

Summer 2002

Research



Abstracts

Center for
Latin American
Economics

Federal Reserve Bank of Dallas
Research Department





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Preface

The Center for Latin American Economics is pleased to present the Summer 2002 issue of *Research Abstracts*. The main body of *Research Abstracts* contains 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.

This edition's offerings include Latin America-related work on tax distortions and reform, credit stagnation, utilities regulation, city-size distribution, monetary policy, income convergence, income distribution, growth and much more. There are 140 papers by 202 authors or coauthors. In our own work at the Center for Latin American Economics, we find the analysis in these papers invaluable not only for our own scholarly and technical research but also as bases for briefings we make. We hope that you will gain as much from these 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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William C. Gruben
Director



Carlos E. Zarazaga
Executive Director

Abstracts

Calculation of Capital Stock in Chile, 1985–2000

by Ximena Aguilar and María Paz Collinao

The aim of this work was to determine the stock of fixed assets in Chile, consistent with the United Nations macroeconomic measurements of the System of National Accounts (SNA). In agreement with the recommendations of revision 3 of the SNA, the Stock of Fixed Assets was determined for the Chilean economy at 1986 constant prices and at current prices. For the calculation of the Stock of Fixed Assets at constant prices, the Perpetual Inventory Method was used, as proposed by the United Nations. This method accumulates the annual Gross Fixed Capital Formation by type of asset and deducts the normal depreciation of the capital in the productive activity. The Stock of Fixed Assets at current prices was calculated applying price indices (deflators) appropriate to the levels obtained at constant prices.

Understanding Money Demand of Argentina: 1935–2000

by Hildegart A. Ahumada and Maria Lorena Garegnani

This paper investigates whether a simple Cagan-like econometric model of demand for currency can be developed for Argentina based on more than 60 years of data (1935–2000). For such a long period, the presence of structural breaks cannot be ignored, given the variety of economic regimes the country has experienced. The purpose is to understand from an “ex-post” perspective how money holdings have reacted to the two main determinants of their demand—a transaction variable and an opportunity cost—after suitable approximations for both concepts are obtained. Transaction elasticity estimates matter for the distribution effects of inflation tax and for measuring the size of the shadow economy. In addition, a comparative analysis of the effect of inflation, interest rates and exchange rates can explain the relevant opportunity cost of holding money. Once two values of the transaction elasticity were taken for the long-run relationship (1 and 0.5) and inflation and interest rates alternatively measured the opportunity cost of holding money, a stable money demand—a satisfactory approximation to the data-generating process—was obtained for the Argentine case.

Wealth Effects in the Consumption Function of an Emerging Economy:

The Case of Argentina 1980–2000

by Hildegart A. Ahumada and Maria Lorena Garegnani

The effects of wealth on consumer expenditures have been widely studied for some time. The hypothesis in which assets are proportional to income has been central in well-known theories such as “permanent income” and “life cycle.” However, recent literature

has suggested that consumer behavior responds to “perceived wealth.” From an empirical perspective, the question is which proxies for wealth should be included to model current consumption in an emerging economy like Argentina, which is subject to different liquidity constraints, external shocks and structural changes. The purpose of this work is to empirically analyze the consumption function of Argentina, taking into account effects of inflation, the real exchange-rate and default risk on wealth during the last two decades, a period of great macroeconomic variability. For the sample and data employed in this study, the results show that national disposable income is the only long-run determinant of private consumption. The study also concludes that different definitions of wealth according to sample subperiods are adopted by the consumers as short-run determinants.

The Quest for Nominal and Real Convergence through Integration in Europe and Latin America

by Enrique Alberola, Ana Buisán and Santiago Fernández de Lis

Over the past decade, economic integration has advanced in both Latin America and in the European periphery areas, and this has been seen as an opportunity for real convergence. In this work, we emphasize that integration has to be supplemented by macroeconomic stability and structural reform. Focusing on these aspects, the work compares the two experiences, which, while diverse in nature, depth and scope, may offer interesting insights, especially for Latin America, given that the degree of integration in Europe is much more advanced. The conclusion points to the need for further effort in Latin America to achieve the fruits of reasonable policies, in order to compensate for the robust institutional underpinnings from which the European periphery has benefited. Thus, as Latin America currently looks back with mixed feelings on the past decade, perseverance and determination in pursuing reforms are called for.

A Simple Nonparametric Long-Run Correlation Estimator with an Application to Latin-American Stock Returns

by Pedro H. Albuquerque

A simple consistent nonparametric estimator of the long-run correlation between two variables is proposed, based on the estimation of the bivariate k -lag difference correlation. It is shown that the estimator is asymptotically equivalent to the Bartlett kernel spectral estimator of the complex coherency at frequency zero. The asymptotic distribution is derived from a test for the absence of long-run correlation. Optimal lag-selection and alignment criteria are presented. Monte Carlo experiments show that the asymptotic approximations are satisfactory, sometimes even for small samples. They also reveal that the lag-selection and alignment criteria are effective. Long-run correlations between American and Latin American stock returns are considered. The estimates increase substantially in the second half of the 1990s. The results possibly

indicate the presence of a correlation component common to Latin American markets, which was important in the second half of the period but not in the first. The significant development of investment funds specializing in Latin American markets and the much-improved foreign access after capital account liberalization in the region may help explain these patterns.

How Bad Is BAD Taxation:

Disintermediation and Illiquidity in a Bank Account Debits Tax Model

by Pedro H. Albuquerque

This paper uses a dynamic general equilibrium model to study the economic effects of bank account debits (BAD) taxation. Australia and various Latin American countries have levied or levy BAD taxes. Theoretical aspects such as tax cascading, financial disintermediation, market illiquidity, impacts on dividend and interest rates, tax revenue, government deficit, and effective rates on final transactions are considered. The Brazilian BAD tax (CPMF) experience is evaluated. The empirical analysis shows that revenue productivity appears to be very sensitive to the tax rate, engendering a Laffer curve. It is also shown that there may be impacts on real interest rates. Part of the BAD tax revenue can be lost due to increased interest payments on government debt. Furthermore, the deadweight losses seem to be significant if compared to revenues. Theory and evidence indicate that the BAD acronym is perhaps more than a witticism.

The 1995 Value Added Tax Reform:

Inflationary Effect, Impact and Relative Elasticities

by Fernando Aportela and Alejandro Werner

In April of 1995 the Mexican government increased the VAT tax from 10 to 15 percent in the interior cities of the country while keeping the rate at 10 percent along the border. This paper examines this particular policy decision in light of three phenomena: the inflationary effects, the impact of VAT and the relative elasticity of the demand of goods and services of the economy. The work utilizes monthly data on the prices of 313 generic products in both border and nonborder cities. The period examined is between February and December of 1995. The data satisfy the requirements mandated by the National Institute of Public Accountants. The behavior of prices on the border is used as a control variable in order to identify the effects that the change in the VAT had on prices in the nonborder cities. The results indicate that the inflationary effect of the fiscal reform disappeared within two months of having been implemented. The estimated tax impact and the value of the relative elasticities are in agreement with that indicated by economic theory. Groups of products

such as food, beverages and tobacco, personal care products, and health care products have a stronger impact and a relatively more inelastic demand than their supply. On the other hand, goods and services like glassware, linens and domestic utensils, leisure products, and household items showed less impact and a relatively less elastic demand than the supply. The results are useful for the formulation of policy, for the evaluation of their fiscal effects on the distribution of income and for determining the optimal monetary policy reaction as it relates to changes in indirect taxes.

Speculative Attacks on Debts, Dollarization and Optimum Currency Areas

by Aloisio Araujo and Marcia Leon

The purpose of this article is to contribute to the discussion of the financial aspects of dollarization and optimum currency areas. Using the model of self-fulfilling debt crisis developed by Cole and Kehoe, it is possible to evaluate the comparative welfare of economies, which either keep their local currency and an independent monetary policy or join a monetary union or adopt dollarization. In the case of a local currency or a monetary union, governments can issue debt denominated respectively in the local or the common currency, debt completely purchased by national consumers. Given this ability, governments may decide to impose an inflation tax on these assets and use the revenues to avoid an external debt crisis. While the country that issues its own currency makes this decision independently, a country belonging to a monetary union depends on the consensus of all member countries regarding monetary policy decisions. In this way, an external debt crisis can be avoided under the local and common currency regimes, if the union and national central banks, respectively, have the ability to conduct monetary policy, represented by the reduction in the real return on the bonds denominated in these currencies. This resource is not available under dollarization. In a dollarized economy, the loss of control over national monetary policy does not allow adjustments for exogenous shocks that asymmetrically affect the client and the anchor countries, but credibility is strengthened. On the other hand, given the ability to inflate the local currency, the central bank may be subject to the political influence of a government not strongly concerned with fiscal discipline, which reduces the welfare of the economy. In a similar fashion, under a common currency regime, the union central bank may also be under the influence of a group of countries to inflate the common currency, even though they do not face external restrictions. Therefore, the local and common currencies could be viewed as a way to provide welfare enhancing bankruptcy, if it is not abused. With these peculiarities of monetary regimes in mind, we simulate the levels of economic welfare for each, employing recent data for the Brazilian economy. (Working paper no. 40)

Changes in Brazil's Exchange-Rate Regime

by Carlos Hamilton V. Araújo and B. Da Silveira Filho Getúlio

This work analyzes eight variants of the Brazilian exchange rate. Taking into consideration the historical context of the evolution of the indicator, an analysis is done on the level and volatility of the series. Special emphasis is given to the effects of the aberrant observations as well as the eventual changes in the regime particularly associated with observations from 1969 through 2001. Additionally, some considerations are made concerning purchasing power parity.

Asymmetric Cooperation and International Public Goods

by Daniel G. Arce M.

The foreign assistance policies of the United Nations Development Program, the World Bank and major donor nations have recently been redefined to explicitly address the provision of international public goods (IPGs). Examples of IPGs include peacekeeping, financial market bailouts and environmental protocols. Given the global heterogeneity across nations, it is curious to find that the majority of the theoretical studies upon which these redefinitions are based assume symmetric roles in the provision of IPGs. Within a framework where nations learn the consequences of collective action over time, we analyze the prospects for the voluntary provision of IPGs when the benefit/cost ratio varies across actors. We then characterize the results for the gamut of contribution aggregators (summation, weakest link, weaker link, best shot and better shot public goods). We demonstrate that a *leading by example* strategy by the country with the highest benefit/cost ratio can implement the cooperative outcome.

We Have a Consensus:

Explaining Political Support for Market Reforms in Latin America

by Leslie Armijo

By the 1990s, and to the astonishment of many, most Latin American countries had reformed their systems of national economic governance along market lines. Many analysts of this shift have assumed that normal political processes were circumvented, since it seemed self-evident that such reforms could not be popular. Explanations emphasizing the role of economic crisis, external assistance and politically insulated executives illustrate this approach. Through a qualitative investigation of the reform process in the region's four most industrialized countries—Argentina, Brazil, Chile and Mexico—we conclude, on the contrary, that reforming governments found and/or created both elite and mass political support for their policies.

The Political Economy of Economic Reforms in Argentina

by Juliana Bambaci, Tamara Saront and Mariano Tommasi

In 1989, Argentina entered a process of sweeping transformations of its economic institutions, which provided for the (temporary) recovery of economic growth and the taming of inflation. The Argentine experience with market-oriented reforms has been regarded by the literature as a salient case of radical and “unconstrained” reform. Yet, a closer scrutiny portrays that the building and maintenance of a pro-reform coalition determined the pace, depth and characteristics of the “new economic institutions.” The idiosyncrasies of Argentina's political institutions, in turn, conditioned this coalition-building strategy. Some of those same idiosyncrasies were at play in the 2001–02 collapse of the convertibility regime and ensuing social and political chaos. This paper examines the link between the net foreign asset position, the trade balance and the real exchange rate. In particular, it decomposes the impact of a country's net foreign asset position (external wealth) on its long-run real exchange rate into two mechanisms: the relation between external wealth and the trade balance; and, holding other determinants fixed, a relation between the trade balance and the real exchange rate. It also provides additional evidence that the relative price of nontradables is an important channel linking the trade balance and the real exchange rate. (Working paper no. 43)

Credit Stagnation in Latin America

by Adolfo Barajas and Roberto Steiner

This study examines the recent marked slowdown in bank credit to the private sector in Latin America. Based on the study of eight countries (Argentina, Bolivia, Brazil, Chile, Colombia, Peru, Mexico, and Venezuela), the magnitude of the slowdown is documented, comparing it to historical behavior and to slowdown episodes in other regions of the world. Second, changes in bank balance sheets are examined to determine whether the credit slowdown is merely a reflection of a slowdown in bank deposits or whether the asset side has changed. Third, following an econometric disequilibrium approach used in recent studies of credit slowdowns in East Asia and Finland, the paper investigates possible causes for the slowdown in three countries: Colombia, Mexico and Peru. While both supply and demand factors appear to have played key roles, their relative importance has varied across countries. (Working paper no. 02/53)

Cultural Expenditures at the Three Levels of Brazilian Government

by Federico A. Barbosa da Silva

This work has two objectives. First, it estimates and describes the expenditures for culture at the three government levels—municipal, state, and federal—from 1994 through 1996. Second, it analyzes the amount of cultural expenditures and provides a profile taking into consideration some of the institutional processes such as decentralization.

Estimation of Export Supply Functions for Brazilian Agricultural Products

by Geraldo Santana de Camargo Barros, Mirian Rumenos Piedade Bacchi and Heloisa Lee Burnquist

The objective of this study was to estimate export supply functions for Brazilian agricultural products. The analysis was based on a theoretical model developed to sustain the specification and estimation of econometric models for different products selected for the study. The theoretical model considered that the export supply equation was derived from domestic supply and demand functions. The econometric models were adjusted by OLS and included error correction terms whenever the variables were cointegrated.

