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IBRD Banking Products: Achieving Results in Latin America and the Caribbean Region

Operations Services Department
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Foreword

Operational innovations are critical to meet and anticipate the rapidly evolving needs and development challenges of emerging economies in Latin America and the Caribbean. Working with a broad range of member countries, the World Bank helps achieve development results by delivering flexible, timely and tailored financial services, knowledge services, and strategic advice, while using its convening capacity to further members’ specific objectives.

Drawing on this rich experience, we are pleased to continue our Operational Innovation Series with a second paper on “IBRD Banking Products: Achieving Results in Latin America and the Caribbean Region”. IBRD now offers a large and flexible menu of banking products and services which, associated with technical assistance, help our clients in managing financial risks. Through these products, IBRD provides effective risk management tools at the best possible prices. This paper presents an overview of IBRD efforts and achievements in applying these banking products and services and evaluates their use in the Latin America and the Caribbean region through a series of five specific country examples.

The Operational Innovations Series is designed to disseminate, in a concise and lucid form, the latest practices and thinking on cutting-edge innovative operational approaches of special relevance to our clients in Latin America and the Caribbean, for readers inside and outside the Bank. Authors are selected for their special knowledge and experience in the topics covered. Examples of upcoming papers include Output-Based Disbursement, the Argentina Fiduciary Action Plan, Performance-Based Lending, and Country Systems in Financial Management.

We welcome and encourage suggestions for further Operational Innovations Papers.

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Acknowledgements

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We live in a world of financial uncertainty. At best, this fact is often corroborated by daily fluctuations of interest and currency rates and at worst by systemic financial crises that periodically punctuate global financial markets. As a provider of banking products, the International Bank for Reconstruction and Development (IBRD) is obviously not immune to this uncertainty. Neither are its clients.

**IBRD clients are vulnerable to major financial risks.** If they lack an investment-grade credit rating, they are often denied access to tools for addressing this vulnerability. Otherwise, they pay prohibitively high prices. For many governments, this challenge is further compounded by weak currencies, underdeveloped local financial markets, and the lack of institutional capacity to understand and manage financial risks.

To assist clients in managing financial risks, IBRD now offers a large and flexible menu of products and services that are tailored to clients’ needs. These banking products leverage the institution’s AAA-rated balance sheet, providing clients with effective risk management tools at the best possible prices.

This paper presents an overview of IBRD’s efforts and achievements in providing banking products that help countries to manage risks. First, the paper reviews the major financial risks faced by our client countries. It introduces the concept of an asset and liability management (ALM) framework for managing these risks, including risks involved in public debt management. Second, it analyzes the challenge of and rationale for providing risk management tools to IBRD’s client countries. Third, it evaluates the application of these banking products and services in the Latin America and the Caribbean region, with specific country examples. Finally, the paper concludes with several considerations on the future use and development of IBRD’s banking products and services.

Governments typically have important financial management responsibilities arising out their balance sheets. Governments are exposed to financial risks arising from their assets and liabilities, including their debt portfolio, foreign exchange reserves, cash holdings, loan receivables, stabilization funds, central government guarantees and, importantly, the expected flow of medium to long term tax revenues.

Balance sheet risk exists when there is a mismatch in the financial characteristics of assets and liabilities. Governments can analyze the nature of these assets and liabilities, especially the sensitivity of the related cash flows to movements in interest rates, currency rates, and commodity prices. Governments can also analyze their exposure to credit risk (as in the case of on-lending) and liquidity risk (cash flow and refinancing risk). It is important for governments to analyze the risks of their assets and liabilities in relation to the broader balance sheet.

Within this framework, governments might be interested, for example, in having debt with financial characteristics similar to those of their main assets, namely, their tax revenues. They might also consider managing balance sheet risk on a sub-portfolio basis, as, for example, in matching the currency rate characteristics of the foreign debt portfolio with those of the international reserves portfolio.

Managing these risks is essential. A government’s debt portfolio, for example, may include large, complex, and risky financial structures which potentially threaten its balance sheet and financial stability. Inability to manage these financial risks can have adverse consequences. It can affect investor sentiment toward the country, increase debt servicing costs, damage the government’s reputation, exacerbate financial market instability, and reduce the government’s access to public and private capital flows. Increases in debt servicing costs can affect the budget, and, if the impact is significant, may require increased taxes, decreased expenditures, or debt default.

Prudent public debt management is especially critical in emerging markets, which often face increased balance sheet risks due to high levels of indebtedness relative to GDP, dependence on export receipts and specific commodities, exposure to volatile terms of trade movements and capital flows, and limited taxing capacity relative to fiscal demands for accelerating development.

