrill Lynch formed a syndicate consisting of 8 co-managers who were leading investment banks targeted for their distribution networks in the US, Europe, and Japan.

The issue was marketed in the US under Rule 144A to qualified institutional investors and outside the US under Regulation S. The most important part of the marketing process was the road shows. Before the final placement, Merrill Lynch

Recuadro 8.1: Río de Janeiro—Conjunto sindicado de empresas

Miembros sindicatos	*Monto para Comercializar (US$M)*
Merrill Lynch Inc	$101
Bayerische Vereinsbank AG	3
BB Securities Ltd	3
Commerz Bank AG	3
Dresdner AG	3
Nomura International Plc	3
Salomon Brothers International Ltd	3
Swiss Bank Corporation	3
Yamaichi International (America) Inc	3
Total	*$125*

Fuente: Merrill Lynch

presented the City administration and the bond transaction on road shows in the US (New York, Boston, San Francisco, Los Angeles, Mid West, and Colorado). The presentations to the investors were made by the City administration itself. They were well prepared and made significant inroads into improving the City's overall credibility vis-à-vis investors.

The key pricing factor was market sentiment. This was the first City issue and was being offered without collateral. Investors looked primarily to the strength of the City administration, which had the reputation of a well-managed operation. The book order indicated that there was strong demand, but only at a significant spread to the US Treasury yield. Issuers were driven by yield. The issue was finally priced at 400 basis points above the 1999 US Treasury yield (which equated to 25 basis points above Brazilian benchmark). At this price, the issue was two to three times oversubscribed. Following the initial launch, the issue developed a deep secondary market. The spread on US Treasury narrowed to 225 basis points.

II. Impact of the Issue

The bond issue helped Rio establish an excellent reputation, particularly in its success in substantially improving fiscal performance and promoting transparency. *The City has a number of supporting factors. It has a diversified economic base and plays an important role in the Brazilian economy, accounting for 7.5% of the GDP. Against these strengths, however, the City still suffers from a weak socioeconomic profile, which will place an increasing strain on its finances.*

The bond issued helped motivate the City to implement a comprehensive system of fiscal controls, tighter tax administration procedures, transparency, and accountability. Two international auditing firms audit financial statements. This has contributed significantly to the City's good fiscal performance, and enhanced its reputation in the international market. Despite these efforts, the City still suffers from serious information gaps, and inconsistencies vis-à-vis world standards.

A negative impact for the City is Brazil's long and controversial history of subsovereign debt crises and central government bailouts. While it was clear that the issue was sold purely on the credit strength of the Municipality, previous local government bailouts indicated that there was an implicit government guarantee that was incorporated into the investors overall view of the credit risk.

III. Conclusions and Lessons Learned

The transaction preparation process was crucial to the credit rating process, particularly the preparation of financial statements prepared with international accounting standards, and the general due diligence process.

The underwriting and marketing process affected the final uptake of the issue as well as the offer price. The underwriting syndicate ensured that the placement was given a geographically large coverage. In addition, the small size of bond allocations to co-managers and small lot size illustrated the strong market demand.

Even though two international auditing firms audited the City's financial statements, the City still suffered from serious information gaps. In addition, interpretation of the financial statements was rendered meaningless due to the inconsistencies and differences that exist between Brazilian accounting standards and international accounting standards. Brazilian accounting standards do not necessarily reflect the economic and financial reality of municipal operations.

Case 5: IBAGUÉ, COLOMBIA

I. Description of the Bond

Feature	*Details*
Offer date	July 1996 and July 1997
Issuer	Municipality of Ibagué
Agent	Fiduciaria Global SA
Amount	Pesos 8 million
Tranche 1	Pesos 4.8 billion
Tranche 2	Pesos 3.2 billion
Collateral	Future gasoline taxes
Interest margin	Variable over DTF + 3.5% maximum
Maturity	Five years
Placement	Bogota, Medellin, and Occidente

The Titulos were placed in two separate tranches of 4.8 million and 3.2 million Pesos. The first tranche was sold in July 1996 and the second in July 1997. *The second tranche sale was conditional on the gasoline tax cash flow performance for the first tranche issue. The gasoline tax was the security and collateral for the bonds.*

Both tranches were placed with brokers on the exchanges of Bogota, Medellin, and Occidente. The maturity period was five years. The interest margin for the first tranche should have been based on the variable rate DTF plus 2.75%, in line with Central Bank rate guidelines for this type of maturity. However, this particular type of transaction fell outside the standard regulation and the actual market spread was DTF + 3.5%. DTF is the average rate for a 90-day period for banks and other financial institutions that participate in the certificate of deposits market.

The relatively high spread for the first tranche reflected tight local market conditions at the time, the risk profile of the municipality, and the perceived uncertainty regarding gasoline tax income. The second tranche attracted a margin of DTF +2%. The interest and principal payment schedules were arranged in monthly, quarterly or semi-annual installments, with semi-annual principal payments restricted to about 17.5% of the total. The amortization choice could be delegated to issue holders. However, two additional conditions formed part of the structure: 40% of the principal could be repaid by the 48th month and 60% by the 60th month.

Duff & Phelps de Colombia gave the issue an A+ rating. The gasoline tax revenue performance during the first 12 months of the issue was fully satisfactory. This factor, combined with a hike in the tax rate from 14% to 20%, eased the marketing period and successful placement of the second tranche.

A. Purpose of the Issue

The issue proceeds were used to help finance a series of civil works aimed at improving road and other transport infrastructure within the City's jurisdiction. Although there were alternative funding instruments in place for infrastructure investment, the City's financial advisers suggested a bond transaction structured around gasoline tax revenues to complement these sources. The City could raise the gasoline tax if necessary which helped it to receive the A+ rating. One other crucial advantage of this type of revenue-backed transaction is that it is not included in the measure of the City's direct or official debt stock. All "titularizaciones" of this nature are exempt from the debt indicators used by the government to manage municipal debt capacity, although the law has tightened on this since the time of the Ibagué issue.

The projects selected for finance under the new bond facility were:

- Autopista Barrio Eduardo Santos—Descanso del Papa—construction, extension and maintenance
- Maintenance and extension of road systems
- Construction of viaducts and access roads in local districts
- Construction and expansion of various rural roads
- Provision of 20% of the funding required for the construction and development of Avenida Ambala and Avenida 79.

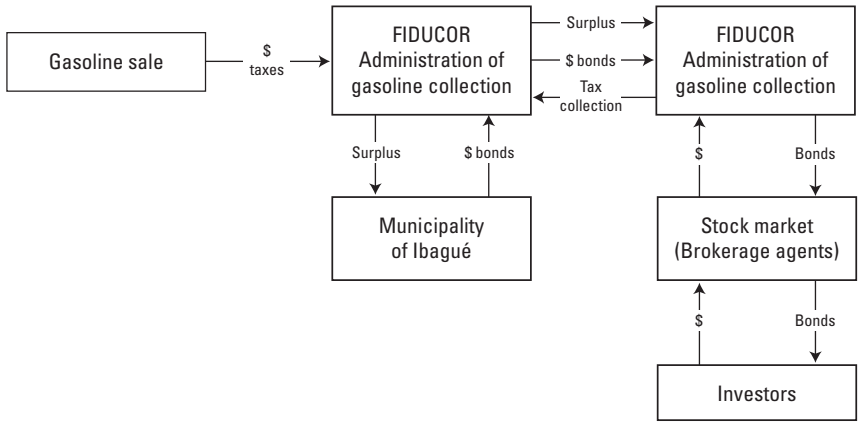
The issue was the first of its kind for the municipality and only the second in the entire country using gasoline sales tax revenues as collateral for a bond issue. The effort was also seen as a means to enhance the city's image and reputation in the marketplace. Despite this, the issue was perceived as a one-off transaction rather than a debt program. It is important to note that the municipality had a healthy financial standing at the time, matched by a reasonably ambitious plan to invest in services and facilities over the medium term. In contrast with many other local government issues in Latin America at the time, the IbaguJ transaction was not intended to refinance short- or long-term debt obligations.

B. The Structure of the Bond

Figure 8.2 illustrates the structure of the Ibagué bond transaction.

The advisors for the transaction were Fiduciaria Global, backed by Corporacion Financiera de Occidente. Global was also appointed agent/manager for the trans-

Figure 8.2: Ibagué—Tax Collection and Bond Payments



Source: Municipality of Ibagué.

action. Corporacion Financiera de Occidente is a limited liability company registered under Colombian corporate laws. With appropriate certificates from the Superintendencia Bancaria, it can act as a financial advisor to municipal governments. Occidente's role in the bond transaction was to assist the authorities with its design and structure. The firm also undertook limited financial and organizational due diligence of the municipality and supported the work on gasoline market assessments and projections.

Fiduciaria Global was established in 1992 as a limited liability company with a mandate to establish fiduciary and financial advisory operations. The firm is registered and approved by the appropriate authorities, including the Superintendencia Bancaria. Global is based in Bogotá, and is a subsidiary of a larger group that has changed its name to UCN. The firm had a track record with the type of fiduciary operations envisaged under the IbaguJ bond issue. Their role in the transaction was to coordinate the work of Occidente and Ibagué, and manage the transaction process. Some of Global's other tasks included administration of revenues; coordination of the rating process and rating company; support with the preparation of the Circular; and management of appropriate permits, approvals and consents.

