

# THE EMERGING INTERNATIONAL FINANCIAL ARCHITECTURE AND ITS IMPLICATIONS FOR DOMESTIC FINANCIAL ARCHITECTURE

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Two salient features of the present international scenario are the large number of negotiations underway at the bilateral, regional, and multilateral levels and the repeated financial crises in emerging markets.

The multiplicity of negotiations itself is becoming a source of uncertainty for economic policy making. It is a taxing process for many developing countries, where the institutional infrastructure supporting negotiations is weak and the staff of negotiators does not have the necessary size and qualifications. As a result, national interests are often not properly promoted, and it is sometimes difficult even to define clearly what the national interest is.

The negotiations involving the financial sector and capital markets in general are no exception in this regard. It is not clear whether the ongoing negotiations in different forums will deliver an appropriate global result from the point of view of developing countries' interest.<sup>1</sup> Indeed, developing countries do not even have a voice in the discussions on the emerging international financial architecture (IFA) in some of the relevant forums. For the international financial architecture to be more friendly to developing countries, the new framework should help to smooth volatility in financial conditions and to diversify national risk; avoid sudden interruptions in the flows of capital; and underpin an amount of flows that is consistent with sustainable growth.

Examples of financial crises in developing countries in the context of globalization abound: the failure of Southern Cone financial liberalization attempts in the early eighties, and the series of financial/macroeconomic crises following the Tequila effect in the late nineties (the crises in Asia, Russia, Brazil, Argentina, and Turkey). In the case of the Southern Cone, the failure was attributed to a problem of sequencing, an inconsistency between domestic financial liberalization, the lack of sound prudential regulations, and the opening of the capital account. In the nineties, the unexpected financial crisis in successful Korea was ascribed to weak domestic regulations and supervision capabilities, flimsy corporate governance, and volatile capital flows (Yoshitomi 2000).

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<sup>1</sup> UNCTAD (2001) is an excellent survey of the issues associated with current IFA negotiations. Also see Ocampo (2000) and Miller (1999).

All these crises share a characteristic: the “perverse” interaction between the domestic financial architecture (DFA) and the IFA. They suggest that, since the process of building institutions for the financially globalized world has an international and a national dimension, there must be a minimum of coherence between the two. If a new IFA is to be built, a new DFA must be designed as well.

This paper’s main motivation is to contribute to a better understanding of the IFA–DFA interactions and of their effects on financial stability and development. The paper is based on two hypotheses. First, the framework regulating financial intermediation (i.e., the DFA) in a given economy should not be conceived independently of the developments in international markets and institutions. This rule applies to the design, reform, and management of regulations. Second, to make financial crises in developing countries less likely, the emerging IFA must be consistent with the DFA and must take into account some key characteristics of developing economies: the higher volatility of the macroeconomic and financial environment; the underdevelopment of the market structure (imperfections, missing markets, high transactions costs); the weakness of institutions; and (as a consequence) the reduced number of countercyclical instruments at the disposal of authorities.

Examination of these two hypotheses allows us to address some fundamental questions about the emerging IFA. What does it “add up to” from the point of view of developing countries’ goals of growth and successful integration in the global economy? Does it make the international financial system more stable, efficient, transparent, and “fair”? Is the IFA “neutral” with respect to changes in risk, return, and structure, or are shifts within them important? Is an imperfect and poorly implemented IFA system still an improvement over no system at all? Obviously, we do not intend to address all these questions in depth, but we believe that the evidence we discuss in this paper is relevant to many of them.

The rest of this paper comprises three sections. The first section develops a framework to examine IFA-DFA linkages and interactions, defines what we mean by IFA and DFA, and reviews the recent developments concerning the IFA. Emphasis is placed on the aspects most relevant for emerging economies and for Latin America in particular. The second section presents a case study to illustrate the issues raised in the previous section. Argentina is selected as the point of reference because the DFA and the structural features of the country are especially useful in illuminating specific points of the analysis.<sup>2</sup> The last section of the paper draws some lessons that can be useful in elaborating a consistent negotiation strategy in the different forums and in designing a DFA that is consistent with both the developments in the IFA and with the goal of a further financial deepening.

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<sup>2</sup> In a context of increasing financial deepening and global integration, Argentina, suffered a series of domestic and external shocks. Thus, its time series presents a degree of variance that is very helpful in illustrating our arguments. Additionally, the country holds ongoing negotiations with the International Monetary Fund (IMF).

## The Emerging IFA and Developing Countries' DFA

In the aftermath of the Asia-led set of financial crises, the phrase “international financial architecture” is now routinely used to connote a host of issues related to international financial management and governance. There is no commonly understood definition of IFA. A narrow interpretation would focus on the role of the International Monetary Fund (IMF) and lender countries before, during, and after a financial crisis, typically in a developing country. Broader interpretations, of the sort we utilize in this paper, put several other aspects of the international financial system within the ambit of IFA. Narrow or broad, what is increasingly clear but less well understood is the implication that the emerging IFA has for domestic financial systems, management, and governance.

We include regional agreements in our schematic analysis below. Countries involved in regional agreements need to take into account the restrictions and the relation between deeper financial regional integration and commitments at the multilateral and regional levels. The arrow pointing downward from the IFA rectangle highlights the fact that international norms and institutions limit the set of strategies available for developing economies to become more financially integrated. For example, a failure to tackle criminality can hinder negotiations on liberalization of financial services.

The DFA includes an array of legal norms, regulations, policies, and practices that influence the management and governance of financial institutions and, hence, their economic conduct and performance. As in the case of the IFA, we can adopt a narrow and a broad interpretation of DFA. In the narrow interpretation, DFA includes only those aspects that are strictly related to the financial sector, while a broader interpretation includes elements associated with the macroeconomic regime. Given the importance of macroeconomic issues in developing countries, a broad interpretation is appropriate. Accordingly, at the bottom of the scheme, we represent the DFA as the union of two rectangles: one containing the elements of the financial infrastructure and the other showing the components of the macroeconomic regime that are relevant for the broadly defined DFA.

The changes associated with the emerging IFA can potentially have a sizable impact on key areas in developing economies. Specifically, changes in the IFA can directly affect the development and stability of the financial sector, the macroeconomic regime, and the process of integration with international capital markets. To be able to manage this process, the authorities must be prepared to introduce the necessary changes in the DFA. In this section, we examine the interactions between changes in the IFA and the DFA. We emphasize three points: (1) the identification of the components of IFA and DFA and the linkages between them; (2) how the IFA–DFA interactions may affect the structure, conduct, and governance of the domestic financial sector and its relations with firms and investors; and (3) how changes in the IFA and DFA can trigger effects that spill over into the macroeconomy and the process of deeper integration with international capital markets.

## A Schematic View of the IFA-DFA Relationships

The DFA and IFA are, in the first place, networks of institutions. Hence, the argument that they matter for the performance of the financial sector and the macroeconomy implies that institutions are not neutral with respect to economic efficiency and that transaction costs matter. In a world where the Coase theorem (Coase 1960) holds, this would not be a helpful hypothesis. If agents are able to enter into contracts as they please, firms and investors can always reach efficient arrangements. They can even contract around the law. But this idealized world is distant from the realities of emerging countries. The only way to enforce contracts is through legal actions of some kind, which can be costly. One factor that features financial intermediation in developing countries is that the enforcement of contracts and, particularly, protecting investor rights, is very costly. The judicial process can be slow and corrupt; supervision of the banking and financial sectors can be weak; there is a lack of transparency; and information tends to be less reliable. Recent research suggests that legal rules protecting investors matter, that institutions do not adapt sufficiently to changes and innovations in the financial sector, and that differences in institutional structure matter in understanding patterns and levels of investment (Carlin and Mayer 2001; Johnson 2000).

A second factor influencing financial development in emerging markets is high volatility. When uncertainty is high, it is very difficult to describe *ex ante* the future states of nature and to quantify risk by means of (an accurately estimated) probability distribution (Kimbal 2000). Therefore data may have little forecasting value. Under these circumstances, to design and agree upon the terms of financial contracts will be more difficult, and, as a consequence, many transactions will not be carried out. The ultimate result is shallow financial markets and an overall financial market structure with some parts missing (i.e., markets for long-run debt, derivative markets, entire sectors of the economy absent in the stock exchange).

The lack of financial deepening created by weak institutions and volatility makes risk management very difficult. Firms and investors cannot properly hedge, shift, or mitigate risks because the necessary instruments simply do not exist. Indeed, a critical factor increasing volatility in emerging economies is the difficulty for the private agents and policy makers to resort to international markets to diversify national risk. Global shocks become very difficult to absorb, and the growth process becomes much more volatile. Typically, this situation is aggravated by the lack of diversification of the productive structure (Fanelli and Medhora 2001).

These features of emerging economies suggest that there may be a perverse feedback channel between weak financial markets, and volatility. Volatility is high because risk cannot be properly managed in shallow financial markets, and these markets are shallow because volatility is high. Improving the DFA and IFA and ensuring their consistency is critical in this regard. A better designed DFA can significantly ameliorate the institutional deficiencies that generate financial market failures. The IFA can make a substantial contribution to increase the authorities' ability to manage national risks (by increasing the number of countercyclical and shock-absorbing instruments available to them). Furthermore, heeding DFA-IFA interactions is also relevant to

volatility for another reason. The possible inconsistency between the IFA and the DFA as a result of piecemeal reforms and international negotiations could in itself become a source of uncertainty.

Given the large number of elements involved in the IFA–DFA interactions, Scheme I organizes the analysis. At the center of the scheme are three ovals showing three policy goals closely associated with the IFA–DFA linkages and interactions: achieving deeper integration with the global economy, developing financial intermediation in a stable environment, and preserving macroeconomic stability. It is via their effects on these goals that the IFA and the DFA have an influence on the conditions for sustainable growth.

The three ovals overlap to call attention to the interdependence between macroeconomic stability, financial conditions, and deeper integration. The recent experience of emerging countries shows that deeper integration with global capital markets can be a valuable instrument in fostering growth and competitiveness. But the process can be painful and may jeopardize both financial and macroeconomic stability. Indeed, it was in the context of the increasing globalization of the nineties that the term “twin crises” was coined to describe the interdependence between financial and currency crises (Kaminsky and Reinhart 1999).

The two arrows joining the DFA and the deeper integration oval represent the interactions between the DFA and IFA that arise as the process of global integration advances. For example: under capital account convertibility, the need to adopt rules and regulations that allow a country to compete internationally will increase; financial systems will have to be adapted to absorb global shocks; the authorities will increasingly take into account that poor fundamentals make the economy more vulnerable to global shocks; and domestically created shocks can jeopardize normal access to international capital markets.

## **The Emerging International Financial Architecture**

Much of what is termed IFA lies in the realm of proposal (and sometimes wishful thinking) rather than actual or probable fact. While taking a broad view of IFA, we avoid the huge literature that has now emerged on proposals to reform the international financial system.<sup>3</sup> Instead, we focus on actual or likely developments in this area that are relevant for our analysis of IFA–DFA interactions. To this purpose we now review briefly the elements included in the IFA rectangle of Scheme I.

