

MICRO-MACRO INTERACTION IN ECONOMIC DEVELOPMENT

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INTRODUCTION

The 1980s debt crisis generated an unprecedented level of macroeconomic instability. In that context, stabilization turned essential and the growth problem was relegated to a second place. However, in the last few years, questions related to growth and productive development have been gaining space on the Latin American economic policy agenda. Undoubtedly, this represented a significant advancement. This change in the priorities of stability and growth can be attributed to the transformation in the international capital markets. In fact, since 1990 there has been a strong fall in the international rate of interest and a flexibilization in the credit rationing scheme that the region had been facing. Consequently, two fundamental factors that had acted as generators of the debt crises of the eighties were deactivated. In this new context, governments could rely on greater degrees of freedom to undertake successfully stabilization policies. Hence, a generalized improvement in key aggregate variables can be observed - although Brazil is still the region's main exception¹. When the urgency of stabilization was finally left behind, the consideration of growth became possible. As a general rule, reactivation of its sources were sought through the implementation of structural reforms oriented both to deepening the role of the markets and increasing the efficiency of the productive structure.

However, it must be considered that stability is far from consolidated. Some structural factors of macroeconomic instability are still intact. The debt crisis has left consequences that have not yet been overcome. And new macroeconomic tensions have appeared as a by-product of the acceleration of the rate of implementation of the structural reforms.

We have stated above that the new situation represents an improvement. But, if we take the remaining factors of potential disequilibrium into account it then becomes necessary to stress that it also represents a challenge. The core of this challenge consists in finding the way to use the increased space available to implement reforms and growth policies, while preserving the recent stability achievements. A necessary condition to confront this challenge is to understand, at least in a rudimentary way, the manner in which micro and macroeconomic factors interact. That is, how restrictions of macroeconomic consistency (short- and long-run alike) determine and are determined by the disequilibria generated during the reform process and by its consequences on the productive base.

This paper analyzes the factors that affect the relation between aggregate consistency and productive development. Such factors are extremely complex. In the treatment of this question the use of analytical results pertaining not only to micro and macroeconomics but also to growth theory, financial theory, public finance, industrial organization, international trade, and technological change dynamics becomes inevitable. To be productive the approach has to be of interdisciplinary nature. This is precisely one of the most difficult obstacles to overcome. There is little systematic interaction at an analytical level between macroeconomists and specialists of each of the fields

¹ See Damill et. al. (1993).

named above -specially those dedicated to industrial organization, innovation and technological change analysis. That is why the nature of this paper cannot be but exploratory (one reason being the macroeconomic background of the authors). At the time of writing we wished that this work contribute to future interdisciplinary studies between microeconomic issues (i.e., factors related to the economic structure) and macroeconomics (i.e., aggregated consistency). This wish had its roots in the belief that a major part of the secrets of economic growth remain hidden inside the complex "micro-macro" link.

If the most important forms of "micro-macro" interactions could be identified it would then be possible to analyze the form in which different macroeconomic scenarios -each being distinguished by a unique setting of aggregate variables- affect positively or negatively the behavior of agents, the institutional morphology and, hence, the efficiency and the growth path of the economic structure. It would also be possible to evaluate if the structural reforms - oriented to changing the characteristics of the environment in which microeconomic decisions are taken- are expected to work in favor of or against the consolidation of stability. Obviously, given our purposes, the analysis will be primarily oriented towards determining the particularities of those mechanisms in the current Latin American context. This context is characterized by a nonconsolidated stability and by the acceleration of structural reform processes which deepen the role of the markets in the economy.

The paper is organized as follows. The first section analyses the "the macroeconomic problem" in itself and how it affects and it is affected by the real and financial microeconomic structure. An attempt to identify the most important "micro-macro" transmission channels is also made. The section closes with some reflections on the form in which micro-macro interaction can help to determine the economic growth potential of a given economy. The way in which we address this questions is rather abstract. In contrast, the second section attempts to apply these ideas to concrete problems. This section describes some stylized facts of micro-macro interaction based on the Latin American experience. The stylized facts we have selected for the analysis are closely related with current policy challenges, whose core is constituted by the relation between stabilization and structural reform. In the first place, a stylized view of the main macroeconomic problems that the region faces in the nineties and its relation with structural imbalances are presented. Then, two examples related to structural reform are introduced. The first one refers to the influence of macroeconomic questions on microeconomic issues. The consequences that two different macroeconomic settings had on the evolution of the productive structure are examined via the recent experiences of trade openness in Argentina and Brazil. The second stresses the effects of micro questions on macro issues. Based on a comparison of the recent evolution of the financial structure in selected Latin American cases we show how that evolution conditions what can be done in macroeconomic stabilization. In both examples we show the micro-macro interactive effects and feedbacks. The paper concludes with some remarks on the main implications of our analysis for economic policy.

SECTION 1: THE SPECIFICITY OF THE MACROECONOMIC PROBLEM AND "MICRO-MACRO" INTERACTION

Some comments on the problem to be studied

It is worth making some clarifications that will help us both to avoid confusion and to delimit our object of analysis. Let us start with a semantic explanation: we use the terms "micro" and "macro" for reasons of brevity and convenience and without too much respect for the traditional division of labor present in our discipline. In this study, the "macro" problem contemplates all short-run issues usually dealt by macroeconomics. But it also incorporates other issues related with consistency between savings and investment in the long-run, which are usually analyzed according to economic growth theory. Instead, our use of the term "micro" refers to a range of characteristics of the economic structure. This range is wider in one sense, but narrower in another, than what usually constitutes the object of microeconomic studies. It is wider because we include some issues usually dealt with by institutional approaches and by the literature on innovation and industrial organization literature in the "micro problem". It is narrower because, for example, we do not make any references to issues related to consumer theory.

Usually, the micro-macro relation is analyzed in the literature on the "microfoundations" of macroeconomics. The purpose of this literature is to build a unified theory. Found on individual behavior determined by a **given** micro structure (resources, technology, tastes and market structure) attempts to reach the most important macroeconomic propositions. Macroeconomics, according to this literature, can be explained by a general theory based only on behavior principles which refer to each individual agent. The macroeconomic problem is in this way "diluted", since it has been converted into a mere result of micro conducts. But in spite of the enormous effort invested in these attempts, results with a minimum of consensus among specialists have not yet been reached. The discussion that follows is only tangentially related with these questions and, anyway, we do not wish to start all over again.

Unlike the microfoundations approach that tries to resolve a theoretical problem, what is used here has its origins in our Latin American case study experience. Given the absence of an integrated theoretical structure for economic analysis applicable to concrete cases, the problems of microeconomic structure and macroeconomics are studied separately. In this way, we have assumed, as methodological premise that macroeconomic problems exist, as do micro problems related with the productive structure. From that point - and based on the stylized facts that we have already identified in case studies, we ask: how do both problems interact; how do certain microeconomic structures affect macroeconomic stability; how different macroeconomic disequilibria contribute to modeling a certain microeconomic structure? This approach does not suppose, certainly, that the micro structure is given and invariable whenever a macroeconomic disequilibrium appears.

Let us illustrate this with an example. In traditional literature it is assumed that inflation is produced by a coordination failure that makes the aggregate demand greater than the supply. Let us

suppose that this is due to an excess supply of money. This disequilibrium can be eliminated if the monetary authority implements a contractive monetary policy that equalizes the real quantity of money and the demand determined by the aggregation of the demand of each individual agent. Face with a macroeconomic disequilibrium phenomenon the microeconomic structure remains, then, unmodified. There is just one quantity of money demand that is compatible with each level of inflation. This is not always consistent with stylized facts in Latin America. Let us suppose that there is a given rate of inflation and that it accelerates owing to an increase in the rate of monetary emission. If authorities have been able to revert the inflation and rate of money issuing to its previous level via stabilization policies, it can be observed that the level of money demand does not return to its original level. And, what is indeed very important, some financial markets directly disappear, typically, the long-term ones. For the same rate of inflation it can then be observed - although not necessarily- that two **distinct** levels of money demand and two **different** structures of financial markets exist. If that happens it implies that you just cannot go back to the "same" economy you had before once the macroeconomic disequilibrium is eliminated. The macro disequilibrium produces a mutation within the micro structure. These kinds of phenomena are not exclusive to the monetary side of the economy since they also appear in the real side. This occurs, for example, when variations in the inflation rate produce **permanent** variations in the average length of contracts or when some kind of contracts simply **disappear**. In both cases the productive structure may undergo changes since there are productive activities that become **unfeasible** if certain forms of contracting are not unavailable².

The idea is not that every macro disequilibrium induces microeconomic mutations. Rather, it is possible to identify specific macro disequilibria that actually produce structural changes. It is obvious that whatever be the type of disequilibrium, macroeconomic issues are in themselves important because they have sufficient grounds to restrict the decisions of individual agents - whether the microeconomic environment is viable or not. But when these decisions lead to: changes in technology or the propensity to innovate, destruction of wealth, variations in the capital/product ratio, institutional modifications (e.g. changes in the type of contracts, the disappearance of markets) it cannot be assumed that the microeconomic environment within which individual decisions are taken has remained constant. The importance of this issue becomes clear when the long-run evolution of the micro structure is observed. There are features of the economic structure that cannot be explained only in microeconomic terms and without making any reference to the macroeconomic environment in which that evolution took place. It is then necessary to identify the characteristics of some specific macro disequilibria that produce permanent mutations in the micro structure. In that sense, the purpose is not to replace the traditional short-run macroeconomic approach that assumes the micro benchmark is given, but to complement it by incorporating the "long-run" effects that aggregate inconsistency phenomena may induce in the micro benchmark.

In order to extend the traditional macro analysis, it is necessary to include, together with stable disequilibrium phenomena, those contexts in which unstable disequilibria may appear. That is,

² On the relation between inflation and contracts, see Frenkel (1990).

we must include macroeconomic scenarios characterized not only by explosive unstable situations (i.e. hyperinflation) but also (and fundamentally) those that show long periods of disequilibria that do not turn explosive (i.e. long periods of three-digit inflation). It should also consider those that show a systematic propensity to generate sharp and recurrent disequilibria in such a way that it becomes an inherent feature of the macroeconomic environment. From our point of view, it is precisely the realization of some economic agents that they live in an economy with macroeconomic instability features that induces them to implement changes in their behavior that eventually provoke structural mutations in the micro environment.