C. Subscription and Sale

The issue was difficult to place. Revenue-backed transactions of this nature were fairly new in Colombia at the time of the sale. Although municipalities could raise gasoline taxes, originally the maximum rate allowed by central government was 14%. This was later increased to 20%, providing a strong impetus for municipalities to raise funds. Other assets eligible for collateral purposes include debts, company shares, fixed assets, and cash-flow. In more recent years, municipalities have also tried to collateralize duties on beer and liquor sales. *The underlying objective in all cases is that the funds raised need to be assigned to infrastructure development.*

Box 8.2: Ibagué First Tranche Uptake

Investors (millions)	*Amount*
1 insurance company	350
4 pension funds	1,400
2 insurance companies	730
1 investment fund	100
2 fiduciaries	250
1 mutual fund	100
1 bank	200
2 Cajas Compensación	1,500
1 company	120
Total	*4,800*

Source: Municipality of Ibagué

Despite these considerations, revenue-backed operations of this nature are difficult to establish and market. The Government was, and remains, generally unhappy with the concept, the state accounting bodies are unclear on its accounting treatment and most investors were concerned with the legal aspects—particularly in connection with the title to, and the transfer of, public revenues of this nature. In addition, most investors were initially concerned about the fact that the collateral was structured around future rather than existing revenues. The advisers and the municipality staff recognized these problems and agreed to structure the operation in two tranches, the second contingent on the performance of the first. This measure provided additional support and incentives to the investors.

The issue was placed entirely in the domestic market. There were some significant differences between the tranches:

- *The first tranche was placed with a relatively small number of institutions through five brokers operating in the three Stock Markets in Colombia*. The brokers were awarded quotas against a firm underwriting commitment and an average commission fee of 1%. The brokerage arrangement was not subjected to an open tender. The order period was long and the margin correspondingly high. The original buyers of the first tranche are shown in Box 8.2.
- The second tranche was acquired by one broker in the Medellin area for subsequent marketing and distribution to institutions in the vari-

Box 8.3: Ibagué Second Tranche Uptake

Investors (millions)	*Amount*
1 insurance company	1,350
5 pension funds	2,850
3 insurance companies	1,730
1 broker	600
3 fiduciaries	300
1 bank	200
7 employees funds	850
2 Cajas Compensación	1,550
3 companies/others	120
Total	*8,000*

Source: Municipality of Ibagué

ous exchanges. The commission rate in the second tranche was negligible. The success of the first transaction impacted on this, as well as on the actual uptake by institutional investors.

The bonds remain with a limited number of institutional investors. Trading has been narrow. The capital market in Colombia is small and the level of liquidity tight. Ownership has been mainly with the bond holders shown in Box 8.3.

II. Impact of the Issue

A Benefits

The credit rating process was very beneficial to the municipality. *Duff & Phelps awarded the issue a credit rating of A+. The rating is quite high by local municipal risk standards and reflects mainly the strong collateral base.* The two tranches helped considerably in reducing the risk profile, especially the second tranche, which was contingent on the revenue collection performance of the municipality during the first year of operations. The second issue was placed a year later, and Duff & Phelps maintained it's a+ rating for both issues.

In contrast with some of the other Case Study credit ratings, the strong collateral base for the IbaguJ transaction simplified enormously the due diligence effort by the rating agency.

The gasoline tax revenues and the structure for their collection and transfer to bondholders effectively "ring-fenced" the issue from the municipality's financial standing and shifting conditions in business, financial, and political environment. This is a significant consideration and an important lesson for other municipalities wishing to enter the bond market, although the rating approaches differ considerably between different Latin American countries.

It should also be noted that the process in IbaguJ was eased by the fact that the city was classified under the "green light" category, meaning that its financial performance and debt structure was manageable and that it could issue bonds without central government approvals. It is highly unlikely that the issue would have

been processed had the city been classified in any other category —with or without the collateral base.

The selection of Duff & Phelps was relatively easy: it is the only international agency operating in Colombia that provides domestic ratings.

B. Difficulties and Weaknesses

The analysis of the IbaguJ case reflects several difficulties and weaknesses. *The Offering Circular does not provide detailed information about the economic structure of the city. Although the bonds are collateralized by the gasoline tax, the fiscal condition of the city is important to gauge political risk.* The trustee may be able to collect gasoline taxes as long as the city maintains a positive operating balance. If the city's financial condition deteriorates, it may consider negating the fiduciary contract and capture the gasoline revenues. The probability of this political risk is much reduced if the city is in good financial health. From this perspective the Offering Circular should review the economic base and financial condition of the city.

Another important omission from the Circular and rating report is information on demographic factors. There are no details on density, growth rates, and age distribution of the city's population. A declining or rapidly aging population will always tend to put a significant constraint on public finances since it shrinks revenues or accelerates service demands, especially on health care. High population growth is likely to be the real situation in IbaguJ. This can be regarded as a positive feature in the context of the issue since it could be partially attributed to high in-migration of working-age population, and in the context of the collateral, of a greater number of vehicles and skilled workers. Another important aspect of demographics is the size of the dependent population (the portion under 15 and over 65). These groups place demand on services but contribute less to income. The Circular does not cover this basic requirement.

Although the financial information in the prospectus provided an interesting account of performance and expectations, under normal circumstances, it would have been virtually impossible to decipher their validity, depth and degree of timeliness. Much of the data is collected manually and reported late. *Without the gasoline tax collateral and a sound fiduciary set up to handle gasoline tax revenues, the transaction may not have stood the due diligence tests of most discerning financial investors, and in this sense it might have failed. The rating report also attached importance to this collateral aspect, ignoring largely the inadequacies of the financial reporting system and the financial performance.* The deal was effectively "ring-fenced" from other existing and future activities by the municipality. This includes the actual institutional/

administration capabilities since the collection and distribution of taxes were responsibilities mandated to fiduciary concerns.

C. Conclusions and Lessons Learned

The issue strategy and structure were of paramount importance to the success of the issue. The main consideration here was a broad investor approach and the use of the collateral base. The issue was targeted at the institutional sector with considerable presale marketing efforts. The first series was more difficult to place, although the strategy was largely adhered to.

The key element behind success was the collateral and two-series tranching approach. This provides an important lesson, particularly for landmark operations of this nature. The collateral base was backed by a tight fiduciary arrangement. Without the collateral and fiduciary arrangements, it is unlikely that the issue would have enjoyed the same reception. This fiduciary arrangement was much less well defined in the case of Valle del Cauca, with serious consequences, especially in terms of rating and market credibility for the issuer. Most future collateralized issues in Colombia will most likely have to follow the arrangements made by Global Fiduciaria in the case of Ibagué.

The main lessons learned from the issue are its "one-off" nature, and the deficiency of the information system, budget controls, and financial planning.

1.One-off Issue

The one-off nature of the issue is a weakness and a lesson for the future transactions. Although the issue was divided into two series, the overall market perception is for a one-off transaction linked to a specific investment program..

2. Information, Controls, and Planning

A common denominator with other similar issues (by municipalities or provinces) is the weakness of the information system. This will need to be remedied over time if the city is ever to appear in the market without collateral. The same requirement could apply even for collaterized issues if at any time in the future the credit rating agencies decide to introduce tighter disclosure and efficiency criteria. The remaining constraint is the lack of detailed financial planning. The latter should include a better awareness of different financial instruments. Budgeting and control is also a major deficiency.

In conclusion, IbaguJ can be regarded as a successful issue, taking place in more difficult market conditions than other similar ones by small municipalities in Latin America. IbaguJ is a good case study to show the potential for raising

disclosure and due diligence standards. Its fundamentals are right. Eventually it should consider issuing unsecured obligations. However, significant improvement in financial reporting, controls and planning are necessary before smaller municipalities can enter the bond market with bonds secured by the city's full faith and credit.

Case 6: VALLE DEL CAUCA, COLOMBIA

I. DESCRIPTION OF THE BOND

Department of Valle del Cauca
50.000 million Colombian Pesos Notes
Collateralized against Liquor Sale Taxes

Feature	*Details*
Issuer	Departamento Valle del Cauca
Amount	P$ 50 billion
Series	Planned in 3 series varying maturities
Sucessful series	Series C, seven year maturity
Placement	Bolsas de valores: 3 domestic markets
Target investors	Institutional and retail
Law	Colombia–Código de Comercio
Security	Tax on liquor sales
Security arrangements	Fiduciary for bond holder repayment
Underwriter	Banco de Colombia
Agent	Fiducolombia SA
Use of proceeds	Debt restructuring/capex programme

The Notes were issued in December 1996 by the Department of Valle del Cauca for a period of seven years, maturing in December 2003. *They are guaranteed by taxes collected on regional liquor sales. These taxes were structured to cover up to 130% of the debt service obligation (including principal and interest). In the event of tax revenue shortfalls, the Department would be forced to pledge other current operating revenues. Under the prevailing capital market laws, all tax revenues that secure bonds are permanently tied to the specific debt obligation, and cannot be used by the issuer for any other purpose. The law itself provides stiff penalties, and even prosecution, for non-compliance.*

The bonds were placed in three domestic stock exchanges over a two-day period—during the 23rd and the 26th of December of 1996, dates considered quite unusual for this type of transaction and market. The main reason for selecting these dates was the Department's fiscal shortfall.

The issue was directed at domestic institutional and personal investors and is listed in the stock exchanges of Bogota, Medellin and Occidente. Institutional investors pur-

chased most of the bonds in the Bogota Stock Exchange. The proceeds were intended to cover the financing requirements of projects under the capital budget (Pesos 25 billion) and to refinance existing debt (Pesos 25 billion). The total transaction was structured around three separate tranches, with an amount of 50,000 million pesos each: *Tranche A*, five years maturity, not placed; *Tranche B,* six years maturity, not placed; *Tranche C*, seven years maturity, successful placement.

