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## CENTER FOR LATIN AMERICAN ECONOMICS
Research Department

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### Preface

The Center for Latin American Economics is pleased to present the eleventh issue of *Latin American Research Abstracts*. The issue includes 90 abstracts written by 133 authors and co-authors. The abstracts appear in alphabetical order by the lead author's surname. The authors' mailing addresses appear in these *Abstracts* so that readers interested in receiving copies of the papers can request them directly from the authors.

In preparation for our next publication, we urge you to send abstracts of your recent research, along with copies of the papers. We ask that the authors write the abstracts in English, limit the abstract to 250 words, and confine submissions to research related to Latin American monetary and economic issues. If you are not yet a member, we urge you to join by filling out the application form at the back of this publication. Please send communication to the following address:

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The Center serves as a catalyst to facilitate communication among scholars. We thank you for your support in this effort.

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**The Brazilian Economy, 1928-1945**

This paper covers economic policy from 1928 to1945 from a chronological perspective. It addresses the structural characteristics of Brazilian trade as well as the striking feature of the Brazilian economy that enabled it to recover quite rapidly from the consequences of the Great Depression. It covers rent-seeking behavior, high tariffs, public ownership, and inefficiencies. It also addresses the high rate of inflation and overvalued exchange rate during the later part of the period.

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**Hodrick-Prescott Filter in Practice**

Hodrick-Prescott filter has been the favorite empirical technique among researchers studying *cycles*. Software facilities and the optimality criterion, from which the filter can be derived, can explain its wide use. However, different shortcomings and drawbacks have been pointed out in the literature, such as alteration of variability and persistence as well as detection of spurious cycles and correlations. This paper discusses these criticisms from an empirical point of view trying to clarify what the filter can and cannot do. In particular, a less mechanical use for descriptive analysis is proposed, testing how the estimated cyclical component behaves and using autocorrelation adjusted standard errors to evaluate cross correlations to differentiate the *genuine* from the *spurious* case. When there is a genuine relationship, simulation results are presented to test the bivariate correlations. Some examples of descriptive analysis for macro aggregates (real activity, trade flows and money) of Argentina are reported to show that the filter is not always appropriate and that simple tools can be used to appreciate the results of the filtered series and to evaluate cross correlations.

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**Democracy and Inflation in Poor Countries: Political Finance and Macroeconomic Outcomes in Brazil and India**

This work posits a link between the national political regime and the medium term bias in a developing country's pattern of macroeconomic outcomes. In elite regimes, politicians and senior economic policymakers need only consider the opinions of the dominant sectors of the social actor we may call *capital*. Policymakers in semi-elite regimes–that politically incorporate white and blue collar *formal sector labor* but exclude the poor majority–confront incentives to avoid long periods of very low growth. Under certain unusual but possible regulatory frameworks, they may satisfy their constituents with positive growth under conditions of high inflation. However, the shift from an authoritarian and/or politically

exclusionary government to mass electoral democracy creates strong incentives for political incumbents to do everything in their power to avoid extended periods of extreme macroeconomic outcomes.

Beginning in the late 19th century and continuing through the late 1990s, I tell the story of two large developing countries, Brazil and India, one of which experienced four decades of extraordinarily high inflation and the other, many decades of economic stagnation. The transition to mass democracy in each country, while generating all of the well-known problems of chaotic and populist politics and rising popular expectations, nonetheless, created positive electoral incentives to eschew the most destructive macroeconomic outcomes.

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**Household Savings and Income Distribution in Mexico**

The objective of this paper is to take a close look at household saving behavior in Mexico in the 1980s and 1990s. We want to verify whether the change in domestic saving observed in the aggregate can be attributed to households rather than the corporate sector, and if so, if the change in household saving behavior is related to short or longer term decisions. More generally, we would like to characterize household saving behavior in several dimensions. These include controlling for cohort effects, for changes in family structure and demographic trends and, above all, for changes in the distribution of income.

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**Sustainability of the Current Account Deficit of the Balance of Payments of Costa Rica**

The main objective of this paper is to determine the sustainable percentage of the balance of payments current account deficit with respect to the Gross Domestic Product (CAD/GDP). Regarding the Costa Rican experience, the application of Husted´s model led to the conclusion that as a general tendency, the current account deficits observed in the seventies were unsustainable, whereas the deficits observed starting from the middle eighties were sustainable. Different methodologies were applied with the purpose of quantifying the sustainability of CAD/GDP.

The first approach utilized the historical average level of CAD/GDP together with the concept of basic balance. In both cases, the resulting indicator was around 4%. When an inter-temporary solvency model was applied, the sustainable levels of CAD/GDP resulted in a direct link to economic growth, to the variation of the external liabilities/GDP, and to the real exchange rate. That is, with an annual growth of 4.5% and with the other factors invariable, the sustainable CAD/GDP would rise to 2.7%. When the growth of external liabilities was 1% - 2% of GDP, the above mentioned deficits would rise to 3.7% and 4.7%, respectively. Either additional increases in production or appreciation of the real exchange rate of 1% annually would result in levels increasing by 0.6% of GDP. A qualitative analysis of the behavior shown by some additional factors would not result in sustained levels significantly higher than those previously mentioned.

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**Internal and External Influences on Innovations in Commercial Banking**

This research project provided a framework to assess how external change has modified competition in bank markets and how bank managers have responded to environmental turbulence. The analysis centers on how banks responded to changes in their growth opportunities through a set of key strategic issues. These include product and geographic diversification, specificity and continuity of corporate vision, and the success in implementing that vision. The work examines whether superior bank performance results from superior visioning of opportunities (strategic intent); better control of the drivers of profitability in opportunistic visions; or fortuitous (random) association between positioning and environmental change. The research utilized two main methodologies consisting of semi-structured interviews with top managers (in Mexico, Spain, and the UK) and case studies of bank company history.

Research results identified cross-country and management style differences in evaluating the effects of external innovations. The results suggested that greater competition in bank markets increased the importance of flexibility in implementing strategic change. Organizational structures that relied less on individual drivers of performance had a wide response. Asset size was also found to influence bank strategy, that is, bank managers seemed to lose control of the relation between activities and the their cost determinates as relative asset size increased. The results point to a need for further exploration of less integrated organizational forms such as electronic networks and alliances. These new forms of organization represent fundamental changes in the relationship between diversification strategies, managers' control of profit generating resources and greater competition in bank markets.

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**Selectivity, Moral Hazard and Prices In Argentina's Health Markets**

Argentina is currently reforming its health insurance system. Unfortunately, little is known about how different insurance arrangements effect the utilization of health care services. This paper empirically studies three issues in health insurance provision for wage and salary workers and their utilization of health care services: (1) the selectivity program in health insurance markets, (2) the moral hazard problem, and (3) the role of prices in utilization. The paper examines the relationship between insurance and utilization both by estimating how insurance type affects utilization and by parameterizing characteristics of seven major *Obras Sociales* (social insurance organizations) using out-of-pocket expenditures. Results from two-part count data models of utilization show that social and private insurance matter in the decision of contacting physicians and hospital services but do not in the frequency choice. Evidence that could be interpreted as supply-induced demand for physician visits is also found.

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**Commercial Integration and Vulnerability to Regional Trade: An Application to Mercosur**

Commercial integration among the Mercosur countries has increased dramatically ever since the trade block was established in 1991. This fact has raised concerns among policy makers about the macroeconomic vulnerability of the smaller Mercosur countries (i.e., Argentina, Paraguay and Uruguay) to macroeconomic disturbances in Brazil, especially with respect to changes in bilateral exchange rates within the region.

We assess the macroeconomic vulnerability of Argentina, Paraguay and Uruguay to real devaluations in Brazil by introducing the concept of regional goods, i.e., goods that are tradable with Brazil but largely non-tradable with the rest of the world. We argue that the macroeconomic vulnerability of the smaller Mercosur economies to terms of trade shocks originating in Brazil depends independently on (1) the extent of net trade in regional goods, (2) the share of regional goods in total output and (3) the share of regional goods in total consumption.

The first part of the paper measures the extent of trade in regional goods between each of the Mercosur partners and Brazil. The second part develops an inter-temporal open economy model, which evaluates the qualitative and quantitative impact of a real devaluation in Brazil on the macro variables - output, employment and sectoral allocation of resources, the current account and the trade balance.