Governments are encouraged to develop a public debt management strategy within a broader framework of asset and liability management. Such a strategy helps greatly to address the above-mentioned issues, guide funding decisions, and reduce overall balance sheet risk. The strategy typically seeks to attain objectives such as funding the government’s requirements, minimizing cost within prudent risk limits, and developing the domestic debt market. The strategy specifies the desired structure or financial characteristics of the debt portfolio, which can in turn be managed through benchmarks, consisting of key parameters such as the ratio of internal to external debt, overall target currency composition, ratio of fixed to floating rate debt, and the maturity profile of the debt portfolio. It is within such a framework of clearly defined debt objectives, strategy, and benchmarks, all contained in a transparent governance structure, that governments can best address risk management and carry out specific transactions.

2. IBRD Risk Management Products: The Challenge and Rationale

The creation and subsequent widespread use of risk management tools (also known as hedging or derivative instruments) is arguably among the most important developments in international financial markets over the past two decades. From the world’s first currency swap transaction in 1981 contracted between IBRD and the IBM Company, the growth of derivative markets has been exponential. However, emerging market countries often have not been able to benefit from the opportunities offered by these instruments. This is explained by three principal characteristics of these borrowers. First, they tend to lack the financial skills, experience, and technology to anticipate, measure, and manage their exposures. Second, their access to key risk management tools is commonly sporadic and expensive because of their
relatively low credit ratings. Third, they often lack the governance structures and political economy consensus necessary to use these risk management tools without being exposed to political, reputational, and sometimes even legal risk.

Over the past several years, these limitations have been diminishing. Emerging countries have gained experience in managing their debt portfolios. Government authorities understand better how unmanaged foreign exchange and interest rate risks may damage debt sustainability, fiscal discipline, and ultimately, their development agenda. Relatively stable interest and currency rates, strong commodity price cycles, and the absence of major external financial crises over the past several years have translated into increased interest by emerging economies in using—and by the public and private sectors in providing—risk management products. In addition, governments increasingly are gaining the legal, institutional and political ability to deal with different types of financial risk within a balance sheet context. Some governments have started to analyze their public debt management within the broader context of asset and liability management and to design debt strategies accordingly.

*Unfortunately, improvements in public debt management capacity and generally benign market conditions have not always been matched by sufficient access to the key tools for implementing prudent public debt management strategies.* Despite historically cheaper access to international capital funds across emerging markets, financial derivative markets are still underdeveloped in many countries. In all cases, access and favorable terms can deteriorate during periods of financial stress, precisely when the need for sound risk management products assumes even greater priority.

Consequently, emerging markets are increasingly focusing on the importance of sound debt management strategies as well as on the need for financial products that can assist them in implementing their evolving asset and liability management strategies. Accordingly, during the mid to late 1990s, IBRD’s borrowers started asking the World Bank to offer financial products to respond to these needs.

*Borrowers, who are also shareholders, view the IBRD as a natural provider of these products for three main reasons. First, the products provide long-term tools for managing financial risks as their needs change over time. Second, IBRD has accumulated considerable experience in risk management products, having extensively used them to manage its own balance sheet risks. Third, borrowers value associated IBRD support in promoting strategic dialogue on sovereign asset and liability management issues, as well as in helping them to better understand how to use market-based tools to implement their strategies.*

It is this conjunction of considerations—demand from clients, IBRD’s experience in using derivatives products, and the importance of financial tools for debt management, financial stability, and developmental impact—that underlay the introduction of IBRD banking products in 1999.

**In making risk management products available to client countries today, IBRD provides a valuable service while incurring relatively small financial risks.** It also plays an important development role by promoting needed investments in institutional capacity and legal reform in client countries. By removing constraints faced by countries in accessing these products, IBRD involvement in risk management products has not crowded out the private sector; rather, it has arguably fostered participation by private sources in the provision of these products over time.

### 3. Development and Main Attributes of IBRD Banking Products

*The evolution of IBRD’s banking products has mirrored that of capital markets over the past two decades.* IBRD has matched—and on occasions, tracked—its clients’ increasing financial sophistication. In 1999, IBRD began matching developments in financial markets by offering its client countries a series of flexible, market-based banking products that are embedded in its loans or on a standalone basis to manage financial risks. These give clients flexibility to chose and modify the financial characteristics of their IBRD loans or other non-IBRD obligations. IBRD’s banking products are priced to reflect the cooperative nature of IBRD and to recover the associated transaction costs.

