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## Subnational and Transnational Infrastructure Projects: The New Challenges to Attracting Private Participation<sup>1</sup>

*Paulina Beato and Antonio Vives\**

During the last decade, most Latin American and Caribbean countries have accumulated extensive experience in the privatization of infrastructure services and in the institutional and regulatory reforms essential to foster a suitable environment for private investment. The reforms have succeeded in

promoting private participation in sectors such as telecommunications, transportation, energy, and potable water and sewerage. Private participation in infrastructure has reduced public deficits and introduced new technologies. In most cases, this has resulted in sig-

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<sup>1</sup> Part of this article is based on Private Infrastructure Investment at the Subnational Level: Challenges in Emerging Economies, by Paulina Beato and Antonio Vives, Journal of Project Finance, Summer 2000.



## Guidance for Developing Deposit Insurance Systems

*Edgardo Demaestri\**

Deposit insurance systems play an important role in the development of financial markets. Their main objectives are to contribute to the stability of the financial system and to protect small, less-financially-sophisticated depositors. The design of a deposit insurance system is

an important financial sector instrument because of its multiple effects, in particular regarding its impact on the behavior of depositors and financial institutions. A well-designed, effective and efficient deposit insurance system, through its

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nificant efficiency improvements as well as increased coverage.

The political decentralization process that has taken place in Latin America during the past decade has dramatically increased the number of infrastructure projects promoted by local authorities (mayors, governors, etc.) At the same time, regional economic integration has encouraged transnational infrastructure projects such as roads, pipelines, and power transmission lines. Developing nations now face the new challenges of attracting private funds to local and transnational projects.

### Local Projects and Political Decentralization

Although the distribution of responsibilities between central and local governments varies, in most countries, subnational governments are responsible for the provision of water

and sanitation, public lighting, waste management, drainage and, to a lesser extent, public transportation and regional highways.

The relevance of infrastructure under local government responsibility is reflected in the fact that almost 77 percent of the total population of Latin America lives in urban areas, making it

■ ***Although local infrastructure needs are rapidly growing, obstacles for private sector participation are different and, to some extent, larger than those faced by infrastructure under the responsibility of national governments.*** ■

the most urbanized region in the world. In order to provide adequate services to a population that has doubled since 1975, the supply of some services in urban areas should also be doubled.

Although local infrastructure needs are rapidly growing, obstacles for private sector participation are different and, to some extent, larger than those faced by infrastructure under the responsibility of national governments. Some obstacles derive from the fact that relevant industry decisions rest on local authorities, making the nature of the political risks of these projects different from those associated with the central government. Other obstacles result from the lack of social acceptance of private participation in some local services such as water and sewerage, waste management and public lighting, which are viewed as rights that should be provided free of

■ ***The functions of central and local governments often overlap and, at times, may prove contradictory. In many countries, local authorities may enter into agreements with the private sector regarding local services; however, responsibility for setting the rules of the game for service provision is in the hands of central government.*** ■

charge.

### Institutional Obstacles

One obstacle to private sector participation in subnational services is the lack of clear and consistent regulation. The functions of central and local governments often overlap and, at times, may prove contradictory. For example, in many countries, local authorities may enter into agreements with the private sector regarding local services; however, responsibility for setting the rules of the game for service provision is in the hands of central governments. This split in functions gives rise to overlaps and regulatory conflicts more often than in other public services, like power and telecommunications, which have less regulatory power in the hands of local and municipal authorities. To reduce these impediments, the regulatory framework should specify the functions of central and local governments. In countries where the power to grant concessions, rental or management contracts is vested in municipalities, contract credibility and flexibility will be improved through the enactment of legislation establishing the principles for setting price and quality rules as well as procedures and guarantees for revising contracts. The credibility of contracts and their enforceability are enhanced by legislation granting them government support and the ability to close loopholes.

