

**The Role of Private Subnational
Credit Markets in Making
Land Development More Affordable**

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Institute of Applied Economic Research - IPEA
Brasilia, DF, Brazil
April 4-6, 2005

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Financing and Land Cost

Lower interest rates and longer tenors on financing for urban infrastructure would make land development more affordable

Higher interest rates + shorter tenors = Less infrastructure within the budget constraints of the national and subnational public sectors

Lack of favorable financing = Less land will be developed at a higher unit cost

= Less affordable land development

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Main argument

Within an adequate legal and regulatory framework and sound macroeconomic policies, **modern private subnational credit markets** can accomplish three things:

- Make urban infrastructure and land more affordable by:
 - o Increasing the total volume of credit available for financing urban infrastructure
 - o Lowering long-term interest rates and lengthening tenors
- Provide strong incentives for subnationals to improve their fiscal performance and efficiency
- Help strengthen and deepen financial markets by providing investments of high credit quality

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Organization

Paper discusses these three impacts of modern subnational credit markets for the following:

- I. The US and Europe. How well do these markets work with regard to these three impacts?
- II. Mexico: Why did the government introduce market based controls on subnational borrowing? How well are they working?
- III. Brazil: What could be done in Brazil?

Will focus more on the last two of these in this presentation

Will also discuss briefly ways of accurately targeting lower income families

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US and Europe

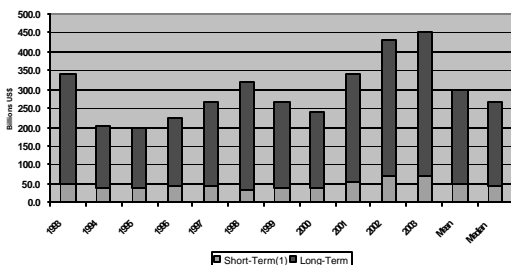
In the US and Europe, the private subnational credit markets provide :

- High volumes of financing at favorable rates:
 - US subnationals issued over the 1993 – 2003 period:
 - ✓ An **annual** average of nearly US\$300 billion of short-and long-term bonds
 - ✓ A total of US\$3.5 trillion for the period
 - In Europe, just Dexia Credit Local in 2003:
 - ✓ Lent 40.3 billion Euros
 - ✓ Its total portfolio of such credits reached 184 billion Euros

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US and Europe

US: Short- and Long-Term Municipal Bond Issuance: 1993-2003
Billions US\$



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US and Europe

In the US and Europe, the private subnational credit markets also provide:

- Effective market-based control of subnational borrowing
 - o The market provides a strong incentive for good fiscal performance, as higher creditworthiness significantly lowers interest rates
 - o Subnationals with very low ratings may lose access to the credit market altogether
 - o Result: effective market-based control

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Mexico: Problem of Subnational Bailouts

In 1999, Mexican government wanted use market - based controls to address the problem of subnational bailouts:

- Cause: use of national/subnational automatic transfers as loan guarantees (*Mandatos*)

Mandato guarantees made loans to subnationals virtually risk free:

- ✓Moral hazard for banks
 - ✓Over borrowing by subnationals
 - ✓Bailouts
- Ineffective national government controls on subnational borrowing

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Mexico: Market-based Debt Controls

Strategy: Use market -based controls of subnational debt as in US and Europe

A number of interrelated reforms paved the way for the emergence of a modern private subnational credit market:

- Decentralization
- Pension
- Banking regulation
- Capital market regulation

Synergy among the reforms has been most important

Must eliminate moral hazards first

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Mexico: Decentralization Adjustment Loan

To address these issues, the Mexican Government asked for assistance in developing a market based system

- This led to the World Bank's **Decentralization Adjustment Loan** of about US\$600 million

Some key reforms:

- Eliminated the *mandatos*
- Required **credit ratings** for all subnationals for bank borrowing

Linked bank risk weightings to credit ratings, as in the Basel Accord II

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Mexico: Revealed Many Creditworthy Subnationals

The credit ratings revealed that there were **many creditworthy borrowers** at the subnational level

- Of a total of 75 states and municipalities rated by S & P, **50** received a rating of A or above on the local scale

Ratings have also created a healthy competition among states and municipalities

- Mayors and governors pride themselves on having better ratings

But who would lend to these creditworthy borrowers?

