

MACROECONOMIC COORDINATION IN THE REGION

Macroeconomic coordination entails, by definition, a collective decision-making mechanism that reflects the interests of the parties involved. Imprecise terminology is often used to describe the different degrees of cooperation between countries. The terms policy convergence, coordination and harmonization are often used interchangeably, even though the concepts imply different levels of economic cooperation. According to Steinherr (1984), convergence policy is defined as a reduction of divergences between national objectives. Coordination requires national policies to be applied based on the acknowledgement of the policies and objectives of other countries and the effects of decisions by each country on the others. Harmonization is a process of steering towards a more uniform economic structure among countries that may lead to a unification of policies; that would occur, for example, when a single authority is responsible for bank supervision and regulation, or when monetary policy is unified under an independent central bank.

As the distinctions between these concepts are quite subtle, it is difficult to reach a consensus on their use that reflects different levels of cooperation. Consistent with the common practice, in this chapter, we shall use the concepts of cooperation and coordination interchangeably to refer to different levels of agreement in the macroeconomic arena, except when a precise distinction is required.

REASONS FOR COORDINATION

Macroeconomic coordination among the member countries of a trade bloc takes on a special meaning when policy decisions have a substantial effect on the trading partners. In this case, if the countries fail to consider the spillovers on other economies of making such decisions, the result can be less favorable to the parties as a whole than if a scheme of cooperative decisions were applied. In other words, cooperation may increase the well being of the overall group to the extent that externalities are present. Demand for coordination, then, is a direct function of the importance of these externalities to each country involved. This, in turn, depends on a set of factors that we shall analyze below.

Degree of Interdependence

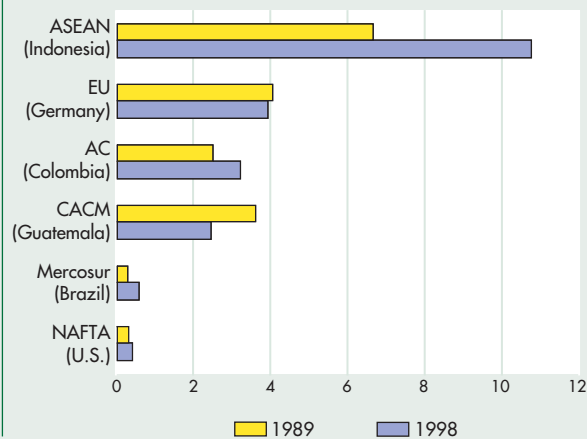
A high level of interdependence implies that each country in the bloc is affected by the events in the other countries. By contrast, if Country A is dependent on the situation in Country B, but not vice versa, interdependence does not exist, reducing the possibilities for macroeconomic cooperation (Box 7.1).

In modifying import demand and export supply, domestic macroeconomic changes will affect the key trading partners through the impact of positive and negative cycles. There are two indicators used to measure trade interdependence between the members of a bloc: the share of regional trade in domestic product for each country, and the share of intra-regional trade

Box 7.1 Dependence and Interdependence

The figures below illustrate the level of dependence or interdependence in different regional agreements based on two indicators: intensity of reciprocal trade between the largest partner in each agreement and the rest of the bloc; and distribution of regional GDP. Both indicators show a lower level of dependence of the largest member, in the case of NAFTA and Mercosur, while interdependence is substantially greater under the other agreements.

Figure 1 Degree of Interdependence
(In percent)



Note: The indicator is estimated with the following formula:

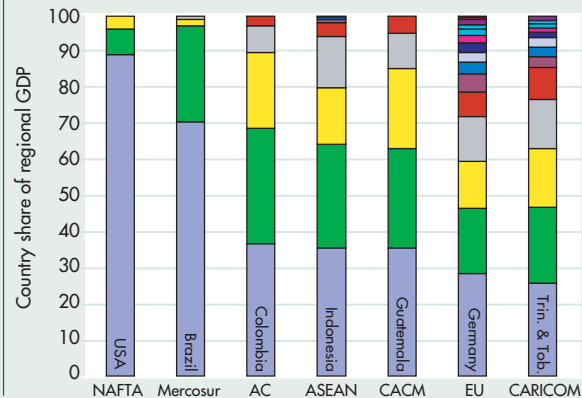
$$\Psi_{int} = \left\{ \frac{X_{jB} / X_{TOT}}{\left(\sum_{n \neq i} X_{ij} / \sum_{n \neq i} X_{TOT} \right)} \right\}$$

which shows the ratio between the exports of the larger country j to the regional integration agreement B , and the sum of the exports of the rest of the country members i to the larger country j . In both cases, exports are normalized by the respective total exports. In parentheses, the left axis shows the larger country in terms of its share to regional GDP.

Source: IDB calculations based on IMF (2001a) and World Bank (2001).

There clearly may be other economic or political reasons beyond trade interdependence for coordination among members of an agreement. If trade dependence in the bloc varies substantially from country to country, however, it is reasonable to consider that there might be fewer incentives for the largest country to coordinate.

Figure 2 Regional GDP Distribution
(In percent)



Note: The distribution measures each country's GDP share of the 1990 average regional GDP.

Source: IDB calculations based on World Bank (2001).

in total trade. The impact of intra-regional trade on product reflects both the weight of intra-regional trade and the openness of the economy. Levels of intra-regional trade may be high as compared with total trade while, at the same time, insignificant in terms of product due to the fact that economies are relatively closed.¹

What are the characteristics of Latin America and the Caribbean from this standpoint? The indicators

¹ A high level of intra-regional trade, however, makes a country more vulnerable to the situation in the region, particularly when such trade entails a substantial component of "regional goods," i.e., those not easily exported to the rest of the world (see Chapter 8).

Figure 7.1a Degree of Interdependence by Regional Bloc for Intra-regional Exports
(Percent of total exports)

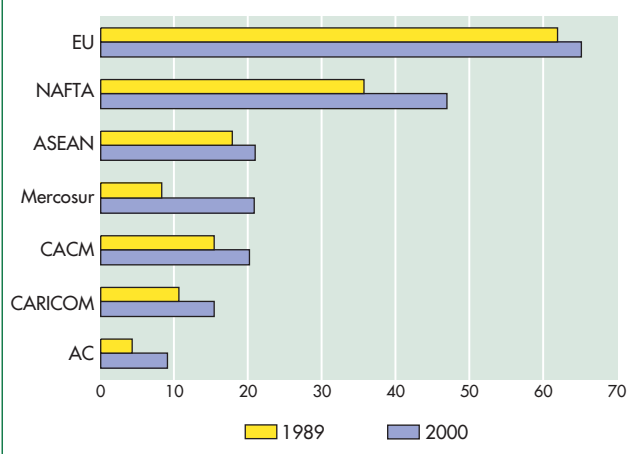
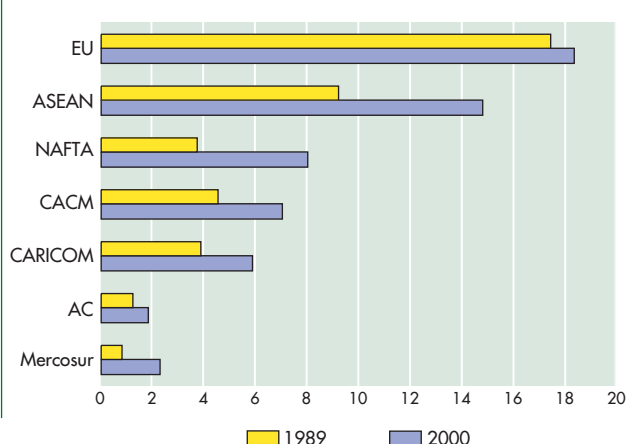


Figure 7.1b Degree of Interdependence by Regional Bloc for Intra-regional Exports
(Percent of regional GDP)



Note: For CARICOM, the latest available data are for 1997.
Source: IDB calculations based on IMF (2001a) and World Bank (2001).

show that interdependence in regional integration agreements (RIA) has increased substantially during the past decade. Nonetheless, the interrelationships within the different blocs are still less important than in other regions. These findings are evident when we analyze intra-regional trade with respect to total trade, and particularly intra-regional trade in terms of gross domestic product (Figures 7.1a and 7.1b). The results are primarily attributable to the openness of the countries, although the fact that regional agreements in Latin America represent a smaller relative share of world product also plays an important role.² Accord-

ingly, the low level of interdependence in Mercosur and the Andean Community (AC) is attributable primarily to the relative closure of the economies involved, while levels in the Central American Common Market (CACM) and the Caribbean Community (CARICOM) are higher, reflecting the intensity of intra-regional trade, and the fact that they are the most open blocs in the region. In any case, these values contrast with the greater importance of intra-regional trade in terms of product in Europe during the late 1980s, i.e., before the decision was made to create a monetary union, or the Association of Southeast Asian Nations (ASEAN) of today. The greater importance of intra-regional trade in the case of NAFTA is basically explained by the fact that it represents approximately 30 percent of GDP for Canada and Mexico.

While the topic of interdependence has been discussed generally from the standpoint of trade relations, the intense globalization of financial markets during recent years has led to greater financial interdependence and, through different channels, has generated contagion effects in critical situations.³ Empirical studies have shown the existence of strong interconnections between financial markets in emerging countries that are clearly influenced by geographic proximity, trade links and economic policy similarities.⁴

Does membership in a given trade bloc increase financial contagion beyond the indirect impact through trade? There is evidence that a country's currency crises are more closely associated with

² The share of Mercosur, AC, CACM and CARICOM in world output is 3.3 percent, 0.8 percent, 0.15 percent and 0.07 percent, respectively, while the European Union accounts for 29 percent. The contrast with ASEAN, which accounts for a lower share of world product than Mercosur, demonstrates that an economy's openness, in addition to its size, is a fundamental factor in increasing regional interdependence.

³ One exception is the absence of contagion in the final phases of the Argentine crisis. This could be attributed to the "absence of surprise" as events unfolded, which permitted investors to prepare themselves by reallocating their assets gradually. During the preceding months, however, there was an impact on other countries in the region, and during 2002 the crisis severely affected Uruguay. Although there are different definitions of contagion, references here are to a situation in which a crisis in another country increases the probability of crisis in the home country, after controlling for the economic fundamentals (Eichengreen, Rose and Wyplosz, 1996).

⁴ See De Gregorio and Valdés (2001); Eichengreen, Hale and Mody (2000); Dornbusch, Park and Claessens (2000); Forbes and Rigobon (2000); Froot, O'Connell and Seasholes (2001); and Glick and Rose (1999).

Box 7.2 How Can Volatility Be Measured?

