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Research Abstracts

Center for Latin American Economics

Federal Reserve Bank of Dallas
Research Department

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Contents

Preface

The Center for Latin American Economics is pleased to introduce in this issue of *Research Abstracts* a new look as well as a new format that will make the abstracts easier to use. The main body of *Research Abstracts* now contains only the titles, authors and abstracts of the papers. An index at the back lists all authors and how to contact them to request copies of the papers. Wherever possible, the index also lists the web sites where you can find papers.

The papers in this edition of *Research Abstracts* cover a wide range of subjects: trade theory, bank regulation, the determinants of educational achievement, the measurement of labor market flexibility, topics on inflation targeting and many others. There are 136 papers written by 207 authors or co-authors. At the Center for Latin American Economics, we find these papers very useful. We hope *Research Abstracts* readers will gain as much from the papers as we do.

Research Abstracts appears on the Federal Reserve Bank of Dallas web site, www.dallasfed.org, in the Center for Latin American Economics section.

As soon as we complete one issue of *Research Abstracts*, we start work on the next. We accordingly urge you to send abstracts of your recent research, along with copies of the papers. We ask that authors write the abstracts in English, limit each abstract to 250 words and confine submissions to research related to Latin American monetary and economic issues. If you are not yet a member of the Center for Latin American Economics, we invite you to join by filling out the application form at the back of this publication. Membership is free. Please send communications to the following address:

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Abstracts

Some Measures of Financial Fragility in the Chilean Banking System:

An Application of Early Warning Indicators

by Antonio Ahumada C. and Carlos Budnevich L.

There is an ample literature whose main objective is to build models that anticipate or provide early warning signals of problematic financial institutions. This paper provides an overview of the literature in an attempt to detect latent fragility in the Chilean financial system. Most applications in this area estimate some probability model with discrete dependent variables that separate —ex-post—failed or bailed-out institutions from the healthy ones, an exercise that during the nineties is not feasible in the Chilean case. We adopt a simpler approach by estimating a linear reduced form model of determination of past-due loans and inter-bank spreads as measures of financial fragility, which can be interpreted as probability indicators of credit and liquidity risk. Bank financial ratios and macro variables form our set of explanatory variables. The models estimated in this article intend to capture financial fragility in the context of a non-crisis environment, which characterizes the Chilean financial system during the 1990s. Although some institutions left the market, we find that failure or insolvency was not the main cause.

Using a Money Demand Model to Evaluate Monetary Policies in Brazil

by Pedro H. Albuquerque and Solange Gouvea

This paper uses a money demand model to evaluate monetary policies under different regimes in Brazil. It considers the consistency between monetary liquidity and the inflation rate path. The concept is applied to the Brazilian case by modeling M1 and its components. Based on unit root and cointegration tests, a growth-rate model is chosen that considers all the interventions that happened during the sample period (1980–1999). The work shows that a variable seasonal pattern, which is a linear function of the nominal interest rate, increases the model's ability to explain seasonal changes in the money demand. Despite the economic instability that marked Brazilian economic history during the last two decades, the model shows a good fit and a predictive power. Finally, it shows that unsuccessful macroeconomic stabilization programs were marked by excessive liquidity, with money supply exceeding expected conditional money demand during intervention periods. The results suggest that tracking monetary aggregates can be useful to policy makers even under a regime where interest rates are the main policy instrument.

Evaluation of the Central Bank of Brazil Structural Model's Inflation Forecasts in an Inflation Targeting Framework

by Sergio Afonso Lago Alves

The purpose of this paper is to evaluate the performance of the Central Bank of Brazil's small-scale structural model (SSSM) as a supporting tool for the monetary policy decision process. The SSSM's projection accuracy for one to three quarters ahead of CPI inflation was evaluated, comparing it to that of the market model and to a simpler model, which is considered a benchmark for short-run forecasts. A *near VAR* model, with quarterly CPI inflation and output gap as the endogenous variables, was chosen as the simple model. This model was found to be good only for one-step-ahead forecasts. Market projections, made by private consulting institutions and banks, turned out to be quite efficient for up to two quarters ahead, with almost no bias and low dispersion, suggesting the acceptance of the market efficiency hypothesis. The SSSM performed quite well over the whole forecast horizon, presenting almost no forecast bias and the lowest dispersion estimates on average, even when compared to the market forecasts. For these reasons, the paper concludes that the Central Bank of Brazil's Small Scale Structural Model possesses the basic features required to support the monetary policy decision process.

Analysis of the Projections of the Banco Central do Brasil's Structural Model for the Variation of IPCA Rates

by Sergio Afonso Lago Alves

This work analyzes the performance of Banco Central do Brasil's small-scale structural model as a helpful tool for the conducting of monetary policy. It analyzes the model's ability to make quarterly predictions of IPCA rate variations for one to three quarters in the future and compares its ability with that of the institutions and financial agents of the market (collected by the Banco Central do Brasil's Grupo de Comunicação Institucional) and with that of simple models, considered benchmarks for short-term projections. A *near VAR* model having as endogenous variations the quarterly inflation rate, the IPCA average, and the production break for each quarter was chosen as the simple model. It did well with extremely short-term projections for one period ahead, but it was not a good instrument for the rest of the periods analyzed. The institutions and financial agents of the market projected very well for at least two periods ahead. However, the structural model performed the best for all projections and for all periods. The paper concludes that the structural model was able to serve as a helpful tool in the process of decision making related to monetary policy.

The Evolution of Occupational Segregation by Sex in Uruguay (1986–1999)

by Verónica Amarante and Alma Espino

This article analyzes occupational segregation and its evolution in Uruguay (1986–1999). The computed indexes show that though overall segregation remains unchanged, it mildly grew for private employees and low skilled workers while it was reduced for both public employees and skilled workers. The increased female share among private employment has not translated into a widened scope in the occupations available for women. The more egalitarian occupational structure among public employees was mainly explained by the reduction in male employment, which happened as a consequence of the public sector reform policy. The increase in women's schooling has widened female employment opportunities.

What's in a Contract?

Determinants and Implications of Work in the Informal Sector in Chile

by Catalina Amuedo-Dorantes

Informal work arrangements are often used for extended periods of time due to their tax and dismissal cost advantages and lack of employment restrictions, relative to the typical employment contract. Unfortunately, informal employees often lack medical and pension coverage, employment security, and bargaining power in terms of wages, training, work schedules, or any other type of employment conditions (MIDEPLAN, 1996). Furthermore, informal employment might have even more serious implications in the long run as workers experience problems in finding employment due to their nonexistent or poor employment histories. In this study, I use micro-level data from the 2000 *Encuestas de Caracterización Socio-Económica* to first look at the size of the informal labor market, the average employment duration, hours of work, earnings, and other job and personal characteristics of workers in the informal sector at the beginning of this decade. Subsequently, I estimate a simultaneous equation model of the likelihood of working in the informal labor market and living in poverty. This model allows for the analysis of two different issues: the determinants of employment in the informal sector and the immediate implications of informal employment for the workers' and their families' well being as captured by their likelihood of life in poverty versus that of comparable employed counterparts.

Optimal Rules for Monetary Policy in Brazil

by Joaquim Pinto de Andrade and José Angelo C. A. Divino

This paper presents optimal rules for monetary policy in Brazil derived from a backward looking expectation model consisting of a Keynesian IS function and an Augmented Phillips Curve (IS-AS). The IS function displays a high sensitivity of aggregate demand to the real interest rate and the Phillips Curve is accelerationist. The optimal monetary rules show low interest rate volatility with reaction coefficients lower than the ones suggested by Taylor (1993). Reaction functions estimated through ADL and SUR models suggest that monetary policy has not been optimal and has aimed to stabilize production rather than inflation.

Historical Behavior of Real Interest Rates in Mexico, 1951–2001

by Fernándo Aportela, José Antonio Ardavín Ituarte and Yyannú Cruz Aguayo

This paper analyzes the historical behavior of real interest rates, both short-term and long-term, in Mexico from January 1951 to July 2001, as well as the real interest rate differentials of Mexico and the United States during the same period. Without taking into account the period of financial repression of the decade of the 1970s, the study identifies the existence of a historical floor for real interest rates as well as differential rates with the United States, the same ones that correspond to the epoch of stabilized development. Towards the end of 1999 and the middle of 2001, the real interest rates as well as the differentials presented similar levels of such floors. In addition, the work analyzes the net or gross yield of the bond UMS26 and the EMBI index and the relationship of these two instruments with the real interest rates in the decade of the 1990s. At the same time, an econometric study is done on the effects of the risk country and of monetary policy related to internal interest rates. This exercise suggests the existence of a significant impact of such variables on the level of real interest rates during the period 1995–2001.

Reserves during a Transition to Floating:

Lessons from the Developed World

by Fernándo Aportela, Francisco A. Gallego and Pablo S. García

This paper highlights the evolution of official international reserves in several developed countries that have moved to a scheme of inflation targeting (IT) and/or floating exchange rates. The aim is to find stylized facts and draw lessons for countries, such as Brazil, Chile and Mexico, which have revamped their monetary and exchange-rate arrangements along similar lines or are in the process of doing so. We study six countries that switched to a floating exchange-rate regime, as well as to an IT framework for the conduct of monetary policy. First, we find that both the adoption of a floating exchange rate and an IT framework are associated with a persistent 10% to 20% reduction in real official reserves held at the Central Bank. Second, this reduction corresponds to a reallocation of international liquidity towards the private financial sector that accommodates part of the effect on the level or composition of the net foreign asset position of the countries. Third, there appears to be a clear change in the correlation between interest rate differentials and the dynamics of official reserves, suggesting that the empirical prediction of Mundell-Fleming, regarding the exogeneity of money supply, holds strongly in the modern world of interest-rate rules. Fourth, the latter also shows that according to cost-benefit analysis, once constraints on exchange-rate volatility are removed, the stock of reserves can be determined independently by the central bank without hindering the credibility of the floating regime.

An Analysis of External Financing in a Small Economy:

Theoretical Application of a Monetary Premium in the Case of Brazil: 1991–1998

by Carlos Hamilton Vasconcelos Araújo and Renato Galvão Flôres Jr.

This paper presents a framework whose primary purpose is to explain private capital flows between the rest of the world and a small economy. Despite its simplicity, this framework—based on the monetary premium theory—brings answers to several questions regarding the capital flows phenomena, including its relationship with interest rate differences. The paper also analyzes the behavior of the capital movements related to the Brazilian economy during the period 1991–1998.

Complementarity and Fungibility of International Capital Flows

by Carlos Hamilton Vasconcelos Araújo and Renato Galvão Flôres Jr.

This paper presents an analysis, both in theoretical and empirical terms, of the fungibility of international private capital flows. We adopt an open investigative position, implementing a univariate and multivariate investigation of the capital movements in the Brazilian economy during the period 1991–1998. Contrary to other studies, we reach an equilibrium relationship linking the flows. Besides this, we find support of the complementarity hypothesis in the long term and of the fungibility hypothesis in the short term.

Efficient and Equitable Commodity Taxation:

Micro-Simulations Based on an Estimated Brazilian Consumer Demand System

by Seki Asano, Ana Luiza N. H. Barbosa and Eduardo P. S. Fiuza

In this study we calculate the optimal commodity tax structure for Brazil. The micro-simulations are based on a complete demand system estimated with a flexible functional form (Almost Ideal Demand System, by Deaton and Muellbauer, 1980). The data source is a 1995–96 national household budget survey. Estimates of preference parameters are consistent with microeconomic demand theory and allow for a highly accurate optimal commodity tax simulation. The model features the maximization of a social welfare function, subject to a balanced government budget requirement. We assume that the only tax policy instrument available to the government is taxation of consumption goods and services. The trade-off between equity and efficiency is taken into account by introducing the government's aversion to inequality into the social welfare function. We also extend our analysis by allowing a uniform per capita lump-sum payment to be made by the government to all households. Our results show that the commodity tax structure is characterized by selective tax rates. More specifically, we found that commodities (such as food and housing), on which the lower income households spend most, should be subsidized. As expected, the degree of selectivity is more significant for higher inequality aversion parameters. Moreover, as the tax revenue goal increases so do all commodity tax rates. However, by introducing a uniform lump-sum transfer, this result is reversed when the central planner's degree of aversion to inequality is high. On the other hand, poll transfer levels are unreasonably high; when we cap them with a binding ceiling, the former pattern is restored. We believe that our empirical findings provide a valuable contribution to the current tax policy debate in Brazil, where distributive goals have great importance.

Estimation of the Brazilian Consumer Demand System

by Seki Asano and Eduardo P. S. Fiuza

In this study, we estimate the Brazilian consumer demand system through family expenditure data, which cover all consumption categories and a new set of regional cost-of-living indexes. The national expenditure surveys conducted in 1986–87 and 1995–96, which collected data from eleven metropolitan areas, are the sources for the expenditure data. Corresponding price indexes from each metropolitan area were constructed from detailed commodity prices. The salient features of our study are: (a) Price variations come from both time and regional differences, which allows us to estimate price elasticities with high precision; (b) We have large variations in income (total expenditures), which is rarely available in aggregated data; and (c) We can control for time specific factors by exploiting the panel structure of the data set. Contrary to the rule of thumb in empirical studies of demand systems, the estimation results display consistency with demand theory. The estimated system will serve as a microeconomic basis for evaluating various policy-related issues.

Output Gap and Inflation

by Ana G. Azofeifa Villalobos, Jorge Madrigal Badilla, Mario Rojas Sánchez, Álvaro Mariano Segura Ávila, Edwin Tenorio Chaves and Alexander W. Hoffmaister Arce

Output gap models are frequently used to explain the evolution of inflation. These models are based on the principle that an increase of the aggregate demand causes the acceleration of the inflation rate. This approach requires measuring the potential output of the economy to determine the output gap. In this paper, the potential output is approximated using four techniques: an ordinary least square regression with time as the independent variable, the Hodrick and Prescott Filter, the Baxter King Filter and a structural long term Cobb-Douglas production function. Our research shows that an increment of one percentage point in the output gap (measured as the logarithmic difference between the gross domestic product and the potential output) increases the inflation rate (growth rate of the consumer price index) at a range between 0.4 and 0.75 percent. The evidence suggests that the output-gap changes affect the inflation rate behavior in two-year spans. Also, this type of model lightly improves the inflation rate forecast, especially when the potential output is estimated through the production function technique.

Wage Responsiveness of Formal and Informal Labor Markets to Economic Downturns:

The Case of Ecuador

by Marco Baquero Latorre

This document evaluates the income response of both formal and informal labor markets in the face of economic recessions. It utilizes statistical evidence to examine policies that promote labor market flexibility. The applied methodology, called Difference in Difference Analysis, which uses control and treatment groups, allows us to measure the income response of both the formal and informal markets during economic recessions. Our results suggest that despite official labor market regulations and minimum wage laws, the formal (rigid) sector also undergoes income contractions during depressed economic times. However, the evidence achieved through Difference in Difference Analysis allows us to conclude that in comparative terms, the formal labor market appears inflexible. The estimated informal real income contraction was approximately 2.3 times greater than that of formal sector income.