### Economic and Financial Obstacles

One of the main obstacles faced by private participants in the provision of public services in Latin America is pricing policies. Most public providers are unable to cover operation and maintenance costs from revenues generated by utility rates. In addition, rates are not revised upwards as costs



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increase. These circumstances give rise to problems that interfere with private participation in three ways. First, the rate increase required to elicit private sector participation and make it feasible leads the public to believe that private participation implies costlier services. Second, the lack of a tradition of increasing rates as costs rise create serious doubts about the ability of local authorities to hold price commitments. Third, the lack of adequate financial resources usually leads to such a severe deterioration in the quality of service that private operators need to make huge investments to obtain some quality improvements, which exacerbates the revenue challenge.

In addition, financing is usually much more difficult for local projects, not just because of the additional risks already discussed, but also because some financial structures are simply not possible at the local level. This can result from underdeveloped local capital markets (making securitization almost impossible) and institutions, and the weaknesses of the enhancements (for example, guarantees) provided by local governments.

### **Social and Political Obstacles**

Public rejection is a main obstacle to private sector participation in the provision of infrastructure services. This rejection results from the real costs of private sector participation faced by certain segments of the population. It also arises from the actions of advocacy groups that deliberately exaggerate negative impacts while downplaying the advantages of private sector participation or the mitigating measures that are part of the plan. Coordination may be especially difficult when local and central government do not belong to the same political party. If the local and central authorities are chosen at the same time, three or four years are available for initiating and culminating the process without changes in the political actors. However, if they are chosen at different dates, time available for implementation of reforms becomes

### **■ Transnational infrastructure projects help expand and reshape regional development hubs, providing countries and their people with opportunities for economic growth and higher standards of living. ■**

even shorter. Also, the people available at the local level tend to have lower qualifications than those at the national level, creating additional risks for the projects.

Furthermore, private provision curtails the use of public services as a political tool to capture votes and exercise power, making the privatization and subsequent operation of the services all the more difficult.

### **Transnational Projects and Economic Integration**

Economic integration is a must for developing countries if they are to expand the markets for their products. Transnational infrastructure projects are critical, if nations are to forge close cooperative ties as each strives to realize its full potential in an ever more competitive global economy. Regional infrastructure facilitates trade, investment and information flows and the movement of people and trade within and between nations. In the process it helps expand and reshape regional development hubs, providing countries and their people with opportunities for economic growth and higher standards of living.

The importance of transnational projects is very clearly highlighted by the economic integration of Europe, where very early in the process authorities recognized the importance of promoting them, putting in place the necessary institutional, regulatory and financial mechanisms. The creation of the European Investment Bank to finance precisely such projects is a very good example. A large part of the success of economic integration in Europe can be attributed to the success of physical integration.

Two new initiatives have been recently launched in Latin America. The Action Plan for the Integration of Regional Infrastructure in South America (IIRSA) was introduced by the Presidents

of South America, and the Puebla-Panama Plan was initiated by the Presidents of Mexico and Central America. Together, these initiatives stress the importance of regional integration for increasing region welfare and growth and rely heavily on physical integration and transnational projects. Regional infrastructure projects are a necessary condition for integration. New or upgraded international highways, international bridges, ports, airports, power transmission lines and pipelines, and telecommunications will be needed in order to accelerate the economic integration process.

### **Risks Are not New, They Are Just Larger**

Transnational projects operate in a qualitatively different environment from single country projects. A transnational project has multiple sovereign principals, complicating management and making it politically sensitive. Risks may be compounded by the existence of incompatible regulatory regimes and sector policies in the various countries involved. Strategic manipulation of regulation (tariffs, subsidies, standards, access policies to essential facilities, discriminatory practices) to the advantage of a particular country may lead project utilization and revenues astray.

Private lenders tend to see more rather than new risks in transnational projects. From the lender's perspective, the main risks will be common ones (i.e., political and regulatory risk, exchange risk). However, instead of dealing with one set of regulators the project will have to deal with two or more. Instead of dealing with one currency, it will have to deal with several. Moreover, as in the case of conflicts of interest between local and national authorities in local projects, conflicts of



interest may arise among the different national authorities.