Table 8.1: Summary of Valle del Cauca Investment Program

Concept	*Works (number)*	*Amount (mil pesos)*
Public works	47	5,556.4
DATT	2	355.2
Education	39	2,539.2
Health	53	3,226.8
Hacienda	10	2,687.8
Community development	31	2,743.0
Agriculture	9	546.8
Indeval	10	915.0
Acuavalle	7	2,399.1
Government	4	296.0
Valorización	3	3,300.0
Visevalle	4	352.0
Social programmes	2	190.0
Total	221	25,107.3

The inability to place the first two tranches was a function of poor issue price structure, relatively long maturities, and bear market conditions. For the first two tranches, the market was tight and the Department had to compete with other transactions. The market improved considerably toward the period coinciding with the third tranche. The high price margin paid by the City was the most important factor in the sale of the third trance. In addition, longer maturities were not a concern by the time the third trance was sold as the market entered into a bull market phase.

A. Purpose of the Issue

The bond concept and preparation process was led by the administration itself. The entity had gathered considerable expertise from a previous issue with similar

Table 8.2: Specific Obligations

Institution	*Amount (mil pesos)*	*Margin*	*Issue date*	*Maturity date*
Banco Uconal	1,800.0	DTF + 6.0	Apr 95	Apr 00
Caja Agraria	1,500.0	DTF + 4.5	Oct 94	Oct 99
Caja Agraria	2,080.0	DTF + 4.5	Jun 94	Jun 99
Corfiboyaca	3,600.0	DTF + 6.0	Apr 95	Apr 00
Banco del Estado	800.0	DTF + 6.00	Dec 94	Dec 99
Banco Industrial	3,000.0	DTF + 6.00	Jan 95	Jun 00
Banco Industrial	1,833.3	DTF + 6.0	Jul 95	Jul 00
Banco Ganadero	6,600.0	DTF + 5.0	Apr 96	Apr 01
Las Fes	2,500.0	DTF + 5.0	Apr 94	Apr 99
Bancafe	1,286.6	DTF + 5.0	Oct 93	Oct 97

Table 8.3: Valle de Cauca Uptake

Buyer (mil peso)	*Tickets*	*Amount*	*% of total*
Personal investors	2	260	0.52
Real sector	5	1,450	2.90
Banks	2	3,570	7.14
Financial corporations	5	15,650	31.30
Trustees	9	4,010	8.02
FCO	15	7,750	15.50
Pension funds	30	17,310	34.62
Total	68	50,000	100.00

Table 8.4: Valle de Cauca Current Bondholders

Buyer (mil peso)	*Tickets*	*Amount*	*% of total*
Personal investors	1	100	0.20
Real sector	39	10,900	21.80
Banks	5	5,100	10.20
Financial corporations	9	5,300	10.60
Trustees	1	160	0.32
FCO	5	10,450	20.90
Brokerage firms	19	120	0.24
Insurance companies	6	1,180	2.36
Pension funds	15	16,690	33.38
Total	68	50,000	100.00

characteristics in 1991. *The issue was required to meet debt obligations and to help fund capital expenditure*. A summary of this investment program is shown in Table 8.1.

In terms of the refinancing outstanding debt, the Department targeted the specific obligations shown in Table 8.2.

B. Subscription and Sale

The bonds were placed in just two days between 23rd–26th of December. *The pre-sale efforts by Banco de Colombia contributed to the rapid placement. It is also important to note that market conditions were highly favorable (bull market). The pre-sale work was performed among the bank's regular clients. The bank's treasury department led the work*. The issue did not have a road show. The number of purchase tickets was limited, as shown in Table 8.3.

The make-up of the bondholders has not change much since the initial offering, as shown for July 1998 in Table 8.4.

II. Impact of the Issue

The most challenging factors for the bond preparation was the due diligence process and projections related to liquor revenues. The liquor tax was the centerpiece of the collateral package. It also defined almost entirely the rating process.

The liquor tax projection was inadequate, despite a direct involvement by the Department in liquor sales (through one of its companies) and the historical record of sales from the previous issue.

Due diligence was conducted by the Department's own economics and financial staff, supported by a financial advisor and Banco de Colombia. The financial advisor was a financial firm with experience in similar bond issues, Comisionista de Colombia. *In complete contrast with the other domestic bond Case Studies, the*

involvement of the advisor was fairly limited. This type of situation tends to develop with follow-up issues that have the same structure as the initial offering.

Indeed, a key finding from Case Studies is that landmark issues are much more difficult to prepare and sell than subsequent operations; the problem being compounded by the lack of experience at the level of issuer. In Valle del Cauca, the advisor went as far as to relinquish responsibility for the actual quality of the information in the placement prospectus. In contrast with other countries, however, in Colombia this exclusion is not possible; the advisor is jointly and severally responsible with the issuer for the Circular contents.

A. Conclusions and Lessons Learned

The key factor to take into consideration in this case is the regulatory framework that facilitated the issue process and its placement. The critical elements are the tax raising powers of the department, its debt structure and the formal government approval process.

Valle has considerable leverage on tax raising. However, the administration has also inherited major service delivery responsibilities under the decentralization process that have a negative impact on its fiscal health, which will hinder the sale of unsecured bonds. The department's debt structure, however, is not reported as being excessively high, thus allowing it to qualify for bond sales under the "green light" category. However, the financial reporting systems that determine the department's fiscal condition are not reliable. Consequently, the "green light" allowing the Department to issue bonds may be misleading.

Appendix A
Rating Non-U.S. Governments: Criteria of the Four Major Rating Agencies

Moody's Investors Service
Sub-national Governments: A Rating Agency Perspective

Sovereign ceiling on foreign currency debt rating
No such restraint on domestic currency debt ratings

1. Institutional Framework
    - Explicit guarantee from the sovereign
    - Oversight from the sovereign
    - Support from fiscal transfers

2. Economic Fundamentals
    - Size and depth of economic base
    - Economic vitality and performance
    - Socioeconomic profile (wealth levels and demographics)

3. Budgetary Framework
    - Revenue base and taxation powers
        - Diversification elements
        - Discretionary powers

  - Fiscal transfers
- Expenditure base
  - Scope and nature of spending responsibilities
  - Current vs. capital spending
  - Discretionary vs. statutory obligations

4. Budgetary Performance
   - Budgetary position
     - medium-term trends
     - source and nature of budgetary pressures
     - cyclical vs. structural
     - debt service burden
     - net financial position
   - Fiscal policy
   - Multi-year goals
   - Nature of consolidation efforts
     - temporary vs. structural
     - tax increases vs. spending cuts

5. Debt Profile
   - Legal underpinnings
   - Debt burden
   - Direct debt
   - Off balance sheet items
   - Debt structure
   - Bullets vs. serial vs. sinkers
   - Maturity profile/refinancing needs
   - Short-term debt
   - Foreign exchange exposure
   - Future borrowing requirements

6. Government Structure and Political Dynamics
   - Political institutions
   - Capacity to develop and implement economic and fiscal policy framework
   - Quality of management
   - Administrative willingness to meet obligations

Standard & Poor's

Local Government Ratings in Emerging Markets

1. Sovereign Rating
   - Constrains the rating of all entities in that country
   - Central government controls monetary power and access to foreign exchange

2. Intergovernmental Relationships—Local Government System
   - System stability
   - Split of service responsibilities
   - Revenue/expenditure match
   - Taxing authority
   - Transfer system
   - Equalization system
   - Central government support

3. The Municipality's Administrative System
   - Reporting system and control routines
   - Accounting and budget procedures
   - Financial policies and risk limits
   - Balanced revenue/exp. growth
   - Split politically appointed/civil servants
   - Political stability and willingness to meet obligations
   - Management

4. Macro-economic Structure and Growth
   - Future looking
   - Demographic structure and growth
   - Employment structure
   - Size vs. diversification
   - Unemployment
   - Local GDP
   - Income levels
   - Investments and new enterprises
   - Infrastructure
   - Natural resources

5. Financial Performance and Flexibility
   - Cash flow based analysis
   - Operating balance: revenues - expenditures
   - Varies over business cycles
   - Depends on nature of service responsibilities
   - Balance before repayment = operating balance net capital investments
   - Measures self-financing of investments
   - Development of revenues vs. expenditures
   - Revenue structure and flexibility
   - Expenditure structure and flexibility
   - Investment needs

6. Financial Position: Debt, Liquidity and Off-balance Sheet Liabilities
   - Debt—direct debt, total public sector debt, tax supported debt
     - In % of revenues, GDP or inhabitants
     - Interest bearing debt
     - Debt service (interest, amortizations)
     - Debt structure, interest and currency exposures
     - Pension liabilities
     - Guarantees
     - Municipally owned companies
     - Liquidity: cash, marketable securities
   - Cash flow variations

Fitch IBCA, Inc.
Rating Non-US Governments

1. Sovereignty
   - Capital market access
   - Currency trends
   - Foreign exchange policies
   - Debt history
   - Legal and regulatory system
   - Expropriation of property
   - Taxation and regulation policies
   - Political stability
   - Social and civil unrest

2. Government
   - Government structure
   - Stability of government
   - Ability to achieve policy targets
   - Relationship to local units
   - Services provided and functional responsibility
   - Legal and regulatory system
   - Financial and accounting regulation and system
   - Retirement systems, if self-administered

3. Debt Analysis
   - Debt structure including guaranteed and contingent commitments
   - Currency of outstanding debt
   - Debt service coverage
   - Amortization schedule
   - Use of proceeds
   - Capital access, debt trends and future borrowing
   - Debt burden measured relative to wealth, exports, and revenues