Optimal Commodity Tax:

A Theoretical Summary and an Application in the Case of Brazil

by Ana Luiza Neves de Holanda Barbosa and Rozane Bezerra de Siqueira

This paper presents a survey of the optimal commodity taxation theory and deals in particular with uniformity versus selectivity of commodity tax rates. A review of the main empirical models is also presented. Moreover, the study attempts to calculate optimal commodity taxes for Brazil. For this purpose, a simplified model is specified and solved taking into consideration the extent of the government's aversion to inequality and restrictive assumptions regarding preferences of households. Our results show that the optimal commodity tax rates should have a selective structure. In particular, commodities, which make up the largest share of the budgets of low-income households, should be subsidized.

The Efficiency of Pension Fund Managers in Latin America

by Armando Barrientos and Aziz Boussofiane

The paper investigates technical efficiency in the emerging pension fund management markets in Chile. Recent pension reform in the region has created a pension fund management market in nine countries in Latin America. The new pension providers collect and invest contributions from workers' retirement savings accounts. They compete on the basis of their commission, rates of return, and quality of service. They are also subject to extensive regulation. The paper examines their behavior and performance in the context of competition and regulation. Using DEA techniques, measures of the efficiency of fund managers in Chile are estimated. It is found that pension fund managers in Chile operate well below the estimated *efficiency frontier* and that market efficiency shows no continuous upward trend over time. Analysis of the determinants of technical efficiency suggests the misalignment of costs and commission charges leads to inefficient market outcomes with adverse implications for future pension outcomes.

Determinants of Educational Performance in Brazil

by Ricardo Paes de Barros, Rosane Mendonça, Daniel Domingues dos Santos and Giovani Quintaes

Despite the high estimated returns to schooling, the Brazilian educational indicators have been below international standards over the years. Worse, the poorer the family the lower the human capital investment is. Since the individual probability of being poor is strongly determined by the educational level, there exists a process of intergenerational transmission of poverty. The main goal of this article is to investigate the determinants of the weak educational performance in Brazil. The analysis focuses on 11- to 25-year-olds living in urban areas of the Northeast and Southeast regions. Four individual educational level determinants are investigated: the availability and quality of the educational services, the attractiveness of the labor market, the availability of family resources (financial and non-financial), and the amount of resources in the community where the individual lives. Similar to previous works, family attributes appear to be the most important.

Financial Regulation and Performance:

Cross-Country Evidence

by James R. Barth, Gerard Caprio Jr. and Ross Levine

This paper examines three questions. First, do countries with relatively weak government/bureaucratic systems impose harsher regulatory restrictions on activities of banks? Second, do countries with more restrictive regulatory systems have poorly functioning banking systems? Third, do countries with more restrictive regulatory systems have a lower probability of suffering a banking crisis?

We find that the answers are as follows: Countries with weak government/bureaucratic systems tend to impose harsher regulatory restrictions on the activities of banks. There is mixed evidence regarding the impact of regulatory restrictions on bank performance. Finally, we find that countries that restrict security market activities tend to have more fragile banking systems.

Some Implications of NAFTA for Brazil's Participation in the FTAA

by Renato Baumann and Ana Maria Franco

Latin American and Caribbean countries have been investigating the possibility of the formation of a free trade area at the hemispheric level (FTAA). FTAA would involve, for each participating country, easier access to the other thirty-three markets. Analysts and negotiators in a majority of the countries have concentrated on the United States market. In the specific case of Brazil, the perception exists that a good part of adverse results are associated with the various benefits enjoyed by the countries participating in NAFTA. This work presents some issues related to this topic.

An Additional Approach to Banking Supervision in Uruguay

by Mario Bergara, Gerardo Licandro and Jorge Ottavianelli

This paper proposes an ordered logit model as a complementary tool in the Uruguayan bank-monitoring system, which was implemented by the Superintendency of Financial Intermediation Institutions. Following the analytic structure of the CAMEL rating system, the model was able to replicate the historical ratings in the Uruguayan system in 89% of the sample. This off-site system, applied to the data of those banks in the sample, suggests that a specific rating becomes obsolete after two years on average and even earlier when dealing with the financing of homes and cooperatives.

A Decade Lost and Found:
Mexico and Chile in the 1980s

by Raphael Bergoeing, Patrick J. Kehoe, Timothy J. Kehoe and Raimundo Soto

Chile and Mexico experienced severe economic crises in the early 1980s. This paper analyzes four possible explanations for why Chile recovered much faster than did Mexico. Comparing data from the two countries allows us to rule out a monetarist explanation, an explanation based on declines in real wages and real exchange rates, and a debt overhang explanation. Using growth accounting, a calibrated growth model, and economic theory, we conclude that the crucial difference between the two countries was the earlier policy reforms in Chile that generated faster productivity growth. The most crucial of these reforms were in banking and bankruptcy procedures.

Trade Theory and Trade Facts

by Raphael Bergoeing and Timothy J. Kehoe

This paper quantitatively tests the *new trade theory* based on product differentiation, increasing return, and imperfect competition. We employ a standard model, which allows both changes in the distribution of income among industrialized countries (Helpman and Krugman, 1985) and nonhomothetic preferences (Markusen, 1986) to effect trade directions and volumes. In addition, we generalize the model to allow changes in relative prices to have large effects. We test the model by calibrating it to 1990 data and then *backcasting* to 1961 to see what changes in crucial variables between 1961 and 1990 are predicted by the theory. The results show that, although the model is capable of explaining much of the increased concentration of trade among industrialized countries, it is not capable of explaining the enormous increase in the ratio of trade to income. Our analysis suggests that it is policy changes, rather than the elements emphasized in the new trade theory, that have been the most significant determinants of the increase in trade volume.

Inflation Targeting in the Context of IMF-Supported Adjustment Programs

by Mario I. Blejer, Alfredo M. Leone, Pau Rabanal and Gerd Schwartz

This paper argues that the IMF's traditional monetary conditionality—a ceiling on net domestic assets of the central bank and a floor on its net international reserves—should be adapted in IMF-supported adjustment programs with countries that have a framework of explicit inflation targets for the implementation of monetary policy. This adaptation should aim at enhancing correspondence and consistency between the monetary objectives of the central bank and the targets established under the IMF-supported adjustment program, as well as between the different instruments used to achieve the policy objectives and targets. The paper reviews various general options in this regard and, using the case of Brazil as an example, demonstrates how these options may be implemented in practice.

Inflation Targeting in Brazil:
Shocks, Backward-Looking Prices, and IMF Conditionality

by Joel Bogdanski, Paulo Springer de Freitas, Ilan Goldfajn and Alexandre Antonio Tombini

This paper examines the recent evolution of monetary policy since the formal adoption of inflation targeting in Brazil. We argue that the new policy framework has been subject to a severe test in its first years of existence, represented by external shocks—oil prices and increased international financial volatility. Moreover, we examine some selected issues that deserve due consideration given their importance in the conduct of monetary policy. The first issue is the presence of a substantial portion of prices with backward-looking adjustment, a fact that affects monetary policy reaction since it reduces the efficiency of domestic interest rates in controlling inflation. The second addresses the question of how inflation targets should be monitored in a country that has an ongoing economic program with the International Monetary Fund. This first issue is particularly important when considering the effects of shortening monitoring horizons on the variability of inflation and output.

Economic and Social Long-Term Impacts of Agriculture in Brazil

by Regis Bonelli

This research investigates a group of Brazilian municipalities between 1975 and 1996 for selected long-term impacts of agricultural income growth on non-farm income, population growth, tax revenues and life conditions (measured by an indicator derived from the United Nations Human Development Indicator). The work's main conclusions are: (a) Total and agricultural income growth were very high in most of the selected areas in the period analyzed; (b) As expected, agricultural and population growth were especially strong in the newly settled areas; (c) A proxy for productivity change suggested very high labor productivity growth rates in most cases; (d) Farm and non-farm income are closely associated over time; (e) Agricultural income is associated with population growth and increases in living conditions over time; (f) We were able to postulate that non-farm income generates (*causes*) farm income; and (g) Both farm and non-farm income are associated with tax revenues over time.

Policies of Industrial Competitiveness in Brazil—1995–2000

by Regis Bonelli

The paper analyzes industrial competitiveness policies adopted in Brazil from 1995 to 2000 and compares them to previous economic measures and instruments. A number of changes over previous policies were identified, such as: (a) The agenda of competitiveness policies is presently more complex and diversified than in the first half of the 1990s; (b) Both fast productivity growth and exchange-rate devaluation contributed to counterbalance the anti-export bias, which characterized particular time periods in the 1990s. Although increased competitiveness can be partially attributed to trade liberalization and exchange-rate valorization up to early 1999, new instruments to enhance industrial competitiveness were responsible for increasing competitiveness in the second half of the 1990s; (c) Local (state) initiatives to increase competitiveness remained nearly the same, as compared with the first half of the 1990s; the reliance on the concession of tax exemptions and tax credits so as to attract new enterprises to territories continued to be the norm; (d) Although many measures and instruments have had as their focus the industrial segment of micro, small and medium-size firms, their effectiveness is questionable; (e) Trade defense and related measures continued at the same pace as before, as no new instruments or institutions were created in the last years of the decade; (f) Measures to reduce overall competitive inefficiencies (*custo Brasil*) continued to be adopted, albeit on a less focused level; (g) The most conspicuous sector policy instrument—the Automotive Agreement—survived the wave of difficulties associated with the widening competitiveness gap between Brazil and Argentina after the Brazilian exchange-rate devaluation of early 1999, but its future is uncertain; (h) The National Development Bank (BNDES) began in the mid-1990s to implement restructuring measures aimed at strengthening domestic firms and groups so as to enhance their competitive position both at home and abroad.

Monetary Rules and Macroeconomic Dynamics in Brazil:
A Rational Expectations Approach

by Marco Antonio Bonomo and Ricardo D. Brito

In this article, we estimate and simulate an open rational expectations macro model for the Brazilian economy. Our goal is to identify the features of optimal monetary rules and their consequences for the model's short-term dynamics. We compare the performance of three parameterizations of the monetary rule that differ with respect to the inflation variable: a Taylor rule, which is based on past inflation and real exchange rate (Ball); and a rule based on inflation forecasts (Bank of England). We solve the model numerically, and we use stochastic simulations to construct efficient frontiers on the inflation variance and output variance space. The sets of optimal rules for the two versions are qualitatively distinct. Since there is uncertainty about the economy's forward-lookingness, we propose a ranking of rules based on an equal weighted average of each model's objective function. The best-ranked rules according to this criterion have a performance moderately inferior to the optimal rules, but they prevent much larger losses, which would occur when rules are chosen according to the wrong model.

A Note on the Efficient Estimation of Inflation in Brazil

by Michael F. Bryan and Stephen G. Cecchetti

This paper investigates the use of trimmed-mean estimators and time-series averaging as techniques for improving the signal-to-noise ratio in high-frequency price data. We show that trimmed-mean estimators substantially increase the efficiency of the aggregate estimator compared to the more standard mean-measures. In this way, these estimators also reduce a central bank's need to time-series average the monthly inflation estimates, which greatly improves the timeliness of the inflation statistic. In the case of Brazil, we find that asymmetrically trimming twenty-four percent from the tails of the price-change distribution reduces the RMSE of the monthly statistic as a measure of the inflation trend by twenty-three percent, making it as accurate as the three-month average growth rate of the mean retail price measure. We also demonstrate that a three-month lagged moving average of the optimal (asymmetrically) trimmed mean is as efficient an estimator of the 24-month centered moving-average retail price growth trend as the mean inflation rate averaged over any horizon.

Growth and External Financing in Latin America

by Guillermo A. Calvo, Eduardo Fernández-Arias, Carmen Reinhart and Ernesto Talvi

The first section of the paper reviews growth and economic performance in Latin America over the last thirty years and identifies the importance of external finance in explaining them. Next, the paper focuses on the novel conditions in external finance and real economic activity during the past decade, concluding with an analysis of the current state of affairs in Latin America. The work provides some clues regarding the big swings in capital inflows. It argues that although these swings are oftentimes triggered by external factors, domestic financial vulnerabilities could seriously contribute to magnifying them. Thus, crisis depth is positively correlated with phenomena like a weak banking sector and large debt amortizations. However, the paper also argues that the central capital market has represented an additional source of disturbance for all emerging market economies and not just Latin America.

The Brazilian Elderly in the Labor Market

by Ana Amélia Camarano

The paper analyzes the participation of the Brazilian elderly in the labor market from 1977 to 1998. This analysis is different from traditional labor market analysis in that the main focus is not on the pressure that the elderly can put on the labor market. The objective is to look at the participation of the elderly as an indicator of dependence. Furthermore, the paper also examines the contribution that the Brazilian elderly bring to the familial budget. Finally, it calls attention to the fact that the elderly population is already affecting the Brazilian labor force. Elderly participation in labor force experienced little changes through the studied time period. It did not seem affected by the large increase in the retired population. Among the considered variables that can affect participation, age and education showed a great importance; age in a negative way and education in a positive one. It is believed that both reflect health conditions, which seem to be an important determinant of elderly labor force supply. The participation of the Brazilian elderly in the labor market is high considering international standards. This is related to the high participation of the retired population. About one half of elderly males and a third of elderly females in the labor market retired in 1998. This proportion increased over the studied time period. Earnings from work are important to the family as well as the individual.

The Growth–Interest Rate Cycle in the United States and Its Consequences for Emerging Markets

by Ana Amélia Camarano

This paper focuses on gaining a better understanding of how the U.S. business cycle, its associated monetary-policy cycle, and their interaction affect developing countries. The work examines, in particular, the effect of developments in the United States on capital flows and growth in emerging market countries. We review the transmission mechanisms whereby shocks in the North are propagated to the South. We present the stylized evidence on how capital flows and growth in developing countries vary with the business and monetary policy cycle in the United States. We also present some basic tests that take a first cut at the data. The final section summarizes our main findings.

Forecasting Brazilian Imports: *Which Is the Best Approach?*

by Marco Antônio F. H. Cavalcanti

Forecasting a country's external trade involves making decisions on a number of crucial questions, such as whether to: (a) adopt univariate or multivariate forecasting methods; (b) use aggregate or disaggregated data; (c) work with data in price/volume terms or in value terms. There are obviously many possible combinations of these choices, and it is not clear which provides the best forecasting approach. In this paper, we provide evidence on these issues through an empirical forecasting exercise for Brazilian imports. Assuming that our sole interest lies in forecasting total monthly imports, we apply three different forecasting methods to alternative model specifications given by the possible combinations of aggregates vs. disaggregated data and value vs. price/volume measures. We then evaluate the relative performance of each modelling approach by means of RMSE error measures.