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Mexico: Factors Influencing Supply of Credit

Rapid growth of **institutional investors** due to:

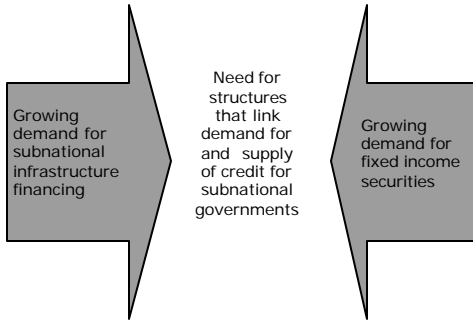
- Macroeconomic stability
- Mutual funds
- Pension reform of 1997

The 1997 pension reform created the private managers of mandatory pension funds: *Afores*

- In five years, these *Afores*
 - Have accumulated assets in excess of 8% of GDP (US\$34 billion as of April 2003)
 - Are expected to reach 20% of GDP by 2015
- Created high demand for fixed-income securities

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Mexico: Linking Supply and Demand for Credit



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Mexico: Bond Issues after the Reforms

The subnational bond market has emerged to link supply and demand of subnational credit

- Capital market regulation changed to permit issuance of subnational bonds

Mexican state and municipal bonds and revenue bonds issued or pending: 2001 to 9/2003

- Number = 22
- Total amount = **US\$2.0 billion**

Great potential for future growth for this subnational credit market

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Mexico: Reform Synergy

Summary: Reform synergy paved the way for the emergence of a modern subnational credit market in Mexico:

• Decentralization =

- o More predictable and transparent transfer system
- o World Bank adjustment loan conditions eliminated *mandatos*

• Bank regulation = World Bank loan linked risk weightings on subnational bank loans to credit ratings

• Pension reform = Set up private pension funds

• Capital market regulation = Allowed issuance of subnational bonds

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Mexico: Results

Results:

- Effective market-based control of subnational borrowing
- More diverse and stronger financial markets
- Greater supply of credit for subnationals

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Brazil: Reforms

Could market-based controls work in Brazil?

Must address three interrelated questions:

- Is the regulatory framework adequate?
- Are there strong institutional investors?
- Are there creditworthy subnational borrowers?

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Brazil: Why Market-based Controls?

A World Bank review of Brazil's fiscal federalism argues:

"Market based lending would provide additional incentives for prudent fiscal behavior, while easing the burden of regulation."

About 2,300 of the mayors leaving office in 2004 could be subject to penalties under the current legislation

- Shows the potential size of this regulatory burden

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Brazil: Reforms

Have Brazil's reforms have set the stage for market-based controls of subnational borrowing?

Short Answer: Yes, with some minor adjustments to allow the most creditworthy subnationals to borrow

For a detailed review of these reforms, see my report for the Inter-American Development Bank

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Brazil: Reforms

Brazil's reforms have prepared the way for market based controls

They have:

- Made the national/subnational transfer system more transparent and predictable
- Introduced strict controls on lending to or borrowing by subnationals
- Increased the transparency of subnational accounts
- Reformed the financial system by eliminating state banks and strengthening prudential regulations
- Restructured CAIXA (Caixa Econômica Federal)

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Brazil: Reforms

Brazil's reforms (continued)

- Used BNDES (Banco Nacional de Desenvolvimento Econômico e Social) to:
 - Finance greater private sector participation in infrastructure provision
 - Modernize subnational administration
- Transformed municipal development funds into development agencies
- Stimulated development of domestic capital markets by strengthening the regulatory framework and creating new types of investment funds

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Brazil: Reforms

A remaining weakness is the lack of an adequate regulatory framework for the water sector

Would still require:

- Some regulatory adjustments to allow the most creditworthy of subnationals to borrow
- Some other adjustments to allow foreign institutions to participate