As a matter of fact, the importance of this issue is implicit in the literature on Latin American macroeconomic phenomena. Whenever a reference is made to the macroeconomic problems of developed countries, it is macroeconomic **disequilibria** that is discussed. Instead, whenever macroeconomics is discussed in Latin America the word disequilibria is replaced by the word stability. It is macroeconomic **stability** and **stabilization** policies that the discourse is all about. In the first case, it is implicitly assumed that the economy is **stable** and that the problem of macroeconomic policy is how fast the equilibrium of an inherently stable economy can be resumed. In the second case, however, it is not assumed that the economy is stable. We agree with this. In this case, the problem is not how to speed up the return to a pre-defined equilibrium but how to find policies that can transform an unstable economy into a stable one. It is a question of determining a **new** equilibrium configuration and **new** forms of dynamic adjustment.

For this reason stabilization policies usually include elements of structural reform and that is why it is so difficult to separate both components. Likewise, this is an important reason to adopt a macroeconomic approach that includes issues usually dealt with in the theory of economic growth. If the economy is unstable it is necessary to change the underlying parameters to make it stable, that is to say, to reform part of its structure. And if stabilization is achieved, the economy will **not** be strictly the same economy that generated the macroeconomic disequilibria and that led it to the implementation of stabilization policies. Inherently stable economies are not stabilized. They are equilibrated. It is the unstable economies that must be stabilized, that is, structurally transformed in order to show a steady return path to equilibrium and, hence, the possibility of being equilibrated.

The close relationship between stabilization and structural reform, which instability phenomena present, generates, in turn, some additional problems. When designing structural reform policies to accompany stabilization, what are the structural parameters that must be changed? What characteristics of the micro structure generate the tendency to instability? How do these changes affect the growth capacity of the economy? These are the questions that make it imperative to analyze the micro effects on macro issues.

In short, in our approach to this study, the relationship between micro aspects and macro issues is a two-ways street. Hence, there are two questions to be analyzed. The first one is why a macroeconomic "problem" exists, independent of the rest of the issues related to the evolution of the productive activities. It is particularly crucial to understand why the macroeconomic disequilibria and the frequent appearance of instability phenomena have so affected Latin America's rate of

growth and the morphology of its productive structure. The second task is to examine the effects of existing imbalances in the productive structure and how its further development and sophistication could contribute to the deactivation of the structural factors underlying the propensity of the region to generate sharp and recurrent macroeconomic disequilibria.

From macro to micro issues: the specific nature of the macroeconomic problem and structural mutations

The literature on microfoundations was the consequence of the inability to build theorems that reproduce macroeconomic stylized facts from microeconomic principles. Unemployment or the importance of nominal variables in determining the aggregated level of activity are, in that sense, clear examples. The impossibility to resolve this question led to the working hypothesis that the macroeconomic problem was independent from individual behavior. The macroeconomic analysis identifies, then, a group of **key variables** that determine the evolution of the economy at the aggregate level. Such variables are associated with the evolution of the external sector, the fiscal accounts, and the global savings-investment balance³. Whenever deep and unexpected changes are produced in those key variables, **coordination failures** between individual plans arise, resulting a macroeconomic disequilibrium.

Hence, the core of the macroeconomic problem is the existence of these coordination failures. When they are produced, not all agents can trade ex post the magnitude they had planned ex ante. A macroeconomic disequilibrium exists, then, because there is a coordination failure at the aggregate level.

The main distortion imposed by a disequilibrium situation is that the magnitude of transactions that agents are obliged to make can be greater or smaller than what they had planned. This has an effect on their budget restraint and their wealth⁴. As a consequence, agents are compelled to make unforeseen adjustments to achieve the desired equilibrium in their "balance sheets". Such adjustments can cover both the real (factor reallocation) and the financial side

³ The discussion on stabilization and growth in Latin America led to the development of the literature on "three-gap" models. Such gaps refer to the fiscal, the external and the domestic (savings/investment) situations. For example, see Fanelli et. al. (1992).

⁴ The traditional literature on disequilibrium (Leijonhufvud 1986; Benassy 1982) stresses unrealized transactions owing to coordination failures. However, this emphasis is unjustified (Fanelli 1988). In disequilibrium situations overindebted agents can typically fall into payment arrears, forcing creditors to lend more than they were willing ex ante. This kind of situation was very common during the debt crisis when many Latin American countries entered into a moratorium. When the unrealized transactions are emphasized, the rationing framework used in a disequilibrium suggests that: "the market's short arm orders" (i.e., if an excess supply exists, the quantity traded is determined by the demand). Instead, when more transactions than those desired are allowed, the rationing scheme can be based on "the market's long arm orders" or in a linear combination of the quantities determined by the long and the short arm. In the first case, all transactions are voluntary; in the second, forced or involuntary transactions may exist.

(portfolio decisions) as well as flows (decisions within the period) and stocks (the intertemporal reallocation of resources). It is true that this kind of adjustment may arise in any kind of disequilibrium situation. But when they are due to "coordination failures" at the aggregate level, there will be a macroeconomically important number of agents making transactions in disequilibrium and, hence, making adjustments in their balance sheets. At the same time, the consequences of these adjustments on the balance sheets of other agents, who were not initially affected, cannot be ignored because they will not be negligible. In other words, "spillover" effects will be produced in other markets leading to a further deepening of the impact effects. Besides, as transactions in disequilibrium can affect not only flows but also stock positions, the spillover effect can have important intertemporal consequences. Disequilibrium is evident from a "reading" of each agent's balance sheet and observing the stock and flow decisions to be taken to resolve disequilibrium situations. It is precisely for this reason that coordination failures are crucial to understanding why macro affects micro.

The transmission channels through which coordination failures at an aggregate level finally affect the agents' decisions are varied and numerous. However, according to the kind of analysis made here, a general categorization of the fundamental channels should suffice. Obviously, the basic transmission mechanism in a market economy is the one that operates through the price system. That is, through variations in relative prices both on the real and the financial side of the economy. However, the price system does not act in an optimal way because: one, prices are not completely flexible; two, information is not perfect; three, there are factors that weaken competition; and, finally, because there are rigidities and "frictions" in processes of factor reallocation. In fact, it is because all those market imperfections exist that coordination failures and, hence, disequilibria are produced. Also "false" signals of relative prices are generated. Under such circumstances, the absence of an optimum price mechanism induces price overshooting. In turn, this gives rise to variations in quantities on either side of the market and to erroneous financial decisions. Those decisions will not allow agents to trade the intended quantities in real and financial markets. The unemployment phenomenon in the real side and overindebted positions or liquidity restrictions on the financial side of the economy are the clearest indicators of these kinds of situations.

When agents learn that their decisions are incorrect, either because prices do not include all the relevant information or because the included information is inexact, they look for complementary data. As the effects of the disequilibrium become evident, two new sets of signals important for individual decisions appear. One is information on traded quantities, supplied by indicators from the real side of the economy. The other is the information on quantities supplied by financial indicators based on the balance sheets of the agents. According to this, it is then necessary to incorporate two additional transmission mechanisms that affect microeconomic decisions and through which macro affects micro. In the first place we have those that operate through quantity indicators on the real side of the economy (e.g. unemployment and idle capacity). Secondly, we have those that act through variations in quantity indicators at the financial side. The latter vary: short-run stock/flow indicators (interest payments/sales); short-run stock/stock indicators (liquidity indicator: liquid assets/short-run debt); long-run stock/stock indicators (indebtedness/net worth) and long-run stock/flow indicators (sales/debt).

Once the nature of the macroeconomic problem has been defined on the basis of key variables and coordination failures on the one hand and transmission mechanisms between the aggregated disequilibrium and microeconomic behavior on the other, there remains the way in which economic disequilibrium effects induce - under certain circumstances- mutations in the morphology and the temporal evolution of the micro structure. We have already said that instability phenomena are very important in all this. What we want to show now is how they are also correlated with the quantitative magnitude of the coordination failures, its temporal length, and its recurrence.

Complete coordination (i.e. the absence of macro problems) can only be produced in a context of general equilibrium context. This context is only an ideal. However, it is still useful because through references to such a situation it is possible to analyze economies with different degrees of macroeconomic disequilibrium. In economies which are always in disequilibrium, a low disequilibrium degree may be considered irrelevant in determining its functioning. Hence, equilibrium stylization can be useful in their modeling. The macroeconomic problem becomes relevant when the magnitude of the disequilibria of the key variables is such that it seriously affects the functioning of the economy.

In traditional macroeconomic analysis, aggregate disequilibrium is conceived of as a temporal phenomenon. Consequently, stress is put on the search for optimal intervention tools - mainly referring to the use of fiscal, monetary and exchange policies. These tools should be able to solve the coordination failures while minimizing the period during which the economy will work in a disequilibrium. In addition to recent discussion on the need for such policies, traditional analysis usually assumes that disequilibrium is only temporal. It could be because the economy regulates itself without any policy intervention. Or, it could also be that it does not but it is still possible to speed up the process which takes the economy back to equilibrium through **fine tuning**. In fact, were that the case, consequences of macro imbalances at a micro level would not be excessively relevant.

Nonetheless, this approach is too narrow, specially when analyzing the typical Latin American macroeconomic problems. The basic reason is that the macroeconomic problems the region's economies are usually facing differ from those of developed economies. The most striking differences are associated with the **magnitude** of macroeconomic disequilibria, their **duration** and their **recurrence**. Those features are revealed in a multiplicity of ways in each economy. However, one feature summarizes the diversity of factors that contribute to the economy's propensity to generate coordination failures: **the degree of volatility and stochastic unpredictability of the evolution of the key variables**. The more volatile and difficult it becomes to model the stochastic process that generates the evolution of the key variables, the more difficult will be to foresee that evolution and greater the uncertainty. Thus, the propensity of the economy to generate external, fiscal, or saving-investment disequilibria will grow. In such a context economies will witness recurrent periods of coordination failures of considerable magnitude.

If the evolution of the key variables follows the above pattern, otherwise absent behavior

will also be observed. We want to stress that one thing is to undergo a disequilibrium stage, and another is to live in an economy that generates them systematically. In this last case -unlike what is usually emphasized in traditional macroeconomic analysis- the macroeconomic disequilibrium is viewed as a **recurrent** phenomenon. Therefore, the conduct of microeconomic adjustment that would be unprofitable if the disequilibrium were just a sporadic and transient phenomenon, becomes **profitable**. It is then reasonable to think that the influence of macro issues on the micro structure will be much more permanent and evident in an economy "structurally" prone to generating macroeconomic disequilibria. We have already seen that the macro-micro transmission mechanisms operate through the price system, through information on quantities and through the financial positions of the agents. It is worth examining, then, the particular characteristics that such channels show in an economy tending to recurrent and unstable macroeconomic disequilibria.