Economic Growth, Trade Balance and the Exchange Rate/Investment Relationship

by Marco Antônio F. H. Cavalcanti and Cláudio Roberto Frischtak

We present projections of the trade and current account balances for Brazil for the period 2001–03. We show that external deficits shall persist during this period; given an international environment characterized by decreasing capital flows (especially those directed to emerging economies), this may impose considerable restrictions on domestic growth. We then discuss possible external adjustment strategies and their implications for domestic activity. The adjustment strategy could be based either on exchange rate devaluation or on additional investments in productive capacity. However, there are limits to both strategies, and we conclude that the evolution of the Brazilian economy during 2001–03 will depend on its ability to walk on the razor's edge due to the exchange rate/investment relationship.

The 1997–98 Liquidity Crisis:
Asia Versus Latin America

by Roberto Chang and Andrés Velasco

Several East Asian countries suffered a sudden stop, with massive and unexpected capital outflows, in 1997–98. Latin American countries, in spite of their more checkered financial past, were much less severely hit at the time (of course, several have had crises since). Why this asymmetry between the two regions? In this paper we argue that what saved Latin America in 1997–98 was not a stronger set of macroeconomic fundamentals (many Latin countries, for instance, had substantial real exchange-rate appreciation and non-trivial current account deficits) but a stronger financial position. In contrast, the Asian countries were in a situation of international illiquidity evidenced by sharply rising ratios of hard currency short-term liabilities to liquid assets. As such, they were extremely vulnerable to a reversal of capital inflows, which occurred massively in the second half of 1997. Financial fragility in Asia had its roots in inappropriate microeconomic policies followed during previous years. Financial liberalization measures in Asia resulted in a deterioration of the international liquidity position of the financial system. These measures, carried out at a time of large capital inflows, created the conditions for a crisis. Much of the borrowing was in dollars and, especially in the period right before the crisis, short term. These two factors left domestic banks exposed to exchange risk and to the mood swings of lenders who had to roll over large loan volumes at short-intervals. By contrast, the Latin countries, having gone through their cycle of financial liberalization and collapse in the 1980s and early 1990s, have followed much more cautious policies in recent years.

Brazilian Business Cycle and Growth Cycle

by Marcelle Chauvet

This paper uses several procedures to date and analyze the Brazilian business cycle and growth cycle. In particular, a Markov switching model is fitted to quarterly and annual real production data. The smoothed probabilities of the Markov states are used as predictive rules to define different phases of cyclical fluctuations of real Brazilian production. The results are compared with different non-parametric rules. All methods implemented yield similar dating and reveal asymmetries across the different states of the Brazilian business and growth cycle, in which slowdowns and recessions are short and abrupt, while high growth phases and expansions are longer and less steep. The resulting dating of the Brazilian economic cycles can be used as a reference point for construction and evaluation of the predictive performance of coincident, leading or lagging indicators of economic activity. In addition, the filtered probabilities obtained from the Markov switching model allow early recognition of the transition to a new business cycle phase, which can be used, for example, for evaluation of the adequate strength and timing of counter-cyclical policies, for reassessment of projected sales or profits by businesses and investors, or for monitoring of inflation pressures.

A Monthly Indicator of Brazilian GDP

by Marcelle Chauvet

This paper constructs an indicator of Brazilian GDP at the monthly frequency. The peculiar instability and abrupt changes of regimes in the dynamic behavior of the Brazilian business cycle are explicitly modeled within nonlinear frameworks. In particular, a Markov switching dynamic factor model is used to combine several macroeconomic variables that display simultaneous co-movements with aggregate economic activity. The model generates as output a monthly indicator of the Brazilian GDP and real time probabilities of the current phase of the Brazilian business cycle. The monthly indicator shows a remarkable historical conformity with cyclical movements of GDP. In addition, the estimated filtered probabilities predict all recessions in-sample and out-of-sample. The ability of the indicator in linear forecasting growth rates of GDP is also examined within and out-of-sample. In both cases, the estimated indicator displays a better predictive performance compared to a linear autoregressive model for GDP. In particular, the inclusion of lags of the indicator improves substantially forecasts of the severity of recessions and strength of expansions, as measured by the volatility of changes in GDP. These results suggest that the estimated monthly indicator can be used to forecast GDP and to monitor the state of the Brazilian economy in real time.

Trends and Cycles in Real-Time

by Rómulo A. Chumacero and Francisco A. Gallego

This paper compares the results of applying several detrending methods to the Chilean monthly economic activity index (IMACEC) that arise from using real-time data sets. We show that data revisions are extremely important and that they can lead to systematically inconsistent estimates of the trend component. Furthermore, most of the filters commonly used to detrend time series in practice are highly unstable and unreliable for end-of-sample estimation.

Inflation Targeting in Latin America

by Vittorio Corbo and Klaus Schmidt-Hebbel

This paper analyzes Latin America's recent experience with the use of inflation targeting (IT) while the region has made substantial progress toward eradicating high inflation. The paper assesses the implementation and results of inflation targeting in Latin America from a broad perspective. It starts by reviewing the issues relevant for the choice of exchange-rate regimes and monetary frameworks, documenting the evolution of exchange-rate and monetary regimes in Latin America during the last two decades. It describes the Latin American and world samples of inflation targeters and compares their performance to non-targeters, focusing on their success in meeting inflation targets, their output sacrifice in achieving low inflation, and their output volatility. A more detailed analysis of five IT experiences follows for Brazil, Chile, Colombia, Mexico, and Peru, with reference to the design of IT in the world sample of inflation targeters, focusing on their success in meeting inflation targets, their output sacrifice in achieving low inflation, and their output volatility. A more detailed analysis of five IT experiences follows for Brazil, Chile, Colombia, Mexico, and Peru, with reference to the design of IT in the world sample of inflation targeters. Using a battery of alternative model estimations and simulations, the paper's conclusion focuses on the dynamics of inflation reduction in the longest IT experience in the region (the case of Chile), evaluating how IT has affected inflation expectations and hence the effectiveness of monetary policy.

Regulation of Protection of Personal Information and Information Companies:

A Comparison of Selected Countries of Latin America, the United States, Canada and the European Union

by Rafael Del Villar, Alejandro Diaz de León and Johanna Gil Hubert

This study argues that the protection of personal information and the promotion of the flow of information are not necessarily incompatible and that they should not be analyzed nor regulated in an isolated manner. The protection of a person's privacy is a fundamental human right. Privacy of personal information is consistent with economic development when regulations not only protect personal information but also consider the emergence of information companies or *societies of information* (a generic term that refers to companies that facilitate the flow of information). This study compares both types of regulations for six Latin American countries: Argentina, Brazil, Colombia, Chile, Mexico and Peru. Regulations in the United States, Canada and the countries of the European Union are included. The thesis of this study is not new; the OECD considered both objectives twenty-one years ago in directives concerning the protection of personal information. Nevertheless, the topic is particularly important for Latin American countries, which generally lack regulation protecting personal information as well as general regulation regarding information companies. Thus, the study recommends a framework that promotes the flow of information as well as protects individual privacy and encourages the development of information companies.

Sensitivity of Bad Bank Loan Performance and Liquidity to Macroeconomic Changes:

A Panel Data Approach

by Rodolfo Durán Víquez, Evelyn Muñoz Salas and Guillermo Olivier Cruz Méndez

The main objective of this paper is to calculate the effect of selected macroeconomic variables on two financial indicators in the Costa Rican banking system—credit and liquidity. We also try to estimate the lag between changes in some macroeconomic variables and these financial indicators. Based on a panel data approach, we found that: (i) it is possible to identify a systemic reaction of the liquidity and credit indicators before changes in some macroeconomic variables and that the differences between the banks are appropriately summarized in a constant intercept indicator that is specific to each bank; (ii) the variables that seem to affect the credit indicator are: devaluation, inflation, new credit operations and the economic activity growth; (iii) the liquidity indicator is affected by the monetary emission, the interest rate in local currency and the failures in banking credit operations. The paper concludes with a quantification of the effect of some macroeconomic variables over the financial indicators and an identification of the lag between changes in those variables. These results are helpful in enabling the central bank to identify which variables could generate systemic problems in each financial area considered—an important issue when analyzing the Early Warning System.

Aggregate Demand Management and Equilibrium Selection

by Huberto Ennis and Todd Keister

We study optimal government policy in an economy where search frictions create a coordination problem and generate multiple equilibria, none of which are Pareto optimal. In such an environment, the government may want to take actions to increase aggregate demand, which would encourage private agents to search more and could thereby increase welfare. We examine the problem of a government that must choose a policy before it knows which equilibrium will be selected. We use a learning-based criterion to determine the probability of the economy attaining each of the equilibria, which allows us to analyze the effects of the policy on the equilibrium selection process and the consequences of this for the determination of the optimal policy. Our model reveals that aggregate demand policies may be more powerful than a standard equilibrium analysis would indicate. By encouraging agents to engage in more trading activity, the policy can also make it more likely that agents will coordinate on a good equilibrium.

Inflation Targeting in Brazil:
Reviewing Two Years of Monetary Policy, 1999 and 2000

by Pedro Fachada

In July 1999, Brazil implemented a formal inflation-targeting framework for monetary policy, less than six months after moving to a floating exchange-rate regime. This work evaluates the initial years of the Brazilian experience with inflation targeting. During the period the inflation rate remained in the targeted range, despite several external and domestic adverse shocks that hit the Brazilian economy. The new monetary framework proved to be fundamental to enhance transparency and to guide expectations, thus preventing transitory inflation surges to develop into permanent inflation increases.

Market Discipline and Exuberant Foreign Borrowing

by Eduardo Fernández-Arias and Davide Lombardo

Recent crises in emerging markets question the effectiveness of market discipline for ensuring efficient foreign borrowing. We review arguments that indicate that market discipline is limited by lack of information and may be dangerously distorted by moral hazard induced by official guarantees. Aside from these well-known concerns, we show that the market fails to internalize country risk and panic risk, which leads to inefficient borrowing even in the absence of traditional distortions. We also discuss optimal tax and trade policy as well as the role of liquidity facilities to address these externalities.

A Liquidity Premium Puzzle:
Evidence from Chile

by Viviana Fernandez

This article looks at the determinants of liquidity premium of the term structure of interest rates. Based upon a very simple model, our results show that liquidity premium is not necessarily positive, as usually believed. This point is illustrated empirically with Chilean data for the sample period 1983–1999. Our estimation results show that liquidity premium is not only time-varying but also dependent on the curvature of the term structure, expected inflation, expected depreciation of the nominal exchange rate, and on economic activity, contradicting the expectations hypothesis. For our sample period, the liquidity premium is usually negative and, when positive, is very small. This implies that investors are willing to hold long-term assets even though their return is relatively lower. This appears to be a consequence of indexation, which reduces the risk of long-term bonds as their return is linked to past inflation. Alternatively, we believe that a negative liquidity premium may be explained by the preferred habitat hypothesis of interest rates. Indeed, data on the composition of the portfolios of Chilean insurance and re-insurance companies show that, due to immunization (matching of durations of assets and liabilities), about 0 percent of total assets corresponds with long-term bonds and mortgage securities. This investment strategy drives the prices of long-term financial instruments up and their rates down.

Explaining Agriculture Expansion and Deforestation:
Evidence from the Brazilian Amazon, 1980–98

by Claudio Ferraz

The extent of deforestation in the Brazilian Amazon grew significantly in the last twenty years. Approximately 400,000 km of tropical forest was cleared from 1978 to 1998. Land conversion to pasture and crop areas was the main source of deforestation, though the contribution of logging increased significantly in the nineties. This paper uses panel data for eight states of the Brazilian Amazon from 1980 to 1998 to estimate a model of the determinants of crop area and cattle herd expansion within the region. Results show that the expansion of crop areas is determined by changes in land prices, government agriculture credit and roads, while the growth of cattle herds is mainly driven by the decrease in the price of cattle and the expansion of the road network.

Chile, Between Neoliberalism and Growth With Equity:
An Overview

by Ricardo Ffrench-Davis

During Pinochet's dictatorship, deep reforms were implemented in Chile. Certainly, many of them constituted permanent achievements for development strategies in democracy. However, economic growth between 1973 and 1989 was mediocre (averaging only 2.9% annually), and income distribution deteriorated notably (detailed data and analysis of policies is included). This outcome was related to the fact that the reforms suffered from various flaws that had severe repercussions on the growth of potential GDP and on social welfare. In the 1990s, the governments of the Concertación launched several changes to the reforms with the goal of injecting *pragmatism*. It focused on decreasing macroeconomic vulnerability when faced with an increasingly volatile external environment and on completing underdeveloped domestic markets. The result of this set of reforms to the reforms was an unprecedented vigorous expansion of productive capacity during the decade (which averaged 7% per year), a rise in savings and productive investment, and a significant reduction in poverty (from 45% to 21% of the population). A recessive gap in 1999–2001, however, highlighted failures, increasing contradictions and halting greater reforms to the reforms.

Evaluating Core Inflation Measures for Brazil

by Francisco Marcos Rodrigues Figueiredo

This article presents a brief survey of core inflation and shows the first results obtained in the computation of such an indicator for the Brazilian IPCA from January 1996 to May 2000. The performance of five alternative measures of core inflation (exclusion method, symmetric trimmed mean, symmetric trimmed mean with smoothed series, weighted median and double weighted indicator) is evaluated and compared. The preliminary results show that the double weighted measure and the 20% trimmed mean with smoothed series performed better.

Energy Prices in the Presence of Plant Indivisibilities

by Ronald Fischer and Pablo Serra

In several countries (Chile, Bolivia, Argentina and Peru, among others), power plants are dispatched according to merit order, i.e., based on the marginal operating cost of the plants. In this scheme, the plant with the highest marginal cost sets the spot price at which firms trade the energy required to fulfill their contracts. The model assumes that plants can operate at any level up to capacity, whereas real power plants have minimum operating levels. This implies that a low cost plant might have to reduce its supply in order to accommodate the minimum operating level of a more expensive power plant. This paper derives the welfare maximizing price rules in this case and shows the inapplicability of the standard peak load pricing rules.

The Impacts of the Minimum Wage on the Labor Market, Poverty and Fiscal Budget in Brazil

by Miguel N. Foguel, Lauro Ramos and Francisco Carneiro

This paper contributes to the debate over the minimum wage in Brazil. It assesses its potential effects on labor market outcomes, terms of poverty alleviation and fiscal impact. The work initially presents a succinct description of the institutional framework, the evolution of its real value over time, and a characterization of the profile of minimum wage earners. After a brief survey of theoretical views and empirical results found in the literature, it presents the estimations and their implications in terms of minimum wage policies.

Is Economic Growth Good for the Poor?

Tracking Low Incomes Using General Means

James E. Foster and Miguel Székely

In this paper we propose the use of an alternative methodology to track low incomes based on Atkinson's (1970) family of *equally distributed equivalent income functions*, which are called *general means* in this work. We provide a new characterization of general means that justifies their use in this context. Our method of evaluating the effects of growth on poor incomes is based on a comparison of growth rates for two standards of living: the ordinary mean and a bottom-sensitive general mean. The motivating question is: To what extent is growth in the ordinary mean accompanied by growth in the general mean? A key indicator in this approach is the growth elasticity of the general mean, or the percentage change in the general mean over the percentage change in the usual mean. Our empirical analysis estimates this growth elasticity for a data set containing 144 household surveys from twenty countries over the last quarter century. Among other results, we find that the growth elasticity of bottom sensitive general means is positive, but significantly smaller than one. This suggests that the incomes of the poor do not grow one-for-one with increases in average income.