The Asian crises were not unique in either their causes, reaction of the international financial institutions (IFIs), other lenders and international community, or their consequences. But their location, timing, and magnitude brought to the fore the role of volatile capital flows in causing the crises, and the prescriptions of the IFIs, particularly the IMF, in resolving the crises. A first component, then, of any definition of IFA is the appropriate capital account regime and the need to understand and manage international capital flows.

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<sup>3</sup> For references see UNCTAD (2001).

But predating these crises is the question of how banks assess risk and make provision for it—the Basel standards for capital adequacy. Also predating the Asian crises and affecting market structure and efficiency of the financial sector are the discussions and developments centered on the financial sector component of the General Agreement on Trade in Services (GATS).

More recently, the G7, G20, and the Organisation for Economic Co-operation and Development (OECD) have served as bases for emerging accords on tax havens and money laundering.

Finally, the emergence of electronic money and trading systems has important implications for market structure and efficiency, for systemic stability, on the conduct of monetary policy, and on central bank functions.

We next describe the salient features of and developments in each of these issues.

**Volatility and Crisis: Management and Prevention.** This is the area where perhaps expectations were and remain highest and where actual and prospective developments are modest at best. The issue turns on three related points: supply of capital issues, managing (short-term) capital, and the role of the IFIs.

Least progress has been made on the supply side issues. Regulation of the sources of capital remains in national hands in source countries, and the more risky and volatile sorts of capital, such as hedge funds and other short-term lending, continue to operate on the basis that the inherent risk of the investment is the best regulator of its size and nature. This lack leads even some industry insiders to sound a warning (Biggs 2001) and call for, at the very least, more effective self-regulation on the part of the industry.

Payment standstills and Collective Action Clauses (CACs) are being discussed at the G20 and G7. Although it is difficult to assess the impact of a policy that does not yet exist, recent evidence suggests that both approaches could provide benefits to borrowers and lenders alike, provided the wherewithal to move away from current ad hoc and unilateral solutions existed.

On managing short-term capital, far-reaching proposals such as the Tobin Tax remain nonstarters in the quarters that matter. Domestic versions, which arguably have been used successfully in Chile, Colombia, and Malaysia, may be seen as part of the arsenal that countries possess to stabilize their economies and alter the composition of capital inflows. But where they are and are not used depends on the status of a country. The analytical debate has therefore focused on balancing the trinity of capital account regime, exchange rate regime, and monetary policy.

It is difficult to assess the extent to which the critiques of the IFIs in the aftermath of the Asian crises have been effective. Failure to make progress on some of the issues requiring collective action (such as standstills and CACs) is due to a number of factors and not an IFI responsibility alone. Misdiagnosing the malady and therefore mistreating it—a key charge in the Asian case—remains a highly contentious issue. At the very least, the responses to the recent Argentinean and Turkish crises suggest that rescue packages are of a smaller order of magnitude. But the policy prescriptions remain largely conventional. A concrete outcome of the Asian crises has been the establishment of forums and processes to enhance the availability of economic data,

transparency of economic policies, and a lightly coordinated approach to oversee developments in the international macroeconomy.

The Committee on Payment and Settlement Systems of the central banks of the G10 countries (CPSS) published in December 1999 a report containing the so-called Core Principles for Systemically Important Payment Systems (BIS 1999). Brazil but not Argentina participated in the Task Force that produced the report. These principles, ten in all, are deliberately general and serve as guides rather than rules to strengthening the financial and payments systems in countries. As a consequence of the reaction to the first report, subsequent texts on implementation have been produced and are detailed and useful. However, the buy-in process is limited and voluntary. A parallel committee, also based at the Bank for International Settlements (BIS), the Committee on the Global Financial System (CGFS), is also concerned with working with central banks to monitor financial markets and promote policies that enhance their stability. This, too, is a limited group with no enforcement mechanism other than the force of its arguments, a point that may also be made about the BIS-based Financial Stability Forum.

The IMF, in conjunction with the BIS, has designed a Code of Good Practices on Transparency in Monetary and Financial Policies and a Code of Good Practices on Fiscal Transparency. The focus here, too, is on promoting best practices through a set of general guidelines accompanied by implementation advice.

The intention is for standards and codes to be developed in a wide range of areas, including banking regulation and supervision, securities and insurance regulation, accounting, auditing, bankruptcy, and corporate governance. Reports on the observance of these are published by the IMF and World Bank and form part of the monitoring process of program countries. It follows that observance is more enforceable (and enforced) in borrowing countries than in lending countries and within borrowing countries in program countries than in nonprogram countries.

The need for widespread access to reliable, timely, and useful data has underscored all recent financial crises. As a result, in 1996 the IMF developed the Special Data Dissemination Standard (SDDS) for countries having or seeking access to international financial markets. (The accompanying General Data Dissemination System, GDDS, is designed for the others.) Approximately fifty countries, including Argentina, have subscribed to the SDDS, which requires data to be organized in a certain format and posted on the World Wide Web.

**Risk Assessment and Capital Adequacy.** The Basel Capital Accord of 1988 (“Basel 1”) was the first consistent multilateral attempt to develop a more uniform risk assessment and capital adequacy framework for the international banking system. What began as a process for the internationally active banks in the twelve advanced countries that comprise the Basel Committee on Banking Supervision now touches the domestic and international operations of banks in over one hundred countries. At the core of Basel 1 is a common method to qualify capital, a common risk-based framework within which bank assets may be valued, and the 8 percent reserve requirement of qualifying capital to aggregate risk-weighted assets.

Basel 1 was criticized for the manner in which it measured risk and for its potentially credit-contracting nature for many banks, particularly large diversified ones. The Asian crises

also highlighted three other weaknesses in Basel 1: the need to extend it to contribute to financial stability in emerging markets; the need to cover short-term interbank lending, a major source of capital volatility, in the risk assessment framework; and more generally, to make processes like the one behind Basel 1 more representative of the global financial community.

Basel 2, unveiled in June 1999, goes some way in building on Basel 1. It sharpens the categories of risk and pays particular attention to “operational risk,” defined as “the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems, or from external events.” Minimum capital adequacy is now more closely linked to a weighted system of risk. Assessing and weighting the risk may be conducted by internal ratings-based approaches used (only) by the largest banks. Alternately, and controversially, the proposal calls for a more standardized approach that uses the ratings of credit agencies.

Basel 2 is currently undergoing a process of review from the international banking, indeed financial, sector, and a final document is expected to be produced by the end of 2002. Implementation has already been pushed back from 2004 to late 2005. The test for the adequacy of Basel 2 would be the following questions: Does it temper lending during boom? (More generally, does it promote countercyclical lending behavior?) Is it easily and transparently applied (or applicable) to all internationally active banks? Does it make the international financial system less prone to crises? Clearly, the answers to these questions are not in, and the challenge to make the Basel process more effective and more inclusive remains to be met.

**Market Structure, Market Efficiency, and Trade in Financial Services.** The General Agreement on Trade in Services (GATS) is the first multilateral agreement to provide legally enforceable rights to trade in all services. It has a built-in commitment to continuous liberalization through periodic negotiations. The GATS is based on several principles. First, it covers all services except those provided in the exercise of governmental authority. Second, there should be no discrimination between other signatories to the agreement (the so-called most-favored-nation principle.) However, exceptions from the most-favored-nation (MFN) obligation are permitted, for up to ten years, in order to give more favorable treatment to some countries than to the generality. Third, laws and regulations governing trade in services should be transparent. And fourth, progressive liberalization is allowed for within the context of a GATS offer.

Still, exceptions to these principles are allowed and fall under two groups. First, governments can choose the services in which they make market access and national treatment commitments. Second, they can limit the degree of market access and national treatment they provide. For the purposes of the GATS, financial services are defined as the following. Insurance and related services: life and nonlife insurance services; reinsurance and retrocession; insurance intermediation, such as brokering and agency services; and services auxiliary to insurance. Banking and other financial services excluding insurance: acceptance of deposits; lending of all types, including consumer credit, mortgage credit, and factoring and financing of commercial transactions; financial leasing; all payment and money transmission services; guarantees and commitment; trading in money market instruments, foreign exchange, derivatives, and exchange-rate and interest-rate instruments such as swaps and forward rate agreements, securities, other

negotiable instruments, and other assets such as gold; participation in issues of new securities; money brokering; asset management such as portfolio management or pension fund management; settlement and clearing services for financial assets; provision and transfer of financial information and financial data processing; and advisory and other auxiliary financial services.

The core of the GATS is the specific commitments, which are made by member countries. Each member must first determine which sectors or activities it wishes to open (thus accepting the national treatment and MFN principles for those sectors), and then determine the nature of limitations and exceptions that it wishes to maintain. Article XII allows for the usual restrictions on trade in services in the event of serious balance-of-payments problems, while the Annex on Financial Services makes clear that given their particular nature, members can continue to exercise considerable authority over their financial sectors for “prudential” reasons such as the protection of investors, depositors, and policy holders; the integrity of the financial system; or the conduct of monetary policy.

Finally, an Understanding on Commitments in Financial Services sets out an alternative approach to that covered by the provisions of Part III of the GATS (on market access and national treatment) by specifying alternative formulas of market liberalization in the financial services sector.

Almost all World Trade Organization (WTO) members have made commitments in the “core” financial services—insurance, banking, and securities. A smaller number have done so in insurance intermediation and the provision and transfer of financial information; only half have made commitments in derivatives trading.

Developing countries, in particular, have to balance the objectives of market efficiency and competition with considerations of macroeconomic stability and financial development. In many cases, these are conflicting objectives made more complicated by the fact that offers in this area form part of the broader set of issues related to international trade negotiations, including the posturing involved in setting up another comprehensive round of trade talks.

**Tackling Criminality.** Although work in this area predates the Asian crises, it is not until recently that diligent efforts are being made to deal with gray areas and outright criminality in international financial transactions. The Financial Action Task Force on money laundering (FATF) was established by the G7 in 1989 and is housed in the Organisation For Economic Co-operation and Development Secretariat. After years of a discreet and ineffective approach to the problem, the FATF in 2000 took a more activist position by naming offenders and creating a “blacklist,” annually updated. The purpose of this approach is to shame countries into complying with a higher level of diligence in preventing money laundering, though in principle sanctions against the financial companies of these countries are also possible.

Four issues remain outstanding. First, the definition of money laundering is left to the member countries of the FATF (for example, France considers tax evasion to be money laundering, but Switzerland does not.) Second, the FATF has directed its highly public efforts against small and poor countries, leaving it open to the charge of bending to exigencies. Third, there is no common framework within which coordinated action may be taken to penalize offenders or improve standards of accountability in all countries, not just the worst cases. A

fourth and no less important issue has to do with linking efforts to curb money laundering with another OECD-inspired exercise, to eliminate what it terms “harmful tax practices.” The Forum on Harmful Tax Practices identifies four factors that would constitute a tax haven: no or only nominal effective tax rates; lack of effective exchange of information; lack of transparency; and absence of a requirement of substantial activities. In June 2001, the U.S. administration convinced the OECD to drop efforts to force offshore tax centers to end some of the more egregious aspects of their tax incentives, while continuing to work with these countries to provide information to OECD national tax authorities. As a result, a blacklist similar to that produced by the FATF is unlikely to be published soon, and efforts by some OECD members to link the tax haven and money-laundering exercises have been temporarily stalled.