The standard deviation of a series was used to estimate its level of dispersion (or volatility). For individual countries, the indicator is immediate and intuitive. Where regions are concerned, however, an aggregate indicator must be constructed. In this chapter, we chose two complementary methods for each regional integration agreement, calculated in most cases on the basis of rates of variation in each series: a) the simple average

of the volatility of each country—a measurement that focuses on the volatility of member countries independent of their size; and b) the volatility (standard deviation) of the “regional” variations, calculated on the basis of the weighted average rates of variation in absolute terms for the series of each country. The average GDP for the decade of the 1990s in constant 1995 dollars was used for the weightings.

exchange rate misalignments vis-à-vis the partners in a trade agreement than with the rest of the world.⁵ When we measure contagion through the impact of a change in a country's capital flows on the other partners in an agreement, however, the evidence is more ambiguous.⁶ These results are consistent with further empirical evidence that shows that interdependence in financial markets is manifested to a greater extent in price variations than in levels of capital flows.⁷

Political Support for the Degree of Integration

Greater demand for coordination is a function of the present level of interdependence, as well as the decision of governments to deepen the process of integration—that is, of future interdependence. For example, when the objective of the integration process is to achieve a monetary union, incentives to cooperate at the macroeconomic level increase substantially, as it is difficult to move forward in creating a single currency if inflation rates differ substantially between the countries, or if the fiscal deficit generates substantial growth in public debt. Integration processes in the region, particularly in recent years, have been characterized by the goal of going beyond free trade areas. This political willingness, however, is not always reflected in specific decisions in support of this objective. As macroeconomic cooperation has its costs, which we shall discuss below, in order to move forward governments must prove tangibly that the national agenda is giving way to the regional one.⁸

Reducing Volatility in the Bloc

Extent of volatility. By increasing uncertainty, macroeconomic volatility affects the rate of economic growth (see Box 7.2).⁹ In recent decades, Latin American countries have evidenced a high degree of volatility, measured by the inflation rate and its variability, variations in the real exchange rate, and in part as a result of these factors, sharp variations in the growth rate. This volatility declined during the past decade, substantially as a result of more responsible fiscal and monetary policies that reduced the level and variability of the inflation rate, inducing a reduction in real exchange rate volatility.¹⁰ In addition, while the rate of growth of GDP increased, its variability declined significantly. Still, volatility continues to be high, particu-

⁵ Fernández-Arias, Panizza and Stein (2002). See Chapter 8 for a detailed discussion.

⁶ Hernández and Mellado (2002) find no significant contagion, other than that generated by trade, from changes in capital flows from one country to the others in the bloc, with the exception of portfolio investment in some trade blocs.

⁷ See Eichengreen, Hale and Mody (2000) and Froot, O'Connell and Seasholes (2001). Changes in the value of shares, fluctuations in the cost of indebtedness in domestic and international markets, or changes in the exchange rate could affect growth to an extent equal to or greater than changes in capital flows.

⁸ This is demonstrated by adoption of a common external tariff, elimination of non-tariff barriers to intra-regional trade, and gradual progress toward establishment of supranational institutions.

⁹ IDB (1995) analyzes the negative impact of volatility on growth.

¹⁰ Except in CARICOM countries, where both inflation and volatility remained at similar low levels throughout the period.

Table 7.1 Macroeconomic Volatility

	Standard deviation ²							
	Annual rate of Inflation ¹		Quarterly inflation rate		Annual GDP growth		Multilateral real exchange rate	
	1991-2001	1971-2001	1991-2001	1971-2001	1991-99	1971-99	1991-2001	1980-2001
AC	32.22 31.51	90.05 142.51	3.06 4.93	16.84 30.04	1.84 2.65	1.67 3.06	1.65 5.40	7.85 14.90
CARICOM	11.66 13.89	8.84 9.01	1.53 3.06	1.29 2.93	0.71 3.06	1.78 5.15	2.28 3.78	2.33 4.77
CACM	37.42 ³ 78.36	98.60 215.17	4.26 15.44	5.50 23.13	1.29 2.21	1.72 4.40	2.08 6.75	3.72 15.29
Mercosur	393.66 ⁴ 155.57	367.60 196.92	40.94 17.92	46.58 31.64	1.55 3.36	2.56 4.84	4.26 3.85	5.32 7.81
ASEAN	7.50 11.20	8.44 11.29	2.22 2.97	1.86 3.37	2.23 3.65	2.11 4.16	4.41 5.50	3.43 7.51
EU	2.69 3.19	5.47 6.33	0.33 0.65	0.90 1.38	0.90 1.75	1.34 2.25	1.05 2.37	0.86 2.25

¹ Cells in red show the average across countries' annual inflation rate weighted by the countries' GDP, and in blue the simple average.

² Cells in red show volatility across countries' average change in absolute value weighted by the GDP, and cells in blue show the simple average of the countries' volatility.

³ Excluding 1991 (high inflation in Nicaragua), the average inflation rate decreases to 12.03 percent.

⁴ Since 1995, the average inflation rate for Mercosur has decreased to 11.49 percent.

Source: IDB calculations based on IMF (2001b) and World Bank (2001).

larly in comparison with the European Union, although certain indicators register levels similar to ASEAN (Table 7.1).

This higher level of volatility not only affects the rate of investment and growth in the country directly exposed to it, but also those rates in the interconnected countries. High and variable inflation rates and substantial variability in GDP make the partner unpredictable, although the most relevant issue among regional partners, for reasons discussed below, is exchange rate variability. Figure 8.2 in Chapter 8 shows that the variability in the intra-regional exchange rate has been considerably higher for all agreements in Latin America than for the European Union or ASEAN. In the region, Mercosur, followed distantly by the AC and CACM, register the highest levels of volatility.

Effects. As economic agents are typically risk adverse, the increase in uncertainty usually associated with volatility can be expected to have a negative impact on economic activity. While a country's volatility affects its partners in different ways, exchange rate

volatility typically attracts the most attention due to its effects on trade and on the political economy of the integration process.

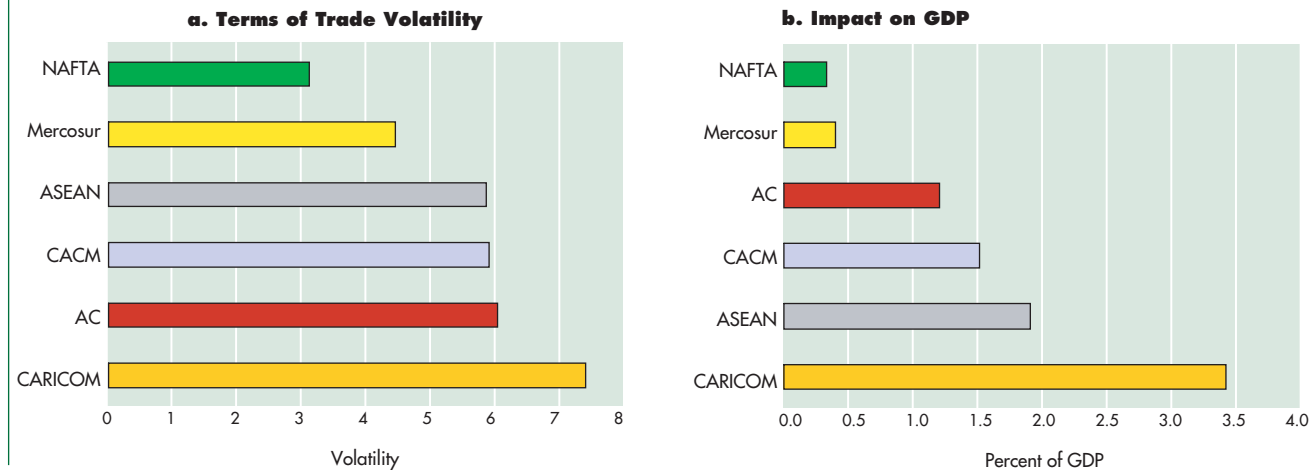
Most empirical studies that have analyzed the impact of exchange volatility on trade flows have found ambiguous or slightly negative effects that can be explained by the existence of exchange risk hedging mechanisms.¹¹ The absence of a stronger negative effect is strengthened by the fact that these studies primarily used data from developed countries in which exchange coverage mechanisms are more advanced.¹² As developing countries began to be incorporated into the studies, volatility had a greater negative impact on exports.¹³ It is not surprising, then, that a monetary

¹¹ From a theoretical standpoint, models with agents neutral to risk or risk lovers can also be constructed. See McKenzie (1999).

¹² The estimates show a lower impact of volatility with improvement in coverage instruments for transactions in foreign exchange (Frankel and Wei, 1998).

¹³ See Estevadeordal, Frantz and Sáez (2001) and Giordano and Monteagudo (2002).

Figure 7.2 Terms of Trade Volatility and its Impact on GDP, 1971-2000



Notes: Regional volatility is calculated as the standard deviation of the average change in the countries' terms of trade, weighted by GDP. For CARICOM, available data in Figures 7.2a-b are for Guyana, Haiti, Jamaica and Trinidad and Tobago, which represent 63 percent of subregional GDP.

Notes: The impact on GDP is calculated as the product between the weighted average of the openness coefficient (1990-99) and the volatility coefficient in Figure 7.2a.

Source: IDB calculations based on World Bank (2001).

union has a positive impact on trade by eliminating exchange rate uncertainty and reducing transaction costs. Chapter 9 analyzes these results.

In addition to its economic impact, volatility also affects the political economy of the integration process. First, economic instability affects external and domestic financing possibilities. Since it is inconvenient for countries that have substantial current account deficits—and therefore considerable financing requirements—to be associated with a country in difficulty, attempts by a country to differentiate from a partner believed to be “unreliable” lead to political problems that seriously undermine the integration process.

Second, if the instability is associated with exchange rate volatility, resistance is created as a result of the loss of competitiveness by producers in the country whose currency has appreciated. In this context, devaluations are considered opportunistic behavior by the partners, weakening solidarity within the region and increasing political pressure to adopt protectionist measures, while reducing support for integration. For example, the devaluations in some European countries in 1992 and 1993 led to protectionist reactions in other countries of the European Common Market and ultimately convinced the parties that the way to avoid such problems in the future was to adopt a single currency. Another example is the substantial increase in protectionist measures in Mercosur countries as a result

of Brazil's devaluation in 1999 (see Chapter 8). By contrast, exchange rate modifications within NAFTA do not appear to have produced similar effects. This can be explained by the growth rate in the region at the time of the exchange modifications, and more specifically, by the size of the devaluing country.¹⁴

In summary, no one wants to have a partner with a highly volatile macroeconomy. If that is the case, there are two alternatives: reduce interdependence or find cooperation mechanisms to reduce volatility. If, for reasons of geographic proximity, political considerations or other factors, the country with which there is a strong trade or financial relationship will continue to be an important partner in the future, then the higher the levels of volatility, the greater the incentive to cooperate in the macroeconomic area.

Causes. The causes of volatility are essential to assessing how to approach cooperation. When the reasons are internal, cooperation will focus on fiscal, monetary and exchange rate issues. If the volatility is the result of exogenous shocks, macroeconomic coordination among countries could be less effective and a

¹⁴ The United States recorded a high rate of growth at the time of the Mexican devaluation, while Brazil's devaluation occurred during a recession in the region. Further, Mexico's share in NAFTA's GDP amounts to only 4 percent, while Brazil accounts for more than 65 percent of Mercosur's product.