Access to Education:

Differences Between the Sexes

by Kaizô Iwakami Beltrão

The gender gap measured by average number of years of schooling for the Brazilian population favored the male population until the 1980 census. However, in 1991, it was reversed, and women averaged .26 years more schooling than their male counterparts. These aggregated statistics revealed intra-cohort differences. This paper focuses on these differences and evaluates the evolution of schooling for each sex, using cohorts for the available censuses. It also analyzes data on the school population from the different censuses and from the Elementary and High School Evaluation System (Saeb). Saeb data deal exclusively with elementary school fourth- and eighth-graders and juniors in high school. The main conclusion is that women have been better performers in the earlier years of schooling, but they usually left school earlier than men. In spite of a poorer performance, men stayed longer in school and graduated at higher levels. At certain ages, women completed more years of schooling than men. In each census, this age has been getting higher. There are also differences in the proportion of individuals of each sex graduating at the various

levels of formal education. The proportion of university graduates among males in older cohorts in the 1960 census is almost 20 times greater than the proportion of university graduates among females. On the other hand, the proportion of university graduates among males in younger cohorts in the 1991 census is almost half the proportion of graduates among females. The same thing happens for all levels of formal schooling in a slightly less aggravated form. The proportion of elementary school graduates among males in older cohorts in the 1960 census is 20 percent greater than the proportion among females. In 1991, there are 10 percent fewer males in the younger cohorts. School population in older censuses was predominantly male and, on average, enrolled in more advanced levels. In more recent censuses, the situation is reversed.

Population and Social Security in Brazil:

An Analysis with Emphasis on Constitutional Changes

by Kaizô Iwakami Beltrão, Sonoe Sugahara Pinheiro and Francisco Eduardo Barreto de Oliveira

This paper analyzes the Brazilian population disaggregated by urban/rural conditions with respect to Social Insurance and Social Assistance during the 1990s. We compare sex, individual age, activity rates and probability of receiving benefits before and after the changes in legislation for the urban and rural populations. For the urban population, we consider the formalization of work relationships. We also check consistency of the age/sex structure for each available calendar year and between adjacent years. We also compare PNAD data to corresponding administrative records: RAIS, SIAPE and MPAS.

The Potential Role of Economic Cost Models in the Regulation of Telecommunications in Developing Countries

by D. Benitez, A. Estache, D. M. Kennet and C. A. Ruzzier

What is the *efficient* cost of providing telecommunications services to a certain area or type of customer? As developing countries build up their capacity to regulate infrastructure monopolies, cost models are likely to prove increasingly important in answering this question, but without *information* no real answer can be given. In this paper, we introduce cost models and establish their applicability when different degrees of information are available to the regulator. Reliable and detailed information is generally a scarce good in developing countries, and we establish here the minimum information requirements that a regulator needs to implement a cost proxy model approach, showing that this “data constraint” need not be that binding.

Expenditure Determinants in Provincial Legislatures:

The Argentinean Case

by José J. Bercoff and Jorge P. Nougués

The type of political system plays a key role in determining the efficiency of the state. The rules used to delegate power and to determine how this power responds, either to a particular group or to the society as a whole, influence the efficiency of expenditures of political institutions. This paper's purpose is to study the possible determinants of expenditures at the legislative level. In particular, we consider the Argentinean Provincial Legislative Power by evaluating data from the country's 24 jurisdictions and performing a cross section analysis. The dependent variable under study is the ratio between the legislature budget and the total provincial budget. Although this ratio, on average, is not that high—2.29 percent for all provinces in the year under study—we consider it as a good proxy to evaluate inefficient expenditures in the public sector. The independent variables used can be divided into two groups. The first ones are related to the constraint observed in the political process, and the second ones are variables related to fiscal federalism.

Competency by Comparison in the Electrical Distribution Sector:

The Role of Defense Policy of Competency

by D. Bondorevsky, D. Petrecolla, C. Romero and C. A. Ruzzier

In this work, we address the problem of the interaction between regulatory policy and competition policy, with respect to the potential implementation of yardstick competition in electricity distribution in Argentina. Then, we study ownership concentration in electricity distribution, the risks that process poses with respect to vertical integration in the industry and the future liberalization of the retail segment.

Elections and Exchange-Rate Policy Cycles

by Marco Bonomo and Cristina Terra

Recent empirical studies on Latin American countries' exchange rate policies have identified a new type of electoral cycle: the real exchange rate (RER) tends to be more appreciated than average in the months preceding elections and more depreciated than average in the months following elections. This paper presents a theoretical model that generates real exchange-rate cycles. In doing so, we have singled out the distributive effects of real exchange-rate changes as the main ingredient leading to exchange-rate policy cycles. Typically, a RER depreciation favors exporters and import-competing domestic industries to the detriment of consumers. We argue that these exchange-rate cycles can be explained by imperfect information on policymakers' preferences, which are concealed with the help of an unstable macroeconomic environment.

Beyond Oaxaca-Blinder:

Accounting for Differences in Household Income Distributions Across Countries

by François Bourguignon, Francisco H. G. Ferreira and Phillippe G. Leite

This paper develops a microeconomic method to account for differences across distributions of household income. Going beyond the determination of earnings in labor markets, we also estimate statistical models for occupational choice and for the conditional distributions of education, fertility and nonlabor incomes. We import combinations of estimated parameters from these models to simulate counterfactual income distributions. This allows us to decompose differences between functionals of two income distributions (such as inequality or poverty measures) into shares due to differences in the structure of labor market returns (price effects); differences in the occupational structure; and differences in the underlying distribution of assets (endowment effects). We apply the method to the differences between the Brazilian income distribution and those of the United States and Mexico, and we find that most of Brazil's excess income inequality is due to underlying inequalities in the distribution of two key endowments: access to education and to sources of nonlabor income, mainly pensions.

Fiscal Rules for Subnational Governments:

Some Organizing Principles and Some Latin American Experiences

by Miguel Braun and Mariano Tommasi

In this paper, we investigate the logic and the workings of fiscal rules, with focus on rules for subnational governments. We argue against a simplistic view that sees the writing of numerical limits on fiscal variables as the solution to fundamental fiscal problems. We suggest that international organizations should take a more comprehensive approach when dealing with the fiscal problems of developing countries. Such an approach requires a deep understanding of the determinants of undesirable fiscal outcomes in each particular case, which in turn requires some explicit political analysis.

A Review of the Monetary Transmission Mechanism and the Pass-Through Effect in Chile

by Héctor Felipe Bravo and Carlos José García T.

First, this paper reviews the most important literature based on money VAR, which explains monetary transmission mechanism and pass-through from depreciation to inflation in Chile and other countries. The focus is on (i) the length of the transmission lags from monetary policy to prices; (ii) the impact of monetary policy on output and real exchange rate; and (iii) the magnitude of pass-

through coefficient. Second, we estimated four VAR models for the Chilean economy: three of them have short-run restrictions (SVAR), and the other one has long-run restrictions (VEC). Our estimations are different from other studies since we use an adjusted interest rate to consider the episodes of 1998, where the interbank interest rate is substantially higher than the monetary policy rate (MPR) announced by the central bank. This allows us to obtain a more precise identification of the monetary policy. The impact of this policy on prices and output is much lower than the effect found by other authors. Thus, the monetary-transmission mechanism is characterized as follows: given a 100 basis points shock to the interest rate during a quarter, the inflation rate decreases by -0.2 percent, output by -0.4 percent, and there is a temporary appreciation of the real exchange rate by 0.4 percent. Additionally, monetary policy reaches its maximum effect between a year and a year and a half. On the other hand, the pass-through coefficient turned out to be low and close to 18 percent after two years.

‘Over-Education’ and the Wage Premium of Workers with University Studies in Uruguay

by Marisa Bucheli and Carlos Casacuberta

During the 1990s there was an increase in the number of people who attended college in Uruguay, both in employment and in the labor force. This article seeks evidence of overeducation at the tertiary level, defined as mismatch between supply and demand of that skill level. The article presents an estimation of the wage premium for those workers who attended college compared with those who finished high school but did not pursue their studies further, for the whole population and within occupations. Returns to higher education are found to be nondecreasing during the decade, which suggests that the increases in supply were matched by increases in demand for such skill level. More specifically, the college premium is estimated in occupations in which workers both with college and with high school can be found. The main conclusion is that in such occupations there is a premium for workers who finished college but not for workers who attended college but did not graduate. The overall results do not support the hypothesis of significant overeducation in the case of university graduates. The data used refer to the Household Survey of Uruguay during the 1990s.

Bank Competition in Argentina: 1997–1999

by Tamara Burdisso, Marcelo Catena and Laura Inés D’Amato

Over the past decade, the Argentine banking industry has been subject to important regulatory changes, increased internationalization and restructuring. It has been argued that increased concentration could undermine bank competition. According to the former approach, concentration is necessarily related to poor competition. However, the new industrial organization approach,

which relies on firms’ profit maximization behavior, has emphasized the weaknesses of relying on concentration measures to draw conclusions about market structure. This paper evaluates bank competition in Argentina by extending the Conjectural Variations approach to the case of multi-product firms. We model Argentine banks as multi-output firms, operating in two markets: retail and corporate. We measure market power by estimating a conjectural variation model for a panel of banks from 1997 to 1999. Rather than evaluating a specific market structure, we construct a market power index that varies in a continuum interval. We are able to determine the extent to which prices deviate from marginal costs, the relevant question from the welfare point of view. We find that both markets operate close to the competitive solution. Finally, these results are confronted with the predictions that could be drawn from concentration measures, according to the structure-conduct-performance approach.

The Argentine Banking and Exchange Rate Crisis of 2001:

Can We Learn Something New about Financial Crises?

by Tamara Burdisso, Verónica Cohen Sabban and Laura Inés D’Amato

In January 2002, Argentina declared a default on its debt and moved to a floating exchange regime, in the middle of a severe banking and currency crisis. A remarkable difference of this episode compared with previous experiences was the strength of the Argentine Financial System, due to strong prudential regulations. However, once the crisis broke out, two risks became evident. First was the exposure of the banking sector to the default risk of the government, a phenomenon linked to the restricted financing sources of the government under a currency board regime. This exposure increased dramatically from the beginning of the 1998 recession until it reached unprecedented levels at the moment of the crisis. Second was the vulnerability of the banks’ balance sheets to currency risk. This was due to the currency mismatch between borrowers’ assets and liabilities. This mismatch could rapidly make banks insolvent in case of devaluation. This paper is an attempt to understand the nature of the banking crisis of 2001 by analyzing the behavior of daily changes in individual bank deposits. Using a dynamic panel data model, we investigate to what extent this bank panic was a systemic run on the banking sector that was suddenly perceived as internationally illiquid rather than an individual bank-fundamentals-based crisis.

How Much Do SMEs Borrow from the Banking System in Argentina?

by Tamara Burdisso, Laura Inés D’Amato, Guillermo Escudé and George McCandless

Using data from the Argentine Central Bank’s Central de Deudores, we study bank lending to SMEs and to larger firms over the period July 1998 to 2000. We consider three definitions of SMEs:

system wide debt of less than \$2.5 million, less than 200 workers, and a step function of workers and system wide debt. We then compare these definitions to the traditional limit of \$1 million debt from an individual bank, used in the literature. We make a first step in indicating the kinds of biases inherent in the traditional definition. We compare lending to SMEs by banks in groups determined by geographical and ownership characteristics. We find little bias against SMEs from bank consolidation or from increased international ownership. We did find that during the business downturn delimited by our data that large firm borrowing crowded out SMEs in the early period and government borrowing crowded out private borrowing over the whole period. The difference between the behavior of lending to SMEs and to large firms varies substantially depending on the economic sector of the firms. Credit quality of bank portfolios to SMEs has been worse than the quality of portfolios of larger firms and has worsened during the downturn. Portfolios of government owned banks have had worse credit quality than private banks for both small and large firms.

Coping with Chile's External Vulnerability:

A Financial Problem

by Ricardo Caballero G.

With traditional domestic imbalances long under control, the Chilean business cycle is driven by external shocks. Most important, Chile's external vulnerability is primarily a financial problem. A decline in the Chilean terms of trade, for example, is associated with a decline in real GDP that is many times larger than one would predict in the presence of perfect financial markets. The financial nature of this excess sensitivity has two central dimensions: a sharp contraction in Chile's access to international financial markets when it needs it the most and an inefficient reallocation of this scarce access across domestic borrowers during external crises. In this paper, I characterize this financial mechanism and argue that Chile's aggregate volatility can be reduced significantly by fostering the private sector's development of financial instruments that are contingent on Chile's main external shocks. As a first step, the Central Bank or IFIs could issue a benchmark instrument contingent on these shocks. I also advocate a countercyclical monetary policy but mainly for incentive—that is, as a substitute for taxes on capital inflows and equivalent measures—rather than for ex-post liquidity purposes.

Brazilian Population Aging:

Differences in Well-Being by Rural and Urban Areas

by Ana Amélia Camarano

The main purpose of this paper is to examine the impact of aging on social policies in Brazil, paying particular attention to the differences between rural and urban areas. In other words, is being elderly in rural areas different from being elderly in urban areas?

And if it is, which dimension of life is affected? How does the social security policy affect these conditions? As Brazilian national data mask regional differences, the paper also places attention on certain differences between the Northeast (Brazil's poorest region) and the Southeast (the richest region). Using data from the General Household Surveys (PNAD) of 1981 and 1999, four dimensions of elderly life are considered: familial arrangements, health conditions, economic activities and income. Relatively better life conditions experienced by the elderly population are contrasted with the effects of the continuous economic crisis experienced by the Brazilian economy. The paper concludes that there has been a change of status for the elderly within their own families, modifying their traditional role of dependent to that of provider. Three factors have been important in enabling such a situation: the widespread coverage of social security, health policies and improvements in medical technology. Nevertheless, better conditions of life for the elderly has meant marked costs in terms of social security benefits and health policies.