**Technological Change.** The final pillar of the emerging international financial architecture is less deterministic than the ones discussed already. Nevertheless, technological change, mainly in the form of more efficient payments systems and the spread of electronic money, is likely to have a profound effect on the international financial system. Analytically, this is largely uncharted territory. A distinction may be made between electronic money (“e-money”) and electronic trading systems (ET).

The BIS defines e-money as “stored value or prepaid products in which a record of the funds or value available to the consumer is stored on a device in the consumer’s possession” (BIS 2000). The principle issues raised by the spread of e-money have to do with its security and macroeconomic implications. Security concerns deal with possible breaches of security for reasons of theft; the possibility that in the absence of well-run clearing and settlement arrangements e-money will abet money laundering; and the lack of clear legal jurisdiction when e-money is used for crossborder payments. The macroeconomic implications of e-money relate to the likelihood that money velocities may change, thus making monetary targeting less effective during a transition phase, and resulting in the reduction in seigniorage revenues caused by a reduction in the amount of notes and coins in circulation.

BIS (2001) defines an ET as a “facility that provides some or all of the following services: electronic order routing; automated trade execution; electronic dissemination of pre-trade (bid/offer) quotes; and post-trade information.” ET systems raise a number of issues related to market contestability, efficiency, and stability. On contestability, until a clear industry standard emerges, there is likely to be fragmentation among such systems and a consequent loss in efficiency. The eventual emergence of a monopoly will raise efficiency, but its size and nature depend on the regulatory regime that governs it. ET systems have the potential to improve the efficiency of individual firms, but they also increase dependency on the system. The systemic instability impact of ET systems depends on their reliability and transparency.

## **The Domestic Financial Architecture in Developing Countries**

**The Financial Infrastructure.** The rectangle on the left-hand side of Scheme I lists the elements of the financial structure that constitute the DFA. They are the legal and judiciary infrastructure, the regulatory framework, and the host of practices and policies that affect the structure, conduct,

and performance of financial institutions and corporate governance. The process of institutional building and reform, however, is complex, and particular attention should be paid to some aspects associated with liberalization policies.

Financial liberalization involves lifting controls on interest rates, deregulation, and privatization of the banking sector, allowing the entry of foreign capital and introducing international regulatory standards. Hence, it can be interpreted as a wide-ranging attempt to redesign the DFA. But, when we examine financial liberalization using the broadly defined DFA framework, inconsistencies appear. The analysis of liberalization experiences suggests that easier reforms (i.e., lifting controls) are introduced quickly while those that are politically conflictive and time-consuming are often delayed (for example, a more transparent and active judiciary).

Another important issue is the relationship between the legal infrastructure and regulations. When the legal system is weak, stronger regulations can act as an effective substitute for court enforcement of contracts. But a strong regulator in the context of a fragile judiciary may result in widespread corruption. In this regard, consistency is critical and necessary to avoid a patchwork approach to reform. It would be wiser to advance more slowly but in a coherent way.

In this way, some attempts may have failed because of the inconsistency between the velocity of the processes of institutional development and of deregulation. Rapid deregulation in the context of weak legal and judiciary infrastructure and lack of transparency may result in the mispricing of risk, which, in turn, can lead to financial turmoil and sudden increases in national risk.

**The Macroeconomic Regime.** The four elements of the macroeconomic regime that are relevant to the DFA are the exchange rate, the monetary and the capital account regimes, and the capacity to manage nondiversifiable national risk. The literature on the choice of exchange rate regimes and on optimal currency areas<sup>4</sup> has clarified the connections between the first three elements, while the literature on capital markets in open economies deals with the fourth.<sup>5</sup>

In choosing an exchange rate regime, the authorities must decide on three key issues: first, the desired degree of autonomy of the monetary policy; second, the degree of openness of the capital account, which will contribute decisively to determining the intensity of capital mobility; and third, the degree of nominal exchange rate flexibility.<sup>6</sup> If there are no restrictions on choice, the authorities might assign monetary policy to domestic targets (inflation/

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<sup>4</sup> See, for example, Frankel and Rose (1996), Frankel (1999), Edwards and Savastano (1999), Mundell (2000), and Bayoumi and Eichengreen (1997).

<sup>5</sup> There is no well-developed analytical framework, however, showing the linkages between these four elements. That is, risk and intertemporal allocation on the one hand, and the factors associated with the exchange rate regime on the other.

<sup>6</sup> Under a complete market structure, the choice of a specific exchange rate regime is neutral. It has no real effects (Obstfeld and Rogoff 1996). In a setting characterized by full price flexibility without restrictions on the intertemporal allocation of resources and on risk management, the information on the characteristics of the existing exchange rate regime would be irrelevant. The rules specified by the authorities to buy and sell different currencies and to manage the monetary supply would be relevant only to the equilibrium value of the nominal variables. In the real world, markets in developing economies are far from complete, and, hence, the exchange rate regime matters to the real variables because the nominal magnitudes may affect

unemployment), ensure free capital mobility to facilitate the intertemporal allocation of resources and of risk, and set a stable nominal exchange rate to favor the stability of the private sector's formation of expectations. The number of "free" parameters and variables in the authorities' opportunity set, however, is too limited. The lack of degrees of freedom determines the appearance of a "trilemma": it is not possible, simultaneously, to achieve nominal exchange rate stability, free capital mobility, and an autonomous monetary policy (Frankel 1999). At most, two of these objectives can be consistently pursued.

The fourth element in the macroeconomic regime rectangle is the capacity to manage nondiversifiable national risk. If international credit markets were perfect, developing countries would be able to demand any amount of credit at the ongoing international interest rate. In such a world, countries would be able to redistribute the effects of external shocks across time and states of nature. The authorities could resort to international credit markets to stabilize consumption and to finance investment until all profitable opportunities are exhausted. Likewise, small countries would be able to diversify a good deal of their national risks. The existence of transaction costs, sovereign risk, uncertainty, and asymmetric information precludes this possibility.<sup>7</sup> The recent episodes of instability have proved that it is very difficult to construct a portfolio for diversifying developing country risks. It is very difficult to hold a well-diversified portfolio in a context in which the parameters defining the stochastic processes generating the returns of national stocks are unstable, and the returns tend to become positively correlated when the consequences of a crisis in an emerging country's capital market spill over, frequently helped by the irrational behavior of investors.

Risk management and mitigation is an important activity for firms. So is it for policy makers in a world of imperfect capital markets. In fact, proficiency in national risk management can be just as important to competitive advantage as technology or scale economies. But again, the instruments and scope for risk management cannot be assessed in isolation from the features of the DFA and IFA. These features can decisively affect the number, type, and extent of the exposures to risk that a country faces and hence the behavior of national risk. In this regard, an international lender of last resort would be of great help in managing national risk. It is crucial to avoid financial practices and rules that increase the economy's vulnerability and to eliminate mechanisms that make fiscal policies procyclical.

### **The DFA, the IFA, and the Argentine Economy**

In the last decade, Argentina has introduced major changes in its DFA. It has been an active player in emerging capital markets, has maintained fluent relations with international financial institutions, has participated in the GATS negotiations in the ambit of the WTO, and is one of the

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real ones. In developing countries, the choice of the exchange rate regime is limited by the specific structural features of both international trade and each country's macroeconomy.

<sup>7</sup> On the "puzzles" that this situation generates, see Obstfeld and Rogoff 2000 and Heliwell 2000.

founders of Mercosur. Argentina is a good reference point to illustrate and assess DFA–IFA interactions.

In addition to describing the reforms introduced into the Argentine DFA, the primary purpose of this section is to identify the channels through which the IFA–DFA interactions influence financial stability and deepening. Although we focus on financial issues, there will be frequent references to the process of international integration and macroeconomic stability in order to avoid a partial equilibrium bias. This bias is often present in the literature analyzing changes in specific components of the DFA. For example, the studies on the Basel standards tend to concentrate on changes in a bank’s risk management practices and to ignore the consequences of such changes on firms’ capital structure and the macroeconomy. To avoid building inconsistencies within the DFA, the design of reform policies should be based on a more “systemic” approach.

### **The DFA, the IFA, and the Reform Program**

Scheme II presents the main developments and changes in the broadly defined Argentine DFA and in the elements of the IFA that are relevant to analyzing the DFA–IFA interactions. We also show the results in terms of the policy goals in the ovals.

**Argentina and the IFA.** The IFA rectangle shows the main linkages between Argentina and the IFA institutions. These linkages have influenced both the financial structure and the overall macroeconomic evolution.

The IFA institutions influence domestic financial intermediation through three channels: (1) the adoption of the Basel Committee recommendations as a guideline to reform banking regulations and supervision; (2) the GATS negotiations on financial services; and (3) the pressure of international institutions like the IMF and the World Bank favoring liberalization. Under the WTO Financial Services Agreement, Argentina made commitments that can be considered generous. Regarding market access, for example, Argentina established fewer limitations than OECD countries (Berlinski 2001). The country completely liberalized foreign financial flows and allowed huge flows of foreign direct investment into the banking sector. These factors contributed to changing substantially the financial market structure.

Argentina has traditionally had close ties with the international financial institutions. The role of the IMF has been particularly important in providing liquidity in the context of the several current account crises. Argentina has resorted to IMF credit facilities very frequently and has been almost permanently under the surveillance of the IMF ever since the debt crisis in the early eighties. In the nineties, the IMF’s help was critical to facing the macroeconomic instability during the Tequila crisis in 1994–95 and from 1998 on.

In December 1999 a program supported with an IMF standby credit was launched, but the ensuing economic performance was disappointing. Hence, in late 2000 the government launched a revised plan. The IMF raised its financing commitment. In January 2001, the Fund increased Argentina’s existing standby credit to \$13.7 billion (part of which was provided under the Supplemental Reserve Facility). The WB, the Inter-American Development Bank (IDB), and

the Spanish Government also contributed with new loans. In addition to macroeconomic goals, IMF conditionality embraces the reform of fiscal administration, social security, industrial and competition policy, trade policy, the financial sector, and corporate governance. No “systemic” study of the consistency of the DFA reforms planned was presented. IMF support was critical in helping Argentina avoid default, but it is not clear that the attached conditionality will resolve the vicious circle of fiscal adjustment, the fall in the level of economic activity, deflation, falling tax yields, and the widening of the fiscal gap.

The country is an active player in the “new regionalism” (it is one of the founders of Mercosur and participates in negotiations in the ambit of the North American Free Trade Agreement and the European Union and with many Latin American countries). The most important changes in the DFA could originate in negotiations under the umbrella of Mercosur. The countries in the region are supposed to make efforts to coordinate the macroeconomy and to achieve deeper integration of financial markets. However, little progress has been made.

**The Reform of the Financial Infrastructure.** The reforms introduced in some segments of the financial infrastructure in the nineties were radical. But the changes did not affect all the elements in the “financial infrastructure” rectangle of Scheme I in the same way or with similar intensity. While the reforms in banking regulations were deep and rapid, there was no progress in the reform of the legal and judiciary infrastructure. Neither were there improvements in corporate governance arrangements. Although equal treatment of foreign capital was guaranteed, there was no progress in the protection of minority shareholders or the monitoring and sanction of abusive self-dealing and insider trading. The lack of improvement in the efficiency of the “market” for corporate control restrained the deepening in equity and bond markets. Traditional features such as family control of corporations, and the tendency for multinationals to control their corporate shares have not changed. These developments were at odds with another major reform: the establishment of a private pension fund system. The reduced stock of private bonds and of stock market capitalization obliged institutional investors to hold a disproportionate amount of public debt and bank deposits in their portfolios. This is but one example of the inconsistencies that can result from a partial approach to DFA reform.