### **Regulatory Framework: Free Trade in Infrastructure Services**

The nature of the regulatory risk may be the same; however, it is higher because several sets of public officers are assessing contract issues for the same project. As a result, risks are larger and more cumbersome and expensive to administer. Just the mere fact that the governments and public officials in charge will change at different times in the participating countries (elections are not simultaneous) generates additional regulatory risks.

Inward-looking economic policies that underestimate the benefits of foreign trade and investment, and curtail private activity are the first enemy of integration. Regulatory frameworks that implicitly prevent the free flow of infrastructure services are a more subtle and dangerous enemy. To deal with the regulatory challenges of transnational infrastructure projects, all countries must accept the principles that make integrated

■ **Governments do not have the human and financial resources to tackle the challenge of subnational and transnational infrastructure projects.** ■

markets possible. In other words, it is necessary to promote and ensure free trade in infrastructure services.

### **Concluding Remarks**

The next frontier in private infrastructure finance lies outside traditional national projects and is moving into the subnational and transnational arena. The countries of Latin America need to make qualitative efforts to increase the availability and access of local and transnational infrastructure in order to enhance the prospects for economic growth. National governments will not necessarily be delivering services directly. Moreover, regulation will not rely entirely on a particular national government. Local governments and supranational authorities are the new protagonists in the development of private infrastructure. The challenge to national governments is to give proper and balanced attention to both transnational and local infrastructure

projects.

The physical and economic integration of our countries should serve as a platform to accelerate growth and enhance the value of regional resources, creating economies of scale, paving the way for productivity gains and bringing down production costs. The availability of infrastructure is key to distribute the advantages of growth and globalization to all citizens, making solidarity and growth compatible.

Clearly, the risks faced by private providers of infrastructure services at the subnational and transnational levels are considerably larger than those faced at the national level. Therefore, if private participation in infrastructure services under central government jurisdiction took more than a decade to become significant in the region, we should be prepared for the long haul. Nevertheless, if governments want this to happen they must take a very proactive role in minimizing the risks to private participation. Even more than in the case of traditional infrastructure projects under national jurisdiction, governments do not have the human and financial resources to tackle the challenge of subnational and transnational projects. ■



credibility and positive impact on the behavior of market participants, can contribute to market discipline and improve resource allocation in financial markets. On the other hand, a deficient design may have negative effects, such as contributing to moral hazard and adverse selection and

reducing market discipline,<sup>1</sup> which, in turn, could contribute to the development of systemic financial problems or crises.

Deposit insurance systems are also relevant because they are related to the supervisory and regulatory framework and the operation of lender of last resort facilities. Financial regulation and supervision, a deposit insurance system, and a lender of last resort facility constitute indissoluble elements of a country financial sector architecture and safety net scheme. A

deposit insurance system is an important part of the financial safety net.

Recognizing the importance of deposit insurance systems, in March 2000, the Financial Stability Forum (FSF)<sup>2</sup> asked Mr. Jean Pierre Sabourin, President and Chief Executive Officer of the Canada Deposit Insurance Corporation, to chair a working group to prepare guidance for developing effective deposit insurance systems. The report prepared by the Working Group on Deposit Insurance (“Working Group”)<sup>3</sup> was

1 Moral hazard refers to the tendency of insured market participants to take additional risk because they are protected against loss. Adverse selection refers to the tendency of more risky market participants to get engaged in insurance arrangements and less risky ones not to. Market discipline refers to a situation where market participants monitor and assess the risk characteristics of financial assets and institutions and act upon such assessments exerting influence on assets’ pricing and institutions’ behavior.

2 The Financial Stability Forum (FSF) was created in 1999 to promote international financial stability, improve the functioning of markets, and reduce systemic risk.

3 The Working Group comprised representatives from Argentina, Canada, Chile, France, Germany, Hungary, Italy, Jamaica, Japan, Mexico, The Philippines, the United States of America, the World Bank and the International Monetary Fund.



◀ p. 4 **Deposit Insurance Systems**

■ **The main objectives of deposit insurance systems are to contribute to the stability of the financial system and to protect less-financially-sophisticated depositors.** ■

endorsed by the FSF on September 7, 2001.