The two main loans offered by IBRD are the Variable Spread Loan (VSL) and the Fixed Spread Loan (FSL). Both feature floating interest rates based on LIBOR® plus IBRD’s own funding cost versus LIBOR (currently about –0.30 percent) and the standard lending spread of 0.75 percent. Standard maturities range from 15 to 20 years, depending on a country’s per capita gross national income. The FSL in particular includes embedded risk management tools allowing for additional flexibility to manage not only currency and interest rate risks, but also the opportunity to reduce liquidity risk by including custom-made repayment schedules.

*Clients can access IBRD risk management tools through the options built into the FSL loan.* They can also choose free-standing hedging prod-
IBRD’s banking products open numerous possibilities for clients to manage their financial risks at both the project and the portfolio level, including:

- Taking advantage of the FSL’s interest rate conversion feature to fix the interest rate on the loan or to “cap” or “collar” such interest rate.
- Tailoring FSL repayment terms to meet project or portfolio needs.
- Choosing the best possible currency denomination for the loan, including in some cases the possibility of obtaining financing in local currency.
- Reducing the vulnerability to fluctuations of commodity prices.

4. Achieving Results through IBRD Banking Products in Latin America and the Caribbean Region

IBRD’s banking products have been evolving since the late 1990s. Actual use of these products was initially very slow, arguably as a consequence of unstable emerging market conditions in the early 2000s and the then-limited capacity of clients to internalize and take full advantage of these products because of weak institutional frameworks for debt management.

Relative to other multilaterals, IBRD has been at the forefront in introducing new banking products to meet its members’ needs. Since 1999, the World Bank’s Treasury has supported the Bank’s regional groups in structuring loans using the evolving banking products. In 2003, the initiative was extended to the country portfolio level by introducing the country Treasury Banking Team, consisting of debt managers, banking products experts, and market/ALM specialists.

The Treasury Banking Team helps to ensure that the Bank’s country team and the client country officials are fully informed of IBRD’s banking products and advisory services. The Team also assists in seeing that the potential uses of these products and services are reflected in the CAS/CPS to meet the country’s public debt/risk management needs. Central to this approach is a shift to a different level of engagement on the part of IBRD: an upstream discussion on the most appropriate mix of banking products and services and risk management tools at the country portfolio level.

In this respect, it is worth noting the leading role played by countries such as Mexico and Colombia. This materialized over time, with countries such as Peru and Ecuador following in their path. It is also important to note that the vast majority of all loans to countries in the Latin America and Caribbean region in the past several years have been FSLs. As mentioned, these already incorporate embedded risk management tools, thus facilitating future application of the products.

Take-up of the IBRD’s banking products is steadily growing. However, legal, institutional, and political economy factors constrain the ability of some clients to apply these products. Examples of such limiting factors include:

- Lack of institutional capacity and expertise to internalize and use risk management products
- Absence of a defined public debt management strategy within which to implement specific transactions and lack of political economy consensus on carrying out risk management transactions
- Underdevelopment of domestic capital markets, which prevents the development of local derivatives instruments
- Laws or policies limiting the engagements of sub-national governments in certain financial transactions that could help manage their financial risks

In order to illustrate the increasing use of IBRD banking products by client countries, several country case studies are presented here. As these examples demonstrate, the applicability of these products at both the project and portfolio levels is always best implemented within the context of a clearly defined public debt management strategy.

Notes

1. For example, as a result of on-lending to sub-national governments.
3. A cross-currency swap from US dollars to Deutsche marks/Swiss francs.
4. LIBOR stands for the London Inter-Bank Offer Rate, the interest rate that banks charge each other for loans. LIBOR is a widely used index for the international price of money.
5. Currency Pool Loans (CPLs) and Fixed-Rate Single Currency Pool Loans (FSCLs) are two old IBRD loans that were discontinued in 2001 and 1999 respectively.
6. A brief description of these risk management (hedging) activities is included in the attached glossary.
7. This underdevelopment is mainly related to legislation and regulation of these markets.
III. Case Studies

Case Study 1: Mexico — Local Currency Financing for On-Lending Operations

Background

Most IBRD client countries find it difficult or costly to hedge their exposure to foreign currency-denominated debt. Lack of investment grade credit ratings exclude them from a wide range of financial instruments such as short-dated futures, forwards, options, long-dated currency, and interest rate swaps, leaving them exposed to exchange rate volatility. In order to assist clients in efficiently managing their public debt risks, IBRD approved a proposal in January 2001 to introduce local currency financing to its clients.

IBRD cannot assume currency risk onto its balance sheet. Therefore, accessing the IBRD local currency financing facility requires either (i) the existence of a swap market in order intermediate local currency or (ii) the ability to efficiently raise local currency via domestic bond issuance. Accordingly, the number of currencies, their volume, and maturities in which IBRD can provide local currency financing is still very limited, albeit rapidly growing. It is highly dependent on the depth and breadth of domestic capital market conditions.

