

Innovation in Brazil, India and South Africa: A New Drive for Economic Growth and Development


INNOVATION IN THE CONTEXT OF INDUSTRIAL POLICIES IN BRAZIL

July 2009




Rafael Oliva
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Presentation Agenda

1. Public Policies for Innovation in Brazil
 2. The BNDES
 3. The BNDES' Support for Innovation: instruments
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Strategic Priorities

1. Expansion and Consolidation of National S,T&I System

Qualify and train human resources; R&D laboratory infrastructure

2. S,T&I for Social Development

3. R,D&I in Strategic Areas:

biotechnology, health, nanotechnology, information and communication technology, space, nuclear energy, defense, renewable energy, biofuels, agriculture, biodiversity etc.

4. Promotion of Technological Innovation in Enterprises



INVESTMENT/GDP

2010 target: 21%

2007: 17.6%

CAGR 2008-2010: 11,3%

Brazilian Exports (% World)

2010 target: 1.25%

2007: 1.18%

CAGR 2008-2010: 9.1%

SMEs

2010 target:

**Increase the
number of export SME
by 10%**

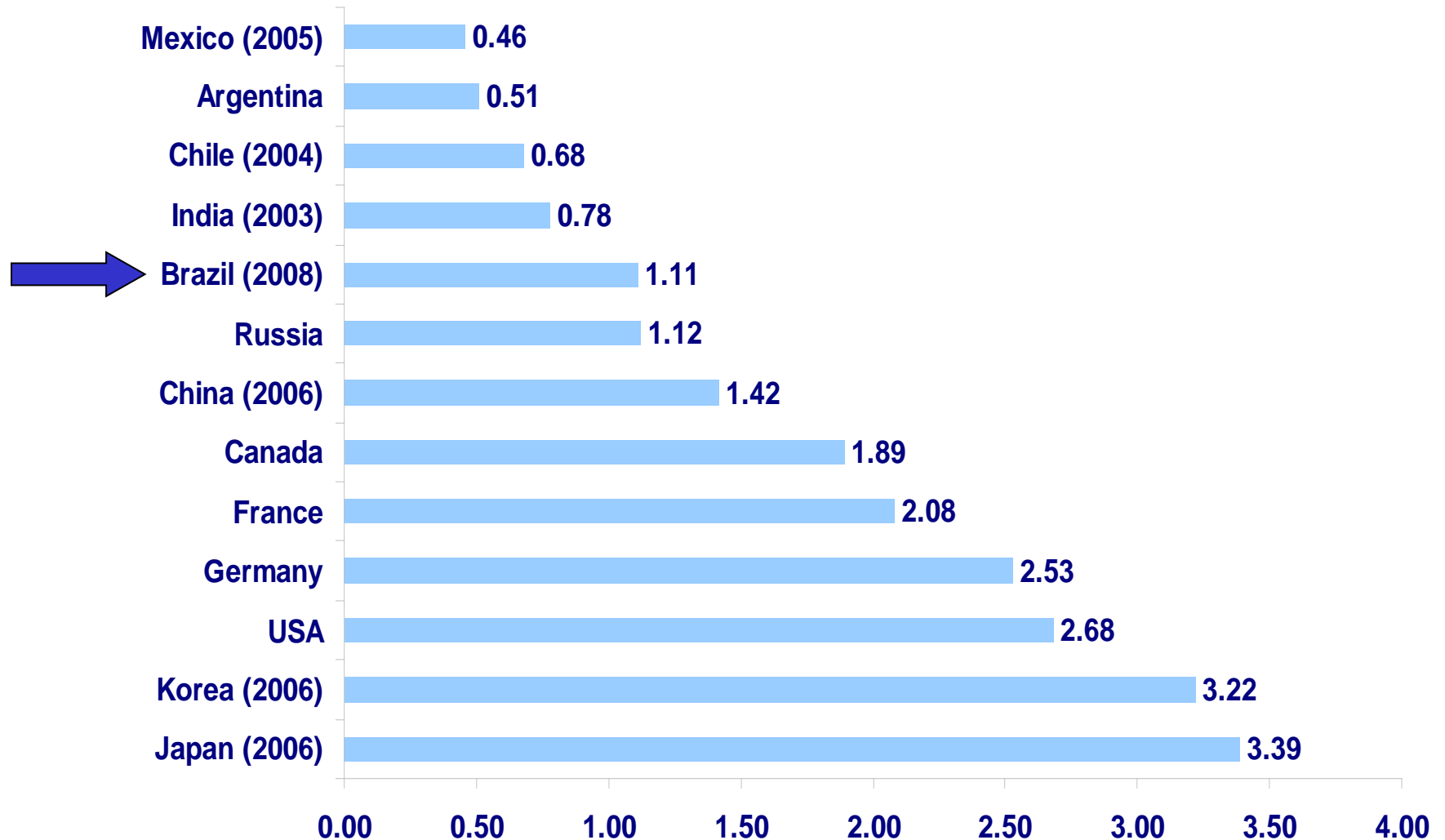
PRIVATE R&D/GDP

2010 target: 0.65%)

