



BANCO CENTRAL DO BRASIL

Working Paper Series **206**

**Fluctuation Dynamics in US interest rates
and the role of monetary policy**

Daniel Oliveira Cajueiro and Benjamin M. Tabak

April, 2010

ISSN 1518-3548
CGC 00.038.166/0001-05

Working Paper Series	Brasília	n. 206	Apr.	2010	p. 1-29
----------------------	----------	--------	------	------	---------

Working Paper Series

Edited by Research Department (Depep) – E-mail: workingpaper@bcb.gov.br

Editor: Benjamin Miranda Tabak – E-mail: benjamin.tabak@bcb.gov.br

Editorial Assistant: Jane Sofia Moita – E-mail: jane.sofia@bcb.gov.br

Head of Research Department: Adriana Soares Sales – E-mail: adriana.sales@bcb.gov.br

The Banco Central do Brasil Working Papers are all evaluated in double blind referee process.

Reproduction is permitted only if source is stated as follows: Working Paper n. 206.

Authorized by Carlos Hamilton Vasconcelos Araújo, Deputy Governor for Economic Policy.

General Control of Publications

Banco Central do Brasil

Secre/Surel/Cogiv

SBS – Quadra 3 – Bloco B – Edifício-Sede – 1º andar

Caixa Postal 8.670

70074-900 Brasília – DF – Brazil

Phones: +55 (61) 3414-3710 and 3414-3565

Fax: +55 (61) 3414-3626

E-mail: editor@bcb.gov.br

The views expressed in this work are those of the authors and do not necessarily reflect those of the Banco Central or its members.

Although these Working Papers often represent preliminary work, citation of source is required when used or reproduced.

As opiniões expressas neste trabalho são exclusivamente do(s) autor(es) e não refletem, necessariamente, a visão do Banco Central do Brasil.

Ainda que este artigo represente trabalho preliminar, é requerida a citação da fonte, mesmo quando reproduzido parcialmente.

Consumer Complaints and Public Enquiries Center

Banco Central do Brasil

Secre/Surel/Diate

SBS – Quadra 3 – Bloco B – Edifício-Sede – 2º subsolo

70074-900 Brasília – DF – Brazil

Fax: +55 (61) 3414-2553

Internet: <http://www.bcb.gov.br/?english>

Fluctuation Dynamics in US interest rates and the role of monetary policy

Daniel Oliveira Cajueiro* Benjamin M. Tabak †

The Working Papers should not be reported as representing the views of the Banco Central do Brasil. The views expressed in the papers are those of the author(s) and not necessarily reflect those of the Banco Central do Brasil.

Abstract

This paper presents empirical evidence suggesting that the degree of long-range dependence in interest rates depends on the conduct of monetary policy. We study the term structure of interest rates for the US and find evidence that global Hurst exponents change dramatically according to Chairman Tenure in the Federal Reserve Board and also with changes in the conduct of monetary policy. In the period from 1960's until the monetarist experiment in the beginning of the 1980's interest rates had a significant long-range dependence behavior. However, in the recent period, in the second part of the Volcker tenure and in the Greenspan tenure, interest rates do not present long-range dependence behavior. These empirical findings cast some light on the origins of long-range dependence behavior in financial assets.

Generalized Hurst exponent; long-range dependence; monetary policy.

Códigos JEL: G18.

*UNB, INCT.

†Banco Central do Brasil and Universidade Catolica de Brasilia

1 Introduction

In the past decades the US economy has experienced low inflation and little variation in real activity if compared to the 1970's. These improvements have been largely attributed to a change in the way the Federal Reserve conducts monetary policy. A number of research papers have suggested that a structural break in the conduct of monetary policy has occurred since Paul Volcker became chairman of the Federal Reserve in August 1979 (see Clarida et al., 2000). However, there is little consensus as whether a change in the conduct of monetary policy has indeed occurred and if it has what would be the dates of these changes (Boivin, 2006).

This paper has three main contributions. First, we present evidence of a structural break in long-range dependence for long-term interest rates. The break seems to be related to the conduct of monetary policy. Second, we employ a non-parametric technique to analyze long-range dependence, which is robust to short-term dynamics misspecification. Third, we also test for long-range dependence for inflation and find that the degree of long-range dependence has decreased substantially in the post-1982 period.

We contribute to the debate on monetary policy by studying changes in persistence in interest rates for different maturities for the US. We investigate 1, 3 and 5 year maturity interest rates and present overwhelming evidence that a structural break has occurred in the dynamics of these interest rates. We employ methods recently developed in statistical physics and show that interest rates' persistence has decreased substantially in the post-1982 period, while there is evidence of strong long-range dependence in the pre-1982 period. Therefore, the evidence in this paper is in line with the reasoning that a structural break has occurred in the conduct of monetary policy in the early 1980's.

This paper proceeds as follows. In section 2, a brief review of the literature is presented. In section 3, the methodology to estimate generalized Hurst exponents is reviewed. In section 4, the data used in this work is described. Section 5 presents the empirical results. Finally, in section 6, this paper is concluded.

2 Brief Literature Review

Researchers have documented a substantial change in macroeconomic variables for the US in the past decades. From the late 1960s through the early 1980s, the United States economy experienced high and volatile inflation along with several severe recessions. Since the early 1980s, however, inflation has remained steadily low, while output growth has been relatively stable¹.

An important question that recent literature has been trying to answer is why in the recent decades monetary policy in the US has been successful in controlling inflation whereas in the mid-1970's inflation was high. Several papers have documented that major changes occurred in the way monetary policy is conducted by the Federal Reserve (Clarida et al., 2000; Duffy and Engle-Warnick, 2006; Boivin, 2006; Boivin and Giannoni, 2006; Sims and Zha, 2006) following changes in the Federal Reserve chairman. These papers in general use parametric models and estimate reaction functions. They test for changes in the reaction function (Taylor rule) of the Federal Reserve to inflation expectations. There seems to be a consensus that major changes have taken place, although that the precise timing of when these changes have occurred is not consensual.

Another strand of the literature has studied long-range dependence in interest rates and has found evidence of it in different periods (Backus and Zin, 1993; Tsay, 2000; Barkoulas and Baum, 1998; McCarthy et al., 2004, Cajueiro and Tabak, 2005a). The study of long-range dependence in interest rates is important for three main reasons: 1. If there is long-range dependence in interest rates then there is some degree of predictability; 2. It is crucial to assess the persistence in interest rates as it has important implications for the evaluation of economic models. For example, if we wish to evaluate whether covered interest rate parity holds we have to take long-range dependence into account employing an ARFIMA model rather than the usual ARMA; 3. It is not clear what the cause of persistence in interest rates is. Although a few papers have documented this stylized fact, so far it is difficult to ascertain its causes. Therefore, if the persistence of interest rates changes due to changes in the conduct of monetary policy we have identified that policy making can be an important cause of long-range dependence.

In this paper we fill the gap between these two literatures and examine

¹See Romer and Romer (2003) for a discussion on why monetary policy has been so much successful under some Federal Reserve chairmen than others.

whether there is a structural break in the long-range dependence of interest rates for different maturities according to Federal Reserve chairman tenure. Therefore, we are able to test whether changes in the conduct of monetary policy are related to changes in the persistence of interest rates. Furthermore, most of the literature so far has employed parametric techniques to estimate reaction functions, such as Taylor rules, and to estimate long-range dependence. These methods are subject to important caveats as the results rely on the short-term dynamics specification. We employ a novel estimation non-parametric technique, which is robust to short-term dynamics misspecification.