The Mexico case

The first country to take advantage of IBRD's local currency financing facility was Mexico. In 2004, the IBRD Board approved two specific loans (US$108 million for the Decentralized Infrastructure Reform and Development Project and US$30 million for the State Judicial Modernization Project). A third US$9 million Student Loan Project was approved in 2005. The ultimate beneficiary of IBRD’s financing was BANOBRAS. The facility enabled BANOBRAS to borrow in local currency at highly competitive terms for on-lending operations to sub-national governments.

Issues and constraints

Specific market conditions and regulations did not allow IBRD to provide local currency financing to the Mexican states. First, specific constitutional provisions required the states to borrow exclusively in local currency and from local financial intermediaries. Second, the spread charged to the states by these intermediaries was added to that of IBRD, resulting in uncompetitive pricing levels. Finally, Mexican financial intermediaries had traditionally hedged against foreign currency exposure through a foreign exchange trust fund established by the Mexican Ministry of Finance, effectively concentrating all foreign exchange risk relating to foreign currency borrowing in the hands of the central government (see Figure 1). These issues and constraints all contributed to an unattractive pricing structure and an inefficient allocation of foreign exchange exposure.

![Figure 1. Financial Structure of Mexico’s Foreign Currency Management](image)

The IBRD solution

Given the development of the Mexican peso swap market, IBRD was able to efficiently provide Mexican peso financing to sub-national governments through BANOBRAS (see Figure 2) according to the following financing structure:

- When the borrower submits a request to withdraw funds on the above-mentioned loans, IBRD executes a swap transaction with banks like ABN AMRO, Citibank, or J.P. Morgan, with a maturity similar to that of the loan disbursement. An initial exchange of US dollars into pesos then takes place under the swap transaction.

- This peso amount is then disbursed to BANOBRAS, which has to service and repay that disbursed amount in pesos. The pricing charged
to BANOBRAS is entirely dependent on the pricing obtained by the IBRD from the market. IBRD simply matches the conditions of the disbursement to that of the currency swap. Then BANOBRAS adds its own lending spread and passes the proceeds to the final beneficiary.

Figure 2. Financial Structure of Mexico’s Foreign Currency Management via the Swap Market

Through this scheme, the borrower is able to obtain local currency funding with a final maturity of 18 years and a 3-year grace period. Pricing is referenced to 182-day Certificados del Tesoro (that is, the 6-month Mexican Treasury rate) with a variable spread depending on market conditions at the time of loan disbursements. To date, two peso disbursements have been undertaken through this facility.

Conclusions

The sub-national governments in these cases were able to obtain local currency financing at very attractive levels through the proper combination of IBRD’s banking products. For practical purposes, IBRD’s local currency financing resembles a line of credit denominated in US dollars that is disbursed, serviced, and repaid in pesos. This financing structure transfers foreign currency risk from the borrower to the market completely and efficiently. As a consequence, the currency and interest rate risks to the borrower, the guarantor, and the final beneficiary are drastically reduced.

Case Study 2: Colombia — Local Currency Financing to Sub-Sovereign Borrowers

Background

Government revenues are typically generated in taxes and other sources of local currency. The ability to contract loans and other liabilities in that currency is of particular interest to borrowers because it reduces or eliminates currency mismatches. This is particularly pertinent where sub-sovereign borrowers typically cannot raise their own local currency financing with adequate terms to help them fund long-term programs.

Colombia is the second country in which IBRD’s local currency financing has been successfully extended to sub-sovereign borrowing. In this case, three Colombian sub-sovereign entities (the department of Antioquia and the municipalities of Bogota and Cartagena) were the borrowers-of-record for three existing US dollar-denominated VSLs. IBRD VSLs, introduced in 1993, did not incorporate the risk management products to manage the volatility of currency and interest rates. IBRD subsequently introduced its FSLs in 1999. However, in approaching IBRD, the three borrowers expressed their interest in reducing the interest rate and currency exposure inherent in the three loans by changing their currency of denomination from US dollars to Colombian pesos (COP), and the floating interest rate to a fixed rate.

At the time of these requests, IBRD’s operational procedures required cross-currency swaps on a net basis to transform future loan servicing obligations from one currency to another. To enter into such swaps, IBRD and the borrower must sign a Master Derivatives Agreement (MDA) providing the legal and operational framework for currency swap transactions. Although an MDA had already been signed between IBRD and the Republic of Colombia, the borrowers-of-record for the three loans were sub-sovereign entities, none of which had separately signed MDAs with IBRD. In addition, Colombian laws and regulations did not permit the government to serve as financial intermediary between sub-sovereign entities and third parties, such as IBRD. Consequently, the option of the government entering into a currency swap with IBRD while simultaneously entering into an offsetting currency swap with the sub-sovereign entities was not legally feasible. The three sub-sovereign entities were thus hampered in their pursuit of the stated objective of mitigating the interest rate and currency risk inherent in the three IBRD loans.

