

## IN THIS ISSUE

Infrastructure Concessions in Latin America and the Caribbean: The Renegotiation Issue and Its Determinants .....	1
Developing Bond Markets in Latin America and the Caribbean .....	1
Infonet .....	12



## INFRASTRUCTURE

### Infrastructure Concessions in Latin America and the Caribbean: The Renegotiation Issue and Its Determinants

*J. Luis Guasch\**

#### I. Private Sector Participation and New Regulations and Risks

Developing countries have turned to the private sector to finance and operate infrastructure services, seeking investment and know-how to accelerate

improvements in levels and quality of service. Private participation has been often preceded by sector restructuring and by new laws and regulations. Such efforts were intended to protect investors from politically motivated government intervention and users from the abuse of

► p.2

\* J. Luis Guasch is Senior Regional Advisor for the Latin America and Caribbean Region at the World Bank and Professor of economics at the University of California at San Diego.



## FINANCIAL MARKETS

### Developing Bond Markets in Latin America and the Caribbean

*Pietro Masci and Benjamin M. Rowland\**

#### I. Introduction

The development of financial markets is a critical issue facing emerging-market countries. The East Asian crisis of 1997-98 showed that neglect of the financial sector results in serious costs and hinders economic growth. When conditions are right, capital market

development makes countries stronger through, among other things, the benefits of diversification, risk transformation and mitigation, and by placing timely, accurate, and transparent information in the public domain. Countries that master the skills and disciplines associated with capital markets development tend to have higher levels of capital forma-

► p.6

\* Pietro Masci is the Chief of the Infrastructure and Financial Markets Division, Inter-American Development Bank. Benjamin M. Rowland is an independent policy advisor.



◀ p.1 **Infrastructure Concessions**

monopoly or dominant positions by new private operators (since many infrastructure services have components of natural monopolies), and to ensure competition between new entrants and dominant incumbent operators when feasible.

Required investments are often highly specific sunk costs that may tempt governments to behave opportunistically, taking regulatory actions that expropriate rents once costs are sunk, such as compulsory or unilateral renegotiations of agreed contract terms. Aware of such pitfalls, investors may require an additional premium (higher tariffs, smaller transfer fees) to account for the risk. Depending on the country and sector, such regulatory risks can add 2 to 6 percentage points to the cost of capital.<sup>1</sup> Higher tariffs and lower transfer fees or sale prices are then needed to cover

these higher costs. For example, a 5 percentage points increase in the cost of capital to account for regulatory risks will reduce an offered transfer fee or sale price by 35 percent, or require a 20 percent increase in tariffs. For example, in the water concession in a Latin American city the regulator grants a 3.5 percent increase in tariffs for each 1 percentage point increase in the cost of capital.

But not only governments may behave opportunistically. Once a private enterprise has been granted an infrastructure concession, it may be able to “hold up” the government—for example, by insisting on renegotiating the contract, seeking more favorable terms, or through regulatory capture. The extensive information advantages that an enterprise has over government (as well as, in most cases, over other potential operators) and perceived leverage in negotiations can give it strong incentives to renegotiate a contract and secure a better deal than the original bid. The resulting regulatory arrangements may be less effective in protecting customers from monopoly abuses. Thus, the design of regulations, concession and privatization contracts, and implementation agreements can significantly affect sector performance and the incidence of renegotiation.

For private sector participation to be successful and achieve the desired objectives, contracts and regulations need to be designed and enforced appropriately. Once the proper design is in place then the key objective should be to ensure that the contracting parties comply with the agreed conditions. Thus, barring major unforeseen events and contingencies (which can be spelled out in the contract), the key issue is how to increase the likelihood that the signatory parties to a concession contract, the private sector operator and the government, comply with the terms of the contract, and that opportunistic renegotiation by either party is dissuaded. A key starting point is the design of better contracts that, while seeking long-term sector efficiency, do not facilitate renegotiation and penalizes noncompliance.

## II. Concessions and the Problem of Renegotiation

Over the past 15 years concessions have significantly improved infrastructure services in many countries. Still, privately provided services have raised many concerns. In some cases conflicts emerged because operators did not comply with contract clauses, charged tariffs considered excessive, or were unresponsive to users. In other cases governments did not honor contract clauses to adjust or index prices. But perhaps the biggest problem with concessions has been the high incidence of contract renegotiation shortly after they are awarded, with the outcome usually detrimental to consumer welfare. Usually, concessions are granted through an auction. The competitive nature of the auction is supposed to dissipate rents and select the most efficient operator. But if concessions are renegotiated shortly after their award, as often happens, the initial bidding or auction turns into a bilateral negotiation between the winning operator and the government—undermining the competitive discipline and benefits of the auction. At that stage, the operator has significant leverage to secure additional benefits because the government is often unable to reject renegotiations and is usually unwilling to claim failure—and let the operator abandon the concession—for fear of political backlash and additional transaction costs. By embarking in renegotiations, the operator can undermine all the benefits of the bidding- or auction-led competitive process. And if bidders expect easy renegotiations, the auction might result in the selection of those who are the most skilled at renegotiation rather than the most efficient operators.

### **The Incidence of Renegotiation**

Renegotiation occurs when the original contract and the financial impact of a concession contract are significantly altered and such changes were not the result of contingencies spelled out in the contract. For example, stated and standard tariff adjustments due to inflation or other stated drivers do not count as reasons for renegotiation.