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**Openness and Efficiency in Brazilian Banking**

Brazil has recently made great strides in opening its domestic banking market to foreign participation, contrary to what one would have expected from its negotiating stance in regional and multilateral trade dealings in financial services. We review the possible gains from such a unilateral liberalization move, and proceed to measure one specific gain that appears most promising: improvements in cost efficiency in the production of banking services. Our results indicate that these gains indeed materialized, although not to the same extent in all segments of the banking market.

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**Price and Monetary Dynamics under Alternative Exchange Rate Regimes**

According to theory, inflation persistence should have less variance across countries under pegged than floating exchange rates, but not necessarily a lower mean. The paper tests this prediction on postwar data for OECD countries. After allowing for the upward bias to persistence estimates that are created by shifts in mean inflation, the paper finds persistence has a greater speed (but not a higher mean) in the floating-rate period, as predicted by theory. Monetary growth has been much less accommodative of inflation under floating rates, most probably because of the shifts in monetary policy rather than those in exchange rate regime.

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**Pricing Liquid Petroleum Gas in Mexico**

This paper considers the regulation of pricing liquid petroleum gas in Mexico. It considers a detailed linear programming model for pricing and demonstrates that the dimensionality of the problem can be greatly reduced without loss of information. The work constructs an appropriate simplified model, which incorporates all information essential to the pricing question and derives relationships that should hold between prices in Mexico and prices in world markets. It is appropriate to tie prices in Mexico to the readily observable prices in the United States. However, this can lead to incentives to increase the price of domestic liquid petroleum gas by diverting production if care is not taken with the structure of the regulations.

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**Pricing Natural Gas in Mexico**

Natural gas in Mexico is produced by a state monopoly (Pemex). The price of gas at the Houston Ship Channel and the arbitration point between imported gas and gas produced in Mexico are used in a formula based on the *netback* to determine the price of gas in Mexico. This paper shows that the price implied by this methodology is equal to the shadow price of the domestic gas production constraint in a welfare maximization problem. Therefore, this formula for regulating the price of gas in Mexico is consistent with the objectives of a regulator seeking to maximize social welfare.

The *netback* formula, however, leads to incentives to divert or reduce production in the south in order to move the arbitration point south and increase the price of domestically produced gas. Since gas produced in the north is a substitute for gas from the Texas market, an increase in production in the north will not change the location of the arbitration point as the marginal gas is exported.

The paper demonstrates that changes in demand and supply between the relevant arbitration point and the border will not change the arbitration point. The research also addresses the effects of the elimination of import tariffs.

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**An Alternative Approach To Financial Crises**

In a world of increasingly integrated financial markets and high capital mobility, the loss of market confidence in a country or currency may give rise to a severe financial crisis that has significant international effects. Priority should therefore be given to preventing such a loss of confidence.

Because crises lead to the abandonment of complacency, they often provide an opportunity for reform. This essay suggests ways to improve the policy response to speculative attacks so as to limit the risk and scope of the crises they cause and therefore benefit the countries directly affected as well as the international economy.

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**Prudential Regulations, Restructuring and Competition: The Case of the Argentine Banking Industry**

The Argentine banking industry has experienced a deep restructuring process since the beginning of Convertibility at which time the industry was opened to competition and new prudential regulations were put in place to improve its solvency. With a dramatic increase in banking output, prompted by macroeconomic stability, the number of firms operating in the industry was significantly reduced.

We analyze the extent to which this restructuring process has reduced competition in the industry, and we also investigate the effects of regulations on bank profitability. We use panel data techniques to explain the differences in profitability between the twenty largest retail banks. We construct concentration as well as market share indexes by bank, to determine the degree of competition at local markets. Efficiency measures are also included as determinants of bank profitability in order to test if differences in profitability are due to efficiency differences rather than to market power or concentration.

The results indicate that there is no evidence of market power in the retail-banking sector. In the more populated areas of the country where financial markets are more developed, the degree of concentration is very small. The finding that banks whose business is mainly located in these areas earn lower profits is an indication that the degree of competition in these areas is high. It is also true that the most X-efficient banks mainly operate in more populated and developed areas. On the contrary, in the less populated areas where financial markets are poorly developed, concentration is higher, and banks that mainly operate in those markets earn higher profits and are less efficient. Finally, while banks with higher liquidity requirements according to their liability structure earn lower profits, the effects of capital requirements on profitability are not clear.

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**Political Instability and Economic Vulnerability**

This paper analyzes and tests the influence of political instability on economic vulnerability in the context of the 1994 and 1997 crises. It constructs four political variables that aim at quantifying political instability. The paper finds that for countries with weak economic fundamentals and low reserves, political instability has a strong impact on economic vulnerability. The estimation results suggest that including political variables in economic models does not improve their power to explain and predict economic crises. The paper concludes that countries are more economically vulnerable during and especially following election periods and when election results are less stable than at other times.

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**Contagion in Emerging Markets: When *Wall Street* is a Carrier**

This paper examines the case in which the capital market is populated by informed and uninformed investors. The uninformed try to extract information from informed investors' trades. This opens up the possibility that if informed investors are forced to sell emerging market securities to meet margin calls, for example, this action may be misread by the uninformed investors as signaling low returns in emerging markets. The paper presents a simple model in which this type of *Wall Street* confusion may result in a collapse in emerging markets' output.

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**Fixed Verses Flexible Exchange Rates: Preliminaries of a Turn-of-Millennium Rematch Rates**

This note examines the pros and cons of flexible and fixed exchange rates in terms of a bare-bones model. The model takes into account features that have played a prominent role in recent currency crises, namely, volatility of capital flows and the real exchange rate, currency substitution and financial fragility, and the Credit Channel.

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**Rational Contagion and the Globalization of Securities Markets**

Globalization of securities markets may promote contagion among international investors by weakening incentives for gathering costly information and by strengthening incentives for initiating arbitrary market portfolios. In the presence of short-selling restrictions, the utility gain of gathering country-specific information at a fixed cost generally diminishes as securities markets grow. In addition, if portfolio managers face a marginal cost for yielding below-market returns larger than the marginal gains for above market returns, there is a range of optimal portfolios in which all investors initiate an arbitrary market portfolio. The width of this range widens as the market grows. Numerical simulations suggest that these informational frictions can have significant quantitative implications for capital flows in emerging markets.

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**Economic Integration and Interdependence: The Mercosur Case**

Since 1986, Argentina and Brazil have been moving forward in a process of economic integration that has consolidated in Mercosur. This process has, as expected, increased their macroeconomic interdependence. This paper examines the nature of the shocks that affect the economies of the two countries and discusses the relationship between economic integration and greater interdependence, presenting the implementation of the cost-benefit analysis to determine the opportunity of a monetary area. The work highlights the crucial role that the symmetry of shocks plays in the determination of the costs of integration. It also presents the analysis of correlation between the main variables, which reflect the interdependence between the two countries. It calculates a static interdependent multiplier and presents a dynamic analysis of the empirical evidence with the construction of a VEC (Vector Error Correction) model. The model tests the characteristics of the shocks, utilizing two common external variables (the international interest rate and export prices) and two endogenous variables (the domestic supply represented by the GDP and domestic demand represented by inflation). The paper

looks at the order of integration of series, applying several tests to establish the appropriate number of lags, and estimates the co-integration vectors through Johansen's procedure. Finally, it analyzes the impulse-response function and the variance decomposition of shocks and discusses main conclusions.

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**The Macroeconomics of Mercosur: A Comparison of the Empirical Regularities between Argentina and Brazil**

The study of macroeconomic fluctuations amongst countries undergoing a process of economic integration is an important subject in economic theory. This is due mainly to the fact that the need for policy coordination depends greatly on the size and kind of macroeconomic interdependence.

The objective of this paper is to present the stylized facts of these fluctuations from 1980 to 1996 in the Mercosur core countries (which together account for 97% of the trade area's GDP) in a rigorous systematic manner without theoretical or prior assumptions.

Our main findings point to the fact that the empirical regularities in these two countries are not completely homogeneous though they are becoming similar since the end of the eighties and especially in the nineties. We find wide differences in the cyclical behavior of exports, the real exchange rate and the variables of the job market.

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**Openness, Exports and Labor Market: The Argentine Case**

In this study, we analyze theoretically and econometrically the relationship between openness, exports, growth and the labor market in Argentina from 1974 to 1996. The results are as follows: (1) Exports are counter cyclical. The idea of *expanse export impulse* is only the result of the illusion of spurious correlation. (2) The relationship between exports and employment rate is in general negative and stronger since 1991 when an openness shock was implemented. (3) Using two different models, we found that to increase the level of employment, it is neither sufficient nor necessary to increase export growth.