3 Measures of Long-Range Dependence

Several methods have been introduced to take the long-range dependence phenomenon into account². This literature can be actually divided in two different strands: (1) an approach whose focus is to determine the degree of long range dependence based on the parameter well-known the Hurst exponent or a parameter related to it (see, for example Geweke and Porter-Hudak (1983), Hosking (1981), Hurst (1951), Barabasi and Vicsek (1991), Robinson (1995) and Cajueiro and Tabak (2005b)) and (2) an approach that aims at developing statistics to test, through a hypothesis test, the presence of long-range dependence (see, for example, Giraitis *et al.* (2003), Lee and Schmidt (1996) and Lo (1991)).

In this paper, we follow the former branch of the literature where one is interested to determine the degree of long range dependence of a given stochastic process $X(t)$. Our measure of long range dependence is the Generalized Hurst exponent introduced in Barabasi and Vicsek (1991) and considered recently by Di Matteo *et al.* (2005) to study the degree of development of financial markets. The generalized Hurst exponent is a generalization of the approach proposed by Hurst (1951). It may be evaluated using the q -order moments of the distribution of increments, which seems to be a good characterization of the statistical evolution of a stochastic variable $X(t)$ ³,

²A survey of these methods may be found in Taqqu *et al.* (1999).

³In financial applications the variable $X(t)$ is the time series of asset prices (in logarithms).

$$K_q(\tau) = \frac{\langle |X(t+\tau) - X(t)|^q \rangle}{\langle |X(t)|^q \rangle}, \quad (1)$$

for each time-window τ . Therefore, using equation (1), the generalized Hurst exponent can be defined for each time scale τ and each moment parameter q as

$$K_q(\tau) \sim \tau^{qH(q)}. \quad (2)$$

In order to find the value of $H(q)$, one has to choose a value for q and to evaluate $K_q(\tau)$ for different time scales τ . The determination of $H(q)$ is obtained by the the best straight line of a log-log plot of $K_q(\tau) \times \tau$.

For the case that a given stochastic process $X(t)$ is a monofractal⁴, the exponent $H(q)$, for any value of q , is useful to discriminate stochastic processes in terms of the presence of long range dependence (Hurst, 1951). In this case, for any value of q , $H(q) = 1/2$ means that $X(t)$ does not present long range dependence. If $H(q) > 1/2$ the process $X(t)$ is persistent in the sense that an increasing trend in the past implies in an increasing trend in the future, whereas if $H(q) < 1/2$ the process $X(t)$ is anti-persistent. For more complex processes, $H(q)$ is dependent on the value of q ⁵.

An important issue in the estimation of long-range dependence measures is how to calculate standard errors for the estimates. We follow Grau-Carles (2005 and 2006) and employ a post-blackening bootstrap approach.

The post-blackening bootstrap methodology may be exemplified as follows⁶:

1. Fit a default AR(1) to asset returns r_1, r_2, \dots, r_3

$$\epsilon_t = r_t - \hat{\alpha}r_{t-1} \quad (3)$$

2. Estimate the autoregressive parameter $\hat{\alpha}$ and form the residuals from the historical sequence

⁴A monofractal is a stochastic process whose its scaling behavior is determined from a unique constant H that coincides with the Hurst exponent.

⁵A good approximation to the Hurst exponent is found when $q = 1$. Therefore, in this work, we evaluate K_q in equation (1) using this value.

⁶The bootstrap is applied to asset returns $(X(t)/X(t-1))$, where $X(t)$ corresponds to the log of asset prices. The price history is recovered recursively from bootstrap samples of returns.

$$\hat{\epsilon}_t = r_t - \hat{\alpha}r_{t-1} \quad (4)$$

3. Obtain the simulated innovations $\epsilon_1, \epsilon_2, \dots, \epsilon_3$ by bootstrapping ϵ_t using the moving block bootstrap (MBB), where the choice of block length is given by the rule provided in Hall et al. (1996) rule (block size = $N^{\frac{1}{5}}$).

4. The bootstrapped innovation series ϵ_t is then post-blackened by applying the estimated model to the resampled innovations, to obtain synthetic returns r_t

$$\epsilon_t = r_t - \hat{\alpha}r_{t-1} \quad (5)$$

The starting value of r_t is taken to be equal to ϵ_0 itself.

In our case we fit an autoregressive $AR(p)$ model for log changes in interest rates. We choose as 30 lags the maximum p and minimize the Akaike information criteria in order to find the optimal lag length for the AR .

We run 100 bootstrap samples and estimate Hurst exponents for these samples. The standard deviation of these Hurst exponents is used as a proxy for the standard error of Generalized Hurst exponents.

4 Data

The data is sampled daily, beginning on January 2, 1962 and ending on February 4, 2005. The full sample has 10755 observations, collected from the Federal Reserve System. We study the 1,3 and 5-years to maturity interest rates, which are constant maturity treasury rates.

We test for long-range dependence in interest rates for different time periods. We split the sample according to monetary policy and also to Federal Reserve tenure. Table 1 presents the tenure period for each chairman. We do not study the Miller administration because it was too short.

It is worth mentioning that although the central bank is able to control the very short-term interest rate aggregate spending decisions and long-term inflation expectations are closely related to long-term interest rates. Therefore, our interest is on studying the effects of changes in the conduct of monetary policy in the dynamics of long-term interest rates, which affect economic activity and long-term inflation expectations.

Federal Reserve Chairman	Period
W. Martin	Apr. 1951 - Jan. 1970
A. Burns	Feb. 1970 - Jan. 1978
G. Miller	Mar. 1978 - Aug. 1979
P. Volcker	Aug. 1979 - Aug. 1987
A. Greenspan	Aug. 1987 - Feb. 2006

Table 1: This table presents the tenure of each Chairman of the Federal Reserve since the 1950's.

5 Empirical Results

Recent research has documented that a change may have occurred in the way monetary policy has been conducted in the US in the past decades (see Clarida *et al.*, 2000, and Boivin, 2006). Therefore, we study the behavior of interest rates for different maturities and compare generalized Hurst exponents for a variety of time periods.

Table 2 presents generalized Hurst exponents for different time periods. Panel A presents estimates according to Federal Reserve chairman. The generalized Hurst exponents are decreasing with maturity, which suggests that short-term interest rates are more predictable than long-term interest rates. It is striking that these generalized Hurst exponents are close to 0.5 for the Greenspan era for all maturities, and are very high for the Burns era (above 0.62 for all maturities).

We would also like to test whether there is an influence of the monetarist experiment conducted in the beginning of the Volcker administration. Panel B shows results dividing the sample in a different way. We see that interest rates were quite persistent in the monetarist experiment in the beginning of the Volcker administration. However, they converge to values similar to the ones seen in the Greenspan administration afterwards. Future research should focus on incorporating these findings in modeling the term structure of interest rates.

	y1		y3		y5	
Panel A: Federal Reserve Chairman						
Martin	0.64	(0.017)	0.59	(0.017)	0.59	(0.017)
Burns	0.64	(0.017)	0.63	(0.017)	0.62	(0.017)
Volcker	0.58	(0.018)	0.58	(0.018)	0.58	(0.018)
Greenspan	0.5	(0.018)	0.5	(0.018)	0.5	(0.017)
Panel B: Monetary Policy						
Pre 1979	0.63	(0.016)	0.61	(0.017)	0.61	(0.017)
Post 1979	0.53	(0.017)	0.52	(0.017)	0.52	(0.017)
Monetarist Experiment	0.6	(0.019)	0.59	(0.019)	0.59	(0.019)
Post 1982	0.5	(0.018)	0.5	(0.017)	0.51	(0.017)

Table 2: This table presents generalized Hurst exponents for 1,3, and 5-years interest rates for different time periods. Standard errors built using the post blackening bootstrap approach are provided between parentheses.

The empirical results obtained suggest that the dynamics of interest rates has changed substantially in the past decades. Long-range dependence seems to be strong in the pre-1982 period, while this evidence practically disappears in the recent period (post-1982), coinciding with substantial changes in the conduct of monetary policy.