Infrastructure and  
Financial Markets

*Review*



Inter-American  
Development Bank

#### **Editorial Board**

Marcelo Antinori, Pietro Masci, Silvia Sagari, Roberto Vellutini, Antonio Vives

#### **Editor for this issue**

Fernando de Mergelina

#### **Managing Editor**

Juan Jose´ Durante

1300 New York Ave, N.W.  
Washington, DC 20577  
Stop W-0508  
Phone: 202-623-2617  
Fax: 202-623-2157  
Email: [sds/ifm@iadb.org](mailto:sds/ifm@iadb.org)

The views and opinions expressed in this publication are those of the authors and do not necessarily reflect the official position of the Inter-American Development Bank. Contributions to the Infrastructure and Financial Markets Review are welcome. Please send comments to [sds/ifm@iadb.org](mailto:sds/ifm@iadb.org). All issues of this publication are available at: [http://www.iadb.org/sds/IFM/site\\_154\\_e.htm](http://www.iadb.org/sds/IFM/site_154_e.htm)

[1] Guasch, J. Luis and Pablo Spiller. 2001. *The Challenge of Designing and Implementing Effective Regulation: A Normative Approach and an Empirical Evaluation*. The World Bank, Washington, D.C.

**Used opportunistically or strategically by an operator or government to secure additional benefits, renegotiation can undermine the integrity of a concession and reduce welfare.**

Excluding the telecommunications sector (that was privatized rather than concessioned), more than 44 percent of infrastructure concessions in Latin America and the Caribbean have been renegotiated.<sup>2</sup> The sectors most affected were transport and water and sanitation, with a renegotiation incidence of 55 and 75 percent respectively (Table 1). Of additional concern has been the very fast timing for renegotiation. The time between the start of operations and the renegotiation of contracts has averaged about 2 years, despite original contract agreements of 20 to 30 years (Table 2). Moreover, this estimated incidence of renegotiation is likely an underestimate because the process is ongoing, and in the next few years additional concessions will likely be renegotiated.

In principle, renegotiation can be a positive instrument when it addresses the inherently incomplete nature of con-

cession contracts. While some renegotiation is desirable, appropriate and to be expected, this high incidence exceeds usual and reasonable levels and raises concerns about the validity of the concession model. It might even indicate excessively opportunistic behavior by new operators or by governments, undermining the efficiency of the process and overall welfare, since renegotiation takes place in a bilateral context (government and the operator) and away from and not subject to competitive pressures and associated discipline. When not driven by the incompleteness of a contract but used opportunistically or strategically by an operator or government to secure additional benefits, renegotiation can undermine the integrity of a concession and reduce welfare, as well as threaten desired structural reform programs in infrastructure. The high incidence reported here should be indeed a cause for concern.

**The Principle of Financial Equilibrium in Regulated Markets: Usually the Basis for Renegotiation**

By definition, certain features of regulated sectors make them more prone to renegotiation. First, regulation constrains the actions that a concessionaire can take, the most important of which is setting tariffs. Second, tariffs are expected to be set so that they allow the concessionaire to earn a fair profit. When firms are not able to earn expected returns, it is rational for them to expect a change in contract terms. This is the premise behind the so-called financial equilibrium clause, which is implicit or explicit in most concession service contracts and legislation. That is, in principle, a valid pillar of any concession contract, since private investors should be allowed to earn a fair rate of return on their investments. Having said that, it is also correct that the financial equilibrium ought to be subject to a number of provisos, including condi-

tions requiring efficient operations and honoring of the initial bid. The following equation offers a simplified representation of financial equilibrium, where revenues minus costs should provide the appropriate return on investment:

$$R = PQ - OC - T - D = rKi,$$

where  $R$  is profits,  $P$  is prices or tariffs,  $Q$  is quantity or output,  $OC$  is operation and maintenance costs,  $T$  is taxes,  $D$  is depreciation,  $r$  is the opportunity cost of capital, and  $Ki$  is invested capital. If the award criterion is a transfer fee, it appears under  $Ki$ . If it is the lowest tariff, it appears under  $P$ . In principle any appropriate bid, whether based on  $K$  or  $P$ , has an analysis behind it that balances the above equation.

A strategic or opportunistic bid (a transfer fee or a tariff) is, presumably, one where the left-hand side of the equation (profits) is less than the right-hand side (allowed returns to capital). The objective of such a bid is to win the concession with the expectation of later renegotiation, arguing that the equation does not balance, and higher tariffs or lower future investments are needed to restore financial equilibrium.

Ample anecdotal evidence indicates the existence of apparent opportunistic bidding on concessions, a cause for concern. Strategic underbidding (or overbidding, depending on award criteria), to some extent encouraged by the incompleteness of contracts, also may explain the high proportion of renegotiations. Firms win concession contracts by strategically underbidding (or overbidding), with the expectation that they will be able to renegotiate in the future. Thus, bids will not necessarily be correlated with efficiency, and some enterprises may possess a systematic advantage in renegotiation skills and chances of success.

**Bidding, Renegotiation and Government Responses: The Sanctity of the Bid**

In a regulated environment where firms are not free to adjust prices howev-

**Table 1: Incidence of Renegotiation of Concessions in Latin America, Total and by Sector, 1985-2000**

Total	31%
Total without Telecom.	44%
Energy Sector	13%
Transport Sector	55%
Water Sector	75%

Source: Guasch (2003)

**Table 2: Average Time to Renegotiate (in number of years)**

ALL RENEGOTIATED CONCESSIONS	Transport Sector Only	Water Sector Only
2.19	3.32	1.60

Source: Guasch (2003)

(2) Guasch, J. Luis. 2003. *Granting and Renegotiating Infrastructure Concessions: Avoiding the Pitfalls*. The World Bank, Washington DC.