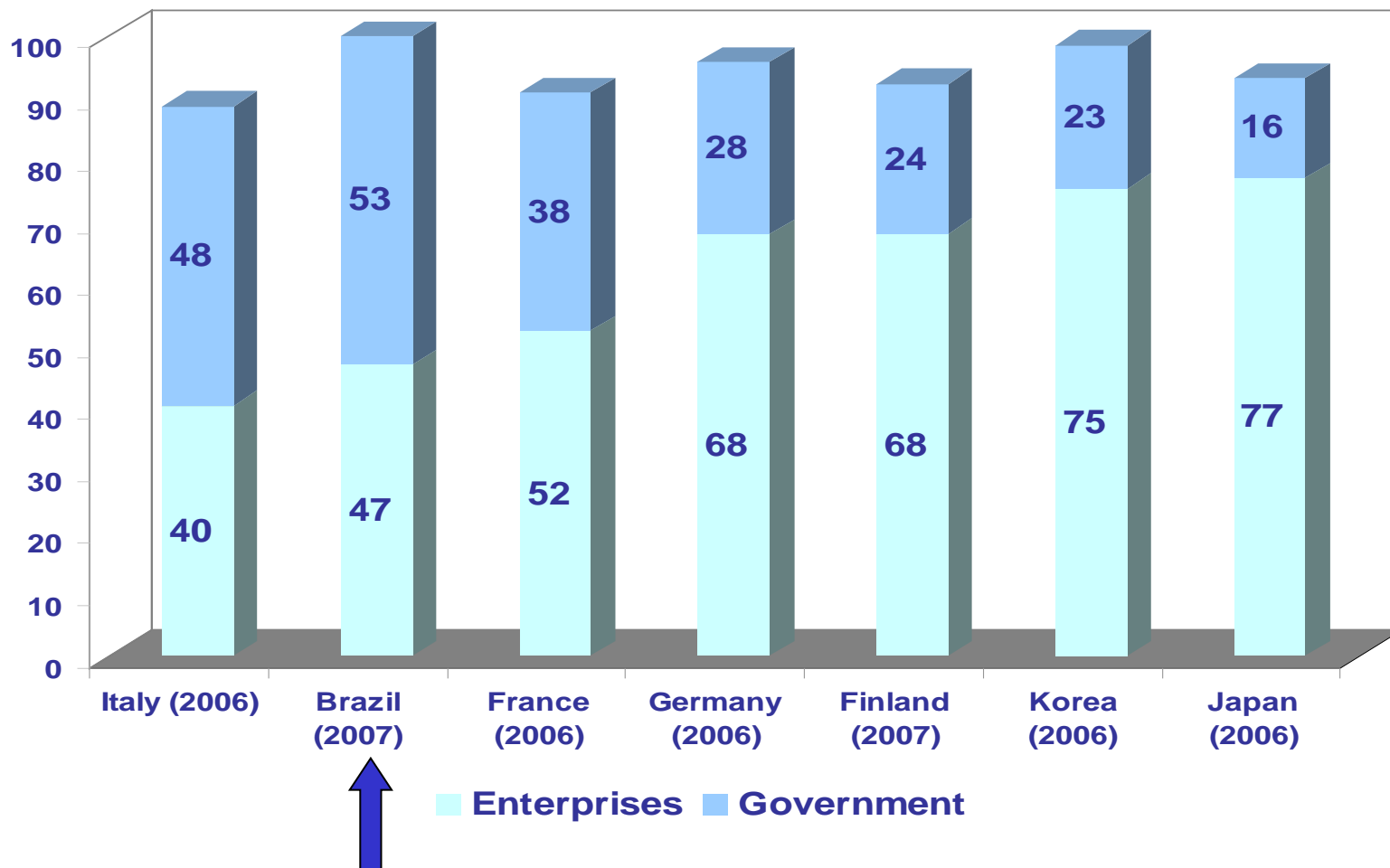
2005: 0.51%

CAGR 2007-2010: 9.8%

National Expenditure in R&D (%GDP)