Estimations of Human Capital for Brazil: 1981–1999

by Luciane Carpena and João Barbosa de Oliveira

This study estimates the human capital stock for Brazil from 1981 to 1999. Future labor incomes are discounted so that we get their present value. We assume that these incomes are a result of years of schooling and work experience. Mincerian coefficients are used as proxies for estimated returns to schooling and experience. Finally, we use recursive algorithms, as in Jorgenson, to obtain the final estimates. We find that the stock of human capital has grown considerably. In per capita terms, it displayed an annual growth of 1 percent to 3 percent, meaning an increase of 40 percent throughout 1981–99. Moreover, despite the fact that the physical capital–output ratio is much higher than the one for human capital, the latter has been increasing at a faster pace than the former. (Discussion paper no. 877)

Economic Growth in Some Latin American and OECD Countries, 1960–1990

by Luciane Carpena and Manuel Santos

This paper studies several aspects of the growth experience of some Latin American and OECD countries from 1960 to 1990. The framework of analysis is a growth model with physical and human capital accumulation. Once data series for the stocks of physical and human capital have been constructed, a growth accounting exercise is performed. This exercise shows that the stocks of physical and human capital can explain the level of output of a country. In particular, most Latin American countries display low rates of investment in physical goods and low relative efforts of human capital accumulation. (Discussion paper no. 100)

Downward Nominal Wage Rigidities and Employment:

Microeconomic Evidence of Mexico

by Sara Gabriela Castellanos

Downward nominal wage rigidities (DNWR) in the Mexican economy are measured using microeconomic data. Then, the associated wage costs as a result of DNWR are calculated comparing observed and hypothetical wage changes' distributions generated from the specific DNWR statistics. Last, a Phillips curve modified to include wage costs is used to determine how much unemployment rises as wage costs increase. Substantial wage rigidities are detected in some key sectors in the economy's formal employment sector. Wage and employment costs are increasing and non-linear on inflation. A forecast exercise is carried out to measure the costs of reducing inflation from 8.5 to 3 percent, the central bank's target for December 2003. In regard to the micro-macro puzzle, results favor an explanation based on aggregation-level differences among variables employed in the Phillips curve estimation.

What Information Does the Mexican Term Structure of Interest Rates Contain on Spot Future Interest Rates?

by Sara Gabriela Castellanos and Eduardo Camero

This paper examines the relationship between spot interest rates and the term structure of interest rates (ETTI). The analysis utilizes proofs derived from the hypothesis of rational expectations. The results suggest that the ETTI contains certain information on the direction of future movements of spot interest rates for the short term as well as for the long term. The estimations that are derived using GARCH and GARCH-M models indicate a relationship between the variations of the risk premium and interest rates.

Structural Econometrics of Share Auctions:

An Application to the Mexican Treasury Securities Primary Auctions

by Sara Gabriela Castellanos and Marco A. Oviedo

Since 1995 the Mexican Treasury has employed the discriminatory format to auction its securities in the primary market. This seems to be in sharp contrast to empirical evidence: every study of the Mexican Treasury securities primary auctions, since Umlauf (1993), demonstrates the superiority of the uniform format to the discriminatory format in terms of auction revenue. Nonetheless, all the previous studies are based on the estimation of reduced form equations using data of the two natural experiments on auction format that have occurred in Mexico. This paper applies the structural econometric model of share auctions recently pro-

posed by Fevrier, Preget and Viser (2002) to examine the revenue performance of the Mexican Treasury securities primary auctions held in 2001 and 2002. The counterfactual comparison of the Treasury's revenue in discriminatory and uniform auctions that can be derived from this method is contrasted with the previous exercises, thus providing new evidence on this puzzling issue.

FDI, Trade and Integration in MERCOSUR

by Marta Castilho and Soledad Zignago

In the 1990s, the MERCOSUR countries experienced a strong growth of trade and foreign direct investment (FDI). To examine the relationship between FDI, trade and regional integration in MERCOSUR, we tested different disaggregated gravity equations on trade and M flows between two MERCOSUR members—Argentina and Brazil—and their partners during the 1990s. Our results attest a strong relationship between FDI and imports, but a weak and negative linkage between FDI and exports. This reinforces the perception that the investment flows into MERCOSUR countries have generated strong flows of imports without generating exports. Another important result is the relevance of MERCOSUR in multinational firms. This relevance seems to vary depending on the country where the firm is located. Firms based in Brazil give an importance to the regional market while those in Argentina view the regional market as irrelevant.

Options Concerning the Commercial Dollar and Expectations with Respect to Exchange Rate Behavior

by Paulo Castor de Castro

This paper presents the derivation of risk neutral probability distributions implied in the prices of call options on the "commercial dollar" (in reals, the Brazilian currency), negotiated at the Mercantile and Futures Exchange of Sao Paulo, Brazil. These distributions were used to analyze the expectations of the market agents concerning the behavior of the "commercial dollar" exchange rate. The skewnesses of the distributions were compared with the spot exchange rates by calculating the correlation between the series of observed values. The correlations between the same skewnesses and the absolute and relative changes in the spot rates (during periods of one, five and 15 trading days) were also calculated. If the correlations obtained were negative, it could be inferred that the agents in the Brazilian market believe in the existence of an implicit target zone for the dollar exchange rate. This hypothesis can be rejected because the correlations found were mostly positive although they were non significant. As the skewnesses found were systematically positive, the hypothesis that the exchange rate follows a random walk can also be rejected. (This kind of trajectory would imply null skewnesses.) (Working paper no. 39)

A Model to Analyze the Effects of the Changes in Average Maturities of Government Securities on Asset Returns

by Marco Antônio Freitas de Hollanda Cavalcanti and Napoleão Luiz Costa da Silva

From July 1994 to October 1997, Brazilian public-debt-managing authorities aimed to increase the debt's average maturity by issuing nominal securities with increasing maturities. In this paper, we apply a model to analyze the effects that changes in the debt's average maturity might have on asset returns. The model elucidates the reasons for the higher risk premium in long securities as compared with shorter ones and shows that to increase the proportion of long-term securities in total debt, government must raise interest differentials even further. When applied to the Brazilian case, the model explains a significant proportion of observed movements in the risk premium of securities.

Inflation, Welfare and Public Expenditures

by Marco Antônio Freitas de Hollanda Cavalcanti and Napoleão Luiz Costa da Silva

This paper studies welfare effects of monetary policy in an overlapping generations model with capital and no form of taxation other than inflation. Public expenditures have a positive effect on labor productivity. The paper concludes that an expansive monetary policy can be welfare-improving, at least for "small-enough" inflation rates, and that there is an optimal inflation rate. Growth maximization, however, is never optimal. Steady-state capital and output increase with inflation, reproducing the so-called Tobin effect. For large inflation rates, however, the government authorities cannot affect real variables, and there are only nominal effects.

Unbundling of Telecommunication Networks

by M. Celani, D. Petrecolla and C. A. Ruzzier

This work addresses local loop unbundling in telecommunications from the broader perspective of competition policy and the notion of an essential facility. It underscores the need of counting on an objective methodology for determining the competitive conditions in a market before implementing open access policies. The work also examines expected effects of unbundling on competition, as well as the difficulties posed in its implementation within tariff structures that are not strictly cost-based. Finally, the article surveys the international experience in local loop unbundling and makes some regulatory policy recommendations based on the conclusions reached.

On the Determinants of the Chilean Economic Growth

by Rómulo Chumacero and Rodrigo Fuentes

This paper presents several methodologies for understanding the Chilean growth process. By using univariate time series representations, we find that the Chilean data is more consistent with exogenous than with endogenous growth models. Growth accounting exercises show that the mild growth rates of the 1960s are mainly due to the accumulation of human and physical capital, while the booms of the mid-1970s and the one from 1985 until 1998 are mainly due to TFP growth. We also find that among the most important determinants of the evolution of TFP are the evolution of terms of trade, improvements on the quality of capital, and the presence of distortions. In fact, distortions do not only eliminate the positive effects of improvements on the quality of capital but also precede the evolution of technology shocks and increase their volatility. A dynamic stochastic general equilibrium model that explicitly incorporates the relative price of investment with respect to consumption goods, terms of trade, and distortionary taxes is able to successfully replicate the impulse-response functions found on the data. This exercise suggests that distortions play a key role in explaining the growth dynamics of the Chilean experience.

Concentration of Population in Capital Cities: Determinants and Economic Effects

by Rodrigo Cifuentes

This paper studies the impact and determinants of the concentration of population in capital cities across countries. Fast population growth in capital cities is a widespread phenomenon that economic factors do not explain. In addition, this fact violates Zipf's law, a strong empirical regularity in the distribution of city sizes. The paper addresses first the impact of this fact on economic growth. A model is built to study the consequences of distortions in the spatial allocation of resources in production. The empirical results show a negative correlation between this distortion and economic growth. The second part of the paper studies the determinants of this phenomenon. Three hypotheses advanced in the literature are tested. The results show that trade barriers do not explain concentration in capitals, nor does political instability. Both results are robust and oppose previous findings in the literature. This paper finds support for the hypothesis that weak political rights in the population can explain concentration of population in capitals.

Intra-Industry Trade Between the United States and Mexico: 1993–98

by Don P. Clark, Thomas M. Fullerton, Jr. and Duane Burdorf

This paper examines changes in intra-industry trade (IIT) in manufactured goods between the United States and Mexico over the first five years of the North American Free Trade Agreement. Most industries experienced large increases in IIT. An examination of various indexes of intra-industry specialization indicates few industries in either country are candidates for significant adjustment problems. These findings should lessen opposition to greater regional economic integration in the Western Hemisphere.

Creation, Destruction and Reallocation in the Brazilian Labor Market

by Carlos Henrique Corseuil, Eduardo Pontual Ribeiro, Daniel D. Santos and Rodrigo Dias

The Brazilian labor market has been frequently characterized as extremely flexible. This paper investigates one dimension of labor market flexibility, job reallocation. Measuring worker reallocation using establishment-level data, we analyze its relationship with establishment characteristics, as a preliminary search for reallocation determinants. Our results suggest that job reallocation is extremely high in Brazil, although heterogeneous across sectors and establishment size. Trade and service sectors have higher job reallocation rates and account for a significant share of total reallocation.

Minimum Wage and Social Well-Being in Brazil: A Review of the Literature

by Carlos Henrique Corseuil and Luciana M. S. Servo

This paper reviews the empirical literature that deals with the effects of minimum wage on income distribution and the Brazilian labor market. In addition to the review, the authors identify new research questions that need to be addressed regarding this topic.

Prebisch-Singer Redux

by John T. Cuddington, Rodney Ludema and Shamila A. Jayasuriya

In light of ongoing concerns about commodity specialization in Latin America, this paper revisits the argument of Prebisch (1950) that, over the long term, declining terms of trade would frustrate the development goals of the region. This paper has two main objectives. The first is to clarify the issues raised by Prebisch and Singer (1950) as they relate to the commodity specialization of developing countries (Latin America in particular). The second is

to reconsider empirically the issue of trends in commodity prices, using recent data and techniques. We show that rather than a downward trend, real primary prices over the past century have experienced one or more abrupt shifts or structural breaks downward. The preponderance of evidence points to a single break in 1921, with no trend, positive or negative, before or since.

The Monetary Policy Instrument in Mexico:

The Daily Operation of the “Corto” and Its Effect on Banks’ Costs and Expectations

by Alfredo Cuevas

The regime known popularly as “el corto” is a set of rules that guide the daily intervention of the central bank in credit markets. These rules are such that effective overdraft in banks’ current accounts at the central bank over a measurement period may differ from the amount implied by the announced “corto” (itself an explicit target for the magnitude of the aggregate overdraft). Daily data for the period November 1998 to December 2000 are used to: (1) estimate the direct financial cost to the banks of the “corto,” (2) figure out the frequency and size of the deviations of the banks’ current account overdrafts from their target levels and (3) explore the effect of the volatility in the intervention process on short-term interest rates in the interbank market. The comparison between announced changes in the level of the overdraft targets and actual changes in overdraft levels induced by the central bank’s intervention seems to provide support for the argument that the “corto” operates mainly by affecting expectations.

Changes in Mexico’s Pattern of External Financing as a Result of NAFTA

by Alfredo Cuevas, Miguel Messmacher and Alejandro Werner

The paper examines changes in external financing both at the level of the economy and at the level of the firm, considering other factors that may have contributed to shape the observed trends in capital flows, including the globalization of capital markets in the 1990s and the 1995 Mexican domestic banking crisis. We find that, following the negotiation and implementation of NAFTA, the composition and magnitude of external financing flows into Mexico underwent important changes, including an increase in the weight of flows to the private sector and in foreign direct investment. Among other things, the data suggest that capital flows responded differentially to the expectation of a change in trade and investment rules and later to the actual implementation of the new rules: portfolio investment boomed dramatically during negotiation of the free trade agreement only to shrink back and cede the lead to FDI once the agreement went into effect.

Welfare Effects of Privatizing Public Utilities in Argentina:

A Household Level Analysis

by José Delfino and Ariel A. Casarín

The privatization of the national public utilities that took place in Argentina almost a decade ago can be explained by the persisting deficits of the enterprises, a general dissatisfaction with their performance and the difficulties the government faced in their control. During the period of private management, companies: (1) restructured their revenues by both regrouping consumers and raising their two-part tariffs unevenly, (2) increased the number of customers and (3) achieved perceptible quality improvements. For assessing the impact of the reforms on residential consumers' economic well-being in the telecommunications, electricity, natural gas and sanitation services, we estimate the welfare changes of the initial consumers and the surplus of the newcomers using household level data from the Gran Buenos Aires. The results obtained suggest that the direction as well as the intensity of welfare changes differ across income groups and services and that magnitudes vary according to the rigidity of demands. The benefits for the newcomers also differ across services, but they seem to have had little significance in all cases, except in water and sewage.