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**Shocks Identification in Argentina and Brazil: A Vector Error Correction Model**

Since 1986, Argentina and Brazil have been integrating their economies. Therefore, it is relevant to examine the nature of the shocks that affect them. Even with appropriate consistent policies, fixing the exchange rate may not be optimal if the shocks are different.

We discuss the relationship between economic integration and greater interdependence, presenting the implementation of the cost-benefit analysis to determine the optimality of a monetary area. We highlight the crucial role that the symmetry of shocks plays in the determination of the costs of integration.

We then move on to the dynamic analysis of the empirical evidence with the construction of VEC (Vector Error Correction) model. First, we choose a model that allows us to test the characteristics of the shocks, selecting two common external variables (international interest rate and export prices) and two endogenous variables (domestic supply represented by inflation). We study the order of integration, applying several tests to establish the number of lags appropriate; and in the last step, we estimate the co-integration vectors through Johansen's procedure. Finally, we analyze the impulse-response functions and the variance decomposition of the shocks.

In conclusion, we find that a more coincident behavior of the economies exists after an external shock than after an internal one, the role of interest rates is more important than export prices, and the variance explanation of a shock is slightly different for each country.

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**Mexico's Monetary Policy Framework under a Floating Exchange Rate Regime**

The currency and financial crises experienced by the European Monetary System in 1992, by Mexico in 1994-1995 and the recent emerging market crisis of 1997-1999 have re-ignited the debate on the viable exchange rate regimes for small open economies and, in particular, for emerging markets. After more than four years with the floating exchange rate regime, the Mexican experience provides an interesting case study for other emerging economies, considering the possibility of moving towards a more flexible exchange rate regime. In this paper, we provide an overview of the transition towards the floating exchange rate regime, the functioning of this system in Mexico, the current monetary policy framework and the behavior of the economy in recent years.

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**A Model of Contagious Currency Crises With Applications to Argentina**

This paper proposes a model of contagious currency crises: crises transmit across countries by raising the risk premium on government bonds. Three types of equilibria can occur: a *no collapse* equilibrium (crises never transmit from abroad); a *collapse* equilibrium (crises are inevitably contagious); or a *fundamentals* equilibrium (crises are contagious if domestic fundamentals are weak). A calibration exercise finds that the 1995 turmoil in Argentina coexisted with a combination of risk-averse investors and weak credibility in the currency bond arrangement. This turmoil can only be attributed to a *Tequila* effect from the Mexican crisis in that investors were excessively risk-averse.

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**Interconnection, Universal Service and Competition in the Argentine Telecommunications Market**

The Argentine telecommunications market is initiating a competition process that may be one of the most important aspects of economic regulation due to the very dynamics of the sector. Greater competition will require cost adjusted tariffs, interconnection agreements that are grounded on economic efficiency principles, and the supply of the so-called *universal service* without altering the competitive neutrality.

The aim of this paper is to analyze the interconnection and universal service based on the principles of economic regulation in Argentina. The paper presents the pros and cons of elements of competition. Some proposals are also made for aspects not considered in current regulation.

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**Towards a Theory of Industrial Dynamism**

This work attempts to develop a theoretical framework, which can better explain industrial stagnation in less developed countries by focusing on factors that affect productivity and demand growth. The approach is an attempt to synthesize two lines of thought: Institutional and Kaldorian.

It is argued that the two factors defining industrial dynamism are productivity and demand growth. Productivity growth depends on factors operating at the firm and industry levels that determine the rate at which productivity grows for given changes in output and capital. For instance, the more efficient firms are organized, the faster the output per worker grows.

Demand growth, on the other hand, depends essentially on income distribution. The relative bargaining power of workers and capitalists determines the distribution of income. *Ceteris paribus***,** the higher the rate of employment is, the higher the bargaining power of workers is when the negotiating wage increases. By the same token, the higher the level is of demand in the goods market, the higher is the likelihood that capitalists will increase their mark-up.

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**Autonomy of the Bank of Mexico: A Test**

This work is divided into three sections. The first presents a brief review of the bibliography, which deals with the independence of the central bank. It highlights the importance of the bank's autonomy for the stabilization of prices and its credibility–two important elements in evaluating the Mexican legislature. The second section highlights the behavior of some variables of the Mexican economy and principal measures of economic policy that resulted in the April 1994 regulation. The third section analyzes the law as it applies to the Bank of Mexico and the financial system. It makes a particular reference to those situations, which demonstrate the failure of the Bank of Mexico's monetary policy in diminishing inflationary pressures. The work concludes with reflections on the viability of a true autonomy.

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**The Determinants of Inflation and the Costs**

Inflation, its costs, and how to avoid it are topics that have occupied an important place in economic discussion and analysis, especially in countries with histories of high instability. This work begins with a review of the causes of inflation to analyze its costs. The paper discusses the consequences of adapting the economy to lessen any negative effects. The costs of stabilization policies are analyzed. Where to reduce inflation in order to achieve a long-term objective is also addressed.

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**Speculative Attacks: An Information Approach**

Plentiful literature regarding speculative attacks has followed the upsurge of these phenomena around the world in the past decade. Part of the literature focuses on the fundamental problems ailing the economy, like fiscal policy. The most recent literature explores the transmission mechanisms within a crisis and contagion effects between countries. However, the primary force behind the initial attack has seldom been explained, discarded as a rumor or shock. The purpose of this paper is to give a feasible explanation of the initiation of speculative attacks. The model developed in this paper analyses the decisions of an investor for whom updated information is crucial. Under this framework, a speculative attack is a rational response to an uncertain environment. One conclusion of the paper is that there is a trade-off between the depth and frequency of speculative attacks. Macroeconomic policy, the size of the economy, the financial strength of the relevant investors, and the effect of herding behavior all influence the vulnerability of any one economy to speculative attacks.

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**Import Quotas and Welfare: The Case of Mercosur Automobile Industry**

The increasing importance of imperfect markets and intra-industry trade has stimulated the development of a new body of international trade theory that provides strong arguments in favor of active commercial policies. In virtue of the importance of that approach, this work applies a model of imperfect competition to explain the impact that the progressive elimination of current quotas would have on welfare, prices, and activity level of the automobile industry of the Mercosur countries. Changes in market conditions are simulated employing a simple Cournot oligopolistic model along with data on production, prices, and costs provided by the firms.

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**The Financial Crisis in Asia: Origins and Evolution in 1997 and 1998**

The financial crisis that initially began in Thailand in July 1997 spread regionally and globally. It provoked serious economic, political and social repercussions not only in Thailand but also in Korea, Indonesia, Malaysia, and to a lesser extent in Japan. As a result of the Asian crisis, there has been a significant fall in worldwide economic growth, and the stability of the financial system has been affected. The repercussions have been especially severe in Latin American countries. This work analyzes in detail the causes of the crisis and its evolution during 1997 and 1998 particularly in Japan, South Korea, Indonesia, Malaysia, and Thailand.

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**Industrial Restructuring of the Electronics Industry in Guadalajara, Mexico**

In 1997, there were approximately seventy-five electronics plants in the Guadalajara metropolitan area employing more than fifteen thousand and generating exports of more than two billion dollars. Companies such as Hewlett Packard, IBM, Motorola, Kodak, and Phillips have manufacturing facilities in Guadalajara producing computers, cellular phones, cameras, film, batteries, semiconductors, etc. The large concentration of electronics firms in Guadalajara has gained the city the title of *Silicon Valley of the South*. Indeed, Mexico is now second only to Japan in exports of computers to the United States.

This report compiles findings from a one-year project funded by the Mexican Center at the University of Texas at Austin. The report addresses the following questions: How did selective-trade-liberalization policies implemented during the 1980s affect the electronics industry in Mexico? What opportunities did NAFTA and Mexico's economic integration with the Americas in the 1990s create for the electronics industry in Mexico? Why did Guadalajara instead of Monterrey attract the electronics industry? And, what has been the impact of the electronics industry on Guadalajara's economic development?

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### What to Do with Capital Gains Taxes in Chile?

This paper analyzes qualitatively the economic consequences of the capital gains taxes currently existing in Chile. It describes the special treatment that specific kinds of capital gains receive and analyzes the consequences on distribution of resources.