4. Financial Analysis
   - Budgetary process and operating results
   - Composition of revenues, including major tax sources and rate structure
   - Tax collection and enforcement history and practices
   - Areas of expenditures and services provided
   - Support and subsidies provided to other levels of government

5. Economic Analysis
   - Social and economic wealth levels
   - Poverty and income inequities
   - Components of income and employment sectors
   - Nature of economic activity
   - Relationship between foreign investment and domestic demand
   - Growth model and trends

6. External Analysis
   - Inflation
   - Banking system and level of reserves
   - Imports and exports

- Trade agreements and trade balances
- Currency volatility and capital controls
- Financial market regulation and history
- Domestic savings

7. Infrastructure
   - Sovereign and municipal analysis
   - Bond security
   - Project operations and project feasibility
   - Underlying service area
   - Revenue stream
   - Flow of funds and reserve requirements
   - Debt service coverage
   - Additional bonds test
   - Credit evaluation of construction contractors, operators, and financial participants

8. Primary Information Required
   - Financial statements, preceding 5 years
   - Budgets, preceding 2 years plus current
   - Debt profile and amortization schedules
   - Administrative responsibilities
   - Principal employers/business
   - Income and employment statistics
   - Other information as necessary

Duff & Phelps Credit Rating Company
DCR's Approach to International Municipals

1. Economic Analysis
   - Employment by sector, trends; comparative unemployment rates
   - Largest employers, non-manufacturing and manufacturing
   - Population trends/age distribution
   - Income measures and per capita income
   - Property value trends
   - Building permit trends/residential housing starts
   - GDP
   - Health services availability

- Literacy/education statistics
- Information on transportation, communication and utility services

2. Pledged Security
   - The security mechanism (tax) must extend through life of debt obligation
   - Impacts of potential legislative changes

3. Debt Analysis (Debt Purpose/debt Structure/debt Burden)
   - Itemization of debt by issue, principal outstanding, security, currency, payment frequency and maturity
   - Debt service schedule for proposed debt
   - Detail on special pledges, collateral provisions and guarantees, including legal documentation
     Debt on off-balance sheet and project debt
   - Detail on debt guaranteed by the issuer/ debt principal per capita
   - Analysis of pension liabilities, including pension fund deficit or surplus, annual subsidy, annual current contribution and any actuarial studies related and related funding assumptions
   - Date, amount and circumstance of default, if any
   - If relevant, information on overlapping debt burden on the issuer=s taxpayers imposed by other government entities

4. Financial Operations (Auditsand Accounting/Financial Analysis)
   - Audits and accounting; statement of accounting standards
   - Current budget and year-to-date financial operations
   - Next year's budget, if available
   - Trend and operational information on major revenue sources (10%+ of revenues)
   - Detail on non-recurring revenue sources, asset sales, and privatization
   - Investment policy
   - Audits for issuer-owned utilities or businesses
   - Detail on union membership and contract terms
   - Trend of cash balances and statement of invested funds

5. Administrative and Legal Factors
   - Description of an issuer's government services
   - Organization chart
   - Electoral procedures for governing body and chief elected officers

- Appointment process for key administrative and professional employees
- Professional qualifications of key administrative and professional employees
- Financial and debt oversight powers by other governments or central government
- Relationship to issuer by other government bodies, particularly in terms of service provision, governmental powers, financial autonomy and debt issuance
- Specific governmental powers and limitations granted by a national constitution, charter or statute
- National regulatory environment as it impacts the issuer, such as recent or planned privatization of government-owned utilities, environmental regulations of foreign currency or debt restrictions
- Pending or proposed legislation that impacts revenue sources, debt issuance, pledged security, operation of utilities, or shifts in service mandates to/from the issuer
- Summary of bankruptcy and insolvency laws and related court rulings as they impact the issuer
- Detail on statutory, charter or constitutional limitations on debt issuance, and ability to raise additional taxes.

Appendix B
Glossary

In order to participate effectively in capital markets, sub-sovereigns need to be familiar with the technical terms used throughout the bonding process. The following glossary is intended to serve as a general reference tool. The definitions (which have been edited for this manual) were compiled from a variety of sources, including:

US Municipal Securities Rulemaking Board. *The Glossary of Municipal Securities Terms.* 1985.

Introduction to the Capital Markets. International Capital Markets workbook series. London: Euromoney Publications PLC, 1997.

Kurish, J.B., and Patricia Tigue. *An Elected Official's Guide to Debt Issuance.* Chicago: Government Finance Officers Association, 1993.

Mikesell, John. *Fiscal Administration: Analysis and Applications for the Public Sector, 4th ed.*, Fort Worth: Harcourt Brace College Publishers, 1995.

Fabozzi, Frank J. *The Handbook of Fixed Income Securities.* New York: McGraw-Hill, 1997.

Brealey, Richard A and Stewart C Myers. *Principles of Corporate Finance.* New York: McGraw-Hill, 1996.

Stickney, Clyde P., and Roman L. Weil. *Financial Accounting*. Fort Worth: Dryden Press, 1997.

Accrued Interest
On a transaction in a security, the dollar amount of interest, based on the stated rate or rates of interest, which has accumulated on a security from (and including) the most recent payment date (or, in certain circumstances, the dated date or other stated date), up to but not including the date of settlement of the transaction. Accrued interest is paid to the seller by the purchaser. In the Eurobond market, accrued interest is calculated on a 360-day basis, which is also the case for U.S. corporate bonds. U.S. Treasury bonds are calculated on a 365-day basis.

Additional Bond Issuance Covenant
A legal promise made by an issuer that the issuer will not issue additional bonds or will limit the amount of additional bonds that will be issued. This covenant provides protection for bondholders against dilution of the value or security of the bonds they hold, which can occur if, for example, new bonds are issued that rely on the same revenue streams or assets for their repayment. It also prevents the amount of outstanding debt from reaching a level that would jeopardize the debt service capacity of the issuer.

Advanced Refunding
The refunding of a debt obligation prior to the date when the outstanding debt is redeemed. Thus, before redemption both the debt being refunded and the refunding debt are outstanding. Typically, refunding occurs when there is a drop in interest rates. Issuers will refund an obligation at these lower rates to reduce the cost of capital.

Amortization
Paying the principal amount of a debt obligation through periodic payments either directly to bondholders or to a sinking fund for later payment to bondholders. In most of Latin America, "amortización" only applies to principal payments.

Arbitrage
Investing borrowed funds in investments that have a higher rate of return than is owed on the borrowed funds. It can also refer to an investor that participates simultaneously in two separate markets to take advantage of price differences between those markets.

Asked Price
The price at which dealers offer securities in the market.

Audited Financial Statements
Statements regarding an entity's finances reviewed by an independent outside agency, including items such as revenues, expenditures, cash flow statement, income statement, balance sheet, impact of operations, and general financial health.

Average Life or Average Maturity
The number of years to the point at which half of an issue will have been redeemed. The average life is a reflection of the rapidity with which the principal of an issue is expected to be paid.

Balloon Payment
A disproportionately large payment at the end of a bond's maturity or term.

Basis Point
1/100 of 1 percent. If the interest rate on a bond increases from 8.00% to 8.25%, the difference is referred to as a 25 basis-point increase.

Bearer Bond
A bond that is presumed to be owned by the person who holds it. The ownership is transferred by delivery, in contrast to a registered bond in which transfer of ownership must be registered, typically with the issuer or a trustee.

Benchmark Bonds
Existing outstanding bond issues that can be used as a method of comparison in order to accurately price new bond issues. The bonds used to serve as benchmarks will preferably be of a comparable maturity and credit quality as the new issue. Government securities are frequently used as benchmarks.

Bid Price
Price at which a prospective buyer offers to purchase securities.

Bond
A contract to pay a specified sum of money (the principal, face or par value) at a specified future date (maturity) plus interest paid at an agreed percentage of the principal. Maturity is usually longer than one year. Notes have shorter maturities and are generally issued with fewer legal and disclosure requirements.

Bond Counsel
An attorney (or firm of attorneys) retained by the issuer to give a legal opinion that the issuer is authorized to issue the proposed securities, and the issuer has met all legal requirements necessary for issuance. In the U.S. bond counsel also gives a legal opinion that the interest on the proposed securities will be exempt from federal income taxation and, where applicable, from state and local taxation. Typically, bond counsel may prepare, or review and advise the issuer regarding, authorizing resolutions or ordinances, trust indentures, official statements, and litigation. The bond counsel may also be referred to as the "bond attorney," the "bond approving attorney," or the "bond approving counsel."

Bond Covenants
See **Covenants**.

Bond Discounts
The excess of the face value of a bond over its price (or underwriter bid). An example is a bond with a face value of $1,000,000 being sold at $900,000. The discount is $100,000.

Bond Election or Bond Referendum
A process whereby the voters of a governmental unit are given the opportunity to approve or disapprove a proposed issue of governmental securities. In the U.S., an election is most commonly required in connection with general obligation bonds. Requirements for voter approval may be imposed by constitution, statute, or local ordinance.

Bond Indentures
See **Indenture**.

Bond Insurance
Insurance purchased to guarantee the timely payment of principal and interest to bondholders. Generally, when bonds are backed by insurance from a highly rated bond insurance company, investors will be willing to purchase the bonds at a lower interest rate. Issuers buy bond insurance when the cost they have to pay for the insurance is less than the money that they save on interest payments.