The preparation of discussion papers and a consultative process that involved more than 100 countries and several institutions, including multilateral organizations, provided the basis for the guidance. The Inter-American Development Bank contributed to this process by organizing a dissemination meeting of the Working Group (Outreach Session, IDB Headquarters, July 2000), and providing support to the Working Group and Mexico's Instituto para la Protección al Ahorro Bancario (IPAB) during an Outreach Session held in Mexico (October 2000).

As Mr. Andrew Crockett, Chairman of the FSF, points out in the Preface to the Working Group's final report:<sup>4</sup> "The FSF report on deposit insurance is built on three general findings. First, explicit and limited deposit insurance is preferable to implicit coverage if it clarifies obligations to depositors and creditors and limits the scope for discretionary decisions that may result in arbitrary actions. Second, deposit insurance systems must be properly designed, well implemented and understood by the public to be credible and avoid moral hazard. Third, to be effective, the deposit insurance function needs to be part of a well-designed financial safety net, supported by strong prudential regulation and supervision, effective laws that are enforced, and sound accounting and disclosure regimes."

The Working Group report provides guidance to develop an explicit, limited-coverage deposit insurance system. It concentrates first on analyzing contextual issues related to different forms of depositor protection and identifying the main issues that need to be addressed when adopting or reforming a deposit insurance system. Second, it refers to the design issues that contribute to the effectiveness and credibility of a system. Finally, it addresses the key issues related to failure resolution, the reimbursement of depositors, and claims and recoveries.

The process of adopting a deposit insurance system or reforming an existing one should start by specifying appropriate public policy objectives and assessing the conditions that can influence the design of the system. After this assessment is completed, policymakers should turn their attention to specific design features, including the mandates, powers, basic organizational structure of the deposit insurer, and the interrelationships among safety net participants. Policymakers then should consider membership and coverage issues. Establishing funding arrangements is also essential, given the need to have access to adequate funds in order to reimburse depositors promptly. Decisions also must be made on how to deal with failed banks and how to reimburse depositors. Finally, a continuous improvement process should be instituted for reviewing the extent to which a deposit insurance system is meeting its objectives and is able to deal with evolving challenges.

### **Summary of the Key Points of Guidance**

The Working Group report presents about 60 guidelines related to 20 topics, covering issues from the determination of policy objectives to the mechanisms for failure resolution and reimbursing depositors. The summary of the guidelines presented below groups them into seven types of issues: contextual, policy, institutional, membership, coverage, funding, and failure resolution and reimbursement of depositors.

### **Contextual Issues**

Although there are several choices on how to protect depositors, an explicit system that offers limited coverage is preferable to an implicit one if it defines the authorities' obligations and limits the scope for arbitrary or discretionary decisions. However, to be effective, such a system needs to be part of a properly designed safety net. It must also be well implemented and supported by strong prudential regulation and supervision, sound accounting and disclosure regimes, and the enforcement of the legal and regulatory framework. Additionally, public awareness about the benefits and limitations of the system is crucial to maintain and strengthen the system

■ **Explicit, limited-coverage deposit insurance is preferable to implicit protection if it clarifies the authorities' obligations and limits the scope for ill-conceived discretionary decisions.** ■

credibility and effectiveness. In particular, it should be clear that a deposit insurance system might deal with a limited number of simultaneous bank failures, but should not be expected to deal with systemic banking crises.

A poorly designed financial safety net may increase moral hazard. This risk can be mitigated through good corporate governance and sound risk management of individual banks, effective market discipline, and strong prudential regulation and supervision, as well as by specific design features. These features include placing limits on the amounts insured, excluding certain categories of depositors from coverage, using certain forms of coinsurance, implementing risk-adjusted premium assessment systems, minimizing the risk of loss through early closure of

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4 A full version of the report can be downloaded from [www.fsforum.org/Reports](http://www.fsforum.org/Reports) or [www.cdic.ca/international](http://www.cdic.ca/international).



troubled banks, and demonstrating a willingness to take legal action when necessary.