Regulation of Transport Cargo in Santiago

by Carlos Díaz, Alexander Galetovic and Ricardo Sanhueza

This paper quantitatively characterizes the trucking industry in Santiago (during Citra 1995) and evaluates current regulations. Most of the restrictions are related to the use of roads considered erratic and unsafe by authorities. These restrictions are costly as well as ineffective, since the principal determinant of the volume of loads and the number of trips is the economic activity of Santiago, which is in great part independent of the trucking industry policies. Most problems caused by trucks that do not internalize external costs (particularly road congestion and deterioration) will be solved when new toll roads are built. Additionally, the industries that generate a large portion of the cargo tend to locate in more accessible areas—currently in the North–South America Vespucio Loop. Finally, loads with multiple destinations throughout the city (including construction materials, consumer goods and fuel) will circulate mainly through the toll roads, only using the smaller roads to arrive at their final destination. We conclude that a combination of improved management and the use of toll roads is the most effective way of dealing with the problems the trucking industry is currently facing.

Free Trade and Women in Business in the Americas

What Role Should Women's Organizations Play?

by Elsie Echeverri-Carroll, Daniela Brandaza and Cecilia Giusti

Our objective in this paper is to bring to the attention of businesswomen's organizations in Latin America the importance of collecting data on the increasing participation of women in the economy as entrepreneurs and managers. There are two reasons why having this data matters. First, we anticipate that women's gains in education and the labor market should put them in a good position to benefit from business opportunities opened by free trade. Second, women's organizations in Canada and the United States have collected data about the impact of women in business on the economy to successfully lobby legislators to pass policies that benefit women in business. We focus on Chile and the largest countries within the NAFTA and MERCOSUR free trade areas: the United States, Canada, Mexico, Brazil and Argentina.

The Argentine Debt Crisis of 2001–2002:

A Chronology and Some Key Policy Issues

by Sebastian Edwards

The purpose of this note is to present a brief chronology of the process that led to the Argentine currency crisis and debt default of 2001–02 and to highlight the most important policy issues that arise from this experience. I have made an effort to highlight the most important events in Argentina's economic history during the period 1991–2002. However, to provide some background information, the chronology begins with the Austral heterodox stabilization plan of 1985. I focus on policy issues that were seen by policymakers and external analysts as particularly worrisome. Many of these issues appear in more than one phase. This is a reflection of the fact that during this period Argentina repeatedly failed to address some of its most pressing economic problems. I also list some of the most important political developments during this period. The second part of the note provides a list of the most important policy issues that emerge from this episode. In organizing these topics, I have tried to keep in mind the need to extract lessons from the experience.

Information Technology and Economic Growth in the Emerging Economies

by Sebastian Edwards

In this paper I analyze the role of the Internet, information technology (IT) and the “new” economy in Latin America. In particular, I discuss the channels through which the Internet and information technology can help boost productivity growth and overall economic performance. I argue that to take full advantage of this

new technology, the Latin American countries will need major investments in “complementary” areas, including research and development, education and infrastructure. Moreover, I argue that if the countries in the region do not implement major institutional and economic reforms, investment in information technology will have a small effect on growth.

Dollarization, Inflation and Growth

by Sebastian Edwards and I. Igal Magendzo

In this paper we analyze the macroeconomic record of dollarized economies. In particular, we investigate whether, as its supporters’ claim, dollarization is associated with lower inflation and faster growth. We analyze this issue by using a matching estimator technique developed in the training evaluation literature. Our findings suggest that inflation has been significantly lower in dollarized nations than in nondollarized ones. We also find that dollarized nations have had a lower rate of economic growth than nondollarized ones. Finally, we find that macroeconomic volatility is not significantly different across dollarized and nondollarized economies. We conjecture that the lower rate of economic growth in dollarized countries is due, at least in part, to these countries’ difficulties in accommodating external disturbances, such as major terms of trade and capital flows shocks.

Volatility Dependence and Contagion in Emerging Equity Markets

by Sebastian Edwards and Raul Susmel

We use weekly stock market data for a group of Latin American countries to analyze the behavior of volatility through time. We are particularly interested in understanding whether periods of high volatility are correlated across countries. The analysis uses both univariate and bivariate switching volatility models. Our results do not rely on the correlation coefficients but on the co-dependence of volatility regimes. The results indicate that high-volatility episodes are, in general, short-lived, lasting from two to 12 weeks. We find strong evidence of volatility co-movements across countries, especially among the MERCOSUR countries.

Lessons from Argentina’s Recent Experience:

The Mirage of Convertibility

by Guillermo J. Escudé

This paper is a reflection on the lessons that can be drawn from Argentina’s experience with convertibility in relation to the characteristics of this particular “hard peg.” The main ingredients of convertibility were the fixed exchange rate with the dollar, full backing and lack of regulatory disincentives to incurring currency risk through currency mismatches. The last two made the regime quite sustainable. However, it is argued that that was also its main

weakness, since that very resilience—and the particular “state of nature” that evolved with the dollar appreciation and the increase in risk aversion—allowed the accumulation of massive macro imbalances that a more flexible exchange regime would not have allowed. It is argued that the lack of currency risk regulations in the financial system was a serious mistake and was built upon a marketing strategy based on making any exit extremely costly. This was supposed to “tie future administrations’ hands” since, presumably, full dollarization would always be a preferred option to devaluation. However, that strategy was basically flawed because any administration that was not convinced that full dollarization was a good long-run alternative, and that had to address the explosive unemployment problem, could prefer to devalue and face those costs.

Regulation: The Market or Social Pressure?

The Determinants of Environmental Investment in an Industry

by Cláudio Ferraz and Ronaldo Seroa da Motta

This study is an attempt to analyze the probability of industrial firms in São Paulo undertaking environmental investments. It utilizes a database from the 1996 economic industrial survey, Paep, as well as additional economic and social data of the area. The study utilizes a probit model to estimate marginal effects of a firm’s characteristics on formal and informal regulation. Taking into account simultaneity of decisions between firms and regulators, instrumental variables are used. Results suggest that informal regulation acts indirectly on the firm’s decisions on investment through regulators. Size, export-orientation and origin of capital are also significant variables explaining the environmental investment pattern.

Educational Expansion and Income Distribution:

A Micro-Simulation for Ceará

by Francisco H. G. Ferreira and Phillippe George Leite

Does more education really mean less poverty and less inequality? How much less? What are the transmission mechanisms? This paper presents the results of a micro-simulation exercise for the Brazilian State of Ceará, which suggests that broad-based policies aimed at increasing educational attainment would have substantial impacts on poverty reduction but muted effects on inequality. These results are highly dependent on assumptions about the behavior of returns to education, both for the distribution of earnings and for the distribution of household income per capita. A large share of the poverty-reducing effect of more education operates through greater incentives for labor force participation among the poor and through reductions in fertility. Both of these effects function largely through decisions made by poor women.

New Evidence on Trade Liberalization and Productivity Growth

by Pedro Cavalcanti Ferreira and José Luis Rossi

Although the subject of a large number of studies, the debate on the links between trade reform and productivity growth is still unresolved, and most studies at the micro level have not been able to establish a relationship between the two phenomena. Brazil provides a natural experiment to study this issue since it was one of the most closed economies in the world until 1988, when trade reform was launched. Also intraindustry-annualized data were available to examine liberalization before, during and after. Using a panel of industry sectors, this paper tests and measures the impact of trade reform on productivity growth. Results confirm the association between the former and the latter and show that the magnitude of the impact of tariff reduction on the growth rates of TFP and output per worker was substantial. Our data reveal large and widespread productivity improvement so that the estimations in this paper are an indication that liberalization had an important effect on industrial performance in the country. Cross-sectional differences in protection are also investigated.

On the Long-Run Effects of Barriers to Trade

by Pedro Cavalcanti Ferreira and Alberto Trejos

We study the macroeconomic effects of international trade policy by integrating a Heckscher–Ohlin trade model into an optimal growth framework. The model predicts that an open economy will have higher factor productivity. Furthermore, under protectionist policies, there may be “development traps,” or additional steady state balanced paths with low-income levels. Hence, the large cross-country differences in barriers to trade may explain part of the huge dispersion of per capita income observed across countries. The effects are quantified and show that protectionist policies can explain a significant fraction of TFP differentials and a very large portion of the long-run income differentials across countries.

Macroeconomic Effects and Welfare Analysis of Reforming Social Security in Brazil

by Sérgio G. Ferreira

The Brazilian PAYG system has been under financial stress and needs to be reformed. I use a computable general equilibrium model, with 55 overlapping generations to simulate macroeconomic and welfare impacts of alternative social security reforms. I look at a wide range of possible reforms, which not only include a complete switch toward an individual retirement account system but also keep the PAYG unchanged—and replace the social security labor tax with a different tax. I find that the elimination of the labor tax, allowing individuals to allocate freely their

savings, has strong positive long-run welfare effects. However, even partial reforms that switch the tax base that finances the retirement benefits are able to produce significant positive long-run effects. However, all the conflicts about social security reform reside in transitional issues. I show that under a variety of possible transitional schemes, there is no tax path that is strictly preferred by every agent. Moreover, every tax regime is the most preferred by at least one generation. Such lack of political consensus, generated by intergenerational conflict, may be a reason why Brazil has “chosen” not to reform its PAYG system.

Exports Dynamism and Economic Growth in Chile

by Ricardo Ffrench-Davis

The dynamic expansion of exports has been a distinctive feature of the Chilean economy during the last quarter of the century. However, the export dynamism has been accompanied by a meager average growth of GDP. The volume of export growth, an annual 10 percent between 1974 and 2001, coexisted with a 4.3 percent increase of GDP. The persistent and vigorous export boom has been associated with significant GDP ups and downs: GDP growth of 8 to 10 percent on various occasions and deep recessions of 14 or 15 percent on others. In this work, we examine the similarities and discrepancies between four episodes (1973–82, 1983–89, 1990–98 and 1999–2001). We analyze the interrelationship between the “quality” (value-added and linkages) of exports and the macroeconomic environment and the overall growth of Chilean GDP; finally, we outline challenges ahead.

How Optimal Are the Extremes?

Latin American Exchange Rate Policies During the Asian Crisis

by Ricardo Ffrench-Davis and Guillermo Larraín

During the Asian crisis, intermediate exchange-rate regimes vanished. It has been argued that those regimes were no longer useful and only the extremes remained valid. The paper analyzes three foreign exchange regimes: Argentina (pegged), Chile (band) and Mexico (float). The Argentinean currency board delivered low financial volatility while its policy was credible, but even then, it displayed high real volatility. Mexican float performed well in periods of instability isolating the real sector. The Chilean band delivered a mixed outcome as compared with Argentina and Mexico. This is linked apparently to a loss of credibility of bands, associated with policy mismanagement and an over-appreciation in the biennium before the crisis. Optimal exchange-rate regimes vary across time and the conjuncture. Exit strategies are part of the election of the optimal system, including a flexible policy package rather than a single rigid policy tool.

Monetary Policy in Brazil:

Remarks on the Inflation Targeting Regime, Public Debt Management and Open Market Operations

by Luiz Fernando Figueiredo, Pedro Fachada and Sérgio Goldenstein

This paper analyzes the main features in the conduct of monetary policy in Brazil. Initially, we focus on the inflation-targeting regime, reviewing the background that led to its adoption in mid-1999, the institutional framework implemented in the country, and the challenges and achievements reached so far. Then we move to the analysis of the public debt management, highlighting its objectives and results, with particular emphasis on the debt composition and average maturity. The third section discusses the open-market procedures. We end with a brief description of specific policy issues to be addressed by the Central Bank in the near future. (Working paper no. 37)

Depreciation of Natural Capital, Income and Sustainable Growth:

Lessons from the Chilean Experience

by Eugenio Figueroa B. and Enrique Calucura T.

The optimal exploitation of the natural resource base is crucial to attain maximum social welfare, especially in developing countries whose economies are highly dependent on such resources. This paper presents a simple model to correct the gross domestic product to obtain a measure of economic income, by subtracting from the net national product the depreciation of natural capital. Corrected measures of the economic income for the period 1985–97 are presented, taking into consideration mining and fishing resources and air contamination. The results show that approximately 3 percent of Chile's economic income corresponds to depreciation of its natural resources plus the cost of atmospheric pollution. In addition, genuine measures of saving are calculated. The results lead to the conclusion that economic growth was sustainable during the period 1985–97. Important policy implications are obtained for a better management of natural resources in the future.

Can Emerging Markets Float?

Should They Inflation Target?

by Ronald Fischer, Alexander Galetovic and Barry Eichengreen

The crises of the 1990s convinced many observers that intermediate exchange-rate arrangements are fragile and crisis prone. But advising emerging markets to abandon the exchange rate as an anchor for policy compels those issuing the call to offer an alternative. This paper asks whether inflation targeting is a viable alternative for emerging markets. It focuses on the distinctive characteristics of the policy environment that bear on its feasibility: fast pass-through, the difficulty of forecasting inflation, liability dollarization, and imperfect credibility.

Structural Breaks in Cointegration Relationships:

Effects of Economic Crises in Mexico 1945–2000

by Alvaro Forteza and Daniel Garces-Diaz

The Mexican economy underwent several episodes of economic turmoil and reform from 1945 to 2000, but I show with cointegration analysis that only the 1982 debt crisis transformed the government's role and induced permanent changes in several variables: the U.S. economy became the driving force behind the Mexican GDP; the real exchange rate began to play a paramount part in the determination of the GDP fluctuations and the trade balance. Furthermore, its high pass-through to inflation made it behave like a stationary process; the long-run money demand mutated from the velocity equation to the Tobin–Baumol's square-root law.

Restaurant Prices and the Mexican Peso

by Thomas M. Fullerton Jr. and Roberto Coronado

Of prime interest to border economies is exchange-rate performance and currency valuation. Commonly used tools for this task include purchasing power parity (PPP), nominal benchmarks and inflation-adjusted trade-weighted indices. The latter have the advantage of relying upon commonly available international macroeconomic data, but they overlook microeconomic information that may offer additional insight into issues surrounding exchange-rate policy debates. Other efforts have utilized small samples of international product price comparisons to shed light on currency valuation questions. This paper develops one such tool by repeated sampling of prices charged for identical menu items sold at restaurant franchises in El Paso, Texas and Ciudad Juárez, Chihuahua. A battery of statistical tests indicates that the international currency value of the peso consistently differed from the exchange rate implied by the border region restaurant price ratios in 1997, 1998 and 1999.