er they see fit, and in the event of adverse economic conditions that do not allow them to earn expected returns, it is rational to expect a change in contract terms to restore profitability, that is, it is rational to expect renegotiation. Thus, it might make sense for firms seeking concession rights to submit their most optimistic bids, with the expectation that, if things do not turn out as well, they can renegotiate the terms of the contract, drawing on the financial equilibrium clause. But what if the financial equation does not hold because a firm submits an unreasonable bid with a very high transfer fee or very low tariff? Should the firm be held to its bid, or should it be bailed out? The right answer is that, barring major external factors, operators should be held to their bids. And if petitions for renegotiation are turned down, operators ought to feel free to abandon the projects and bear the corresponding costs or penalties. The appropriate behavior for government is to uphold the sanctity of the bid and not capitulate to opportunistic requests for renegotiation. Doing so may lead to the abandonment of a concession, but that is a price worth paying, and in fact can help governments establish a reputation for not been easy with renegotiation demands and, in doing so, it would discourage future aggressive bids. Governments should reject opportunistic requests for renegotiation more often and allow concessions to fail. Such outcomes would reduce the incidence of renegotiations.

But governments have had a hard time adopting that strategy because there are political costs to accepting concession failures. Although cancellations and renationalizations of private infrastructure projects attract headlines, they have been relatively uncommon. Of the 2,485 private infrastructure projects concluded between 1990 and 2001, just 48 (less than 2 percent) saw the exit of the private sector. But such data may simply indicate that governments have been

■ ***Firms win concession contracts by strategically underbidding or overbidding, with the expectation that they will be able to renegotiate in the future.*** ■

unable to commit to a policy of no renegotiation and have conceded to opportunistic renegotiation. Many governments have conceded rents to operators during opportunistic renegotiations when it would have been more appropriate to hold the operators to their initial bids even though, in the short term (that is, before a government establishes a reputation for not conceding to opportunistic renegotiation), such an approach would increase the number of abandoned concessions. Thus, it could be argued that the incidence of abandoned concessions has perhaps not been high enough to establish a needed reputation signaling a credible commitment to a policy of no opportunistic renegotiation and reach the steady state “good” equilibrium of much limited renegotiation demand and incidence.

A second best, but difficult, approach for government is to reject aggressive bids. But that is difficult and seldom done. Indeed, such bids are celebrated as a sign that the government has secured a very high transfer fee or very low tariff. Paradoxically, even well-meaning governments might avoid disqualifying aggressive offers for fear of being accused of corruption or favoritism.

Given that renegotiation requests are often accepted and resolved in favor of concessionaires, aggressive bidding and frequent renegotiation demands should not be surprising (near 70% of renegotiations are initiated by the operator). Thus, it often makes sense for firms to submit their most optimistic bids for concessions, with the expectation that if things do not turn out as well, they will be able to renegotiate the terms of the contract. But financial equilibrium imbalance can also be claimed at any time, and independently of having submitted a bid that is not financially viable. The information asymmetries on costs make it difficult for governments and regulators to properly evaluate those requests, creating incentives for firms to argue financial imbalance.

### ***The Case of Directly Awarded Concessions: Rents Captured at the Start and the Resulting Lower Incidence of Renegotiation***

An interesting empirical regularity from the data collected that provides additional support to the rent-seeking thesis is the low incidence of renegotiation (about 8 percent) on concessions granted not through competitive bidding but through direct adjudication or bilateral negotiation between the government and a single operator, as a result of government invitation or operator request. A plausible explanation for that low renegotiation incidence is that any rents to be captured were secured through the initial bilateral negotiation, reducing or eliminating the need for opportunistic operator behavior after the concession is awarded. Moreover, the lack of competition lessens the incentives to submit financially unsustainable bids.

In contexts where there is a direct adjudication of concession, any renegotiation usually comes from a new administration questioning a “sweet” deal granted by the previous administration, or from the same administration with different priorities. Examples include power purchase agreements with independent power producers in various countries and road concessions in a couple of countries.

The lower incidence of renegotiation in directly awarded concessions should not be interpreted as an endorsement of that process. To the contrary, it shows that there are problems with that process (rent capture, opportunities for corruption) and indicates that it should not be used.

### ***Other Elements that May Drive Renegotiation***

Governments also hold some blame for problems with concessions because they have often behaved opportunistically and interfered with contract clauses (forcing renegotiation, cutting tariffs unilaterally, not authorizing tariff increases

allowed in the contract, and so on). Operators can account for the risk of renegotiation in their bids, possibly leading to the selection of not the most efficient operator but the one who is best able to bear the risk. The result will be a contaminated process with higher regulatory risk that will translate into higher capital costs and higher tariffs. Thus, government-led is no better than operator-led renegotiation. While it is hard to envision eradicating government influence on regulatory decisions, properly designed concessions and regulations would make that behavior more costly.

Concessions that are poorly designed, riddled with ambiguities and often awarded in a hasty fashion also open the doors for renegotiation demands. The clustering of concession awards within a few years supports that hypothesis. Governments planning on introducing reforms feared that they had limited windows of opportunity to make their policy changes irreversible and so awarded concessions in a number of sectors almost simultaneously without taking sufficient time to design contracts appropriately and to set and implement appropriate regulatory frameworks. Some efforts emphasized speed, failing to include in contracts considerations related to acquisition of information about markets and specification of contingencies. Such shortcomings and contracts that are not water-tight add to incompleteness and increase opportunities for renegotiation.

Finally, macroeconomic shocks also bear some of the blame for renegotiation. Exchange rate risk is a major factor because project revenue is usually denominated in local currency and financing usually takes place in foreign currency. While there is little that operators and, in some cases, governments can do to prevent such shocks, clear contract guidelines should indicate what level of changes may trigger an adjustment and how to proceed and renegotiate under such conditions.