### ***Policy Issues***

The first step in designing a deposit insurance system is to identify the public policy objectives that it is expected to achieve. As stated above, the principal objectives of deposit insurance systems are to contribute to the stability of the financial system and to protect less sophisticated depositors.

When adopting or reforming a deposit insurance system, policymakers should conduct a situational analysis, including examinations of the banking system; public attitudes and expectations; and the legal, regulatory, supervisory, accounting and disclosure frameworks. The characteristics of the legal framework and the strength of prudential regulation and supervision will have implications for the effectiveness of a deposit insurance system. When gaps are identified, necessary actions should be taken either before or together with the adoption or reform of a deposit insurance system.

When transitioning from a blanket guarantee to a deposit insurance system, policymakers should consider public attitudes and expectations and the effects of different countries' protection levels in the presence of a high level of capital mobility, and/or regional integration policies. The transition from a blanket guarantee to a deposit insurance system should be as rapid as a country's circumstances permit. Consideration should be given to alleviating fears that result from the reduction in protection for depositors and other creditors and the capacity of the banking system to fund a new deposit insurance system.

Policyholders should consider the

**■ To minimize the risk of moral hazard and adverse selection and to foster market discipline, a deposit insurance system should be properly designed, correctly implemented, and well understood. ■**

use of a self-assessment methodology to assist them in the design, implementation, and modification of a deposit insurance system.

### ***Institutional Issues***

There is no unique set of purposes and official instructions suitable for all deposit insurers. The mandate and powers formally given to the deposit insurer should be consistent with the policy objectives of the system. A deposit insurer should have all powers necessary to fulfill its functions.

The structure of the system must be determined either by assigning the deposit insurance functions to an existing organization or establishing a separate entity. Regardless of its structure and the nature of the administration (official or private), the form of governance utilized in a deposit insurance system should reflect the mandate and the degree to which the deposit insurer is legally separated from other financial safety net participants. The governing body should include individuals with the authority to make decisions, subject to a fit-and-proper test, and free from conflicts of interest. The governance structure should be transparent and subject to clear oversight and accountability. Deposit insurers should attract and retain qualified human resources, which should receive legal protection against lawsuits for actions taken in good faith.

**■ To be effective, a deposit insurance system needs to be part of a well designed financial safety net, well implemented, and supported by strong prudential regulation and supervision. ■**

When a single organization performs all of the safety net functions, clarity of mandates and adequate accountability among the relevant departments are required. When the functions are assigned to different organizations, establishing an explicit and clear interrelationship among the safety net participants is crucial. In that case, close coordination and information sharing among safety net participants is essential.

### ***Membership***

Banks to be included in a deposit insurance system should be subject to strong prudential regulation and supervision. Membership of eligible banks should be compulsory to reduce the problem of adverse selection faced by deposit insurers. However, eligible banks may be given membership automatically or be asked to apply for entry. Establishing entry criteria provides a degree of flexibility for the deposit insurer to control the risks it assumes. Domestic banks are the principal institutions covered by most deposit insurance systems. The inclusion of foreign banks and branches, non bank financial institutions, and state-owned banks could enhance the stability of the financial system, ensure competitive equity, and diversify the deposit insurer's risks.

### ***Coverage***

Considering the relative importance of different deposit instruments and the public policy objectives of the system, policymakers should define what is an insurable deposit and determine a credible level of coverage. Deposit insurance should apply on a per depositor per bank basis to effectively limit coverage, contribute to the stability of the financial system, and keep the requirement for information reasonable.

The use of coinsurance can foster market discipline and reduce the costs of deposit insurance. Coverage limits may need to be adjusted periodically because of inflation, real income growth, the development of new financial instruments, and the way in which these factors influence the composition and size of deposits. If the system covers deposits denominated in foreign currencies, the deposit insurer should manage prudently foreign exchange risks.

Cross-border issues are relevant in determining coverage. In particular, multiple reimbursements of insured depositors should be avoided if the host country system provides supplementary coverage. Likewise, the deposit insurance provided by the home country system should be recognized in the determination of premiums.