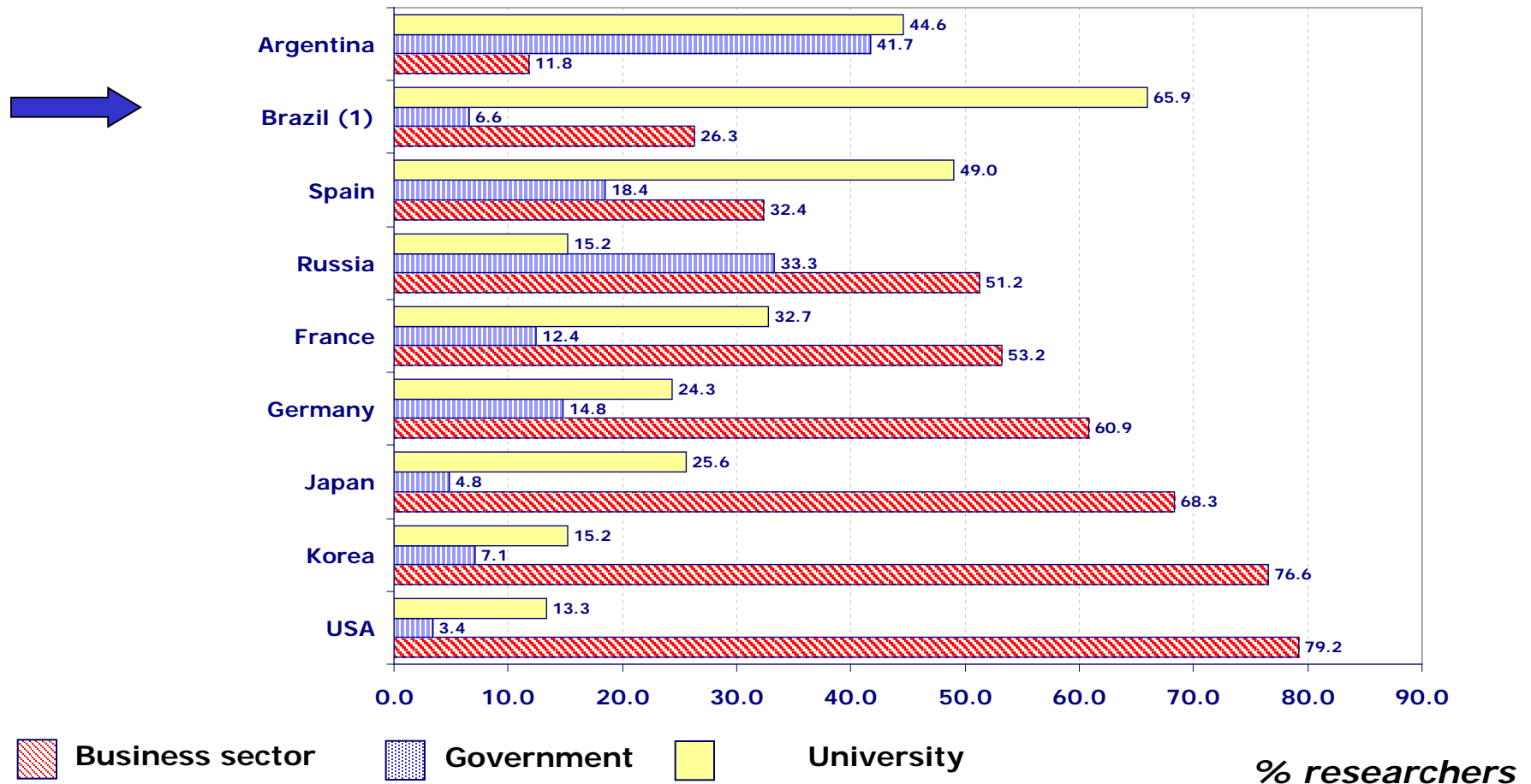


Private and governmental investment in R&D (%) in Brazil



Most Brazilian researchers work at universities...

Percentage of full-time researchers per institutional sector 2005



- **Improve the capacity for coordination**
- **Accelerate uptake of technologies with great impact on the whole productive structure**
 - ICTs, capital goods, biotechnology, nanotechnology
- **Mobilize the private sector**
- **Provide resources for investment in volume, costs and terms consistent with the different stages of innovation process**
 - Improve the existing instruments to characteristics of the knowledge society: the intangible capital agenda

- S,T&I: a matter of the State
- New regulation for innovation
- Increased federal funds for S,T&I
- Improvement and expansion of existing S,T&I programs and creation of new ones