**Table 3: Contract features and the incidence of renegotiated concessions in Latin America and the Caribbean, mid-1980s–2000**

<i>Feature</i>	<i>Incidence of renegotiation (percent)</i>
<b>Award criteria</b>	
Lowest tariff	60
Highest transfer fee	11
<b>Regulation criteria</b>	
Investment requirements (regulation by means)	70
Performance indicators (regulation by objectives)	18
<b>Regulatory framework</b>	
Price cap	55
Rate of return	13
<b>Existence of regulatory body</b>	
Regulatory body in existence	17
Regulatory body not in existence	61
<b>Impact of legal framework</b>	
Regulatory framework embedded in law	17
Regulatory framework embedded in decree	28
Regulatory framework embedded in contract	40

Source: Guasch (2003)

### III. Determinants of Renegotiation

*Contract features and the incidence of renegotiation:* Analysis of over 1000 concessions<sup>3</sup> granted in Latin America and the Caribbean from 1985 to 2000 shows certain patterns. Renegotiation was far more likely when concession contract awards were based on the lowest proposed tariff (with renegotiation occurring in 60 percent of the cases) rather than on the highest transfer fee (11 percent). Renegotiation was also much more likely when concession contracts contained investment requirements (70 percent) than when they included performance indicators (18 percent). Moreover, the incidence of renegotiation was much higher under price cap regulation (55 percent) than rate of

return regulation (13 percent), and when a regulatory agency was not in place (61 percent) than when one was in place (17 percent). Finally, renegotiation was more likely when the regulatory framework was embedded in the contract (40 percent) than when embedded in a decree (28 percent) or a law (17 percent).

#### **Empirical Analysis of the Determinants of Renegotiation**

To identify the determinants of renegotiation, the impact of various explanatory variables on the probability of renegotiation was estimated through a probit model specification. The explanatory variables were chosen on the basis of theory and empirical evidence. They were: macroeconomic shocks, enforcement

► p.6

(3) Guasch, J. Luis. 2003. *Granting and Renegotiating Infrastructure Concessions: Avoiding the Pitfalls*. The World Bank, Washington DC.



quality, financial structure of the concession, extent of competition in the award process, extent of affiliation, tariff adequacy and lock-in effects, legal grounding of regulation, electoral cycles, risk allocations, and reputation and learning by government.<sup>4</sup> The main results were that regulations, concession design and political factors all play an important role.

*Regulation Matters:* As expected, the existence and type of regulation are highly significant in explaining the incidence of renegotiation. Both are proxies for the quality of enforcement, and better enforcement (through a neutral professional institution that can evaluate an operator's status and claims) should dissuade or reject inappropriate claims for renegotiation. In addition, a stronger legal grounding for regulation (embedded in a law rather than in a decree or contract) lessens the probability of renegotiation and increases the political cost of government-led renegotiation.<sup>5</sup>

The type of regulation also affects the probability of renegotiation, as the theory predicts, through risk allocation. Rate of return regulation lowers the probability of renegotiation because the costs of potential adverse events are borne by government. In contrast, price cap regulation, where risks are borne by the operator, is more fragile to shocks, such as when adverse events might trigger a demand to renegotiate by an operator seeking to restore financial equilibrium.

*Concession Design Matters:* Concession design also matters greatly, especially award criteria and investment obligations. Awarding contracts based on the lowest tariff rather than the highest transfer fee significantly increases the probability of renegotiation. First, tariffs are a weak anchor for a concession. They are subject to constant revisions, and it is

foolish to think that they will remain unchanged for the duration of a concession using the adjustments agreed upon.

Second, such award criteria impose little lock-in or sunk commitment on operators. Unlike with transfer fees, operators do not have to pay anything upfront, so their leverage is much stronger, and they can walk out early with little to lose. Finally, minimum tariffs might be viewed as a proxy for tariff adequacy. Their use as award criteria can lead to the bidding of inadequate tariffs and so prompt requests for renegotiation.

Investment obligations also affect renegotiation and increase its probability. These refer to regulating by means as opposed to regulating by objectives. Since the investments need to be evaluated, monitored, and accounted for, there is a permanent conflict in determining what counts as investments (for example, firms often argue that severance payments should count as investments), the amounts of investments, prices paid or transfer fees used, and so on. That leads to protracted negotiations and can lead to renegotiation. In principle, the implications are clear: no investment obligations should be required other than requirements to achieve a number of outcome targets (performance measures). That approach avoids the problem of measuring investment, manipulation of transfer fees, and proper use of investment.

Affiliation and proximity of operators to government matters and it also increases the probability of renegotiation through a higher possibility of capture and higher success in seeking renegotiation. That might induce risky offers and lead to the selection, not of the most efficient operator, but of the one most skilled in renegotiation or with higher affiliation.

Macroeconomic factors, especially devaluations, also increase the likelihood of renegotiation. Revenues from infrastructure services are collected in domestic currency, while investments

tend to be financed with foreign currency. Thus devaluations alter the financial equilibrium of the operator, leading to appropriate requests for renegotiation.

*Political Factors Matters:* Two political factors appear to affect the probability of renegotiation. One is the extent of corruption. If operators believe that their government counterparts are subject to influence, they will be more likely to believe that renegotiations and the capture of additional rents are possible.

The second political factor affecting the probability of renegotiation is the timing of elections. New administrations tend to reconsider actions taken by previous administrations, either because there are new priorities and a need to change contract terms accordingly, or because of politically motivated objectives. A typical example is when a new administration belongs to a different political party than the previous one and terminates agreements secured by the previous one to politically undermine it. Another example is the election of a new mayor who must grant tariff increases that were agreed to by the previous mayor. The new mayor must suffer the political cost of the tariff increase without having shared in the fiscal benefits of the concession. Many new mayors have refused to grant such increases and have sought renegotiation.

