ANDIMA
National Association of Financial Market Institutions
Brazil

Indicative Prices:
transparency tools for illiquid markets

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May 2008

Transparency

- **Lessons from the recent events**

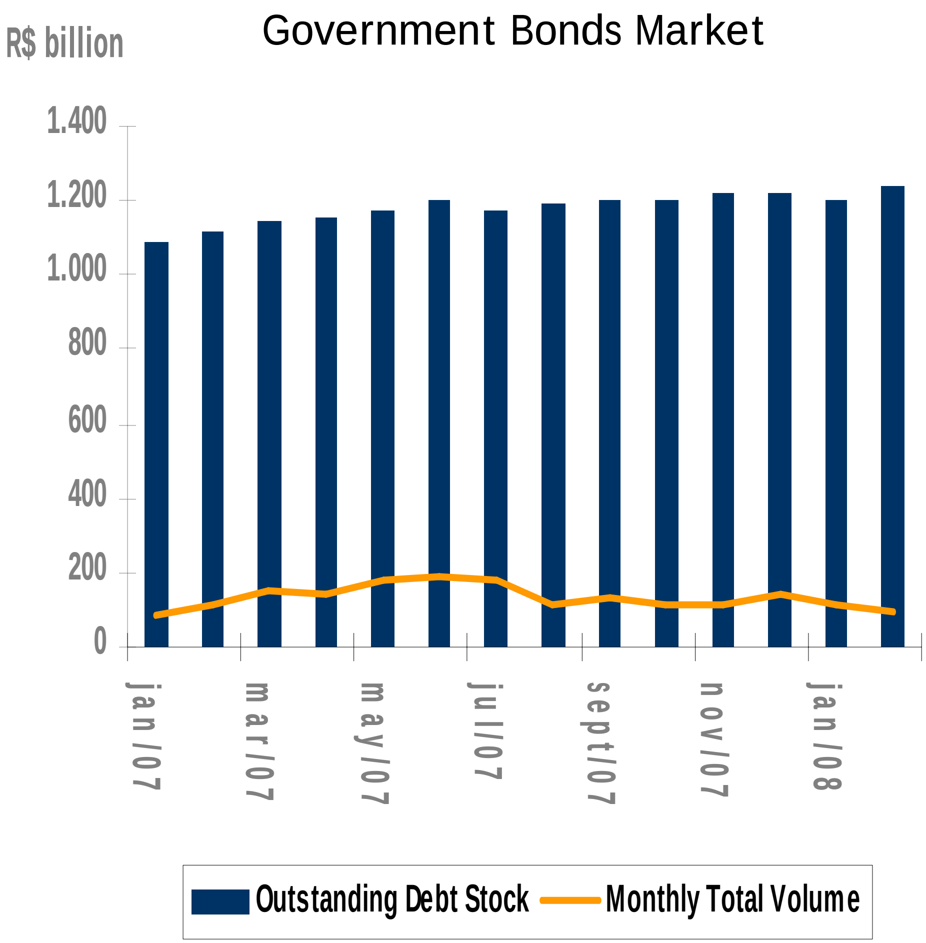
- **Main tools for**
  - Mark to market
  - Risk evaluation
  - Risk management

- **And for**
  - Investor protection and education
  - Prudential regulation and supervision
  - Self regulation and market integrity

- **Alternatives for illiquid markets**

In Brazil

- **Macroeconomics improving**
- **Credit growth**
- **Liquidity remains low**
  - Strong presence of issuers
  - Short maturities
  - Narrow investors base
  - Strategies in the derivatives market
  - Hold to maturity behavior



Transparency

- **Disclosure of information about**
  - markets
  - issuers
  - securities

- **Basic international concept**
  - Consolidation and timely disclosure of pre and post trade prices

In Brazil

- **Prices reflect liquidity imperfections**
  - Low participation of market makers and electronic trading
  - Bid and ask spreads not marketable
  - Multiple brokers and vendors (fragmented information)
  - Intra group and out of the market trades affect average price

- **Andima**
  - Developed Indicative Prices

- **Institutional background**
  - Extensive data base
  - Statistical consistency
  - Qualified sources