Error Correction Exchange-Rate Modeling:

Evidence for Mexico

by Thomas M. Fullerton Jr., Miwa Hattori and Cuauhtémoc Calderón

A set of error correction models is proposed for the nominal exchange rate between the Mexican peso and the U.S. dollar. The basic theoretical frameworks utilize balance of payments and monetary constructs. Empirical estimation results are fairly weak for both specifications irrespective of the interest rate variable selected. Although dynamic simulation properties of the equations are acceptable, in no case do they generate levels of accuracy that exceed those associated with a random walk.

Transmission Mechanisms of the Monetary and Exchange Rate Policies at the Sectoral Level:

Evidence from Argentina

by Florencia Gabrielli and Elena Grubisic

In this paper we analyze the transmission mechanisms of changes in some relevant economic variables such as instruments of monetary policy, exchange rate and sectoral real outputs. The analysis is based on VAR models and the corresponding impulse-response functions. Two ways of disaggregation are used: one at the aggregate demand level and the other one with the different sectors that form the GDP (supply side sectors). We consider two periods separately, the 1980s decade and the 1990s decade. The main reason for using the data separately relies on the fact that the Argentine economy presents a very different behavior in each period, so it would not be appropriate to consider both periods as a unit. In the '80s, the closed economy presents a high inflation and also periods of hyperinflation practically with null growth rates. In the '90s, the economy experienced a high degree of openness with years of no inflation and positive real growth rates at the beginning followed by a recession period. We use quarterly data to estimate the different models, starting from 1980 until 2001.

Creditor Protection and Financial Cycles

by Arturo Galindo and Alejandro Micco

We develop a model in which the elasticity of credit to exogenous shocks depends on creditor rights regulations. We show that an increase in creditor protection reduces the elasticity of credit supply to exogenous shocks and, hence, the amplitude of the credit cycle. Using an extended set of a measure of creditor rights protection in the spirit of La Porta et al. (1998), we find that stricter creditor rights regulations not only increase the breadth of the credit market but also reduce the volatility of the credit cycle.

Does Financial Liberalization Improve the Allocation of Investment?

Micro Evidence from Developing Countries

by Arturo Galindo, Fabio Schiantarelli and Andrew Weiss

Has financial liberalization improved the efficiency with which investment funds are allocated to competing uses? In this paper, we address this question using firm-level panel data from 12 developing countries. We develop a summary index of the efficiency of investment allocation that measures whether investment funds are going to firms with a higher marginal return to capital and, if so, to what extent. We then examine the relationship between this index and various measures of financial liberalization. The results suggest that in the majority of cases, financial reform has led to an increase in the efficiency with which investment funds are allocated.

Competition and Educational Results:

Theory and Evidence for Chile

by Francisco Gallego

This paper presents a theoretical model and empirical estimations to evaluate the effects of competition on school quality. Empirical estimations, using roughly five thousand Chilean schools in the 1994–97 period and econometric techniques robust to endogeneity, support the theoretical model and show a positive and relevant effect of competition on the results of public-subsidized schools. The effects are bigger for the fraction of public-subsidized schools that are private, because they have incentives more directly related to academic performance.

The Golden Period for Growth in Chile:

Explanations and Forecasts

by Francisco Gallego and Norman Loayza

Economic growth in Chile since the mid-1980s has been remarkable for its high level and persistence. This paper explores the factors behind the high growth rates of the past 15 years and analyzes the extent to which they can be sustained in the future. The first part of the paper presents some stylized facts about growth in Chile. Taken together, they suggest that the jump in growth was driven by policies and macroeconomic conditions that affected the economy's overall productivity. The second part of the paper considers the large body of recent empirical growth literature to examine the extent to which a cross-country approach can explain Chile's growth performance. It formulates a basic regression model that contains the most popular variables in the growth literature and estimates it using techniques suited for dynamic models of panel data. The basic model allows us to explain about 45 percent of the change in the growth rate between 1970–85 and 1986–98, which was 4.74 percent. When we expand the basic model to include the quality of the political system and governance, the comprehensiveness and complementarity of policy reforms, and the availability of public services and infrastructure, we can explain 73 percent of the growth improvement. The last part of the paper starts the assessment of possible new growth sources for Chile by first projecting the country's growth rate for the next 10 years under various assumptions and second by proposing some areas with potentially large returns.

Mexico's Economic Integration with the U.S.:

How Strong Is It?

by Daniel Garces-Diaz

Mexico's economic ties to the United States have always been strong, and the 1994 free trade accord (NAFTA) was an important attempt to tighten them. I provide a new perspective about the links between the two economies by studying some variables from 1980 to 2000. I use cointegration and spectral analysis to

show that the Mexican GDP, its components (including government expenditure and imports) and real money balances were driven by U.S. economic activity and the bilateral real exchange rate alone. The tighter economic integration appears to have begun in the early 1980s.

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 first 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 semistructural 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 of 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.

Convergence in Living Standards Across States in Mexico

by Rodrigo García-Verdú

This paper addresses the issue of whether states in Mexico are converging to a common standard of living as measured by two key welfare indicators. Using the distribution dynamics approach pioneered by Quah (1993) to study income convergence, we analyze the distribution of the infant mortality rate and the adult literacy rate across Mexican states during the period 1940–2000. This approach allows us to analyze the intradistribution mobility of states as well as the long-run distribution of these indicators. Our results show that there is higher mobility across the distribution of literacy rates than infant mortality rates and that there is convergence to a common adult literacy rate among Mexican states but not so in the case of infant mortality rates. These results stand in contrast with our earlier findings that there is no convergence to a common per capita income level.

Income Dynamics Across States in Mexico: 1940–2000

by Rodrigo García-Verdú

This paper analyzes the dynamics of the distribution of income across Mexican states during the period 1940–2000 and the hypothesis of convergence to a common per capita income level. The approach used here exploits both the time-series and cross-section dimensions of the data by tracking the evolution over time of the entire income distribution across states. By estimating transition matrices for per capita GDP relative to the national average, we are able to analyze the intradistribution mobility of states. This then allows us to analyze the long-run income distribution by computing the invariant or ergodic distribution implied by the estimated transition matrices. Our results show there is low mobility across the distribution of relative income and that there is no convergence to a common per capita income level among Mexican states. There is no evidence, though, of the relative income distribution tending to a bimodal or multimodal distribution.

From the Deficit of Limits to the Limits of Deficit:

The Fiscal Policy of the Government of Fernando Henrique Cardoso, 1995–2002

by Fabil Giambiagi

The article analyzes the evolution of public accounts in Brazil in the two Fernando Henrique Cardoso administrations: 1995–98 and 1999–2002. The work emphasizes that to understand the dynamics of deficit and public debt, attitude of the authorities is as important as so-called structural reforms. Thus, the high deficit of the first administration (1995–98) is understood as the result of an expansionary policy, while the adjustment of 1999 is seen as proof of a commitment to fiscal austerity, which resulted in poorly financed public expenditures. This paper also shows the data of the different items of the fiscal result, highlights the importance of the once-and-for-all revenues for the reduction of imbalance, and calls attention to the dimension of several wealth adjustments that increased the net debt/GDP ratio. Two important messages remain: (1) The most relevant cause for the fiscal worsening during the first Cardoso administration was the deterioration of the primary result and not the increase in the interest burden, and (2) the total primary federal public expenditure grew in real terms in all eight years of the two administrations—with no exceptions—at a yearly average of 6 percent, more than doubling the average yearly GDP growth rate of 2.4 percent.

Lessons from Economic Research on the Role of the Private Sector in Education

by Pablo González

This paper presents the conceptual elements necessary to understand the economic role of the state and of the private sector in education. It describes the advantages and disadvantages of managing educational establishments from the private perspective as well as the public. It addresses the benefits and problems of competency and public financing through *vouchers*, which are strongly associated with the development of private activity. It also deals with arguments related to profit. The second part of the paper reviews the international empirical literature, which concerns the relative efficiency of the private sector and the effects of competency. It concludes that the results of these investigations are at times contradictory and rather difficult to interpret for public policy ends.

Regulation of Private Education

by Pablo González

This work describes theoretically the determining principles of supply and demand of private education and the mechanisms by which public policy influences the private-education sector. It examines the results of case studies developed in Argentina, Brazil, Colombia and Guatemala, emphasizing the recent developments of public policy that affect private activity in education as well as highlighting some regulatory problems.

Consumption Dynamics in Mexico:

An Analysis of Cointegration with Regime Shifts

by Jesús R. González García

This paper uses tests of stability for cointegrating vectors and models of cointegration with regime shifts to study the dynamics of private consumption in Mexico. The main result shows that the stabilization program implemented in Mexico at the end of 1987 produced a temporary but considerable shift in the income elasticity of consumption. Before the program, the long-run relationship between per capita income and consumption was characterized by the unitary elasticity that is commonly found in the empirical literature. However, the program induced a considerable change in regime and the elasticity increased about 25 percent in the period 1989–94. Later, when the financial crisis erupted at the beginning of 1995, the unitary elasticity was reestablished. With respect to the dynamics of private consumption in recent years, the results indicate that since 1995 the unitary long-run income

elasticity of consumption has been maintained. That is, there has been no consumption boom in recent years. This is so despite the fact that the growth of private consumption was 1.7 percentage points higher than GDP growth in 2000 and 3.7 percentage points higher in 2001—a year in which private consumption was the only component of aggregate demand that showed a positive contribution to GDP growth. In sum, this paper shows that regime shifts in long-run relationships may be identified and evaluated using cointegration models allowing regime shifts.

Globalization, Poverty and Equality

by Fernando González Laxe, J. Venancio Salcines Cristal and Esther A. Barros Campello

Kuznets (1955) maintained that a rise of a country's Gini index does not necessarily imply a deterioration of the standard of living for its citizens. With the aim of questioning this hypothesis, the paper analyzes the evolution of private consumption in GNP and private consumption per capita in eight Latin American countries. The countries under consideration are those whose inequality levels have increased. If Kuznets' hypothesis (1995) were fulfilled, should national private consumption rate over GNP be reduced and national rates of saving be increased? In addressing this question, the work analyzes the evolution of a set of indicators of development for the eight Latin American countries. We find two differentiated behavior guidelines, the first one represented by Guatemala, Panama, Peru, Dominican Republic and Venezuela and the other represented by Chile, Mexico and Brazil.

The Distribution of Income in Uruguay:

The Effects of Economic and Institutional Reforms

by Carlos Gradín and Máximo Rossi

This paper is concerned with distributive aspects of crucial economic and institutional reforms experienced by income sources in Uruguay after the late 1980s. These reforms involved both the labor market and the pension system. We provide empirical evidence about the different way they affected the distribution of income. The distribution of income across all earners at the end of the '80s exhibited two well-distinguished poles, each associated with one income source. This bimodality faded with time during the 1990s due to the general improvement in retirement pensions, eliminating polarization by income sources. For the same period, we find in the case of labor earnings a net transfer of population mass from the middle of the distribution to both extremes, which results in increasing polarization within this income source.

The Use of PNADs for Rural Areas

by Mauro Eduardo Del Grossi and José Graziano da Silva

The objective of this work is to examine the current use of the National Household Sample Survey (PNADs) for rural areas in Brazil. The text highlights the instrumental power that only the survey has for the analysis of the new emergent rurality in Brazil. While pointing out the positive aspects and the limitations of the PNAD database, the work explores important concepts such as the delimitation of the rural areas, the sample coverage for the rural areas, the concept of labor and work, and the reference period. The work concludes with recommendations for improvement. (Discussion paper no. 874)

Natural Resources and Economic Growth:

The Role of Investment

by Thorvaldur Gylfason and Gylfi Zoega

This paper begins with a brief review of empirical evidence, which indicates that since 1965, economic growth has varied inversely with natural resource abundance or intensity across countries. The paper proposes a new linkage between natural resources and economic growth, through saving and investment. When the share of output that accrues to the owners of natural resources rises, the demand for capital falls, and this leads to lower real interest rates and less rapid growth. Moreover, the analysis shows that the discrepancy between the privately and socially optimal rates of growth increases with the natural capital share. Empirical evidence from 85 countries from 1965 to 1998 suggests that natural capital may on average crowd out physical as well as human capital, thereby inhibiting economic growth. The results also suggest that across countries, heavy dependence on natural resources may hurt saving and investment indirectly by slowing down the development of the financial system.

Monetary Union:

European Lessons, Latin American Prospects

by Eduard Hochreiter, Klaus Schmidt-Hebbel and Georg Winckler

In this paper, selective issues of long-run sustainability of monetary unions are analyzed. Using theoretical insights and the experience of EMU, we argue that empirical evidence on OCA criteria for EMU suggests that benefits for the countries participating in EMU outweigh costs by a relatively large margin although by varying degrees from country to country. We also conclude that the Stability Pact is a sufficient but not a necessary condition for EMU to succeed and that EMU has been driven by political considerations. A sound financial sector is a precondition. With regard

to lessons to be drawn for Latin America and the Caribbean, we first find that there has been a strong push toward the floating cum inflation-targeting corner and to regional trade integration. Moreover, it seems that in contrast to EMU, the benefit–cost balance of a move to a monetary union is much less favorable in Latin America and the Caribbean and, most important, missing the political dimension.

Wage, Dispersion and the Stock Market:

Implications of Technological Change in a Matching Model Framework

by Victor Daniel Iajya

Income inequality has been one of the most popular problems that economists have attempted to explain. Accordingly, many theories have been developed. Since labor income is the main (and usually the only) source of household income, exploring the dispersion of wages is pivotal in explaining income inequality. The main purpose of this paper is to test one possible explanation for an increase in wage dispersion. In a labor market with matching costs, after the arrival of a new technology, the gradual adoption of it will result in a temporary increase in wage dispersion among identical workers. This gradual adoption will also make the dispersion of firms' market values follow the same pattern. This paper shows that the implications of the model seem to be confirmed by the U.S. data in the past two decades.