Bond Year
Number of 12-month intervals between the date of the bond and its maturity date, measured in $1,000. Thus, the bond year for a $5,000 bond dated April 1,

1985, and maturing June 1, 1986, is 5.830 [(14 months/12 months) x (Number of $1,000 bonds). Bond years are used to calculate the average life of an issue (bond years/total number of bonds)

Book-entry System
A system for reflecting ownership of bonds in which only one physical certificate is issued for a bond and evidence of ownership is a receipt showing interest in this certificate. This system enables the actual certificates to be held in a central repository with each owner's interests reflected on that repository's books.

Book Value
The value of a security, as shown by the accounting records of the investor, but which is not necessarily identical to the security's market value. This value may be the original cost of acquisition of the security, or original cost adjusted by amortization of a premium or accretion of a discount.

Broker
A person or firm that acts as an intermediary by purchasing and selling securities for others rather than for its own account. The individual or firm is involved in buying and selling securities on behalf of customers.

Brownfield Projects
Projects and facilities in areas that are or have been environmentally contaminated. For such projects, a large cost is often environmental remediation, which must figure into total project costs. As a result, these added costs are often reflected in the total amount of debt issued for the project.

Bullet
An issue of bonds with no amortization features, so that all the principal is paid on the maturity date.

Bullet Maturity
See **Bullet**.

Bullet Obligation
A bond or other security that is not amortized, so that all principal is paid on the maturity date.

Call
Payment of principal before stated maturity, as provided for in the bond agreement.

Callable Bond
A bond that permits the issuer to redeem it before maturity according to the terms and price (the call price) stipulated in the bond agreement.

Call Premium
Dollar premium paid, stated as percentage of the principal amount called, for the exercise of a call provision.

Capital Stock
A measure of value, such as assets and liabilities, which does not automatically change over time. In assessing changes in a city's financial condition, one should measure capital stocks of one year to capital stocks of subsequent years (or historically).

Capitalized Interest
Funds reserved from a bond issue to pay interest for a period of time (often during construction of the project). If revenues from a project will not be generated quickly, these funds are set aside in order to service a debt obligation until such time that the project can generate its own revenue. Capitalized Interest is used in **Project Revenue Bonds**.

"Clean" Price
The price of a bond that does not include accrued interest due to the seller of the bond. See also **"Dirty Price."**

Clearing Systems
A depository/transaction system established to expedite the clearing of securities by removing the necessity for physical delivery of securities. The two centralized Eurobond clearing systems are Cedel and Euroclear. Transactions and deliveries between accounts within the system are affected by way of bookkeeping entry only.

Closing
The procedures relating to the completion of a primary market issue on the closing date. Bondholders receive the bond certificates and the issuer receives the bond proceeds from the underwriter.

Collateral
Assets pledged by the issuer or borrower. These assets can be claimed by the bondholders if the issuer defaults on bond payments.

Collateral Agreements
An agreement between the issuer and investor that determines the type of collateral to be used should the issuer fail to repay a loan or a subsidiary agreement.

Competitive Bid or **Competitive Bidding**
A method of submitting proposals for the purchase of a new issue of bonds by which the bonds are awarded to the underwriting syndicate presenting the best bid according to stipulated criteria set forth in the notice of sale. The underwriting of securities in this manner is also referred to as a competitive or public sale; it is to be distinguished from a negotiated sale or a private placement.

Concession Agreements
A form of privatization, where asset ownership remains with the government, but the private sector is responsible for the operation, maintenance, and financing of the facility.

Contingent Liabilities
Liabilities that might arise under some circumstances, but have not yet occurred. Examples include future pension fund liabilities or the risk that an issuer may be liable for loans to third parties that it has guaranteed.

Coupon
(1) A detachable part of a bond that evidences interest due. The coupon specifies the date, place, and dollar amount of interest payable, among other matters. Coupons may be redeemed by detaching them from bonds and presenting them to the issuer's paying agent for payment. (2) The term is also used colloquially to refer to a bond's interest rate.

Coupon Rate
The annual rate of interest payable on a bond expressed as a percentage of the principal amount.

Covenants
The bond issuer's enforceable promise to perform or refrain from performing certain actions. With respect to sub-sovereign securities, covenants are generally stated in the bond contract. Covenants commonly made in connection with a bond issue

include covenants to charge fees sufficient to provide required pledged revenues (called a "rate covenant"); to maintain casualty insurance on the project; to complete, maintain and operate the project; not to sell or encumber the project as well as other types of covenants.

Coverage
The ratio of pledged revenues available annually to pay debt service in relation to the annual debt service requirement. Pledged revenues are usually calculated as net income before the deduction of interest, depreciation and amortization expenses. This ratio is one indication of the margin of safety for payment of debt service. The formula for determining coverage is as follows:

Coverage = Pledged Revenues/Debt Service Requirement

Creditworthiness
General statement of the market's current opinion regarding an issuer's financial health either in general or related to a specific transaction or bond issue. Creditworthiness is a slippery concept, as it changes based on the changing market conditions as well as the actions of the issuer.

Dated Date
The date from which interest begins to accrue on an issue, even though the issue may be delivered on some later date.

Dealer
A person or organization which engages in the business of underwriting, trading, buying, and selling securities. Unlike brokers, dealers trade on their own behalf as well as for clients.

Debt Burden
The level of outstanding debt that any issuer is responsible for by nature of previous bond issuances. Credit rating agencies use a variety of indicators of debt burden such as debt per capita or debt expressed as a percentage of revenue.

Debt Guarantees
Promises to repay identified debt. Debt can be guaranteed through a variety of sources. In addition, an issuer's financial health may be affected by the fact that the issuer has guaranteed debt issued by a third party.

Debt Limit
The maximum amount of debt which a sub-sovereign is permitted to incur under constitutional, statutory or charter provisions.

Debt Management Policy
A self-regulating policy instituted by an issuer to insure that the issuer's debt is kept within determined limits. A debt management policy will include limits as to the allowable level of debt to be issued as well as methods for debt repayment, types of debt to be issued, and the mix of short-term and long-term debt.

Debt Outstanding
All debt remaining unpaid as of a specified date.

Debt Service
The amount of money necessary to pay interest on an outstanding debt, the principal of maturing serial bonds, and the required contributions to a sinking fund for term bonds. Debt service on bonds may be calculated on a calendar year, fiscal year, or bond fiscal year basis.

Debt Service Coverage
See **Coverage**.

Debt Service Payments
See **Debt Service**.

Debt Service Reserve Fund
A fund established by an issuer to pay debt service if other revenues are insufficient to satisfy the debt service requirements. This can be funded entirely from bond proceeds or it may be only partially funded at issuance and be allowed to reach its fully funded level over time with pledged revenues. If the fund is used in part or whole, the issuer is obligated to replenish the fund from revenues or first available funds. Often the total amount of the fund is equal to one year's debt service requirement.

Debt Structure
This term can be used in different ways. First, it can be used to describe the key elements of a past bond issue. Second, it can be used to describe the maturity structure of an issuer's total outstanding debt including items such as whether the preponderance of the debt is short-term.

Dedicated Revenue Bond
A bond whose debt service requirements are pledged from a specified revenue stream, such as intergovernmental transfers or specific tax revenues.

Default
Breach of some covenant, promise or duty imposed by the bond contract. The most serious default occurs when the issuer fails to pay principal, interest, or both, when due. Other "technical" defaults result when specifically defined events of default occur, such as failure to perform covenants.

Defeasance
Termination of the rights and interests of the bondholder under terms of bond documents.

Delivery Date
The date on which securities are delivered in exchange for proceeds. The delivery date is considered the date of issuance for new securities.

Demand Projection
A method for determining the demand for a new project, such as vehicle traffic generated on a toll-road. This projection helps an issuer to predict the financial viability of the new facility, its ability to withstand various changed circumstances, and whether it will generate enough revenues to cover the debt service for building the facility.

Denomination
The face amount of a bond or note.

"Dirty" Price
The price of a bond that reflects the portion of the coupon interest that the buyer will receive, but that the seller has earned. This price includes accrued interest when the bond is sold between coupon payment dates.

Discount
Amount (stated in dollars or percentage) by which the price of a security is less than its face amount.

Double-barreled Bond
A bond secured by the pledge of more than one source of repayment, often project revenue and specific taxes.

Due Diligence
The process of investigating the issuer of sub-sovereign securities (often undertaken by underwriter's counsel) to ensure that all material facts related to the sale are fully disclosed.

Elasticity Scenarios
An economic measure that tests how sensitive project revenues may be to shifts in demand. Toll roads are an example of projects that are evaluated with different elasticity scenarios. The issuer must be sure that increases in toll rates will not decrease demand for the road so much that revenues fall below debt service requirements.

Emerging Markets
Markets not in the developed economies of Western Europe, North America, and Japan that are seen as offering potential for growth and profit.

Eurobond
A negotiable debt security issued outside the country of its currency and intended for international distribution outside of the U.S.

Eurobond Market
The market for negotiable bonds issued outside the country of its currency and intended for international distribution.

Face Amount
The par value (i.e., principal or value on maturity) of a security.

Financial Advisor
A consultant who advises a sub-sovereign issuer on matters relating to the issue: structure, timing, marketing, fairness of pricing, terms, bond ratings, and the like.

Financial Stress-test Scenarios
These scenarios test the financial stability of an issuer by reviewing financial records and exploring how finances will change as circumstances change. A good example

of such a test is checking the financial stability of an issuer by changing the assumed interest rate charged on a new issue.

"Firm" Underwriting Commitment
A commitment by an underwriter to buy all bonds from an issuer and then sell them. Should any bonds remain unsold, the underwriter must purchase them itself.

First Tier Intermediary
A Municipal Development Fund (MDF) that lends directly to a sub-sovereign government.