The finding of long-range dependence in interesting rates is important for a variety of reasons. First, in many economic models such as the uncovered interest rate parity, Fisher hypothesis, expectations hypothesis of the term structure of interest rates we have to assume an underlying structure for interest rates. If interest rates possess long-range dependence most of these models have to be estimated using fractional integration techniques. An additional problem is when there are structural breaks in the long-range dependence parameter. In this case our results provide some insights on why some models may work better in specific periods, whereas they provide poor predictions in other periods (see Dai and Singleton, 2002; Kozicki and Tinsley, 2005).

The empirical results are important because they imply that a more aggressive policy response to inflation reduces long memory in long-term interest rates. This could be happening due to a change in the dynamics of long-term inflation expectations, which suggests that monetary policy is more effective.

We also test for long-range dependence in the Consumer Price Index for the US employing monthly observations. We split the sample in the pre and post-1982 periods. We have 251 and 269 observations for each period, respectively. The Hurst exponent for the Consumer Price Index (inflation) decreases from 0.72 to 0.58 (bootstrap standard errors equal to 0.024). Therefore, there is a significant decrease in inflation long memory in the post-1982 period. This suggests that part of the inflation process could have been predicted in the pre-1982 period, which is consistent with a Fed's weak response to inflation forecasts in this period.

Long term interest rates have two main drivers: they can be seen as sums of expected short-term interest rates (Expectation Hypothesis of the Term Structure of Interest Rates) plus some risk premium for expected inflation. In the 1980 period the Fed responded more strongly to inflation expectations and monetary policy has stabilized the economy more effectively. Therefore, our empirical results suggest that these changes in the conduct of monetary policy may have changed the dynamics of inflation itself.

6 Conclusions

Testing for long-range dependence in asset prices has been subject of intense investigation in the financial literature. There are many implications for portfolio and risk management. For example, traditional option pricing models should be modified to incorporate long-range dependence features in asset prices and volatility. Furthermore, if the long-range dependence parameters change over time, then the time series that are being studied possess more information than is given by monofractal models. Therefore, studies that focus on how and why long-range parameters change over time may be particularly useful as they can be used to determine structural breaks or shifts in these time series.

This paper offers a fresh look at the properties of interest rates for the US. The empirical evidence suggests that interest rates had strong long memory in the pre-Volcker administration and that after 1982 this evidence has disappeared. These results suggest a structural break in the dynamics of interest rates. They also imply that careful should be taken when studying long time series as the parameters that characterize them may change over time, which is evidence of multifractality.

It is important to notice that our sample period includes important changes in the macroeconomic environment, as exchange rates become flexible in the mid 1970's and early 1980's. Therefore, in a fixed exchange rate framework shocks to the economy must be absorbed mainly by movements in interest rates, which implies in more persistent interest rates' dynamic. However, in flexible exchange rate regimes policy makers have more degrees of freedom to absorb shocks into the economy, as exchange rates may absorb partially such shocks.

7 Acknowledgements

The opinions expressed in the paper are those of the authors and do not necessarily reflect those of the Banco Central do Brasil. Benjamin M. Tabak and Daniel O. Cajueiro gratefully acknowledge financial support from CNPQ Foundation.

References

- [1] BACKUS,D, ZIN, S. Long memory inflation uncertainty: evidence of term structure of interest rate. *Journal of Money, Credit and Banking*, **25**, 687-700, 1993.
- [2] BARABASI, A.L., AND VICSEK, T. Multifractality of self-affine fractals. *Physical Review A*, **44**, 2730-2733, 1991.
- [3] BARKOULAS, J. T. AND BAUM, C. F. Fractional dynamics in Japanese financial time series. *Pacific-Basin Finance Journal*, **6**, 115-124, 1998.
- [4] BOIVIN, J. Has U.S. Monetary Policy Changed ? Evidence from Drifting Coefficients and Real-Time Data *Journal of Money, Credit and Banking*, **38**, 1149-1173, 2006.
- [5] BOIVIN, J., GIANNONI, M.P. Has Monetary Policy Become More Effective ? *The Review of Economics and Statistics*, **88**, 445-462, 2006.
- [6] CAJUEIRO, D. O. AND TABAK, B. M. The long-range dependence behavior of the term structure of interest rates in Japan. *Physica A*, **350**, 418-426, 2005a.
- [7] CAJUEIRO, D. O. AND TABAK, B. M. The rescaled variance statistic and the determination of the Hurst's exponent. *Mathematics and Computers in Simulation*, 2005b.
- [8] CLARIDA, R., GALÍ, J., AND GERTLER, M. Monetary Policy Rule and Macroeconomic Stability: Evidence and Some Theory. *Quarterly Journal of Economics*, **115**, 147-180, 2000.
- [9] DAI, Q., K. SINGLETON Expectations Puzzles, Time-Varying Risk Premia, and Affine Models of the Term Structure. *Journal of Financial Economics* , **63**, 415-441, 2002.
- [10] DI MATTEO, T., ASTE, M., AND DACOROGNA, M. Long-term memories of developed and emerging markets: Using the scaling analysis to characterize their stage of development. *Journal of Banking and Finance*, **29**, 827-851, 2005.

- [11] DUFFY, J., ENGLE-WARNICK, JIM Multiple Regimes in U.S. Monetary Policy ? A Nonparametric Approach *Journal of Money, Credit and Banking*, **38**, 1363-1377, 2006.
- [12] GEWEKE, J. AND PORTER-HUDAK, S. The estimation and application of long memory time series models. *Journal of Time Series Analysis*, **4**, 221-238, 1983.
- [13] GIRAITIS, L., KOKOSZKA, P., LEIPUS, R. AND TEYSSIÈRE, G. Rescaled variance and related tests for long memory in volatility and levels. *Journal of Econometrics*, **112**, 265-294, 2003.
- [14] GRAU-CARLES, P. Tests of Long Memory: A Bootstrap Approach. *Computational Economics*, **25**, 103-113, 2005.
- [15] GRAU-CARLES, P. Bootstrap testing for detrended fluctuation analysis. *Physica A*, **360**, 89-98, 2006.
- [16] HALL, P., HOROWITZ, J.L., JING, B. On blocking rules for the bootstrap with dependent data *Biometrika*, **82**, 561-574, 1995.
- [17] HOSKING, J. R. M. Fractional Differencing. *Biometrika*, **68**, 165-176, 1981.
- [18] HURST, E. Long term storage capacity of reservoirs. *Transactions on American Society of Civil Engineering*, **116**, 770-808, 1951.
- [19] KOZICKI, S., TINSLEY, P.A.. What do you expect ? Imperfect policy credibility and tests of the expectations hypothesis *Journal of Monetary Economics* , **52**, 421-447, 2005.
- [20] LEE, D. AND SCHIMIDT, P. On the power of KPSS test of stationarity against fractionally-integrated alternatives. *Journal of Econometrics*, **73**, 285-302, 1996.
- [21] LO, A. W. Long-term memory in stock market prices. *Econometrica*, **59**, 1279-1313, 1991.
- [22] MCCARTHY, J., DISARIO, R., SARAOGU, H., LI, H. Tests of long-range dependence in interest rates using wavelets. *The Quarterly Review of Economics and Finance*, **44**, 180-189, 2004.

- [23] ROBINSON, P. M. Gaussian semiparametric estimation of long-range dependence. *The Annals of Statistics*, **23**, 1630-1661, 1995.
- [24] ROMER, C. AND ROMER, D. Choosing the Federal Reserve Chair: lessons from history. *NBER Working Paper*, 2003.
- [25] SIMS, C.A., ZHA, T. Were There Regime Switches in U.S. Monetary Policy ? *American Economic Review*, **96**, 54-81, 2006.
- [26] TAQQU, M. S., TEVEROVSKY, V. AND WILLINGER, W. Estimators for long-range dependence: an empirical study. *Fractals*, **3**, 785-798, 1999.