Figure 7.3a Private Capital Flows, 1971-2000
(In percent of GDP)

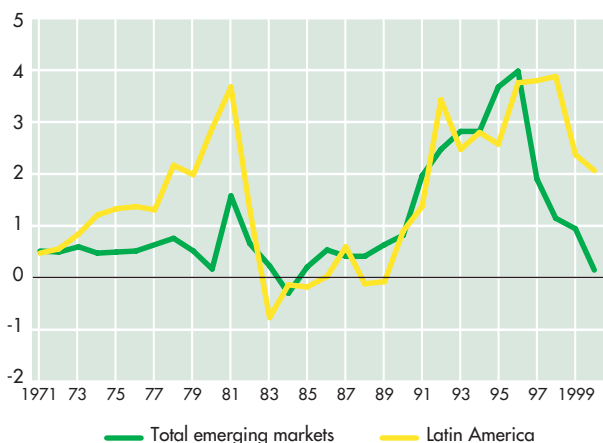
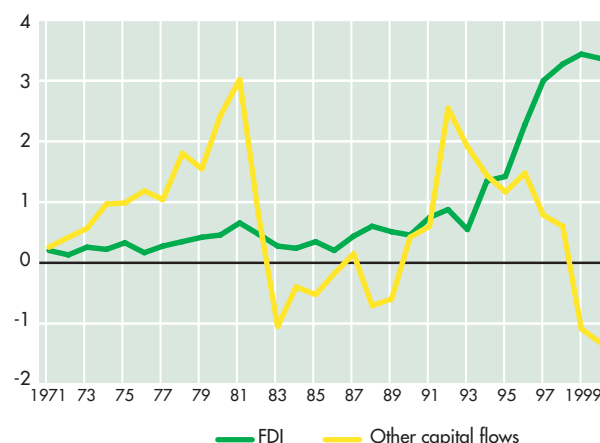


Figure 7.3b FDI and Other Capital Flows in Latin America, 1971-2000
(In percent of GDP)



Source: IMF (2001c) and World Bank (2001).

different kind of coordination, as discussed below, might be required. In Latin American agreements, both factors have interacted over time as the region has been exposed to substantial external shocks—primarily terms of trade and private capital flows—the impact

of which has been amplified by macroeconomic policy deficiencies and the absence of institutions to address them.

Figure 7.2a shows that terms of trade volatility has been high in Latin America, although the figures

Table 7.2 Volatility of Private Capital Flows
(In percent of GDP)

	1971-80	1981-90	1991-99	1971-99
Mercosur				
Weighted average	0.69	0.80	1.14	1.20
Simple average	1.87	1.51	2.28	2.09
AC				
Weighted average	0.60	1.06	1.67	1.23
Simple average	1.80	3.63	4.00	4.13
CACM				
Weighted average	0.83	1.29	3.11	2.43
Simple average	2.84	5.21	10.04	7.18
CARICOM ¹				
Weighted average	0.90	1.41	2.43	1.97
Simple average	3.89	4.94	5.82	6.16
NAFTA				
Weighted average	0.20	0.87	0.90	0.75
Simple average	0.87	2.17	1.84	2.05
ASEAN				
Weighted average	0.83	1.92	5.12	3.14
Simple average	1.18	3.00	6.44	5.20
EU				
Weighted average	0.39	0.50	0.97	0.68
Simple average	1.30	1.13	2.66	2.44

Notes: The weighted average shows the volatility of the average across countries, weighted by GDP.

¹ Available data for CARICOM include Guyana, Haiti, Jamaica and Trinidad and Tobago, which represent 63 percent of subregional GDP.

Source: IDB calculations based on IMF (2001c) and World Bank (2001).

Figure 7.4a Private Capital Flows: Magnitude of Volatility Dimensions and “Sudden Stops” by Region, 1972-99

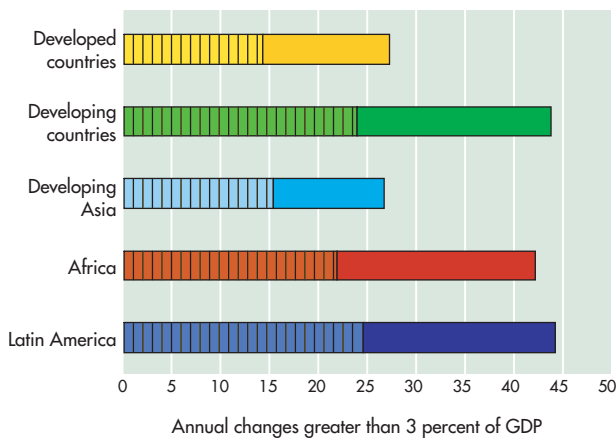
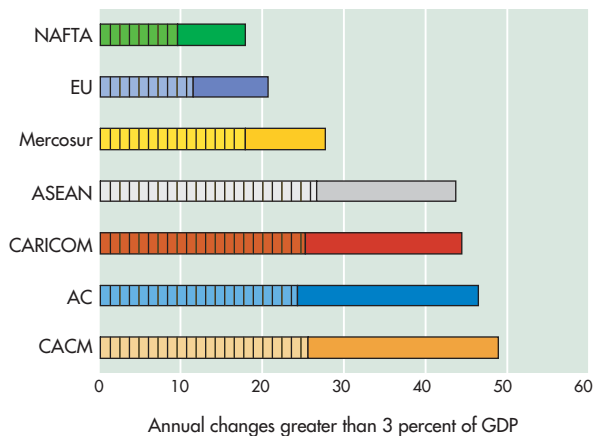


Figure 7.4b Regional Integration Agreements and “Sudden Stops”



Notes: The two figures present the percentage of annual observations when net private capital flow changes are greater than 3 percent of current GDP, based on country data. The bars with vertical lines present sudden stops, which are cases when the negatives changes were greater than 3 percent of current GDP. Source: IDB calculations based on World Bank (2001) and IMF (2001c).

are not much different from the volatility within ASEAN, despite that region's greater diversification of exports.¹⁵ Figure 7.2b shows the impact of this volatility in terms of product, which depends crucially on the economy's openness and explains its relatively low impact in Mercosur.

During the past few years, however, volatility in the region and in emerging countries in general has mainly come from changes in private capital flows. Figures 7.3a and 7.3b show that oscillations in capital

flows in emerging regions have been substantial, particularly when foreign direct investment is excluded. Similarly, Table 7.2 shows that this volatility has been greater in all the Latin American blocs than in Europe.¹⁶

To illustrate the magnitude of this volatility, a sample of 121 countries (23 developed and 98 developing countries, according to the IMF classification) is used to calculate cases in which annual variations in net private capital flows exceeded 3 percent of GDP in the receiving country over 1972-99. Figure 7.4a shows that for all developing countries, this level is exceeded in 44 percent of the observations, although it drops to 38 percent when developing countries having income levels below \$20 billion (in 1995) are excluded.¹⁷ The same coefficient is 27 percent for developed countries, and 6 percent when only the G-7 countries are considered. Given the impact that sharp reductions in capital flows have on GDP and on the exchange rate (Calvo, 2001), the same figure also shows how many of these variations correspond to reductions exceeding 3 percent of the countries' GDP. In developed and developing countries, there are approximately the same number of cases of sudden stops as sudden starts of capital flows, which would seem to imply that the sudden whims of the markets occur in both directions.¹⁸ Figure 7.4b presents the same information by regional integration agreement. With the exception of Mercosur, in all of the remaining agreements in Latin America, the cases where changes in annual capital flows exceed 3 percent of GDP are around 45 percent.

While for closed economies fluctuations in capital flows as a percentage of GDP could be low, the impact in terms of variation in GDP and the real exchange rate required to adjust the current account

¹⁵ Volatility is calculated for the past three decades, a period during which the export structure is not uniform. In fact, volatility in terms of trade decreases substantially for ASEAN when only the past decade is considered.

¹⁶ For Mercosur, however, this is true only when the indicator is weighted by country size. NAFTA is found to have volatility similar to Europe.

¹⁷ The maximum values for developing countries are found in Latin America (44 percent) and Africa (42 percent).

¹⁸ Sharp increases in capital inflows tend to produce a substantial increase in product and appreciation in the exchange rate, which, in many cases, is indicative of future crisis.

may exceed that required in more open economies. This is the case of Mercosur compared to other agreements in Latin America. In fact, when the number of observations in which the annual fluctuations in capital flows exceed 20 percent of exports, Mercosur is found to have a higher level of volatility than other blocs, as observations with these characteristics amount to 39 percent of the total, as compared to 29 percent for the AC and 23 percent for CACM.

All of this represents further proof of the magnitude of the region's financial volatility—volatility that is not only the result of changes in the external context, but also of internal factors that traditionally have shown great instability in emerging countries.

In summary, while volatility declined during the past decade, subregional blocs still exhibited macroeconomic instability, explained by both domestic and external factors. There is, accordingly, broad scope to establish policies that reduce the impact of external shocks (for example, through diversification of exports and adoption of measures to reduce the impact of the variability of capital flows). There are also opportunities for cooperation to address these external shocks, such as by creating regional financing mechanisms. Volatility of internal origin might be reduced through coordination of macroeconomic policies, mainly in the monetary and fiscal areas.

Discipline under Domestic Pressure

Regional agreements can serve to implement measures that generate domestic resistance. An international agreement may strengthen certain actions by associating them with a consensus with other countries, therefore making them less subject to a decision of the national authorities. To date, in countries of the region, the external discipline mechanism has been introduced under agreements with international financial institutions rather than under coordination agreements with the regional partners. The advantage of a regional agreement, however, is that it typically is viewed as a choice by the country, over which it normally has some degree of control, while agreements with international organizations are often considered to be imposed by outside interests.

In any case, the importance of regional agreements in imposing some degree of internal discipline

depends on whether the agreement is perceived as advantageous to the country. While this has been true for Europe, it has not necessarily been so for Latin America. As a result, there is a risk that implementation of unpopular economic policies will be viewed as the result of an agreement whose benefits are not clear, therefore generating incentives for its termination.

Increasing Credibility

Coordination of macroeconomic policies with partners that enjoy a good reputation can generate positive externalities. In an extreme case, even if there are not conditions to create a monetary union, coordination could lead to the adoption of a single currency with a view to gaining further credibility. Similarly, the countries may decide to adopt the currency of a country outside the region if it is believed that the benefits of that country's reputation may offset the costs associated with the absence of monetary policy.

Unlike Europe, where coordination is viewed as a responsible policy given the reputation of some of the partners, the absence in Latin America of countries with a tradition of monetary stability implies that the qualification of a country as "responsible" in macroeconomic policy management has little to do with honoring commitments with the country's partners. Coordination between countries without reputation can generate credibility gains if it enables more responsible economic policies to be implemented—among other reasons, because it can help reduce domestic pressures. For coordination to be credible, however, there must be some costs associated with noncompliance.