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1950

**Infrastructure (Energy and Transport)
Steel Work**

1960

**Heavy Industry – Consumer Goods -
PYMES**

1970

**Substitution of Imports
Basic Inputs – Capital Goods**

1980

**Energy
Agribusiness
Competitive Integration**

1990

**Private Infrastructure and Exports
Privatization: Management of PND
Social and Urban Development**

Today

**Innovation - Infrastructure – Production Capacity
Exports – Social Inclusion**

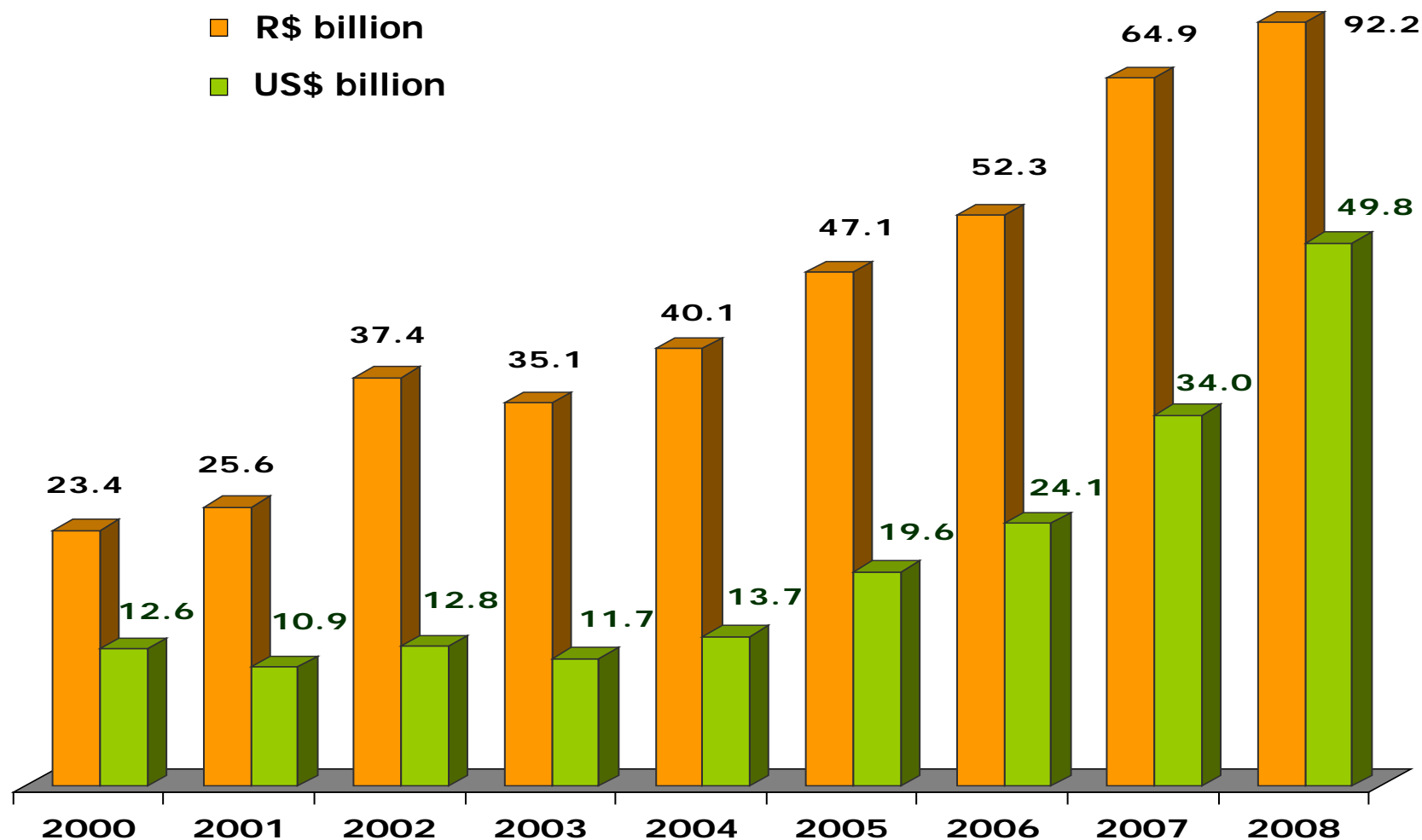
Development Banks

Bank	Assets US\$ billion	Net Equity US\$ billion	Disbursements US\$ billion
World Bank	233.6	41.5	10.5
BNDES	118.6	10.8	49.8
IDB	72.5	19.4	7.1
CAF	14.3	4.6	5.8

Source: BNDES (Dec./08), World Bank (Jun/08), IDB and CAF (Dec./08).


(*) In the World Bank, different to the others, the 12-month fiscal year ends on June 30.

Evolution of Disbursements



Default 2008: 0.15 (%)

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Goal: to contribute to the increase of innovative activities in Brazil on a systematic basis

Directives

- 1. Efforts in all economic sectors**
- 2. Complementary to other institutions within the National Innovation System**
- 3. By means of integration between financing and capitalization instruments**

Target: R\$ 6 billion in disbursements between 2008-2010

The BNDES' Innovation Policy



LINES

INNOVATIVE CAPITAL

FOCUS ON STRATEGY

INNOVATION TECHNOLOGY

FOCUS ON PROJECTS

NONREIMBURSABLE RESOURCES

**FUNTEC
Technology Fund**



**Projects in Research,
Development and Innovation**

BNDES CARD

For micro, small and medium-sized companies
**Certification, conformity assessment, technology services, IP,
software, etc**