Banco Central do Brasil

Trabalhos para Discussão

Os Trabalhos para Discussão podem ser acessados na internet, no formato PDF, no endereço: <http://www.bc.gov.br>

Working Paper Series

Working Papers in PDF format can be downloaded from: <http://www.bc.gov.br>

- | | | |
|----|---|----------|
| 1 | Implementing Inflation Targeting in Brazil
<i>Joel Bogdanski, Alexandre Antonio Tombini and Sérgio Ribeiro da Costa Werlang</i> | Jul/2000 |
| 2 | Política Monetária e Supervisão do Sistema Financeiro Nacional no Banco Central do Brasil
<i>Eduardo Lundberg</i> | Jul/2000 |
| | Monetary Policy and Banking Supervision Functions on the Central Bank
<i>Eduardo Lundberg</i> | Jul/2000 |
| 3 | Private Sector Participation: a Theoretical Justification of the Brazilian Position
<i>Sérgio Ribeiro da Costa Werlang</i> | Jul/2000 |
| 4 | An Information Theory Approach to the Aggregation of Log-Linear Models
<i>Pedro H. Albuquerque</i> | Jul/2000 |
| 5 | The Pass-Through from Depreciation to Inflation: a Panel Study
<i>Ilan Goldfajn and Sérgio Ribeiro da Costa Werlang</i> | Jul/2000 |
| 6 | Optimal Interest Rate Rules in Inflation Targeting Frameworks
<i>José Alvaro Rodrigues Neto, Fabio Araújo and Marta Baltar J. Moreira</i> | Jul/2000 |
| 7 | Leading Indicators of Inflation for Brazil
<i>Marcelle Chauvet</i> | Sep/2000 |
| 8 | The Correlation Matrix of the Brazilian Central Bank's Standard Model for Interest Rate Market Risk
<i>José Alvaro Rodrigues Neto</i> | Sep/2000 |
| 9 | Estimating Exchange Market Pressure and Intervention Activity
<i>Emanuel-Werner Kohlscheen</i> | Nov/2000 |
| 10 | Análise do Financiamento Externo a uma Pequena Economia
Aplicação da Teoria do Prêmio Monetário ao Caso Brasileiro: 1991–1998
<i>Carlos Hamilton Vasconcelos Araújo e Renato Galvão Flôres Júnior</i> | Mar/2001 |
| 11 | A Note on the Efficient Estimation of Inflation in Brazil
<i>Michael F. Bryan and Stephen G. Cecchetti</i> | Mar/2001 |
| 12 | A Test of Competition in Brazilian Banking
<i>Márcio I. Nakane</i> | Mar/2001 |

13	Modelos de Previsão de Insolvência Bancária no Brasil <i>Marcio Magalhães Janot</i>	Mar/2001
14	Evaluating Core Inflation Measures for Brazil <i>Francisco Marcos Rodrigues Figueiredo</i>	Mar/2001
15	Is It Worth Tracking Dollar/Real Implied Volatility? <i>Sandro Canesso de Andrade and Benjamin Miranda Tabak</i>	Mar/2001
16	Avaliação das Projeções do Modelo Estrutural do Banco Central do Brasil para a Taxa de Variação do IPCA <i>Sergio Afonso Lago Alves</i>	Mar/2001
	Evaluation of the Central Bank of Brazil Structural Model's Inflation Forecasts in an Inflation Targeting Framework <i>Sergio Afonso Lago Alves</i>	Jul/2001
17	Estimando o Produto Potencial Brasileiro: uma Abordagem de Função de Produção <i>Tito Nícias Teixeira da Silva Filho</i>	Abr/2001
	Estimating Brazilian Potential Output: a Production Function Approach <i>Tito Nícias Teixeira da Silva Filho</i>	Aug/2002
18	A Simple Model for Inflation Targeting in Brazil <i>Paulo Springer de Freitas and Marcelo Kfoury Muinhos</i>	Apr/2001
19	Uncovered Interest Parity with Fundamentals: a Brazilian Exchange Rate Forecast Model <i>Marcelo Kfoury Muinhos, Paulo Springer de Freitas and Fabio Araújo</i>	May/2001
20	Credit Channel without the LM Curve <i>Victorio Y. T. Chu and Márcio I. Nakane</i>	May/2001
21	Os Impactos Econômicos da CPMF: Teoria e Evidência <i>Pedro H. Albuquerque</i>	Jun/2001
22	Decentralized Portfolio Management <i>Paulo Coutinho and Benjamin Miranda Tabak</i>	Jun/2001
23	Os Efeitos da CPMF sobre a Intermediação Financeira <i>Sérgio Mikio Koyama e Márcio I. Nakane</i>	Jul/2001
24	Inflation Targeting in Brazil: Shocks, Backward-Looking Prices, and IMF Conditionality <i>Joel Bogdanski, Paulo Springer de Freitas, Ilan Goldfajn and Alexandre Antonio Tombini</i>	Aug/2001
25	Inflation Targeting in Brazil: Reviewing Two Years of Monetary Policy 1999/00 <i>Pedro Fachada</i>	Aug/2001
26	Inflation Targeting in an Open Financially Integrated Emerging Economy: the Case of Brazil <i>Marcelo Kfoury Muinhos</i>	Aug/2001
27	Complementaridade e Fungibilidade dos Fluxos de Capitais Internacionais <i>Carlos Hamilton Vasconcelos Araújo e Renato Galvão Flôres Júnior</i>	Set/2001

- 28 **Regras Monetárias e Dinâmica Macroeconômica no Brasil: uma Abordagem de Expectativas Racionais** Nov/2001
Marco Antonio Bonomo e Ricardo D. Brito
- 29 **Using a Money Demand Model to Evaluate Monetary Policies in Brazil** Nov/2001
Pedro H. Albuquerque and Solange Gouvêa
- 30 **Testing the Expectations Hypothesis in the Brazilian Term Structure of Interest Rates** Nov/2001
Benjamin Miranda Tabak and Sandro Canesso de Andrade
- 31 **Algumas Considerações sobre a Sazonalidade no IPCA** Nov/2001
Francisco Marcos R. Figueiredo e Roberta Blass Staub
- 32 **Crises Cambiais e Ataques Especulativos no Brasil** Nov/2001
Mauro Costa Miranda
- 33 **Monetary Policy and Inflation in Brazil (1975-2000): a VAR Estimation** Nov/2001
André Minella
- 34 **Constrained Discretion and Collective Action Problems: Reflections on the Resolution of International Financial Crises** Nov/2001
Arminio Fraga and Daniel Luiz Gleizer
- 35 **Uma Definição Operacional de Estabilidade de Preços** Dez/2001
Tio Nícias Teixeira da Silva Filho
- 36 **Can Emerging Markets Float? Should They Inflation Target?** Feb/2002
Barry Eichengreen
- 37 **Monetary Policy in Brazil: Remarks on the Inflation Targeting Regime, Public Debt Management and Open Market Operations** Mar/2002
Luiz Fernando Figueiredo, Pedro Fachada and Sérgio Goldenstein
- 38 **Volatilidade Implícita e Antecipação de Eventos de Stress: um Teste para o Mercado Brasileiro** Mar/2002
Frederico Pechir Gomes
- 39 **Opções sobre Dólar Comercial e Expectativas a Respeito do Comportamento da Taxa de Câmbio** Mar/2002
Paulo Castor de Castro
- 40 **Speculative Attacks on Debts, Dollarization and Optimum Currency Areas** Apr/2002
Aloisio Araujo and Márcia Leon
- 41 **Mudanças de Regime no Câmbio Brasileiro** Jun/2002
Carlos Hamilton V. Araújo e Getúlio B. da Silveira Filho
- 42 **Modelo Estrutural com Setor Externo: Endogenização do Prêmio de Risco e do Câmbio** Jun/2002
Marcelo Kfoury Muinhos, Sérgio Afonso Lago Alves e Gil Riella
- 43 **The Effects of the Brazilian ADRs Program on Domestic Market Efficiency** Jun/2002
Benjamin Miranda Tabak and Eduardo José Araújo Lima