Constrained Discretion and Collective Action Problems:

Reflections on the Resolution of International Financial Crises

by Arminio Fraga Neto and Daniel L. Gleizer

The purpose of the paper is to highlight some essential features of an approach to the resolution of international financial crises, based upon an assessment of what has been essential for restoring normal relations between debtors and creditors in recent crises. We focus on the nexus between the debtor and the private creditors and on what they can do together to solve the collective action problems that bedevil the resolution of crises, recognizing that the official sector has a catalytic role to play. This contrasts with the emphasis on the relationship between the official sector and the debtor, and on the connection between the official sector and the private sector. The essence of a lasting solution is finding practical ways to enable debtors and creditors to conclude and implement explicit and implicit agreements relating to the amount and timing of credit flows and debt repayments.

A Simple Model for Inflation Targeting in Brazil

by Paulo Springer de Freitas and Marcelo Kfoury Muinhos

Based on a six equation model by Haldane and Battini (1999), we estimated a Phillips and an IS equation for Brazil after the Real Plan, in order to study the transmission mechanism of the monetary policy. The results show that interest rate affects output gap with a lag of one quarter and output is positively related to inflation with a one lag only. The devaluation of the nominal exchange rate has also a contemporaneous effect on inflation. We also made stochastic simulations in order to depict the inflation and output gap volatility loci under alternative Taylor-type rules and under an optimal rule, which minimizes a loss function that depends on a weighted average of inflation and output gap variances. The stochastic simulation showed that when compared to the variance in inflation, output gap variance appears to be more sensitive to the weights given in the loss function. It also showed that optimization procedures longer than six periods are inefficient and the most efficient frontier horizons are set within the range of two to four periods. Finally, sub-optimal but simple rules, like Taylor type rules can perform as well as the optimal ones, depending on the parameters chosen and on the preferences of the central bank.

Education, Income and the Border

by Thomas M. Fullerton Jr.

Border areas of the Texas economy face a variety of important economic challenges. In the modern labor market setting, income performance depends increasingly on productivity, and the latter is primarily a function of educational attainment. To examine the extent to which education influences border region income performance, a cross section econometric model is estimated using county level information. Data are drawn for all 254 counties in Texas using 1990 census information files. Empirical results indicate that per capita income is influenced by educational, demographic, and geographic factors. Regression output is similar, but not identical, to estimates obtained for other regions of the country. Model simulation results indicate that border counties lost nearly $3.6 billion in personal income attainment due to below-average high school graduation rates in 1990.

A New Perspective on Mexico's Transmission Mechanism and Economic Integration with the USA—1980–2000

by Daniel Garces-Diaz

This paper presents a comprehensive view of the Mexican economy in the last two decades. It shows that the Mexican GDP is cointegrated with the USA index of industrial production and the real exchange rate. The coefficient of the former is close to one but the sign of the latter is negative, i.e., a real depreciation is contractionary in spite of its strong and fast positive effect on the trade surplus. Most components of aggregate demand, even government expenditure, have similar long-run relationships, implying that the level of economic activity in Mexico is entirely determined by the US economy and the real exchange rate. Moreover, the real exchange rate is also the ultimate determinant of real wages and prices and, along with the US economic activity again, the level of real monetary balances. Surprisingly, most of the equations are linear, constant and stable for the whole sample period in spite of many institutional and economic changes; they also show very good out-of-sample forecasting performance. Only two events seem to have caused structural changes in some relations: the change in economic policy at the end of 1982 forced by the beginning of the debt crisis and the opening up of the economy in 1985. The behavior of the real exchange rate seems to be related to the financial needs of the public sector and that helps to explain its strong mean reversion and the changes in inflationary uncertainty. Most of the results are, to the best of my knowledge, completely new and they should be of interest for analysts of small open economies and developing countries.

Stabilization Policies in Chile During the Nineties

by Carlos José García T.

This paper provides econometric evidence on the effectiveness of targeting inflation in order to reduce the rate of inflation in Chile in the 1991–97 period. This paper shows that the inflation target altered the inflationary dynamic by following through with out-of-sample forecasts with VAR models. Second, this paper estimates the Central Bank's feedback rule by using a semi-structural VAR, which shows that an unexpected and temporary real interest shock can reduce the inflationary gap. However, this paper argues that the strategy of using unexpected and temporary shocks to explain the decline in inflation is misleading. The paper supports this with consideration to the fact that the inflation target was an announced, decreasing, and permanent policy. Third, by using an unrestricted VAR, this paper performs dynamic solutions that assume an exogenous and known path for the inflation target. The results indicate that the decreasing inflation target gradually led inflation to the single-digit range without a drop in output. However, the real appreciation observed during this period and connected with a capital inflow shock was also an important element to explain the decline in the rate of inflation.

Price Inflation and Exchange Rate Pass-Through in Chile

by Carlos José García T. and Jorge Enrique Restrepo

A price equation based on a model of imperfect competition was estimated using quarterly data for Chile from 1986:1 to 2001:1. The estimation includes the first difference of the dependent variable following the literature on the estimation of linear quadratic adjustment cost (LQAC) models, when the target and some of the driving variables follow I (2) processes. The equation is used to generate out-of-sample inflation forecasts of a price index narrower than the CPI. We can conclude from the estimation results:
(i) exchange-rate pass-through depends positively on economic activity (output gap) explaining why pass-through has been so low in recent years in Chile. In other words, a negative output gap has compensated the inflationary impact of exchange-rate depreciation; (ii) productivity reduces unit labor costs and inflation; (iii) wages and foreign prices are positively related to inflation; (iv) finally, expected inflation acceleration is significant, confirming that expectations matter in determining inflation.

New Frontiers for Monetary Policy in Chile

by Pablo S. García, Luis Oscar Herrera and Rodrigo O. Valdés

This paper assesses the efficiency of the current inflation-targeting (IT) scheme in place at the Central Bank of Chile. Using a small macroeconomic model of the Chilean economy, our main results are as follows: (i) an efficient monetary policy requires a bias towards output stabilization around its long-run trend; (ii) the switch to forecast-targeting, implicit in the current IT scheme in Chile, results in an efficiency gain; (iii) targeting core inflation is not efficient; (iv) *ceteris paribus*, efficiency could be enhanced if monetary policy leans against the wind when facing shocks to the cost of international finance.

A Description of Progresa

by Rodrigo García Verdú

This paper describes the main features of Progresa, a large-scale human capital investment program recently implemented in Mexico and targeted to rural households living in extreme poverty. It also summarizes the main results of the evaluation of the program in the areas of education, health, and nutrition. Progresa provides cash transfers and in-kind benefits conditional on regular school and health clinic attendance by participants. Thus, the program aims at simultaneously decreasing current poverty through direct cash transfers and reducing future poverty by increasing the human capital of participants through investments in education, health, and nutrition. Progresa is a very interesting program from an economic perspective for two main reasons. First, the program explicitly incorporates into its design several concepts from economics in general and human capital in particular. For example, the program acknowledges that forgone earnings constitute one of the main costs of education. In response, the program increases schooling enrollment and attendance by compensating households for the income they forgo by sending their children to school. The amount of school grants at the secondary level increases with each school grade in order to reflect the higher opportunity cost of attending school for older children and is higher for girls than for boys in order to revert the gender gap in schooling attainment. Second, the program constitutes one of the largest randomized social experiments of its kind. In order to evaluate Progresa, an experimental design was adopted in which some eligible villages were randomly selected to participate in the program while others were randomized out and were used as a control group. A panel of households from both the treatment and the control groups was then surveyed every six months for a period of three years, both before and after the beginning of the program.

Risk Sharing in Rural Mexico

by Rodrigo García Verdú

This paper presents evidence on the ability of households in village economies in rural Mexico to insure their consumption against idiosyncratic risks. Using Progresa's unique longitudinal households survey data, we are able to test the full insurance hypothesis. Furthermore, by exploiting the experimental design of Progresa, we analyze the effects of the program on preexisting risk-sharing arrangements. Although Progresa is not an insurance program, it has been suggested that a transfer program, which reduces the variance of income, might decrease risk sharing in a model with limited commitment. We analyze various kinds of shocks, such as income and illness shocks, and reject the full insurance hypothesis. Furthermore, we find no evidence that Progresa has displaced preexisting risk-sharing arrangements.

Schooling and Earnings in Rural Mexico

by Rodrigo García Verdú

This paper contributes to the evaluation of Progresa by validating the estimates of the rate of return to schooling in rural Mexico, a fundamental parameter in the evaluation of the program. In particular, we use data on earnings and schooling from Progresa's ENCASEH, a cross-sectional household survey data set, in order to estimate different specifications of the earning function. Since the program only started in 1997, there is no data available yet on the labor market outcomes of program participants. In order to circumvent this shortcoming, we use data from other household members from the same communities. The estimates we obtain suggest annual rates of return to education of around 8%, which are lower than those estimated using data from urban areas, which are between 10% and 12%. This is no surprise given that migration from rural to urban areas in Mexico is pervasive, so self-selection of more able individuals into higher-paying urban jobs can explain this result.

Household Responses to Adverse Income Shocks in Latin America

by Alejandro Gaviria

This paper uses a new data set to study household responses to adverse income shocks in seven Latin American countries. The results show (i) that households respond to income shocks mainly by increasing their labor force participation, selling assets, and cutting back on human capital investments, (ii) that poor households are the most likely to be affected by adverse income shocks, and (iii) that lower-middle-class households are more likely to cut back on human capital investments and move abroad when faced with an adverse income shock. Taken together, these results offer ample justification for publicly funded safety nets that target the poor.

Overshootings and Reversals:

The Role of Monetary Policy

by Ilan Goldfajn and Poonam Gupta

This paper provides evidence on the relationship between monetary policy and the exchange rate in the aftermath of currency crises taking into account the role of a fragile banking system. It analyzes a large set of currency crises that led to real exchange rate undervaluations from a sample of eighty countries in the period 1980 to 1998. First, the paper evaluates whether tight monetary policy increases substantially the probability of reversing the undervaluation through nominal appreciation of the exchange rate rather than through higher inflation. Second, using panel data, the paper estimates the relationship between real exchange rates and real interest rates. We find that tight monetary policy facilitates the reversal of the real exchange rate through nominal appreciation rather than inflation. In contrast, when the economy is also facing a banking crisis, tight monetary policy may not have the same effect.

Presence of Derivatives and Hedging Operations:

Price Risk of Gold from BROU (1996–2000)

by Rene Gonzalez Silva and Ana Maria Lorenzo Figueroa

Resource management is increasingly subject to the forces of a global and competitive market, which offers rewards only in exchange for risk. In this context, derivatives (which appear in the media more frequently for their shadows than for their lights) allow for a quick and efficient adjustment of portfolio positions according to each agent's preferences. In the developing countries, the impact of price variations in commodities is very significant. Our countries usually show certain institutional backwardness, which prevents them from making better use of state-of-the-art risk-management tools. In the 1990s and in particular since 1996, BROU (owner of more than half a million gold ounces) developed a mobilization strategy, which included hedging transactions using derivatives that enabled it to avoid losses of more than 50 million dollars. Besides showing that derivatives are (implicitly) present in various contracts, we resort to the experience of Banco República because, in principle, one could not expect that a state bank, acting within Uruguayan Public Law, had intensively used these instruments in order to deal with such a particular asset.

Monetary Aggregates in Mexico:

Is There a Return to the Classics?

by Alfonso Guerra de Luna and Alberto Torres García

This paper analyzes the information contained in Mexico's monetary aggregates. The purpose is to identify if such information is useful in order to anticipate future behavior of prices and economic activity. The results show that inflation is an important determinant of the velocity of money. At the same time, it was found that the variations of inflation in Mexico during the last two decades motivated change in money velocity and these affected the relation among the monetary aggregates, prices and economic activity. In particular, a relevant result of the investigation is that while inflation and velocity were stable in Mexico, the monetary aggregates anticipated correctly the movements of prices and economic activity. However, when inflation and velocity stopped being stable, money lost the ability to anticipate price levels and economic activity.

Injury Investigations in Anti-Dumping and the Super-Additivity Effect:

A Theoretical Explanation

by Poonam Gupta and Arvind Panagariya

Empirical evidence shows that in injury investigations in anti-dumping cases conducted by the United States International Trade Commission, the probability of a positive finding is higher when the number of defendant firms is larger, holding constant their total market share. In this paper we offer a theoretical explanation of this finding. We show that the presence of many exporters exacerbates the free-rider problem, which leads every firm to invest less on defense. Thus, for the same market share, injury finding is more likely to be positive for many small sellers than a few large sellers.

Banking, Financial Integration, and International Crises:

An Overview

by Leonardo Hernández and Klaus Schmidt-Hebbel

This paper summarizes new research on the relationship among institutions, financial development, economic growth, financial integration, and the likelihood of boom–bust cycles and banking crises. The first part of the paper reviews issues pertaining mainly to the banking sector, and summarizes new findings regarding banking regulation and supervision and the behavior of depositors and other market participants. The second part of the paper reviews new findings on the internationalization of banking, boom–bust cycles and macro-financial linkages during financial integration, the elements of international financial crises, and the role of capital controls to reduce macroeconomic vulnerability.

It's the Terrorism, Stupid

by Jennifer Holmes and Sheila Amin Gutiérrez de Piñeres

Much has been written discussing the support for Fujimori during the implementation of his *fujishock* program in Peru. In the voting behavior literature, the role of Fujimori's success in ending terrorism is mentioned but is generally treated as a mere footnote. We present historical analysis, public opinion data and economic statistics to argue that without controlling terrorism, Fujimori would not have been able to implement his stabilization programs, while maintaining popular support. First, the problem of terrorism was paramount, and his success in ending it was greatly rewarded in terms of personal support. Second, the subsequent gains in the economic situation can be traced to improvements in security. Terrorism affects political and country risk, thereby significantly curtailing domestic and foreign investment.

Evolution and Structure of the Different Cash Payment Methods in Mexico

by Eduardo Jallath and José Luis Negrín

This paper describes the evolution and structure of the principal methods Mexico uses in making cash payments. The description involves methods of traditional payments, such as checks and credit cards, as well as non-traditional payments such as electronic transfers and debit cards. Traditional payment methods have been reduced, while the electronic payments have gained popularity in high volume payments. Debit cards have registered elevated growth, supported by automatic cash machines, and have become the preferred payment method used in sales. These methods have come to represent more than 60% of the total number of high volume transactions. Additionally, the number of checks and high value transactions has decreased. When reference to high value payments is made, the transfers of high value (SPEUA) represent more than 95% of transactions, while in net terms the transfers of bonds in the payment system represent more than 60% of the total value. The comparison of the structure and different cash payments used by Mexico reflect that in spite of the positive evolution of the electronic payments system, its use is still limited.