### **Funding**

An effective deposit insurance system should have sound funding arrangements and mechanisms to ensure the prompt reimbursement of depositors' claims. Member banks should pay the cost of deposit insurance because they and their clients directly benefit from having an effective deposit insurance system. The premium system may be flat-rate or differentiated on the basis of individual bank's risk profile. The bases and criteria used in a risk-adjusted differential premium system should be transparent to all participants, and consideration should be given to the advantages and disadvantages of keeping the risk profiles of individual banks confidential.

In practice, deposit insurance systems often are funded on a combined ex-ante and ex-post basis. The deposit insurer should make certain that funds are well managed and readily available to cover losses. A case can be made either for establishing and maintaining one fund or for establishing and maintaining separate funds for different types of financial institutions. If separate funds are established,

### **■ An effective failure resolution process should reimburse depositors promptly, minimize resolution costs, maximize recoveries on assets, and reinforce market discipline. ■**

policymakers should ensure that distinctions among the institutions and their funds do not distort competition.

### **Failure Resolution and Reimbursing of Depositors Issues**

Cooperation among the financial safety net participants in failure resolution is essential to handle troubled banks in a timely and effective manner. The determination and recognition that a bank is in serious financial difficulty should be promptly made on the basis of well-defined criteria. An effective failure resolution process should ensure that depositors are reimbursed promptly, minimize resolution costs and disruption of markets, maximize recoveries on assets, and reinforce discipline through legal actions in cases of wrongdoing. Policymakers may wish to review whether bankruptcy laws facilitate an orderly exit of troubled banks.

The deposit insurer should know promptly when a bank will be closed. Access to the necessary deposit data before the bank is closed reduces the risk of manipulation of records, shortens the time for reimbursing depositors, and helps preserve public confidence.

The powers of the entity responsible for the claims-and-recoveries function should include control of the failed bank's assets, and the ability to allow or disallow claims, enforce or repudiate obligations, and challenge fraudulent transactions. Commercial considerations, merits, and transparency should guide asset management and disposition strategies. Claims against directors, officers, and other parties related to the bank failure may result in better recoveries and foster market discipline.

Depositor ranking (priority) rules affect failure resolution costs and the

incentive for creditors to exert market discipline. Extensive collateralization of bank's liabilities may also affect deposit insurer's costs. Finally, it should be considered whether rights of set-off<sup>5</sup> apply to all loans or only those due or in default and whether set-off also can be influenced by the priority of claims in a bank failure.

### **Conclusion**

Deposit insurance arrangements in Latin America and the Caribbean are varied. Several countries do not have an explicit system or only have implicit coverage. Fourteen countries have explicit deposit insurance schemes (see chart on page 8). Membership is compulsory in all of them. Most systems are officially administered. The private sector plays a role in the administration of the systems in only four countries (Argentina, Brazil, Dominican Republic, and Peru). Eleven countries offer limited coverage of deposits. Ecuador had a full blanket guarantee until recently and now offers a limited coverage that is being gradually reduced over time. Two countries have a full blanket guarantee but are transitioning to systems with explicit limited coverage (Honduras and Mexico). Costa Rica offers unlimited coverage but only for deposits in state-owned banks. Only three countries have systems with coinsurance (Chile, Colombia, and Ecuador). Although there are also differences among countries with regards to funding, most of the systems are only partially pre-funded.

These are typical issues associated with deposit insurance schemes. Considering the particular characteristics of countries in the region, other topics should also be considered. For instance, the impact of recent develop-

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<sup>5</sup> Set-off refers to situations in which the claim of a creditor against an insolvent institution is deducted from a claim of that institution against the same creditor.



### ◀ p. 7 Deposit Insurance Systems

ments in electronic money and banking (e-money and e-banking) on financial intermediation should be taken into consideration when designing deposit insurance schemes. Also, the effects on income redistribution and poverty may be analyzed when designing special features such as membership and coverage.