44	Estrutura Competitiva, Produtividade Industrial e Liberação Comercial no Brasil <i>Pedro Cavalcanti Ferreira e Osmani Teixeira de Carvalho Guillén</i>	Jun/2002
45	Optimal Monetary Policy, Gains from Commitment, and Inflation Persistence <i>André Minella</i>	Aug/2002
46	The Determinants of Bank Interest Spread in Brazil <i>Tarsila Segalla Afanasieff, Priscilla Maria Villa Lhacer and Márcio I. Nakane</i>	Aug/2002
47	Indicadores Derivados de Agregados Monetários <i>Fernando de Aquino Fonseca Neto e José Albuquerque Júnior</i>	Set/2002
48	Should Government Smooth Exchange Rate Risk? <i>Ilan Goldfajn and Marcos Antonio Silveira</i>	Sep/2002
49	Desenvolvimento do Sistema Financeiro e Crescimento Econômico no Brasil: Evidências de Causalidade <i>Orlando Carneiro de Matos</i>	Set/2002
50	Macroeconomic Coordination and Inflation Targeting in a Two-Country Model <i>Eui Jung Chang, Marcelo Kfoury Muinhos and Joaúlio Rodolpho Teixeira</i>	Sep/2002
51	Credit Channel with Sovereign Credit Risk: an Empirical Test <i>Victorio Yi Tson Chu</i>	Sep/2002
52	Generalized Hyperbolic Distributions and Brazilian Data <i>José Fajardo and Aquiles Farias</i>	Sep/2002
53	Inflation Targeting in Brazil: Lessons and Challenges <i>André Minella, Paulo Springer de Freitas, Ilan Goldfajn and Marcelo Kfoury Muinhos</i>	Nov/2002
54	Stock Returns and Volatility <i>Benjamin Miranda Tabak and Solange Maria Guerra</i>	Nov/2002
55	Componentes de Curto e Longo Prazo das Taxas de Juros no Brasil <i>Carlos Hamilton Vasconcelos Araújo e Osmani Teixeira de Carvalho de Guillén</i>	Nov/2002
56	Causality and Cointegration in Stock Markets: the Case of Latin America <i>Benjamin Miranda Tabak and Eduardo José Araújo Lima</i>	Dec/2002
57	As Leis de Falência: uma Abordagem Econômica <i>Aloisio Araujo</i>	Dez/2002
58	The Random Walk Hypothesis and the Behavior of Foreign Capital Portfolio Flows: the Brazilian Stock Market Case <i>Benjamin Miranda Tabak</i>	Dec/2002
59	Os Preços Administrados e a Inflação no Brasil <i>Francisco Marcos R. Figueiredo e Thaís Porto Ferreira</i>	Dez/2002
60	Delegated Portfolio Management <i>Paulo Coutinho and Benjamin Miranda Tabak</i>	Dec/2002

61	O Uso de Dados de Alta Frequência na Estimação da Volatilidade e do Valor em Risco para o Ibovespa <i>João Maurício de Souza Moreira e Eduardo Facó Lemgruber</i>	Dez/2002
62	Taxa de Juros e Concentração Bancária no Brasil <i>Eduardo Kiyoshi Tonooka e Sérgio Mikio Koyama</i>	Fev/2003
63	Optimal Monetary Rules: the Case of Brazil <i>Charles Lima de Almeida, Marco Aurélio Peres, Geraldo da Silva e Souza and Benjamin Miranda Tabak</i>	Fev/2003
64	Medium-Size Macroeconomic Model for the Brazilian Economy <i>Marcelo Kfoury Muinhos and Sergio Afonso Lago Alves</i>	Fev/2003
65	On the Information Content of Oil Future Prices <i>Benjamin Miranda Tabak</i>	Fev/2003
66	A Taxa de Juros de Equilíbrio: uma Abordagem Múltipla <i>Pedro Calhman de Miranda e Marcelo Kfoury Muinhos</i>	Fev/2003
67	Avaliação de Métodos de Cálculo de Exigência de Capital para Risco de Mercado de Carteiras de Ações no Brasil <i>Gustavo S. Araújo, João Maurício S. Moreira e Ricardo S. Maia Clemente</i>	Fev/2003
68	Real Balances in the Utility Function: Evidence for Brazil <i>Leonardo Soriano de Alencar and Márcio I. Nakane</i>	Fev/2003
69	r-filters: a Hodrick-Prescott Filter Generalization <i>Fabio Araújo, Marta Baltar Moreira Areosa and José Alvaro Rodrigues Neto</i>	Fev/2003
70	Monetary Policy Surprises and the Brazilian Term Structure of Interest Rates <i>Benjamin Miranda Tabak</i>	Fev/2003
71	On Shadow-Prices of Banks in Real-Time Gross Settlement Systems <i>Rodrigo Penaloza</i>	Apr/2003
72	O Prêmio pela Maturidade na Estrutura a Termo das Taxas de Juros Brasileiras <i>Ricardo Dias de Oliveira Brito, Angelo J. Mont'Alverne Duarte e Osmani Teixeira de C. Guillen</i>	Maio/2003
73	Análise de Componentes Principais de Dados Funcionais – uma Aplicação às Estruturas a Termo de Taxas de Juros <i>Getúlio Borges da Silveira e Octavio Bessada</i>	Maio/2003
74	Aplicação do Modelo de Black, Derman & Toy à Precificação de Opções Sobre Títulos de Renda Fixa <i>Octavio Manuel Bessada Lion, Carlos Alberto Nunes Cosenza e César das Neves</i>	Maio/2003
75	Brazil's Financial System: Resilience to Shocks, no Currency Substitution, but Struggling to Promote Growth <i>Ilan Goldfajn, Katherine Hennings and Helio Mori</i>	Jun/2003