Let us begin the analysis with the price system. In market economies the basic task of eliminating all disequilibria is governed by relative prices. One important consequence of the volatility of key variables is a higher and a more pronounced variability in key relative prices, that is, in the relative prices associated with fundamental variables (real exchange rate, real wages, interest rates, and so on). If the price signals that agents receive are more volatile, then the degree of uncertainty regarding the decision-making process will be higher. What is more, the probability of an individual making a wrong decision that ex post will lead him into a disequilibrium situation will be greater.

The evolution of traded quantities in a disequilibrium is not independent of what we have just said. We had already seen adjustments are not always produced through prices because of imperfections (rigidities, etc.). As a consequence, quantities also show a more volatile evolution in a context wherein it is difficult to anticipate the evolution of relative prices. There are sudden and unexpected changes in quantities during the adjustment process. This gives rise to fast and recurrent recession/expansion cycles that increase uncertainty in the microeconomic decision context.

Lastly, as in a monetary economy every transaction on the real side corresponds to another transaction on the monetary side, the financial balance sheet indicators will also tend to show deep and unexpected changes. In fact, unforeseen variations in prices and quantities can set agents that have not yet taken any decision at the financial level into a disequilibrium. This happens, for example, when unanticipated devaluations also generate unanticipated wealth transfers that can strongly change an agent's financial position (e.g. it can change a solid financial position into a speculative or Ponzi-type one) or when profound recessions lead to unsustainable financial positions.

It is precisely because of the diverse way in which micro-macro transmission mechanisms operate that explains how macro disequilibria produce micro mutations in an economy with a tendency to generate instability. In fact, observed mutations are somehow related with the following. **Flexibility⁵ in changing past decisions is rewarded** in an economy with high

⁵ Our use of the concept of flexibility is inspired by Hicks (1974).

macroeconomic uncertainty, where it is rather easy for an agent to make mistakes. Empirically, the most direct way to verify is by observing the huge risk differential between short- and long-term profitability rates. Situation where this differential becomes infinite can often be observed. On such occasions, long-term credit markets disappear.

This "**extreme preference for flexibility**" has fundamental consequences on the allocation of real resources, on the financial morphology and -through its effects on investment and capability of innovation- on growth. We will examine the latter below. As a matter of fact, it is one of the central conclusions of our analysis since productive development is directly affected. But for now, we are interested in stressing two additional points that have more to do with disequilibrium's adjustment dynamics and with limitations imposed on macroeconomic policies by an unstable economy.

In an unstable economy, individual reactions do not merely produce mutations in the micro structure. In a disequilibrium situation such mutations can also generate adjustment mechanisms that can set the economy on an explosive dynamic path. This happens, for example, when a fiscal deficit is produced and inflation accelerates. In order to be protected from these effects individuals react by shortening the length of contracts. This minimizes the intertemporal horizon of microeconomic decisions. Some investment projects will not be carried out and the demand for some financial assets will disappear. As a consequence, the activity level falls and it becomes more difficult for both the government and the private sector to place debt, even for a short-run period. A lower level of activity reduces tax revenue and the fiscal deficit grows. In a context of reduced public-bond demand the only option to finance the government is by increasing the monetary emission rate. That will speed up inflation and prolong the circle. At some moment the adjustment path in a disequilibrium starts to show explosive signals. That validates former individual decisions to shorten contracts in order to adapt them to an unstable economy. Adjustment in a macro disequilibrium leads to a consolidation of mutations at the micro level.

The feedback mechanisms of the disequilibrium and the consolidation of micro mutations also affect the effectiveness of economic policies. When frequent and unanticipated changes are produced in the temporal path of key variables, authorities are forced to implement frequent and radical changes in policy instruments so as to compensate for disequilibrium effects. In such a context authorities will find it very difficult to attain the necessary credibility to enforce their policies.

This has two negative consequences. The first one is that it is difficult that the agents will show speed and flexibility in adapting their behavior whenever the government announces radical policy changes. In an uncertain environment, defensive and conservative behavior can be more profitable if it can guarantee greater flexibility. The second consequence is that the government is forced to overshoot the quantitative objectives that policies pursue. In that sense, there exists a kind of trade-off between credibility and dramatic impact: announcements must be impressive if they are to modify the conservative behavior of the agents.

Both factors are a permanent source of macroeconomic coordination failures and instability in the region. If agents' behavior does not follow the direction pursued by the authorities and, in addition, policies seek dramatic objectives, the consequence in macroeconomic disequilibrium and in terms of productive disallocation can be highly distorting. These kinds of economic policy issues are typical, for example, of economic policy cycles of the protection-openness-balance of payments crisis- protection type that appeared in countries like Argentina and Chile. In order to be fully credible, authorities launch a very quick and ambitious program of trade openness, expecting the private sector to presume trade openness to be permanent. They further expect the private sector to start investing in restructuring firms. But, as the openness generates an explosion of imports and an unsustainable current-account deficit, the private sector anticipates that such a regime will not last long and, consequently, does not invest. When the resulting current-account deficit can no longer be financed and in an attempt to maintain a minimum of macroeconomic stability, authorities are forced to reimpose not only high tariffs but also import quotas and prohibitions. Ex post, the private sector's defensive behavior was justified.

From micro to macro: structural imbalance and macroeconomic stability

Not all countries show the same degree of macroeconomic instability. This is so because the volatility of key variables and specific adjustment mechanisms (in the event of a lack of equilibrium situation) differ from country to country. Such features are strongly correlated with each economy's structural characteristics. And that is precisely why micro factors are relevant in determining an economy's ability to process macroeconomic shocks with greater or less efficiency.

The economic structure is made up of a productive base (technology, resources, innovation capability), individuals, markets and institutions. Hence, the economy's ability to absorb shocks that are translated into coordination failures can be evaluated according to: a) the amount and quality of existing self-regulatory mechanisms (markets and institutions) which can mitigate and distribute a shock's effects over time; b) the characteristics of the productive system that make it more or less flexible to reallocate productive factors to new situations (i.e. post-shock).

According to the above, economies could then be organized by their degree of development of the markets, their institutions and the diversification of their productive structure. For example, in economies with a certain degree of industrial development, both criteria could be used to create an order with developed capitalist economies at one end of the spectrum and transition former-socialist economies at the other. Major Latin American economies would be placed between those extremes.

The first criterion makes the self-regulatory capacity dependent on the degree of development of markets and institutions. Market structure as well as institutions directly or indirectly related to the economic activity are crucial because the ability to **administer uncertainty** depends on them. Hence, they can significantly contribute to softening disturbing effects generated by volatility.

The higher the **market structure's** degree of development, the smoother will the price determination process be, and so, the lower the probability of long-lasting disequilibria and unstable processes. A complete system of markets would make it possible to eliminate spot disequilibria through future market operations. Uncertainty can be processed through the insurance markets. The ideal reference model is one of market structure and perfect information with all the necessary mechanisms to assure the complete coordination of plans and decisions by individuals in a decentralized way, and where resources can be reallocated quickly in the event of sudden changes of information, without incurring into significative costs.

Indeed, no real economy has such characteristics. However, developed capitalist economies come closest to this theoretical stylization. And, even if the structure of these economies do show many "market failures", similar substitutes for missing markets exist. For example, the absence of generalized future markets will have less impact in proportion to the development of capital markets of different length. Although no markets can be insured against every kind of risk, insurance markets are far more developed there than in the typical Latin American economy.

From the above it can be concluded that the higher or lower "completeness" of the microeconomic structure of markets is relevant to the macro dynamics because of a close correlation between problems of macroeconomic "coordination failure" and the magnitude of "market failures". The greater the number and importance of market failures, the weaker are the market mechanisms of disequilibria smoothing. In those cases the tendency of the economy to generate disequilibria and dynamic adjustment paths that tend to reproduce or amplify imbalances instead of correcting them is also higher.

The degree of development of **institutions** related to the economic activity affects the probability of macroeconomic "coordination failures" for various reasons. It is worth mentioning two of them. First, some institutional arrangements can replace "market failures", such as the nonexistence of some key future or insurance markets. In this way, institutions are relevant mechanisms that reduce uncertainty. These institutions are important in determining "customer-type" relationships; in diminishing uncertainty between firms that operate in a spot market world; in replacing failures in the labor market or externalities generated in the learning process financed by particular firms; in providing substitutes for nonexistent credit markets, through state-owned banks or through customer - supplier credit relations.

The second reason is that institutional strength reduces the volatility of key variables. The more developed public sector institutions (e.g. tax system) are, lower is the probability of fiscal shocks that lead the economy into macroeconomic disequilibrium. More efficient bank supervision and screening mechanisms in credit assignment by commercial banks can result in a reduced probability of a financial crisis with its consequent negative externalities on the macroeconomic equilibrium. Additionally, institutional development is relevant because of a correlation between it and the degree of stability of the judicial framework. In a private-property based economy, legal certainty is not only a basic condition for the mere existence of markets but also for the necessary investment that assures the continuity of the economic system.

The second criterion makes a direct reference to the productive structure. In the event of permanent shocks the lower the diversification and sophistication of production are, the lower is the capacity to quickly reallocate resources to new activities. Productively less developed economies show a higher amount of rigidities that prevent the productive structure from quickly adapting. That makes both the transition process and the post-shock adjustment more lengthy and, hence, more lengthy the period during which the economy works in a disequilibrium. It is important to emphasize that -at least empirically- (a) and (b) factors are not independent of each other and this tends to stress the disequilibrium's persistence. In fact, it can be observed that the lack of productive development is positively correlated with the underdevelopment of financial and capital markets. In this way, the tendency toward instability is strengthened because the rigidities in the productive structure determine that the transition periods will be long and the absence of capital markets makes the restructuring of productive processes very difficult to finance. For example, the outcome in the typical Latin American economy points to prolonged periods of productive retraction that do not necessarily conclude with the successful restructuring of the productive apparatus. Instead, they result in net losses of formerly incorporated productive capacity. The processes of shock trade opening characterized by the disappearance of important industrial sectors without the appearance of new specializations plus the disappearance of scale economies in certain segments of the industrial system owing to insufficient financing for restructuring, are the paradigmatic.

In the second place, a correlation between the degree of productive development and the sophistication of institutions associated with the economic activity can also be empirically observed. This produces delays in the development of institutions which will substitute missing markets - because of market failures. So, the ability to process uncertainty is directly related to the limited sophistication of the productive structure. Actually, in the light of industrial organization literature, this is not surprising. This literature establishes that the development of nonmarket institutions reduces uncertainty. Relations between customers, firms and suppliers, tend to be stronger in the more sophisticated industrial sectors, where prices play a smaller role in allocating resources than in commodities and raw material in general⁶ productive sophistication lead to a minimal presence of these institutions and greater uncertainty and instability.

Two simple examples can help to clarify the above. One is the multiplier effects and illustrates the role of changes in the micro structure in the determination of macro dynamic adjustment.