The liberalization of the banking system in Argentina has been wide ranging. In addition to canonical deregulation measures, dollar-denominated deposits and credit operations were permitted from the beginning of the reform. The process, however, showed two distinct periods separated by the Tequila effect. As a consequence of this shock, several banks faced severe solvency problems,<sup>8</sup> and, to improve the reliability of the system, the authorities introduced a new regulatory framework. The new framework sought to base financial stability on market discipline. The two pillars of the new system were the capital adequacy standards and the liquidity requirements system.

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<sup>8</sup> During the Tequila crisis, some wholesale banks with relatively large government bond portfolios or other financial market exposures were severely affected by the fall in the price of financial assets. The solvency

The banks' capital adequacy standards are based on the 1988 Basel Capital Accord. A minimum of 11.5 percent of assets at risk is the standard requirement. There is also a capital requirement for credit risk. The indicator of credit risk utilized is the interest rate charged on each loan. In 1996 market risk capital requirements were introduced. Argentina was one of the first countries to implement the amendment to the 1988 accord. The "standardized" approach was used, which requires the service of a credit rating agency to evaluate risk. Capital requirements were further augmented in 1999 to cover interest rate risk on the banking book.<sup>9</sup>

With the primary goal of protecting systemic liquidity, a new liquidity requirement system was implemented in 1995 to replace the existing minimum reserve requirement scheme. Liquidity requirements were defined on virtually all liabilities, although the rates declined as the maturity of the liability increased. Reserves were remunerated at rates similar to short-term dollar interest rates. The system was subsequently modified to permit the holding of balances in qualifying foreign banks and the use of standbys from foreign banks. The purpose was to reduce for banks the implicit tax burden of a liquidity requirement.

In addition to this increase in capital and liquidity requirements, other measures were implemented to improve solvency and information. In 1992, a main debtors' database was created and the provisioning requirements were substantially tightened after the Tequila crisis. In 1997 and 1998, a plan to oversee banks based on the BASIC system was implemented.<sup>10</sup>

Substantial changes in the market structure and conduct of banks were observed after the implementation of these banking sector regulations. The most remarkable development was the improvement in the management and capitalization of banks. This development, however, did not result in a better overall performance of the banking sector. It faced increasing difficulties in playing the basic role of increasing the supply of credit to the private sector and improving the allocation process. As we will see, the amount of credit allocated to the private sector stagnated and there was a crowding out process as the government demand for financing increased. Although these disappointing features are in part explained by the pervasive recessionary process, the recession itself may have been exacerbated by the developments on the financial side. Given

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indicators significantly worsened. Other small banks were also affected and, as a consequence, a wave of mergers and absorptions followed.

<sup>9</sup> Calomiris and Powell (2000) present the following expression to calculate capital requirements:  $CR = 11.5 * w * X * K + MR + IR$ , where, CR = capital requirement as a percent of assets at risk; w = average bank Basel risk weight for counterparty risk; X = average interest rate factor (the interest rate on each loan is used as an indicator of counterparty risk); K = Camels factor; MR = market risk capital requirement; IR = interest rate risk (banking book) capital requirement.

<sup>10</sup> BASIC is an acronym. B = bonds: the bank must issue a subordinated liability for some 2 percent of its deposits each year. This system did not work well because the Asian crisis made debt issues difficult. A = auditing: a list of qualified bank auditors who must post a financial bond. S = supervision: the Superintendency adopted a version of the U.S. CAMELS system of bank rating, and so the bank's CAMELS ratings are used in several regulations. I = information: disclosure rules for banks are set. C = credit rating: each bank must obtain a credit rating from an internationally active authorized rating agency (there are four). The idea is to ensure that public information is available to less-sophisticated investors. BASIC was proven not to be problem-free. See Calomiris and Powell (2000) for a detailed explanation.

the importance of these issues for an assessment of the changes introduced in the DFA, we examine below in more detail the effects on the banking sector and on the firm's balance sheets.

The reforms set in motion a process of deep changes in the banking market structure. Two salient features are the increase in the concentration of ownership and a higher participation of foreign banks. The participation of foreign banks in total credit and deposits rose from around 16 percent in 1994 to almost 50 percent in 2000. In contrast, the proportion corresponding to both smaller private banks and public banks fell. The process of concentration was no less profound. In 1990, the top ten banks accounted for 50 percent of total deposits, and, in 2000, the share grew to 70 percent. The concentration is higher regarding credit, where the top ten banks account for 80 percent. To a certain extent, these results have been policy induced. The process of mergers and acquisition that followed the Tequila crisis was promoted by the Central Bank and multilateral institutions. The process was assisted through the use of a Fiduciary Fund set up in 1995; twenty-four provincial banks were privatized.

The new and tighter prudential regulations induced changes in lending practices that, in turn, affected the sectoral allocation of credit. The most relevant effects were the increment in the proportion of loans allocated to the public sector and a high participation of larger loans in the credit supply. Some specific features of the capital adequacy requirements may have contributed to these results. First, capital requirement may be biased in favor of the allocation of funds to the public sector. While a minimum of 11.5 percent of assets at risk is required in the case of the private sector, the requirement for the government component of assets is much lower (between 1 and 5 percent). Besides, no provisioning is required for credits to the public sector. Second, the evaluation of credit risk as a function of the interest rate charged on loans may introduce a bias against smaller firms. In the case of small-scale borrowers, higher rates may reflect higher administrative costs rather than higher risk. Third, the increase in capital requirements may have created a competitive advantage favoring foreign banks. Many national banks were unable to raise domestic capital to increase their capitalization. Many small retail domestic banks, with well-established customer relationships with small firms, disappeared or were absorbed by larger banks, especially after the Tequila crises. Frequently, this entailed the loss of the stock of information accumulated, and smaller firms faced increased difficulties to access credit markets. This hypothesis is consistent with the elevated concentration of loans now observed. According to the main debtors' database, 1 percent of the total number of loans absorbs 60 percent of credit. Fourth, after the tightening of prudential regulations, there is a tendency for the banks to reduce the proportion of their assets at risk as a proportion of total assets. Despite this reduction there was an increment in the participation of nonperforming loans in recent years. As a consequence, solvency indicators worsened. The nonperforming loans (net of provisioning) as a proportion of banks' net worth increased in the last years from around 20 percent in 1998 to 24.5 percent in 2000.

**The Changes in the Macroeconomic Regime.** As the rectangle corresponding to the macroeconomic regime shows, the most relevant modifications were the implementation of the

convertibility program (which put in force a currency board-like regime in 1991) and the complete deregulation of the capital account.<sup>11</sup> In fact, to reinforce convertibility, in 1992 a new Central Bank charter establishing the independence of the Central Bank and the banking superintendency (as a semiautonomous unit) was passed. Rediscounts were severely restricted and there was no deposit insurance.<sup>12</sup> In effect, to face the dilemma, the authorities renounced their autonomy over monetary policy.

The country has maintained this macroeconomic regime for more than ten years. The most remarkable result of the convertibility regime was the reduction in the inflation rate. Under convertibility, Argentina ceased to be a high-inflation country. Today, the rate of inflation is well below international standards, and, recently, the country has begun to experience deflation. Another important fact is that although the economy's average rate of growth was considerable in the nineties (4.1 percent per year), sustained growth is far from assured, and the country is presently suffering from a painful recessionary period that has lasted for more than three years.

In fact, the above-mentioned average growth rate is the result of two completely different periods, separated by the Tequila effect in 1995. In the first years of the reform, the increase in gross domestic product (GDP) was strong. But, after 1995, the evolution of the economy showed several disappointing features: The activity level followed a stop-and-go pattern; the average increase in GDP was low; and the unemployment rate soared. Likewise, the fiscal deficit and the stock of the external debt experienced an upward trend. As a consequence, Argentina began to face increasing difficulties to meet its external obligations and ultimately was forced to resort to the IMF, as was described above. At this time, the financial aid has not been sufficient to eliminate financial instability. In fact, today the country is facing a very difficult financial and macroeconomic situation characterized by high interest rates, deflation, and a persistent recession.

The stop-and-go pattern followed by macroeconomic aggregates, together with the inability to stabilize the economy, even in the presence of special multilateral financial help, suggests that the reforms introduced in the macroeconomic regime did not enhance the capacity to manage national risk. This inability has had consequences on the evolution of both financial intermediaries' and firms' balance sheets. Likewise, the inability to manage national risk resulted in an increase in volatility, and the perverse feedback channel between volatility and financial sector stability was activated. These events may jeopardize the progress made in reforming the regulatory framework. It is also possible that the timing and intensity of the reforms contributed to worsening the recession and to deepening the difficulties on the real side.

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<sup>11</sup> The peso was pegged to the U.S. dollar and the parity was fixed at one peso per dollar. It was established that the Central Bank would hold an amount of international reserves that would at least be equal to the currency in circulation.

<sup>12</sup> As a consequence of the Tequila effect, the Congress approved various modifications that softened the restrictions on rediscounts, and a deposit insurance scheme was created. The limit of coverage is \$30,000.

## Financial Stability and Deepening

**Financial Deepening.** The reforms in the DFA contributed significantly to changing the financial scenario inherited from the so-called “lost decade” of the eighties. In 1991, the economy’s degree of financial deepening was very low. Total deposits amounted to around 5 percent of GDP. The stabilization of the nominal exchange rate and disinflation under convertibility greatly favored the recovery in the demand for domestic assets. This recovery was additionally strengthened by the substantial improvement in emerging capital markets and the deregulation of the capital account. Chart 1 shows the continuous improvement in financial deepening in the 1991–94 period as measured by the increase in the demand for deposits and total credit. These developments softened the tight credit rationing of the eighties and opened up new opportunities for the firms to innovate in the form of financing capital projects.

This process of increasing financial deepening has certain features. First, there has been an increasing dollarization of portfolios. Chart 2 shows the evolution of the stock of dollar-denominated credit and deposits in the domestic financial system as a proportion of the total stock of credit and deposits. As can be seen, the proportion of dollar-denominated instruments grew continuously. At the end of 2000, more than 60 percent of credits and deposits were denominated in dollars. However, the proportion of dollarized credit is greater than the proportion of deposits. This implies that, in fact, banks are hedged against a devaluation of the currency.

A second feature is that the evolution of the demand for domestic assets proved to be highly dependent on external conditions. As can be seen in Chart 1, external shocks impacted rapidly on the demand for domestic assets and the credit supply. The Mexican crisis interrupted the upward trend in deposits and credit. After the 1996–97 recovery, the Russian crisis had the same effect. Note that the speed of the recovery in deposits and credit is very different after the Tequila and the Russian shocks. While the recovery is very rapid in the former case, credits and deposits show a much more sluggish evolution in the latter. In fact, the worsening of financial conditions in 2001 resulted in a fall in the stock of deposits.