- 76 **Inflation Targeting in Emerging Market Economies** Jun/2003
Arminio Fraga, Ilan Goldfajn and André Minella
- 77 **Inflation Targeting in Brazil: Constructing Credibility under Exchange Rate Volatility** Jul/2003
André Minella, Paulo Springer de Freitas, Ilan Goldfajn and Marcelo Kfoury Muinhos
- 78 **Contornando os Pressupostos de Black & Scholes: Aplicação do Modelo de Precificação de Opções de Duan no Mercado Brasileiro** Out/2003
Gustavo Silva Araújo, Claudio Henrique da Silveira Barbedo, Antonio Carlos Figueiredo, Eduardo Facó Lemgruber
- 79 **Inclusão do Decaimento Temporal na Metodologia Delta-Gama para o Cálculo do VaR de Carteiras Compradas em Opções no Brasil** Out/2003
Claudio Henrique da Silveira Barbedo, Gustavo Silva Araújo, Eduardo Facó Lemgruber
- 80 **Diferenças e Semelhanças entre Países da América Latina: uma Análise de Markov Switching para os Ciclos Econômicos de Brasil e Argentina** Out/2003
Arnildo da Silva Correa
- 81 **Bank Competition, Agency Costs and the Performance of the Monetary Policy** Jan/2004
Leonardo Soriano de Alencar and Márcio I. Nakane
- 82 **Carteiras de Opções: Avaliação de Metodologias de Exigência de Capital no Mercado Brasileiro** Mar/2004
Cláudio Henrique da Silveira Barbedo e Gustavo Silva Araújo
- 83 **Does Inflation Targeting Reduce Inflation? An Analysis for the OECD Industrial Countries** May/2004
Thomas Y. Wu
- 84 **Speculative Attacks on Debts and Optimum Currency Area: a Welfare Analysis** May/2004
Aloisio Araujo and Marcia Leon
- 85 **Risk Premia for Emerging Markets Bonds: Evidence from Brazilian Government Debt, 1996-2002** May/2004
André Soares Loureiro and Fernando de Holanda Barbosa
- 86 **Identificação do Fator Estocástico de Descontos e Algumas Implicações sobre Testes de Modelos de Consumo** Maio/2004
Fabio Araujo e João Victor Issler
- 87 **Mercado de Crédito: uma Análise Econométrica dos Volumes de Crédito Total e Habitacional no Brasil** Dez/2004
Ana Carla Abrão Costa
- 88 **Ciclos Internacionais de Negócios: uma Análise de Mudança de Regime Markoviano para Brasil, Argentina e Estados Unidos** Dez/2004
Arnildo da Silva Correa e Ronald Otto Hillbrecht
- 89 **O Mercado de Hedge Cambial no Brasil: Reação das Instituições Financeiras a Intervenções do Banco Central** Dez/2004
Fernando N. de Oliveira

- 90 Bank Privatization and Productivity: Evidence for Brazil** Dec/2004
Márcio I. Nakane and Daniela B. Weintraub
- 91 Credit Risk Measurement and the Regulation of Bank Capital and Provision Requirements in Brazil – a Corporate Analysis** Dec/2004
Ricardo Schechtman, Valéria Salomão Garcia, Sergio Miki Koyama and Guilherme Cronemberger Parente
- 92 Steady-State Analysis of an Open Economy General Equilibrium Model for Brazil** Apr/2005
Mirta Noemi Sataka Bugarin, Roberto de Goes Ellery Jr., Victor Gomes Silva, Marcelo Kfoury Muinhos
- 93 Avaliação de Modelos de Cálculo de Exigência de Capital para Risco Cambial** Abr/2005
Claudio H. da S. Barbedo, Gustavo S. Araújo, João Maurício S. Moreira e Ricardo S. Maia Clemente
- 94 Simulação Histórica Filtrada: Incorporação da Volatilidade ao Modelo Histórico de Cálculo de Risco para Ativos Não-Lineares** Abr/2005
Claudio Henrique da Silveira Barbedo, Gustavo Silva Araújo e Eduardo Facó Lemgruber
- 95 Comment on Market Discipline and Monetary Policy by Carl Walsh** Apr/2005
Maurício S. Bugarin and Fábria A. de Carvalho
- 96 O que É Estratégia: uma Abordagem Multiparadigmática para a Disciplina** Ago/2005
Anthero de Moraes Meirelles
- 97 Finance and the Business Cycle: a Kalman Filter Approach with Markov Switching** Aug/2005
Ryan A. Compton and Jose Ricardo da Costa e Silva
- 98 Capital Flows Cycle: Stylized Facts and Empirical Evidences for Emerging Market Economies** Aug/2005
Helio Mori e Marcelo Kfoury Muinhos
- 99 Adequação das Medidas de Valor em Risco na Formulação da Exigência de Capital para Estratégias de Opções no Mercado Brasileiro** Set/2005
Gustavo Silva Araújo, Claudio Henrique da Silveira Barbedo, e Eduardo Facó Lemgruber
- 100 Targets and Inflation Dynamics** Oct/2005
Sergio A. L. Alves and Waldyr D. Areosa
- 101 Comparing Equilibrium Real Interest Rates: Different Approaches to Measure Brazilian Rates** Mar/2006
Marcelo Kfoury Muinhos and Márcio I. Nakane
- 102 Judicial Risk and Credit Market Performance: Micro Evidence from Brazilian Payroll Loans** Apr/2006
Ana Carla A. Costa and João M. P. de Mello
- 103 The Effect of Adverse Supply Shocks on Monetary Policy and Output** Apr/2006
Maria da Glória D. S. Araújo, Mirta Bugarin, Marcelo Kfoury Muinhos and Jose Ricardo C. Silva

- 104 Extração de Informação de Opções Cambiais no Brasil** Abr/2006
Eui Jung Chang e Benjamin Miranda Tabak
- 105 Representing Roommate's Preferences with Symmetric Utilities** Apr/2006
José Alvaro Rodrigues Neto
- 106 Testing Nonlinearities Between Brazilian Exchange Rates and Inflation Volatilities** May/2006
Cristiane R. Albuquerque and Marcelo Portugal
- 107 Demand for Bank Services and Market Power in Brazilian Banking** Jun/2006
Márcio I. Nakane, Leonardo S. Alencar and Fabio Kanczuk
- 108 O Efeito da Consignação em Folha nas Taxas de Juros dos Empréstimos Pessoais** Jun/2006
Eduardo A. S. Rodrigues, Victorio Chu, Leonardo S. Alencar e Tony Takeda
- 109 The Recent Brazilian Disinflation Process and Costs** Jun/2006
Alexandre A. Tombini and Sergio A. Lago Alves
- 110 Fatores de Risco e o Spread Bancário no Brasil** Jul/2006
Fernando G. Bignotto e Eduardo Augusto de Souza Rodrigues
- 111 Avaliação de Modelos de Exigência de Capital para Risco de Mercado do Cupom Cambial** Jul/2006
Alan Cosme Rodrigues da Silva, João Maurício de Souza Moreira e Myrian Beatriz Eiras das Neves
- 112 Interdependence and Contagion: an Analysis of Information Transmission in Latin America's Stock Markets** Jul/2006
Angelo Marsiglia Fasolo
- 113 Investigação da Memória de Longo Prazo da Taxa de Câmbio no Brasil** Ago/2006
Sergio Rubens Stancato de Souza, Benjamin Miranda Tabak e Daniel O. Cajueiro
- 114 The Inequality Channel of Monetary Transmission** Aug/2006
Marta Areosa and Waldyr Areosa
- 115 Myopic Loss Aversion and House-Money Effect Overseas: an Experimental Approach** Sep/2006
José L. B. Fernandes, Juan Ignacio Peña and Benjamin M. Tabak
- 116 Out-Of-The-Money Monte Carlo Simulation Option Pricing: the Joint Use of Importance Sampling and Descriptive Sampling** Sep/2006
Jaqueline Terra Moura Marins, Eduardo Saliby and Josete Florencio dos Santos
- 117 An Analysis of Off-Site Supervision of Banks' Profitability, Risk and Capital Adequacy: a Portfolio Simulation Approach Applied to Brazilian Banks** Sep/2006
Theodore M. Barnhill, Marcos R. Souto and Benjamin M. Tabak
- 118 Contagion, Bankruptcy and Social Welfare Analysis in a Financial Economy with Risk Regulation Constraint** Oct/2006
Aloísio P. Araújo and José Valentim M. Vicente