Fixed-rate Interest
Interest on a bond, which is calculated as a constant specified percentage of the principal amount and paid at the end of, specified interest periods, usually annually or semi-annually until maturity. Unlike floating rate interest, a fixed rate remains constant for the life of the bond.

Fixed-rate Markets
Markets where fixed rate debt can be issued, sold, and traded.

Floating or **Variable-rate Interest**
Interest on an issue of securities, which is not fixed for the life of the issue, but determined periodically according to a formula specified in the terms of the issue. The rate is usually set at a margin above a specified money-market rate, for example, for Eurodollar securities this is typically the three- or six-month London Inter-bank Rate (LIBOR) at which leading banks offer Eurodollar deposits to each other.

Floating-rate Note (FRN)
A note paying interest on a floating-rate basis, generally subject to a certain minimum rate of interest.

Foreign Bond
A security issued by a borrower in a domestic capital market other than his own and denominated in the currency of that market.

Frontloading
To provide higher coupon rates on the shorter maturity bonds or larger principal repayments in the early years of a serial bond issue.

Full-faith and Credit Debt
Long-term debt for which the credit of the government, implying the power of taxation, is unconditionally pledged. It includes debt payable initially from specific taxes or non-tax sources, but represents a liability payable from any other available resources if the pledged sources are insufficient.

Funding
Issuance of bonds or other long-term debt in exchange for or to provide funds to retire outstanding short-term debt.

Future Value
A measure of the time value of money, that is, the amount an investor would receive in the future by investing today at a given interest rate.

General Obligation Bonds or **G.O. Bonds**
A bond that is secured by the full faith and credit of an issuer with taxing power. See also **Full-faith and Credit**.

General Obligation Debt
A debt, such as a bond or a bank loan, that is secured by the full-faith and credit of an issuer with taxing power.

Greenfield Projects
New projects that are built in areas that have previously been undeveloped.

Indentures
A legal contract between the issuer of bonds and a trustee establishing the responsibilities of the issuer and the rights of the bondholders.

"Indicative" Offering Price
In a negotiated offering, the estimate the underwriter gives for the price of bonds that will be sold by the underwriter to the public.

Institutional Investor or **Buyer**
A bank, financial institution, insurance company, mutual fund, pension plan, or similar investment organization.

Instrument
A global term for securities, encompassing a range of financial debt from negotiable deposits to bonds. Typically used in relation to short maturities, such as money market instruments.

Inter-bank Rates
The rates at which banks bid for or offer deposits to each other in a particular market.

Inter-creditors' Agreement
An agreement among creditors to a specific project that determines the process and hierarchy for debt repayment.

Interest
The amount paid by a borrower as compensation for the use of borrowed money. This amount is generally an annual percentage of the principal amount.

Intermarket Spread
The difference in interest rates between bonds of similar maturities and credit rating that are issued in different markets.

Intermarket Spread Swap
An exchanging of one security for another so that investors can improve their portfolios. This type of swap occurs when an investor believes that the current yield spread between two bonds is not in line with historical yield spreads and that this spread will realign by the end of the investment horizon.

Internal Rate of Return
That interest rate which equates the present value of a future stream of payments with the initial investment, that is, the yield-to-maturity.

International Securities Market Association (ISMA)
An association with over 500 member firms from 35 countries. The primary objectives of ISMA are to provide a basis for examination and discussion of questions relating to the secondary market in Eurosecurities, to issue rules governing their functions and to maintain a close liaison between the primary and secondary markets in Eurosecurities.

Issuer
A governmental unit, political subdivision, agency or authority that borrows money through the sale of bonds or notes.

Lease Obligations
A bond or obligation that is secured by lease payments made by the party leasing the facility to the issuer of the debt. These obligations are used typically to finance the construction of facilities used by a state or municipality, which in turn leases the facility from a financing authority.

Legal Covenants
See **Covenants**.

Letter of Credit
Agreement by a bank or other financial entity to honor drafts or other demands for payment of debt service.

Level-debt Service
The same amount of debt service owed by the issuer each year. This frequently occurs when serial maturities are arranged so that the volume of maturing bonds increases at approximately the same rate as interest payments decline with reduced outstanding debt. Thus, total debt service remains almost constant, even as debt is retired.

Leveraged Assets
Assets that have been designated as a source of repayment/collateral should all revenue sources fail to achieve debt service requirements.

LIBID
London Inter-bank Bid Rate, the rate at which major London-based banks offer to take funds on deposit from other banks.

LIBOR
London Inter-bank Offered Rate, the rate at which major London-based banks offer to lend funds to other banks.

Limited-Recourse Bond
A limited recourse Project Finance Bond is a bond that has additional security other than the revenues generated from the project. The additional security covers

some project risk (revenue, political, operating, etc.) that is not acceptable to the lenders. See also **Non-Recourse Bond**.

Liquidity
The ease with which buying and selling takes place in a market.

Local Tax Base
The extent of assets and operations that are subject to tax by an issuer The tax base is particularly important for general obligation debt because most revenues for these bonds comes from property and other own source taxes that depend heavily on the make-up of the local tax base.

"Long" Positions
A market position where the dealer has bought the market product in excess of immediate requirements, usually with a view to selling it at a higher price at a later date.

Long Term
(1) In the Eurobond market, refers to initial maturities longer than seven years; and (2) Under standard accounting practice, refers to long-term debt with a remaining maturity greater than one year.

"Mark to Market"
The process by which the daily market value of securities used as collateral for a bond issue is determined. If the value of the securities falls below a certain required dollar value, usually an amount over the outstanding value of the bonds, the borrower must provide additional collateral to the bond collateral agent. The additional amount of the outstanding par value is a "haircut."

Margin
This is expressed as a percentage, added to a reference interest rate (e.g., to six-month LIBOR) to establish the coupon of a floating-rate instrument. It is also called the spread.

Market-maker
A dealer or trader who consistently quotes both bid and offered prices or yields for an issue of securities and is willing to trade on those prices.

Maturity Date
The date by which the entire debt principal is to be repaid.

Medium Term
(1) In the Eurobond market, refers to maturities of two to seven year. (2) In the Euro money-markets, refers to maturities in excess of one year.

Monoline Insurance Company
An insurance company that generally is involved in one line of business. Bond insurance companies are good examples of this. They only insure municipal and other bonds. They usually have a AAA rating based on their ability to pay any claims that may arise if the insured bonds default.

Negotiated Sale
The sale of a new issue of bonds by an issuer through an exclusive agreement with an underwriter or underwriting syndicate selected by the issuer. A negotiated sale should be distinguished from a competitive sale, which requires public bidding by the underwriters. The primary points of negotiation for an issuer are the interest rate that it pays and purchase price of the bonds by the underwriter, which determines the amount of the proceeds the issuer receives from the bond sale. The sale of a new issue of securities in this manner is also known as a negotiated underwriting. See also **Private Placement**.

Net Interest Cost
A common method of computing interest expense of a bond issue, defined as:

(Total Debt Service Payments + Discount (-Premium))/ Bond Years).

Nominal Amount or Value
The value stated on the face of a security.

Nominal Interest Rate
The contractual interest rate appearing on a bond and determining the amount of interest to be paid to a holder.

Non-Guaranteed Debt
Long-term debt payable solely from pledged specific sources, for example, from earnings of revenue-producing activities (toll highways and bridges, electric power

projects, etc.) or from specific and limited taxes. Includes only debt that does not constitute an obligation against any other resources of the government if the pledged sources are insufficient.

Non-Recourse Bonds
Bonds that are secured by specific revenue sources that are agreed on in the bond covenant. These bonds are typically revenue bonds where revenues are generated by the project being developed. There is no alternative source of revenue generation. These bonds are different from general obligation bonds, which are backed by the full taxing power of the issuer.

Off-Balance Sheet Project Financings
Project finance activities that are conducted by an outside autonomous entity that is expressly created for the purposes of the finance, construction, and operation of a facility. Investors have recourse only to the project revenues and assets, not any of the assets or revenues owned by the project sponsor in other businesses or facilities.

Off-Take Contracts
In a project financing, the contract between the owner of a facility, such as a power generating plant, and the purchaser of the facility's product, such as a government or private electric distributing company.

Offer
The rate at which the market, or a particular market-maker, is willing to sell.

Offering Circulars
A document prepared by the underwriter about the offering of a bond issue. This document discloses basic information regarding the characteristics of the bonds (maturity, interest rate, etc.); legal documents that support the financing, financial and other information about the issuer or the project being financed; and the legal, financial, environmental, commercial, and other risks associated with the ability of the issuer to repay the bonds. It is intended for investors to evaluate whether they want to purchase the bonds. The Offering Circular is the term used for international and Eurobond offerings. In the U.S. municipal market, the document is referred to as an Official Statement. There can be differences between offering circulars, official statements, and offering memoranda as they are used in different markets. An Offering Circular is used in international bonds; an official statement in U.S. municipal bonds, and an offering memorandum is used in syndicated loans for project finance.

Offering Price
Price at which underwriters offer securities to investors.

Official Statement
See also **Offering Circular**. There can be differences between offering circulars, official statements, and offering memoranda as they are used in different markets. An Offering Circular is used in international bonds; an official statement in U.S. Municipal bonds, and an offering memorandum is used in syndicated loans for project finance.

Operating Reserve Fund
A fund established by the bond contract for a revenue bond. The fund is used to meet the costs of operating and maintaining the financed project in the event that current revenues are not sufficient to pay these costs or if additional funds are needed for an operating or maintenance emergency.

Parastatal
An entity which is entirely or partially owned by a government entity.

Par Bond
A bond selling at its face value.