Eliminating Distortions and Reducing Fiscal Costs

As countries eliminate tariff barriers, reduce exchange rate volatility, and advance in their level of interrelations, distortions in competition resulting from different tax systems generate increasing costs, and therefore also incentives to coordinate policies in the area.

Elimination of barriers to the flow of goods and services—a minimum level of integration to which all modern second-generation agreements aspire—increasingly requires establishment of trade-neutral

taxes among the countries involved. For this reason, indirect taxes are typically the first to be harmonized with value-added tax (VAT) based systems that avoid the cumulative effect of taxes in cascade, and guarantee tax neutrality.¹⁹ Since it is not so obvious that differences in direct taxation are distortionary, the need for harmonization in this area is not evident. Coordination, however, is also advisable to avoid discrimination and obstacles to the circulation of factors required to achieve a common market. For example, differences in corporate income taxes may affect decisions on investment and the location of enterprises; and personal income tax may affect labor movements, as do the benefits, costs, and the option to transfer accumulated social security entitlements.

Tax coordination as a cooperative action between countries for the mutual adaptation of their taxation systems is therefore advisable to guarantee the free mobility of goods, services and factors, and to eliminate distortions to competition between jurisdictions. Tax coordination, however, is also an instrument to fight loss of fiscal revenue resulting from fraud and tax evasion, as well as from a possible race to zero taxation or greater subsidies.

Regarding tax evasion and fraud, an example is provided by the lack of coordination in connection with jurisdictions that do not withhold interest collected by nonresidents, and that exchange little or no information with the agent's country of residence.²⁰ Although it might be argued that tax competition has positive aspects, since it prevents governments from imposing confiscatory charges, the downside can also be substantial if it leads to a "race to the bottom" between countries. The location of investment becomes a basic theme between countries that are net recipients of foreign capital and investments, and there is a risk of promoting sectoral and regional policies through tax incentives in a disorderly fashion.²¹ The effect is particularly important between countries in a free trade area, and particularly when tariffs are high. An example of this "race to the bottom" is the competition between states in Brazil to attract companies in the automotive sector (see Box 7.3). This provides a good illustration of the type of competition that can occur between countries when the level of integration is quite high. Given the degree of trade integration in Mercosur, competition among Brazilian states might have

affected other Mercosur member countries by shifting investment from them to Brazil.

In summary, while tax competition promotes control of states that tend to maintain excessive tax pressure, the process can be traumatic and lead to a tax war, in which all countries lose revenue. Since the effects tend to be greater between countries that have reduced the barriers to trade in goods and services, the most reasonable alternative, supported by successful integration experiences, is some degree of coordination reflecting the features of each agreement.

COORDINATION: COSTS AND DIFFICULTIES

The costs associated with macroeconomic coordination depend on the type of coordination that is adopted, which can range from the time required for standardization and exchange of information to delays in making economic policy decisions owing to the need to report or reach a consensus, or the inability to do so because of the compromises of coordination on monetary, exchange rate or fiscal policy.

Autonomy

The use of advanced macroeconomic policy cooperation mechanisms often involves the loss of autonomy in making national policy decisions, and particularly, reduced discretion in national policies to address specific shocks. Examples are the adoption of a single currency, with the resulting loss of monetary autonomy, and reduced fiscal discretion under the Maastricht agreement and the European Stability and Growth

¹⁹ The European Economic Community in 1970 introduced the VAT as a replacement for various taxes on production and consumption levied by member countries. Most Latin American countries have adopted the VAT, although in some cases, such as Argentina and Brazil, it subsists with other taxes on production and sales, generating a cumulative effect that leads to competitiveness problems.

²⁰ In addition, the existence of tax-immune zones normally entails complicated control of goods in transit, with the resulting tax evasion problems.

²¹ Fernández-Arias, Hausmann and Stein (2001) demonstrate that, under certain conditions, the location of investment is not optimal in the absence of benefits from the countries, and in such cases, specially-designed incentives are advisable. Coordination, in any event, may improve the distribution of benefits in favor of the country or region receiving the investment.

Box 7.3 The Tax War in Brazil's Automotive Sector¹

Beginning in the early 1990s, the automotive industry in Brazil expanded significantly. Investments in new plants from 1994 to 2000 totaled more than \$6.1 billion. Tax incentives provided by state governments—the tax war—led to a process of deconcentration in production. Without these incentives, investment would quite probably have continued to be located in the more industrialized region of São Paulo-Rio de Janeiro-Minas Gerais, or in some cases, in another Mercosur country.

The typical benefits from the incentives can be divided into three categories: i) a short-term budget impact (grants of land and port facilities or execution of infrastructure works); ii) short- and medium-term credit benefits (subsidized loans to finance fixed asset purchases, and state tax exemptions for purchases of machinery and equipment); and iii) long-term tax benefits.

An analysis of the tax cost associated with the incentives provided for installation of three automotive plants (General Motors in Rio Grande do Sud, Renault in Paraná, and Mercedes Benz in Minas Gerais) showed the following results:

- The value of the approved benefits is 24 percent greater than the capital invested by General Motors; equal to the investment for Mercedes Benz; and comes to 35 percent of invested capital for Renault;
- The main benefit is deferred or postponed payment of the tax on circulation of merchandise and services;

- The estimated tax cost per job directly generated is \$443,800 for Mercedes Benz, \$359,400 for General Motors, and \$139,600 for Renault;

- Considering that the investments would still have been made in the country or region in the absence of the incentives, the estimated fiscal cost can be interpreted as the price that the country or region pays for the relocation of resources from the optimal location in the absence of the benefits.²

The tax war between states to attract automotive sector investment is not unique to Brazil. In 1980, Tennessee attracted a Nissan plant that employed 1,900 persons at a tax cost of \$33 million (\$17,400 per job generated). Five years later, the cost to Tennessee of attracting a General Motors plant that created 6,000 jobs amounted to \$150 million (\$25,000 per job). In 1993, Alabama agreed to provide \$300 million in incentives to attract a Mercedes Benz plant that employed 1,500 workers (\$200,000 per job).

¹ See Barreix and Villela (2002).

² While the assumption that the investment would occur in the region independent of the subsidies may seem strong, it is not necessarily so in this case, given the size of the market and the high protection from external competition.

Pact. This analysis assumes that countries can use instruments of economic policy, which is not the case in some Latin American countries. An example is the inability of most countries in the region to use anti-cyclical fiscal policies and the difficulty of using monetary or exchange rate policy in highly dollarized economies.²² When fewer economic policy instruments are available, the costs of giving up some discretion are clearly lower.

In general, this loss of autonomy tends to be perceived as more costly the greater the relative size of the country, and therefore the less dependent it is on the bloc. To reduce this resistance, supranational decision-making mechanisms may be adopted that at least

partially reflect the relative size of each country.²³ This does not imply that agreements involving countries of similar size promote integration, since the absence of a country or countries to lead the process may make the bloc less dynamic. The optimal combination seems to be the existence of lead countries with an integrationist

²² The region's difficulties in applying anti-cyclical fiscal policies should be considered a problem that needs to be corrected rather than a permanent characteristic. To that end, fiscal surpluses must be generated during cyclical upswings. See Ocampo (forthcoming).

²³ For example, the Executive Board of the European Central Bank is comprised of permanent representatives from Germany, France and Italy, while representatives from other countries serve on a rotating basis (see Box 9.1 in Chapter 9).

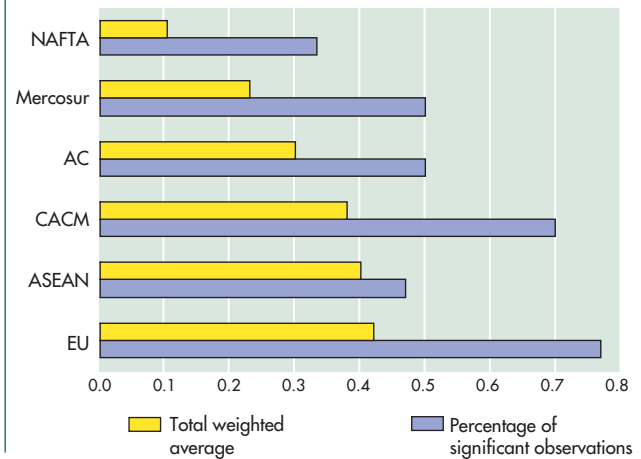
vocation that steer the process, along with an acknowledgement of the relative size of the partners in the supranational bodies.²⁴

Cyclical Synchronism

The costs of economic coordination will be lower to the extent that the countries face similar situations. If the cycles of the countries involved are synchronous, economic policy decisions will be similar, and therefore the cost of forgoing national policy will be lower.²⁵ Countries in subregional blocs in Latin America have historically registered less synchronous cycles than countries of the European Union. Figure 7.5 provides two cycle synchronism indicators: the percentage of correlation coefficients between the cycle component of GDP of member countries of an agreement that is positive and significantly nonzero, and the average of all correlation coefficients weighted to reflect the share of the countries in the product of the bloc.²⁶ The highest degree of synchronism is found among countries of the European Union, although CACM countries are also found to have a relatively high level of correlation.²⁷ Mercosur countries register the lowest levels of synchronism in the region, particularly when the correlation is weighted by the countries' size.

While the highest degree of synchronism in economic cycles facilitates coordination of macroeconomic policies, a lack of synchronism does not necessarily mean that coordination is not convenient. Non-synchronous cycles may provide a reason to coordinate fiscal policies, as the country in the best fiscal situation as a result of being on the upside of the cycle may have resources to lend to countries needing to finance a larger deficit.²⁸ On the other hand, asynchronous economic cycles can be the result of divergent macroeconomic policies, different exchange regimes, or asynchronous external shocks. When different macroeconomic policies are applied, it is clear that cooperation, by definition, will increase synchronism.²⁹ Different exchange rate regimes may be compatible with macroeconomic policy coordination, although in economies subject to significant external shocks this situation may introduce much variability in the exchange rate between countries.³⁰ Last, external shocks with differentiated impacts across countries are more difficult to manage, as they may require different

Figure 7.5 Business Cycle Correlation, 1960-99



Note: Percentage of statistically significant correlation coefficients and average of correlation coefficients weighted by GDP.

Source: IDB calculations based on World Bank (2001).

²⁴ It can be argued that a system of representation that reflects the relative size of the countries might benefit large countries, since they might better resist internal pressures without excessive costs in terms of autonomy.

²⁵ If cycles are asynchronous, advanced forms of macroeconomic coordination might not generate costs in the presence of full price and wage flexibility. On an alternative or complementary basis, the lack of synchronicity may be replaced at least partially with high levels of labor mobility and fiscal transfers. Labor mobility reduces unemployment, as workers move between countries in the agreement depending on the economic cycle, and fiscal transfers can be expected to play an anticyclical role in the countries or regions.