The principal conclusions and proposals of the study are the following: First, the general rule in Chile is that capital gains ought to be taxed as ordinary income. This is an advantage because it simplifies taxes. Special treatment is the exception and it is convenient to eliminate almost all that exist. Second, it is improbable that capital gains taxes in Chile currently distort the distribution of resources. Third, although it is improbable that the current regime prejudices the development of the stock market, reasons of efficiency justify exempting the capital gains. Nevertheless, this exemption, should not be granted without demanding legal constraints on the stock market to furnish prices in a timely manner with transparency to anyone who buys and sells financial assets.

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### A Note on Enforcement Spending and VAT Revenues

Estimating the impact of changes in enforcement spending is of interest to tax authorities and policymakers. The literature on tax compliance usually focuses on the effect that these changes have on tax evasion. This makes it difficult to obtain reliable estimates since evasion data are often suspect, particularly in developing countries. This paper shows how, in the case of the Value Added Tax, tax revenues can be used instead of evasion data to estimate the impact of changes in the enforcement spending. Applying our approach with aggregate Chilean data from 1981 to 1997, we find that one dollar of additional enforcement spending increases VAT revenues by thirty-one dollars. Moreover, current levels of spending could increase by forty percent and still be within sample values, which implies that a ten percent increase in enforcement spending may be expected to reduce evasion from its current rate of twenty-three percent to twenty percent.

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### Descriptive Analysis of the Relative Size of Government Spending in Chile

This work examines the relative size of the Chilean government by using an international comparison with equivalent countries. It also presents a similar analysis of two important components of public spending: education and health. A comparative analysis shows that public spending in education and health, as a fraction of GDP, is close to the average of that of countries with similar levels of income per capita. As this fraction grows, it is concluded that public spending on these items, as a fraction of GDP, will increase significantly in the future if Chile continues the same evolutionary path as those of developed countries.

As far as the welfare of a country, what is significant is not only the public spending on education and health but *total spending* on these items. When comparing the fraction of GDP that is dedicated to education and health in countries of income per capita similar to Chile, Chile is among the highest in education while in health, it is near the average. It is possible to conclude that the total spending in education and health, both public and private, ought to grow significantly in the next few years as a fraction of GDP.

Analysis of this kind only measures the spending and does not consider the quality of the services financed with this spending. This is an important limitation of this type of work. Increased public spending may not necessarily translate into improvement in the efficiency of the services.

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**The Argentine Credit Risk Indicator in a General Framework for Regulatory Credit Risk Capital Requirement**

Argentina has complemented Basle-style credit risk minimum capital requirements for banks that use risk weights with an innovative *credit risk indicator*. The indicator essentially increases the risk weight of a loan according to the interest rate it commands.

This paper delves into the microeconomic foundations for such a mechanism using portfolio theory. Perfectly competitive banks maximize von-Neumann-Morgenstern utility subject to capital requirements in a single period under multivariate normally distributed loan losses due to defaults. Following Rochet (1992) to limit the bank's failure probability, this work demonstrates that the optimal risk weights should be proportional to the spread between the net loan rate of expected default costs and the riskless rate.

The credit market equilibrium interest rates are found, and the spread is shown to be proportional to the betas of the individual loans. Thus, the optimum risk weights should be proportional to the betas of the individual loans because they reflect the covariance (undiversifiable) risk of the loans. The regulator will thus send the proper signal to the bank as to the riskiness of the loan and will successfully limit the probability of default. As in Rochet (1992), this works well under the assumption of unlimited liability for banks. However, when there is limited liability, moral hazard problems arise which make it advisable to additionally have an absolute minimum capital requirement. Hence, if properly implemented, the Argentine innovation has the potential to further the regulatory objective beyond the use of Basle risk weights.

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**Capital Flows in Chile: From the Tequila to the Asian Crisis**

Latin America experienced sharp swings in net capital inflows in the last two decades, with significant effects on the domestic economies. Chile, in particular, recorded the highest rise in external debt in the years up to 1981 and exhibited the sharpest drop in GDP (15%) in all Latin America in 1982. This took place in an already deeply liberalized and privatized economy with a persistent fiscal surplus.

In the early 1990s, already in transition to democracy, Chile was at the head of *emerging economies* that faced a return of external finance. This reborn supply took place in an international atmosphere of strong pressures by multilateral institutions and US authorities for across-the-board capital account openings in recipient nations. Chile moved against the stream with a selective opening, including the introduction of regulations on short-term and other volatile inflows. The outcome has been highly successful, particularly in the time of the Mexican and Argentinean crisis of 1995. But, also Chile, in spite of some untimely relative weakening of the regulations in 1996-97, has been facing the Asian crisis rather well, notwithstanding the tough worsening of the terms of trade of Chile. Here we review the politics implemented by Chile in the 1990s and their effects.

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**Standards and Protection**

This paper examines the behavior of a country that imposes a minimum standard on a good produced both by a domestic firm and by a foreign competitor that also supplies its own market. Production costs rise with the standard, and the foreign firm incurs a fixed setup cost if it produces at two standard levels. When the domestic government raises the minimum standard, the foreign producer has to choose between sacrificing exports, facing higher production costs on its entire output, or incurring the fixed setup cost. Depending on the size of the foreign market and the fixed setup cost, the domestic firm will lobby for the lowest minimum standard that excludes the foreign firm or for no standard at all. When consumption of the good produces an externality, the domestic social planner sets a minimum standard, which is a non-increasing function of the size of the foreign market. When an externality is present, we show that the planner is always protectionist in the sense that it chooses a higher standard than the one it would set if both firms were domestic.

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**Contingent Protection as Better Insurance**

We formalize the notion that GATT exceptions such as antidumping and escape clause actions can act as insurance for import competing sectors affected by adverse price shocks. We use a general equilibrium model with several import-competing sectors and assume incomplete markets so that agents cannot contract insurance. We show that these measures are superior to uniform tariffs as insurance mechanisms. Moreover, we demonstrate that the optimal uniform policy may not involve a tariff at all but rather might entail an export tax. We also show that a tax *cum* subsidy policy (taxing all sectors in order to subsidize the shocked sector) improves welfare.

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**The Length and Cost of Banking Crises**

This paper reviews how recent studies of banking crises differ with regard to the dating, length, and costs of the crises. Significant discrepancies in these features suggest the absence of analytical consensus. The data allow an examination of the relation between perceived crises length, as an index of delay in taking actions to resolve a crises, and crises costs. Cross sectional evidence does not show that the length of a crisis is a significant contributor to its resolution cost. A measure of economic cost, the growth shortfall in the crisis period, shows more evidence of a link.

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**Determinants of Loan Repayment in Chile**

This paper investigates what are the determinants to repay a loan in the Chilean financial market. A specific goal is to identify the institutional arrangements whereby creditors ensure that borrowers will repay the debt. A second aim is to analyze the effects of these arrangements on borrowers' behavior. Despite La Porta et al. 1997 classifying Chile as a French Civil Law country, the law and the private arrangements have evolved consistently with the capital market development to protect the rights of the creditors. This is consistent with relatively low rates of bad loans, ranking from 1.1% to 2.0% from 1993 to 1997.

First, we address the composition of lending by type of contract, volume of lending, cost of credit and default rates in the Chilean credit market. We next examine different variables which may effect loan repayment: (1) limitations on the access to credit, (2) macroeconomic stability, (3) collection technology, (4) bankruptcy code, (5) information sharing, (6) the judicial system, (7) prescreening techniques and (8) major changes in financial market regulation. A satisfactory performance of the Chilean credit market, in terms of loan repayments, hinges on a good information sharing system, an advanced collection technology, macroeconomic performance and major changes in financial market regulation.

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**Inflationary Pressure Determinants in Mexico**

An ongoing difficult policy issue confronting monetary authorities in many

developing economies is the management of a stable price environment. Unstable prices create uncertainty, lower investment, and raise costs of doing business, thus lowering rates of growth. As a result, there exists a widespread need for understanding inflationary dynamics in any country of interest. This paper develops a standard monetary inflation model and augments it to include import and labor cost of production factors in a theoretically plausible manner. Implications for implementing an empirical version of the model are also discussed.