Indicative prices

ANDIMA

- **Daily calculation and disclosure of indicative prices**
  - 100% of the outstanding government bonds maturities
  - 60% of debentures traded

- **Sample of 45 price makers among banks, securities firms and asset managers**

- **Available at Internet**

- **End of the day indicative range**
  - promotes convergence without impact trading

Secondary Market of Public Bonds

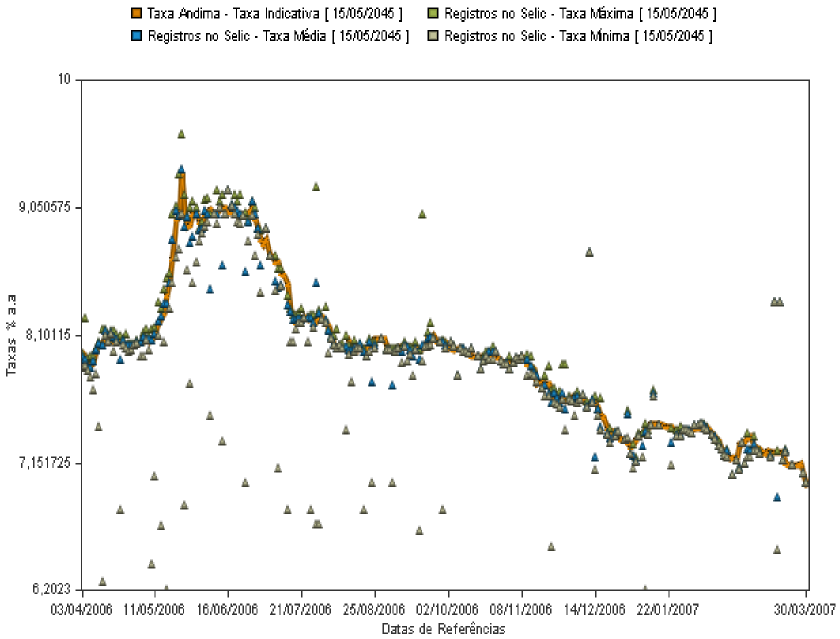
Home > Brazilian Financial System > **Secondary Market of Public Bonds** [Glossary]

Federal Public Bonds										05/23/2007
FIXED RATE bonds		National Treasury Bills (LTN) - Rate (% p.y.)/252								
SELIC Code	Base Date/ Issuance	Expiry Date	Maximum Rate	Minimum Rate	Indicative Rates	Unit Price (UP)	Standard Deviation	Indicative Range		
								Minimum	Maximum	
100000	06/01/2005	07/01/2007	12.1519	12.1365	12.1492	987.79015872	0.01	12.1379	12.1603	
100000	02/13/2006	10/01/2007	11.7241	11.7091	11.7202	960.76927643	0.01	11.7077	11.7328	
100000	07/22/2005	01/01/2008	11.3942	11.3713	11.3856	938.63002940	0.01	11.3755	11.3956	
100000	08/04/2006	04/01/2008	11.1205	11.0879	11.1105	914.41739050	0.01	11.1018	11.1191	
100000	12/07/2006	07/01/2008	10.9359	10.9110	10.9260	892.64290350	0.01	10.9162	10.9357	
100000	05/05/2006	01/01/2009	10.6439	10.6054	10.6281	849.48127665	0.02	10.6115	10.6446	
100000	04/05/2007	07/01/2009	10.4804	10.4450	10.4719	811.34487581	0.02	10.4535	10.4802	