Par Value
The face value of a security. For bonds, the amount that must be paid at maturity. A quotation of 100 means selling at par; below 100, at a discount (95 ‘ $950 for a $1,000 par value bond); and above 100, at a premium (105 ‘ $1,050 for a $1,000 bond).

Paying Agency
The bank, trust company, etc., at which securities are presented for payment.

Pledged Security
A security that is backed by a specific promised revenue stream in order to service the debt. Also, a security that has been promised.

Point
1 percent.

Premium
(1) For securities selling above par, the difference between the price of a security and par. (2) An amount that must sometimes be paid above par in order to call an issue (i.e., a call premium). (3) Occasionally used and interchangeable with margin or spread when the latter two refer to a percentage above a given amount or rate.

Prepayment Provision
Provision specifying at what time and on what terms repayment of the principal amount may be made before the stated maturity.

Present Value
A measure of the time value of money, that is, the amount of money an investor would exchange today for a future stream of principal and interest payments. Also, the current worth of a payment or series of payments, discounted at a given interest rate.

Price
Security price, generally quoted in terms of percent of par value (e.g., premium price ‘ 103, discount price ‘ 97) or in terms of annual yield to maturity (e.g., “yielding 10-3/8%”).

Primary Market
The market in which new issues of securities are initially syndicated and distributed, i.e. sold or placed.

Prime Rate
The rate at which prime borrowers can borrow from banks.

Principal, Face, Maturity, or **Nominal Amount** or **Value**
That amount inscribed on the face of a security, exclusive of interest or premium, due to a security holder at maturity. It is the amount used in the computation of interest due on the security. Also it is the total face amount of all securities in the issue.

Private Placement
The sale of a new issue of bonds, generally in large denominations and which are generally sold to a limited number of institutional investors rather than being offered to the public.

Project Revenue Bonds
A bond whose debt service requirements are pledged from the earnings of a specific project. A project revenue bond is not backed by the government's full-faith and credit.

Prospectus or Offering Memorandum
A document prepared by the lead-manager to an issue containing all the pertinent information about a public offering of securities and about the borrower and guarantor, if any. It is made available to the appropriate legal authorities, stock exchanges and prospective investors. A preliminary prospectus is generally dispatched at the beginning of the subscription period and a final prospectus is dispatched immediately after both the final terms have been fixed and the borrower and the managers have signed the subscription agreement. There can be differences between offering circulars, official statements, and offering memoranda as they are used in different markets. An **Offering Circular** is used in international bonds; an official statement in U.S. Municipal bonds, and an offering memorandum is used in syndicated loans for project finance.

Protect
During an issue's distribution in the primary market, to guarantee, on an 'if, as and when issued' basis, to sell another party a specified amount of securities. Protection is normally given by a lead-manager, at his discretion, to the syndicate members. They, in turn, may offer protection to their investor client.

Project Financing
The financing of a project with bonds or syndicated bank loans wherein the revenues generated by the project are the sole means of repaying the debt (non-recourse). See also **Limited Recourse**.

Public Offering
Sale by an underwriter to the public.

Pure Yield Pickup Swap
The exchanging of one security for another, which occurs when an investor switches from one bond to another that has higher yield. This is done to achieve a higher coupon payment or a higher yield to maturity.

Put
An option to sell.

Rate Anticipation Swap
The exchanging of one security for another, which occurs when a portfolio manager or investor has a particular expectation about the direction of future interest rates, he will swap bonds to take advantage of the future shift in interest rate.

Ratings
Evaluations of the credit quality of notes and bonds usually made by independent rating services. Ratings are intended to measure the probability of the timely repayment of principal and interest on bonds. Ratings are initially made before issuance and are periodically reviewed by the rating agencies and may be amended to reflect changes in the issuer's credit position.

Refinancing and Roll-over Risk
The risk that an issuer will need to borrow again in the market to meet its payment requirements for outstanding bonds or notes as they mature.

Refunding
The issuance of long-term debt in exchange for or to provide funds for the retirement of long-term debt already outstanding.

Registered or **Nominative Security**
A security, the ownership of which is recorded on the borrower's books in the name of the holder or his nominee. The principal can be transferred only with the endorsement of the registered holder. Registered securities rarely have coupons; interest is paid to the holder by cheque from the borrower's paying agent.

Re-offering Yields
Interest rates at which underwriters resell individual bonds to investors.

Revenue Anticipation Notes
A short-term municipal debt obligation with future revenues pledged for retirement of the notes at maturity.

Revenue Bonds
See **Dedicated Revenue Bonds** and **Project Revenue Bonds**.

Revenue Bond Debt
The amount of money that is owed through revenue bonds.

Roll Over
Issuance of new notes to retire outstanding notes.

Second Tier Intermediary
A Municipal Development Fund (MDF) that supplies credit to a sub-sovereign government through a commercial bank in an attempt to engage the commercial bank in this financial sector.

Secondary market
The market for issues of securities, which is made by market-makers after the completion of such issues' primary market distribution, and until the securities mature.

Secured Debt
Collateral transferred to the investor in case of issuer default. Also, debt that has been secured by a particular asset being used as collateral in the event of default or inability to pay debt service.

Security
A negotiable certificate evidencing a debt or equity obligation.

Serial Bond
A bond in an issue that contains multiple maturities.

Shareholder's Agreement
An agreement between the equity investors in a project financing. This agreement describes the monetary arrangement between the government and the project's equity holders.

"Short" Positions
A market position where the dealer has sold a market product which he does not own, with a view to buying it back at a lower cost at a later date.

Short Term
In most markets, a period of less than one year.

Sinking fund
Fund used to accumulate periodic payments toward redemption of bonds at maturity; payments on schedule plus interest earnings will accumulate to par value of the bonds.

Spread
A difference in prices or yields, often between a market-maker's bid and offer rates. Also, a bond underwriter's gross profit; the price received by the underwriter on sale of the bonds less the price paid by the underwriter for those bonds.

State Bond Bank
State institutions in the U.S. that issue a state bond. It uses the proceeds of the bond issue to purchase the securities issued by local governments within the state. The debt service payments from the local government to the state institution are pledged to the repayment of the state bond.

Subordinated Debt
Securities on which the claims of a holder on the assets of the borrower rank behind other debt in right of payment in a liquidation.

Substitution Swap
Occurs when an investor exchanges one bond for another bond that has identical coupon, maturity, price sensitivity, and credit quality but offers a higher yield.

Syndicate
A group of underwriters.

Taxable Equivalent Yield or **Taxable Yield Equivalent**
The interest rate which must be received on a taxable security to provide the holder the same after-tax return as that earned on a tax-exempt security.

Tenor
Maturity of a loan.

Total Outstanding Debt
The entire amount of debt an issuer has issued in the past from all sources that remains unrepaid.

Total Return
A measure used to calculate the total amount an investor will receive from holding a bond until maturity. This measure takes into account an investment horizon, the reinvestment rate, and the selling price of the bond at the end of the investment horizon.

Term Bond
A bond of an issue that has a single, deferred, stated maturity date.

Treasury Bill
The shortest-term federal security. Treasury bills have maturity dates normally varying from three to twelve months and are sold at a discount from face value rather than carrying an explicit rate of interest.

Trend Analysis
An analysis that evaluates the potential economic changes affecting an issuer. This is done in order to accurately predict the financial stability of the issuer and the ability to meet debt service requirements as circumstances change.

True Interest Cost
A method of calculating bids for new issues of municipal securities that takes into account the time value of money.

Underwriter
A dealer which purchases an entire amount of a new issue of bonds for resale. The underwriter may acquire the securities either by negotiation with the issuer or by award on the basis of competitive bidding.

Underwriting
Purchase of all bonds in a new issue and the marketing of them.

Underwriting Spread
Difference between the offering price to the public and the price the underwriter pays the issuer.

Yield
The rate of return on a security.

Yield Curve
A graph which plots market yields on securities of equivalent quality but different maturities, at a given point in time. The vertical axis represents the yields, while the horizontal axis depicts time to maturity. The term structure of interest rates, as reflected by the yield curve, will vary according to market conditions, resulting in a variety of yield curve configurations, as follows:

Yield Curve Slopes

(1) Ascending or Positive: characterized by interest rates rising as maturities lengthen. This is indicative of some aversion to the uncertainty resulting from increased price volatility and decreased liquidity of long-term issues. A positive yield curve generally indicates investor expectations of higher rates in the future. (2) Horizontal or Flat: characterized by similar yield levels for all maturities. This generally indicates that investors expect that interest rates in the future will be approximately the same as current levels. (3) Descending, Negative or Inverted: characterized by interest rates falling as maturities lengthen. A negative yield curve generally indicates that investors expect short-term rates to fall in the future. (4) Humped: characterized by bulges in the yield curve with lower yields on either side. This generally indicates, despite a high degree of short-term uncertainty, that investors expect lower future rates.

Yield to Maturity

The rate of return to the investor earned from payments of principal and interest, presuming that the security remains outstanding until the maturity date. Yield to maturity takes into account the amount of the premium or discount, if any, and the time value of the investment, as well as the frequency at which interest is compounded.

Zero Coupon Bond

A bond that bears no interest but is marketed below face value amount, to produce a substantial gain on maturity.

Appendix C
Conference Agenda

Please note that this agenda may not represent last-minute changes and substitutions.