A Statistical Analysis of Banking Performance in the Eastern Caribbean Currency Union in the 1990s

by V. Hugo Juan-Ramon, Ruby Randall and Oral Williams

This study extends earlier research (Randall, 1998) by assessing the statistical significance of differences in bank performance indicators across three groups of banks in the Eastern Caribbean Currency Union (public, private indigenous and private foreign) across three sub-periods in the 1990s. In addition, the study investigates the optimal scale of banks, the structure of ownership, size and concentration of banks within and across countries and the extent of dollarization in the ECCU banking system. Further, the study determines whether the performance trends observable in the 1970s, as documented in the CAFAS report, were still discernable in the 1990s. The paper provides background information on the ECCU, describes the data and methodology and summarizes the results.

Politics and the Determinants of Banking Crises:

The Effects of Political Checks and Balances

by Philip Keefer

A large body of research has provided significant insights into the financial and macroeconomic causes of banking crises. Many of these causes—ranging from lapses in financial regulation to determined efforts to maintain a fixed exchange rate—have in common their origins as policy decisions of political actors. Numerous non-technical criteria, ranging from the identity and interests of political constituencies to political and electoral institutions, condition the incentives of political decision makers to make or correct policy *mistakes*. This paper explores the role of one significant political institution, the presence or absence of political checks and balances. Checks and balances influence the independence of regulators, the value and cost of special interest payoffs to policy makers, and individual political incentives to avoid collective policy failures. The evidence suggests that the financial and economic causes of crisis, consistent with these arguments, differ significantly in countries that exhibit few or many political checks and balances.

Models for Signal Extraction and Forecast of Quarterly Series of Supply and Demand of Costa Rica

by Ana Cecilia Kikut Valverde, Elvia Campos Villalobos, Marta Muñoz Barrantes, Alexander Porras Jara, Margarita Rodríguez Mora and Lizette M. Rocha Bonilla

The main objective of this study is to assess the short-term behavior of the real sector by using ARIMA models to estimate the unobservable components of the Costa Rican time series of global supply and demand and their components. As a result, the central bank has better forecasts of these series. We use the recent available quarterly series of the global supply and demand, in constant *colons* of 1991 from the first quarter of 1991 to the fourth quarter 2000. We study thirty-five variables. By utilizing TRAMO/SEATS for Windows, we make statistical inference about the estimations obtained from the adjusted models for each component. Additionally, we apply the direct and indirect seasonal adjustment to some variables. From this study we conclude that the TRAMO/SEATS software constitutes an easy, flexible and powerful tool for the time series analysis. In general, this package was able to discriminate among alternative models and decompositions. We also observe a satisfactory final decomposition. However, it is important to make an economic explication for the seasonal adjusted series. Finally, the results of the seasonal adjustment indicate that the indirect method was significant for two variables (agriculture and industry).

Public Demands for Government Debt and Other Financial Assets

by Ana Cecilia Kikut Valverde, Lorely Villalobos Moreno, Jaime Odio Chinchilla and Alexander W. Hoffmaister Arce

The main objective of this paper is to estimate the public's government debt demand, which plays an important role in solving the year-end financial programming exercise, proposed by Hoffmaister et al. (2001). The public's government debt demand is related to the public demand for other financial assets in that it is simultaneously determined by the money demand (in *colons* and dollars) and the demand for certificates of deposit. This relationship is important when the calibration of the Monetary Program is done through adjustments to the interest rate. Including these economic relationships with some restrictions results in better estimates. The principal results of this paper are: First, the semi-elasticity response of government debt to changes in the interest rate is estimated at approximately 0.7. Second, the estimates for the public demand for other financial assets confirm the interrelationship between these demands. For example, when the interest rate changes, it is necessary to redo the programming exercise. These changes in the demands affect the monetary base demand, which in turn changes the financial needs of the central bank. Third, for the Monetary Program 2000, the estimates for the government debt demand suggest that the original results are close to those that had been obtained if the estimated debt demand had been included in the exercise.

Mercosur:
The Dilemma Between a Customs Union and a Free Trade Area

by Honorio Kume and Guida Piani

In the first half of 2001, the government of Argentina changed import tariffs of some products, eroding the Common External Tariff (CET) of Mercosur. In particular, the tariff rates of capital goods were reduced to zero, an action with potential negative implications for the Brazilian industry of these goods. In this paper the authors address two problems. First, in the case of the maintenance of the custom union, they examine the best structures for the CET so that the different interests related to competitiveness and economic growth in the four member countries might be reconciled. In the event that such an agreement is not reached, the authors then consider Mercosur being transformed into a free trade zone. This would probably reinforce the prerequisites of regional content in the exchanged products and also enhance the negative effects of trade diversion.

A Critical View of Inflation Targeting:
Crises, Limited Sustainability, and Aggregate Shocks

by Michael Kumhof

This paper presents a critical appraisal of inflation targeting as a monetary policy regime for emerging markets. It is shown that this policy, if understood as a strict commitment to a CPI inflation target, shares many features with exchange-rate targeting and is quite different from flexible exchange rates under money growth rules. Inflation targets are vulnerable to speculative attacks, although less so than exchange-rate targets. They perform worse than exchange rate targets when policy sustainability is limited. And their relative performance under exogenous shocks, not surprisingly, depends on the nature and direction of those shocks. Given this lack of an obvious advantage over exchange rate targets, the real attraction of inflation targets may be that they give the policymaker discretion. This, in the context of many emerging markets, has to be a cause for concern.

On the Non-Monotonic Relation Between Interest Rates and the Exchange Rate

by A. Lahiri and Carlos A. Végh

Central banks typically raise short-term interest rates to defend against currency depreciations. The empirical literature in this area has, however, been unable to detect a clear systematic relationship between interest rates and exchange rates. We use an optimizing model of a small open economy to rationalize the mixed empirical findings. In the model, higher interest rates generate both a negative output effect and a higher fiscal deficit. We show that the relationship between nominal interest rates (both policy-controlled and market-determined) and exchange rates is inherently non-monotonic. The results of the model are thus consistent with the inability of non-structural empirical models to find a systematic relationship.

Does Inflation Targeting Make a Difference?

by Oscar Landerretche, Vittorio Corbo and Klaus Schmidt-Hebbel

This paper conducts a wide empirical search of the features and effects of inflation targeting (IT), by comparing the performance of countries with and without inflation targets and by carrying out a case study of Chile, the country with the most extensive experience among emerging-market economies. The work compares the performance of a sample of inflation targeters (Iters) with that of other country groups, focusing on their success in meeting inflation targets, sacrifice ratios, and output volatility. By studying differences in VAR structures between Iters and non-inflation targeters (NITers), the work tries to determine if IT improves the ability to predict inflation. It examines the behavior of macroeconomic changes under IT. Drawing on the methodology of Cecchetti and Ehrmann (2000), it analyzes if central banks' degree of aversion toward inflation is different for Iters and NITers. It also looks at the effect of IT on central bank behavior.

Long-Term Capital Movements

by Philip R. Lane and Gian Maria Milesi-Ferretti

International financial integration allows countries to become net creditors or net debtors with respect to the rest of the world. In this paper, we show that a small set of fundamentals (shifts in relative output levels, the stock of public debt and demographic factors) can do much to explain the evolution of net foreign asset positions. In addition, we highlight the role that *external wealth* plays in determining the behavior of the trade balance, and we provide some evidence that a portfolio balance effect exists: real interest rate differentials are inversely related to net foreign asset positions.

Employment in Brazil:
Female Labor Force Participation

by Lena Lavinas

Female labor force participation has been increasing at a constant and continuous rate, irrespective of the fluctuations in the rate of overall economic growth. There are many reasons for this trend that has favored female occupational rates rather than male. As indicated by this study, a major reason female workers are more successful in acquiring jobs is a result of their higher level of schooling and lower remuneration. However, ultimately, the higher level of employability of females is also largely due to features, capabilities and capacities associated with gender. It is as if personal female attributes, valued by the new economy, worked jointly with educational and remuneration advantages to place females in a relatively better position in the labor market.

Ten Years of Inflation Targeting:
Design, Performance, Challenges

by Norman Loayza and Raimundo Soto

Inflation targeting has become an increasingly popular monetary regime in both emerging and industrialized economies. However, several features of this regime and its effects on economic performance still remain elusive. This article critically discusses the main theoretical and empirical insights provided by the articles included in the book *Inflation Targeting: Design, Performance, Challenges*.

Movements in Emerging Markets:
Index Volatility

by Hedibert Freitas Lopes and Hélio dos Santos Migon

In this report, we use factor models combined with multivariate stochastic volatility models to study the dependence among Latin American stock price indexes and the North American index, DOWJONES, over a period of about five years, beginning after the Real Plan. More specifically, we concentrate on situations where the factor variances are modeled by an univariate stochastic volatility structure. We improve currently available methodology by allowing the factor loadings in the factor model structure to have a time-varying structure and to capture changes in the series' weights over time. By doing this, we believe that changes and interventions experienced by those five countries are well accommodated by our models, which learn and adapt reasonably fast to those economic and idiosyncratic shocks. We empirically show that the time-varying covariance structure can be modeled by one or two common factors and that some sort of contagion is present in most of the series' covariances during periods of economic instability. Open issues on real time implementation and natural model comparisons are thoroughly discussed.

Social Sector Reform in Latin America and the Role of Unions

by Daniel Maceira and M. Victoria Murillo

This paper analyzes the reaction of Latin American teacher and doctor unions to a series of social sector reforms in the region: administrative decentralization, provider payment mechanisms, and the introduction of performance evaluation and private provision. It combines the literature of economics and political science to understand the conditions that shape different patterns of union behavior and their effect on policy implementation. The paper suggests that the main conditions influencing union behavior in the health sector are related to the structure of the market (size and level of competition) due to the predominance of the private–public mix in its employment. In education, where the public sector is the main employer, political alignments and the organizational features of teachers' associations also play an important role in explaining the behavior of providers' organizations. Considering the exogenous character of most of these variables, the paper concludes by making some policy suggestions to align the objectives of unions and policymakers through regulatory reforms.

Financial Programming and Policy of the Central Bank of Costa Rica:

Analysis, Proposals and Medium Term Considerations

by Jorge Madrigal Badilla, Mario Rojas Sánchez, Álvaro Mariano Segura Ávila, Edwin Tenorio Chaves and Alexander W. Hoffmaister Arce

This paper formalizes the financial programming exercise carried out by the Central Bank of Costa Rica and suggests some modifications in order to reflect the characteristics of an open economy with a predetermined exchange rate regime. The paper emphasizes the importance of the coordination between monetary and fiscal policies in achieving a particular inflation rate goal. Three issues are highlighted. First, a way to solve the inflation rate indetermination when there is a target for the real exchange rate is suggested. Particularly, the central bank should set the domestic interest rate such that uncovered interest rate parity holds. Second, a government securities demand function by the public is introduced to illustrate the fiscal policy role when the exchange rate is predetermined. In other words, due to the few degrees of freedom for monetary policy in an open economy with a fixed exchange rate, the fiscal policy plays a fundamental role in achieving an inflation-rate target. Third, in order to reduce the inflation rate in the medium run, an adequate coordination between fiscal and monetary policies should exist. The government should adjust its financial needs to the public's demand for government debt at the parity interest rate. If this coordination is not possible, the model can be used to determine the inflation rate that is consistent with a given fiscal deficit.

Interest Rate Reaction Function in Costa Rica

by Jorge Madrigal Badilla, Lorely Villalobos Moreno, Melania Flores Pizarro and Alexander W. Hoffmaister Arce

This paper discusses the policy reaction function of the Central Bank of Costa Rica (BCCR), where the exchange rate has followed successfully a crawling peg for fifteen years. The exchange rate regime combined with capital mobility can hinder the central bank's ability to conduct independent monetary policy and affect its policy responses. Indeed with perfect capital mobility, movements in domestic interest rates will fully reflect movements in world interest rates. Abstracting from perfect capital mobility, the exchange-rate regime reduces the scope of independent monetary policy. For instance, facing a weak domestic economy, the central bank might decide to forgo increasing domestic rates temporarily when world interest rates increase and to defend the peg by selling international reserves. This strategy cannot be followed indefinitely and might not be the best response to a permanent increase in world interest rates, but it does suggest that the central bank has some scope to conduct monetary policy. Preliminary evidence suggests that indeed the BCCR increases domestic interest rates to defend the exchange rate peg and is sensitive to deviations of international reserves from their targeted levels. The evidence also suggests that the response of the interest rate to deviations in inflation targets has increased, particularly following the revision to the central bank's bylaws where *domestic and external* stability of the currency has been singled out as its main policy objective. Some evidence is found of a stronger interest rate response when international reserves are below their targeted level compared with the response when international reserves are above those levels.

Monetary Transmission in Costa Rica

by Jorge Madrigal Badilla, Lorely Villalobos Moreno, Melania Flores Pizarro and Alexander W. Hoffmaister Arce

This paper discusses the monetary transmission in Costa Rica where the exchange rate has followed successfully a crawling peg for fifteen years. The exchange rate regime combined with capital mobility will hinder the central bank's ability to conduct independent monetary policy. Indeed with perfect capital mobility, movements in domestic interest rates will fully reflect movements in world interest rates. Abstracting from perfect capital mobility, the exchange rate regime reduces the scope of independent monetary policy. For instance, facing a weak domestic economy, the central bank might decide to forgo increasing domestic rates temporarily when world interest rates increase and defend the peg by selling international reserves. This strategy cannot be followed indefinitely, and might not be the best response to a permanent increase in world interest rates, but it does suggest that the central bank has some scope to conduct monetary policy. Preliminary evidence from VAR models suggests that indeed movements in domestic interest rates largely reflect innovations of external origin. Shocks in domestic interest rates appear to lead to a price puzzle, as in early monetary VAR models for the U.S. It seems that the price puzzle is associated with increases in the crawling-peg rate rather than with a missing variable that predicts future inflation. Regardless of the origin of movements in domestic interest rates, the evidence supports a credit channel for the transmission of monetary policy, with estimates suggesting that about half of the impact on economic activity appears to be associated with a credit channel.

Evaluation of the Technical Efficiency of Health Services in the State of Rio de Janeiro's Municipalities

by Alexandre Marinho

This paper assesses the health care services in the Brazilian state of Rio de Janeiro's municipalities. The evaluation is performed through the combination of non-stochastic efficiency frontiers with regression models encompassing municipalities' resources and outputs. Identifying the optimal levels for production and consumption of services are achieved. Econometric relationships among technical efficiency, GDP, population size and average length of stay can be calculated.