The solution for Colombia’s sub-sovereign borrowers

Given the above considerations, the parties (the IBRD, the Republic of Colombia, and the three sub-sovereign entities) agreed to legally amend the existing loan agreements to permit interest rate and currency conversions in accordance with procedures under the FSL framework. From the financial, legal and operational perspectives, these amendments made the existing VSLs equivalent to FSLs by incorporating the standard financial clauses allowing for currency and interest rate risk.
management into the existing loan agreements. This enabled the three sub-sovereign entities to fulfill their objectives of converting the loans into Colombian Pesos (COP) at fixed interest rates.

Conclusions

Through the above-mentioned legal amendments, IBRD (i) responded to the borrowers’ needs in a timely manner; (ii) allowed them to fully hedge their currency and interest rate risks by converting their outstanding debt into fixed interest rate or into other currencies, including Colombian pesos; (iii) gave the borrowers the means to manage the financial risks inherent in IBRD VSLs; and (iv) facilitated the conversion of the loans into Colombian pesos, with the added advantage of converting the sovereign government’s contingent liability under the related guarantees into Colombian pesos, thereby reducing the overall sovereign currency risk.

To date, two of the three Colombian sub-sovereign borrowers have converted their US dollar-denominated floating interest rate loans into COP-denominated, fixed interest rate loans.

Case Study 3: Colombia—Currency, Interest Rate, and Refinancing Risk Management

Background

Debt growth accelerated in Colombia in the late 1990s when a constitutional reform and economic policies resulted in sustained fiscal deficits. Debt to GDP doubled from 26 percent in 1997 to 54 percent in 2002. In 1998 and 1999, anxiety generated by the international financial crisis brought capital inflows to a halt. Capital fled the country amid concerns over the strength of the Colombian peso. This resulted in a currency devaluation and an increase in interest rates. By 1999, Colombia faced its worst recession, which was accompanied by a crisis in its financial system. Growth was stagnant between 1998 and 2002. In 1999, Colombia lost its investment grade. The default of Argentina in 2001, caused in part by persistent fiscal imbalances, created additional pressures amid concerns that Colombia might follow the same path.

Rationale for and implementation of a debt management strategy

To manage its growing debt portfolio problem against this backdrop, the Colombian authorities approved a medium-term fiscal framework that established future targets for the level of debt. An external debt strategy was designed that would help to manage currency, interest rate, and refinancing risks in order to avoid shocks to the budget. This was best summarized by Colombia’s finance minister, who stated that “the fundamental objective of debt management is to lower the financial risk of the portfolio.” Consequently, the authorities developed an external debt management strategy aimed at reducing the overall risk profile of the debt portfolio. This strategy was articulated through the primary objectives of (i) rebalancing the currency and interest rate composition of the portfolio in order to reduce the overall level of vulnerability and (ii) assigning top priority to the management of refinancing risk in light of the authorities’ desire to avoid the “bunching up” of debt repayments in the short term.

With these objectives in mind, the Colombian authorities developed a migration plan toward a “benchmark” reference in the external debt portfolio using specific objectives of currency composition (that is, a percentage of currencies represented in the portfolio), interest rate composition (that is, fixed versus floating rate debt and portfolio duration), and a liquidity profile (that is, yearly percentage of debt maturing). This “benchmark” portfolio is summarized in Table 1 below:

<table>
<thead>
<tr>
<th>Objectives</th>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currency (% of total)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US dollars</td>
<td>82</td>
<td>83</td>
</tr>
<tr>
<td>Euros</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>Japanese yen</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Interest rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent floating</td>
<td>24</td>
<td>15</td>
</tr>
<tr>
<td>Duration (years)</td>
<td>2.6</td>
<td>3.5</td>
</tr>
<tr>
<td>Liquidity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent amortization **</td>
<td>2 to 14 percent</td>
<td>10 to 15 percent</td>
</tr>
</tbody>
</table>

Source: Ministerio de Hacienda y Crédito Público, Colombia
* Debt currency mix to be aligned with foreign exchange reserves and trade flows
** Yearly principal amortization/total principal payments

Table 1 - Colombia’s Debt Management Strategy—Portfolio Benchmarks

The Role of IBRD

As a consequence of the strategy outlined above, Colombia’s central government focused on mitigating refinancing risk, decreasing the share of foreign currency debt, and controlling the exposure to interest rate risk in the external debt portfolio. The Colombian authorities actively engaged IBRD to take full advantage of its banking products. This engagement materialized in the following transactions:

- Colombia was the first country (1999) to take the newly introduced FSL, which was also the first
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By including euro-denominated liabilities through this action, the Colombian sovereign debt portfolio diversified and achieved its euro target within the benchmark, thus helping to manage its currency risk.