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Brazil: Impact of Reforms

These reforms have significantly:

- Reduced the risk of irresponsible borrowing by subnationals
- Increased the number of creditworthy subnationals
- Augmented the potential financing by institutional investors in the capital markets

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Brazil: Impact of Reforms

There are many creditworthy municipalities

Preliminary Ranking of 491 Municipalities with 50,000+ Inhabitants with 2003 Financial Data:

Results for Top Quartile

Financial Indicators	Value
Debt Service/ Current Revenue	2.1%
Net Operating Surplus After Debt Service/ Current Revenue	16.5%
Salaries/ Current Revenue	44.2%

Number of Municipalities = 122

Total population = 18.0 million

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Brazil: Impact of Reforms

Brazil's institutional investors represent an enormous potential supply of financing for:

- Subnationals, and
- Private sector suppliers of subnational services and infrastructure

Institutional Investors	Total Investments (Billions of US\$)
Mutual Funds	186.4
Private Pension Funds	69.4
Insurance Companies	16.0

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Brazil: Two Challenges

Two significant challenges for Brazil's private subnational credit markets are:

- Very high interest rates
- Volatile exchange rates

High interest rates:

- The Overnight/SELIC rate is currently 19.25%
- For the 9/1999 to 9/2004 period, the mean was 18.9%

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Brazil: Two Challenges

Volatility of foreign exchange rates

Volatility of R\$/US\$ exchange rate has made borrowing in foreign currency expensive even at low US\$ interest rates

For example, the annual internal rate of return of a US\$ loan taken at Libor + 50 basis points in January 1999 in December 2002 would be:

- 5.6% in US dollars versus
- 35% in Reals due to the devaluation of the Real

Conclusion: **Lending should be in local currency**

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Brazil: A Two-track Strategy

How to provide longer term financing at rates that are more accessible without crowding out the private credit market?

We suggest a strategy with two parallel tracks that could begin simultaneously:

- **Track 1.** In Track 1, funding would come from below-market-rate sources, but private entities would take the credit risk
- **Track 2.** Institutional investors such as pension and investment funds could increasingly fund these efforts, as interest rates drop

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Brazil: A Two-track Strategy

There are sources of funding with below-market rates, such as those administered by the:

- Caixa Economica Federal (CAIXA)
- National Economic and Social Development Bank (BNDES)
- Municipal Development Funds (MDFs)
- Multilateral banks (Could lend Reais)

Track 1 would lend these below market rate resources through the private market

- Does not compete directly with this the private market at subsidized rates, as has been the case

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Brazil: A Two-track Strategy

Until interest rates begin to fall, one would expect Track 1 to dominate, but with some startup activity with Track 2

In summary, the two track strategy would be:

- **Track 1.** Private sector takes credit risk with below-market-rate funding
- **Track 2.** Private sector takes risk and provides funding, including from institutional investors

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Brazil: Funding from CAIXA

What would be feasible Track 1 structures?

Fortunately, CAIXA has already developed workable structures

- Developed because of the 45% of equity cap on public sector lending

Structure: lend FGTS funds through the private market

- FGTS (Worker's Severance Indemnity Fund) receives 8% of the salaries of all of the workers in Brazil's formal sector (i.e., those with signed work cards)
- Money goes to individual accounts on which participants can draw in case of being fired, to buy housing, etc.

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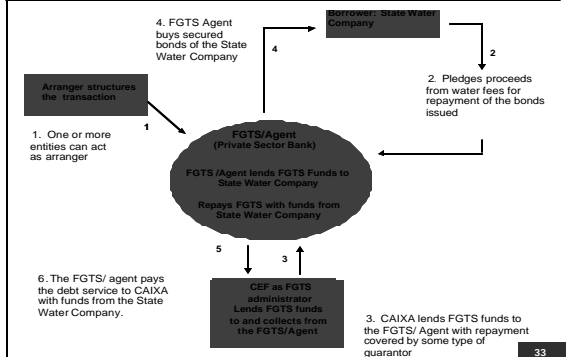
Brazil: CAIXA Structures