MONDAY, OCTOBER 26

7:00 P.M. Inauguration Ceremony

Opening Remarks:

José Joaquín Martinez Sieso, President, Cantabrian Autonomous Community (Spain)

Angel Martín Acebes, Deputy Director for Multilateral Organizations, Ministry of Economy (Spain)

Francisco Martín, Executive Vice President, Banco Santander (Spain)

Shahid Javed Burki, Vice-President, Latin America and Caribbean Region, World Bank

Roger Grawe, Country DirectorHungary, Czech Republic, Moldova, Slovak Republic, Slovenia Country Unit, World Bank

8:15 P.M. James D. Wolfensohn, President, World Bank

TUESDAY, OCTOBER 27

9:00 A.M. Opening Speech

Guillermo Perry, Chief Economist, Latin American and Caribbean Region, World Bank

9:45 A.M. Plenary Session One
Macroeconomic Implications of Sub-national Borrowing

Lecturer:
Jaroslaw Bauc, Secretary of State (Poland)

Discussants:
Cristopher Marks, Resident Advisor, Ministry of Finance (Poland), DGPA-USAID
Anwar Shah, Principal Evaluation Officer, Operations Evaluation Department, World Bank
Roger Grawe, Country Director, Hungary, Czech Republic, Moldova, Slovak Republic, Slovenia Country Unit, World Bank

Moderator:
Eduardo Wiesner, Economic Consultant (Colombia)

11:30 A.M. Plenary Session Two
Financial Management and Funding Strategies

Lecturer:
Joan Clos, Mayor of Barcelona (Spain)

Discussants:
Vilma Milunovic, Head Department of Finance, Piran (Slovenia)
John Petersen, President, Government Finance Group Inc. (USA)
Katalin Pallai, Advisor on Planning, Municipality of Budapest, Secretariat of the Mayor (Hungary)

Moderator:
Benjamin Darche, Principal, Capital Advisors Ltd. (USA)

1:00 P.M. **Lunch sponsored by MBIA-AMBAC**

Jim Hass, Managing Principal, Capital Advisors Ltd. (USA)

2:30 P.M. **Plenary Session Three**
Legal, Regulatory, and Institutional Framework for Subnational Borrowing

Lecturer:
José Luis Ruiz, International Monetary Fund

Discussants:
Vera Kamenickova, Advisor to Prime Minister (Czech Republic)
Michel Noel, Manager, Municipal Finance Initiative, World Bank
Timothy Goodspeed, Professor, Hunter College (USA)

Moderator:
Fernando Rojas, Senior Public Sector Management Specialist, Poverty Reduction and Economic Management, World Bank

4:30 P.M. **Plenary Session FourRound Table**
The View from the Market

Juan Miranda, Wellesley Co., AB Asesores
K. Brian Keegan, Managing Director, Debt Capital Markets, Merrill Lynch (USA)
Iain Hardie, Executive Director, Eastern Europe Capital Markets, Morgan Stanley, Dean Witter (USA)
Maher Al-Haffar, Director, Debt Capital Markets, Santander Investment (USA)

Moderator:
David Rosen, Managing Director, Emerging Markets, Bear Stearns (USA)

WEDNESDAY, OCTOBER 28

9:00 A.M. Opening Speech

Enrique Peñalosa, Mayor of Santa Fé de Bogotá (Colombia)

9:30 A.M. Plenary Session One
Choice of Instruments and Borrowing Structures

Lecturer:
George Peterson, Senior Fellow, Urban Institute (USA)

Discussants:
Mario Cerna, General Administrator of San Salvador (El Salvador)
Rafael Gutierrez Suarez, Advisor on Economy and Finance, Government of Cantabria
Ellis Juan, Senior Vice President, Head of Project Finance, Latin America, Santander Investment

Moderator:
Brad Johnson, Partner, Hawkins-Delafield & Wood (USA)

11:30 A.M. Five Breakout SessionsCase Studies

Session One: Credit Ratings and Financial Guarantors

Caroline Wingardh, Director, Standard & Poor's (USA)
David Stevens, Senior Vice President to the Chairman, MBIA Insurance Corporation (USA)
Gersan Zurita, Duff & Phelps (USA)
Yves Lemay, Senior Vice'President and Global Coordinator for Sub-Sovereign Risk, Moody's (USA)

Moderator:
K. Brian Keegan, Managing Director, Merrill Lynch (USA)

Session Two: Borrowing through Financial Intermediaries

Janeth Hunter-Moore, Executive Manager, Michigan Bond Banks (USA)
Pedro Lasa, Municipal Infrastructure Finance Loan, PROMUNI (Central America)
Sergio Lleras, Financiera de Desarrollo Territorial S.A., Santa Fé de Bogotá (Colombia)
Dana Craciunescu, Associate Banker, EBRD, City of Bucharest (Hungary)

Moderator:
John Petersen, President, Government Finance Group Inc. (USA)

Session Three: Debt Management

Carlos Alberto Sandoval Reyes, Secretary of Finance, City of Santa Fé de Bogotá (Colombia)
César Augusto Rabello Borges, Governor of Bahia Province (Brazil)
Igor Kostikov, Managing Director, Alexander Kostikov and Partners Ltd., St. Petersburg (Russia)

Moderator:
Clemente del Valle, Principal Financial Specialist, Capital Markets Development, World Bank

Session Four: Assessing the International Capital Markets

Eduardo delle Ville, Secretary of Finance of City of Buenos Aires (Argentina)
Aladar Madarasz, Senior Research Fellow, Institute of Economics, Hungarian Academy of Sciences, Budapest
Renato Villela, Secretary of Strategic Affairs, City of Rio de Janeiro (Brazil)
Andrew Dobson, Consultant to UK Know How Fund on Russian Capital Markets, St. Petersburg (Russia)

Moderator:
Francisco Pujol, Vice-President, Latin America Capital Markets, Morgan Stanley (USA)

Session Five: Collateralization

Carmen Inés Cruz, Mayor of Ibagué (Colombia)
Aníbal Aguilar Gomez, Financial Officer, City of La Paz (Bolivia)
Andres J. Ayala, General Secretary of the Bureau of Territorial Policies, Murcia (Spain)

Moderator:
Maria E. Freire, Regional Coordinator, Economic Development Institute, World Bank

2:30 P.M. Plenary Session Two
Avoiding Bail Outs: Minimizing Exposure of Central Governments

Lecturer:
Fernando Rojas, Senior Public Sector Management Specialist, World Bank

Discussants:
Hana Polackova, Public Sector Management Specialist, Poverty Reduction and Economic Management Sector Unit, World Bank
João Oliveira, Senior Economist, The World Bank

Moderator:
David Vetter, DEXIA (France)

4:00 P.M. Five Breakout SessionsCase Studies

Session One: Dealing with Non-Performing Sub-sovereign Borrowers

Giovanni Giovanelli, Financial Specialist, Inter-American Development Bank
Marcelo Menéndez, Menéndez y Asociados S.A., Buenos Aires (Argentina)
Joseph Hedegus, Director, Metropolitan Research Institute, City of Budapest (Hungary)

Moderator:
George Peterson, Senior Fellow, the Urban Institute (USA)

Session Two: Financing Typical Sub-national Investment (Revenue bonds and General Obligation bonds)

Kaarel-Mati Halla, Advisor Economic Affairs, City of Tallinn (Estonia)
Jorge Pardal, Mayor of Guaymallen (Argentina)
Pedro Juan Conzales Carvajal, Secretary of Finance of City of Medellín (Colombia)
Oscar Stark, Principal Economic Advisor of City of Asunción (Paraguay)

Moderator:
Anthony Levitas, Municipal Finance Policy Advisor, USAID

Session Three: Transparency and Invormation Disclosure

Renato Villela, Secretary of Strategic Affairs, City of Rio de Janeiro (Brazil)
Richard Wilson, Duff and Phelps (UK)
Marino Henao, Director of Latin Center for Urban Management, Quito (Ecuador)
Eugenio Mendoza, Managing Director, Merrill Lynch (USA)

Moderator:
Sonia Hammam, Advisor, The World Bank

Session Four: Institutional Investor Perspectives

Carlos M. Asilis, Senior Advisor, Vector Investment Advisors (Spain)
William Oliver, Senior Vice President, Alliance Capital Management (USA)
Stefan Muller-Bongartz, Credit Analyst, Rheinhyp Bank Europe

Moderator:
Carlos Silva-Jauregui, Economist, Poverty Reduction and Economic Management Sector Unit, World Bank

Session Five: Vehicles for Joint Public Investments (Special Purpose Districts, Intermunicipal Companies)

Patricia Philips, Finance Director, City of Virginia Beach (USA)
Luis de la Mora, Partner, Arthur Andersen (Spain)
Enrique Francia Romero, Manager, Arthur Andersen (Spain)
Javier Ibarrola, Senior Vice-President, Banco Santander (Spain)

Moderator:
Elio Codato, Senior Urban Management Specialist, World Bank

THURSDAY, OCTOBER 29

9:30 A.M. Closing Session

Gonzalo García Piñiero Lago, Mayor of Santander (Spain)
Michael Barth, Director, Capital Markets Development Department, World Bank
Roger Grawe, Country Director, Hungary, Czech Republic, Moldova, Slovak Republic, Slovenia Country Unit, World Bank
Tim Campbell, Advisor Urban Development, World Bank

10:00 A.M. Closing Remarks

Miguel Fiandor, Managing Partner, Arthur Andersen (Spain)
Philip Schofield, DEPFA-Bank, General Manager (Spain)

11:30 A.M. Closing Remarks (continued)

Michael Barth, Director, Capital Markets Development Department, The World Bank
Tim Campbell, Advisor Urban Development, The World Bank
Roger Grawe, Country Director, Hungary, Czech Republic, Moldova, Slovak Republic, Slovenia Country Unit, World Bank
Luis Guasch, Lead Specialist, LCSFP, The World Bank