Finally the policy implications are clear: improved contract design and regulatory framework along the lines here described; holding the bidders accountable for their initial bids; making the costs of opportunistic renegotiation high through much larger performance bonds; committing to a policy of no renegotiation for at least the first quinquennial tariff review; making compensation to operators quite significant in the event of government-led renegotiation; specify the triggers for renegotiation and guidelines for the process; and establish a neutral and professional advisory group to evaluate renegotiations demands. ■

(4) Guasch, J. Luis. 2003. *Granting and Renegotiating Infrastructure Concessions: Avoiding the Pitfalls*. The World Bank, Washington DC; and Guasch, J. Luis, Jean-Jacques Laffont and Stephane Straub. 2003. "Renegotiation of Concession Contracts in Latin America." Policy Research Working Paper # 3011. The World Bank, Washington DC.

(5) Estache, Antonio, J. Luis Guasch and Lourdes Trujillo. 2003. "Price Caps, Efficiency Payoffs and Infrastructure Renegotiation in Latin America." in Conference Proceedings "The UK Model of Regulation: A Retrospective of the 20 Years Since the Littlechild Report." London Business School Press, London, UK.



◀ p.1 **Developing Bond Markets**

tion, grow more quickly, provide better financial services to their populations, and enjoy greater prospects for long-term financial and economic stability.

This essay focuses on the role of government in the development of bond markets as the first step of a strategy to create a healthy capital market. The paper reviews the experience of countries and regions of the world and derives recommendations for Latin America and the Caribbean.

The goal of developing a capital market is more appropriate in some countries than others. Economies of scale are inescapable, and even the largest Latin American countries have proven unable to defend important market segments against the pull of powerful international financial centers. Thus, national goals of building stronger financial systems and capital markets need to be grounded in a realistic assessment of which financial products and services truly have to be “home grown” and which are better obtained internationally.

Whether capital market development is defined in terms of building domestic markets and institutions, or “functionally” (where the aim is to ensure that domestic users and providers of capital have access to the best rates and terms), the two approaches must eventually converge. Competition is pervasive and money is ultimately fungible. Thus, domestic financial institutions must eventually match international competitiveness standards; otherwise, the competitiveness of their own clients would decline, and those with a choice would move elsewhere. The first building block of a capital market strategy is the development of a domestic bond market, which is consistent with the home-grown ownership.

## II. Experiences in Other Parts of the World

Domestic bond markets are growing and offering new kinds of instruments in many parts of the world. Asia, Europe and the United States offer interesting lessons.

### *The Asian Experience*

The crucial lesson drawn from the Asian crisis is the danger of the absence of diversification, manifested in an over reliance on banks, short maturities, and foreign currencies. The four economies hit by the crisis—Indonesia, the Republic of Korea, Malaysia, and Thailand—historically relied on short-term borrowing from domestic and foreign banks to fund their long-term needs. These countries were characterized by the success of their real economies, e.g., strong exports, low inflation, high growth, and low public sector deficits, but coupled with significant levels of government and political intervention that stunted the development of capital markets in general and domestic bond markets, in particular. Rather than tapping incipient domestic bond markets, companies gambled on the ability of their governments to maintain nominal exchange rates fixed and borrow in lower-coupon currencies (i.e., yen and dollar).

The corporate governance structure, characterized by disclosure-shy, family-held firms, favored a bank-centered system over a capital markets solution. Obstacles to a bond market alternative for private borrowers included the lack of a strong government securities market to provide a benchmark for private issuers, an underdeveloped role for institutional investors, and inadequate market infrastructure. All these elements reflected the absence of a government strategy to develop bond and capital markets.

Since the crisis, domestic bond markets have assumed much more importance and, in fact, are now the fastest growing asset class in Asian emerging markets. The fiscal deficits

that resulted from the crisis turned many Asian governments from modest net borrowers into large net borrowers. This, in turn, is helping to establish a government yield curve and benchmark instruments to assist banks and corporations in pricing their issues. Modest inflation and large domestic liquidity are keeping interest rates low and are expected to boost bond issuance. “Although the region’s bond markets remain national, a consistent approach to macroeconomic and institutional reforms as well as coordination in countries such as Korea, Malaysia and Thailand could provide the conditions for markets that are more regional in scope and with benefits for all.”

### *The European Experience*

Integration, liberalization, and technology have been the main drivers of the move toward achieving a single financial market in Europe. During the past 10 to 15 years, almost all European countries have put in place policies for bond market development as part of a capital market strategy made possible by the integration process and the adoption of a common currency. Countries such as Italy and Spain, whose public sector debt in the 1980s was heavily skewed toward short-term funding, now spread their debt over a larger spectrum of maturities. They have created benchmarks for corporate bonds and for other public sector entities (including local governments) as well as for equity markets, and they have encouraged the creation of derivative markets for government bills and bonds. Innovations such as Italy’s electronic trading platform for government securities, the *Mercato Telematico (MTS)* started in 1988, were widely replicated throughout Europe.

With the introduction of the euro, segmentation by national currencies is disappearing. Greater transparency and disclosure of information and a more efficient market infrastructure are facilitating secondary markets, liquidity, and



◀ p.7 **Developing Bond Markets**

comparisons among issues. With the elimination of exchange rate risk, bond spreads among national issues have narrowed. Credit risks have moved toward convergence as a result of the fiscal *stability pact* that commits governments to limit public sector deficits to 3 percent of GDP or less. However, factors such as transparency, speed and efficiency of issuance and trading systems, clearing and settlement procedures, regulatory frameworks, and specific government initiatives to boost liquidity (e.g., buying back less liquid issues, interest rate swaps) still are mostly determined at the national level, leaving much to be done. Although market competition is causing many of these factors to converge, after many years of trying, European Union members have yet to agree on a common framework for investment law.