University Hospitals:
Utilization Indicators and Analysis of Efficiency

by Alexandre Marinho

This paper studies the performance of forty-five Brazilian federal teaching hospitals for two and a half years beginning in 1998. The evaluation is done by connecting and assessing technical efficiency scores and service indicators. The efficiency scores are obtained from a data envelopment analysis (DEA) model. The service indicators used are the occupancy rate, the turnover rate and the average length of stay. The approach allows for regional and temporal analysis, besides bed size and clinical specialties (medicine and surgery) insights. By connecting efficiency scores and service indicators in a panel data regression model, some interesting relationships between these variables are achieved.

Higher Education on the Mexico – United States Border:
Convergences and Divergences

by Francisco Marmolejo and Fernando Leon

The integration of nations into macro blocks has given rise to the emergence of sub-regional—namely, trans-regional—organizations. This article analyzes how higher education institutions of the northern region of Mexico and the southern region of the U.S. have reacted to this situation, in spite of differences in profiles, organizations and degree of consolidation. The authors have established a typology of the existing collaboration between the two regions, which stresses the innovative nature of the institutional development projects. The authors conclude by reflecting upon ways to improve future trans-border collaborations: access to higher education, quality of that education, regional development, institutional effectiveness and openness, technology and non-conventional education, academic and student mobility, intercultural diversity and awareness, data collection and dissemination of successful practices.

Monetary Policy and the Transmission Mechanism in Mexico

by Lorenza Martínez, Oscar Sánchez and Alejandro Werner

This paper describes the evolution of monetary policy implementation in Mexico from 1995 until the present. At the beginning of this period, monetary policy was set in terms of a quantitative target. Then, this framework gradually evolved into one in which discretionary actions of monetary policy, with the intention of reaching an inflation target, received greater relevance. The authors analyze two issues that recently have generated doubts on the effectiveness of the implementation of monetary policy: the use of borrowed reserves as a policy instrument and the effectiveness of monetary policy to affect inflation by an additional channel besides the exchange rate. The main results indicate that the behavior of the real interest rate has been determined by the traditional variables that guide the discretionary actions of any central bank and that this rate has affected in a statistically significant way aggregate demand and credit.

The Exchange Rate Regime and the Currency Composition of Corporate Debt:
The Mexican Experience

by Lorenza Martínez and Alejandro Werner

This paper analyzes the effect that the change from a fixed to a floating exchange-rate regime, which took place in Mexico in December 1994, had on the currency composition of corporate debt. In particular, the paper asks whether a fixed exchange-rate regime biases corporate borrowing towards foreign currency, due to an implicit exchange-rate guarantee given by the government. Under a predetermined regime, firms will not fully internalize their exchange-rate risk, and they will be more likely to engage in balance sheet mismatches than under a floating regime. We study the main determinants of foreign currency borrowing of those firms listed in the Mexican stock exchange from 1992 to 2000 to test whether balance sheet currency mismatches fell after the adoption of the floating exchange-rate regime. The results support the view that the floating exchange-rate regime has been useful in reducing exchange-rate exposure.

Inflation Targeting and the Liquidity Trap

by Bennett T. McCallum

This paper considers whether *liquidity-trap* issues have important bearing on the desirability of inflation targeting as a strategy for monetary policy. From a theoretical perspective, it has been suggested that *expectation-trap* and *indeterminacy* dangers are created by variants of inflation targeting, the latter when forecasts of future inflation enter the policy rule. This paper argues that these alleged dangers are probably not of practical importance. From an empirical perspective, a quantitative open-economy model is developed and the likelihood of encountering a liquidity trap is explored for several policy rules. Also, it is emphasized that, if a liquidity trap immobilizes the usual interest rate instrument, there is still an exchange-rate channel by means of which monetary policy can exert stabilizing effects. The relevant target variable can still be the inflation rate.

Managed Care for Brazil's Banks

by Elizabeth McQuerry

The focus on financial sector reform in emerging market economies often centers on the need to reduce government involvement in markets. Individual countries have taken many different approaches toward reaching this goal. In Brazil, financial sector reform has entailed the need for a large governmental role in structuring reforms, especially in the banking sector. This article explores a key aspect of Brazil's financial liberalization—the reform and opening of the domestic banking sector. Trade liberalization efforts that began in the late 1980s and early 1990s in Brazil were hampered by economic and political concerns, chiefly inflation. The Real Plan, introduced in 1994, provided economic stabilization but did not automatically improve the outlook for the financial sector. Instead, policymakers were forced to initiate a managed restructuring of the private and public banking sectors. This article first discusses policy choices facing government decision-makers in opening domestic financial sectors and then examines the basic features of Brazil's banking sector reform within the context of other changes and policy objectives taking place in Brazil. The author concludes that Brazil's banking reform promoted a sweeping reorganization of the banking sector and effectively averted a banking crisis. At the same time, deepening and consolidation of reform in the banking sector will remain incomplete until new legislation can be passed and fiscal reform is further advanced.

Industrial Policy in Latin America and the Caribbean at the Turn of the Century

by Alberto Melo

This paper documents a turning point in industrial policies in Latin American and Caribbean countries during the mid-1990s and attempts to characterize the emerging trend in business promotion policies in the region. The work includes an empirical survey of industrial policies. It is a *qualitative* survey in that it is limited to identifying and describing the types of policy rules, policy measures, and, in some cases, the institutions through which governments in the region have sought either to adapt to or to take advantage of the worldwide trend towards open and competitive markets. No attempt is made to measure these policy impacts quantitatively. However, as a contribution to a qualitative judgment of the emerging policy approaches, the paper closes with a brief review of opinions on export promotion policies.

The Relationship Between Trade Credit and Investment in Mexico: 1998–2000

by Miguel Messmacher

The hypothesis of this analysis is that trade credit allowed firms in Mexico to undertake more fixed investment, substituting for the limited supply of resources from financial intermediaries during 1998 to 2000. For this purpose, the supply and demand for trade credit were analyzed first and then the relationship between trade credit and fixed investment. The following results were obtained: (i) the intermediation of financial resources through firms seems to be quite important in the Mexican economy; (ii) there is evidence of three segmented markets among which firms substitute financial resources: bank loans, resources within a corporate group and trade credit; (iii) there is a positive and significant relationship between reporting trade credit as one of the main sources of the firm's financing and fixed investment. The result is consistent with several observations: (a) the availability of trade credit allowing the firm to use other funds for investment, particularly if it responds to a long-term relationship between firms and thus increasing the odds of relative stability of the supply of trade credit, (b) a higher profitability of fixed assets given the firm's ability to have a more stable supply of inventories and thus higher capacity utilization, or simply because of better cash management, and (c) if trade credit is indeed a more stable source of funding, it allows the firm to be less sensitive to financial shocks operating through bank credit or securities markets.

Monetary Policy in Mexico: 1950–2000

by Miguel Messmacher and Alejandro Werner

This paper presents a description of the evolution of monetary policy in the last fifty years. During this period, the conduction of monetary policy has evolved significantly. During the larger part of this period, monetary policy was oriented to maintain the level of the exchange rate as the nominal anchor of the economy, either because a fixed exchange rate or a predetermined crawl were maintained. However, public finance deficits and confidence crisis led to exchange-rate devaluations several times, translating into accelerations of inflation. This happened even in situations with a low public finance deficit, like in 1994. In the more recent period, the central bank adopted a flexible exchange rate regime, in which the nominal anchor of the system is the commitment of the monetary authority with inflation targets. The mechanisms used by the central bank to control inflation have changed according to the evolution of the economy. They have evolved from the use of reserve requirements in a context of limited financial development to the use of open market operations once a money market developed. The most important conclusion obtained from this analysis of the different periods is that in those periods when there was a deficit in public finances or a balance of payments crisis, the ability of monetary policy to control the evolution of prices was limited. This was due to loss of credibility and the high social cost implied by a policy that would have completely limited the inflationary pressures originated by these events.

Monetary Policy and Inflation in Brazil (1975–2000): *A VAR Estimation*

by André Minella

This paper investigates monetary policy and basic macroeconomic relationships involving output, inflation rate, interest rate, and money in Brazil. Based on vector autoregressive estimation (VAR), it compares three different periods: moderately increasing inflation (1975–1985), high inflation (1985–1994), and low inflation (1994–2000). The main results are the following: (1) monetary policy shocks have significant effects on output; (2) monetary policy shocks do not induce a reduction in the inflation rate in the first two periods, but there are indications that they have gained power to affect prices after the Real Plan was launched; (3) monetary policy does not usually respond rapidly or actively to inflation-rate and output innovations; (4) in the recent period, the interest rate responds intensely to financial crises; (5) positive interest-rate shocks are accompanied by a decline in money in all three periods; (6) the degree of inflation persistence is substantially lower in the recent period.

Currency Crises and Speculative Attacks in Brazil

by Mauro Costa Miranda

The main goal of this paper is to investigate the hypothesis that currency crisis models based on macroeconomic fundamentals explain, to some extent, the occurrence of speculative attacks and currency crises in Brazil between January 1982 and January 1999. For this purpose, the external sector of the Brazilian economy was analyzed to identify speculative attacks and currency crises. An adaptation of one of the main first generation models of currency crisis was used as theoretical background, producing an equation of the probability of occurrence of speculative attacks as a function of macroeconomic variables. As an empirical application for the case of Brazil, an econometric model was utilized to estimate the parameters of this equation. The results were compatible with the hypothesis of the model. The probability of occurrence of speculative attacks grows with the monetary supply, the real effective exchange rate, the international interest rate, and the liberalization of capital controls and diminishes with the international reserves, the real gross domestic product, the exchange rate fixed by the government, the square of the international interest rate, the external price level, and the international trade in goods. The estimated equations for the probability of occurrence of currency crises and speculative attacks showed its usefulness to predict the imminence of these events.

One Decade of Inflation Targeting in the World:
What Do We Know and What Do We Need to Know?

by Frederic S. Mishkin and Klaus Schmidt-Hebbel

One decade of inflation targeting in the world offers lessons on the design and implementation of inflation targeting, the conduct of monetary policy, and country performance under inflation targeting. This paper reviews briefly the main design features of eighteen inflation targeting experiences, analyzes statistically if countries under inflation targeting are structurally different from non-inflation targeting industrial countries, and reviews existing evidence about the success of inflation targeting. The interaction of the features of inflation-targeting design and the conduct of monetary policy during transition to low inflation are tackled next. The paper ends by focusing on unresolved issues on design and implementation of inflation targeting and their relation to the conduct of monetary policy—open issues that have to be addressed in the next decade of inflation targeting.

A Decade of Inflation Targeting in Chile:
Developments, Lessons, and Challenges

by Felipe G. Morandé

Chile was among the first countries in the world to adopt a monetary framework based on an explicit, publicly announced, annual inflation target, when the term *inflation targeting* had not even been formalized. An inflationary past suggested the combination of tough inflation targeting parameters (to enhance the Central Bank of Chile's reputation) and a gradual transition from moderately high inflation to a long-run goal of 3% (the ex post policy horizon—or implicit targeting horizon—was nine years). Reaching the long-run goal rate in 1999 and an indisputable reputation as inflation-averse have allowed the Central Bank of Chile to move more into the flexibility side of the credibility-flexibility trade-off. Also, having a third objective in the form of an asymmetric threshold current account deficit did imply in a few episodes setting aside the implicit output stabilization goal in the short run. This in the end may have implied a more aggressive and conservative monetary policy than otherwise. However, a lot of attention has been paid to reducing business cycle fluctuations, and the attempt has been successful overall.

Core Inflation:
Robust Common Trend Model Forecasting

by Ajax R. B. Moreira and Helio S. Migon

Monetary authorities need a future measure of inflation trend to keep track of inflation targeting. Many alternatives of the core inflation measure have appeared in the recent literature pretending to avoid the deficiencies of the usual headline inflation index as a predictor. This price index is defined as some weighted average of the individual price change of a list of goods and services. The literature criticizes its use as the future inflation indicator, since the products are heterogeneous with respect to variability and since some of the involved prices have relevant seasonal movements. A multivariate model including simultaneously the seasonal effects of each component of the price index and a common trend—the core inflation—are developed in this paper. The model is phrased as a dynamic model and a robust sequential filter is introduced. The posterior and predictive distributions of the quantities of interest are evaluated via stochastic simulation techniques, MCMC—Monte Carlo Markov Chain. Different models are compared using the minimum posterior predictive loss approach, and many graphical illustrations are presented.

Public Export Policies:
The Case of PROEX

by Sérvulo Vicente Moreira and Adelaide Figueiredo dos Santos

Through an econometric analysis, this paper discusses activities and results of the Financing Exports Programme (PROEX) from its creation in 1991 until 2000. The work looks at the PROEX budget and its impact on Brazilian exports. The research observes this instrument's ability to improve all facets of the Brazilian economy. It depends on policies to be adopted and also the continuing analyses of international market perspectives.

Monetary Policy Rules for Financially Vulnerable Economies

by Eduardo Morón and Diego Winkelried Quezada

One distinguishable characteristic of emerging economies is that they are not financially robust. These economies are incapable of smoothing out large external shocks since sudden capital outflows or terms of trade shocks imply large and abrupt swings in the real exchange rate. This could be very costly if the real exchange-rate swings trigger a financial crisis as in the case of highly unhedged liability dollarized economies. Using a small open economy model, this paper examines alternative monetary policy rules for economies with different degrees of liability dollarization. The paper examines the efficiency of inflation targeting when the liability dollarization ratio is high. Our findings suggest that it might be optimal to follow a non-linear policy rule that defends the real exchange rate in a financially vulnerable economy.

Efficiency and Equity in the Criteria and Instruments Used for Rationing Electrical Energy

by Ronaldo Seroa da Motta

This paper first analyzes criteria to apply differentiated electricity rationing quotas among users as an alternative to the 20% reduction in electricity consumption across the sectors adopted by the Brazilian government for the management of the 2001 energy crisis. We conclude that although economic sectors may present differentiated income generation impacts and electricity consumption profiles, such discrimination cannot be precisely designed to minimize effects on the national product, employment and trade balance. With uniform quotas in place, we evaluate the instruments of electricity consumption profiles; such discrimination cannot be precisely designed to minimize effects on the national product, employment and creation adopted by the government to enforce the rationing plan. We conclude that the proposed set of instruments is cost-effective and progressive oriented, particularly against the option of planned energy blackouts, if they are fully applied. Lastly we discuss the proposal to create a secondary market for tradable household electricity quotas, taking into account its potential transactional costs as well as distributive aspects and legal constraints.

Inflation Targeting in an Open Financially Integrated Emerging Economy:
The Case of Brazil

by Marcelo Kfoury Muinhos

Keeping in mind the recent change in the foreign exchange regime in Brazil, this paper conducts a study of the pass-through from the exchange rate devaluation to inflation. Econometric estimations were performed using the specifications of the pass-through suggested by Goldfajn and Werlang (2000). Some simulations of the augmented Taylor rule (with an added exchange-rate term) have also been made to analyze the response from supply and external shocks in a simple inflation-targeting model with trade balance equations. In contrast to Ball (2000), when the exchange rate is included in the Taylor rule, output volatility increases after a negative shock to the capital inflow.