Judicial Independence in Unstable Environments, Argentina 1935–1998

by Matías Iaryczower, Pablo T. Spiller and Mariano Tommasi

Argentina's constitution and electoral rules promote a fragmented polity. It is in such environments that independent judiciaries develop. However, most analysts do not consider the Argentina judiciary as independent. In this paper, we attempt to explain this contradiction by showing that this perception is inappropriate. We develop a test of the hypothesis that the judiciary is independent by empirically examining the political incentives faced by individual justices in their decisionmaking. Our results show an often-defiant court subject to constraints. Our measure of defiance is the probability of a nonaligned justice voting against the government. We find that judicial decisionmaking was strategic. The probability of voting against the government falls the stronger the control of the president over the legislature, but it increases the less aligned the justice is with the president. Thus, politics *and* process matter in understanding Argentina's Supreme Court decisions. Institutions matter in Argentina as well.

Regulations in the Competitive Electricity Market

by Mario Ibarburu

The aim of this paper is to describe the degrees of freedom, and hence the alternatives faced, in designing electrical markets in general. The analysis is modified so as to study the Argentinean and Brazilian cases, with special emphasis on the expected outcomes for Uruguay. The comparative analysis of the three countries is intended to capture the different microeconomic puzzles to be solved in each case and to identify the diverse regulatory frameworks in which solutions can be found. This is accomplished by using some general concepts related to competition in the energy markets, both the ones in which generation takes place and those in which commercialization occurs.

Value at Risk:

Theory and Applications

by Christian A. Johnson

This article describes the Value at Risk concept, popularized during the past 10 or 15 years, presenting applications on stocks, bonds, interest and exchange-rate forward contracts and swaps. We applied asymmetric GARCH methodologies over Chilean stock indexes to enhance our risk evaluation performance. Liquidity-adjusted Value at Risk methodologies for individual and multiple asset portfolios are discussed. To conclude, we applied this methodology to evaluate the performance in three Chilean financial institutions.

Amateur Legislators—Professional Politicians:

The Consequences of Party-Centered Electoral Rules in a Federal System

by Mark P. Jones, Sebastian Saiegh, Pablo T. Spiller and Mariano Tommasi

The Argentine congress plays a limited role in the production of public policy and is a relatively ineffective check on the Argentine executive branch. We argue this is the result of incentives created by several features of Argentine political institutions. In this article we emphasize the role of the country's electoral rules, which place the legislator re-election decision not in the hands of the voters but rather in the hands of the provincial governor/party boss(es). These rules limit legislators' ability to develop a professional legislative career and reduce their incentives to specialize and to develop strong legislative institutions. We provide empirical evidence of the short duration of congressional careers, the province-based nature of Argentine political careers and the lack of specialization among legislators resulting from the above-mentioned institutional incentives.

Keeping a Seat in Congress:

Provincial Party Bosses and the Survival of Argentine Legislators

by Mark P. Jones, Pablo T. Spiller and Mariano Tommasi

What effect does provincial-level politics have on the ability of Argentine legislators to survive in office? We develop a game-theoretic model of incumbent renomination and derive two related hypotheses on the variation in the time a national deputy will survive in office. We argue that the brevity of Argentine congressional careers can be explained by the disproportional power held by local party leaders vis-à-vis incumbent legislators. Drawing upon a novel data set on the composition of the Argentine Chamber of Deputies between 1983 and 1997, our expectations are tested through censored Weibull regression. Our hypotheses are supported by the analysis. We find the probability of staying in the national congress decreases with the passage of time. The hazard is mitigated if a legislator occupies a leadership position in the legislature.

Argentina's Recovery and Excess Capital Shallowing of the 1990s

by Finn E. Kydland and Carlos E. J. M. Zarazaga

The paper examines Argentina's economic expansion in the 1990s through the lens of a very parsimonious neoclassical growth model. The main finding is that investment remained considerably weaker than what the model would have predicted. The resulting excessive "capital shallowing" could be regarded as a weakness of the rapid economic growth of the 1990s that may have played a role in Argentina's ultimate inability to escape the crisis that started to unfold toward the end of that decade.

The Exchange Rate's Pass-Through:

An Analysis for the Costa Rican Economy from 1991 to 2001

by Jorge León Murillo, Ana Patricia Morera Martinelli and Welmer Ramos González

This paper estimates a coefficient of pass-through for Costa Rica and tries to determine the importance of factors identified in several empirical studies as probable determinants (GDP gap, real exchange rate deviation from equilibrium, economy openness and inflationary lag). The coefficient is estimated by OLS. To estimate the dynamic between exchange rate and inflation rate, a VAR analysis is conducted. In the short run, the pass-through coefficient is 16 percent with two months of lag. Additionally, the importance of inflationary inertia is confirmed. However, in a long-run analysis, a pass-through coefficient of 55 percent was found. The dynamic analysis shows that this process takes about 10 months, with an important increase in the fifth month. Finally, the study of the determinants of this coefficient shows that the most important effect is the misalignment of the real exchange rate. Additionally, the GDP gap and the economy openness have a significant impact.

Financial Development, Financial Fragility and Growth

by Norman Loayza and Romaine Ranciere

This paper attempts to reconcile the apparent contradiction between two strands of the literature on the effects of financial intermediation on economic activity. On the one hand, the empirical growth literature finds a positive effect of financial depth as measured by, for instance, private domestic credit and liquid liabilities (for example, Levine, Loayza and Beck 2000). On the other hand, the banking and currency crisis literature finds that monetary aggregates, such as domestic credit, are among the best predictors of crises and their related economic downturns (for example, Kaminski and Reinhart 1999). This paper starts by illustrating these opposing effects by, first, analyzing the dynamics of output growth and financial intermediation around systemic banking crises and, second, showing that the growth-enhancing effects of financial depth are weaker in countries that experienced such crises. After these illustrative exercises, the paper attempts an empirical explanation of the apparently opposing effects of financial intermediation. This explanation is based on a distinction between transitory and trend effects of domestic credit aggregates on economic growth. Working with a panel of cross-country and time-series observations, the paper estimates an encompassing model of long- and short-run effects, following Pesaran, Shin and Smith's (1999) Pooled Mean Group Estimator. The main result of the paper is that a positive long-run relationship between financial intermediation and output growth coexists with a mostly negative short-run relationship.

A Test for the Existence of Bubbles in the Brazilian Exchange Rate

by Wilfredo L. Maldonado, Octávio Augusto Fontes Tourinho and Marcos Valli

The Brazilian exchange rate suffered strong fluctuations in 2001. They resulted from the Argentina crisis and the energy crisis, which influenced expectations about the future value of this variable. However, the fundamentals of the economy did not vary significantly. In this paper, we use a regime-switching regression model to test the existence of bubbles in the Brazilian exchange rate. We consider the floating exchange rate period from February 1999 to February 2002 to capture speculative bubbles since in previous years the exchange rate bands avoided the possibility of speculation. We considered three structural models providing fundamental exchange rates: The first one uses the hypothesis of Purchasing Power Parity (PPP), which claims that the fundamental exchange rate must equalize the purchasing parity in Brazil and abroad. The second model uses a result from international trade: the fundamental exchange rate must equilibrate the external balance of the country. Finally the third model improves the PPP hypothesis allowing that it only holds in the long run and that the

exchange rate must satisfy the nominal uncovered interest parity. We conclude that the PPP model and the third model detect that type of speculation in the economy.

Innovation and Growth in Resource-Rich Countries

by W. F. Maloney

Numerous resource-rich economies have been far more dynamic than those in Latin America, and there is little long-term evidence that natural-resource-abundant countries generally underperform. But, two factors historically distinguish Latin America from the more successful experiences of Scandinavia or Australia. First, deficient national "learning" or "innovative" capacity arising from low investment in human capital and scientific infrastructure led to weak ability to innovate or even take advantage of technological advances abroad. Second, the period of inward-looking industrialization created a sector whose growth depended on artificial monopoly rents rather than the quasi-rents arising from technological adoption and, at the same time, undermined resource-intensive sectors that had the potential for dynamic growth.

Capital Adequacy and Credit Risk in Bank Loan Portfolios

by Javier Márquez Diez-Canedo

The search for an explicit, credit-risk-related rule for capital adequacy is one of the most important issues for regulators and risk managers alike. Current credit-risk methodologies rely extensively on numerical methods to obtain the portfolio loss distribution so that the determination of capital requirements and single obligor limits is an empirical process that requires considerable computational effort. The measurement of risk concentration in loan portfolios and the identification of segments that exhibit excessive concentration is a problem that has remained elusive despite its recognized importance. Based on the default probabilities of the loans and their covariances, a default model is developed that obtains a functional form for the loss distribution, assuming that it can be characterized by two parameters. The mean-variance representation of Value at Risk (VaR) leads to a lower bound on the banks' capitalization ratio, and the resulting inequality establishes capital adequacy. The Herfindahl–Hirshman index emerges as a measure of concentration, providing a precise quantification of how concentration contributes to overall credit risk of the portfolio. Two new properties of the index are obtained that relate single obligor limits to concentration along different segments of the portfolio so as to ensure capital adequacy. Numerical exercises performed to date on real portfolios provide results comparable to those obtained using other methodologies at a considerable reduction in computational effort. Throughout the paper, the implications for risk management and regulation are discussed.

Outgrowing Resource Dependence:

Theory and Evidence

by Will Martin

Many policymakers are concerned about dependence on resource exports. This paper examines three changes that reduce this dependence: (1) accumulation of capital and skills; (2) changes in protection policy, particularly reductions in the burden of protection on exporters; and (3) differential rates of technical change. Developing countries as a group have made enormous progress in diversifying their exports away from resources in recent decades, a development that appears to have been aided by accumulation of capital and skills and by dramatic reductions in the cost of protection to exporters but slowed down by technological advances that favored agriculture.

The Exchange Rate Regime and the Composition of Corporate Debt:

The Mexican Experience

by Lorenza Martínez Trigueros and Alejandro Werner

In December 1994, Mexico abandoned its fixed exchange-rate regime for a flexible one. This work analyzes the effects of that change on the composition of corporate debt. In particular, we examine the effect the fixed-exchange-rate regime had on the overindebtedness denominated in foreign currency, which was due to the government's implicit guarantee against any exchange-rate devaluation. Under a predetermined exchange-rate regime, businesses do not completely internalize their exchange-rate risk, and they will tend to incur exchange-rate disequilibrium on their balance sheets. With this in mind, this work examines the principal determinants of indebtedness in foreign currency that the businesses listed on the Mexican Stock Exchange (la Bolsa Mexicana de Valores) incurred during 1992–2000. The goal is to see if the exchange-rate disequilibrium on financial balances decreased once the flexible exchange-rate regime was adopted. The results support the thesis that the flexible exchange-rate regime reduces exchange-rate exposure of companies.

Challenges of Economic Growth:

An Overview

by Carlos Massad A.

This work summarizes the current literature on economic growth and critically discusses the main theoretical and empirical insights provided by papers presented at the November 2001 Central Bank of Chile conference entitled “The Challenges of Economic Growth.”

Macroeconomic Econometric Forecasting Models in Argentina

by George McCandless, Tomás E. Murphy and Florencia Gabrielli

This paper attempts to set an analytical framework to both generate and evaluate macroeconomic forecasts. The motivation comes from the usefulness of forecasting models for policy analysis and the fact that the practice of macroeconomic forecasting in Argentina has been largely overlooked mainly due to macroeconomic instability and the lack of reliable information. Posing its ultimate aim in obtaining accurate predictions for a group of economic variables, this study assesses the different performances of various statistical models in this matter. Therefore, three macroeconomic variables (GDP, imports and investment) are forecasted using two different techniques: (1) the traditional methodology popularized by Box and Jenkins—the ARIMA model; and (2) the autoregressive VAR model. Once the forecasts are obtained, an evaluation of their accuracy is carried out.

Determining the Causes of Bank Runs in Argentina During the Crisis of 2001

by George McCandless, Josefina Rouillet and Florencia Gabrielli

In this paper, we use monthly cross-section information on Argentine banks to try to explain the variation in deposits during the 2001 crisis. The variables used relate to the condition of the bank, whether it is public or private, loan and deposit interest rates for each bank as well as variables relating to the general condition of the economy. We observe how the bank-specific variables explain the change in deposits as the crisis progresses. If neither bank-specific information nor information about the general economic conditions can explain a sufficient portion of the variation in deposits, this provides evidence in favor of a self-fulfilling theory. We use our empirical results to attempt to determine whether the bank run is best explained by a self-fulfilling prophecy theory or if fundamentals matter.

Privatization of the Sanitation Sector in Brazil

by Marina Figueira de Mello

This paper examines four case studies of water sector concessions to the private sector in Brazil. The analysis comprises mainly the pricing policies, the impact of the auction modeling on future tariffs and regulation practices. The main conclusions are that the pricing policies are inefficient and unfair and should be completely remodeled before the privatization program proceeds. The auction models affect future tariffs and should focus on the lowest price. The regulation framework is incomplete, unstable and unclear.

Coping with Chile's External Vulnerability:

A Financial Problem

by Verónica Mies

With traditional domestic imbalances long under control, the Chilean business cycle is driven by external shocks. Most important, Chile's external vulnerability is primarily a financial problem. A decline in the Chilean terms-of-trade, for example, is associated with a decline in real GDP that is many times larger than one would predict in the presence of perfect financial markets. The financial nature of this excess sensitivity has two central dimensions: a sharp contraction in Chile's access to international financial markets when it needs it the most; and an inefficient reallocation of this scarce access across domestic borrowers during external crises. In this paper I characterize this financial mechanism and argue that Chile's aggregate volatility can be reduced significantly by fostering the private sector's development of financial instruments that are contingent on Chile's main external shocks. As a first step, the Central Bank or IFIs could issue a benchmark instrument contingent on these shocks. I also advocate a counter-cyclical monetary policy but mainly for incentive—that is, as a substitute for taxes on capital inflows and equivalent measures—rather than for ex-post liquidity purposes.