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**Empirical Evidence on Latin America Trade Responsiveness**

An important issue in applied international economics is the extent to which trade flows adjust to changes in national income, relative prices, and exchange rates. While there have been numerous surveys regarding merchandise trade elasticities in industrial economies such as Japan and the United States, relatively little work has been completed with respect to developing regions of the world. This paper examines the literature on empirical estimates of import and export elasticities published for Latin America. Results indicate that a variety of modeling strategies have been successfully implemented with respect to aggregate import demand equations as well as specialized import sub-categories. Relatively less economic research has been conducted with respect to Latin American export supply functions.

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**Fixed Capital Adjustment: Is Latin America Different? Evidence from the Colombian and Mexican Manufacturing Sectors**

This paper examines capital adjustment patterns using two large and largely novel data sets from the manufacturing sectors of Colombia and Mexico. The findings show that investment patterns in these countries resemble those reported for the United States to a surprising extent. Capital adjustments beyond maintenance investment occur only rarely, but large spikes account for a significant fraction of total investment. Although duration models do not provide strong evidence for the presence of substantial fixed costs, nonparametric adjustment function estimates reveal the presence of irreversibilities in investment. These irreversibilities are important for understanding aggregate investment behavior.

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**Financial Liberalization, Credit Constraints, and Collateral: Investment in the Mexican Manufacturing Sector**

This paper examines the impact of liberalization on fixed investment in Mexico, using establishment-level data from the manufacturing sector. It analyzes changes in cash flow sensitivities and uses an innovative approach to explore the role of real estate as collateral. The results suggest that financial constraints were eased for small firms but not for large ones. However, banks' reliance on collateral in their lending operations increased the importance of real estate. The results provide microeconomic evidence consistent with the role attributed to *financial accelerator* mechanisms during lending booms and during recessions that stem from financial crises.

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**Does Monetary Policy Stabilize the Exchange Rate Following a Currency Crisis?**

This paper provides evidence on the relationship between monetary policy and the exchange rate in the aftermath of currency crises. It analyzes a large data set of currency crises in eighty countries from 1980 to 1998. The main question addressed is: can monetary policy significantly alter the probability of reversing the post-crisis undervaluation through nominal appreciation rather than higher inflation? We find that tight monetary policy facilitates the reversal of currency undervaluation through nominal appreciation rather than inflation. When the economy is also facing a banking crisis, depending on the specification, tight monetary policy may not have the same effect.

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**Determinants of Ex-ante Banking System Distress: A Macro-Micro Empirical Exploration of Some Recent Episodes**

This paper empirically analyzes the contribution of microeconomic and macroeconomic factors in five recent

episodes of banking system problems in the U.S. Southwest (1986-92), Northeast (1991-92) and California (1992-93); Mexico (1994-95); and Colombia (1982-87). The paper finds that a low capital equity and reserve coverage of problem loans ratio is a leading indicator of bank distress, signaling a high likelihood of near-term failure. Distress is shown to be a function of the same fundamental macro-micro sources of risk that determine bank failures. Focusing on distress has the advantage that the fragility of the banking system can be assessed before a crisis actually occurs.

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**When Does Financial Liberalization Make Banks Risky?: An Empirical Examination of Argentina, Canada and Mexico**

In the literature on systemic banking crises, two common themes are: (1) lack of market discipline encourages risky lending and (2) financial liberalization or privatization lead to risky lending. However, there is evidence to suggest that neither financial liberalization nor weak market discipline always precedes risky lending. We test for depositor discipline and separately for post-liberalization or post-privatization risky lending in Argentina, Canada, and Mexico. In the countries without market discipline, lending risk increases significantly in the wake of liberalization. Where depositors discipline banks, banks neither behave riskily nor does their risk increase in the wake of privatization.

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**Long-Run Exchange Rate Dynamics: A Panel Data Study**

Long-run movements of real exchange rates are studied using a panel data set comprising fifty-one economies. The purchasing power parity hypothesis (PPP) is examined first using unit root tests. It is found that PPP does not hold for the full sample of countries, but it may hold for the advanced economies as well as open and high-inflation economies. Using the recently developed mean group and pooled mean group estimators, the paper finds support for the Balassa-Samuelson hypothesis in both advanced and developing economies and for the influence of shifts in terms of trade.

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**On Crises, Contagion and Confusion**

Since the Tequila crisis of 1994-95, the Asian flu of 1997, and the Russian virus of 1998, not to mention the Exchange Mechanism crises of 1992, which failed to receive a catchy name in the financial press, economists have been busy producing research on the subject of contagion. Yet, less than a handful of studies have examined empirically through which channels the disturbances are transmitted if there are, indeed, fundamental reasons for the spillovers we observe. In this paper, we attempt to fill this gap by analyzing how both trade links and the largely ignored financial sector links influence the pattern of fundamental-based contagion. We assess the incidence of contagion across regions and time. We then examine the role of international bank lending, the potential for cross-market hedging, and bilateral and third-party trade in the propagation of crises.

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**Can Currency Demand be Stable Under a Financial Crisis? The Case of Mexico**

This paper finds strong evidence that real currency demand in Mexico remained stable throughout and after the financial crisis in Mexico. Cointegration analysis using the Johansen-Juselius technique indicates a strong cointegration relationship between real currency balances, real private consumption expenditures, and the interest rate. The dynamic model for real currency demand exhibits significant parameter constancy even after the financial crisis as indicated by a number of statistical tests. The paper concludes that the significant reduction in real currency demand under the financial crisis in Mexico could be appropriately explained by the change in the variables that historically explained the demand for real cash balances in Mexico. This result supports the bank of Mexico's use of a reserve money program to implement monetary policy under the financial crisis.

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**Sectorial Macroeconomic Interdependencies: Evidence for Latin America, East Asia and Europe**

This paper analyzes common economic patterns across countries and economic sectors in Latin America, East Asia and Europe for the period 1970-94 by means of an error-components model that decomposes real value added growth in each country into common international effects, sector-specific effects and country-specific effects. We find significant co-movements in the European and East Asian samples. In the Latin American sample, however, we find country specific components to be more important than common patterns. These results are robust to different sub-sample time spans and different sub-sample country groups.

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**Competitive Behavior in the Mexican Banking System**

This paper presents an empirical assessment of the competitive conditions in the Mexican banking sector from January 1995 to December 1996. It uses the Panzar-Rosse (1987) econometric test, H statistic, to evaluate the market behavior. The test classifies the behavior as profit maximizing monopoly, oligopoly, conjectural variation oligopoly, monopolistic competition or perfect competition. The H statistic reflects the behavior of the market through the sum of the inputs' price elasticities, which are obtained from a reduced form of the revenue equation. We used ROA (return on assets) as the dependent variable, to test if the behavior found proved to be in a long-run equilibrium. The results show that the Mexican banks' revenues are acquired under conditions of monopolistic competition. One of the main characteristics of a monopolistic competition is that all agents behave as monopolist of their differentiated product. Hence, the current product differentiation observed in Mexican banks supports our results.

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**Estimation of the Inefficiency Level in Mexican Banking Sector: A Stochastic Frontier Approach**

In this paper the X-inefficiency level for the Mexican banking sector is calculated using a stochastic frontier approach. This

stochastic frontier was estimated using panel data: thirty-four financial institutions, from January 1995 to August 1997. We consider that the chosen estimation period is particularly relevant to measure the post-crisis effects on the financial health of Mexican banks. In order to specify the cost function, we used a multi-product relationship with a log-linear Cobb–Douglas function. The X-inefficiency is measured as the average deviations from the efficient frontier. The results indicate that the Mexican banking industry operates with a 13.5% X-inefficiency level. The results of this paper suggest that X-inefficiency can, and should be used as an indicator of the financial health of Mexican banks.

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**Large Capital Flows: A Survey of the Causes, Consequences, and Policy Responses**

This paper reviews the causes, consequences, and policy responses to large capital flows in several emerging markets. It opens by studying recent patterns of capital flows and then discusses the causes of capital flows. Emphasis is given to the reasons behind the capital inflow episode in the 1990s, the major reversals, and the volatility observed in these flows. The paper goes on to examine the consequences of capital inflows and the pros and cons of alternative policy responses. It concludes with policy lessons derived from country experiences.

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**The Long-Run Relationship between Real Exchange Rates and Real Interest Rate Differentials: A Panel Study**

This paper empirically examines the long-run relationship between real exchange rates and real interest rate differentials over the recent floating exchange rate period, using a panel cointegration method, with data for a set of industrialized countries. The paper finds evidence of statistically significant long-run relationships and plausible point estimates, which contrast with much existing evidence. The failure of others to establish such relationships may reflect the estimation method they use rather than any inherent deficiency of the fundamentals-based models.