In any case, all of the systems in the region have the potential to be enhanced. The guidance proposed by the Working Group and endorsed by the FSF is a useful tool for policymakers in the region to assess and reform the schemes currently in use. Further discussion of deposit insurance guidelines and analyses of the pros and cons of the issues and alternative features will promote the implementation of deposit insurance systems that better contribute to systemic financial stability and the protection of de-

positors, while reducing the risk of moral hazard and fostering market discipline. The Inter-American Development Bank has supported the process of discussion and dissemination of the deposit insurance guidance. Now, the IDB stands ready to collaborate with member countries in the analysis and implementation of reforms for their particular deposit protection schemes. ■

### Explicit Deposit Insurance Schemes in Latin America and the Caribbean

IDB Member Countries	Date Enacted/ Revised	Membership	Primary form of Administration	Limited Coverage	Coinsurance
Argentina	1971/1995	Compulsory	Private	Yes	No
Brazil	1995	Compulsory	Private	Yes	No
Chile	1986	Compulsory	Official	Yes <sup>6</sup>	Yes
Colombia	1985/2000	Compulsory	Official	Yes	Yes
Costa Rica <sup>7</sup>		Compulsory		No	No
Dominican Republic <sup>8</sup>	1962	Compulsory	Official/Private	Yes	No
Ecuador	1998/2000	Compulsory	Official	Yes	Yes <sup>9</sup>
El Salvador	1999	Compulsory	Official	Yes	No
Honduras	1999/2001	Compulsory	Official	Blanket-transitioning	No
Jamaica	1998	Compulsory	Official	Yes	No
Mexico	1986/1990	Compulsory	Official	Blanket-transitioning	
Peru	1992/2000	Compulsory	Official/Private	Yes	No
Trinidad & Tobago	1986	Compulsory	Official	Yes	No
Venezuela	1985	Compulsory	Official	Yes	No

<sup>6</sup> There is full coverage for demand deposits.

<sup>7</sup> Only deposits in state-owned banks have explicit coverage.

<sup>8</sup> Only deposits in savings and loans associations have explicit coverage.

<sup>9</sup> The coinsurance applies only for deposits larger than a certain amount (US\$8,000).

## Book Reviews, Articles & Papers

### **Real Options: Evaluating Corporate Investment Opportunities in a Dynamic World,** by

*Sydney Howell, David Newton, Andrew Stark, and Dean Paxton.*  
July 2001, Financial Times, Prentice Hall.

The study of real options has taken off relatively recently and constitutes one of the most important developments in business decision analysis. Real option analysis derives from the value of options on share or stocks in the financial markets. It helps us decide how much money we should spend to acquire an economic opportunity and when we should commit ourselves to one of the available decisions. Real options analysis is increasingly used by companies to value intangible assets as well as investment opportunities and is becoming an integral part of corporate strategy. A real option is a tool, which allows an economic agent to make a decision in the future, e.g., whether to invest, not to invest, to postpone the investment, or to sell it. Between now and the time of the decision, market conditions will change making one of the decisions available better than the rest. The real options will give the right to make that decision once the information is available because at some point in the past the right to make that decision was acquired. Real options integrate investment, operations and disinvestment.

For example, when designing an electricity generator a company may choose to pay a higher capital cost for a plant able to burn either gas or oil. The differential price constitutes the cost of the real option, which will be exercised sometimes in the future as the conditions warrant.

The book provides specific guid-

ance on directing or applying real options analysis in financial decision-making in a number of cases, with spreadsheet solutions and without high mathematics sophistication. The book provides examples that include the valuation of a power plant under uncertainty, a real estate development and even a real option case related to the Manchester United Football team. It should be underlined that all four authors are senior academics at Manchester Business School, a leading business school in Great Britain.

In sum, real options give managers powerful tools for assessing value accurately, for managing resources more flexibly and responding rapidly to a changing environment. The book provides the reader with a substantial and comprehensive understanding of real options, the concepts behind the analysis and how to use them. It demystifies the scientific aura surrounding the subject, giving the reader the understanding necessary to direct or apply real option analysis in any organizational setting.