- For subsequent FSLs, the Colombian authorities chose to take advantage of the automatic rate fixings option embedded within these loans, thus obtaining fixed interest rate financing and consequently reducing the overall interest rate risk of the sovereign debt portfolio, as established in the benchmark.

- The Colombian authorities also opted for custom-made repayment schedules available under the FSL platform, enabling them to attain a stable distribution of future debt repayments and to reduce the overall level of refinancing risk, according to the benchmark.

Conclusions

The case of Colombia highlights the importance of designing and implementing a debt management strategy within an ALM framework. In this context, client countries can take full advantage of the flexibility provided by IBRD banking products in order to reduce the overall risk levels of such a portfolio. In the case of Colombia, the strategy was set at the central government level. IBRD banking products can similarly be applied at the project level, also achieving the best possible terms for IBRD loans and thereby contributing to the financial viability of projects.

Case Study 4: Peru—Interest Rate Management

IBRD’s contribution

The case of Peru provides another good example of the applicability of IBRD’s banking products to achieve desired risk management objectives at the portfolio level. In this case, IBRD banking products were not to be applied to future loans but were used instead to transform the financial characteristics of existing IBRD loans.

The stated objective in the Peru case was to reduce the interest rate risk profile on the overall sovereign debt portfolio by gradually increasing the percentage of fixed interest rate debt to total debt from 51 percent in 2004 to 59 percent in 2006 (Figure 3, below).

The Peruvian authorities wished to take advantage of the interest rate risk management products embedded in IBRD FSLs, which allowed for conversion from floating into fixed interest rate debt. Ultimately, 4 of the 18 IBRD FSLs were converted into fixed interest rates (see Table 2 below).

Table 2. Peru: Interest Rate Conversion Transactions (in US$ millions)

<table>
<thead>
<tr>
<th>Loan</th>
<th>Name</th>
<th>Curr.</th>
<th>Amt</th>
<th>Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>72000</td>
<td>Programmatic Social Reform</td>
<td>USD</td>
<td>150</td>
<td>2017</td>
</tr>
<tr>
<td>72030</td>
<td>Programmatic Decentralization and Competitiveness</td>
<td>USD</td>
<td>150</td>
<td>2017</td>
</tr>
<tr>
<td>72660</td>
<td>Programmatic Social Reform</td>
<td>USD</td>
<td>100</td>
<td>2018</td>
</tr>
<tr>
<td>72760</td>
<td>Programmatic Reform for Growth</td>
<td>USD</td>
<td>100</td>
<td>2018</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>500</strong></td>
<td></td>
</tr>
</tbody>
</table>

Conclusions

The conversion of existing IBRD FSLs from floating to fixed interest rate represents a total of US$500 million in loans. It was executed over a one-week period at highly competitive terms. The Peruvian case highlights the ease and potentially quick execution of these transactions to help implement the debt/risk management strategy of the government. It also shows how costs can be

Figure 3. Peru: Total Debt—Interest Rate Compositions

<table>
<thead>
<tr>
<th>Total Debt - Interest Rate Composition</th>
<th>2004</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Debt</td>
<td>42.4%</td>
<td>41.3%</td>
</tr>
<tr>
<td>Variable Domestic</td>
<td>7.0%</td>
<td>3.9%</td>
</tr>
<tr>
<td>Variable External</td>
<td>42.5%</td>
<td>37.2%</td>
</tr>
<tr>
<td>Fixed Domestic</td>
<td>8.1%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Fixed External</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusions

The conversion of existing IBRD FSLs from floating to fixed interest rate represents a total of US$500 million in loans. It was executed over a one-week period at highly competitive terms. The Peruvian case highlights the ease and potentially quick execution of these transactions to help implement the debt/risk management strategy of the government. It also shows how costs can be
reduced taking advantage of IBRD’s AAA rating in the international capital markets. In addition, going through IBRD helped Peru to save its credit lines with commercial banks, demonstrating how such conversions can allow a country to execute other needed transactions.

Case Study 5: Ecuador—Refinancing Risk Management through Customized Repayment Schedules

Background

Ecuador presents an excellent example of the applicability of IBRD’s banking products on a project-by-project basis within the context of broader public debt management. The case of Ecuador also highlights some challenges in changing long-established ways of doing business.