EQUITY

**Direct Participation
Funds**
Criatec Program (*Seed Money*)

IC AGENDA AT THE BNDES: 3 STEPS

IC Rating

- Better assessment and **avoid poor allocation of resources**
- **Develop gauges and *scorecards* to evaluate credit**

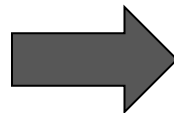
IC Report

- Stimulate companies to **construct / improve Intangible Capital**
- Stimulate companies to **report Intangible Capital**

Awareness

- 
- Include topic in **business agendas and public policy**

Test with 40 companies



Gauges in final validation phase

- **PROMOTING INNOVATION IS A PRIORITY OF PUBLIC POLICIES IN BRAZIL**
- **DIFFERENT GOVERNMENT AGENCIES HAVE BEEN ENGAGED IN THE EFFORT TO BUILD**
- **BNDES HAS WORKED TO PROVIDE A WIDE RANGE OF FINANCIAL INSTRUMENTS**
 - **Financing and capitalization**
 - **Support for companies of all sizes and of all sectors**
- **THE NEXT STEPS**
 - **Financing side: the intangible capitals agenda**
 - **ACCELERATE THE CONSOLIDATION OF THE CULTURE OF INNOVATION**

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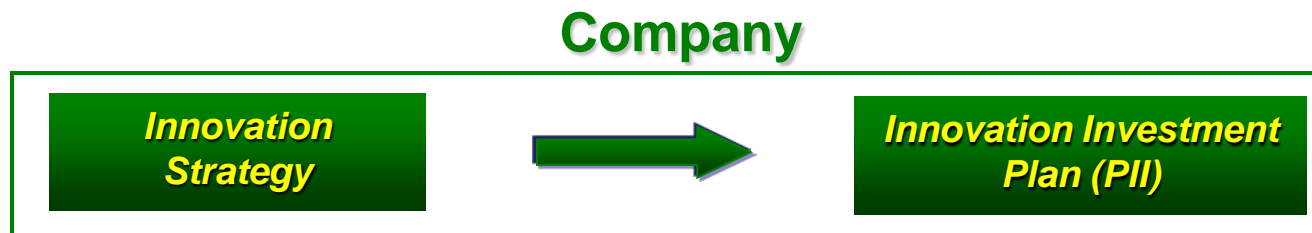
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Lines, FUNTEC and Card



- **Goal: support for innovative efforts aligned with strategies and foreseen in the companies' Innovation Investment Plans**
- Eligible Items: physical infrastructure + tangible and intangible assets
- Financing and/or capitalization
- Minimum Amount : **R\$ 1 million**
- **Cost: 4.5% a.a. (valid until Dec./2009)**
- Participation: up to 100%
- Term of Loan: **up to 12 years**

Project

Technological Risk

*Market
Opportunity*

*Originality for
National Market*

- **Goal:** support research, development and innovation projects with **technological risk and market opportunity:** products and/or new processes (for the national market) or those that are significantly improved
- Financing and/or capitalization
- Minimum Amount: **R\$ 1 million**
- **Cost: 3.5% a.a (valid until Dec./2009)**
- Participation: up to 100%
- Term of Loan: **up to 14 years**

- ✓ **Direct Investment and in lost funds**
- ✓ Scientific and technological projects
- ✓ Of strategic interest to Brazil

- ✓ **Beneficiaries :**
 - Technological institutes and support institutes
 - **Conditions: company intervention**

- ✓ The BNDES' Level of Participation: up to 90%
- ✓ Projects are assessed by CCTEC

Eligible Items:

- ✓ Technological extension
- ✓ Technicians specialized in energy efficiency and environmental impact
- ✓ Prototype Development
- ✓ Design, Ergonomics and Model of the Product
- ✓ Quality assessment and implementation of the product and software process
- ✓ Develop packaging
- ✓ Acquisition and transfer of technology (registered contracts at the INPI)
- ✓ Feasibility assessment and request registration of intellectual property

Conditions:

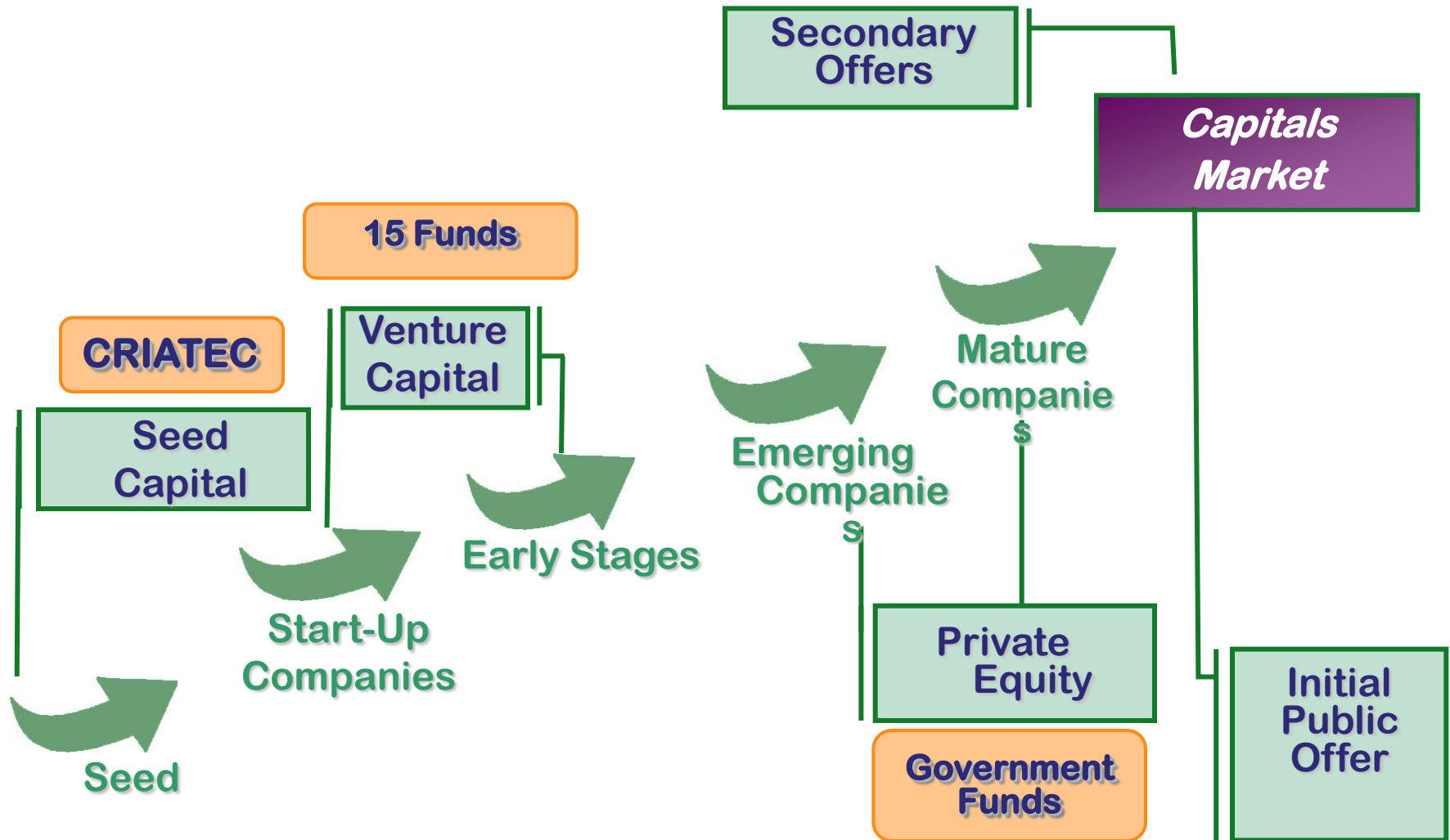
- ✓ Beneficiaries: micro, small and medium-sized companies
- ✓ Limit: up to R\$ 500,00, per bank (BB, CEF, Bradesco)
- ✓ Fixed repayments in up to 48 months
- ✓ Interest rate: 1.00 % a.m.