Uncovered Interest Parity with Fundamentals:
A Brazilian Exchange Rate Forecast Model

by Marcelo Kfoury Muinhos, Paulo Springer de Freitas and Fabio Araujo

One of the most challenging elements of the inflation-targeting framework is the exchange-rate forecast. Wadhwani (1999) proposed a UIP, where real variables like the unemployment differential, the current account differential, and the excess return of financial assets affect the expected exchange rate. The objectives of this paper are first to include, as in Wadhwani (1999), some real variables to anchor exchange-rate expectations. In our case, the long-run value of the exchange rate is determined by balanced external accounts. Second, we use this approach to simulate the behavior of key macroeconomic variables in an inflation-targeting structural model for Brazil. Finally, we compare the results with those of a random walk specification. The impulse responses under UIP-with-fundamentals model seemed to be more realistic than those obtained by using other specifications for exchange-rate forecasts.

A Test of Competition in Brazilian Banking

by Márcio I. Nakane

This paper implements an empirical test of market power for Brazilian banking based on Bresnahan (1982) and Lau (1982). A dynamic version of the test is applied. The results show that the banking industry in Brazil is highly competitive, although the perfect competition hypothesis is rejected. The hypothesis that Brazilian banks behave like a cartel arrangement is also rejected.

Procyclical Productivity:

Evidence from an Emerging Economy

by Lucas Navarro and Raimundo Soto

Average productivity tends to rise during booms and fall during recessions. This fact is at odds with classical macroeconomic theories, which suggest that labor productivity should be countercyclical due to the law of diminishing returns to factors. Theoretical explanations for this puzzle include exogenous changes in production technology, increasing returns to scale, measurement errors due to unobserved input variations, external economies and composition effects at the aggregate level. Surprisingly, aggregate data for Chilean industry show that productivity is countercyclical. This paper has two objectives. First, we study the cyclical behavior of productivity in eighty-four sectors of Chilean industry in the 1979–1997 period. We find that, contrary to the results obtained using aggregate indexes, disaggregated data confirm that on average productivity is unambiguously procyclical. The main reason for this difference is that aggregate data provides a distorted assessment of the cyclical component of productivity due to the marked heterogeneity of behavior between sectors. Second, we examine the determinants of productivity in Chilean industry using an econometric model that allow us to quantify the relative contribution of the four different explanations of procyclical productivity. The results indicate that technology shocks account for 50% of productivity cycles in the 1979–1997 period, thus supporting the supply shocks hypothesis as the main source of business cycles in Chile. The other 50% of the productivity shocks is explained by important reallocation effects among sectors of different productivity and, more recently, by the presence of increasing returns. Variations in the utilization of capital and labor effort were insignificant.

Mexico:

Credit Card Usage by Progressively Less Likely Users

by José Luis Negrín and Clara de la Cerda

Using a Probit model, we determine the probability of credit card usage at the household level. We rank credit card users to find that, given their intrinsic characteristics, some of the main determinants of usage (income, asset ownership, etc.) have deteriorated during the period 1994 to 2000. Other countries have experienced the deterioration of the individual characteristics of credit card users when the credit market expands and thus reaches riskier borrowers (Black and Morgan, 1999). In Mexico, however, such deterioration has taken place while the credit market has been shrinking as a consequence of the 1994 banking crisis and of the prudential regulations that were adopted afterwards. This deterioration is not the result of the issuance of credit cards to riskier clients but a result of the worsening of the characteristics of credit card users who had a card before 1994 and kept on using it afterwards in spite of their worsening economic conditions.

An Empirical Study of the Determination of Electronic and Traditional Payment Mechanisms

by José Luis Negrín and Eduardo Jallath

The usage of a particular payment method is related to its own adoption stage and to the existence of other payment methods. This paper presents a model that identifies empirically the extent in which the aggregated use of the main payment method depends on its own adoption stage and on its interaction (substitutions and complementarities) with other payment methods. The model is tested using nationwide data of the Mexican economy on transactions for credit cards, debit cards, checks and Automated Clearing Houses. We are able to identify both the technology-adoption stage and the interactions among payment methods. In the case of the Mexican economy, we find that the non-traditional payments (debit cards and ACH) are at an expansive adoption stage; credit cards are at a mature adoption stage, while checks are being disadopted. We identify the relationship with checks and credit cards but find that other interrelations are not significant. This result is due to the market segmentation that exists at the high volume payment systems, which emerge from peculiar institutional arrangements.

Income, Income and Educational Inequalities and Political Participation in Brazil

by João Barbosa de Oliveira

This work is an empirical investigation on the validity of main relationships, established in a theoretical model developed by Ferreira (2001), regarding the interaction among income, educational and political inequalities as well as the influence of these inequalities on an economy's per capita income. The analysis applies panel data estimation techniques on a sample of large metropolitan Brazilian municipalities, so-called self-representatives in the sample composition of the Household National Surrey (PNAD). We use data for years 1988, 1992, 1996 and 1999. The main conclusions are: (a) income and educational inequalities have a negative correlation with per capita income; (b) more political participation is associated with higher per capita income level and with less income inequality; (c) income and educational inequalities are positively correlated. In addition, we observe that specific characteristics of municipalities, captured by fixed effects, are important to explain studied relationships. We also observe that effects of political participation can only be captured if the variable used to measure it reflects more directly on the individual's willingness to influence the political decision making process.

Effects of Foreign and Domestic Monetary Policy in a Small Open Economy:

The Case of Chile

by Eric Parrado

This paper considers empirical evidence for a small open economy, characterizing and identifying the dynamic effects of both foreign and monetary policy shocks on Chilean macroeconomic variables. A structural VAR approach is used with non-recursive contemporaneous restrictions. Several interesting results appear in the analysis. First, consistent with the predictions of a stochastic rational expectations model, a domestic monetary contraction generates a transitory fall in output and monetary aggregates. Second, there is no evidence of price and exchange rate puzzles. Third, the source of Chilean output, price level, and real exchange-rate volatility is similar to that identified in industrial countries: monetary policy explains a relatively small proportion of output, price level, and exchange-rate variability. Finally, foreign monetary policy innovations have very short-lived effects on domestic interest rates and have no major influence over the Chilean macroeconomic variables while risk premium shocks influence significantly both the interest rate and the exchange rate.

Estimation of the Consumption Functions of Non-Durable Goods and Services and of Durable Goods: 1980.1–2000.4

by Alejandro Pérez Lopez

The two main components of total private consumption in Mexico, consumption of non-durable goods and services and consumption of durable goods, are analyzed from an econometric viewpoint. The paper has three purposes: to estimate the long-run consumption functions (cointegration models) and the short-run consumption functions (error correction models), to test the Hall hypothesis against the borrowing constraint hypothesis, and to make forecasting exercises of consumption for the year 2000. The results show that consumption of non-durable goods and services has approximately a long-run elasticity of one with respect to gross domestic product while consumption of durable goods has a long-run elasticity smaller than one with respect to gross domestic product and a negative one with respect to the real exchange rate. Moreover, the short-run elasticities of both kinds of consumption with respect to gross domestic product are positive; and with respect to the real exchange rate, they are negative and significant. Finally, the forecasting exercises show a close correspondence between the observed and the forecasted values, indicating that the high level of consumption of non-durable goods and services observed during 2000 is explained by the econometric model and the evolution of the exogenous variables in that year.

Measuring the Tax Effort of Developed and Developing Countries:

Cross Country Panel Data Analysis—1985–95

by Marcelo Piancastelli

In the tax literature, the tax effort index for any country is usually measured by the ratio of the actual tax ratio to the predicted ratio. This reflects mainly the variance in the taxable capacity of a country. A high value of tax effort index indicates that a particular country is collecting more tax than would be predicted, given its tax structure and prevailing economic and social conditions. This paper estimates the tax effort index for a sample of seventy-five countries for the period 1985–95. It incorporates the most recently available data and also econometric techniques not used before for such an analysis. The results are then compared with previous studies encompassing different periods over the last thirty years. The evidence provided in this paper suggests that per capita income, the ratio of trade to GDP, and the share of agriculture in GDP are the most consistent explanatory variable of the tax ratio, while several variables used in previous studies, such as the ratio of mining output to GDP, and the ratio of quasi-money to GDP are not significant in the recent period under analysis. This paper examines those countries that have improved their tax performance, measured by the tax effort index, as well as those which have a less favourable performance. Tax ratios and tax effort comparisons are also made among the developed and developing countries according to income groups and different continents.

Profile of Civil Servants Active in the Federal, State and Municipal Areas:

Comparison Based on RAIS, PNAD and SIAPE

by Sonoe Sugahara Pinheiro and Tomie Sugahara

This paper draws a profile of active civil servants at the federal, state and municipal levels with regard to sex, age and occupation. Special laws, which are not applicable to those of the private sector, rule these public-sector workers. Furthermore, a comparative analysis of the three available data sources is developed. The first one is sample data: (1) Pesquisa Nacional por Amostra de Domicílios (PNAD) from IBGE, for the federal, state and municipal levels; and the other two are administrative data: (2) Relação Anual de Informações Sociais (Rais) from Ministério do Trabalho e Emprego (MTE), for the federal, state and municipal levels and (3) Sistema Integrado de Administração de Pessoal (Siape) from Ministério do Planejamento, Orçamento e Gestão (MPOG), for the federal level. The years considered are 1997, 1998 (for Rais, PNAD and Siape) and 1999 (for PNAD and Siape). After doing a comparative analysis of these different data, we decided to work with data from Siape at the federal level and data from PNAD at the state and municipal levels. Along with the profile of the civil servant, we present their mean income. In order to draw a profile of the civil servants, the classes used are teachers, non-teachers without graduate level training and non-teachers with graduate level training. We classified as non-teachers all those civil servants who occupy positions different from teachers, although it can happen that a civil servant is classified as a teacher although that person holds a different position and vice-versa. The non-teachers with graduate level training have instruction level equal or higher than graduation. These classes were selected because they have different characteristics towards retirement rules, income evolution, mortality, admission policies, etc. We have also considered age and sex.

When Is It Optimal to Abandon a Fixed Exchange Rate?

by Sergio Rebelo and Carlos A. Végh

This paper discusses the optimal time to abandon a fixed exchange-rate regime in response to an increase in government spending that renders the peg unsustainable. We consider two variants of an optimization-based first-generation speculative attack model. In the first variant, there are fiscal costs of abandoning fixed exchange rates. These costs may represent the bailout of the banking sector, loss of tax revenues, difficulties in refinancing public debt, etc. The second variant incorporates fiscal reform that makes the peg sustainable and that arrives according to a Poisson process while the exchange rate is fixed. In both cases, we show that for moderate government expenditure shocks it is optimal to abandon the peg when international reserves hit a pre-specified lower bound. When the government expenditure shock is large, it is optimal to abandon the peg as soon as the shock materializes. Surprisingly, immediate abandonment of the peg is also optimal when the fiscal costs of abandoning the peg are large.

The Distribution of Immobile Wealth and Income in Brazil: 1992–1999

by Eustáquio J. Reis, Paulo Tafner and Luis Octávio Reif

From the PNAD's data covering 1992 through 1999, this paper proposes a hedonic function to estimate the value of house rents. The regressions were applied for each year. Using the coefficients obtained in regressions, we *simulate* the value of rent for owned houses based upon their attributes and the error specific to their census tract. Using a function that relates rents and value of stock, we estimate the real value of housing stock for each year. We also can distribute the value of housing stock for owners and then estimate the Gini coefficient. This paper concludes that despite economic stabilization after 1992, the shape of distribution of household wealth remains unchanged during the 1990s.

Central Bank of Bolivia's Monetary Policy

by Jorge Requena, Raúl Mendoza, Oscar Lora and Fernando Escobar

This paper analyzes the role of the monetary authority in the context of the small, open and highly dollarized Bolivian economy. In order to fulfil its legal mandate of preserving low levels of inflation, the Central Bank of Bolivia (CBB) sets an intermediate target based on monetary aggregates, which together with a stable exchange-rate policy have been successful in reducing inflation close to international levels and preserving adequate levels of international reserves. The paper discusses the effectiveness of monetary policy's transmission mechanisms. While it is clear that monetary policy has a direct effect on prices, the transmission to the real economy is less clear. The work argues that the high level of dollarization imposes a limitation to monetary and exchange-rate policies. The paper concludes with suggestions for future research.

Competitiveness, External Vulnerability, and Growth in the Brazilian Economy

by Marco Flávio da Cunha Resende and Joanílio Rodolpho Teixeira

This paper shows an alternative specification of the demand functions of both total imports and the imports of capital goods for Brazil. The setup is based on the conjecture that a variable expressing the availability of foreign exchange should be included in these import functions. Our approach is grounded in the hypothesis of high production costs of new technology and a lack of technological know-how in Brazilian industry as a whole, and in the capital goods industry in particular. The Johansen procedure was adopted and the econometric results do not reject the above hypothesis.

Worker Turnover and the Creation and Destruction of Jobs:
Conceptual Aspects

by Eduardo Pontual Ribeiro

The goal of this article is to present a review of the concepts related to worker and job flows, highlighting their similarities, differences and relationship. We call attention to the difference between worker turnover and job reallocation utilizing Brazilian data. A survey of the literature on job flows concludes the article. The main message from the literature is that job reallocation is remarkable, suggesting that at least 25% of available jobs in an economy are destroyed or created in a given year.

Global Public Sector's Solvency:

An Introductory Empiricist Search for Costa Rica

by Mario Rojas Sánchez, Álvaro Mariano Segura Ávila, Edwin Tenorio Chaves, Manrique Sáenz Castegnaro and Alexander W. Hoffmaister Arce

This paper attempts to measure the discounted future revenues of Costa Rica's public sector in order to determine the government's ability to pay its debt at any particular moment in time. For this purpose, the work does not analyze Costa Rica's past conditions of solvency but instead engages in two exercises. The first determines the indispensable conditions that guarantee the solvency of the actual government debt. The second estimates the likelihood of public sector solvency in the future given the country's current economic conditions. The results suggest that given a potential GDP growth of 4% and assuming a future public sector's annual primary surplus close to 1%, the real interest rate in Costa Rica must be between 7% to 9% to guarantee public sector solvency. In addition, the simulation suggests that the public sector's likelihood of solvency is very sensitive to changes in the rate of economic growth and the level of the public sector's primary surplus. This paper makes evident that it is necessary to increase the level of public sector primary surplus in the coming years and to keep the rate of economic growth over 3% in order to assure the solvency of the government debt.