In one of these structures:

- A private bank acts as an FGTS/Agent
- As shown in the diagram, CAIXA as FGTS Administrator onlends money to the private FGTS/Agent
- The private FGTS Agent, in turn, loans the money to the water company
 - Secured with their water tariff revenues

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Brazil: CAIXA Structure



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Brazil: CAIXA Structure

Private financial agent:

- Takes the risk of nonpayment by the water companies
- Receives risk spread in compensation

Total interest rate = TR + FGTS spread + CAIXA Spread + Risk Spread

Where:

TR = Reference rate

FGTS spread = 6.5% for sewerage or 8.0% for water

CAIXA Spread = depends on servicing costs

Risk Spread = Based on creditworthiness that goes to the financial institution taking the risk (1.5% to 3.5%)

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Brazil: Guarantees/ Credit Enhancement

Another alternative would be guarantees/ credit enhancement

Credit enhancement seems feasible from a regulatory standpoint

Example from Chile: the Santiago/Valparaiso Toll Road

- Financed on the local credit markets with guarantees from:
 - o IADB private sector
 - o Dexia Credit Local: first loss
 - o FSA (US bond insurance company)

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Brazil: Financing via the Capital Markets

CAIXA is also developing structures for financing via the capital markets:

- One involves selling its loans in a receivables investment fund (FIDC)
 - o FIDC is similar to a European covered bond
- Others involve using Special Purpose Entities (SPE)

There are a number of equity investment funds (FIP) being set up to finance infrastructure:

- **Brazilian Infrastructure Investment Fund** that Inter-American Development Bank is helping to set up
- **Brasil Energia** to finance renewable energy

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Brazil Reform Synergy

Summary: Reforms paved the way for the emergence of a modern subnational credit market in Brazil

For example:

- Change in banking sector regulation =
 - o Controls on lending to subnationals
 - o General improvement of banking regulation
 - o Restructuring of CAIXA
- Subnational controls = Fiscal Responsibility Law mandates sound fiscal management and controls borrowing
- Capital market regulation = Strengthened overall regulation and created new types of investment funds

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Programs for Lower Income Families

Private subnational credit markets can, of course, finance programs for lower income families, if local authorities so wish

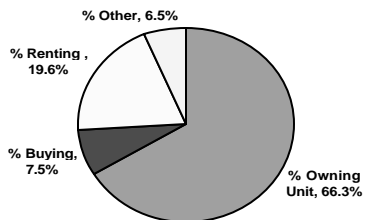
Design of programs for lower income families should take into account price affects of these programs:

- Provision of infrastructure in lower income settlements such as *favelas* usually pushes up housing prices and rents
 - o If the lower income families are renters, they maybe pushed out of the settlement by rising rents
 - o Rising housing prices will make it harder for lower income families to buy housing

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Brazil: Favela Renters and Buyers

Nearly 20% of households in Rio de Janeiro's *favelas* are renters



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Programs for Lower Income Families

To improve accuracy of targeting to low income families, should address these issues before infrastructure investments are made

- One way is to boost home ownership
- Make land tenure more secure in squatter settlements

As any subsidies needed per household will rise with costs, it makes sense to keep costs low by such means as:

- Alternative technologies for sewer provision
- Let the families construct their own units

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Conclusions

Mexico has effectively used private subnational credit markets to:

- Create incentives for subnationals to improved their fiscal performance and efficiency
- Help to develop national financial markets
- Provide a high volume of infrastructure financing on favorable terms that can lower the costs of land development

With some adjustments to allow creditworthy subnationals to borrow, Brazil could do the same

Such markets could benefit lower income families by making urban land more affordable, if issues of renters and land tenure are addressed adequately

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Conclusions

Synergy among a number of different reforms can pave the way for development of the private subnational credit markets

Design and implementation of these reforms requires a joint effort of:

- Country government national and subnational teams, especially the regulators and development banks
- Multilateral and bilateral entities
- Private financial institutions
- Rating agencies

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