The magnitude of the multiplier effect of public expenditure is higher in Argentina than in the U.S. It is known that the multiplier effect has been weakened in the American economy, to the point where doubts about its existence arose in the early seventies. On the contrary, the same effect can be clearly observed in the thirties. This transformation in the dynamics of the macroeconomic behavior can be attributed to the growing complexity of the economic structure (development of

⁶ Scherer (1980) presents an overwhelming quantity of stylized facts related to the industrial organisation that supports this statement.

markets and institutions, and wealth accumulation). In sum, waged earners are now wealthier, have unemployment insurance and more access to credit. A transitory reduction in their income will have less effect on their consumption expenditure than sixty years ago. Instead, the structure of the Argentine economy resembles the American structure of the thirties. A reduction in wage earners current income (poorer than their American counterparts and without a generalized unemployment insurance) imposes a liquidity restriction on them that affects their expenditure. It can be observed, then, the extent to which the "income effects" determine the magnitude of the multiplier. These same mechanisms, dependent on the economic structure, also determine other differential behavior in the event of disequilibrium situations, for example, the effects observed in devaluations. Structural diversity, in particular diversification of the productive base, determines that a devaluation is recessive in Argentina while it is expansive in the United States.

The second example refers to the lack of productive diversification as a direct cause of the degree of volatility of macroeconomics. One of the main determinants of the balance of the current account's variability in Latin America is the variability of the terms of trade. As exports show a low degree of diversification owing to the lack of competitiveness from the most dynamic industrial sectors (Guerreri 1993), the trade account often experiences significant changes in the event of negative external shocks. The lack of productive diversification converts the volatility of the terms of trade into the volatility of the fundamental variables. The dependency on a few export products makes it impossible to mitigate the volatility through the implicit risk diversification present in a diversified export structure. In that way, the lack of productive development becomes a source of macroeconomic volatility.

Micro-macro interaction, productive structure and growth

Up to now, we have analyzed the way in which macro instability can induce mutations in the micro structure, as well as how micro weaknesses -either present in the productive structure, markets or institutions- can generate coordination failures. We have treated these issues separately for reasons of clarity and methodology. However, that on an empirical level, the general rule is that a myriad of interaction and feed-back mechanisms between micro and macro issues simultaneously determines both the micro and macro characteristics of a given economy. Hence, in the analysis of specific cases it is very difficult to determine if an economy shows severe market failures owing to its macroeconomic instability, or on the contrary, it is the lack of some key markets -like long-term capital markets- that has generated the aggregate instability⁷.

⁷ Both phenomena normally tend to feed on each other. In fact, this is why it is so difficult to find a way out of a deep crisis when instability and missing key markets cross a critical threshold. Stabilization policies that are not accompanied by structural reforms tend to fail because of existing deficiencies in the market structure. Reform policies that are not accompanied by stabilization tend to fail owing to uncertainty in context of macroeconomic disequilibrium. This is an additional argument in favor of stabilization strategies accompanied by structural reform policies and also against the implementation of reform policies that might lead to a deepening in the macroeconomic imbalance (Fanelli and Frenkel 1994).

This does not mean that in a concrete case the evolutionary result of the micro-macro interactive process cannot be analyzed by separating the effects of each of these two factors. In fact, the possibility of making that analytical division is crucial to understanding the growth restrictions of an economy at any given moment. In concluding our methodological approach let us take a brief look at consequences of the process on economic growth.

For the purpose of providing a succinct treatment of the question of growth restrictions issues we have systematized them into four problems that economies must resolve before they can grow (Fanelli and Frenkel 1994). In the first place we have the “Smithian” problem. In order to grow in a fast and sustainable way an economy must generate a savings rate such that a high investment rate is financed with its own resources. The second problem is the “Keynesian” one. It stresses the need for efficient mechanisms to mediate between savings and investment, that is, a developed structure of markets and institutions that assures that the savings effort is effectively transformed into productive investment. The third is the “neoclassical” problem which emphasizes the fact that available resources must be efficiently allocated so as to maximize the growth rate. It is not only a question of how much investment is made but also how efficient that investment is. Lastly, there is the “Shumpeterian” problem which refers to creativity as an engine of growth as well as the role of the businessman and innovative firms (e.g. technology, organization)⁸.

The micro-macro interaction that we have developed are essential to the last three growth problems. These problems⁹ contribute to the modeling of the markets and financial institutions that mediate between savings and investment. They also determine the efficiency with which relevant economic information is processed affecting through prices, quantity and financial indicators the optimum allocation of resources. What is more, they have an important effect on an economy's capacity to innovate influencing the behavior of individual agents and on institutions that make up the national system of innovation¹⁰.

A good part of these effects can be examined from the micro mutations produced in a context of high instability. That is so because these environments reveal the working mechanisms since variables are far more affected than in less intense disequilibrium situations.

When we referred to about macro influences on the micro structure a main conclusion was that micro mutations induced by macroeconomic instability have the particularity of affecting agents' **degree of preference for flexibility**. In relation to the growth problems mentioned above, changes in this degree are crucial because they not only induce variations in size of the investment but also affect its efficiency and its capacity to innovate.

⁸ Nelson (1991 and 1992) discusses the role of the businessman vis-à-vis the firm in the innovation process and as agents of "creative destruction".

⁹ We are not interested here in dealing with how savings restrictions are affected.

¹⁰ On National Systems of Information see, for example, Nelson (1993), Mowery (1993) and Johnson and Lundvall (1988).

In a context of high preference for flexibility, the shortening of the time horizon rewards short-term investment projects over long-term ones. At the same time, expected profits from riskier projects are discounted by an excessively high rate. In addition, it can be empirically observed that adjustments in the discount rate for either longer or riskier projects not only quickly incorporate information on any rise in the systemic risk but they also tend to overshoot. In turn, the overshooting phenomenon, by affecting price and quantity signals, induces important mistakes in intertemporal resource allocation. It follows, then, that investment will be inefficient and lead to a worsening of the neoclassical problem.

In general, in a situation of high preference for flexibility, short-run investment projects with a smaller correlation with the economic cycle and low returns dispersion will be favored. In a context of increased flexibility preference, like the one observed in Latin America in the eighties, as only a reduced number of projects could fulfil the above-mentioned conditions, sharp falls in the investment/product ratio were registered in most of the region. This is not surprising. Neither should it be surprising that foreign direct investment was mainly oriented towards the purchase of privatized public services firms. These firms are classified as low risk investments, manage huge amounts of liquid resources and use established technologies.

For example, in the book of "beta" assets used in stock exchanges of developed countries to measure the economic risks of investment projects, public service businesses such as natural gas, electricity, and phone companies have the lowest betas on the list (Brealey and Myers 1986). That is, they are low risk businesses and their profits do not follow global market tendencies. Instead, businesses associated with high technology and innovation -like electronics- which would contribute most to technological learning in any country of the region have the highest betas. As a higher beta implies a greater risk, in a deeply uncertain environment characterized by overshooting in the adjustment of the discount rates, the necessary profitability to carry out these projects is so high that the probability of their being implemented is reduced to a minimum. We will comment on this below. Taking into account that foreign direct investment is one of the key vehicles for technological transference to developing countries (Dahlman 1993 and Dahlman and Nelson 1993) and the fact that privatizations opened the way for foreign investors to buy low risk businesses, it is not difficult to conclude that little can be expected from innovation as a source of growth in the present context. Structural reform in a context of instability can act against a more sophisticated productive structure. That is true if purchases of state-owned enterprises crowd out riskier and technologically more sophisticated projects.

Actually, innovation -and hence, the possibility of resolving the Shumpeterian problem - is one of the activities that was most deeply affected by the increase in preference for flexibility. An important channel through which this occurs is that in less developed countries technological learning is closely related to purchases of new production equipment. Thus, when investment falls, the process of technological change is weakened (Bradford 1994). And there is a second reason for which the innovative process tends to be paralyzed. When the "noise" associated with information on prices, finance and quantities information is loud investors will typically adopt defensive

strategies, thereby weakening their “animal spirits” and willingness to incorporate innovation into the productive process (Katz 1994). Concretely, just as the preference for flexibility tends to destroy efficiency in market transactions, worsening the neoclassical problem, it also tends to disintegrate national systems of innovation by severely affecting the behavior of agents and institutions that help to sustain them. Without a doubt this makes the shumpeterian growth restriction more severe.

Microeconomic mutations that intensify the preference for flexibility also significantly affect the structure of financial intermediation. In a situation of overall preference for flexibility in microeconomic decisions there is a generalized movement of the demand for financial assets towards short-term ones as well as toward assets denominated in foreign currencies (as in the cases of Argentina, Uruguay, Peru and Bolivia). This implies that liquid or very short-term papers become more expensive than those of longer maturity periods. The market price/face value relation of instruments denominated in domestic currency tend to depress. Liquidity becomes a very relevant attribute, like profitability, at the moment of decision. This, in turn, has a correlation with the generation of credit. The necessary conditions to gain access to long-term funds are increasingly harder. If credit is available is denominated in foreign currency. Firms with activity in the domestic market will be obliged to take higher exchange risks.

In other words, in addition to the jump in discount rates owing to the **economic risk** that we have commented on above, there is a rise in these rates due to the jump in **financial risks**. In that way, two investment projects with the **same economic risk** but showing distinct financial risks - because the financial structure to which each has access varies- may not “get the same grade” in the selection process. One project might be, then, carried out while the other might not. It is a known fact that in any economy financial risk affects the economic risk of any business. The specific difference in an economy that shows an excessive preference for flexibility is that such a difference is aggravated.

Obviously this strongly determines the capacity to grow by affecting the process by which the winners are selected. Selection becomes strongly correlated with specific **financial** characteristics of each productive branch and less related to **economic** features. After a lengthy period, in an economy with missing or too narrow long-term capitals markets, surviving firms are **not** necessarily those with greater capacity to allocate efficiently resources or to innovate in products or productive processes. They are mainly those that are found in certain production branches that are less affected by that market failure, given the type of industrial organization that characterizes them. Firms that tend to better survive in this kind of financial environment are capital intensive and whose income is predictable¹¹. These firms, generally associated with the privatized public services can raise their indebtedness coefficient without producing large jumps in their financial risk indexes. Following them are the big firms, also capital intensive, but whose operative income is less predictable. In these cases, the capability to increase the indebtedness coefficient without generating any “jumps” in their financial risk coefficient is lower. Typical examples are the firms that operate in

¹¹ To see a categorization of the financial characteristics of the funding by branch of production, see World Bank (1989).

steel, cement and petrochemistry. Lastly and most vulnerable are the small- and medium-sized firms whose operative income is strongly correlated with the global economic cycle. Such firms abound throughout the Latin American industrial sector. They are associated with the textile branches, or small producers of capital goods, etc. By affecting the natural selection process, forces that act against the solution of the neoclassical as well as the Shumpeterian problem are established.