²⁶ Synchronism in cycles is assessed as the correlation between the series of deviations of the countries' GDP with respect to its trend calculated using the Hodrick-Prescott filter.

²⁷ These results remain relatively invariable when only the past 20 years are included. Synchronism in CACM is explained in part by the trade interrelations between the members, although "external coordination" associated with the cycle of the United States seems to be more relevant (see Panizza, Stein and Talvi, 2000).

²⁸ Coordination would function in this case as insurance for the ability to apply anticyclical policies. To that end, a system of transfers that requires sophisticated fiscal institutions that do not exist in the region is needed. This transfer mechanism does not even exist in the European Union, where transfers are linked to the countries' relative development, rather than to their economic cycles.

²⁹ This does not mean that countries with a lengthy history of similar macroeconomic policies should be overlooked. Their economic policies will undoubtedly be easier to coordinate in the future.

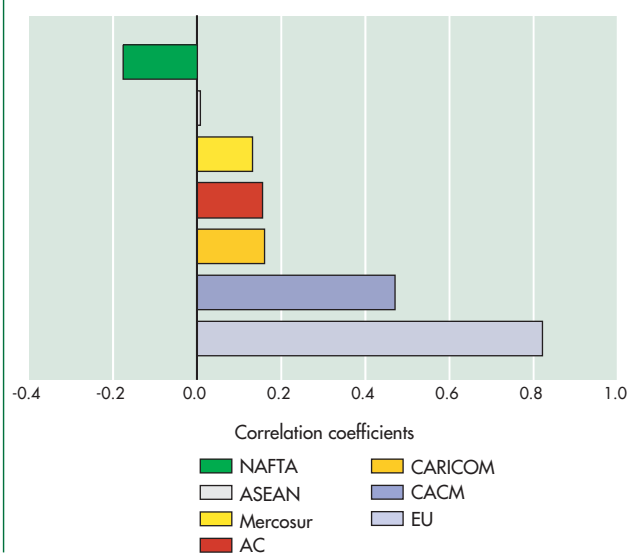
³⁰ While experience in Mercosur has shown that variability in exchange rates between countries was greater during the 1980s when exchange regimes were similar (Fanelli, 2001), the change in the real bilateral rate between Brazil and Argentina in 1999 was the result of an external shock that affected the real equilibrium exchange rate in both countries, although, in light of Argentina's convertibility system, it only affected the nominal and real exchange rate in Brazil.

macroeconomic policies, and in particular, they may change the equilibrium exchange rate between the members of a bloc. It is therefore important to assess whether or not the different blocs in the region are exposed to synchronous shocks.

Before proceeding with this analysis, let us consider a related topic: the relationship between trade levels and synchronous economic cycles. When countries specialize in goods in which they have comparative advantages and that intensify inter-industrial trade, there is no reason for greater trade interrelations to promote cyclical synchronism, since specialization can accentuate its idiosyncratic nature, particularly if the price of goods marketed is determined on the international market.³¹ Alternatively, higher levels of intra-industrial trade lead to greater similarities in productive structures, and therefore trade will not only have an impact through import demand or export supply, but will reduce the level of asynchronous external perturbations.³² As shown in Chapter 2, Mercosur and the AC have registered steady increases in intra-industrial trade that can be expected to increase cyclical synchronism, although in the case of Mercosur, the fact that the large economies are fairly closed reduces the impact of trade on the economic cycle. The other integration agreements in the region do not show any significant increase, although for CACM, intra-industrial trade has been relatively important for some time. (Chapter 8 provides a detailed analysis of the empirical evidence on the relationship between trade and cycle synchronization.)

Returning to the nature of the shocks, a number of studies have made the distinction between demand and supply shocks. Under the assumption that the former are more contaminated by controllable domestic factors and policies than supply shocks, the correlation between the latter would be effective proof of the probabilities that macroeconomic coordination between the members of an integration agreement will be successful. The results of these studies show no correlation between supply shocks in countries of NAFTA, Mercosur or the AC.³³ By contrast, some degree of correlation is found in a group of East Asian countries and in Europe during the period prior to the establishment of the European Union.³⁴ While the results of this methodology are easy to interpret, it has some limitations, such as assumptions that supply and demand

Figure 7.6 Terms of Trade Correlation, 1960-2000



Note: The correlation is calculated as a simple average of the correlation coefficients of terms of trade changes between member countries of the same regional integration agreement. Available data for CARICOM include Guyana, Haiti, Jamaica and Trinidad and Tobago, which represent 63 percent of subregional GDP.

Source: IDB calculations based on World Bank (2001).

shocks are independent, and that supply shocks permanently affect product while demand shocks only affect it temporarily.³⁵

Another way to assess whether countries that belong to different blocs are facing similar perturbations is to analyze the correlation of external shocks to the region. One of the most relevant shocks in Latin America is the behavior of external prices. Figure 7.6 shows the correlation between the terms of trade vari-

³¹ See Krugman (1993).

³² Frankel and Rose (1998) discuss the economic interdependence argument as a synchronizing factor between cycles, and provide empirical evidence for industrial countries.

³³ See Bayoumi and Eichengreen (1994); Arora (1999); and Bayoumi and Mauro (2002).

³⁴ In Eastern Asia and Europe, 15 percent and 19 percent of the respective estimated correlations were significant.

³⁵ An example may clarify the problems of using an aggregate supply and demand model such as the one underlying this methodology. A stabilization plan that attracts foreign investment may—given the impact on investment and incorporation of technology—have a permanent effect on income levels. But the model will not be able to properly capture the relationship between the demand shock and the permanent change in the income level.

ation rates for countries belonging to the same bloc. As we might expect, given the similarity in their productive structures, countries of the European Union have highly correlated terms of trade. In all other regional agreements, with the exception of CACM, the correlation is significantly lower.³⁶

As discussed above, numerous studies have shown the interrelation between private capital flows to emerging countries, as well as between financial asset prices.³⁷ This interrelation results in part from the existence of exogenous factors, which are common to all the emerging countries or to a region in particular, and that therefore should help generate greater synchronism in economic cycles.³⁸ Similarly, the synchronism of cycles also increases when a variable (prices of public or private bonds, exchange rates, or capital inflows) is affected by the behavior of the same variable in other emerging countries—an influence that increases with geographic proximity and trade volume.

In summary, the empirical evidence shows that there is no cyclical synchronism in Mercosur or AC countries. Nor is there much correlation between the changes in terms of trade. This is not the case for CACM countries, which have a relatively high level of correlation between their cycles and between their terms of trade. The entire region, however, is affected by similar financial shocks, which clearly helps enhance the synchronism between economic cycles. It could be concluded that, from the standpoint of these indicators, the cost of macroeconomic coordination, and, in the extreme, of monetary union, is substantial in the various blocs, with the possible exception of CACM.

Difficulties with Coordination

Experience has shown that macroeconomic cooperation entails difficulties associated with differences in perception about the economy's underlying model and in the policy objectives of the national authorities. That makes it difficult to determine how to distribute the benefits obtained from coordination efforts.³⁹ For example, it was impossible to coordinate exchange policies in Mercosur during the 1990s owing to the existence of different exchange regimes in Argentina and Brazil.

Another problem derives from the difficulty in internalizing the benefits of cooperative arrangements,

particularly when the future benefits exceed the present ones, and when the discount rate is high. In addition, the risk of individual losses when adopting a cooperative strategy not supported by the other participants discourages national authorities from being cooperative, resulting in a negative outcome for all participants (the prisoner's dilemma). A less pessimistic conclusion can be reached by considering the dynamic aspect of international coordination: to the extent that, over time, all players will be making decisions that promote mutual trust and understanding and that reduce their economic policy options, progress in increasing forms of cooperation could be made, as the costs from uncooperative behavior by the other agents would be bounded.⁴⁰

To this point we have analyzed the benefits and costs associated with macroeconomic coordination. Obviously, the relevant concept is the net benefit. For instance, a high level of synchronism of the countries' cycle—perhaps the most significant cost—reduces the costs of forgoing economic policy instruments and, therefore, increases the net benefit of macroeconomic coordination. One factor to be borne in mind is that some of the elements analyzed so far are interrelated, as proved by the fact that the greater the trade and financial interdependence, the more synchronous the cycles will be. Therefore, in this case the benefits and costs will be simultaneously affected, increasing the net benefits from macroeconomic coordination.

³⁶ In the case of NAFTA, the negative correlation of the terms of trade would seem somewhat strange, particularly if we consider that there is a positive correlation between export and import prices in countries belonging to the bloc. This can be partly explained by a positive correlation between export and import prices for each country and by the fact that what is being correlated is the rate of change in terms of trade.

³⁷ Forbes and Rigobon (2000), for example, find that all correlations between the return on Brady bonds exceed 0.8 for a sample of 13 emerging countries. For the same sample of countries, they also find a significant correlation in returns on stocks. Further estimates show a high level of correlation between returns on sovereign paper for a sample of emerging countries, although, for Argentina, the correlation begins to decline in mid-2001 until it disappears.

³⁸ See Calvo (2001) and Calvo, Leiderman and Reinhart (1993). For an assessment of the importance of these factors during the 1970s, that is, during the first upswing in private capital income in the region, see Devlin (1989).

³⁹ See Ghymers (2001).

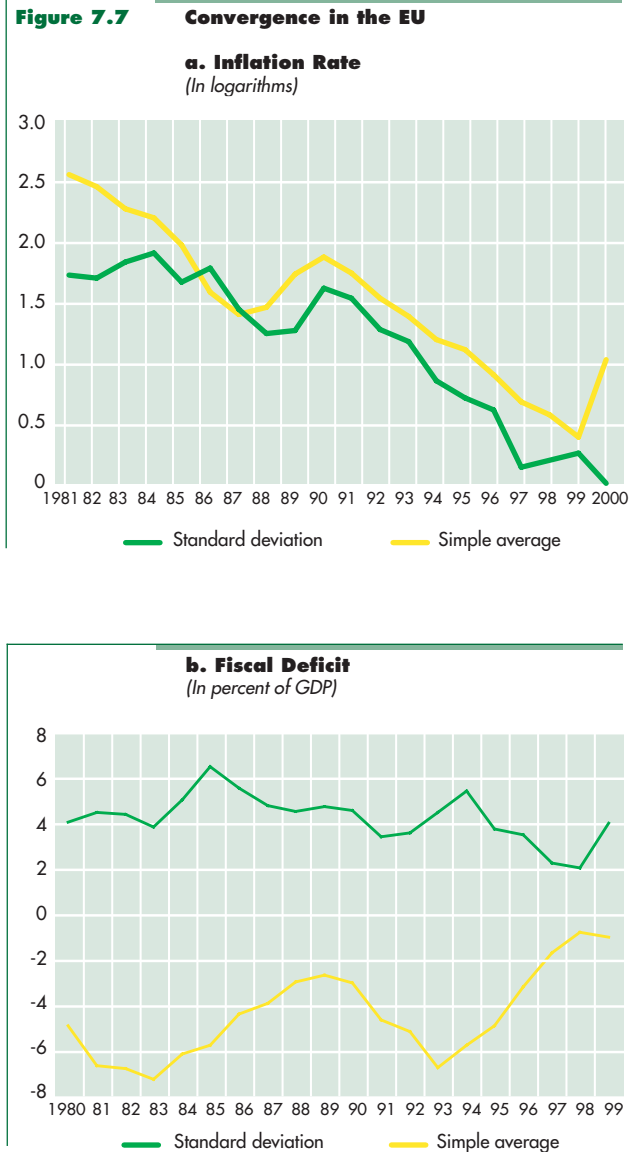
⁴⁰ *Ibid.*

COORDINATION IN PRACTICE

Setting aside conceptual considerations for a moment, practical experience has shown that difficulties with macroeconomic coordination seem to have exceeded the positive incentives. Little progress has been made in this area, with the obvious exception of the European Union. However, in some subregional integration agreements, there have been attempts at macroeconomic cooperation driven by the success of the European experience, and by greater interdependence within each bloc.