119	A Central de Risco de Crédito no Brasil: uma Análise de Utilidade de Informação <i>Ricardo Schechtman</i>	Out/2006
120	Forecasting Interest Rates: an Application for Brazil <i>Eduardo J. A. Lima, Felipe Luduvicé and Benjamin M. Tabak</i>	Oct/2006
121	The Role of Consumer's Risk Aversion on Price Rigidity <i>Sergio A. Lago Alves and Mirta N. S. Bugarin</i>	Nov/2006
122	Nonlinear Mechanisms of the Exchange Rate Pass-Through: a Phillips Curve Model With Threshold for Brazil <i>Arnildo da Silva Correa and André Minella</i>	Nov/2006
123	A Neoclassical Analysis of the Brazilian "Lost-Decades" <i>Flávia Mourão Graminho</i>	Nov/2006
124	The Dynamic Relations between Stock Prices and Exchange Rates: Evidence for Brazil <i>Benjamin M. Tabak</i>	Nov/2006
125	Herding Behavior by Equity Foreign Investors on Emerging Markets <i>Barbara Alemanni and José Renato Haas Ornelas</i>	Dec/2006
126	Risk Premium: Insights over the Threshold <i>José L. B. Fernandes, Augusto Hasman and Juan Ignacio Peña</i>	Dec/2006
127	Uma Investigação Baseada em Reamostragem sobre Requerimentos de Capital para Risco de Crédito no Brasil <i>Ricardo Schechtman</i>	Dec/2006
128	Term Structure Movements Implicit in Option Prices <i>Caio Ibsen R. Almeida and José Valentim M. Vicente</i>	Dec/2006
129	Brazil: Taming Inflation Expectations <i>Afonso S. Bevilaqua, Mário Mesquita and André Minella</i>	Jan/2007
130	The Role of Banks in the Brazilian Interbank Market: Does Bank Type Matter? <i>Daniel O. Cajueiro and Benjamin M. Tabak</i>	Jan/2007
131	Long-Range Dependence in Exchange Rates: the Case of the European Monetary System <i>Sergio Rubens Stancato de Souza, Benjamin M. Tabak and Daniel O. Cajueiro</i>	Mar/2007
132	Credit Risk Monte Carlo Simulation Using Simplified Creditmetrics' Model: the Joint Use of Importance Sampling and Descriptive Sampling <i>Jaqueline Terra Moura Marins and Eduardo Saliby</i>	Mar/2007
133	A New Proposal for Collection and Generation of Information on Financial Institutions' Risk: the Case of Derivatives <i>Gilneu F. A. Vivan and Benjamin M. Tabak</i>	Mar/2007
134	Amostragem Descritiva no Apreçamento de Opções Europeias através de Simulação Monte Carlo: o Efeito da Dimensionalidade e da Probabilidade de Exercício no Ganho de Precisão <i>Eduardo Saliby, Sergio Luiz Medeiros Proença de Gouvêa e Jaqueline Terra Moura Marins</i>	Abr/2007

- 135 **Evaluation of Default Risk for the Brazilian Banking Sector** May/2007
Marcelo Y. Takami and Benjamin M. Tabak
- 136 **Identifying Volatility Risk Premium from Fixed Income Asian Options** May/2007
Caio Ibsen R. Almeida and José Valentim M. Vicente
- 137 **Monetary Policy Design under Competing Models of Inflation Persistence** May/2007
Solange Gouvea e Abhijit Sen Gupta
- 138 **Forecasting Exchange Rate Density Using Parametric Models: the Case of Brazil** May/2007
Marcos M. Abe, Eui J. Chang and Benjamin M. Tabak
- 139 **Selection of Optimal Lag Length in Cointegrated VAR Models with Weak Form of Common Cyclical Features** Jun/2007
Carlos Enrique Carrasco Gutiérrez, Reinaldo Castro Souza and Osmani Teixeira de Carvalho Guillén
- 140 **Inflation Targeting, Credibility and Confidence Crises** Aug/2007
Rafael Santos and Aloísio Araújo
- 141 **Forecasting Bonds Yields in the Brazilian Fixed income Market** Aug/2007
Jose Vicente and Benjamin M. Tabak
- 142 **Crises Análise da Coerência de Medidas de Risco no Mercado Brasileiro de Ações e Desenvolvimento de uma Metodologia Híbrida para o Expected Shortfall** Ago/2007
Alan Cosme Rodrigues da Silva, Eduardo Facó Lemgruber, José Alberto Rebello Baranowski e Renato da Silva Carvalho
- 143 **Price Rigidity in Brazil: Evidence from CPI Micro Data** Sep/2007
Solange Gouvea
- 144 **The Effect of Bid-Ask Prices on Brazilian Options Implied Volatility: a Case Study of Telemar Call Options** Oct/2007
Claudio Henrique da Silveira Barbedo and Eduardo Facó Lemgruber
- 145 **The Stability-Concentration Relationship in the Brazilian Banking System** Oct/2007
Benjamin Miranda Tabak, Solange Maria Guerra, Eduardo José Araújo Lima and Eui Jung Chang
- 146 **Movimentos da Estrutura a Termo e Critérios de Minimização do Erro de Previsão em um Modelo Paramétrico Exponencial** Out/2007
Caio Almeida, Romeu Gomes, André Leite e José Vicente
- 147 **Explaining Bank Failures in Brazil: Micro, Macro and Contagion Effects (1994-1998)** Oct/2007
Adriana Soares Sales and Maria Eduarda Tannuri-Pianto
- 148 **Um Modelo de Fatores Latentes com Variáveis Macroeconômicas para a Curva de Cupom Cambial** Out/2007
Felipe Pinheiro, Caio Almeida e José Vicente
- 149 **Joint Validation of Credit Rating PDs under Default Correlation** Oct/2007
Ricardo Schechtman

- 150 **A Probabilistic Approach for Assessing the Significance of Contextual Variables in Nonparametric Frontier Models: an Application for Brazilian Banks** Oct/2007
Roberta Blass Staub and Geraldo da Silva e Souza
- 151 **Building Confidence Intervals with Block Bootstraps for the Variance Ratio Test of Predictability** Nov/2007
Eduardo José Araújo Lima and Benjamin Miranda Tabak
- 152 **Demand for Foreign Exchange Derivatives in Brazil: Hedge or Speculation?** Dec/2007
Fernando N. de Oliveira and Walter Novaes
- 153 **Aplicação da Amostragem por Importância à Simulação de Opções Asiáticas Fora do Dinheiro** Dez/2007
Jaqueline Terra Moura Marins
- 154 **Identification of Monetary Policy Shocks in the Brazilian Market for Bank Reserves** Dec/2007
Adriana Soares Sales and Maria Tannuri-Pianto
- 155 **Does Curvature Enhance Forecasting?** Dec/2007
Caio Almeida, Romeu Gomes, André Leite and José Vicente
- 156 **Escolha do Banco e Demanda por Empréstimos: um Modelo de Decisão em Duas Etapas Aplicado para o Brasil** Dez/2007
Sérgio Mikio Koyama e Márcio I. Nakane
- 157 **Is the Investment-Uncertainty Link Really Elusive? The Harmful Effects of Inflation Uncertainty in Brazil** Jan/2008
Tito Nícias Teixeira da Silva Filho
- 158 **Characterizing the Brazilian Term Structure of Interest Rates** Feb/2008
Osmani T. Guillen and Benjamin M. Tabak
- 159 **Behavior and Effects of Equity Foreign Investors on Emerging Markets** Feb/2008
Barbara Alemanni and José Renato Haas Ornelas
- 160 **The Incidence of Reserve Requirements in Brazil: Do Bank Stockholders Share the Burden?** Feb/2008
Fábia A. de Carvalho and Cyntia F. Azevedo
- 161 **Evaluating Value-at-Risk Models via Quantile Regressions** Feb/2008
Wagner P. Gaglianone, Luiz Renato Lima and Oliver Linton
- 162 **Balance Sheet Effects in Currency Crises: Evidence from Brazil** Apr/2008
Marcio M. Janot, Márcio G. P. Garcia and Walter Novaes
- 163 **Searching for the Natural Rate of Unemployment in a Large Relative Price Shocks' Economy: the Brazilian Case** May/2008
Tito Nícias Teixeira da Silva Filho
- 164 **Foreign Banks' Entry and Departure: the recent Brazilian experience (1996-2006)** Jun/2008
Pedro Fachada
- 165 **Avaliação de Opções de Troca e Opções de Spread Europeias e Americanas** Jul/2008
Giuliano Carrozza Uzêda Iorio de Souza, Carlos Patrício Samanez e Gustavo Santos Raposo