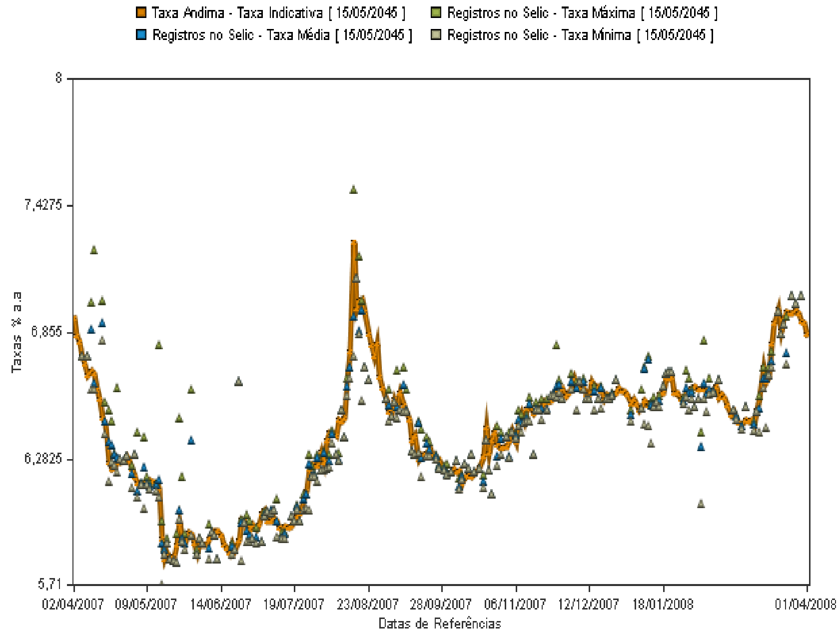
Whenever interpolated, a rate is published in bold characters.

Transparency tools

- **COMPARE**
  - Comparison tool - highlight of market imperfections and convergence



NTN-B 45 (apr/2006 to apr/2007)



NTN-B 45 (apr/2007 to apr/2008)

Transparency tools

- **Bond Market Reporting System**
  - Indicative and intraday prices available - consolidation and timely disclosure

ANDIMA's Bond Market Reporting System

Main > Technical Information > Public Bonds > **Online Rates System** | **Methodologics Notes**

Show + Columns ☐

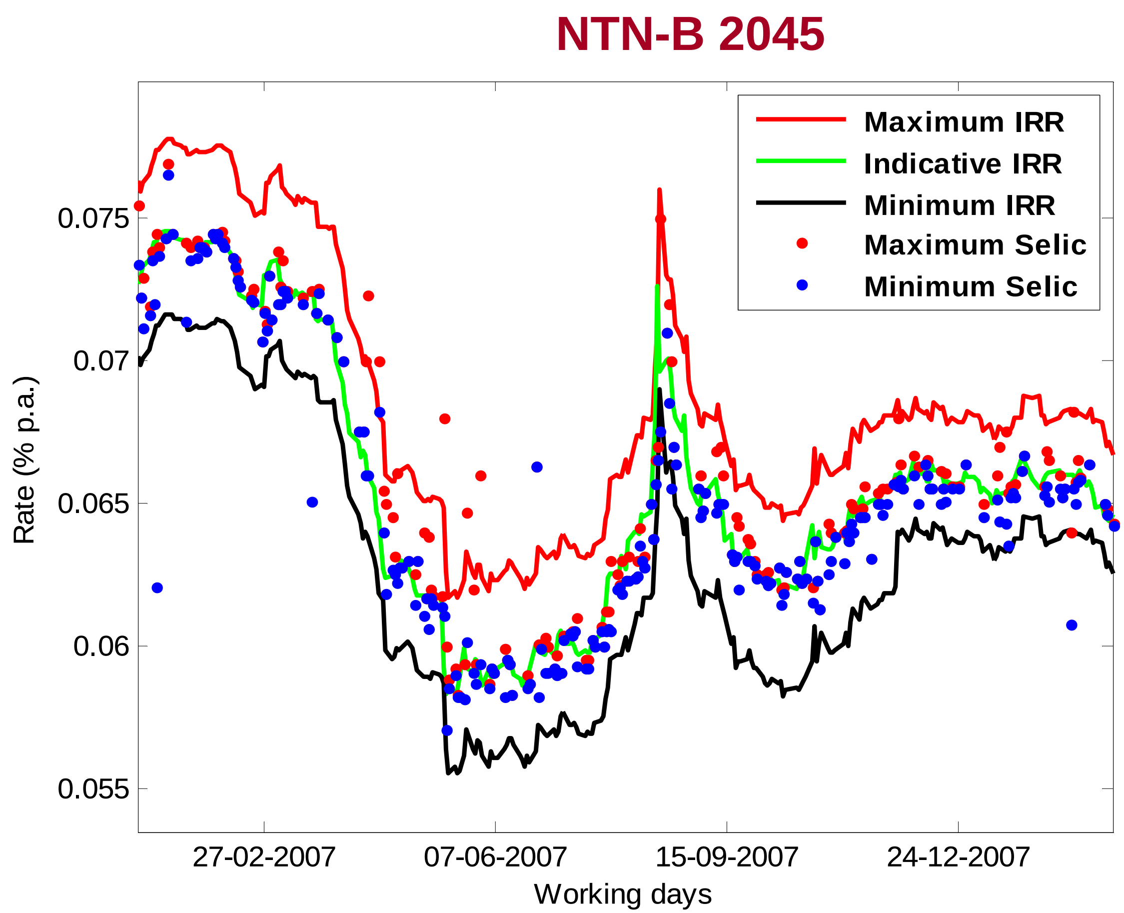
Reference Date : 05/21/2008 **Provider :** +/- **Bonds :** +/- **Maturity Date :** +/- Clear Parameters Print