When reviewing past experiences, it should be borne in mind that macroeconomic coordination efforts are not limited strictly to integration arrangements, since they also derive from the acknowledgement of mutual interdependence in the global framework. One example is the attempt by the G-5 (later expanded to the G-7) to coordinate macroeconomic policies during the latter half of the 1980s. Recognizing the need for coordinated action to resolve macroeconomic disequilibria among major industrial countries, the countries adopted a form of multilateral oversight through objective indicators. The aim was not only to coordinate exchange rates or interest rates, but also other national policies that supported those objectives. Some of the obstacles faced by these agreements were increasing capital flows that made independent monetary policy difficult, the absence of consensus on inflation risks (consensus on the underlying model), problems in agreeing on fiscal policies, and the absence of independent central banks that limited agreements between policy authorities. Cooperation was nonetheless an important factor in heading off major international tensions.

The achievements and setbacks that characterized the long European experience provide useful lessons for other integration agreements.⁴¹ First, in Europe, exchange rate policy was a decisive element in macroeconomic cooperation. Following the end of the Bretton Woods agreement on fixed exchange rates, and faced with tensions between member countries caused by floating exchange rates, European countries instituted different exchange rate arrangements to maintain some degree of stability within the region. Accordingly, exchange rate policy became the vehicle for indirect monetary and fiscal policy coordination.



Source: IDB calculations based on IMF (2001b).

Second, exchange rate policy agreements led to de facto convergence of fiscal and monetary policies and inflation rates, as it became more evident that enhanced stability was a requirement for macroeconomic cooperation. Figure 7.7a shows that the convergence of the European Union economies, as measured by the reduction in the inflation rate and its variance among countries, was achieved during the years preceding the Maastricht agreement, although the agreement seems to have been essential in aligning fiscal deficits (Figure 7.7b).

⁴¹ See Eichengreen (1993), Goodhart (1995) and Ghymers (2001).

Third, progress was gradual and resulted from mutual trust created between national representatives, fostered by periodic meetings between the key policy and economic players and the functioning of technical groups that included members from the different countries involved. This approach and compliance with certain agreements reduced the risk that the parties would engage in opportunistic behaviors.

Fourth, the experience of the 1980s clarified the need for the assessment of compliance with the agreements not to be limited to the policy authorities of the countries. Rather, the assessments should be broadly disseminated, as should the recommendations provided by the members of the agreement or the supranational organizations regarding how to correct imbalances. This approach allows for oversight of the policy authorities by their own citizens and the international community (countervailing powers). At the same time, it improves the market credibility of the agreements so that countries can be rewarded or punished accordingly.

Finally, supranational organizations play an important role in enabling criteria shared by the parties to be established, ensuring some degree of independence in assessing national policies, and providing recommendations on how to correct economic policy deviations. In this area, as in many others, it is advisable to make progress incrementally, beginning with institutional rules that do not significantly reduce the autonomy of the countries.

Perhaps the most important lesson from the European Union is that the attempts at macroeconomic cooperation consistently complemented progress toward integration. In other words, interdependence provided incentives for coordination, and macroeconomic cooperation, particularly in the area of exchange rate arrangements, allowed enhanced interdependence.⁴²

What can be said about macroeconomic coordination efforts in Latin America? Box 7.4 shows that some integration agreements have attempted to follow European convergence criteria (Maastricht). Mainly because there were no incentives for compliance, these attempts were not very significant. However, beyond the absence of agreements to achieve a certain degree of macroeconomic convergence, the different blocs and the region as a whole have con-

verged toward more responsible macroeconomic policies. Figures 7.8a-d show a decline in inflation levels and its dispersion among the member countries of different agreements during the 1990s.

In the area of exchange rate policy, there have been few coordination efforts. This is of course explained by the existence of different exchange regimes within some blocs, and by problems in defending the value of the local currency against speculative attacks. Clearly, it is difficult to coordinate exchange rate policies when economies have “polarized” exchange rate schemes, such as convertibility or dollarization, and floating exchange regimes. Figure 7.9 shows the differences in exchange rate regimes within the different blocs.⁴³

WHAT OPTIONS ARE AVAILABLE?

Progress in macroeconomic coordination under integration agreements is complex from the economic and political standpoints. The scarce progress in Latin American subregional agreements is a clear manifestation of these difficulties. From the economic standpoint, although trade interdependence increased during the 1990s, it is still considerably lower than the levels in other regional agreements. While levels of financial interdependence are much higher than they were a decade ago, attempts by countries to differentiate themselves from a partner have been decisive in moments of crisis, aggravating political problems and undermining progress in the integration process. The perception that coordination with regional partners generates more negative than positive externalities is crucial to explain this attitude. In turn, it leads to the increasing conviction that the partner will behave in an uncooperative manner, which further weakens the prospects for progress in macroeconomic policy coordination.

⁴² Europe is also a case in which macroeconomic cooperation was accompanied by coordination in other areas (policy on labor, income, mobility of goods and services, capital markets, etc.), which helped increase interdependence.

⁴³ The IMF classification used has the problem that some schemes appear to be floating regimes, but perform otherwise. See Calvo and Reinhart (2002).

Box 7.4 Macroeconomic Cooperation in Practice**• Andean Community (AC)**

1997: An advisory council was created for central bank governors and treasury ministers.

1999: Inflation convergence criteria were adopted.

2001: The target of single-digit inflation was agreed upon for December 2002. Fiscal convergence criteria were adopted (ratio between deficit and GDP and public debt and GDP not to exceed 3 percent and 50 percent, respectively). A community monitoring system was established in compliance with targets.

• The Caribbean Community (CARICOM)

1997: The Council for Finance and Planning was established, indicating a willingness to coordinate fiscal and monetary policies, and particularly interest rates, exchange rates, tax structures and budget deficits.

Late 1990s: Convergence criteria were established to determine eligibility for monetary union, consisting of a rule on exchange rates, reserve coverage, and a debt service to export ratio.

• Central American Common Market (CACM)

1960s-80s: A region-wide policy of exchange rates pegged to the U.S. dollar was pursued, creating an implicit monetary area and achieving some degree of convergence.

1998: Objectives to control inflation were announced through budget deficit regulation and gradual elimination of the quasi-fiscal deficit.

Late 1990s: Reciprocal consultations were increased between monetary authorities and financial system regulators.

• Southern Cone Common Market (Mercosur)

2000: The Macroeconomic Monitoring Group was established to harmonize statistical processes for calculation of certain key indicators (consumer price indices, budget deficit, and net debt of the consolidated public sector). A quarterly publication providing these indicators was introduced. A two-phase convergence mechanism was established as a transition through which countries would announce their objectives in terms of the indicators.

2002: Adoption of common objectives that would include a maximum of 5 percent inflation and targets for fiscal variables.

• North American Free Trade Agreement (NAFTA)

The growing interconnections between the economies involved as a result of NAFTA has led to an enhanced exchange of information and more effective informal contacts among the authorities.

• European Union (EU)

1970s: Coordination mechanisms were consolidated in light of the instability following the breakdown of the Bretton Woods agreement. The Werner Report (1970) proposed a monetary union. The currencies of the European Economic Community were tied through the European mechanism for managing currency fluctuations beginning in 1972, although the macroeconomic instability that characterized the first half of the 1970s made convergence impracticable. The European Monetary System (EMS) was established in 1978 and the currencies of eight countries were linked through the Exchange Rate Mechanism (ERM), which permitted fluctuations within pre-established limits. Between 1979 and 1987, there were 11 realignments, although the parities were maintained under the agreement from that time until 1992, when Great Britain left the system. Other currencies followed suit.

1993: Convergence criteria proposed in the Maastricht Treaty were adopted.

1999: Creation of the Monetary Union.

2002: The euro entered circulation.

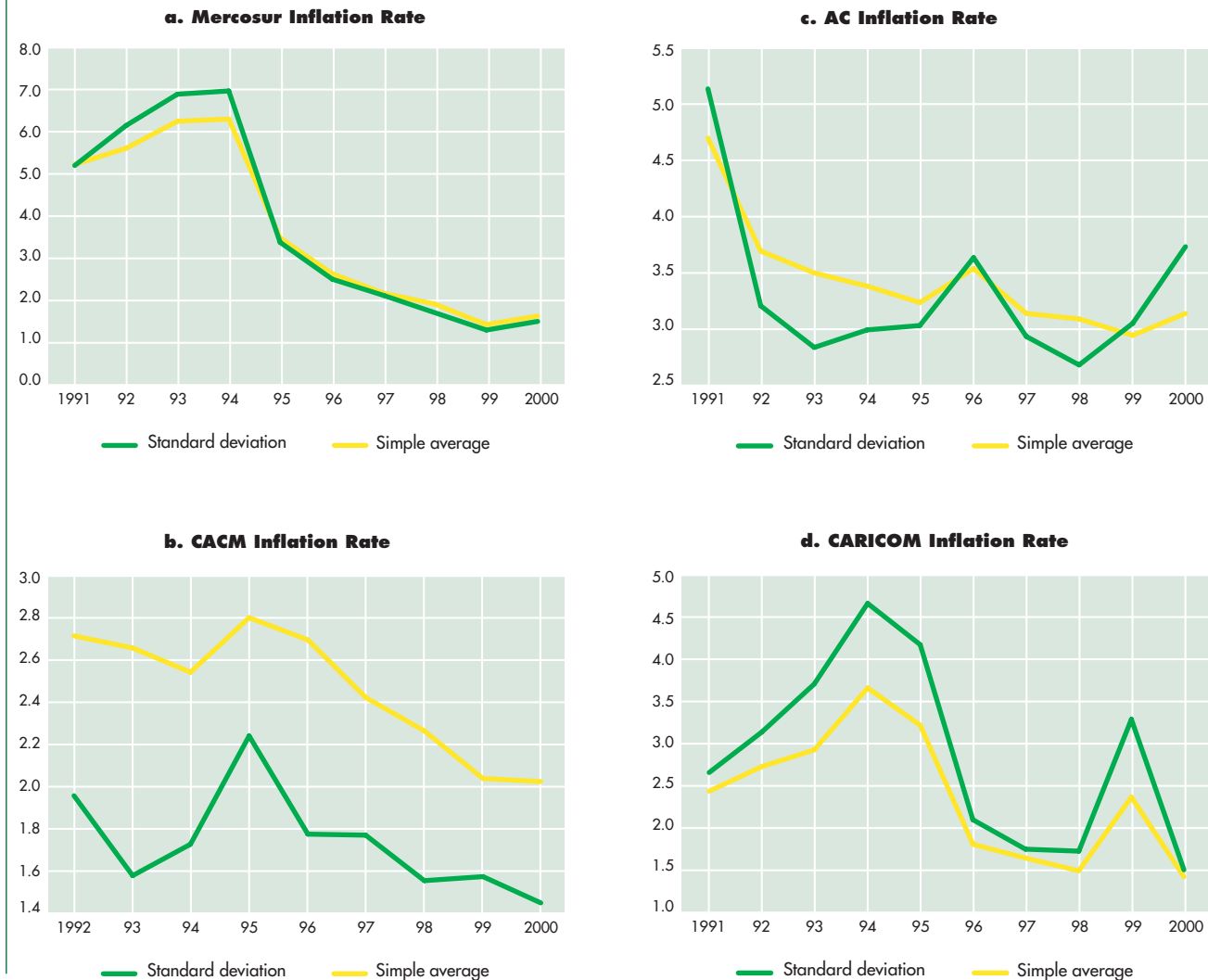
• Association of Southeast Asian Nations (ASEAN)