### **The U.S. Experience**

The U.S. lessons stems from key decisions made two centuries ago, when it was an emerging country with an agrarian economy. Printing money and incurring large amounts of domestic and foreign debt financed the American Revolution. At the end of the war, in 1780, the federal government (which lacked taxing authority) and the states (all of which were in varying degrees of fiscal disarray), struggled to cope with debt. At the Constitutional Convention in 1786, the federal government gained the power to tax and regulate trade among the states. Given the task of funding the war debt, in 1789 the first Treasury Secretary, Alexander Hamilton devised a plan that has had a lasting impact on the development of the U.S. financial system: It assigned the entire war debt to the federal government. The initial placements in 1789 were, in effect, “junk bonds” and sold at 25 percent of face value. By 1792, however, the bonds were selling at 120 per-

■ **One of the main risks to capital market development in Latin America and the Caribbean is the “vicious cycle” that can arise when market-financed government borrowing drains resources from and crowds out the productive sector. ■**

cent of par and were attracting foreign investors. The U.S. bond market was born, and with it the U.S. capital market.

Although the U.S. capital market is taken as a model, it should also be seen as the product of forces, some deliberate and some accidental, that operated in an evolutionary fashion. For example, although today central bank independence is treated as a sacred principle, for part of the twentieth century, from 1914 to 1934, the Treasury secretary was ex-officio chairman of the Federal Reserve and had a strong influence on its policies, at least until the early 1950s. Also, interest rates, frozen during World War II, were not freed again until 1951, despite mounting postwar inflation.

There are other examples of the accidental nature of the development of the U.S. financial sector. Treasury markets remained unregulated under the 1933 and 1934 Securities and Securities Exchange Acts because lawmakers at the time were understandably focused on failures in the private rather than the public markets. But this “quirk of history” helped pave the way for the Treasury market scandals of the 1980s and 1990s. In the 1950s, Federal Reserve open market operations only used Treasury bills. Primary dealers (initially called “weekly reporters”) were not created until the early 1960s. Until the early 1970s, long-term debt was placed by subscription rather than auctions, and regularly announced auctions did not occur until the mid-1970s; nor did the use of accurate, statistically derived yield curves. Treasury benchmark securities eventually arose as a result of the accumulation of these practices and ballooning government deficits. However, their availability was not the result of a deliberate policy but the consequence of other policies.

Today, developments in information technology drive debt management in

the United States as much as the markets themselves. For example, the U.S. Treasury has reduced the time for releasing auction results from about 20 to 5 minutes, significantly lowering the period during which market participants are “at risk” for a lack of knowledge. At present, the U.S. Treasury’s overriding objective is to borrow money on behalf of the government on the best possible terms, which has led it to discontinue its long-term benchmark issue, the 30-year bond, widely used to price and hedge long-term corporate, municipal, and mortgage-related securities. The markets have adapted but not, according to some traders, without some increase in risks and decrease in liquidity.

### **III. The Government Bond Market: Opportunities and Dangers**

Although the experiences of Asia, Europe, and the United States are instructive, they do not capture one of the main risks to capital market development in the deficit-prone countries of Latin America and the Caribbean: the “vicious cycle” that can arise when market-financed government borrowing drains resources from and crowds out the productive sector. Governments can displace the private sector with a variety of techniques, including taxation, repression, or simply printing too much money. But whatever form it takes, fiscal irresponsibility on the part of governments often makes both the private sector and the government more dependent on short-term foreign capital inflows to fund long-term investments—a double mismatch of currency and maturity, which can be a recipe for disaster.

*Excessive dependence on short-term foreign capital is dangerous in emerging economies and in particular in those countries whose economies are relatively closed, and where the export*



■ **The emergence of a yield curve and benchmark instruments create attractive venues through which large institutional funds can invest for long periods, and enable the government to undertake long-term commitments.** ■

sector that would enhance competitiveness and innovation (and earn foreign exchange) is fragile. High debt service payments to foreign lenders can also fail these countries by removing valuable reinvestment resources from circulation. The international community, after suffering numerous losses, today demands high levels of disclosure from emerging market borrowers. Opportunistic investors may continue to lend in hard currencies at higher rates and for shorter terms, but prudent investors will simply disappear.

Experience shows that government efforts to dissuade capital flight via inflation-adjusted interest rates can often lead to radical and volatile changes in interest and inflation rates. When inflation is high and persistent, investors abandon financial assets and shift into nonproductive real assets, e.g., real estate. Financial institutions lose the ability to leverage their resources and shift their focus from the productive economy to short-term financial arbitrage. The vicious cycle culminates in the erosion of savings, financial institution disintermediation, slower growth, and a loss of investor confidence.

Vicious cycles are not inevitable. Governments can reap substantial benefits for their economies if they use capital markets with care and foresight. Governments that keep borrowing to prudent levels gain a useful instrument of fiscal policy and set the stage for creating financial markets that serve private as well as public borrowers. Building a yield curve, or *term structure of interest rates* and creating and maintaining liquidity at critical points along the curve through the development of *benchmark instruments* are two of the most important services that governments can provide. Each of these visible achievements is *prima facie* evidence of a gov-

ernment's commitment to stable financial policies. The term structure reveals interest rate and inflation expectations, strengthening the quality and reliability of foreign and domestic private sector planning and investment decisions. Other instruments and innovations can be designed and priced more easily in the financial marketplace, including but not limited to mortgage-backed securities, equities, and bonds.