External shocks also influenced the cost of domestic credit. The main link between external and domestic credit markets is the country risk premium. Changes in the conditions in emerging countries’ capital markets and/or in the domestic macroeconomic scenario are reflected immediately in changes in the country risk premium. The volatility of both domestic and external conditions was echoed in the evolution of Argentina’s risk. Via its influence on the cost of credit, this volatility increased the variance of aggregate demand. Chart 3 shows the evolution of the country risk premium as measured by the Emerging Markets Bond Index (EMBI) spread and compares it with the economy’s quarterly rate of growth. Both variables show high volatility, and there is a marked and negative association between changes in the country risk premium and changes in the growth rate of quarterly GDP. A simple regression exercise (Fanelli 2001) shows that each percentage point of increase in the country risk premium is associated with a one percentage point fall in the annual growth rate.

The third feature is the close association between the supply of credit and the activity level. Indeed, given that Argentina’s capital markets are far from perfect, it seems plausible that

changes in the availability of credit do matter to the level of activity. Using an error correction model, Fanelli and Keifman (1999) find results that are consistent with the hypotheses of an influence of credit on output in the short run and of a negative correlation between the country risk premium and the evolution of the macroeconomy.

In sum, these data suggest that under the DFA that resulted from the nineties reforms, the money and credit supplies are to a great extent passively determined by the evolution of the demand for domestic assets. This relationship, in turn, creates a close association between capital inflows, the generation of credit, and the activity level. This association is a potential source of macroeconomic and financial uncertainty, as international capital flows into emerging countries are far from stable.

It must be taken into account, nonetheless, that the economic authorities' degrees of freedom under convertibility are not equal to zero. In fact, it seems that the depth of the recession since 1998 may not have been independent of some policy actions on the fiscal side and the reforms in prudential regulations. Specifically, there has been a persistent tendency for the rate of growth of credit to lag behind the rate of growth of deposits since 1995. In fact, in 1999 the line representing deposits crosses the credit line (Chart 1). The tightening in prudential and liquidity regulations of the Central Bank in the second part of the nineties may be associated with this result.

But, in fact, the credit squeeze in the private sector since 1998 has been stronger than what is suggested in Chart 1. The chart clearly shows that the aggregate stock of credit as a proportion of GDP has stagnated since 1998. But the aggregate conceals the fall in the stock of private credit that was offset by an increase in the amount of public sector credit demand. The increase in the fiscal deficit from 1998 (which was associated with the political cycle) raised the public sector's borrowing needs, and, as a consequence, the government crowded out the private sector. The private/public credit ratio fell from 7.7 when the Russian crisis hit the economy in 1998 to 4.4 at the end of 2000.

The funds available for financing the private sector suffered, simultaneously, from the pressure exerted by the fall in capital inflows, the tightening in prudential regulations, and a mounting public sector demand for credit. In such a context, it is not surprising that the demand for investment and consumer durables, which is a major factor behind the present stagnation of aggregate demand, plummeted. This feature of the Argentine experience shows that a systemic approach to reform may be useful. A tightening of regulations can be self-defeating if effective demand is falling and the emerging capital markets' conditions are worsening. It can jeopardize the banks solvency if the firms' financial fragility increases. To assess the plausibility of this hypothesis, we examine the evolution of the balance sheets of a panel of firms.

**The Firms.** Chart 4 shows the evolution of the capital structure of Argentine firms listed on the Stock Exchange. In the nineties, there is a clear tendency for the level of leverage to increase. This tendency is very marked: in the 1992:1–2000:3 period, net worth increased by 22 percent in real terms while total debt grew by 221 percent.

It would be very difficult to understand why there was such an important growth in indebtedness in the nineties without referring to macroeconomic factors and the changes in the

DFA. In the early nineties, following two hyperinflationary episodes in 1989 and 1990, foreign capital markets were closed to most Argentine firms and the domestic credit/GDP ratio was extremely low. Under such circumstances, it seems logical to assume that firms were in disequilibrium and that the observed leverage ratio did not reflect long-run equilibrium values. As stability consolidated in the nineties and capital inflows recovered, the firms sought to reduce the gap between existing and preferred levels of leverage. To highlight the relevance of macroeconomic factors to microeconomic decisions, we draw the observed values of the gearing ratio (debt over total assets) against its “medium-run” trend (using the H-P filter) in Chart 5.<sup>13</sup>

Substantial deviations from the trend are associated with major macroeconomic shocks. The two largest downward deviations coincide with the hyperinflationary period and with the Tequila effect. In both cases, nonetheless, as the effects of shocks faded, the gearing ratio recovered rapidly. Notice particularly the years of booming capital inflows (1992–94).

Chart 6 shows the evolution of long- and short-term debt. By comparing Charts 5 and 6, we can see that the behavior of the long-term liabilities/asset ratio tends to mimic the behavior of the gearing ratio. But the fluctuations of the latter ratio are smoother, implying that agents tend to resort to short-term debt when they face either increasing costs in the markets or long-term debt or rationing.

Under convertibility, the stock of short-term debt held by firms is higher than that of long-term debt during almost all of the sample period, and their proportion is comparable to other developing countries (Booth et al. 2000). The telling presence of instruments with short maturity implies that staged finance is a feature characterizing Argentina’s debtor–creditor relationships (Stulz 2000).

Chart 7 shows the comovement of the proportions of short- and long-term debt in total debt. As can be seen, the gap between the two variables tends to augment in recessionary periods and to diminish in expansionary ones. This trend implies that the ratio between short- and long-term liabilities tends to move procyclically and, therefore, that negative shocks not only reduce leverage but also tend to shorten the duration of debt.

If average maturity falls during downturns, firms should increase their demand for liquid assets to maintain their liquidity position (i.e., to keep the liquid assets/short-term debt ratio constant). The available evidence, however, points against this hypothesis. It seems that in the Argentine case, the firms’ liquidity position tends to worsen in periods of macroeconomic instability. To illustrate this point, Chart 8 compares the evolution of liquidity (liquid assets/short-term liabilities) with the evolution of country risk, which is interpreted as a proxy for macroeconomic disequilibrium. The behavior of these two series is compatible with the conjecture that, under convertibility, liquidity constraints move procyclically.<sup>14</sup>

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<sup>13</sup> The reference to the trend is only illustrative. It follows from our arguments in the text that, after hyperinflation and stabilization, the Argentine economy is at present in a period of adjustment.

<sup>14</sup> It is interesting to note, in this regard, that liquidity conditions seem to respond very quickly to changes in foreign capital markets. Notice, for example, in Chart 8 that the worsening in liquidity conditions occurs well before the Tequila effect hits the economy. In fact, there is a clear worsening in the liquidity indicator

The increase in the proportion of dollar-denominated liabilities under convertibility that we observed at the aggregate level is also clear in the firm panel. The proportion of dollar-denominated debt in total debt rose from 52 percent in 1992 to 77 percent in 2000 (Chart 9). This chart suggests that the growth rate of dollar-denominated debt was even higher than the rate corresponding to total liabilities, which, as was mentioned, was very high: in the 1992:1–2000:3 period the total amount of dollar-denominated debt almost quadrupled.

There is a close link in the evolution of dollar-denominated and long-term liabilities, which suggests that for Argentine firms, domestic dollar-denominated credit and external capital markets are critical sources of long-run funds. Under the assumption that firms prefer to match the duration of their assets and liabilities, dollarization and capital inflows must have had a positive influence on capital formation. However, it is also true that as the proportion of dollar-denominated liabilities increases, so does the exposure to unanticipated changes in the real exchange rate. Hence, there is a trade-off between the benefits of matching the duration of the two sides of the balance sheet and the increased currency risk taken because of higher mismatching in the currency-denomination of assets and liabilities. The existence of currency risk implies an inverse relationship between the expectations of a change in the real exchange rate and the degree of currency mismatch between assets and liabilities.

If this argument is valid, every time the firms seek to hedge against devaluation, the share of long-run liabilities in the firms' balance sheets will tend to fall. Chart 10 presents evidence that this conjecture merits investigating in the Argentine case. We plot the ratio between short- and long-term debt against the ratio between dollar-denominated liabilities and assets.

An inspection of Chart 10 reveals significant declines in dollar-denominated liabilities and a rise in the importance of short-term debt every time an important shock, be it domestic or external, hits the economy. Specifically, notice the widening in the gap between the two variables during hyperinflation (1989–90) and the Tequila effect (1995–96) and after the Russian/Brazilian turmoils (1998–99).

**Lessons.** In sum, the dynamics of short- and long-term debt held by firms throughout the cycle suggest a series of stylized facts that should be taken into account in assessing the effects of the reforms in the DFA.

In the first place, credit conditions can react quickly to changes in investor sentiment, and, hence, the evolution of overall volatility and national risk is highly relevant. The fluctuations in leverage suggest that negative shocks tend to worsen credit conditions rapidly, driving firms' leverage to suboptimal levels. Firms may have to resort to liquidating assets to smooth the effects of short-run credit crunches. In contrast, firms take advantage of "tranquil" periods in credit markets to correct deviations from long-run equilibrium.

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after the tightening of monetary policy in the USA in the first quarter of 1994. This result suggests that the Tequila effect and the change of orientation in monetary policy in the USA are not independent phenomena.

Second, macroeconomic shocks play a significant role in explaining Argentina's dollarization. In Argentina, agents must take financing decisions in a highly uncertain environment in which substantial wealth losses can result from errors in expectations. When a fiscal or an external shock leads to an unexpected currency devaluation (and, eventually, to a change of the exchange rate regime), those agents facing severe losses typically feel as if the authorities had violated their property rights. This fear of losses and the need to "protect property rights" from moral hazard is behind the economy's tendency to dollarize, which is observed under increasing macroeconomic instability.

Third, when the macroeconomic setting worsens, there is, simultaneously, a shift toward the demand for foreign exchange and a mounting demand for short-term financing. Hence, economic downturns create pressures on both foreign exchange and domestic financial markets. When the exogenous macroeconomic shock is strong enough and the regulatory framework is weak, this combination of events can trigger the so-called "twin crises," which, in fact, have occurred in Argentina. Domestic markets for short-term credit are unable to make up for the fall in dollar-denominated and long-run loans, and firms face increasing difficulties in meeting their short-run obligations.

Fourth, the behavior of the different debt components throughout the cycle suggests a channel through which instability can jeopardize the reforms of prudential regulations. Negative shocks reduce the firms' net worth, increasing the probability of financial distress. A regression exercise shows that a one-percentage-point increase in the country risk premium reduces the value of firms listed on the Buenos Aires Stock Exchange by 2.2 percentage points (Fanelli 2001). Under such circumstances, creditors react by shifting their demand toward assets with short-term maturity to better monitor the behavior of debtors and because the liquidity premium rises in uncertain environments. But, if we assume that the duration of assets is somewhat constant throughout the cycle, when the shortening in the term to maturity of debt occurs, the firms' financial position further deteriorates and default becomes more probable. This increase is perceived by creditors as an upward movement in the costs of financial distress (if we calculate these costs as the probability of default times its cost). Under these circumstances, a logical result is that creditors will try to shorten maturity to better monitor and discipline debtors. If this reasoning holds, there are endogenous factors that tend to reduce maturity and increase financial duress during recessionary periods. This hypothesis of maturity shortening as a disciplinary device is fully consistent with the hypothesis of staged finance as an antimoral hazard mechanism in contexts where institutional underdevelopment impedes the precise definition of property rights.