The objective of the Ecuadorian authorities was to reduce the short- and medium-term refinancing risk inherent in the overall sovereign country debt profile. As shown in Figure 4, the repayment profile of the Ecuadorian sovereign debt showed that debt repayments would be “bunched up” in years 2013 to 2015. Faced with this prospect, Ecuador needed to either issue debt or contract loans with a debt repayment profile beyond 2016.

The role of IBRD

Traditionally, Ecuador had contracted FSLs according to standard terms of IBRD’s loans. This meant an average loan maturity of 11.25 years, which were typically achieved from loans with 17 years of final maturity and a 4 to 5 year grace period. In recent years, Ecuador adhered to these standard conditions in all its IBRD loans. Their impact on the overall sovereign debt profile had not been examined.

Given the accumulation of debt repayments projected for 2013–15, any loans contracted with IBRD during 2005 or 2006 would have worsened the “bunching up” problem. With this constraint in mind, Ecuadorian authorities requested that IBRD assist them in structuring new loans to partially reduce the accumulation of repayments coming due during 2013–16.

The solution to the Ecuadorian problem was to take advantage of the flexibility embedded in the FSLs. The authorities designed custom-made repayment schedules for all loans contracted in FY06/07. This was a departure from the standard conditions. They contracted grace periods of 8.5 years for the three loans rather than the usual 5 years. These new loans, worth US$100 million, include repayment schedules that specifically avoid principal repayments between 2013 and 2016, while still maintaining average maturities within the policy limit of 11.25 years. The Ecuadorian authorities thus ameliorated the “bunching up” problem for 2013–16 and were able to postpone loan repayments of newly contracted IBRD debt beyond the high refinancing risk period.

Figure 4. Ecuador: Applying FSL Repayment Flexibility

Notes

1. Banco Nacional de Obras, a government development bank.
2. All loans to BANOBRAS are guaranteed by the government of the United Mexican States.
3. Memorias de Hacienda, Ministerio de Hacienda y Crédito Público, Colombia.
4. Since then, the Ministry of Finance has been improving its debt/risk management strategy.
As highlighted by the case studies of Ecuador, Colombia, Mexico, and Peru, effective use of IBRD’s banking products can help manage financial risks inherent in a borrowing country’s public debt portfolio. Whether at the sovereign or sub-sovereign portfolio or at the project level, this reduced vulnerability clearly improves the resilience to ever-changing market conditions and external shocks, with positive impact on economic development and poverty reduction.

The case studies also highlight four crucial points.

- A sound public debt management strategy designed for managing financial risk within an ALM framework provides the most appropriate conduit within which to apply and take full advantage of the flexible menu of IBRD’s banking products.

- IBRD banking products can be applied not only at the sovereign and sub-sovereign portfolio level but also at the project level, thus achieving the best possible terms for the financial viability of specific projects.

- It is essential to involve the country Treasury’s Banking Team at very early stages of project preparation. Although the use and applicability of IBRD’s banking products is highly streamlined and is becoming increasingly widespread, country-specific legal, regulatory, political and financial considerations require a level of intensive due-diligence before project implementation, without which specific transactions cannot be executed.

- Treasury’s Banking Teams are increasingly becoming involved in CAS/CPS preparation and implementation. This allows the Bank’s country teams to initiate discussions with all the parties involved and produce a coherent strategy conducive to the most effective and timely application and structuring of IBRD’s banking products and services.

The pace of development of new IBRD banking products and the innovative application of existing ones are likely to increase in coming years as a consequence of both client demand and new financial market developments. The new working environment in which IBRD currently operates, characterized by the increasing financial sophistication of our client countries, requires a higher level of synchronization with clients’ needs and objectives in order to provide customized financial solutions at the best possible financial terms.

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Financial Risks

- **Currency risk.** Currency risk arises when the currencies a borrower owes are different from those received from its net earnings or revenue streams. If exchange rates never changed, borrowers would not need to worry about currency risk, but when the currency they owe appreciates relative to the one they earn, borrowers face a loss compared with the expected outcome if exchange rates were static. When the reverse is true, they can expect a gain.

- **Interest rate risk.** Interest rate risk arises when the interest rate characteristics of what a borrower owes differ from those that they earn. This would be the case if their earnings fluctuated while their borrowing costs were fixed. Interest rate risk can result in gains or losses depending on changes in interest rates. Variable rate debt is not inherently more risky than fixed rate debt, nor vice versa. The source of the interest rate risk is the mismatch between the interest rate basis of the assets and revenues and that of the liabilities and expenses, rather than the interest rate basis in and of itself.