During the late 1990s, a process was established to monitor the region's macroeconomic development and to stimulate adoption of transparent policies through a policy of revision. An initiative was also approved to provide support in the event of balance of payments crises.

The difference in the European experience is significant. In Europe, there are at least three types of incentives to comply with the objectives established under the Maastricht agreement and the Stability Pact. First, being considered a responsible country;⁴⁴ sec-

ond, the gains associated with elimination of exchange rate volatility with key trading partners; and third, the

⁴⁴ For countries with better reputations, there are incentives to eliminate opportunistic behavior by the other members.

Figure 7.8 Convergence in Latin America

Note: All the series are in logarithms.

Source: IDB calculations based on IMF (2001b).

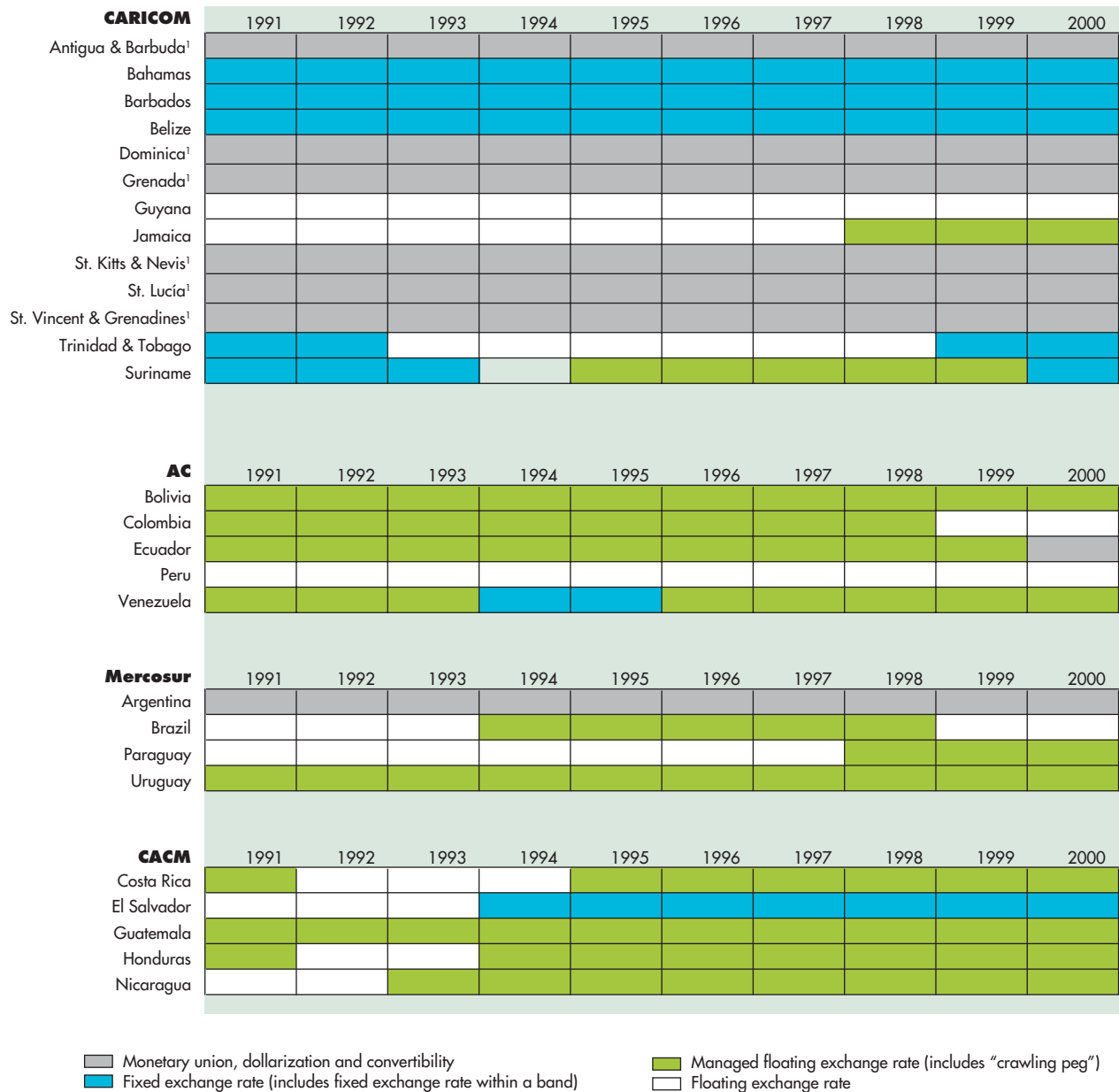
existence of a system of penalties for countries that fail to meet fiscal targets.⁴⁵ These factors have not been present in South-South regional agreements, and particularly in Latin America. Under these agreements, qualifying countries as “responsible” in macroeconomic policy management for now and in the near future has nothing to do with meeting commitments within the area. Rather, it involves agreements with multilateral credit institutions, and particularly, with the International Monetary Fund. Although intra-bloc exports are substantial in a number of regional agreements, the levels registered in the European Union have not been

attained by any of them. Finally, the countries of the region have not established mechanisms to levy penalties for noncompliance with the proposed objectives.

The relevant question then is whether it makes sense to attempt to coordinate macroeconomic policies under regional integration agreements in Latin America. One answer is that this depends on the intended level of integration. If the agreement’s objective is a

⁴⁵ Penalties should be commensurate with the purpose. In some cases, penalties entailing publication of slippages might be more effective than pecuniary fines.

Figure 7.9 Exchange Rate Regimes in Latin America



¹ Members of a monetary union whose currency is fixed with the dollar.
 Source: IMF, *Exchange Rate Agreements, Annual Reports*, various years.

free trade area, it would not seem necessary to move forward with significant forms of coordination, except perhaps efforts designed to avoid tax wars between the member countries. Even for agreements that attempt to move toward higher forms of integration, it might be argued that macroeconomic coordination should be the result of greater independence. For instance, if volatility of members creates problems

under the agreement, a need for coordination would arise in due course. However, as mentioned, the absence of macroeconomic coordination mechanisms weakens the process of integration. While the example of Europe is commonly used to affirm that demand for coordination increases with the level of interdependence, the European case shows that there is an interactive process between coordination and interdependence that

makes them complementary. Therefore, the need arises to move forward jointly on both fronts.

Due to the magnitude of the external shocks and the absence of an exogenous coordination mechanism similar to the one provided for the exchange rate under the Bretton Woods agreement during the early years of European integration, Latin America faces greater difficulties than Europe in coordinating its macroeconomic policy.⁴⁶ What type of coordination is possible, then, in the subregional agreements in Latin America? Clearly, this will depend on the specific characteristics of each agreement, although certain general criteria can be established considering the international experience and the reality of the region. The European experience shows that there has been convergence as a result of establishing limits to the level of disequilibrium in the public accounts and inflation rates, as well as through the different attempts to coordinate exchange rate policy that culminated in the adoption of a single currency. The fact that Europe has not been willing or able to move forward toward higher levels of fiscal coordination might help to establish certain criteria for Latin America. It has been argued, however, that progress in areas that involve institutional change—such as independence for central banks and price and wage flexibility—would be more important than establishing goals for certain variables (Eichengreen, 1998). This is true to the extent that inflation and budget deficit reductions can be transient, and therefore it is better to emphasize the structural changes, such as independence of the central bank, which would make possible low long-term inflation rates. Regarding prices and wages, flexibility would make it easier to cope with asynchronous perturbations in a context of macroeconomic coordination.⁴⁷ However, there is no way to ensure that the institutional changes will be permanent, as many of them are based on a law.⁴⁸ Further, to the extent that the cooperative scheme requires generating confidence between the different countries involved, it would seem that this should be achieved by reducing volatility for a prolonged period of time so that stability becomes a public asset that instills confidence in the partners and will transcend the current government. Creating institutions that help maintain this stability in the medium term is of greater importance, and, accordingly, the institutions must be complementary with, rather than

substitute for, macroeconomic convergence. Similarly, creation of the institutions that facilitate flexibility in nominal variables would certainly support any coordination effort.

In addition to macroeconomic convergence and the institutional reforms necessary to help sustain it in the long term, moving toward mechanisms of exchange rate coordination would also be advisable. Exchange rate volatility not only weakens the possibility of enhanced trade integration, but also generates policy tensions within the agreement.

Macroeconomic convergence. No one wants to associate with an unstable country. Besides, it is difficult to imagine that macroeconomic policies could be coordinated with a highly volatile partner. Macroeconomic stability is therefore vital in order to make progress in the integration process. This is where macroeconomic convergence matters: there are certain economic criteria essential to achieve stability, which is crucial for any integration agreement to function. Stability is therefore an objective shared by each country and by the regional bloc as a whole. A realistic mechanism for regional coordination, therefore, is convergence of fiscal policies (deficit and debt) and inflation rates. The European experience has shown that the acceptable fiscal disequilibrium should entail the structural deficit rather than the current one, i.e., the deficit adjusted by the level of economic activity.⁴⁹ The history of Latin America suggests that the level of this deficit should be considerably lower than it is in Europe. Given the region's exposure to external shocks, a maximum level of current account disequilibrium, or at least

⁴⁶ This does not imply that the region has no other mechanisms for exogenous coordination, such as the impact on financial regulations and supervision mechanisms for substantial foreign investment flows in the financial area.