It is also worth mentioning that the underdevelopment of the financial system also affects these problems. On the one hand, typical segmentation of less developed markets tends to harm the access of small- and medium-sized firms to credit thereby strengthening the above-mentioned tendencies in favor of big firms. On the other, the banking system plays an important role in improving resource allocation through the screening mechanisms used by credit officers who allocate loans to the private sector¹². When the credit is nonexistent screening mechanisms do not work and private investors lose an important source of independent assessment of their projects.

Actually, when productive structures resulting from a decade of instability and financial restriction in Latin America are observed, some significant features seem to be correlated with the above-mentioned ranking of the “probability of survival for financial reasons”. In fact, in the first place interaction between micro and macroeconomic phenomena that took place within the debt crisis framework resulted in economic stagnation and a depression of investment rates. At the same time, this last point, together with severe instability, proved to be a major drawback to Latin America's process of productive diversification. The possibility of producing an integrated development of the industrial sector out of the experience in import substitution was definitively aborted. Industrial sectors that best survived the crises were basically those that processed natural resources and who worked in scale production, such as the automobile industry. In some countries, this industry in particular is undergoing a restructuring process with yet unknown results. Others, a bit more sophisticated, like capital goods production, have tended to disappear as have some segments of the textile industry. The new dynamic sectors are related to the privatizations in countries such as Chile and Argentina and, to a lesser extent, Mexico (Guerrieri 1993; Katz 1993).

In conclusion, we would like to examine a relevant consequence of micro mutation. As we have already said, situation exhibiting a preference for flexibility are usually converted into a strong increase in the demand for foreign currency assets. In Latin America, this phenomenon takes the form of either a deep dollarization of the domestic financial system or “capital flight”. Both phenomena intensify the Keynesian restriction as they impide the intermediation process between savings and investment. However, the consequences of both phenomena differ. In the dollarization case, we have already seen that the main negative consequence is that it induces firms to take a higher exchange risk. But dollarization also has its positive side. It increases the loan capacity of the domestic financial system (in dollars). Thus, it does not imply that domestic savings cannot be channeled towards investment but that costs of such situation could turn more expensive for firms since run a higher exchange risk. It is precisely this element that differs dollarization from capital

¹² On the role of the financial system, see Stiglitz (1993).

flight. In this last case, increases in assets denominated in foreign currency suggest that part of domestic savings will finance investment projects in other economies. This results in highly negative consequences on the growth restriction because the mediating process between savings and investment at a domestic level is interrupted. If access to external financing is unavailable, as happened in the eighties, growth begins to be restricted by savings availability. In this way, investment projects do not find financing. And that does not occur because of low internal savings but rather because savings are mainly exported through the portfolio decisions of the agents.

Historically, the challenge imposed by the Keynesian restriction to growth has been one of the most difficult to overcome in Latin America. It can be interpreted that state-owned banks were established in the region with the purpose of fostering development. They represented an attempt to repair this initial failure of economic organization. But, in general, the functioning of these banks also underwent important failures, which became critical as macroeconomic instability increased the magnitude of distortions and increased incentives for rent-seeking activities. This seems to be clear in many Latin American countries, such as Argentina, Brazil and Chile, where both the damage of the channeling of savings and selection and efficient allocation of credit was associated with higher inflation.

Likewise, the relatively greater importance of public savings and the financing of private investment through fiscal transfers has also been the other side of the coin of the financial system's weaknesses in Latin America. But the fiscal crises and the need for stabilization have put strict limits on the traditional role played by the public sector.

As a matter of fact, the inability to develop these institutional mechanisms to replace this market failure, as seen by the lack of long-term capital markets, no more than proves that macroeconomic instability can be as harmful to the development of markets as it can be to the development of institutions.

SECTION 2: MACROECONOMIC INSTABILITY AND STRUCTURAL REFORM: LATIN AMERICA IN THE NINETIES

Section I stated, in relatively abstract terms, what we considered to be the core around which micro-macro interrelations are articulated. In this section we would like to give a (highly) stylized view of how some of the most important problems and challenges that Latin America faces today may be rationalized in the framework developed above. Our objective is basically of an analytical and exploratory nature. We have selected three issues linked to micro-macro problems as well as to the relation between structural reform and stabilization policy. The first one refers to macro imbalances the region is currently confronting and their relation to structural distortions associated with micro mutations induced by instability in the eighties. The second shows the importance of coordination failures in the explaining micro results that followed the reform of the foreign trade regime in Argentina and Brazil. Lastly, based on the Argentine, Bolivian, Brazilian and Colombian experiences, we examine the role of market failures at the financial level, its effects on stability and the efficiency of financial liberalization as a tool to creating "missing" capital markets.

Macroeconomic challenges of the nineties

Macroeconomic factors traditionally played a significant but now less intensive role explaining marked imbalances in the Latin American productive structure. This role, however, was never as clear and determinant as it was in the past decade. For this reason the eighties is an invaluable source of stylized facts for the analysis of how macroeconomic instability can induce mutations in the micro structure. In other works on Latin America we have made a detailed analysis of that period and we shall not repeat the complete analysis here¹³. However, we would like to briefly mention that the evolution of the Argentine economy constitutes the extreme example and, hence, is paradigmatic of structural effects induced by long-lasting macroeconomic instability.

The volatility of key macroeconomic variables in Argentina has been evident since the mid-seventies in all its relevant dimensions. Consequently, macro-micro transmission mechanisms in a disequilibrium -through prices, quantities and the financial position of the agents- acted with all its potential. In the first place, the volatility of price signals became evident in the very inflationary dynamics: inflation rates were high, increasing on average, and highly variable. In all cases decelerations were just temporary results of anti-inflationary policies that achieved the brief deactivation of the highly unstable dynamics as shown by the process of variation in nominal prices. In the second place, the variance of relative prices was also significant. Not only because as this feature is empirically associated with high inflation but also because key relative prices, like the exchange rate and the real wage, experienced variations of great magnitude between stages during that period. In the third place, effective demand and the level of activity showed acute cycles -

¹³ See Fanelli et. al. (1992).

accelerations and decelerations of inflation and changes in relative prices- associated with external macroeconomic and policy shocks. Lastly, on the financial level, extreme variability in real prices and quantities induced permanent changes in the liquidity conditions and the financial position of the agents. In such a context, the financial indicators of the balance sheets of the firms (stocks and flows alike) showed strong disequilibria and variations in their evolution. Particularly influential was the extent to which wealth transfers triggered by unexpected maxi-devaluations and strong unforeseen accelerations in inflation affected the stocks financial position -and hence, of solvency- of the agents (Damill and Fanelli 1989).

Long exposure to instability induced permanent mutations in micro behaviors affecting the economy's structural configuration. On the one hand, the economic structure of the early nineties is the result of accumulated decisions of real and financial allocation which the agents adopted in an environment of high uncertainty and where changes in relative prices were sudden and frequent. The paths of volatility and instability the key variables followed were transmitted to the structure through the agents' election of activities, technologies and portfolios. On the other hand, those changes in relative prices together with the sudden and frequent variations in the financial conditions and the effective demand led to a high variance in the results of the productive activities. In that way, market instability operated as a hard process of selection. So, many significant characteristics of production sectors, the labor market, the financial organization, the public sector economy, and trade and financial relations with the rest of the world in the early nineties can be explained by this exposure to a highly uncertain environment, subject to frequent and abrupt changes in the functioning of the economy's basic conditions.

The selection process contains an important stochastic component. However, the final result was systematically the same in that economic activities tended towards a very short-run horizon. In an unstable context, **preference for flexibility** became the rule of behavior in microeconomic decisions. Investment projects had to show fast returns and assure profitability. This not only meant sharp falls in the aggregate investment rate but also in the depreciation of infrastructure and the "impoverishment" of the productive base. That was due to the penalties imposed on higher risk activities, such as those associated with innovation and technological change. When firms made changes in their production organization, they implemented only marginal modifications in order to make minimal adaptatio to the changing environment, characterized, for example, by systematically positive real interest rates (Kosakoff 1993). The length of contracts of industrial firms, in the labor market and in the economy in general was reduced. They were subject to processes of permanent renegotiation as macroeconomic "news" changed the information of the agents. At the financial level the demand for assets tended to be very short term and in foreign currency. As a counterpart, while credit for consumers disappeared it became scarce, short-termed and expensive for firms. Many found themselves in serious difficulties to finance both investment and working capital. This situation was aggravated because the state, afflicted by its own crises, was in no conditions to facilitate on an institutional level alternatives to palliate the consequences of the disintegration of the market structure.

In differing intensities and forms processes were observed throughout Latin America. In the

late eighties, the debt crisis had left such deep marks on the productive and financial structure that they were both an obstacle to growth and, above all, an obstacle to the achievement of a lasting macroeconomic stability. In the eighties it became clearer than ever that stabilization policies alone were ineffective tools in a dynamically unstable economy. As we said earlier, in an economy with a tendency to generate unstable paths it is necessary to induce changes in the "structural parameters" to deactivate sources of disequilibrium and/or dynamic adjustment mechanisms that give rise to these paths. Thus, in addition to stabilization, policies to reform the economic structure began to be seen as essential elements to achieve a sustainable macroeconomic equilibrium.

The most urgent tasks that stabilization-cum-structural reform policies had to accomplish to reestablish macro equilibrium and sources of growth were: (a) to recompose the investment and savings coefficients that had fallen several percentage points; (b) to restructure the public sector that had particularly suffered the effects of the external shock and macroeconomic instability, since it was the most foreign-indebted agent in the economy; (c) to revitalize domestic capital markets in order to make an efficient intermediation possible between savings and investment with an interest rate that was compatible with macro stability and the productivity of investment projects; (d) to encourage the reallocation of domestic resources towards tradable sectors in order to give a sustainable solution to the structural disequilibrium of the current account; (e) to find new ways to revitalize sources of productivity and employment growth in an economy that, in a certain way, had "lost its way" and was trapped between the crisis of the postwar development model and the macroeconomic effects of the debt crisis.

But first, two major obstacles had to be overcome. One was, the unfavorable international scene that had blocked the necessary external capital to finance the stabilization period and the structural reform. The second was, the economic policy's new challenge to coordinate stabilization policies with structural reform.