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**Theoretical Aspects for Monetary Policy Design**

This paper attempts to clarify the main concepts in monetary policy design from a theoretical viewpoint. It includes a review of the current debate on the role of monetary policy, the factors that impose conditions on its effectiveness, transmission channels, and the way monetary policy should be designed and implemented.

The effectiveness of monetary policy is intrinsically related to the institutional framework of the economy, the extent of international financial integration, and the current exchange rate arrangements. Additionally, there is also the influence of elements such as the expectations of individuals, the financial system structure, the government budgetary deficit, and the degree of independence of the central bank.

The decision to use money or interest rate as an intermediate objective should consider the capacity of the monetary authorities to control them, the money demand stability degree, and the relationship between money, interest rate and production. Generally, this is more an empirical than a theoretical decision.

There is no consensus as to the selection either of a discretionary or a monetary rules based strategy. In fact, the evidence available regarding the strategy, which gives better results in terms of less output volatility or higher employment levels, is insufficient. This is the reason why often an eclectic approach relying on current circumstances is suggested.

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**Fiscal Deficits and Business Cycles**

Tight fiscal policies are implemented when the policymaker understands that reducing the fiscal deficit is an issue to resolve. This paper demonstrates that in an environment composed of heterogeneous agents – some of which are liquidity constrained – the response of the economy is strongly influenced by the stage of the business cycle in which the latter is operating. In this respect, it is shown that if the government attempts to reduce the fiscal deficit through a tax rate increase and if this policy is carried out on the slump phase of the cycle, the policymaker will be obliged to increase bond issuing in order to finance government's expenses. Moreover, as this *tight* policy compels a more rapid growth of the public debt, taxes in the future will have to be raised even further. As a consequence, a government that honors its budget constraint should start generating a flow of fiscal surplus prior to the previously planned time limit, provided agents are rational. Increasing the current tax rate in order to decrease the fiscal deficit actually increases the latter, worsening the government's position.

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**The Risk of Concentration in a Credit Portfolio: Total Risk, Indicators of Concentration and Implication for Banking Regulation**

One of the most important kinds of risks, which can occur in financial intermediaries, is that of concentration. Concentration occurs when the assets associated with the granting of credit are not very diversified or there is too much concentration in too few hands. In order to evaluate if a particular intermediary presents levels of dangerous risk, it is important to use a reliable measure of total risk. This measure should not only examine the risk incurred by reasons of concentration of the portfolio but also the state of capitalization in relation to the assumed risk.

This article presents a derivation of total risk through concentration of a credit portfolio. It presents the relationship between capitalization of a bank and its past due loan portfolio. The Herfindahl index of concentration is used for the analysis. This index is the most adequate in comparing levels of concentration of a credit portfolio among credit institutions and is also congruent with total risk. The results of this work have important implication for bank administration of risk and regulation, which respects concentration risk and its relation to capitalization and the past due loan portfolio of the banking system.

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**The Effect of Inflation on Income Distribution**

This work analyzes empirically the effect of inflation on economic inequality. In particular, it supports the theory that high inflation rates worsen income distribution and that a more equitable situation is reached during disinflation. Taking a sample of more than one hundred countries, the paper concludes that an increase in inflation by five percent implies, for a country like Mexico, a decline in equality by one percent in the short term and four percent in the long term. Subsequently by analyzing inflationary crises, the work concludes that during the first year of a crisis, inequality will deteriorate eight percent and more than one percent for each subsequent year. Utilizing data from Mexico, the work finds that an increase of five percent in inflation will negatively impact income distribution by approximately two percent.

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**Foreigners in an Open Economy: Recent Impacts On Productivity, Concentration and Trade**

The recent boom of foreign direct investments in Brazil revived an old debate of the sixties and seventies about the role of foreign companies in a developing economy. This paper aims to revisit this debate in the light of the changes in trade regime and foreign capital regulation that occurred in

Brazil during the nineties. The main argument is that, given these transformations, the present cycle of foreign investment tends to have a more favorable cost-benefit ratio than those that marked Brazil's import substitution industrialization. To test this argument, data on productivity, concentration and trade of approximately twenty thousand manufacturing firms for 1995-97 are examined. The results tend to support the argument.

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**Explaining Foreign Exchange Market Puzzles**

This paper develops a flow model of the exchange rate with speculative capital flows integrated in a rigorous manner. The model is consistent with five foreign exchange market puzzles: (1) occasional discontinuous jumps in the exchange rate; (2) periodic short-term regimes of persistent appreciation/depreciation that can develop into a long swing; (3) the forward discount bias; (4) volatility clusters in the foreign exchange market that create conditional heteroskedasticity; and (5) the dual profitability of betting in the short run against any foreign exchange intervention and betting with the intervention in the long run.

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**Policy Challenges for Financial Institutions**

The integration of global financial markets has led to a sharp expansion in international capital mobility. The increase in capital flows has contributed significantly to economic growth and improved the standards of living in emerging market economies. Financial competition and innovation have also led to the development of new products, such as derivatives. However, the proliferation of derivative products and the deepening of capital flows have produced serious concerns about the stability of the global financial system. The rapid spread of the Asian crisis to Russia and Latin America in 1998 invoked fears of a global financial crisis. The greatest concerns have focused on OTC derivatives. This paper argues that although there are some problems with OTC derivatives, they should not be eliminated or replaced with exchange-based derivatives. Modifications to enhance transparency and monitoring should help reduce some of the shortfalls.

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**The Dynamics of Capital Movements to Emerging Economies During the 1990s**

The dual objectives of this paper are to document and explain the changing dynamics of cross-border capital movements in emerging markets in recent years. In attempting to explain these dynamics, our focus is on the role of the policy response in shaping both the volume and the composition of capital inflows. Specifically, we assess the extent to which two broad types of policies - direct intervention in the capital account (such as measures to control capital inflows) and the broad monetary-foreign exchange *policy mix* (such as sterilized intervention) - have systematically influenced the nature and

dynamics of capital flows. We also examine empirically a potential *pull* factor largely ignored in the existing literature - the possible link between the volume of portfolio flows and the characteristics of the domestic equity market - most notably, its depth. The latter is a particularly relevant issue for the 1990s, in light of the growing importance of bond and equity portfolio flows. Along these dimensions, we extend our earlier work (Montiel and Reinhart, 1999) by focusing on to what extent the relationship between capital flows and its push or pull determinants vary across regions. Our main focus is on emerging markets in Asia and Latin America. In the process, we take stock of the answers the empirical literature has provided to the questions of the causes of the inflows, the factors affecting the composition of the flows, and the existence of contagion effects in international capital markets.

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**A Review of Capital Account Restrictions in Chile in the 1990s**

This paper examines the Chilean experience with capital controls and reviews studies on controls on capital inflows. Controls on Chile's inflows had only a temporary impact in reducing specific inflows because they were affected by avoidance. There is some evidence that controls increased interest rates and altered the composition of capital inflows. The studies, however, contain important methodological problems in measuring flows and significant econometric weaknesses, which cast doubt on the robustness of estimates. No study has assessed the political economy of the controls. It seems premature to view the Chilean experience as supportive of controls on capital inflows.

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**Use of Probabilistic Analysis in order to Improve Decision Making in Environmental Regulation: The Regulation of Arsenic in Chile**

The use of probabilistic analysis is very useful for the management of risks in developing countries, where information, resources, and technical specialization often are scarce. Currently the majority of the regulatory agencies in the world recommend the use of a deterministic focus for the analysis of problems related to decision making. However, this focus does not incorporate the uncertainty in the variables. Often extreme values of the variable are used to assure that possible (although perhaps improbable) states of nature are considered. This work compares the results of a deterministic analysis with those of a probabilistic analysis for the regulation of arsenic in Chile. The differences are established for public policies. The work concludes that the use of a deterministic focus related to the application of an environmental norm is too restrictive when considering only the average values. However, upon sensitizing these results to minimum and maximum values, the deterministic focus generates norms that are too relaxed compared to the achievable goals in the probabilistic analysis. In addition, the work examines those variables whose uncertainty impinges more significantly on the total uncertainty, and for that reason permits defining where the resources ought to be focused for future research.