166	Testing Hyperinflation Theories Using the Inflation Tax Curve: a case study <i>Fernando de Holanda Barbosa and Tito Nícias Teixeira da Silva Filho</i>	Jul/2008
167	O Poder Discriminante das Operações de Crédito das Instituições Financeiras Brasileiras <i>Clodoaldo Aparecido Annibal</i>	Jul/2008
168	An Integrated Model for Liquidity Management and Short-Term Asset Allocation in Commercial Banks <i>Wenersamy Ramos de Alcântara</i>	Jul/2008
169	Mensuração do Risco Sistêmico no Setor Bancário com Variáveis Contábeis e Econômicas <i>Lucio Rodrigues Capelletto, Eliseu Martins e Luiz João Corrar</i>	Jul/2008
170	Política de Fechamento de Bancos com Regulador Não-Benevolente: Resumo e Aplicação <i>Adriana Soares Sales</i>	Jul/2008
171	Modelos para a Utilização das Operações de Redesconto pelos Bancos com Carteira Comercial no Brasil <i>Sérgio Mikio Koyama e Márcio Issao Nakane</i>	Ago/2008
172	Combining Hodrick-Prescott Filtering with a Production Function Approach to Estimate Output Gap <i>Marta Areosa</i>	Aug/2008
173	Exchange Rate Dynamics and the Relationship between the Random Walk Hypothesis and Official Interventions <i>Eduardo José Araújo Lima and Benjamin Miranda Tabak</i>	Aug/2008
174	Foreign Exchange Market Volatility Information: an investigation of real-dollar exchange rate <i>Frederico Pechir Gomes, Marcelo Yoshio Takami and Vinicius Ratton Brandi</i>	Aug/2008
175	Evaluating Asset Pricing Models in a Fama-French Framework <i>Carlos Enrique Carrasco Gutierrez and Wagner Piazza Gaglianone</i>	Dec/2008
176	Fiat Money and the Value of Binding Portfolio Constraints <i>Mário R. Páscoa, Myrian Petrassi and Juan Pablo Torres-Martínez</i>	Dec/2008
177	Preference for Flexibility and Bayesian Updating <i>Gil Riella</i>	Dec/2008
178	An Econometric Contribution to the Intertemporal Approach of the Current Account <i>Wagner Piazza Gaglianone and João Victor Issler</i>	Dec/2008
179	Are Interest Rate Options Important for the Assessment of Interest Rate Risk? <i>Caio Almeida and José Vicente</i>	Dec/2008
180	A Class of Incomplete and Ambiguity Averse Preferences <i>Leandro Nascimento and Gil Riella</i>	Dec/2008
181	Monetary Channels in Brazil through the Lens of a Semi-Structural Model <i>André Minella and Nelson F. Souza-Sobrinho</i>	Apr/2009

182	Avaliação de Opções Americanas com Barreiras Monitoradas de Forma Discreta <i>Giuliano Carrozza Uzêda Iorio de Souza e Carlos Patrício Samanez</i>	Abr/2009
183	Ganhos da Globalização do Capital Acionário em Crises Cambiais <i>Marcio Janot e Walter Novaes</i>	Abr/2009
184	Behavior Finance and Estimation Risk in Stochastic Portfolio Optimization <i>José Luiz Barros Fernandes, Juan Ignacio Peña and Benjamin Miranda Tabak</i>	Apr/2009
185	Market Forecasts in Brazil: performance and determinants <i>Fabia A. de Carvalho and André Minella</i>	Apr/2009
186	Previsão da Curva de Juros: um modelo estatístico com variáveis macroeconômicas <i>André Luís Leite, Romeu Braz Pereira Gomes Filho e José Valentim Machado Vicente</i>	Maio/2009
187	The Influence of Collateral on Capital Requirements in the Brazilian Financial System: an approach through historical average and logistic regression on probability of default <i>Alan Cosme Rodrigues da Silva, Antônio Carlos Magalhães da Silva, Jaqueline Terra Moura Marins, Myrian Beatriz Eiras da Neves and Giovanni Antonio Silva Brito</i>	Jun/2009
188	Pricing Asian Interest Rate Options with a Three-Factor HJM Model <i>Claudio Henrique da Silveira Barbedo, José Valentim Machado Vicente and Octávio Manuel Bessada Lion</i>	Jun/2009
189	Linking Financial and Macroeconomic Factors to Credit Risk Indicators of Brazilian Banks <i>Marcos Souto, Benjamin M. Tabak and Francisco Vazquez</i>	Jul/2009
190	Concentração Bancária, Lucratividade e Risco Sistêmico: uma abordagem de contágio indireto <i>Bruno Silva Martins e Leonardo S. Alencar</i>	Set/2009
191	Concentração e Inadimplência nas Carteiras de Empréstimos dos Bancos Brasileiros <i>Patricia L. Tecles, Benjamin M. Tabak e Roberta B. Staub</i>	Set/2009
192	Inadimplência do Setor Bancário Brasileiro: uma avaliação de suas medidas <i>Clodoaldo Aparecido Annibal</i>	Set/2009
193	Loss Given Default: um estudo sobre perdas em operações prefixadas no mercado brasileiro <i>Antonio Carlos Magalhães da Silva, Jaqueline Terra Moura Marins e Myrian Beatriz Eiras das Neves</i>	Set/2009
194	Testes de Contágio entre Sistemas Bancários – A crise do <i>subprime</i> <i>Benjamin M. Tabak e Manuela M. de Souza</i>	Set/2009
195	From Default Rates to Default Matrices: a complete measurement of Brazilian banks' consumer credit delinquency <i>Ricardo Schechtman</i>	Oct/2009

- 196 The role of macroeconomic variables in sovereign risk** Oct/2009
Marco S. Matsumura and José Valentim Vicente
- 197 Forecasting the Yield Curve for Brazil** Nov/2009
Daniel O. Cajueiro, Jose A. Divino and Benjamin M. Tabak
- 198 Impacto dos Swaps Cambiais na Curva de Cupom Cambial: uma análise segundo a regressão de componentes principais** Nov/2009
Alessandra Pasqualina Viola, Margarida Sarmiento Gutierrez, Octávio Bessada Lion e Cláudio Henrique Barbedo
- 199 Delegated Portfolio Management and Risk Taking Behavior** Dec/2009
José Luiz Barros Fernandes, Juan Ignacio Peña and Benjamin Miranda Tabak
- 200 Evolution of Bank Efficiency in Brazil: A DEA Approach** Dec/2009
Roberta B. Staub, Geraldo Souza and Benjamin M. Tabak
- 201 Efeitos da Globalização na Inflação Brasileira** Jan/2010
Rafael Santos e Márcia S. Leon
- 202 Considerações sobre a Atuação do Banco Central na Crise de 2008** Mar/2010
Mário Mesquita e Mario Torós
- 203 Hiato do Produto e PIB no Brasil: uma Análise de Dados em Tempo Real** Abr/2010
Rafael Tiecher Cusinato, André Minella e Sabino da Silva Pôrto Júnior
- 204 Fiscal and monetary policy interaction: a simulation based analysis of a two-country New Keynesian DSGE model with heterogeneous households** Apr/2010
Marcos Valli and Fabia A. de Carvalho
- 205 Model selection, estimation and forecasting in VAR models with short-run and long-run restrictions** Apr/2010
George Athanasopoulos, Osmani Teixeira de Carvalho Guillén, João Victor Issler and Farshid Vahid