As we have already said, the first obstacle tended to weaken entity as the change in the international situation in the nineties implied a drop in international interest rates as well as a reverse in the direction of capital flows to Latin America. In the new context most of the region witnessed a significant reduction in inflation levels, a greater equilibrium of the public sector, and increases in the level of domestic absorption (particularly investment that began to grow following the post-crisis depressed levels). Greater stability made it possible to implement reform programs in the public sector and the productive structure.

While the international situation is not undergoing any important change, greater difficulties are associated with the second kind of obstacles that we have mentioned. On the one hand, Latin American economies are still vulnerable. That is, they tend to generate situations in which coordination failures at an aggregate level would serve to abort a sustainable growth process, characterized by an increasing sophistication of the productive structure. On the other, structural reforms per-se may give rise to processes of macroeconomic instability. In closing this first subsection, we review the most important potential sources of macroeconomic vulnerability. In the following two, and based on the analysis of trade and financial openness, we exemplify the kinds of

problems resulting from structural reforms.

The stability achieved in the nineties is still fragile. Greater structural robustness is still incipient. Consequently, the macroeconomic equilibrium depends on potentially very volatile variables. According to the analytical framework developed earlier this issue can be introduced by using the key variables that define the evolution of public accounts, the external sector, and the savings investment balance.

The adjustment process and the structural reform of the public sector undertaken in the last years has induced a strong reduction in the destabilizing role of fiscal variables. Nevertheless, the public sector is far from achieving a long-run sustainable adjustment. Particular features of the process, usually based on inefficient adjustments of taxation and public expenditure show that fiscal accounts are likely to experience certain destabilizing pressure. To a great extent, stability will depend on the public sector's success at upgrading the level and the efficiency of public expenditure without generating important deficits. Fundamental reasons for this are the following: (a) In some countries privatization revenue temporarily replaced the weakness of tax revenue, but the tax system is still regressive and collection is poor; (b) The favorable situation of the capital market reduced the interest burden in the government accounts and, at the same time, brought new financing. This situation, though, will not last if the capital flows change direction; (c) A good part of the expenditure adjustment was made via the reduction in public investment. Consequently, the current level of investment is incompatible with the sustainability of the necessary structure for the development of productive activities; (d) Even if the private sector effectively takes the lead in the development process, the proliferation of market failures, which are an obstacle to productive development, will exert pressure on the public sector to supply risk capital, to establish incentives for technological innovation and to reinforce training of human resources.

The evolution of the variables in the external sector shows a greater degree of potential volatility. The recovery of economic activity levels was accompanied with a process of increasing external disequilibrium in the region as a whole. In general, the limited diversification of the productive structure has hampered recovery as a result of the increase in external competitiveness (Brazil and Chile are possible exceptions in this sense). In contrast with the orthodox approach to liberalization forecast, trade openness policies have proven to be a strong incentive for the import demand rather than a crucial factor for the increase in export competitiveness. In general terms, tendencies that consolidated were those that pushed exports towards activities more related to assembly plants or to industrial products with intense use of natural resources. Without diversification of export sources and with greater imports, current account deficits have grown and, hence, the two main factors generating external uncertainty have remained: the Latin American dependency on external savings and the evolution of the terms of trade, determined by the price evolution of products traded in markets with higher relative volatility.

Lastly, the situation related to the savings investment balance at the domestic level also shows signs suggesting that macroeconomic problems continue to be relevant. In relation to this, the most important point is that the investment rate is still low and the savings rate is even lower. With

the exception of Chile and Colombia, savings have not yet recovered their pre-debt crisis levels. This has led to a dependency on external finance to close the gap between internal savings and investment, as mentioned above.

Importance of macro issues in micro results: trade openness in Argentina and Brazil

Argentina's and Brazil's recent experiences in trade openness constitute important examples of the interaction between macroeconomic configurations and policies on the one hand and "micro" processes on the other in the nineties. Each experience shows a particular combination of trade openness policies under different macroeconomic conditions. What is more, a comparative examination of these experiences makes it possible to separate the components of the macroeconomic settings and isolate their effects. In that sense, it is most important to observe the level and variability of the real exchange rate as crucial to explaining the different results obtained from similar "micro" policies.

The opportunity to analyze the role of just the exchange rate is not very common. In comparing national experiences it is usually very difficult to isolate different factors and policies, and determine the exact causes behind the outcome. This is particularly true regarding the macroeconomic configuration and each of its components (e.g., inflation, fiscal situation, variability of relative prices). For this reason, as an alternative, they are studied in the context of more specific policies¹⁴. The comparison of the recent experiences of trade openness in Argentina and Brazil constitutes, in that respect, exceptional material. It allows us to observe how one macroeconomic variable, the real exchange rate, can influence the results of similar trade policies.

The comparison is made up of the following elements. Similar trade policies were implemented more or less simultaneously in a highly unstable economy (Brazil) and in a recently stabilized one (Argentina). Despite its relative disadvantages in macroeconomic stability, Brazil received a more favourable evaluation. **The behavior of the real exchange rate** - and the

¹⁴ The experiences of Southeast Asia, which occupy an important place in the development debate, are an example of multidetermination referred to above. The debate on such experiences has privileged research and discussion on trade, fiscal and financial policies to promote industrialization and exports. However, it also seems to be relevant that those economies experienced low inflation, that they did not undergo fiscal problems of a similar magnitude to those experienced in Latin America, and that they enjoyed a significant stability in relative prices, particularly the exchange rate. The overlapping macroeconomic conditions that favored development with more specific policies makes it difficult to estimate the relative importance of the different factors that contributed to the success of these experiences and that gives rise to multiple interpretations and emphasis.

consequent more robust evolution of the current account- **is the only element that influenced Brazil's better performance**. In that sense, the fact that the Brazilian economy experienced a high degree of instability throughout the process of trade openness strengthens the point.

The policy of trade openness was developed more or less simultaneously in both countries. In Brazil, the Collor government launched a gradual program of trade openness in its first few months. That program was maintained, despite some cracks, during the Franco administration. In the Argentine case, even though tariffs had been reduced in 1990, trade openness took the form of a shock, since the elimination of nontariff barriers somewhat coincided with the launching of the Convertibility Plan. Beyond the differences in the characteristics of the openness processes, the average tariff prevailing in Brazil towards the end of 1993 was 14%, lower than Argentina's 20% that resulted in Argentina from the weighted average of tariffs and the "statistics duty".

While the process of gradual trade openness was being developed in Brazil, between 1990 and the last quarter of 1992 the domestic demand was depressed, the level of industrial activity had a recessive tendency and the observed increases in exports could be explained as transitory effects of the recession. Processes of industrial restructuring and reorganization that implied increases in productivity and reduction in employment were also being developed. However, these effects were not easily perceived because they overlapped with the effects of the contraction in the domestic demand. Since 1993, nonetheless, the Brazilian economy renewed expansion. The recovery actually began in the last quarter of 1992¹⁵. Particularly interesting is the dynamic shown by both the automobile industry, which continues to break production records, and by the electronics industry. Industrial growth was accompanied with a significant increase in productivity. On the global demand side, the expansion can partly be attributed to an increase in the internal demand - particularly for durable consumer goods - and partly to an **increase in exports**. Gross fixed investment increased from the low levels it had registered in previous years. The strong increase in demand for durable consumer goods is associated with the increase in real remuneration, with the reduction in interest rates and with the **reduction in the relative prices of these kinds of industrial goods**. The reduction in the relative prices is associated with the process of trade openness.

And finally, exports grew by 10% in 1993, owing to increased sales to Latin America, China and the United States. That year Brazil exported almost 39 billion dollars, against 36 billion the year before. Twenty-four percent of that total originates in primary products, 14% in semimanufactured goods and 60% in manufactured. Imports grew at a higher rate than exports (25%) at the same period. They were driven by the tariff reduction and the expansion in the domestic demand. The country imported around 26 billion dollars. The trade surplus in 1993 registered approximately 13 billion dollars in 1993.

In the Argentine case, the reduction in tariffs and the vigorous expansion in the domestic

¹⁵ According to preliminary estimates of the 1993 national accounts, the product grew by 4.9% while the industrial product grew by 8.8%. Other estimates show an industrial growth of 10%, led by the production of durable consumption goods and capital goods.

demand for durable consumer goods occurred more or less simultaneously, even if restructuring processes had already begun, mainly induced by the exchange rate appreciation in 1990. The expansion in the Argentine economy initiated in 1991, after the launching of the Convertibility Plan. In contrast with the 1990's very depressed levels of activity and investment, the 1990-1993 period witnessed a 25% increase in the product, a 31% in consumption and a 78% in investment. In that same period industrial production increased by 18%, even if this rate is the average of the diverse behavior of industries. The automobile industry led the way, with historical records in production and sales. As in Brazil, important increases in productivity were registered.

The stylized features of the evolution of the external sector in that period show a rather slow growth in exports and a strong expansion in imports, particularly between 1991 and 1992. Exports amounted to 12.3 billion dollars in 1990 and 13 billion in 1993. Meanwhile imports that had totaled 4.2 billion in 1990 climbed to 16.8 billion in 1993. In that way, the positive trade surplus of 1990 and 1991 (8.3 and 3.7 billion dollars, respectively) was transformed into a deficit of 3.7 billion in 1993.

Despite some obvious differences between the recent economic evolutions of Argentina and Brazil, the similarity between some stylized features is striking. First, the demand for durable consumer goods played an important role in the expansion. Second, a fall in the relative price of these goods can be verified, constituting one explanation for the growth in demand. Even though the dynamics of the real wages differ, the fall in the relative price of industrial goods in both cases implied a rise in the purchasing power regarding those goods. Third, the ascending industrial production concurred with a strong increase in productivity. Fourth, there was an acceleration in imports. Fifth, the fall in industrial relative prices and the increment in imports was induced by a process of trade openness. In both cases, the growing importance of competitive imports acted as a restraint on the rise in domestic prices of locally produced goods. In that way, the tariffs reduction on importable goods had the expected effect on relative prices.

We should also mention that the reduction in the relative prices of industrial consumer goods, the significant rise in productivity and the drop or the stagnation in industrial employment were produced through an important reorganization and restructuring of the industrial production, together with a surge in industrial imports.

The crucial difference between the two processes was the behavior of exports. While Argentine exports were practically static from 1990, Brazil's exports increased more than the product during the expansion. In fact, exports constitute one of the main factors of its evolution. Note that, unlike the Argentine case, the stylized features of the Brazilian trade openness faithfully reproduce the conventional predictions regarding the results of such a policy: an increase in productivity and the simultaneous expansion of both sides of the trade balance, resulting from greater specialization and the increment in competitiveness.