- **Commodity price risk.** Commodity price risk is a type of market risk associated with commodity price changes. This can occur if the value of one’s assets is linked to the price of a commodity or group of commodities while the value of liabilities is not, or vice versa. This dependency can be directly reflected in the government’s revenues, such as tariffs or the export of government-owned commodities; or indirectly as taxes on exporters and importers; and higher or lower levels of economic activity. If borrowed revenues consist mainly of earnings from exports of natural resources or commodities while liabilities consist of domestic currency fixed-rate debt, the borrower may be subject to commodity price risk. As commodity prices fall, revenues are reduced; and if commodity prices rise, revenues increase. In either case, the cost of debt remains the same. This risk can be reduced by linking the cost of debt service to the price of the commodity through a derivative instrument such as a commodity swap.

- **Liquidity risk.** Liquidity risk typically arises when the maturity of a borrower’s assets is longer than the maturity of the debt, and the borrower has no readily available source of cash to repay the maturing debt obligation. Two types of liquidity risk are cash flow risk and rollover risk.

- **Cash flow risk.** Cash flow risk arises when differences in the timing of a borrower’s earnings and debt service may leave insufficient cash flow to make loan repayments at certain points. This type of risk could arise, for example, if repayments were due before a borrower earns sufficient revenues, or if its earnings fluctuate while its debt service remains constant from one period to the next.

- **Refinancing risk.** Refinancing risk refers to being unable to roll over or refinance maturing debt by securing a new loan (or only being able to do so at very high cost). If a borrower has no alternative source of cash, it will need to roll over or refinance the maturing debt to generate cash in order to service it. A borrower that is unable to refinance the maturing debt may be forced to liquidate assets or default on the loan. General international market turmoil or changes in the perception of the borrower’s creditworthiness can affect rollover risk. Concentrating the maturity dates of the debt will increase rollover risk if the borrower does not have a source of cash to repay the maturing debt. One way to reduce rollover risk is by spreading out the maturity dates of the debt.

- **Credit risk.** Credit risk, for a national government, is the risk that sub-borrowers or beneficiaries of government guarantees may default and the government must then bear the loss. In the context of on-lending operations, credit risk is created when loan terms may be inappropriate for the borrower’s debt servicing capacity, increasing the risk that the entity responsible for repaying the loan cannot do so. This could happen if the loan terms selected by the borrower and passed on to a project entity have currency, interest rate, or cash flow characteristics that are inappropriate for that entity and lead it to default on the loan. For example, suppose that a country borrows from the IBRD in JPY at variable rates and on-lends the JPY at
variable rates to a rural bank that makes fixed-rate loans and earns some foreign exchange in US dollars. At first glance, it seems that the country has no currency or interest rate risk, since it has passed these on to the rural bank. The rural bank, however, is taking on currency risk and interest rate risk that it may be ill equipped to bear. If as a result of these risks the rural bank is unable to pay off the loan, the country still has to pay IBRD. In effect, the country has transformed its currency risk and interest rate risk into credit risk.

Risk Management (Hedging) Transactions

- **Interest rate swaps.** Interest rate swaps are individually negotiated transactions that may be used to transform the interest rate basis of a borrower’s underlying loan obligation from a fixed to a floating rate, or vice versa. As counterparties to an interest rate swap, IBRD and the borrower agree to exchange two sets of cash flows denominated in the same currency at a future date. The cash flows paid by one party reflect a fixed rate of interest while those of the other party reflect a floating rate of interest. No exchanges of principal amounts are involved.

- **Interest rate caps and collars.** Interest rate caps and collars provide protection against rising interest rates to users of floating-rate loan products. Interest rate caps are individually negotiated transactions that set an upper limit on the interest a borrower would pay on a floating rate loan against payment of an upfront premium. Interest rate collars are individually negotiated transactions that set an upper and a lower limit (that is, “a collar”) on the interest a borrower would pay on a floating rate loan against payment of an upfront premium.

- **Currency swaps.** Currency swaps are individually negotiated transactions that may be used to transform the currency denomination of a borrower’s net loan obligation. As parties to a currency swap, IBRD and the borrower agree to exchange two sets of cash flows, denominated in different currencies at certain dates in the future. The cash flows reflect payments of interest on these currencies, which may be fixed or floating, as well as exchanges of principal amounts.

- **Commodity swaps.** Commodity swaps are individually negotiated transactions to exchange two sets of cash flows at certain dates in the future, where one set of cash flows is linked or indexed to the market price of a commodity and the other is a pre-agreed fixed cash flow or a cash flow based on a floating or fixed rate of interest. This product is offered by IBRD on a case-by-case basis.