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**Conceptual Standard for Regulating Toxic Substances in Chile**

This document presents a methodology for regulating toxic atmospheric substances in Chile. This methodology is based on international experience. Given the complexity in the regulation of toxic substances, the high uncertainty that exists in the estimation of the effects, and the diverse interests that are in play, it becomes necessary to generate a regulatory participative process. This process should establish clear-cut rules, but at the same time deliver sufficient flexibility so that the sources are moved to the new situation gradually. This avoids significant economic impact. The proposed focus incorporates limits of risk. Standards need to be established setting upper and lower limits. Sources negotiating with the authorities need to plan to move from the lower standards to the higher ones within a predetermined time limit. The time and standards will vary with each firm depending on the socioeconomic characteristics of the sources, the particular contaminant, and the impact of the emissions on the environment.

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**Labor Market Regulations and the Demand for Labor in Brazil**

The main objective of this study is to evaluate the impact of the 1988 changes in labor market regulations prescribed by the new Constitution on the level of employment and on the speed of employment adjustment in Brazil. From the many aspects of labor market regulations, this study concentrates on those that directly influence variable labor and dismissal costs. Evaluating the impact of changes in these costs on the level of employment and speed of adjustment is based on estimates of structural dynamic models for labor demand at different points in time

before and after the 1988 constitutional change. The empirical strategy is to estimate such models from microlongitudinal monthly data for a sample of five thousand manufacturing establishments, which cover the period from January 1985 to December 1997. We try to isolate the effect of the constitutional change on the parameters of the labor demand function from the effects of the trade liberalization process and from the several stabilization plans that occurred at the end of the 1980s. We do this by regressing our monthly estimates of these parameters on a temporal indicator of the 1988 constitutional change, controlling for a variety of other macroeconomic indicators.

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**Inflation and Economic Cycles**

This work presents some of the harmful effects of inflation in the case of Mexico. The analysis centers on the short-term dynamics of macroeconomic variables and their relation to inflation. The Hodrick-Prescott filter is used to obtain the cyclical components of the variables studied. The contemporary correlation between the cyclical components of the variables indicate that when inflation finds itself above the trend, economic activity, employment, investment and real wages will tend to be beneath the trend. Inflation above the trend is associated with higher nominal and real interest rates than the trend. The lagged correlations between the cyclical components of the variables analyzed indicate that inflation has a harmful effect on the variables mentioned. The results corroborate functions of impulse-response, obtained through vector autoregressive regressions (VAR). In light of the results of this work, forces, which definitively lower inflation, should not be underestimated.

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**The Brazilian Financial System: Recent Restructuring, International Comparisons and Vulnerability to the Exchange Rate Crisis**

This paper, based on the balance sheets of financial institutions, shows that the national private banks are currently in a less vulnerable position than in the first years after the introduction of the Real Plan. The ratio of non-performing loans of the banking system is strongly concentrated in federal retail banks. Moreover, international comparisons reveal that the main Brazilian private banks are less vulnerable than the ones from other emerging economies in Latin America and Asia. PROES strongly reduced the market share of state banks and improved the allocations of resources on the remaining ones. The arrival of foreign banks has also strengthened and improved the efficiency of the financial system. However, private national banks are still strongly hegemonic when compared to foreign banks, and they have been reacting efficiently to the stronger competition and participating in the recent privatization of state banks. Finally, this paper shows that the Brazilian financial system should not be seriously affected by the recent devaluation of the currency.

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**Inflation, Unemployment and Monetary Policy in Brazil**

In this article, we present some estimates for the Non-accelerating Inflation Rate of Unemployment (NAIRU) using Brazilian data. Two different models are used. One is based on a transfer function estimation of a traditional Phillips curve approach. The second one is a signal extraction method where the NAIRU is the unobservable stochastic trend of the unemployment data. The NAIRU is estimated using both the BGE and the DIESSE data. The results show a linear Phillips curve for Brazil and allow good estimates of the NAIRU. For the quarterly data estimations, we obtain a time varying NAIRU while for the monthly data, the best estimate generates a fixed NAIRU. Our results are in line with the acceleration of inflation during the eighties and the deceleration of inflation that follows the Real Plan. We also present a monetary policy where the NAIRU gap plays a key role for inflation targeting, not because monetary authorities should close the gap every period, but because it helps predict future inflation.

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**International Trade and the Business Cycle**

This paper develops a new empirical framework for analyzing the dynamics of the trade balance in response to different types of macroeconomic shocks. The model provides a synthetic perspective in the conditional correlations between the business cycle and the trade balance that are generated by different shocks. It attempts to reconcile these results with unconditional correlations found in the data. The results suggest that, in the post-Bretton-Woods period, nominal shocks have been an important determinant of the forecast error variance for fluctuations in the trade balances of the Group of Seven countries.

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**Average Revenue Regulation and Uncertainty**

We examine profit-maximizing pricing under a stylized version of the price-cap plan used by the Mexican Energy Regulatory

Commission (CRE) to regulate transportation and distribution in the natural gas industry. When average revenue in each period is calculated as the ratio of total revenue to output in that period (as in CRE's plan), incentives for strategic non-linear pricing may be created. However, in spite of its drawbacks, we also show that this regulatory regime can be efficient under stochastic-demand environments because it allows an intertemporal growth in consumer surplus. This is proved through a simulation exercise with data from the natural-gas distribution projects in Mexico.

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**Monetary Aggregates Using Divisia Weights: An Application to Brazilian Data**

First, we review the methodology for constructing monetary aggregates using Divisia weights. Divisia monetary aggregates (M2, M3, and M4) were then calculated with monthly and quarterly data for the period Jan. 1980-Ago. 1998. They were found to have a better performance than the traditional monetary aggregates constructed with the simple-sum of assets. This was based on the following criteria: (1) a better goodness-of – fit coefficient in a regression between changes in the monetary aggregate and the inflation rate; (2) a relationship between these two variables which was closer to proportionality; (3) more stable monetary multipliers; and finally, (4) a higher correlation coefficient between income velocity and the interest rate.

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**Financial Fragility and Economic Performance in Developing Economies: Do Capital Controls, Prudential Regulation and Supervision Matter?**

Little empirical investigation exists of the links among capital account liberalization, prudential regulation and supervision, financial crises, and economic development mainly because of the lack of comparable measures to describe regulatory practices for different countries. This paper examines empirically, albeit in a preliminary manner, these links using new measures of capital controls, prudential regulation, supervision, and depositors' safety for a sample of fifteen developing economies over the period 1990-97. Results confirm the importance of the degree of capital account convertibility and the regulatory and supervisory framework in affecting financial fragility and economic performance.

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**Costs Associated with Disinflation**

This work conducts a study of the empirical regularities of disinflationary procedures implemented in various countries during 1970-1998. In order to reverse inflationary tendencies, the monetary authority needs to implement restrictive monetary policies that raise real interest rates and appreciate the real exchange rate, which ultimately affects the rate of economic growth. The analysis of this work focuses on identifying the determinants of the costs associated with reducing the inflation rate. A macroeconomic model is presented which intends to capture the relevant elements of disinflation and its associated costs.

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**Economic Regulations: The Case of the Panama-Paraguay Waterway**

The incorporation of private capital into the provision of infrastructure during recent years in Argentina has brought about substantial changes in public policy regarding infrastructure. The Panama-Paraguay waterway took place within this framework. In terms of economic efficiency, the performance of this channel after improvements were made resulted in an initial positive outcome for most of the groups affected by the changes. This work explores regulation from an institutional framework, relating in particular the performance of the waterway to the regulatory framework: the market mechanisms imposed, the implicit incentives, and the institutional context in which regulation was imposed.

The author reaches conclusions particularly with regard to the limits that regulation imposes on opportunistic behavior and the conditions that it establishes to allow continued growth of the potentialities of the waterway.

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**Entrepreneurial Response to Economic Liberalization and Integration: An Application of the Behavioral Approach to Financial and Economic Decision-Making**

Utilizing in-depth interviews with thirty-six Uruguayan manufacturing enterprises and earlier sessions with seventy-six entities, this study reinforces the importance of increased competition in promoting the efficiency with which resources are utilized. The findings suggest half a dozen hypotheses about economic behavior that conflict with what might be expected from an attempt to optimize. A substantial number of decision-makers maintained that they pursued multiple or less-than-completely maximizing objectives and used rules of thumb (heuristics) in much of their problem solving. Equally important was the use of such heuristics because of difficulties in implementing optimization objectives, an aspect not always taken into account in determining optimal economic advice. Perhaps the most notable finding is that those firms, which claimed a profit-maximizing objective and the use of many appropriate techniques to advance that objective, employed guidelines in information searches that usually involved rules of thumb with serious and often imperfectly recognized biases. The study draws on the contributions of cognitive psychology to the analysis of decision making. Hypotheses for further testing are offered.