Fifth, a well-managed and well-capitalized banking system is a requisite for avoiding systemic economic and financial crises, but it is not a sufficient condition. The ability of banks to manage risk and the moral hazard problem depends on their ability to measure and mitigate their own exposure, as well as the sufficiency of their equity capital. A systemic view takes into account that banks are essentially shock absorbers because commercial banks are in the business of managing credit risk. Even if a bank is well managed, it will absorb errors in risk management made elsewhere in the system and/or errors in expectations due to global or domestic shocks. The

evolution of Argentine firms' balance sheets shows us that aggregate shocks can rapidly deteriorate their financial position. If firms become vulnerable, banking books can become insolvent when the prices of assets fall and are marked to market. Fair market prices are dependent upon market liquidity and cash flow. Once the liquidity begins to dry up, assets may have to be sold at liquidation prices in order to obtain liquidity (Sheng 2000).

Sixth, the phenomenon of risk migration is closely related to this issue. Risk tends to migrate in the financial system because hedging does not reduce systemic risk. It only transfers the exposure elsewhere or transforms the type of the exposure. Because of risk migration, activities such as hedging do not reduce the amount of systemic risk. This fact is very important in the case of Argentina. When the level of perceived systemic risk increases, banks hedge against currency risk and seek a better matching of the duration of assets and liabilities. The counterpart of this, as we have seen, is that firms' liquidity falls and the duration of their liabilities shortens during downturns. This augments the firms' vulnerability, increasing counterparty risk. The ultimate effect of the banks' attempt to hedge is that risk migrates from currency risk to credit risk. And the greater the amount of risk mitigation by banks, the more likely it is that unforeseen losses will migrate quickly from one market to another. As risk migrates through the system, it tends to emerge in its most basic form, as credit risk (Kimbal 2000). When one takes into account the phenomenon of risk migration and its effects on banks' solvency, the Calomiris and Powell (2000) argument about market discipline seems weaker. They argue that tight credit supply during downturn is a sign of the financial system's strength because tight credit supply in the face of a recession and high loan losses is precisely what one would expect from a banking system that is subject to market discipline. The Argentine case suggests that in the context of a generally weak economic system, a financial sector is no more healthy if it simply transfers its risk to firms, because this, too, rebounds on it.

### **Concluding Remarks**

As Aliber (2000) points out, a principal difference between the current debate over IFA and its analog of the 1960s (then called international monetary reform) is in the unity of purpose. In the 1960s, the goal was for Germany, Japan, and some other countries to expand their reserve holdings without the United States having to run a persistent payments deficit. In the current debate, problem identification lies in four areas that are at least partially exclusive: volatile capital flows, inadequate financial sector regulation, inappropriate exchange rate regimes, and lack of an international lender of last resort.

The emerging IFA in effect reflects views two and three. Key constituents of the international financial system, particularly in developing countries, grapple with the existence of problems one and four as well. So one critique of the emerging IFA is that it is not comprehensive in addressing the spectrum of problems faced by the international financial system. As a result, DFAs, particularly in developing countries, may be incompatible with the IFA while being consistent with the domestic situation at hand. Put another way, while the emerging IFA may decrease risk globally, this risk is also being shifted. In the absence of any

meaningful implementation of improved governance of lenders, or the introduction of debt standstills and collective action clauses, the burden of “improving” the IFA falls on those least equipped to do so.

Despite the promises of a new IFA, an “unfriendly” international setting for many developing countries in the future is not improbable. This setting is becoming a source of uncertainty and disequilibria per se and constitutes a substantial obstacle to financial development because financial intermediation is particularly vulnerable to uncertainty. Furthermore, since financial intermediation plays a critical role in resource and risk allocation and in supporting macroeconomic stability, the disequilibria on the financial side tend to spill over the whole economy via the effects on credit risk and liquidity constraints.

The design of a coherent strategy articulating the different international initiatives that affect the developing countries’ DFA with national reform efforts would greatly help to overcome this situation. The evidence analyzed in this paper suggests that, to that purpose, it is important to adopt a systemic view of the DFA reform.

An important advantage of this approach is that it stresses the need to preserve the overall consistency of the reform. This applies to both the “internal” consistency of the different DFA components and the “external” consistency between the DFA and the IFA. Likewise, the approach calls for a comprehensive evaluation of the effects of the changes in the DFA that embraces not only financial institutions but also macroeconomic stability and the country’s ability to reap the benefits of trade in international assets. The approach does not limit the monitoring of the reform to oversee the performance indicators of financial institutions. It also gives special consideration to the effects on firms’ balance sheets; to the interactions between solvency, liquidity, national risk, and cyclical fluctuations; and to the problem of risk migration. The analysis of the Argentine case illustrates the importance of these factors.

Two policy implications follow from the systemic approach. On the domestic side, it calls attention to the danger of the patchwork approach to reform and advocates a careful design and sequencing of the measures affecting different segments of the DFA. On the international side, it calls for a symmetric view of the problem of systemic instability in emerging capital markets. To avoid asymmetry, not only is it necessary to focus on what national institutions should do but also to take into account the key role international financial institutions play.

An internally and externally consistent financial architecture could greatly contribute to deactivating the feedback mechanism that links macroeconomic volatility and shallow financial markets. Argentina is an example of how destructive this feedback can be. The Argentine case shows that the difficulties in managing national risk and the subsequent effects on firms and bank balance sheets can jeopardize the best-designed DFA reforms.

But consistency is more than the “application” at the domestic level of the principles and strictures of the IFA. Pistor (2000) argues that while the “supply of well-designed laws from the outside” is a key feature of many international organizations, particularly in the financial arena, “for developing effective legal systems, the contents of the supplied laws is of only secondary importance to the process of law development and the compatibility of the new laws with pre-

existing conditions.” An important feature of the emerging IFA, if it is to succeed in being accepted everywhere, is precisely attention to local conditions.

The most important service that the IFI can pay to the consistency between the IFA and the DFA is to help countries diversify national risk and manage liquidity under circumstances of financial distress. The literature on international risk sharing tends to emphasize the analysis of the potential welfare gains of consumption smoothing. But this literature frequently assumes implicitly that domestic risk-sharing opportunities have been exhausted, that there are no liquidity problems, and that the probability distributions of returns are stable and known. Under highly imperfect markets and volatility, these are not good assumptions. It is difficult to hedge risk, and macroeconomic shocks create severe liquidity constraints and instability in the probability distributions. Hence, better access to instruments to diversify national income risk would permit consumption smoothing. But it would also significantly improve the functioning of the financial market, thereby facilitating the exploitation of domestic opportunities to share risk optimally and to manage liquidity, meaning that the welfare gains would be much higher than the literature suggests.

The analysis of the Argentine experience presents important lessons regarding the internal consistency of the DFA. One obstacle to the success of the DFA reform in the Argentine case was the lack of coherence in the design and implementation of reform policies. While some segments of the DFA were radically transformed, others remain practically intact. The supervision and regulation framework of the banking sector improved significantly, and the currency board prevented the government from implementing misleading monetary policies. But there was a lack of transparency in other segments of the capital markets; corruption was widespread (including allegations of money laundering and the use of the financial system as a vehicle for tax evasion).

In this way, the old problem of sequencing appears again. In fact, Argentina is an interesting case in which there was an attempt to substitute the lack of transparency in the legal framework and policy making with stronger regulations. Ultimately, this attempt imposed substantial costs on firms and investors and led to stagnation.

Although Calomiris and Powell (2000) argue that “Argentina’s bank regulatory system now is widely regarded as one of the two or three most successful among emerging market economies,” the fact is that the reform suffered from the patchwork syndrome. As the present difficulties have demonstrated, years of reforms have corrected severe flaws in the financial infrastructure. The new prudential regulations helped to a certain extent to protect the solvency of the financial system under the stressful circumstances of the last three years.

Our analysis suggests that the IFA efforts should concentrate on building mechanisms for liquidity provision under stress to help diversify individual country risk and to build institutions that consider the need to preserve the consistency between the DFA and the IFA. The evidence for the links between financial sector liberalization and growth is so weak, and the links between weak institutions and unfavorable financial flows so strong (Wyplosz 2001; Wei and Wu 2001), that going anywhere beyond these core features compels a dangerous imbalance between what an

IFA intends to achieve and what will result. There is every likelihood that in the short run, at least, the IFA leads to instability, contraction, or both in developing countries, so minimizing these effects while positioning to reap the longer term advantages inherent in the IFA is of utmost importance.

For an effective DFA to be implemented, the most important lesson is to avoid the patchwork approach to reform and to concentrate on institutional building. In Latin American countries, transaction costs matter—a lot. In this regard, the DFA should be built under the assumption that the most important goal is market creation and not market liberalization.