Wage Inequality in Developing Countries:

Market Forces or Government Intervention

by Daniel Miles and Máximo Rossi

Wage dispersion has increased significantly in developing countries, despite the openness to trade of these economies. Research on this issue, using approaches valid under the assumption of conventional demand–supply competitive framework, conclude that this observed increase in wage inequality is a consequence of an increase in skills premium. In this paper, we show that this conclusion could be biased if government intervention is not taken into account. Here we find that in Uruguay most of the increase in wage dispersion could be explained by a significant increase in public wages and a decrease of minimum wage. In addition, we observe that the impact of these interventions is different depending on the degree of concentration of population and economic activity.

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 a vector autoregressive (VAR) estimation, it compares three different periods: moderately increasing inflation (1975–85), high inflation (1985–94) 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 the 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.

Regulation, Incentives and Teacher Remunerations in Chile

by Alejandra Mizala and Pilar Romaguera

This paper reviews the current work regulations for teachers, taking into account the differences among the various types of educational establishments. The work also characterizes teachers according to their education, age and socioeconomic level, considering elements such as job satisfaction and teachers' evaluations of their own working conditions. Indicators of teaching performance are estimated, and the performance is linked with salaries. The work briefly describes the national system of evaluation of teaching performance (SNED) and analyzes its role as an instrument, which incorporates monetary incentives.

Federalism and State Debt in Brazil

by Mônica Mora de Araujo de Couto e Silva

The federalism, introduced in Brazil by the Constitution of 1891, was based on the cession of power from the central government to state governments. The resultant specificity of Brazilian federalism has affected intergovernmental relationships. This paper discusses the role of state debt in Brazilian federalism since the decade of the 1960s. The work analyzes the state debt process and its ramifications, particularly in light of the Fiscal and Finance Restructuring Program and the Fiscal Responsibility Law.

The Economic Effects of Unions in Latin America:

Teachers' Unions and Education in Argentina

by M. Victoria Murillo, Lucas Ronconi, Juan Sanguinetti and Mariano Tommasi

This paper constitutes a first cut at looking at the effects of trade unions in the education sector in Argentina. Even though we cannot draw strong conclusions, much less recommendations, we have provided a substantial amount of new information, and we have found useful preliminary results on some of the channels of union influence on the performance of this crucial sector.

We find evidence that those provinces where teacher unionism is fragmented, union density is higher and the political relationship with the governor is more conflictive have more strikes (fewer class days) and, consequently, students perform worse. We also find that union strength is related to the decision of tenuring teachers. And student learning improves when the teacher in front of the class is a tenured one. But since tenuring also seems to increase absenteeism, it might reduce the actual number of tenured teachers in the classroom, with uncertain net effect on student learning.

Credit Information Sharing Mechanisms in Mexico:

Evaluation, Perspectives and the Effects of Firms' Access to Banking Credit

by José Luis Negrín

This paper describes the evolution of the various information sharing mechanisms that have emerged in Mexico; it studies their evolution, regulation and market structure. Sharing mechanisms palliates the effects of asymmetric information in the credit industry. There is a tight relationship between the development of the credit market and that of the mechanisms to share information. We show that in Mexico sharing information has been limited because credit has also played a limited role in the economy. The fast expansion of credit in the early 1990s, at a time when there was only a limited-coverage Public Registry of Credit Information (PRCI), made clear the need to develop mechanisms to share information. Hence, the regulation issued afterward attempted to promote the entry of private credit bureaus. However, only one of them, the Credit Bureau (CB), has remained in the market. This firm is owned by all Mexican commercial banks, and therefore, it is the recipient of their information and their demand for reports. It has displaced the PRCI and other potential competitors. Despite that market structure, we show that the quality of the information provided by the CB is better than in the days before the regulation. We also show that wider information sharing has resulted in less access to banking credit for small and medium-size firms.

Quality of Credit Card Users in Mexico

by José Luis Negrín and Clara de la Cerda

The 1994–95 Mexican banking crisis resulted in a reduction in credit card use, the formation of credit institutions and the adoption of regulations devoted to reducing credit risk. With the purpose of determining the evolution of the quality of credit card users, this work examines the determinants of credit card use at the household level, applying a probit model to the National Survey of Household Income and Spending (1994, 1996, 1998 and 2000). Three fundamental results are derived from the study. First, various indicators show a deterioration in 1996 of the quality of

credit card users but an eventual improvement so that by the year 2000 the quality was superior to the quality of those registered in 1994. This signifies that the institutions and the regulations adopted as a result of the crisis and the credit contraction had the desired result. Second, the factors identified as the principal determinants of credit card use were income, geographic location, automobile and home ownership, age and education, with education being very relevant. In contrast, marital status, gender and variables related to work were not as relevant. Finally, the proportion of households with high qualification who are not credit card users has increased. This is due to credit card companies being more cautious in granting cards or to potential users of good quality opting not to use them.

Cooperation and Conflict:

A Study of the Footwear Industrial Complex in Brazil

by Eduardo Garutti Noronha and Lenita Maria Turchi

This paper presents the results of an investigation, which constitutes part of a larger research project, which deals with commodity chains and industrial modernization in Brazil. It addresses two main areas related to public policy: industrial development and employment. The empirical investigation was conducted in the three main footwear production clusters in Brazil. Two main assumptions guided the investigation. First, organization analysis (entrepreneur associations, labor unions, etc.) reveals both the patterns and the rationale for cooperation or conflict in the footwear industrial complex. Second, cooperation among the links in the chain (including labor–capital cooperation) is a key factor in understanding employment creation and industrial success.

Non-Linear Approach to the Relationship Between Inflation and Growth:

Panel Data Evidence for Latin America

by Marcelo Ochoa and Walter Orellana

There is a general agreement that high inflation rates above 100 percent a year have a detrimental effect on output growth. However, there is less consensus of opinion that moderate inflation rates can inhibit growth. This paper reexamines the nature of the relationship between inflation and growth for a panel data of nine Latin American countries during 1980–2000. This document explores, in particular, the possibility that the function that relates economic growth to inflation contains a structural break. Using threshold regression methods for nondynamic panels and overcoming some pitfalls found in past empirical work, the results confirm the existence of nonlinear effects of inflation on economic growth. The threshold is estimated to occur when the inflation rate reaches 17 percent. The coefficients found indicate that at inflation rates above the threshold, doubling the rate of inflation will reduce the rate of growth by 2.1 percentage points. Nevertheless, when the inflation rate is below 17 percent, the esti-

mated effect of inflation turns out to be positive. Additionally, the empirical evidence presented examines the connection between inflation volatility and growth. The results suggest that inflation volatility is negatively correlated with growth only at one-digit inflation rates. Besides, the robustness analysis finds that the coefficients estimated are stable across various samples; particularly, they are not sensitive to the inclusion of high-inflation observations.

Implicit Volatility and Anticipation of Events of Stress

by Frederico Pechir Gomes

This paper aims at verifying whether, for the Brazilian markets, option-implied volatility contains information regarding large-magnitude returns in the future. A practical tool was developed to capture the information provided by implied volatility. Statistical evidence showed that implied volatility in Telebras and dollar–real options contained useful information regarding stress events in the future. Depending on the implied volatility estimate used in the analysis, the information provided by Telebras options was captured by a practical warning system at a 92 percent level of confidence. In the case of implied volatility in dollar–real options, however, the practical tool proved to be inefficient. False signals were issued and stress events in the dollar–real market were not previously detected. (Working paper no. 38)

Prices and Competition in the Brazilian Electricity Sector in Transition:

Regulation and the Market

by Ruderico Pimentel

In the past two decades, the world has witnessed changes in the organization of the electricity sector, beginning with the pioneering experiences in Chile and the United Kingdom. These changes had in common the introduction of elements of competition and the transference of state-owned companies to private owners, which took place in a sector that previously had been totally regulated. This process has also reached Brazil, which is experiencing a complete redesign of its institutional structure. This work highlights some of the motivations and common elements of these transformations. It also concentrates on the options between regulation and the market, particularly as it concerns the electricity sector in Brazil. Both of these options are subject to imperfections and need to be sufficiently discussed and adequately reformulated.

Do Common Cycles Exist in Latin American Countries?

by Jose G. Pineda and Ana Maria Cerro

This paper intends to measure and explain to what extent Latin American countries' growth cycles have experienced comovement in the past 40 years. It analyzes short-run dynamics by looking at the correlation matrix and coincident phases in the cyclical part of the series using the Hodrick and Prescott filter. The next methodology investigates jointly trend and cycle dynamics in these countries' real GDP using time series techniques that exploit common features in the series. The methodology used is described in Vahid and Engle (1993). Next, we use a structural VAR approach developed by Blanchard and Quah (1989) and followed by Bayoumi and Eichengreen (1994) to identify aggregate supply and demand disturbances. The results show a great dispersion among cyclical correlation between the 11 Latin American countries analyzed, in short lasting cycles. They show that the most representative countries of the region—Argentina, Brazil and Mexico—show a very low correlation. For the next methodology, we identify long-lasting cycles of approximately 10 years. It seems as if those long-lasting cycles are common to Latin American countries. Also, the correlation among countries in different decades has changed a lot. From the structural VAR approach, the results imply a very low degree of comovement among the shocks affecting these economies. There exist important differences regarding the speed of adjustment and the excess volatility of demand shocks. Any process of integration (especially monetary) among the Latin American countries needs more policy coordination prior to any attempt to go further in an economic integration process.

The Use of PNADS for Analysis of Migratory Phenomenon:

Possibilities and Methodological Challenges

by José Marcos Pinto da Cunha

In the 1990s, after more than a decade of data collection, PNAD's basic questionnaire included systematic data collection on migration. Scholars, and especially demographers, have seldom explored this data source. This paper is part of a major evaluation project of PNAD in the 1990s. It presents the potentials of this data source for migration research and discusses ways to improve data collection. To assess the quality of PNAD's migration estimates, data on volumes and flows were comparable to the ones obtained from the 1991 Demographic Census and the 1996 General Census Count. The results demonstrate that PNAD is a reliable and rich data source to study migration and should be more widely used. This effort would enable scholars to develop novel and creative means of data analysis techniques and improve current instruments for data collection on migration.

The Policy of Minimum Price Fixing and the Agricultural Development of Brazil's Center-West Region

by Gervásio Castro de Rezende

This paper discusses the policy of minimum price setting for the Center-West. The policy, which was adopted by the government in the 1980s and the first half of the 1990s, did not take into consideration the higher transportation costs between this region and the importing regions, vis-à-vis the other exporting regions. This paper initially argues that the policy made it more difficult to achieve market integration between the Center-West and the net importing regions. The paper presents an analysis both of market integration and of the degree of intensity of the policy at varying times. In addition, the paper presents new data on stocks formed in this period as a result of this policy. The paper addresses the argument that despite having favored the growth of agricultural production in the Center-West in the short run, the implications of this policy were negative in the long run for the agricultural development of the Center-West. It actually postponed solutions to problems of infrastructure, warehousing and financing of the marketing of crops. Keeping grain prices high in the Center-West prevented grain-consuming industries from migrating to the region.

Determinants of the Brazilian Spread:

A Structural Approach

by Katia Rocha, Ajax R. B. Moreira and Ricardo Magalhães

The high interest rates that Brazil pays are a limitation to growth. What are the motives for such high rates? We assume that borrowers always search for the lowest rates. Why does the market demand such high rates for external Brazilian financing? Is there anything that justifies these rates? This paper tries to respond to these questions utilizing a structural approach of analysis of credit risk. The object of the study is to determine a structural model for the Brazilian spread with regard to the function of observed macroeconomic variables. A desired model is not only able to explain what macroeconomic variables influence the spread but also how changes in the fundamentals modify the level of the spread required in the international market. The model serves as an orientation for economic and monetary policy. We measure the spread or the Brazilian sovereign risk premium by comparing the difference between the implicit rates of the prices of the C-bond and the rates of U.S. treasuries of the same duration. We chose the C-bond because of its liquidity, its wide acceptance and its lack of association with country credit risk. We found that the high-risk premium reflects investors' negative perceptions, which can be attributed to the 1986 moratorium. (Working paper no. 890)

The Deposit Rate Adjustment Speed in Mexican Banks:

An Estimation and Strategic Clustering

by Francisco E. Ron-Delgado

Through cointegration and error correction techniques, the existence of a balanced relationship between interest rates on over-the-counter bank deposits and wholesale rates can be proven. We can also estimate the average adjustment speed between both prices (AAS), assuming symmetrical and asymmetrical movements. Finally, the application of multivariate cluster analysis methods offers a classification of the credit institutions in Mexico for the 1989–94 period, prior to the outbreak of the crisis, and for a second period that includes the subsequent years, until June 1998. The estimate is done for each of the banks of a sampling of 15 institutions. This work proves, for the majority of institutions in force during each period, the existence of a cointegrating vector between retail and wholesale rates. The average symmetrical adjustment speeds are estimated between both variables for each bank, with a notable increase when compared before and after the outbreak of the crisis. This makes the average adjustment speeds asymmetrical, which were less common in their verification but consistent with the symmetrical movements, since the increased adjustments reduced the necessary time after the crisis in comparison with previous years while decreased adjustments remained the same. The classification obtained is conceptually acceptable to us, according to known characteristics of the national banking system and certain other characteristics of each credit institution.

Dynamic Adjustment and Equilibrium Between Industrial Production and Stock-Exchange Activity in Mexico

by Francisco E. Ron-Delgado

This article contributes to the theoretical discussion on whether the development of the financial system and the securities market, in particular, exerts an effect on the level of productive activity. There is a brief review of the different positions within this theoretical debate. Econometric procedures and procedures from multivariate statistical analysis are used, particularly through techniques of cointegration and equilibrium correction models. Two hypotheses are contrasted: (1) The level of development of the securities market exerts a positive effect on the level of economic growth; (2) The price index and prices on the Mexican stock exchange and the value of industrial production maintain a relationship of equilibrium in the long term, and the first can be an effective predictor of the second.