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**Economic Theory and Credibility in Monetary Policy**

Monetary policy can be described as a process of sequential interaction between authorities and the public. The authority designs and revises its instruments and policies, while the public responds and anticipates the authority's behavior. The interaction between policymakers and economic agents determine the equilibrium. The purpose of this paper is to present theoretical considerations about the way central banks can enhance their credibility and consequently facilitate the process to abate inflation.

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**Taxation in Latin America: Structured Trends and Impact of Administration**

From the mid-1980s to early 1990s, Latin American tax policy provided rich lessons for other reforming countries. Meaningful innovations led also to perceptible revenue gains. Later in the 1990s, tax policies began to drift. Shining examples of fundamental reform seemed to lose their luster. Revenue in terms of GDP also stagnated, partly reflecting over-reliance on consumption taxes and neglect of taxable capacity on incomes. The stagnation has been exacerbated by excessively simplified administrative practices. Based on these developments and on the limited taxability of internationally mobile capital, the paper anticipates a likely tax structure for the new century.

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**Estimation of Export and Import Functions for the Mexican Economy**

The objective of this paper is to analyze the determinants of the Mexican external sector by the estimation of export and import functions using cointegration techniques. The article offers new empirical evidence about the external sector performance using the recent econometrics techniques for the analysis of non-stationarity series. Using cointegration, the short and long run elasticities are estimated, and the significance of its determinants in the function's interpretation is proven.

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**Copper and the Chilean Economy 1960-98**

This paper concludes that world copper prices play an important role in short-term fluctuations and probably influence long-term growth of the Chilean economy. While many mechanisms may be at work, investment seems to play a major roll. In a copper price boom, the higher copper price and associated capital inflows create upward pressure on the real exchange rate. The appreciation of the Chilean peso during the first part of the copper cycle contributes to lower inflation, which could partly explain why real wages grow more rapidly in this part of the cycle.

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**Budget Institutions and Fiscal Performance in Latin America**

In this paper, we collect detailed information on the budget institutions of Latin American countries. We classify these institutions on a hierarchical collegial scale, as a function of the existence of constraints on the deficit, and voting rules. We show that hierarchical and transparent procedures have been associated with more fiscal discipline in Latin America in the eighties and early nineties.

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**Elections and the Timing of Devaluations**

This paper presents a rational political budget cycle model for the open economy, in which devaluations are delayed in the run-up to elections, in order to increase the electoral chances of the party in office. By concentrating on the closed economy, previous political cycle models overlooked the influence of elections on the behavior of exchange rates.

We introduce voter uncertainty in two different dimensions. Not only are voters uncertain regarding the competency of the incumbent but they also ignore the degree to which the incumbent is opportunistic, i.e. willing to distort the economy for electoral gain. When there is only uncertainty about competence, we obtain a separating equilibrium, as in the previous political budget cycle literature. However, when uncertainty about opportunism is introduced, a partially pooling equilibrium emerges: an incompetent, opportunistic incumbent delays a devaluation until after elections, mimicking a competent incumbent, while the competent does not distort the optimal pattern of the exchange rate, regardless of the degree of opportunism.

The model's prediction that there is a tendency to delay devaluations until after elections is used to look at the empirical evidence on devaluations around elections.

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**Reelection or Term Limits? The Short and the Long View of Economic Policy**

An incumbent's drive for reelection, can lead to political budget cycles. The distortion cycles in economic policy may be offset by the information they indirectly provide about the incumbent's competency. The informative content of cycles depends on the sophistication of voters, i.e. on whether they are rational or near rational.

In a framework of individual candidates, constitution clauses that prohibit the reelection of the president eliminate political budget cycles. One-term limits that allow non-immediate reelection also shift the focus from short-run cycles to the long-run soundness of economic policies. They have superior welfare properties. Hence, the choice is not reelection or not, but rather immediate or non-immediate reelection.

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**Endogenous Transaction Technology and the Welfare Cost of Inflation**

The change in an economy's transaction technology is an endogenous process motivated by the will of private agents to reduce the currency requirements needed to carry out a certain amount of transactions. This change is costly, and a higher inflation level diminishes the available resources for consumption, since it induces agents to invest more resources in this process.

This paper uses a model that includes transaction technology along with assets, which are alternatives to cash in the liquidity provision services. The number of assets is determined by a free-entry condition to financial intermediation. The welfare cost of inflation is derived from the need to invest a greater amount of resources to develop the new assets. Finally, given the assumptions of this model, an increase in the inflation rate produces a greater cost than the benefit associated with returning the inflation to its original level.

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**Quarterly Demand for Currency: Estimations Using Three Statistical Techniques**

This paper presents estimations for currency demand using three statistical techniques: ordinary least squares, error correction models and vector autoregression. The demand estimation was performed using quarterly data from 1987 to 1997. Generally, the estimated equations showed satisfactory results in economic and statistical terms. The prediction capacity was confirmed by the low forecast error, under three percent for 1997. The demand stability in the short and long-term was verified using the Cusum, Cusum Square and Johansen cointegration tests.

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**Experiences in Monetary Policy: Lessons for Costa Rica**

This paper examines eight international experiences in implementation and design of monetary policy. The countries reviewed are Spain, the United States, Canada, New Zealand, Chile, Germany, Mexico and Colombia. From these experiences the following aspects constitute valuable lessons for Costa Rica: (1) Monetary policy must be utilized to directly control inflation. (2) There is an unstable relationship between monetary aggregates, nominal income, and aggregate expenditure as a result of innovations and financial globalization. (3) An effective monetary policy requires consistent fiscal and exchange policies. (4) The use of exchange rate as nominal anchor has not been a sustainable strategy in the long run in underdeveloped countries. (5) An independent central bank encourages credibility by the economic agents. (6) Finally, the majority of the successful strategies have resulted in a change towards an operative objective of short-term interest rates.

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**Weighing Accession to an Existing Monetary Union: Should Small Countries Join**

Few disagreements have been more pronounced than those concerning the pros and cons of a monetary union compared with maintaining flexible exchange rates among countries of a region. Once a large economic and monetary union has been established, as in Europe, the question for neighboring countries, modeled as small open economies, inevitably becomes whether to join such a union, which behaves like a closed economy.

This paper explores the welfare consequences of the alternative monetary and exchange-rate regimes available to the small country. The small country must choose in view of the policies, which the large country adopts for itself. The monetary union, modeled as a closed colossus, optimizes its monetary policy in an economy with nominal wage contracts in which employment is determined by the demand for labor under the contract terms. Reacting to movement in high-frequency observables, such as interest rates and prices, the monetary authority aims to keep labor on its supply curve inside the union in the face of IS and LM shocks to aggregate supply. The small country that considers joining a monetary union experiences shocks, which are imperfectly correlated with those of the large country. A monetary union would increase the degree of correlation. By fixing the nominal exchange rate irrevocably at 1:1, a monetary union also helps stabilize the real exchange rate between the specialized small and the large country, and it makes the supply of money to the small country highly elastic. Giving up floating exchange rates and an independently optimized monetary policy thus brings stabilization costs and benefits to the small country. These costs and benefits are rigorously modeled and deduced from researched parameter values in this paper. The objective is to present and apply a completely transparent method for evaluating the choices still available to the small country.

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**Moderate Inflation and the Instability of the Inflationary Process**

The Mexican economy has experienced moderate levels of inflation during a large part of its recent history. This paper argues that it is not desirable that a country maintain these levels of inflation for prolonged periods of time, not only because the long term costs are large and inevitable, but because these extended periods of moderate inflation considerably reduce the future probability of decreasing the inflation rate. This work examines a historic study of inflationary behavior of countries that have had levels of moderate inflation for significant periods of time. The probability of maintaining a moderate inflation rate is

substantially less than maintaining a low inflation rate. Going from a low to a moderate inflation rate increases significantly the probability of a considerable inflation rate increase. It is also found that the disinflationary processes that have not depended on an exchange rate anchor have had stronger results that those programs based on fixed exchange rates. The work ends with an analysis of the classic cases of countries with moderate inflation.

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