Beyond the similarities and differences in the stylized features at an aggregate level, several differences in the implementation of the trade openness can also be pointed out. In the first place, the

Brazilian program was gradual¹⁶ and preannounced. In Argentina, instead, it had the characteristics of a shock. Secondly, in Brazil it had characteristics that some Brazilian critics called "corporativist": restructuration contracts with negotiated timing with particular industries were established between the government, businessmen and trade unions, helping to reduce uncertainty and the reallocation of resources. These agreements, though exceptional, were not completely absent in the Argentine case -the most important one being the special regime for the automobile industry¹⁷. In the same way, from 1991, the trade policy in Argentina experienced frequent ad hoc changes. The precarious nature of these changes makes any permanent effects on resources allocation doubtful. The most marked change (and the most far reaching) is the 7-point rise in "statistics duty" on imports, which had a greater relative effect on imports from MERCOSUR.

Together with discrepancies in the development of trade openness, we believe that the greatest difference between the two openness experiences is of a macroeconomic nature and found in the level and evolution of the exchange rate during the process. In Brazil, the exchange-rate policy tended to sustain the real price of the dollar at a constant level from early 1991, equivalent to approximately 80% of the average value of the '80s. In contrast, a significant exchange appreciation already existed in Argentina -in relation to the 80's average- when the nominal price of the dollar was fixed in March 1991 and the appreciation continued in the following years.

When the effects of the exchange rate and trade barrier reduction are taken together it is possible to foresee different effects on relative prices and incentives. In both cases the reduction of barriers induces a fall in the relative price of imported and importable goods. In the Brazilian case, the level and the stability of the exchange rate tended to sustain the relative price of exported and exportable goods, whose competitiveness may yet improve. In the Argentine case, the incidence of a low exchange rate and the tendency towards appreciation combined with the effect of the reduction of barriers on the prices of imported and importable goods, but the lag in the exchange rate **besides** served to depress the relative prices of exported and exportable goods¹⁸.

The relevant role of the exchange rate in the comparison of trade tendencies in the Argentine and Brazilian economies is further supported on observing bilateral trade in the MERCOSUR framework. Trade volume has systematically grown since the late eighties, while the result of the balance shows a clear correlation with the evolution of the bilateral exchange rate explained by the differing evolution of the real exchange rate.

¹⁶ "Gradual" is used in contrast with the Argentine case. The period associated with the concept of gradual has been shortening over time. A three-year program, like the Brazilian one, would not have qualified as gradual in the mid-seventies when, for example, the Chilean trade openness program was considered to be fast.

¹⁷ It is worth mentioning that this industrial sector led the Argentine expansion and its production explains a major part of the dynamics of the industrial activity since 1991.

¹⁸ In spite of that, there could be a positive effect on export competitiveness in import-intense industries with low nontradable costs. It is clear that the larger the nontradable costs are, the greater will the negative effect on export competitiveness be.

In addition to repercussions on resource allocation, the real exchange rate during the process of trade openness plays a central role owing to its effects on credibility and, hence, on the expectations of the agents. The cases of Argentina and Brazil are a clear example of this. Argentina's strong exchange appreciation and the resulting large deficits in the trade account, carry uncertainty on the sustainability of the trade policy. These credibility deficiencies operate to reduce incentives for resource reallocation. Instead, the solid results of the Brazilian external sector give extra-credibility to the sustainability of the trade policy and, in consequence, foster its allocative effects. When the agents anticipate that structural reform policies are not sustainable because they can give rise to strong macroeconomic imbalances in the future, it is very probable that the conservative microeconomic behavior, referred to above, will appear. Then, if the policy is unsustainable, it goes against the principle of economic rationality to assume that agents restructure firms in order to adapt.

The arguments we have developed in this subsection do not intend, obviously, to be an exhaustive analysis of the experiences of trade openness, but only to show some important micro-macro interaction that can appear during processes of structural change. In this sense, the conclusions derived from the comparison are relative given the brief development of these experiences. It should also be mentioned that the Brazilian performance cannot be exclusively attributed to the cluster of factors of the nineties. Brazil has a long history of industry and industrial exports and that was the base on which the recent trade policy operated. However, despite its preliminary character and subject to the due consideration of the initial conditions, the analyzed evidence tends to support the crucial role played of the level and tendency of the exchange rate in determining the results of trade openness policies. The cases illustrate the way in which the exchange appreciation - a general characteristic of the macroeconomic configuration of the nineties - also affects the results of the trade openness policies, which were originally intended to increase the competitiveness of the economies.

The importance of micro issues: failures of the financial market, liberalization and stability

The practically inexistence of a long-run capital market and the fragility and reduced size of short-run financial markets are typical market failures in Latin America. This factor has most influenced the generation of coordination failures and the reduction in the capacity to absorb the effects of external shocks. These coordination failures determine the inexistence or the weakness of compensatory financing sources in periods of transient falls in the flow of income of consumers, firms and government and, consequently, lead to a strengthening of the liquidity squeeze on expenditure. Economies restricted by liquidity react in a more volatile way in the face of real and monetary shocks and, hence, are more prone to generate coordination failures.

However, short-termism and the fragility of the financial structure have not only significantly influenced the short-run macroeconomic dynamics but also represented an important restriction on growth. In the region, financial systems do not play a major role in either the channeling of savings into investment or in the risk diversification through the capital market. Its

role as a mechanism of project selection is also unimportant. In such a context, the main factor in the competitive selection of firms is not so much the entrepreneurial Shumpeterian spirit but rather the ability to survive in an economy restricted by liquidity, without long-run financing and with few possibilities of risk diversification through the stock market. It is not necessarily the liquid firms in low risk businesses and which are in a condition to finance themselves that can contribute most to growth. For example, in processes of manager selection, financial ability can be more important than the ability to innovate in the productive process.

Literature stresses two fundamental causes for weakness in the financial markets - economic instability and financial repression. It is understood that a successful stabilization policy together with the liberalization of the financial markets is a sufficient condition for the achievement of an important level of financial deepening.

There is no doubt about the importance of the macroeconomic instability factor in explaining the most serious distortions observed in the financial markets. It is a typical example of negative feedback between macroeconomic instability and market failures. The inexistence of long-run capital markets makes the economy more unstable and the greater instability tends to diminish and eliminate important segments of the capital market.

Nowadays, the best example of this is Brazil. The most direct cause of the sharpening of distortions and failures of the financial markets there in the nineties is the persistence and sharpening of instability. More than a decade of high inflation and the most recent experience of "megainflation" (monthly rates above 20% associated with uncertainty regarding unexpected changes in rules) have intense micro mutations in a system that was relatively one of the most developed in Latin America¹⁹. At present, the system is reduced to the mere function of administering liquidity. It specializes in the supply of domestic assets accepted by the public as substitutes for money, at the cost of practically abandoning its functions of basic financial intermediation: credit to the nonfinancial private sector was reduced from around 35% of GNP at the end of the seventies to 12% of the GNP in 1992²⁰. Also, significant microeconomic mutations were produced in productive firms. The incentive to reduce the burden of the inflationary tax led to the concentration of resources in the cash management and the hyperdevelopment of administering liquidity with a deterioration in the productive activities. In this way there was a so-called "financialization" of all productive activities (Dias Carneiro et. al. 1994). Actually, this is a typical feature of megainflationary situations. For example, a study of the balances of the largest Argentine industrial firms during the high inflation period of the eighties shows that they developed significant activities of financial intermediation and that explains an important proportion of their results (Damill and Fanelli 1989).

¹⁹ An analysis of the Brazilian financial system can be found in Dias Carneiro et. al. (1994).

²⁰ The most striking characteristic of this evolution is the relation between the financial system and the government in order to intermediate the latter's liabilities and supply index-tied liquid assets. The process led to a concentration of financial activities in daily transactions of all kind of public papers, which can be used as bank reserves.

The experience of the region reveals that a successful stabilization policy eliminates most of the perverse characteristics of this financialization process, such as the extreme short-termism and the tendency toward a systematic reduction in the financial system. However, the recent Latin American experience also shows that the market failures behind the absence of a long-term capital market and the very low coefficients of monetization do not disappear just because macroeconomic stability has been reestablished. Rather, they seem to be closely related to the characteristics of the micro structure. In countries where stability has been achieved the financialization phenomenon has tended to fade but important levels of financial deepening have not yet been achieved. Besides, it must be kept in mind that the region did not have developed long-term markets even in its more stable periods prior to the debt crisis.

Actually, Colombia is a good example of this last point because it was not so seriously affected by the debt crisis as the rest of the region. In spite of that, its degree of financial deepening is still low, the financial system is poorly developed and segmented and plays a limited role in financing public and private investment²¹. These characteristics cannot be attributed to the effects of a lengthy instability as in other countries or to a profound financial crisis like those experienced in the Southern Cone. In the late seventies the Colombian financial policy did not embark the country on a series of experiments in openness and liberalization and did not have to confront later a macroeconomic instability of a magnitude like that of the Southern Cone. Although the country also suffered the effects of the debt crisis, its external shock there was smaller. In fact, the economic policy could administer the fiscal crisis without completely disorganizing the financial system and inflation did not exceed an annual rate of 30%. Nevertheless, the financial system entered a crisis in 1982 and the state had to come to its rescue. However, the main solvency problems had already been overcome by 1985 without producing large macroeconomic repercussions. In Colombia, the degree of financial deepening and the characteristics of the financial system are similar to those of other Latin American economies when they experimented inflation rates of more or less the same level as recent Colombian ones, before the experiments of reform and the high instability of the eighties.

It seems clear, then, that specific structural policies to foster the level of financial deepening are necessary, in addition to stabilization policies. Is financial liberalization the answer? Is she capable of overcoming the market failures and achieving a more complete market structure? The Latin American experience does not seem to be moving in that direction. A short review of the cases of Bolivia and Argentina - which stabilized their economies and completely liberalized their financial systems - can be extremely useful.

After undergoing a period of high instability, Bolivia managed to stabilize its economy from 1985. During the post-stabilization period the financial system became completely free²². The extension of this period of stability makes this case particularly interesting, because enough time has

²¹ An analysis of the Colombian financial system and the present reforms can be seen in Lora, Zuleta and Zuluaga (1994).

²² The exposition of the Bolivian case is based on Damill, Fanelli and Frenkel (1992).

passed to consider the observed tendencies permanent. In Bolivia, the hyperinflationary period had taken the demonetization and the contraction in the financial intermediation to extreme levels²³. In the more stable period that followed the success of the stabilization plan a process of remonetization and deepening of the financial intermediation was observed. However, in spite of an eight-year expansive tendency of the stocks of financial assets the degree of deepening was still very low. In 1992, M3 represented only 25% of GNP.