The Current Account in an Inter-Temporal Choice Framework:

A Test for the Countries of Mercosur

by José W. Rossi

The inter-temporal approach to the current account is applied to data of the Mercosur countries. This is done first using the simplest form of the model in which a representative household attempts to smooth its consumption so as to optimize its savings choice. Such a model applies basically to a small open economy. Its rationale is that if there is a temporary fall in the country's output, the country will borrow in world capital markets so as to smooth its consumption, in which case the country will run a current account deficit. Since such economies are greatly affected by external shocks, which are not taken into account by the basic inter-temporal approach, this model has generally not passed the empirical test. In fact, external shocks affect both the interest rate (domestic and international) and the exchange rate, both of which affect the small economy's current account. Thus, to account for such external effects, an extension to the basic inter-temporal model has been proposed in the literature, which incorporates the variations in the interest rate and the exchange rate as additional explanatory variables in the inter-temporal current account model. This second model is also applied to the Mercosur data. As quarterly data could not be found for most of the variables of each country of Mercosur, annual data were used instead. The source of the data is the International Financial Statistics (IFS) and the period covered goes from 1970 to 1999. The basic conclusion is that neither the simple inter-temporal model nor the extended version of such a model was successful in predicting the current account of the Mercosur countries. As the theory behind the model presumes a small open economy that can borrow without affecting international markets and since the Mercosur countries are not by any standard open economies and also have frequent difficulty in borrowing in the international capital markets, the failure of the model in this case is perhaps not surprising. One can be reminded, however, that as other studies have shown even for developed countries meeting the assumptions of the model, the results can still be quite disappointing.

Inflation Forecasts:

Innovations in the Agricultural and Regulated Prices and Fittings

by Gabriela Saborío Muñoz, Katia Vindas Sánchez and Alexander W. Hoffmaister Arce

This paper analyzes the adjustments in inflation forecasts originated by innovations of regulated prices in the agricultural sector and public service sector. Potentially, this analysis could supplement the inflation forecasts carried out by the Central Bank of Costa Rica (BCCR), because these innovations are not explicitly captured in the available models. The results suggest that revising the inflation forecasts in light of variations in the regulated prices is not critical. The regulated prices don't improve inflation forecasts because they reflect some of the past inflation and, therefore, they add little new information. This occurs to a lesser degree with the electricity rates, where a variation of approximately four percentage points in their price implies a revision of inflation forecasts of approximately 0.15 percentage points on average in the six months following the increase. However, variations in the agricultural prices affect the general level of prices, mainly in horizons shorter than nine months. This suggests that in order to avoid turning monetary policy pro-cyclical, agricultural price effects on inflation should not influence monetary policy decisions, especially if the innovations in agricultural prices are caused by supply innovations. Due to their high volatility, when the agricultural prices are included in the model, inflation forecasts get worse by approximately 50% in periods shorter than a year.

Chilean Banking Crisis of the 1980s:

Solutions and Estimation of the Costs

by Gonzalo I. Sanhuez

This paper reviews the solutions to the Chilean banking crisis of the 1980s, analyzes their effects on banks, and derives policy lessons from the analysis. The work also estimates the cost of the rescue of each institution. The three main solutions to the crisis were the following: (i) foreclosure of insolvent institutions or transfer of their assets and liabilities to the solvent provision of fresh funds; (ii) acquisition of high-risk portfolio (bad loans) under condition of repurchase without provision of fresh funds; and (iii) acquisition of high-risk portfolio under condition of repurchase through future profits with provision of fresh funds. The results showed that the third alternative was the most efficient for the recovery of a significant number of financial institutions with solvency problems. Supporting bank re-capitalization and creating incentive for recovering bad loans helped to accelerate the recovery of the banking industry. The total cost was significant. The cost of foreclosure of insolvent institutions was 10.6% of GDP and the cost of portfolio purchase under conditions of repurchase reached 6.7% of GDP.

A Review of Tax Competition Among Countries

by Napoleão Luiz Costa da Silva

Globalization and regional economic integration have increased factor mobility and have reduced commercial barriers among countries. In this context, tax competition among national (sub-national) governments to attract factors of production and consumers to their respective jurisdictions became far more intense. This paper surveys models, which deal with the effects of tax competition among countries (states) on the welfare of an integrated region (federation), on tax rates, and on the levels of public expenditures. The main stream of the argument is that tax competition among countries brings distortions that lead to levels of taxation and public expenditure different from those that maximize welfare in the integrated region (federation). It follows that tax harmonization is desirable. But this does not necessarily mean that different countries (states) should adopt a single common tax rate. Costs and benefits of such a measure should be balanced in order to make a decision. Possible solutions for the problems created by tax competition, the empirical relevance of the negative externalities that this process brings, and the arguments for those who defend that competition as a preferable course are also discussed. A final section pinpoints subjects for future research as, for example, the impact on Brazilian federation's welfare of tax harmonization in the Mercosur, and the relation between taxation of capital income and the choice of production location in the Brazilian federation and in the Mercosur.

What We Know (and Don't) about the Relationship Between Commercial Liberalization and Labor Markets in Brazil

by Sergei Soares, Luciana M. Santos Servo and Jorge Saba Arbache

This paper reviews the debate over the impact of commercial liberalization on labor markets in Brazil. It briefly presents the main theoretical issues involved in the debate, identifies the main facts observed in the 1990–99 period, raises what we consider to be the main questions and the answers given by the literature and finally suggests future directions of research.

A Combination of Inflation Forecasts

by Álvaro Solera Ramírez, Ivannia Solano Chacón, Gabriela Saborío Muñoz and Alexander W. Hoffmaister Arce

In a single forecast, this work combines the different inflation forecasts of recent individual models. To the extent that the different individual forecasts reflect different and independent information, the forecast that combines this information has the potential of having a lower forecasting error than those of individual forecasts. Several alternative methods are considered with the purpose of determining the weights required to make the combination. To choose among the alternative methods, the resulting forecasting errors are evaluated. For the chosen method, the corresponding *intervals of trust* are calculated. The combined inflation forecasts are 9.9, 9.8, and 9.9 percent, respectively, for December 2001, December 2002, and in 24 months. The forecasts are conditional to the average interest rate in the United States (90-day Treasury Notes), a devaluation of seven percent in both years and to the average price of crude oil (Brent). The forecasts suppose implicitly that the fiscal policy is the same that has been shown historically in the data. The weights to obtain the combined forecast are 0.00, 0.24, 0.35, and 0.41, respectively, for the models ARMA, VAR, Petroleum, and *naïve*. These weights are obtained from the regression method restricting the weights to add one and not to be negative.

Transmission of Oil Price Shocks with Regulated Domestic Fuel Prices:

Evidence from Costa Rica

by Álvaro Solera Ramírez, Ivannia Solano Chacón, Katia Vindas Sánchez and Alexander W. Hoffmaister Arce

This paper discusses the transmission of oil price shocks in Costa Rica, where the domestic fuel market is supplied by a state-owned monopoly and domestic fuel prices are set according to a pre-established rule. The importance of understanding and quantifying the effect of oil price shocks on the economy is heightened by the recent increases in world oil prices and by the recent emphasis of monetary policy on achieving an inflation target. The price-setting rule seeks to avoid large and persistent deviations between domestic and world prices that can either subsidize domestic consumers by delaying increases or serve as a *cash cow* for the government by delaying decreases. The rule, however, affects the transmission of oil price shocks in the economy. Preliminary evidence suggests that an oil price shock of 10 percent translates into about one percent increase in the rate of inflation and about a one and a half percent decrease in output growth. The impact on inflation and output lasts about a year and a half although the effects are greatest some six to nine months following the shock. The price-setting rule appears to delay and mitigate the impact on inflation and output.

Seasonal Cointegration and the Stability of the Demand for Money

by Raimundo Soto and Matías Tapia

Studies on money demand in both developed and developing countries coincide in reporting systematic overpredictions of monetary aggregates, non-robust estimated parameters and out-of-sample forecast variances that are too large to guide monetary policy. Several explanations have been given for these failures, including dynamic misspecification, omitted variables such as financial innovations, and non-observed components. This paper explores an alternative, simpler way to approach the instability of money demand using seasonal-cointegration techniques. Using Chilean data, we find that seasonal cointegrating vectors exist and, when omitted from the estimation, account for a substantial fraction of the observed instability in money demand functions. Because seasonal cointegrating vectors act as additional long-run restrictions, they can substantially reduce the variance of forecast errors. The estimated demand for money in Chile is remarkably stable in spite of the profound structural and financial reforms carried out throughout the 1977–2000 period. Parameters are robust and similar to those suggested by economic theories.

Inflation Targets in a Global Context

by Gabriel Sterne

Inflation targeting has become a global framework, used by countries of many different types and in all the continents of the world. To assess its global contribution, this paper uses one of the broadest ever surveys of monetary policy frameworks to construct an overall picture from the individual jigsaw pieces of framework characteristics. The jigsaw is made of targets and other measures of policy reaction, institutional characteristics such as independence, accountability and transparency, and analytical capacities within the central bank. The paper notes that the use of inflation targets has spread very rapidly in the 1990s, far more so than has the number of *inflation targeting* frameworks. The analysis focuses on the flexible use of inflation (and money) targets and how these relate to indicators of each of the central bank reaction functions, independence, accountability, transparency, and analytical methods. The use of targets appears to have built a strong momentum towards explanation of policy, and the use of inflation targets in particular has provided a vehicle for communication between central banks and governments and the private sector.

The 1990s in Latin America:

Another Decade of Persistent Inequality, but with Somewhat Lower Poverty

by Miguel Székely

This paper processes seventy-six surveys from seventeen Latin American countries to document changes in poverty and inequality during the 1990s. We show that there is no country in Latin America where inequality declined during the 1990s. Poverty declined in ten or eleven of the seventeen countries for which household surveys are available, depending on the poverty measure used. Persistently high inequality inhibited further poverty reduction.

Testing the Expectations Hypothesis in the Brazilian Term Structure of Interest Rates

by Benjamin Miranda Tabak and Sandro Canesso de Andrade

We test the expectations hypothesis (EH) plus rational expectations (RE) in the Brazilian term-structure of interest rates, using maturities ranging from two to twelve months and daily data from 1995 to 2000. We rely on two methodologies based on single-equation regressions. Our results indicate a rejection of the EH plus RE, especially at the longer maturity. This may have important implications for the rational expectations macro modeling currently being used to evaluate the conduct of monetary policy in Brazil. We also show the risk premium in the yield curve is positively related to the covered interest rate differential and to the volatility of interest rates.

Substituting the PIS and the COFINS (and Why not the CPMF?) for a Non-Cumulative Contribution

by Ricardo Varsano, Thiago R. Pereira, Erika Amorim Araujo, Napoleão Luiz Costa da Silva and Marcelo Ikeda

In Brazil, cascading taxes are responsible for almost 25% of total revenue raised by the three levels of government. This is harmful to the country's economic performance and to her international trade balance. In this paper, the sectoral burdens of Brazilian cascading social contributions, as well as their impacts on exports and imports, are estimated, and their harmful effects on the economy are discussed. Substitution of a value added contribution for the cascading ones is proposed. It is suggested that, in view of urgency and notwithstanding some sacrifice of its quality, the new tax be created simply by means of an ordinary law without amending the Constitution. Most desirable features of the tax that can be created without changing the terms of the Brazilian Constitution are discussed. The uniform rate necessary to keep tax revenue constant and changes in sectoral tax payments are estimated.

Income Composition, Endogenous Fertility and Schooling Investments in Children

by Fernando A. Veloso

Using data from the 1976 and 1996 PNAD, a Brazilian household survey, this paper studies how the composition of income between mothers and fathers affects fertility and schooling investments in children. Income composition affects the time cost of fertility because mothers and fathers allocate different amounts of time to child rearing. These effects are in turn transmitted to investments in children through a trade-off between quantity and quality of children. The main contribution of this paper is two-fold. First, it derives new implications about the relationship between household income composition and schooling investments in children. Second, it devises and implements an empirical approach to assess these implications, using two cross-sections of fertility and schooling data from Brazil. The main empirical finding of the paper can be summarized as follows: First, the empirical analysis shows that a larger negative effect of the mother's labor income on fertility in 1996 is associated with a larger positive effect on the adult child's schooling, reflecting the interaction between quantity and quality of children. Second, the larger negative effect of the mother's labor income on fertility in 1996 is associated with a reduction in the effect of other determinants of number of children. This suggests that an increase in the relative importance of time costs of fertility may be an important determinant of variations in fertility over time in Brazil and other developing countries.

Can Financial Market Policies Reduce Income Inequality?

by Glenn Westley

Highly imperfect financial markets are an important source of income inequality in Latin America. Implementing policy changes from a broad agenda of *second generation* financial reforms that is emerging in the region offers the possibility of helping to reduce this inequality by altering the conditions under which financial markets function. The primary problem, whose foundations and ramifications this paper explores in many dimensions, is the fact that in most countries in Latin America, banking institutions have shown a great reluctance to serve the lower end of the business market, namely, micro and small enterprises (hereafter "MSEs" or "smaller enterprises"). Yet, over 70 percent of all poor earners in Latin America either own or are employed by MSEs. These two facts—that smaller enterprises have few financial services but many low-income owners and employees—together with the important impacts that greater access to the credit and deposit services can have on the income levels of MSE owners and their employees, are the bases for the argument that the financial reforms discussed here can help reduce income inequality. This paper consists of two parts. Part I presents empirical evidence and discusses likely mechanisms through which provision of additional financial services to smaller firms might lessen income inequality in Latin America, fleshing out the arguments just made. It also presents international cross-section and Latin American evidence that this channel may be an empirically important means for improving the distribution of income in the region. Part II discusses a number of specific reforms aimed at increasing smaller firm access to financial services, namely: improving regulation and supervision of credit unions and micro finance institutions (MFIs); improving the legal and regulatory framework for secured transactions and modernizing supporting institutions; reducing informality; establishing or strengthening credit bureaus; improving the legal and regulatory framework for leasing and factoring; and strengthening credit unions and MFIs.

Reserve Pooling in the Eastern Caribbean Currency Union and the CFA Franc Zone:
A Comparative Analysis

by Oral Williams, Tracy Polius and Selvon Hazel

This paper presents a comparison of the gains from the pooling of reserves, and hence reserve variability, in the Eastern Caribbean Currency Union (ECCU) and the CFA franc zone. The results indicate that countries within the ECCU area have achieved greater balance of payments protection than the CFA zone countries from the pooling of reserves. Unanticipated changes in the terms of trade lowered reserves in the FA relative to the ECU, which may reflect a greater reliance on primary commodities in the CFA compared with services in the ECCU.

Impact of Trade Liberalization in Americas on China's Exports

by Wang Xiaode

The free trade area of the Americas (FTAA) is scheduled to start functioning in 2005. It promises to be a huge market with a bright future for countries both inside and outside the region. While injecting vigor into trade in the Western Hemisphere, it will, however, pose a fierce competition to its non-FTAA trading partners, including China. This work starts with an examination of conditions of trade and economic relations between China and countries in the Western Hemisphere. It continues with a well-documented analysis of the coming serious challenges facing China against the backdrop of the formation of FTAA. It puts forth possible responses for China to seek opportunities to meet them. Recognizing that trade expansion with the vast region will make it extremely important that China sustain a stable economic growth, this work makes some suggestions for positive reactions to the unavoidable changes that will be brought about by FTAA.

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