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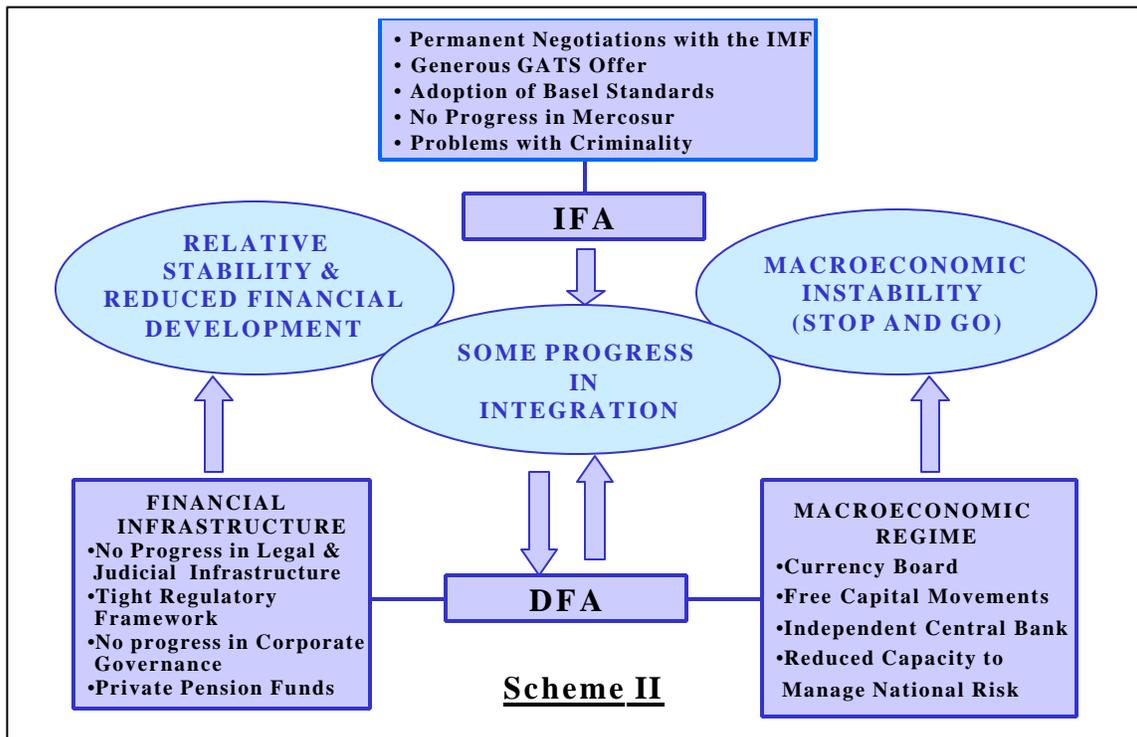
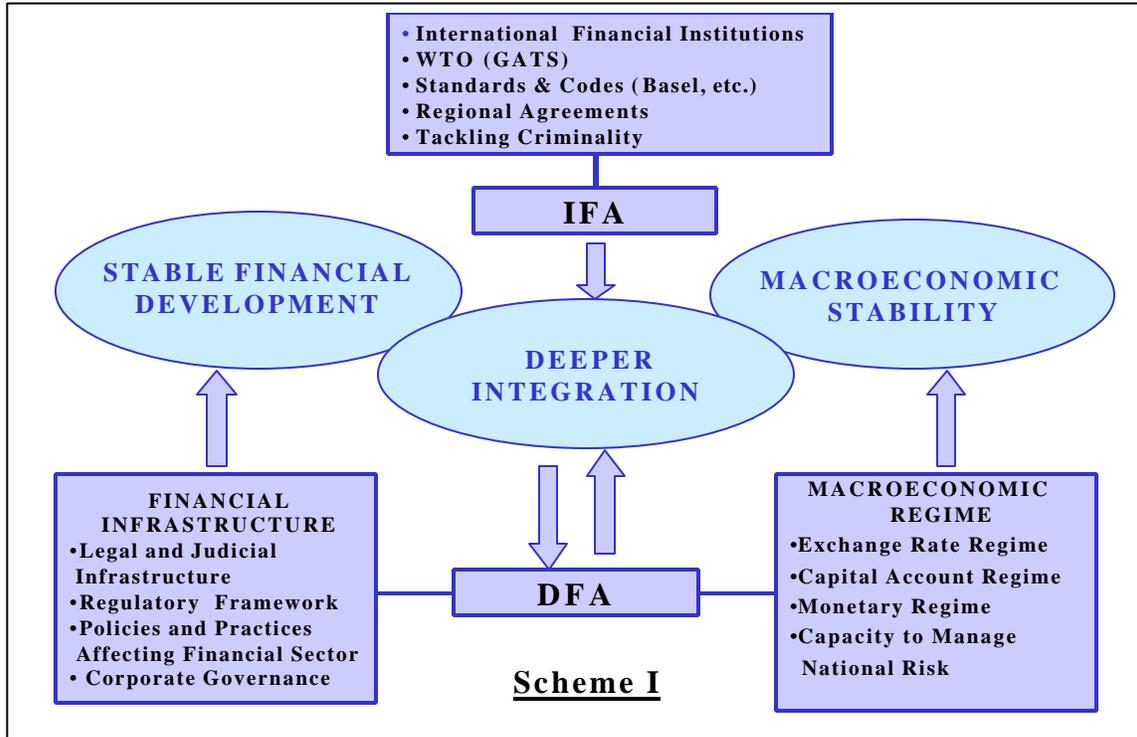