There are three micro characteristics of this process that should be mentioned as they reflect the kind of structural imbalance that give rise to observed market failures that were not overcome. In the first place, the short-termism and dollarization have persisted. The demand for currency and bank deposits which showed an initial rise satisfying the minimum cash needs of families and firms later stagnated. The major part of the expansion in the demand for assets is explained by the growth in the dollar denominated segment in local banks, which was the only one to show tendency to grow²⁴. In this way, the expansion of the financial savings is exclusively channeled into dollarized assets. These assets show the additional characteristic of being relatively short-run placements.

The persistence of short-termism and dollarization, in turn, determine that the productive activities with largest potential for growth are not necessarily most favored by the expansion in credit. Short-termism implies that the risk of maturity mismatch will keep banks from financing productive projects of long-term maturity. The deepening of the dollarization of the system in a context in which the major proportion of credit is assigned to non-tradable activities with domestic currency income determines the existence of a systemic exchange risk. If we add the cost of credit due to the maturity mismatch risk to the extra cost owing to the exchange risk, financing will continue to be excessively expensive. Only few projects will be able to pass the profitability test at the existing discount rate. Bolivia's limited growth rate and the reduced post-stabilization investment/product ratio constitute the best evidence in favor of this hypothesis.

The second characteristic is that the increased deepening did not imply an important increase in the savings rate of private agents. In fact, it might have even acted towards its reduction. The expansion of credit has been mainly channeled to finance consumption expenditure²⁵.

Lastly, it should be pointed out that the post-stabilization financial development did not imply changes in the oligopolistic and segmented features of the financial system, which limits credit access to small firms and producers which are not linked to banks (Morales 1991).

²³ At the beginning of the stability period in 1986 M1 represented less than 5% of GNP and the total assets deposited in the banking system was slightly more than 10% of GNP.

²⁴ Despite the increase in the demand for domestic money after the stabilization, M1 later stagnated at around 6% of GNP. A similar process occurred in the demand for local currency-denominated deposits, which only represent around 2% of GNP.

²⁵ At an aggregate level, the Bolivian economy showed an increase in the investment rate, but it was the external and the public savings that mainly contributed to its financing. Although the private savings rate appeared to grow it only represented approximately 4% of GNP, slightly more than half of its 1980's rate, prior to the debt crisis.

Unlike Bolivia, Argentina only managed to stabilize its economy in 1991. As a consequence, macro instability is still much more alive in the microeconomic "memory". Hence, defensive behavior may still be playing an important role, together with structural reasons, in explaining the absence of development of the capital market. Prior to the implementation of the Convertibility Plan, Argentina's financial structure was even worse than the current Brazilian one. It had experienced a financial crisis in the early eighties, a period of high inflation that ended in two hyperinflationary episodes, and a mass intervention in private contracts that meant the expropriation of a part of the financial wealth of individuals oriented to stop the second hyperinflation in 1990 (the Bonex Plan)²⁶. After those episodes, in 1990, M1 and M2 represented only 1.8% and 4% of GNP, respectively. Since April 1991, in the whole period of consolidation of stability, the financial system has operated in a completely free way, as has the capital account of the balance of payments. There was a swift recovery of monetization and the increase in intermediation. Between 1991 and 1993, M1 grew 540% and M2 560%, and credit to the private sector expanded concomitantly. However, in 1993 the relative size of the stock of assets denominated in domestic currency -measured by the relation M2/GNP- was 11%, approximately half of the equivalent indicator of 1980.

The evolution of the Argentine financial structure during these periods shows some important and surprising similarities with the Bolivian case. In the first place, like Bolivia, there was a sharp deepening of dollarization. The dollar denominated segment in the local bank system grew faster than that denominated in domestic currency, particularly in 1993, when the growth of the latter tended to slow down. In late 1993, the major part of savings and term deposits and credit was denominated in dollars²⁷. Like the Bolivian case, the strong proportion of dollar denominated credit to finance consumption expenditure and non tradable activities led to a systemic exchange risk. In the same way, the maturity of financial placements, with which the financial risk of maturity mismatch fosters the exchange risk with the already commented consequences on investment²⁸. There are two additional features that the Argentine experience shares with its Bolivian counterpart. The first one is the high concentration of credit in the "best" debtors (low risk big enterprises) and the persistence of the segmentation of the market. This has limited the small and medium firms' access to credit. The second one is that private savings did not recover as a consequence of greater financial freedom. In fact, the global savings rate diminished²⁹.

²⁶ The Argentine case is based on Rozenwurcel and Fernandez (1994) and Fanelli and Frenkel (1994).

²⁷ The so-called "Argendollar" deposits represented 7% of GNP in 1993. If we add this segment to M2 for a global indicator of the degree of deepening in local currency and dollars, we obtain 18.2% of GNP, which is still three points behind the pre-crisis deepening indicator.

²⁸ The inherent fragility of the dollar-denominated segment should be taken together with the risk of insolvency resulting from the virtual inexistence of deposit insurance for domestic currency-denominated deposits and the very limited assistance that the Central Bank could provide. The Convertibility Law and the new Central Bank Chart strongly limits the Central Bank from assisting Banks.

²⁹ In spite of the fact that the national savings rate in 1990 was among the lowest values of the crisis period, it was reduced two additional points between 1990 and 1993. In this period there was also an increase in public savings, so the fall of private

A feature of the Argentine case that is worth emphasizing is that the domestic financial market was liberalized as well as capital movements to/from abroad. In fact, remonetization and the expansion of intermediation which began in 1991 mainly originated in capital incomes³⁰. This fact likens the stylized features of the recent financial evolution of Argentina to those observed in Argentina, Chile and Uruguay in the late seventies, during the so-called Southern Cone liberalization experiences (McKinnon 1991; Fanelli and Frenkel 1993)³¹. The core of this similarity lies in the strong appreciation of the real exchange rate induced by the simultaneous liberalization of the financial system and foreign capital flows. In this way, the attempt to attack financial market failures via liberalization is translated into wrong signals for the allocation of productive resources. The credit expansion ends up favoring the expansion of consumption and not investment, and benefitting nontradable rather than tradable goods. In such a context, the stylized fact is that unsustainable current-account deficits are generated that lead to the failure of the liberalization policy for reasons of macroeconomic disequilibrium. In fact, arguments against the use of financial liberalization as a tool to attack market failures in the financial field are based on the generation of this kind of dynamics. The results, in terms of external disequilibrium, tend to reactivate the role of instability as a restraint on financial development. In particular, uncertainty with respect to macroeconomic sustainability is directly transferred to the financial system and the existence of this risk prevents the system from playing a significant role in the intermediation between savings and investment.

In sum, we believe that the examples of Bolivia and Argentina suffice to illustrate the survival of traditional failures and the emergence of new obstacles to the efficient intermediation in conditions of stability and under the new rules of the game resulting from deep structural reforms. On the one hand, the microeconomic factors that have to do with preferences in portfolio allocation do not change (the preference for short-term and dollarized assets remains) and, on the other, the macroeconomic evolution -via unsustainable deficits in the balance of payments- tends to increase uncertainty, which is the main stumbling block to the extension of terms of assets and liabilities in

savings rate was even greater, approximately 5% of GNP.

³⁰ For a detailed analysis of the relation between capital income and transformations in the financial system, see Fanelli and Machinea (1994).

³¹ From a macroeconomic point of view, Argentina is more similar to early eighties Chile because its financial boom was produced in a context of fiscal equilibrium. In addition to the similarities, there are also some new elements, like the different character of the capital flows and the current dollarization of the financial system. This could result in differences in the behavioral dynamics. The fact that privatization and private placement were important components of the capital flows in the nineties rather than commercial bank lending could imply less fragility than in the past. Instead, if it is true that the dollarization of the system reduces the banks' exchange risk, it is also true that it introduces a new systemic risk. Even if it is difficult to evaluate the joint effects of these differences, they do not seem to be important enough to differentiate substantially the dynamic of the model from the Southern Cone experiences. On the other hand, the nonintervention rules of current legislation define a potentially more fragile institutional context -even if they are ultimately ignored in the face of a threat of a generalised crisis, as happened in Chile and Uruguay in the past. Independently of similarities and differences, what is clear is that the Southern Cone experiences offer valuable empirical material to infer the adjustment dynamics of the financial system in the event of negative shocks or a contractive tendency generated by the external sector.

the intermediation process.

A reflection on economic policy

Throughout this paper we have attempted to systematize the relations between the microeconomic structure, macroeconomic stability and growth. In general, we have emphasized how these relations have restricted growth in Latin America (for example, when we analyzed the consequences of an increased preference for flexibility). We did not intend to give a pessimistic view of the region's potential capacity to grow and, actually, the objective with which we developed the framework of this analysis was to contribute to a better comprehension of how to design reasonable policies for a sustainable growth. In fact, the same framework might be used to show how an economy that achieves a reasonable degree of stability while resuming growth and reactivating sources of innovation could generate virtuous circles. Greater stability would help to deactivate the preference for flexibility and the development of the productive structure would result in richer and more efficient markets and institutions.

The central message of this paper is that there is no growth without stability but economies that do not grow will have a poor economic structure - in terms of the wealth of their markets, institutions and productive capacities- and will find it very difficult to achieve a lasting stability. The main challenge to economic policy is, then, how to start off on a growth-cum-stability path and stay on it long enough for some virtuous circles to begin working.

There are two other points that we would like to add. First, missing markets are not likely to appear by simply signing a "decree of deregulation and liberalization" resolving in this way existing market failures and the tendency to generate coordination failures. On the contrary, from our analysis we can see that a "complete" structure of markets is not so much the cause as the consequence of development. There is a positive correlation between development of the productive structure and markets and economy-related institutions. Market structures in developed economies have less severe failures. Many of the important economies that achieved development in the last few decades are only now fighting the liberalization and deregulation battle after decades of applying both institutional and market mechanisms to encourage growth³². It could be said that a market structure that works relatively well is the cherry on top. But another thing is to prepare the dessert for which there seems to be no clear or general recipe. Case-studies suggest that the efficient functioning of institutions and public policies are just as important as the improvement in the structure of markets. In fact, it is for this reason that gross interventionist sins as well as vain liberalization attempts are equally responsible for failures.

The second point is that macroeconomic stability is too important for growth to risk losing it through daring attempts at mass intervention in markets or through the premature implementation

³² Lim (1993) makes a fascinating analysis of how market incentives can be intelligently "helped" using institutional mechanisms in the process of technological change.

of liberalization policies. Having said this, it is also necessary to bear in mind that problems of market failures, of coordination and those related with fostering incentives for the development of the system of innovation need specific economic policies to resolve them. Finding the equilibrium between the roles of the state, institutions, and markets in the economic process is not an easy task. But nobody ever said that development was easy.

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