Last Updated: 15:31:22

Bonds	Maturity Date	ISIN Code	Provider	Time	Term of Trade	Rate %p.a.					Bid	Ask
						Previous Day	Maximum	Average	Minimum	Last		
LTN	07/01/2008	BRSTNCLTN624	ANDIMA 11H	-	-	11.9989	-	-	-	-	12.0592	12.041
LTN	07/01/2008	BRSTNCLTN624	CALL	10:15:00	-	-	-	-	-	-	12.0800	12.050
LTN	07/01/2008	BRSTNCLTN624	CALL	10:30:00	-	-	-	-	-	-	12.0700	12.050
LTN	07/01/2008	BRSTNCLTN624	CALL	11:00:00	-	-	-	-	-	-	12.0600	12.040
LTN	10/01/2008	BRSTNCLTN673	ANDIMA 11H	-	-	12.6110	-	-	-	-	12.6456	12.630
LTN	10/01/2008	BRSTNCLTN673	CALL	10:15:00	-	-	-	-	-	-	12.6500	12.630
LTN	10/01/2008	BRSTNCLTN673	CALL	10:30:00	-	-	-	-	-	-	12.6500	12.630
LTN	10/01/2008	BRSTNCLTN673	CALL	11:00:00	-	-	-	-	-	-	12.6600	12.640
LTN	01/01/2009	BRSTNCLTN640	BMF	-	FORWARD	-	-	-	-	-	13.1700	13.155
LTN	01/01/2009	BRSTNCLTN640	ANDIMA 11H	-	-	13.1490	-	-	-	-	13.1850	13.175

Transparency tools

- **New indicative range**
  - Zero coupon curve
  - Building of a specific methodology
  - Next day opening range
- **Next step: monitoring**



Transparency tools for

- **Regulators**
  - Recognized as fair price for means of MTM of institutions and investors
  - Indicative range used for supervisory means of institutional investors
- **Self regulation**
  - Best price makers ranking
  - Banks CDs pricing
  - Credit Notes issuance and trading principles
  - Recommendation for MTM of investment funds by ANBID
- **Reach**
  - Associates and pension funds and issuers that adhere to the Codes
  - Around 98% of secondary market participants

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- **Visit our websites:**
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  - www.debentures.com.br

- **More information**
  - **Technical area:** getec@andima.com.br
  - **Self-regulation area:** gerar@andima.com.br

Self regulation in Brazil

- **Two types**
  - Entities governing exchanges and organized OTC markets – statutory regulatory authority
  - Associations representing the Financial System – voluntary commitment to procedures and conduct rules

- **Formal SRO**
  - BSM (former Bovespa and BM&F, now integrated) – stocks and fixed income securities, options, futures and forward contracts
  - CETIP – deposits, fixed income securities and derivatives traded OTC

- **Voluntary SRO**
  - ANDIMA - fixed income markets and secondary market
  - ANBID - investment funds management, custody, primary offering and private banking