The emergence of a yield curve and benchmark instruments create attractive venues through which large institutional funds can invest for long periods, and enable the government to undertake long-term commitments that are critical for socioeconomic development (e.g., education and infrastructure) with greater safety. Ultimately, the availability of a broader range of instruments (ranging from inflation-indexed government bonds to high-risk venture capital investments) allows investors to diversify their portfolios domestically.

#### **IV. Bond Market Development in Latin American and the Caribbean**

Certain countries (such as Brazil, Chile, Colombia, and Mexico) have had some success in extending the term structure of government borrowing,<sup>1</sup> paving the way for corporate bond issuance and more portfolio diversification opportunities for domestic institutional investors. However, corporate issuance is still low by international standards and almost entirely concentrated in the very short term. Although the requirements for developing the corporate bond sector are more difficult than those for government bonds, the weakness of the corporate sector may still mainly reflect the prevailing state of affairs in government bond markets.

Interestingly, a large portion of the

internationally offered bonds of Latin American governments is frequently purchased by domestic investors (Costa Rica is a case in point). For some, this is evidence that there is potential for the development of long-term domestic bond markets. For others, it is evidence that such markets will not develop without major legal, regulatory, and institutional changes to strengthen investor confidence. Under the latter view, domestic investors prefer investing abroad because they feel more comfortable with an instrument underwritten by large international houses that relies on international laws and clearing and settlement procedures.

Well-developed secondary markets are absent because of a lack of liquidity—a major weakness in the region's bond markets that is most difficult to correct—which in turn thwarts the development of a yield curve. Without liquidity, there is little to distinguish a bond from a fixed-term bank loan, from the investor's point of view. Liquidity is important from the vantage point of international institutional investors. In Chile, for example, despite the development of a well-regulated fixed rate bond market with maturities of up to 20 years, there are essentially no foreign investors because of the lack of liquidity.

What can be done? The development of bond markets is an important step toward capital market development and the more efficient use of financial resources. It necessitates full disclosure of government financial dealings, i.e., greater accountability not only to international creditors but to individuals and corporations as well. This can enable governments to harness domestic savings more effectively in the interest of long-term growth. Improved information dissemination mitigates the capital flight crises resulting from panicked investors in industrial countries. Information is the best antidote for uncertainty and can go far in stabilizing international capital flows. Development of a deep and liquid bond market would likewise reduce the

(1) The average life of the total stock of domestic bonds in Mexico increased gradually from 230 days in 1995 to 750 days in 2001 (Merrill Lynch data).



◀ p.9 **Developing Bond Markets**

dependency on short-term capital flows and speed the development of pension funds and insurance companies, whose investment horizons are in line with those of the government.

Developing long-term bond markets in Latin America can have effects substantially broader than financial market development; their effects ripple throughout the system, and can be an engine for national socioeconomic development. Many emerging markets analysts argue that reduced dependence on foreign capital and debt service is what Latin America needs to promote its economic growth and financial strength. Of course, bond market development should not be seen in isolation, but rather as part of an overall capital market development objective—as well as of the objectives of reducing the government's funding cost and facilitating monetary policy.

These objectives include a commitment to macroeconomic stability and fiscal discipline, the role of the central bank[GDT1], and the identification of core investors in government bonds, including institutional investors. In turn, important reforms need to be made to serve the broader objective of capital market development: effective corporate governance for entities that operate in the market, judicial systems capable of enforcing property rights, and regulatory agencies to oversee financial markets. Some of the requirements for bond market development may lend themselves to regional solutions. Yet, as Europe's experience shows, this is at best a long-term undertaking and may not be possible without a very high degree of monetary, fiscal, and political integration.

## V. Lessons and Policy Recommendations

The experiences of developed and developing countries highlight the fundamental components for a sustainable

■ ***The development of bond markets necessitates full disclosure of government financial dealings, i.e., greater accountability not only to international creditors but to individuals and corporations as well.*** ■

strategy to promote domestic bond markets. They basically include a consistent macroeconomic program, a sound financial system, and institutions to enforce regulations. Several lessons can be drawn from the experiences of the rest of the world as well as from those of Latin American and Caribbean countries:

- Bond market development requires addressing both the supply and demand sides of the equation. It requires a degree of active cooperation among diverse parties that is unlikely without a strategic plan and strong leadership.
- A regional dimension with coordinated macroeconomic policies can strengthen national endeavors to develop bond markets.
- Macroeconomic stability and fiscal discipline are crucial to the success of establishing a sustainable bond market and to avoid the vicious cycle of developing bond markets for government financing.
- Timing and conditions—(level of interest and exchange rates, status of the public sector finances, financial sector reform and sound regulation, legal framework, infrastructure) are crucial to promote the development of domestic bond markets. These considerations reinforce the need that financial authorities define a strategy for bond and capital market development and capital expansion, and recognize opportunities for its implementation over a long term.

Building a bond market requires vision, leadership, and a long-term perspective. Some key measures of a successful strategy include developing a yield curve with longer maturities, and the development of liquid benchmark instruments. The scale and complexity of bond market development makes it almost by definition a nonpartisan “proj-

ect of the state” rather than of a particular administration. This implies that broad public awareness of its advantages is also important. Whether the path chosen is to build up national institutions, or to foster international (or regional) integration, there can always be much to learn from the experience of other countries, both in and outside the region.