Links Between X-Efficiency and Overdue Payments in Credit Portfolios of Mexican Banks:

A Non-Causality Granger Approach

by Francisco E. Ron-Delgado

Operative efficiency and the quality of credit portfolios, measured by the level of overdue payments, are two basic concepts used in the analysis of any banking institution. Implementing strict control over the credit process helps to improve the efficiency of any banking institution. At the same time, if a bank operates efficiently, it will most likely be easier to meet international standards in the management of its credit portfolio. This article confirms some of the causal relationships between efficiency and the index of overdue payments for a sample of 14 credit institutions in the Mexican market studied on a quarterly basis between December 1994 and June 1999. The estimation, based on a procedure that uses a flexible Fourier type function, allows us to affirm that, on average, the selected banks operated during this period with an efficiency level rated at 82.7 percent. Also pointed out is the reciprocal relationship between the index of overdue payments and efficiency. Although the banks' cost efficiency has recently improved, the index of bad debt portfolios continues to grow due to structural factors. In addition, it is also confirmed that when the index of overdue payments increases, efficiency is reduced. This can be explained by the elevation of costs inherent in the follow-up and recovery of portfolios, as well as by the introduction of precautionary measures imposed by authorities.

Rational Herding Behavior Hypothesis in the Mexican Stock Exchange

by Francisco E. Ron-Delgado

If a market has obstacles to information flow, it will be less efficient. In such a financial market, some investors will prefer to follow other participants without attention to their self-information because they think their information is not complete. Following the pattern of other investor leaders is the rational basis for herding behavior. The present research moves into two planes to check the possible existence of the herding phenomena in the Mexican stock market. First, we consider the case of the Common Mutual Funds. Second, we use a rational herding under a global (or international) approach for 16 emerging markets, including Mexico from 1994 to 1999, taking into account the Calvo and Mendoza (1999) model. Our results demonstrate herding behavior in Mexico's common mutual funds market. The results suggest that the more reduced and concentrated market segments have a deeper tendency to follow this conduct. At the same time, we verify that the majority of the herding transactions were selling operations in the following sectors: commerce, building and manufacturing. The buying herding appears in financial services, communications, conglomerates and mining. The tests for rational

herding among emerging markets suggest domestic origins in the cases of Peru, Venezuela, Mexico, Chile and Argentina, whereas in the cases of Thailand, Brazil and Indonesia, global considerations dominate.

Wholesale and Retail Interest Rates in the Mexican Banking System:

Its Equilibrium Relationship and Adjustment Velocity

by Francisco E. Ron-Delgado

This paper attempts to determine the level of rigidity between retail and wholesale interest rates of assets and liabilities by examining the long-term equilibrium relationship between the two types of rates. Through the use of cointegration techniques and correction error mechanisms, the work looks at symmetric or asymmetric adjustments between the interest rates. The working hypothesis is compared over three different periods: previous to bank nationalization (1980–82); the period of nationalized banks (1982–89); and the first years of liberalization and banking-sector opening and liberalization (1989–97). The study tests the hypothesis that retail interest rates maintain a long-term equilibrium relationship with wholesale rates. During most of the time periods considered, the velocity of symmetrical adjustment is lower for liability rates than for asset rates with the exception of the recent period of reprivatization. Although not in all time periods, asymmetric adjustments were detected in asset rates, liability rates or in both rates.

Reducing the Asymmetry of Information through the Comparison of the Relative Efficiency of Several Regional Monopolies

by M. Rossi and C. A. Ruzzier

Following the process initiated by Chile in the early 1980s, most countries in South America have undergone deep transformations in their electric industries. In this new playing field, the comparison of the relative efficiency of several regional monopolies seems to be a potentially valuable tool to reduce the asymmetry of information that is involved in the regulator–firm relationship. However, to be useful in the regulatory process, production frontier estimates require a broad set of comparable firms and detailed information about them. This availability of data, although a necessary condition, is far from sufficient. One must also count on adequate techniques. In this paper we carry out an efficiency analysis in the electricity distribution sector in South America using different techniques, stating the conditions under which they become a useful tool in crafting an efficient regulation of the firms in that sector. The paper underscores the importance of conducting a consistency analysis whenever using efficiency measures in applied regulation.

Monetary Policy During Brazil's Real Plan:

Estimating the Central Bank's Reaction Function

by Maria José S. Salgado, Márcio G. P. Garcia and Marcelo C. Medeiros

This paper uses a Threshold Autoregressive (TAR) model with exogenous variables to explain a change in regime in Brazilian nominal interest rates. By using an indicator of currency crises, which is chosen endogenously, the model tries to explain the difference in the dynamics of nominal interest rates during and out of a currency crises. The paper then compares the performance of the nonlinear model to a modified Taylor Rule adjusted to Brazilian interest rates and shows that the former performs considerably better than the latter.

Investment by Manufacturing Businesses and the Impact of Interest Rates

by Oscar Sánchez

This work studies the effect of interest rate changes on investment spending by manufacturing businesses in Mexico. To conduct the analysis, the paper considers the role that credit market imperfection has had on the conducting of monetary policy in Mexico. This is accomplished through the estimation of investment functions based on standard methodology, where the difference between internal and external cost of resources is stressed. It was found that the internal funds, in the form of cash flows, have played a relevant role in influencing capital spending by the manufacturing businesses. In particular, it was found that small businesses appear to be more sensitive to variation in cash flow. Evidence was found that changes in real interest rates affect investment spending by manufacturing businesses. Regarding the effect that the changes in the interest rate variable have on investment, it appears that small and big businesses differ in their responses, with the larger businesses having a greater reaction. Nevertheless, these results support the conclusion that although Mexico's credit market has been characterized by imperfection, resulting in larger businesses having more access to resources, changes in interest rates affect investment spending by smaller businesses as well.

Agency Problems in the Solutions of Banking Crises

by Gonzalo I. Sanhueza

This paper examines the agency problems that arise when a central bank rescues a failing bank. Specifically, the objectives of this paper are to determine: (1) the agency problems that emerge when central banks buy risky loans from banks with financial

problems and (2) the response of the banks to the incentives they face when the central bank purchases their risky loans. The empirical evidence from the Chilean banking crisis of the 1980s shows that the rescued banks had higher levels of risk and were less efficient. However, it is not clear that the higher levels of risk were due to moral hazard behavior. I also found that some additional measures mitigated the agency problems. These mitigating factors included limiting the amount of financial assistance per bank, the closing or selling of the banks with more serious solvency problems and the designation of a provisional administrator in some banks.

Chile's Trade Policy:

An Assessment

by Maurice Schiff

This paper reviews some of the main findings of recent research on the politics, economics and political economy of regional integration. It also assesses Chile's trade and regional integration policies and concludes that (1) Chile is likely to obtain static and dynamic benefits from a free trade agreement (FTA) with the United States, though the benefits crucially depend on the extent to which its market access to the United States improves, on the cost of implementing the intellectual property rights agreement and on the cost of the rules of origin; (2) benefits are more doubtful with respect to FTAs with MERCOSUR, the Andean Pact and Central American countries; (3) Chile is negotiating with the EU and should start negotiating FTAs with Asian countries; (4) Chile should bind all its tariffs at the World Trade Organization at the applied MFN uniform tariff rate; and (5) the uniform MFN tariff should be reduced below 6 percent after 2003.

Fiscal Adjustments in Latin America:

Causes, Success and Consequences

by Min Shi

We provide an empirical analysis of substantial fiscal adjustments in Latin American countries based on the dataset of Gavin and Perotti (1999). We find that among the episodes of fiscal tightening, the longer-lasting ones rely primarily on expenditure cuts while the temporary adjustments rely more on revenue increases. We also find that the overall increases of fiscal surplus are similar. We find improvements in the macroeconomic situations following fiscal tightening. The longer-lasting fiscal adjustments have a larger positive effect on the overall economy than short-lived ones do. Fiscal tightening is more likely to occur after elections and/or after years of higher deficits and lower real GDP growth. These regularities are similar to the findings in OECD countries.

The Distributive Impact on Minimum Wage:

Individual Distribution of Labor Income

by Sergei Suarez Dillon Soares

The objective of this paper is to estimate the impact that changes in the value of the minimum wage will have upon the distribution of individual labor income. Two complementary approaches are used. The first approach is to use nonparametric estimators to calculate the individual income labor distribution. The estimator used is the kernel estimator with a bandwidth of 0.08, and the data come from the five PNADs since the Real Plan. The results are visual and qualitative but show a strong concentration of individuals at or around the minimum wage. About 10 percent of individuals with positive labor income are in this minimum wage spike. Although this is less than the 15 percent of individuals with positive labor income who earn less than minimum wage, the kernel estimators show that the spike follows increases in the minimum wage. This shows that minimum wage increases should have a significant effect on labor income distribution. The next approach in the paper is to quantify the elasticity of labor income as it relates to minimum wage increases. The data come from the monthly PME's since the Real Plan, and the methodology entails using various comparison groups to net out the minimum wage effect. Although all three comparison groups used are imperfect, the results are more or less coherent. They show that labor income elasticities with relation to minimum wage increases are low (around 0.2) for the lowest centiles in the labor income distribution, are higher (around 0.6) for the centiles where the minimum wage is effective, and then drop to zero for the two highest quintiles. In conclusion, the minimum wage has a significant effect upon the individual labor income distribution, but it is not very large.

The Institutional Foundations of Public Policy:

A Transactions Approach with Application to Argentina

by Pablo T. Spiller and Mariano Tommasi

Public policies are the outcomes of complex intertemporal exchanges among politicians. The political institutions of a country constitute the framework within which these transactions are accomplished. We develop a transactions theory to understand the ways in which political institutions affect the transactions that political actors are able to undertake, and hence the quality of the policies that emerge. We argue that Argentina is a case in which the functioning of political institutions has inhibited the capacity to undertake efficient intertemporal political exchanges. We use positive political theory and transaction cost economics to explain the workings of Argentine political institutions and to show how their operation gives rise to low-quality policies.

Exchange Market Pressure, Currency Crises and Monetary Policy:

Additional Evidence from Emerging Markets

by Evan Tanner

This paper extends my previous work by examining the relationship between monetary policy and exchange market pressure (EMP) in 32 emerging market countries. EMP is a gauge of the severity of crises, and part of this paper specifically analyzes crisis periods. Two variables gauge the stance of monetary policy: the growth of central bank domestic credit and the interest differential (domestic versus U.S. dollar). Evidence suggests that monetary policy plays an important role in currency crises. And, in most countries, the shocks to monetary policy affect EMP in the direction predicted by traditional approaches: tighter money reduces EMP. (Working paper no. 02/14)

Fiscal Sustainability and Monetary Versus Fiscal Dominance:

Evidence from Brazil, 1991–2000

by Evan Tanner and Alberto M. Ramos

Under a monetary dominant (MD) regime, the primary surplus adjusts to limit debt growth, permitting monetary policy to be conducted independently of fiscal financing requirements. In Brazil, some evidence favors an MD regime for 1995–97 but not for the decade of the 1990s as a whole. While fiscal adjustments of 1999 yielded a primary surplus of about 3 percent of GDP, consistent with solvency, a credible MD regime would require further adjustments of the primary surplus if debt increases, growth falls or interest rates rise. (Working paper no. 02/5)

Private Education Is Better?

Evidence from Chile

by Andrea Tokman Ramos

This paper uses Chile's voucher system to provide new evidence on whether private schools are more efficient than publicly operated schools. It contributes to the world debate by analyzing a universal voucher system. It contributes to previous Chilean studies by reducing the selection bias and allowing heterogeneous treatment effects. The results suggest that public schools are neither uniformly worse nor better than private schools. Rather, public schools are relatively more effective for students from disadvantaged family backgrounds. Such a system of comparative advantage is consistent with the coexistence of public and private schools in most Chilean communities.

Economies of Scale and the Scope of Collective Medical Assistance Institutions in Uruguay

by Patricia Triunfo

The paper uses a translogarithmic cost function to describe the behavior of medical care institutions (IAMCs) in Uruguay. The dataset includes 41 institutions between 1985 and 1993. Estimated parameters reflecting the existence of global economies (for the aggregated product) point at institutions operating with increasing returns to scale. That is, big IAMCs would operate with lower average costs than small institutions. Given the definition of inputs and products, it is here found that the average IAMC has experienced a reduction of 20–23 percent in costs in the period analyzed. The increase in the scale of production has lowered costs, and there has also been a technological change associated with the use of inputs. The most common bias found is toward medicine and capital saving technologies in all IAMCs. The model is also estimated for three specific products—ambulatory visits to general physicians and pediatricians; ambulatory visits to surgeons and gynecologists; and total number of hospital discharges. The results suggest that joint production yields no gain *vis-à-vis* specialization. Hence, a big although not universal IAMC appears as the first best.

The Ahmad-Stern Approach Revisited:

An Application to Mexico

by Carlos M. Urzúa

This paper extends the methodology first proposed by Ahmad and Stern for the design of tax reforms that are optimal at the margin. The extension takes into account sharper approximate welfare measures. The revised methodology is illustrated in the case of the Mexican tax reform that was supposed to take place in 2002 but ultimately failed.

Trade Policy on a Country Basis and Multilateral Arrangements:

The Case of Uruguay

by Marcel Vaillant

This paper sheds some light on two issues related to the recent multilateral trade agreements (Uruguay Round of GATT and the creation of WTO). First, are they binding for the design of trade policies in Uruguay? Second, how have they posed restrictions on these policies? The first part reviews the trade policies developed in Uruguay during the last decades with a historic perspective. It concludes that Uruguay has had a continuous unilateral proliberalization position. The description of government institutions and private lobby groups is used in the second section to analyze the process. There is evidence supporting the hypothesis that the trade liberalization process can be thought of as a political equilibrium between government and private lobby groups. Finally, the paper concludes that multilateral agreements are increasingly determining the characteristics of trade policies in Uruguay.

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