CHART 1: Evolution of Deposits and Credit

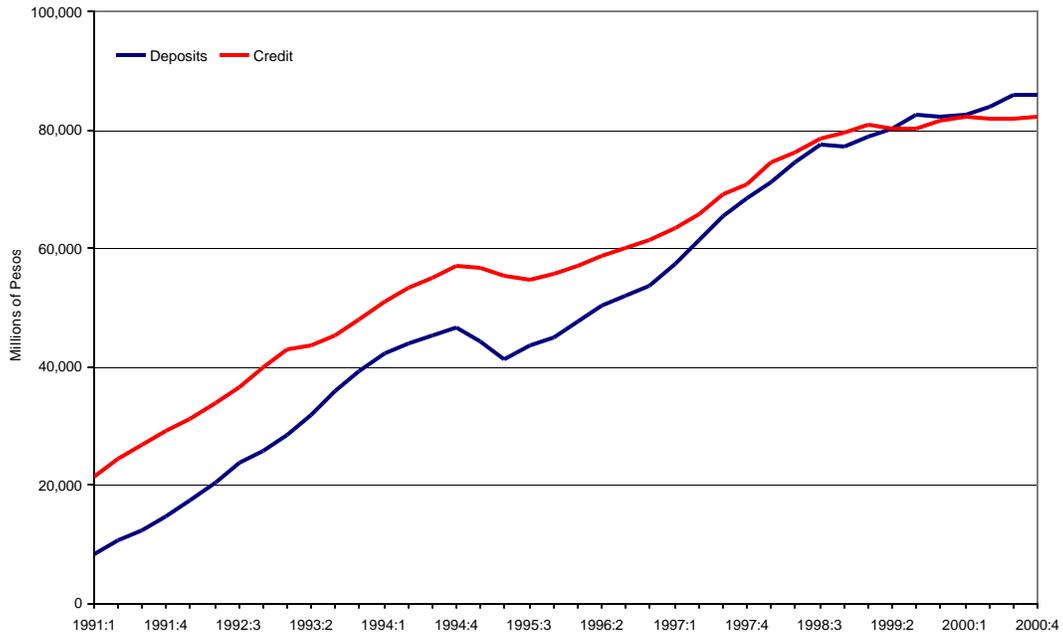


CHART 2: Dollarization of Credit and Deposits

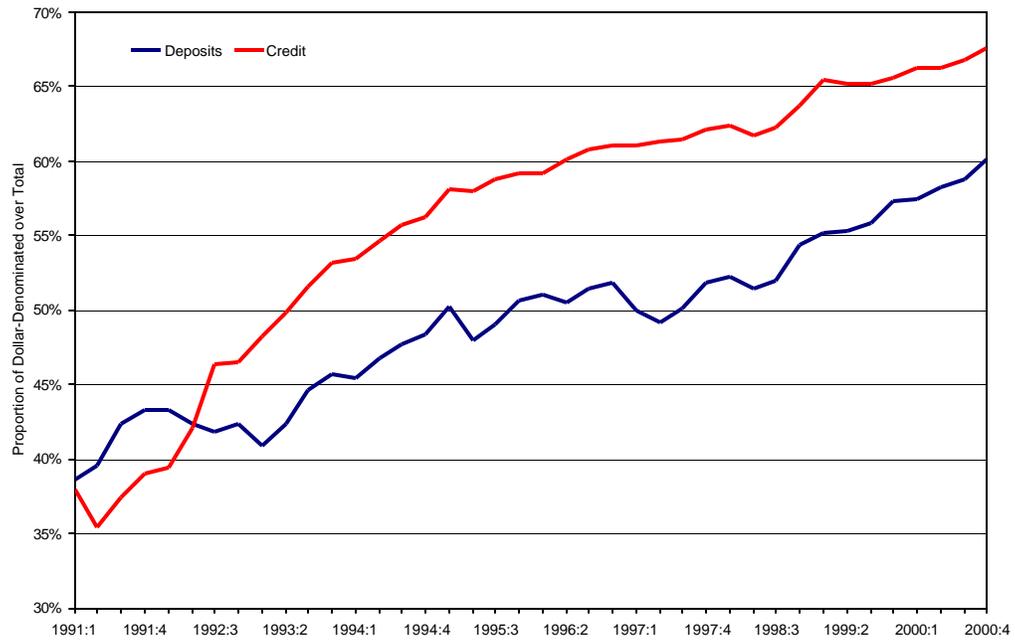


CHART 3: Country Risk Premium and Growth Rate

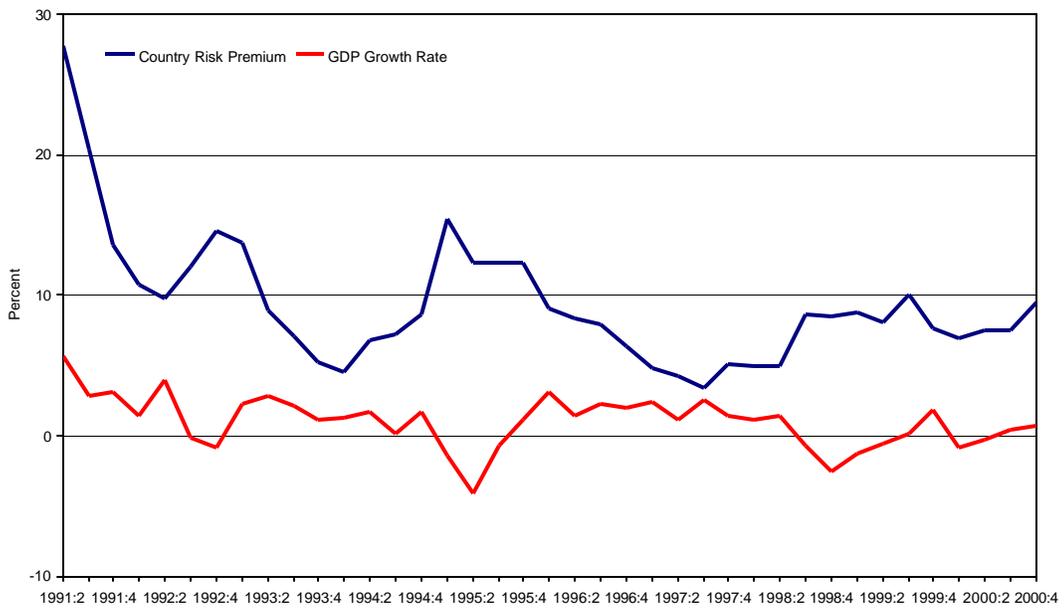


CHART 4: Assets, Liabilities, and Net Worth

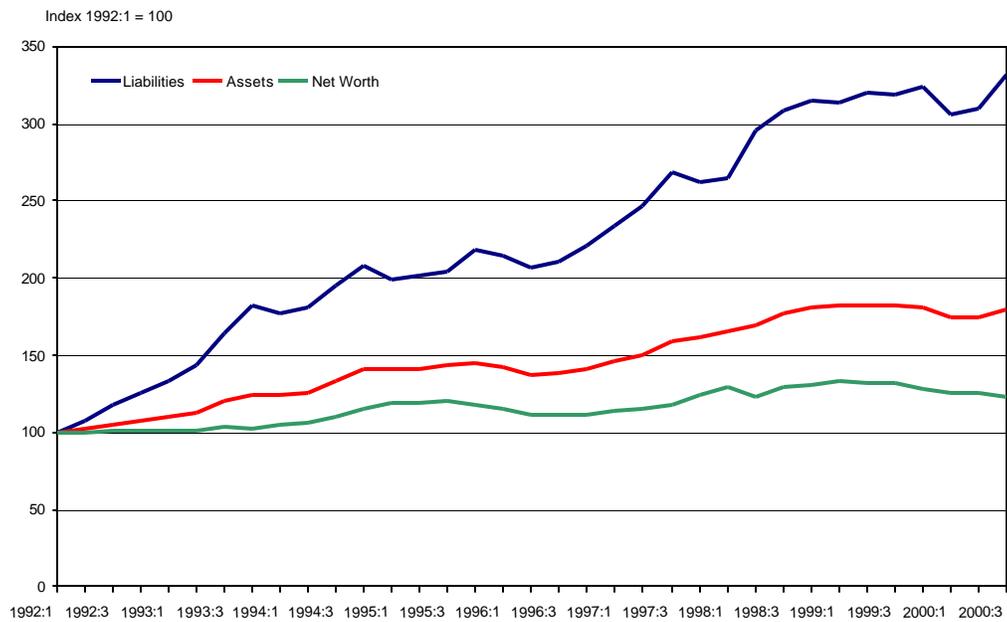


CHART 5: Gearing Ratio

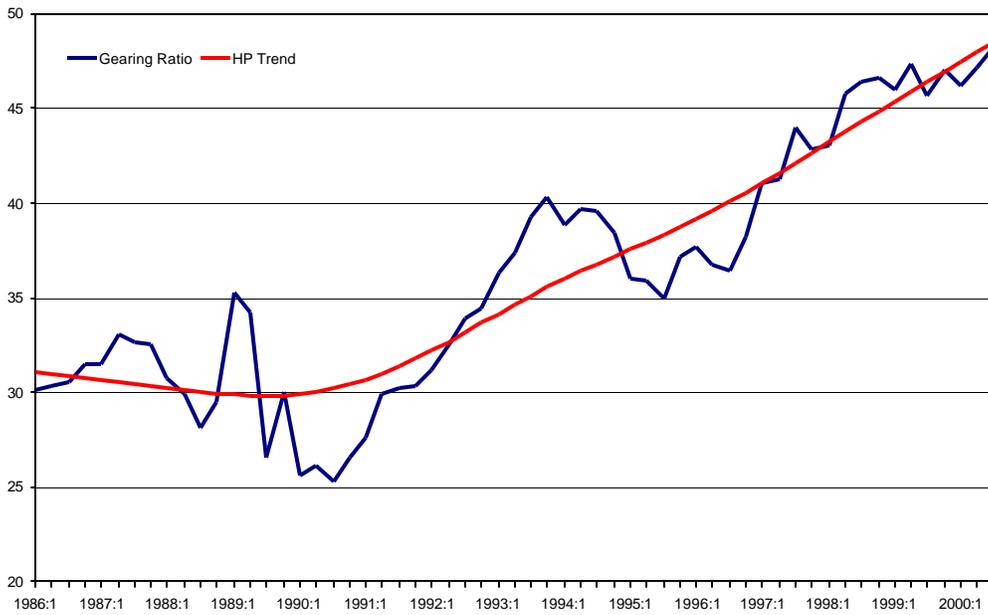


CHART 6: Short- and Long-Term Debt Ratio

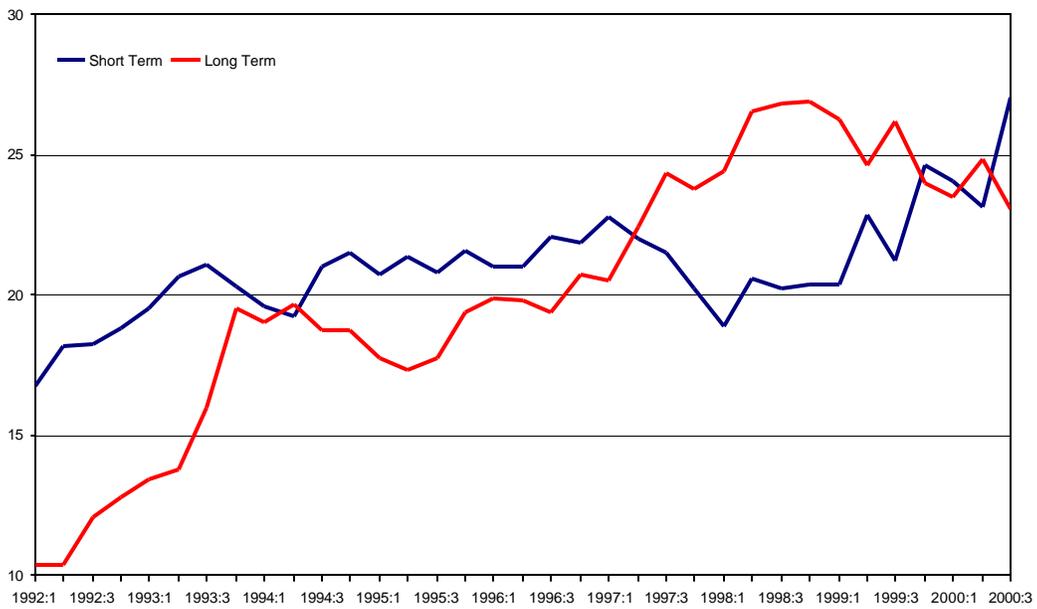


CHART 7: Proportion of Short- and Long-Term Debt in Total Debt

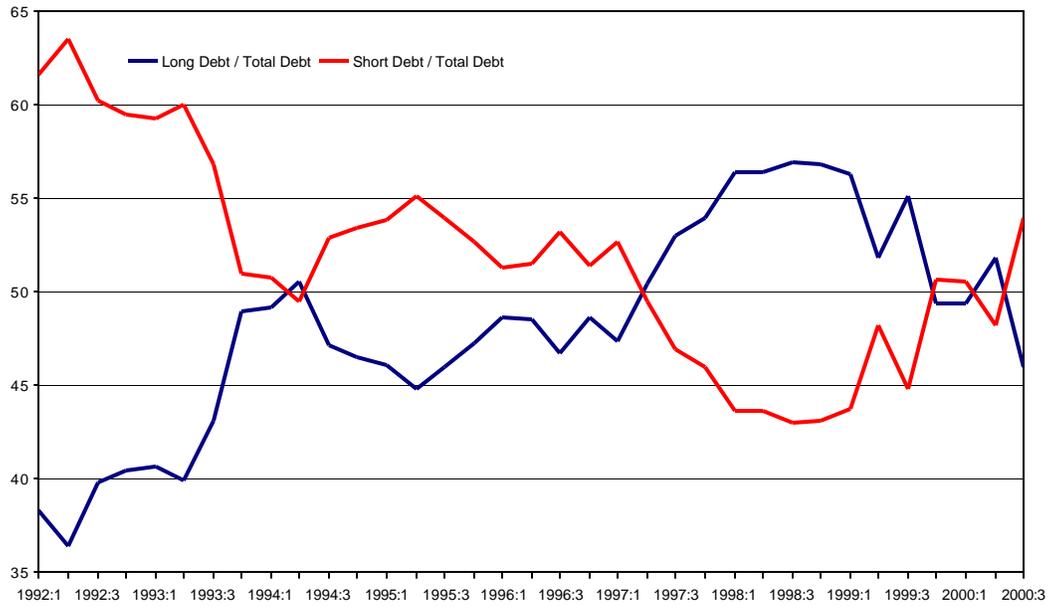


CHART 8: Liquidity and Country Risk

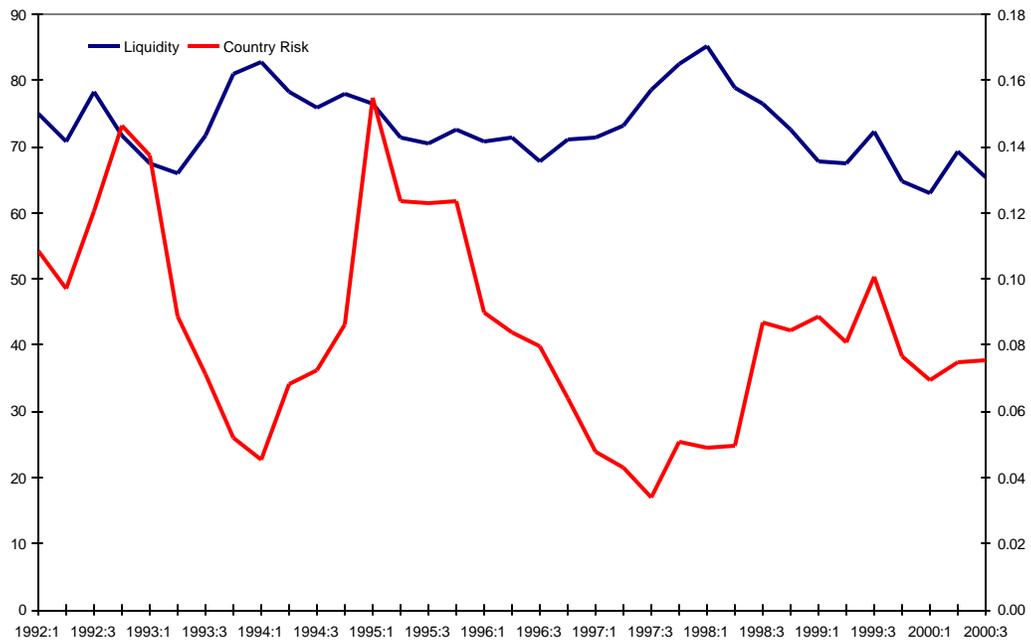


CHART 9: Proportion of Dollarized Debt to Total Debt

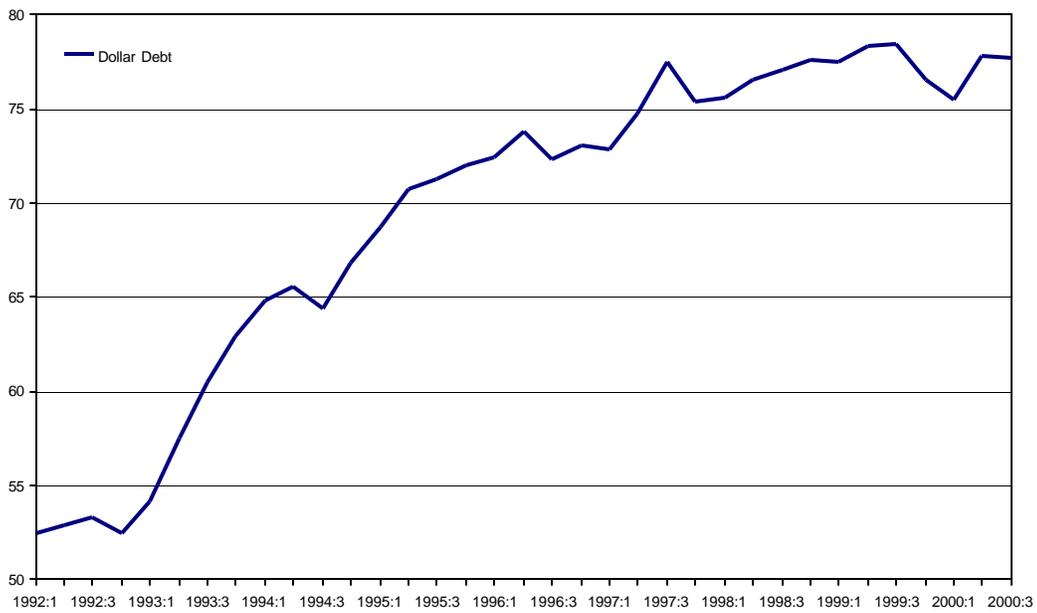


CHART 10: Short-Term and Dollar-Denominated Debt