The creation of cross-national networks of policymakers and other interested parties to review and analyze experiences and to seek to identify best practices would help in developing broader perspectives. These networks could explore important questions as the role of a “debt management office.” Unlike mature economies, where market forces can work out the inherent conflicts between monetary and fiscal policies, the emerging Latin American economies could well benefit from taking a more formal approach to these issues. The interaction between bond market development and monetary policy and the exchange rate regime is another area where cross-country discussion would be useful.

Trade-offs are unavoidable, and governments need to be mindful of all these factors in developing capital markets and debt management strategies. There is growing empirical and anecdotal evidence suggesting that capital market development works best when policymakers introduce reforms in a certain logical sequence (in which money markets and government bond markets are the first steps) and pay attention to institutional building. For a number of reasons, including national differences and entrenched interests, this ideal may not be achievable. A typical problem, for example, is how to enlist the cooperation of banks that may fear that the development of capital market instruments will lead to an erosion of their deposit bases. On such topics, and oth-

ers, comparative information and an informed public can be a policymaker's best ally.

Multilateral institutions such as the Inter-American Development Bank have a role to play in capital market development and also a comparative advantage in fostering cross-country discussion and analysis. Activities in which multilaterals are either actively engaged or might become so include promoting public awareness of the importance of bond markets; supporting technical expertise for debt and bond manage-

ment; advising on investor protection measures; proposing a standard model for bond indentures; analyzing and recommending best practice changes related to issuing and transaction taxes; developing databases showing default levels; and providing technical assistance to help create credit derivatives.

Multilateral institutions have a strong comparative advantage in exposing this body of work to public debate through forums, seminars, and the creation of networks of experts in Latin

America and the Caribbean, and the payoffs from this effort can be significant. Other forms of support may include temporary credit enhancement via guarantees, default insurance, and the purchase of junior subordinated tranches; providing working capital finance for market makers; and flotation their own bonds in local currencies to help create AAA benchmarks. Many of these activities should be treated as elements of a broader strategy, rather than as discrete technical instruments. ■

**Table 1. Size and Structure of the World Bond Market, 2001**

<i>Region, Country, or Group</i>	<i>Total Value of Outstanding Bonds</i>	<i>Total World Bond Market</i>	<i>Share of World's Government Bonds</i>	
	Billions of U.S. dollars	Percent	U.S. Dollar Value	Percent
United States	17,090.9	51.83	8,588.8	48.21
European Union	6,466.9	19.61	3,127.1	17.55
Japan	5,305.0	16.09	3,938.7	22.11
United Kingdom	1,081.6	3.28	390.9	2.19
Canada	514.4	1.56	356.0	2.00
Switzerland	261.6	0.79	49.6	0.28
Denmark	252.3	0.77	67.9	0.38
Australia	182.7	0.55	57.2	0.32
Sweden	128.6	0.39	60.2	0.34
Other	64.3	0.20	31.2	0.18
Asia	1,000.7	3.04	538.8	3.00
Latin American and Caribbean	391.6	1.19	389.1	2.18
Eastern Europe, Middle East, and North Africa	231.3	0.70	220.1	1.24
Emerging-market countries	1,623.6	4.92	1,148.0	6.44
<b>Total for the world</b>	<b>32,971.9</b>	<b>100.00</b>	<b>17,815.6</b>	<b>100.00</b>

Note: As the table shows, in emerging economies, government bonds constitute the bulk of fixed-income issues (with the exception of Asia). In emerging markets, the domestic debt component grows while the external debt share declines. In 1995, the total outstanding debt of emerging-market countries was about \$720 billion, of which \$310 billion (i.e., 43 percent) was domestic debt. In 2001, the total outstanding debt of emerging economies was \$1,623 billion, of which \$1,130 billion (i.e., 70 percent) was domestic.

Source: Merrill Lynch, Size and Structure of the World Bond Market: 2002 (New York: Merrill Lynch, 2002).



## Book Reviews, Articles & Papers:

**Focus on Capital: New Approaches to Developing Latin American Capital Markets**, *Kenroy Dowers and Pietro Masci*, Editors, Inter-American Development Bank, Washington D.C., 2003.

Local capital market development responds to the need to reduce the risk of financial crises that result from an excessive reliance on external bor-

rowing—for example, to avoid foreign exchange risk, reduce contagion, and decrease short-term external borrowing. In fact, as financial crises dwarf the role of financial intermediation, the problems of asymmetric information become even more severe, leading to greater public mistrust of financial institutions.

*Focus on Capital* tackles various aspects of developing Latin American capital markets. Macroeconomic and structural policies, accounting practices and standards, bond market development, market infrastructure, derivatives markets, corporate governance, ethics, human capital, and regional integration all play a role. One of the shortcomings of many strategies for capital market development—more

important than getting the sequencing wrong—is failing to understand the links between the various components and the need for an overall strategy as well as plans for each component.

*Focus on Capital* analyzes the status of the markets in Latin America and identifies the technical, political, and financial challenges to building vibrant capital markets and increasing the efficiency benefits of regional economic and financial integration.

The book can be obtained at the IDB Bookstore, 1300 New York Avenue, NW, Washington, DC 20577, USA, Tel. (202) 623-1753, Fax (202) 623-1709, Email [idb-books@iadb.org](mailto:idb-books@iadb.org). Online bookstore: <http://shop.iadb.org/iadbstore/>.

**The Infrastructure and Financial Markets Division  
invites you to visit our Website  
[www.iadb.org/sds/ifm/](http://www.iadb.org/sds/ifm/)**

The Infrastructure and Financial Markets Division of the Sustainable Development Department provides technical and advisory support, research and dissemination within the IDB group. This mission is accomplished through the development of policies and strategies, training programs, and dissemination of best practices.



**Inter-American Development Bank**

**Sustainable Development Department  
Infrastructure and Financial Markets Division**