Capitals Market

	R\$ million			
	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>
Investments (ctd)	6	8	16	17
Amount	66.8	98.1	367.3	377.2
Average Amount	11.1	12.3	23.0	22.1

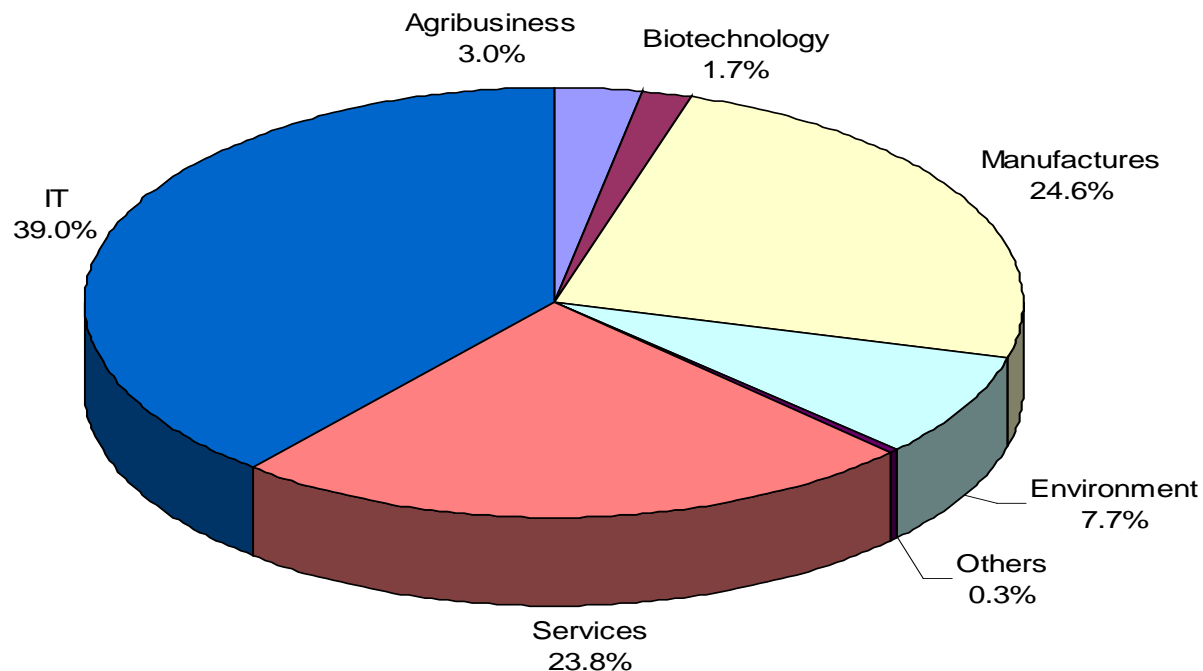
Since 1988, when support for the PYMES began via risk capital, the BNDES offered support to 99 companies, with direct disbursements of R\$ 1.3 billion.

Companies' life cycles and support instruments



**BNDESPAR participated in structuring 42 investment funds,
totaling R\$ 1.4 billion and supporting 149 companies
(105 VC and 44 PE) - March/2009**

VC Fund: R\$ 548 million invested
Sectorial distribution per approved amount



Goals: to capitalize innovative micro and small companies with seed capital and offer them adequate management support

- **Investment period begins: January 2008**
- **Companies receiving investment: 18**
 - **Biotechnology, Agribusiness, IT and Medical equipment**
- **Allocated equity: R\$ 100 million**
- **Participation: BNDESPAR (80%) and BNB (20%)**