The book does not discuss the policy implications of the various examples presented. Its main objective is to focus on the concepts and the analysis of real options. However, a somewhat knowledgeable reader will clearly recognize the public policy implications involved, e.g., in concessions or in private sector lending of international financial institutions. The implications that real options have for public policy, particularly those related to activities in emerging markets and associated with the work of multilateral development banks, deserve more research and attention. The book begins with an introduction to real options analysis. That discussion is followed by an examination of

modeling techniques for tackling and solving real options and the application of financial option concepts to real options. The discussion then moves to an application of real options to specific cases and the pitfalls of real options analysis and how to avoid them. The volume ends with thoughts of the future of real options analysis.

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### **Prelude to Political Economy. A Study of the Social and Political Foundations of Economics,** by

*Kaushik Basu.* New York, NY: Oxford University Press, 2000.

Mainstream economics treat institutions, politics and government as exogenous. Its methods, especially game theory, have pervaded other social sciences at a very high pace. The author calls for a more cautious approach. Though Basu uses game theoretic reasoning across the board, he thinks of a stepwise process to study markets and the economy as embedded in society, politics and the law. A lot of work must be conducted before we get a clear understanding of how this embedding takes place. The absence of such understanding renders poor policy recommendations.

The book attempts to explain government as endogenous. Basu starts by discussing how certain "extra-economic" activities like theft, larceny and blackmail are allowed or rejected voluntarily by individuals, when in principle they are feasible choices. Basu states that "Once we start from ... a large do-

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## Book Reviews, Articles & Papers

main to get the case where the general equilibrium model works, we need either social norms that effectively restrict the set from which one chooses, or the institution of government, with coercive powers, or some related institution, in order to prevent individuals from finding some of these extra-economic activities worthwhile.”

Basu studies norms in conjunction with beliefs. Just as norms play a key role in determining how an individual or a group fares in life and whether a nation prospers or stagnates, so can the beliefs of people. Beliefs are often self-fulfilling. Basu provides the following

example: in India, speculators are believed to be obnoxious. Casual observation confirms the impression. Suppose that those who have a zeal for making money are willing to bend the rules, cut corners and perhaps cheat friends. Suppose as well that people like to be liked, and that society believes that speculators are obnoxious. It is possible in such a society, that only those whose love of money is strong enough will be willing to incur the social opprobrium of being thought to be obnoxious. However, belief that speculators in India—and probably everywhere—are obnoxious will thus have been rendered true!

Basu proceeds to address the interplay between law and economics. He states and elaborates a core *theorem of law and economics: Whatever behavior and outcomes in society are legally enforceable are also enforceable through social norms.* This is equivalent to two corollaries: (i) *What can be achieved through the*

*law can, in principle, also be achieved without the law; (ii) If a certain outcome is not an equilibrium outcome for the economy, then no law can implement it.* Thereafter the book discusses power and coercion, the science of advising endogenous government, and the concept of “state”, which cannot be taken for granted.

This very relevant work has immediate implications for policy design in infrastructure and financial reforms. A sector reform will succeed if it “Pareto-improves” the *status quo* and the reallocation of rights can be sustained by the interplay of interested parties. The issuing of formal rules to change the governance of an economic sector (new laws or the creation of regulatory bodies) is not sufficient to move forward, as the second corollary reminds us. More and complementary actions are required, on a continuous basis.

JB

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### Infrastructure

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\* *Competition Policy in Latin America: Implications for Infrastructure Services.* By Carmen Fuente. Best Practice Study, 2001, IFM-126.

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\* *Infrastructure Finance Directory 1997, 1998, and 1999 editions.* Edited by Antonio Vives. IFM-117, IFM-114.

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- \* *Private Infrastructure and Inter-American Development Bank Group Support*. By Jorge Rivas and Antonio Vives, Special Report.
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- \* *Roles for the Private Sector, Governments and Multilateral Creditors in Latin American Private Infrastructure*. By Martin Chrisney and Antonio Vives (1996).

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