⁴⁷ From the standpoint of the change in relative prices, full price and wage flexibility would mean that changes in nominal exchange rates would not be necessary. Of course, in the case of contracts with nominal interest rates denominated in domestic currency, price deflation generates problems in the financial system beyond those produced by a flexible exchange rate.

⁴⁸ Argentina is one case where it can be argued that the low inflation rate for a decade ultimately proved to be transient. However, Argentina also showed that institutional reforms (such as the loss of the central bank's independence in 2001) also ultimately proved transient.

⁴⁹ Establishing the structural budget deficit as a target would eliminate objections involving the difficulty of implementing anticyclical fiscal policies, as has been the case in Europe.

of short-term external indebtedness, should also be considered.⁵⁰ Furthermore, as the weakness of financial systems in emerging countries has been one of the main reasons for instability, it is important to achieve minimum harmonization criteria in the areas of financial regulation and supervision.

In addition to moving forward with these criteria, it is important to know how to convert a regional macroeconomic convergence agreement and the appropriate institutional reforms for long-term stability into a relevant instrument within the region and within the international framework. To that end, beyond the incentives generated by agreements with the international credit institutions—which in any case function as “exogenous coordination” mechanisms—the region should set its own incentives. One possibility is to assign more importance to convergence agreements, for example, through public dissemination of the results and recommendations to be made by a group of technical experts to countries that have not observed the agreed-upon guidelines. Another possibility, which may be complementary, would be to create a regional fund for which access would be authorized, among other requirements, when the countries meet the conditions established under the macroeconomic convergence agreements. As noncompliance with the agreed terms would generate additional regional costs, the rules of macroeconomic convergence—and the related institutional reforms—would receive more serious consideration from the members, and from the international community.

Since coordination in complementary areas favors the integration process, which will increase the demand for macroeconomic coordination, it would be advisable for international organizations to support regional proposals aimed at that objective. The incentives that these organizations might provide, in addition to technical cooperation, include rapid-disbursement loans to support the implementation of common policies (rules of competition, trade standards, an institutional dispute settlement framework, establishment of regional technical agencies, regulation and supervision of the financial system, etc.) and institutional reforms that would help macroeconomic policy coordination (independence of central banks, labor regimes, relations between the national and subnational governments, the social security system, etc).

Exchange rate coordination. The literature on currency crises offers a number of explanations for exchange rate variability, and therefore its volatility within a bloc. In addition to these explanations, the existence of large external shocks and different exchange rate regimes within integration agreements must be considered. So far, we have discussed external shocks and synchronism in economic cycles. When different exchange regimes are involved, an external shock that has the same effect on the equilibrium exchange rate of two countries can change the current bilateral exchange rate between them, as is evident in the extreme case when one country has a fixed exchange rate and another a floating rate. Therefore, the existence of similar exchange regimes should eliminate at least one of the reasons for exchange rate variability within the bloc. When countries adopt managed floating regimes, coordinating exchange rates will require, in addition to macroeconomic convergence, substantial international reserves or the capacity to borrow in critical situations. This introduces limitations to those schemes aimed to reducing exchange rate volatility through the establishment of floating bands (the “European way”). However, this is particularly difficult, since there is greater capital mobility than during the 1970s and 1980s, and since, unlike Europe, there are no loan agreements between countries in the event of critical situations, and none of the currencies in the region can function as a reserve currency. On the other hand, the alternative of adopting a fixed exchange system, or even dollarization, entails significant costs in terms of flexibility to adjust to external shocks, as the recent Argentine experience shows. Thus, the decision to adopt a mechanism with these features cannot be based only on the attempt to reduce exchange rate volatility to promote trade integration.

In light of these observations, and the fact that the domestic dollarization component plays a central role in selecting an exchange regime or in the exchange rate variability that countries are prepared to accept in floating schemes, it does not appear realistic at this stage to propose exchange rate coordination mechanisms, unless sufficiently broad bands are involved. To the extent that different blocs must coexist

⁵⁰ See Zahler (2000).

with certain degrees of exchange volatility, and in light of the costs this imposes on the integration processes, transparent mechanisms to offset excessive changes in exchange parities should be considered. The compensation should be transient, not exceed the trade preference under the agreement, and take into account the exchange rate with the partner relative to the one with the rest of the world.⁵¹

Finally, since Latin America is exposed to large external shocks, particularly in terms of capital flows, reducing volatility and moving forward with macroeconomic coordination requires mechanisms that make it possible to manage abrupt changes in the

international environment. Beyond domestic policies directed toward that goal, progress must be made in redesigning the international financial architecture. While recommendations in this area are beyond the scope of this chapter, they clearly should include establishing effective financial facilities for automatic disbursement—in the event of liquidity restrictions and declines in terms of trade—as well as loans from development banks to partly offset movements of private capital flows. The possibility of creating regional funds to offset these shocks, while laying the groundwork for progress with coordination within the regional framework, should also be explored.⁵²

⁵¹ The more important factor is the exchange rate with the partner relative to the one with the rest of the world. In other words, similar exchange rate appreciation for members of the agreement with relation to the rest of the world should not be the object of compensation (Machinea, 2002).

⁵² Regarding regional funds, see Agosin (2001), Griffith-Jones (2001), Ocampo (1999) and Mistry (1999).

REFERENCES

- Agosin, Manuel. 2001. Fortalecimiento de la cooperación financiera regional. *Revista de la CEPAL*. April.
- Arora, Vivek. 1999. Exchange Arrangements for Selected Western Hemisphere Countries. International Monetary Fund. Mimeo.
- Barreix, Alberto, and Luiz Vilela. 2002. Coordinación tributaria e integración: Lecciones para el Mercosur. Inter-American Development Bank. Mimeo.
- Bayoumi, Tamin, and Barry Eichengreen. 1994. *One Money or Many: Analyzing the Prospects for Monetary Unification in Various Parts of the World*. Princeton University Studies in International Finance no. 76.
- Bayoumi, Tamin, and Paolo Mauro. 2002. The Suitability of ASEAN for a Regional Currency Arrangement. *World Economy* 24(7) July.
- Calvo, Guillermo. 2001. Globalization Hazard and Weak Government in Emerging Markets. Inter-American Development Bank. Mimeo. December.
- Calvo, Guillermo, and Carmen Reinhart. 2002. Fear of Floating. *Quarterly Journal of Economics*.
- Calvo, Guillermo, Leonardo Leiderman, and Carmen Reinhart. 1993. Capital Inflows and Real Exchange Appreciation in Latin America: The Role of External Factors. *IMF Staff Papers* 40(1).
- De Gregorio, José, and Rodrigo O. Valdes. 2001. Crisis Transmission: Evidence from the Debt, Tequila, and Asian Flu Crises. *World Bank Economic Review* 15(2).
- Devlin, Robert. 1989. *Debt and Crisis in Latin America. The Supply Side of the Story*. Princeton, NJ: Princeton University Press.
- Dornbusch, Rudiger, Yung Chul Park, and Stijn Claessens. 2000. Contagion: Understanding How It Spreads. *World Bank Research Observer* 15(2) August.
- Eichengreen, Barry. 1993. European Monetary Unification. *Journal of Economic Literature* 31(3) September.
- _____. 1998. *Does Mercosur Need a Single Currency?* Center for International and Development Economics Research Paper C98-103, University of California, Berkeley.
- Eichengreen, Barry, Galina Hale, and Asoka Mody. 2000. Flight to Quality. Paper presented at the conference on "International Financial Contagion: How it Spreads and How it Can Be Stopped." World Bank, Asian Development Bank and International Monetary Fund.
- Eichengreen, Barry, Andrew Rose, and Charles Wyplosz. 1996. *Contagious Crises*. National Bureau of Economic Research Working Paper 6370, Cambridge, MA.
- Estevadeordal, Antoni, Brian Frantz, and Raúl Sáez. 2001. Exchange Rate Volatility and International Trade in Developing Countries. Inter-American Development Bank. Mimeo.
- Fanelli, José M. 2001. *Coordinación de políticas macroeconómicas en el Mercosur*. Siglo Veintiuno de Argentina Editores and Red Mercosur.
- Fernández-Arias, Eduardo, Ricardo Hausmann, and Ernesto Stein. 2001. Courting FDI: Is Competition Bad? Inter-American Development Bank. Mimeo.
- Fernández-Arias, Eduardo, Ugo Panizza, and Ernesto Stein. 2002. Trade Agreements, Exchange Rate Disagreements. Inter-American Development Bank. Mimeo.
- Forbes, Kristin, and Roberto Rigobon. 2000. *Contagion in Latin America: Definitions, Measurement, and Policy Implications*. NBER Working Paper no. 7885, September.
- Frankel, Jeffrey, and Andrew K. Rose. 1998. The Endogeneity of the Optimum Currency Area Criteria. *Economic Journal* 108(449) July.
- Frankel, Jeffrey, and Shang-Jin Wei. 1998. Regionalization of World Trade Currencies: Economies and Politics. In Jeffrey Frankel (ed.), *The Regionalization of the World Economy*. Chicago: University of Chicago Press.
- Froot, Kenneth A., Paul G. J. O'Connell, and Mark S. Seasholes. 2001. The Portfolio Flows of International Investors. *Journal of Financial Economics* 59(2) February.

- Ghymers, Christian. 2001. La problemática de la coordinación de políticas económicas. ECLAC Series on the Macroeconomics of Development.
- Giordano, Paolo, and Josefina Monteagudo. 2002. Exchange Rate Instability, Trade and Regional Integration. Inter-American Development Bank. Mimeo.
- Glick, Reuven, and Andrew K. Rose. 1999. Contagion and Trade: Why Are Currency Crises Regional? *Journal of International Money and Finance* 18(4) August.
- Goodhart, Charles. 1995. The Political Economy of Monetary Union. In Peter Kenen, *Understanding Interdependence*. Princeton, NJ: Princeton University Press.
- Griffith-Jones, Stephany. 2001. Reforms of the International Financial Architecture: Views, Priorities and Concerns of Governments and the Private Sector in the Western Hemisphere and Eastern Europe. Institute of Development Studies, University of Sussex.
- Hausmann, Ricardo, Ugo Panizza, and Ernesto Stein. 2001. Why Do Countries Float the Way they Float? *Journal of Development Economics* 66(2).
- Hernández, Leonardo, and Pamela Mellado. 2002. ¿Incrementan los acuerdos de integración regional la interdependencia financiera? Inter-American Development Bank. Mimeo.
- Heymann, Daniel. 2001. *Regional Interdependencies and Macroeconomic Crises. Notes on Mercosur*. ECLAC Studies and Perspectives Series no. 5. ECLAC, Buenos Aires.
- Inter-American Development Bank (IDB). 1995. *Overcoming Volatility. Economic and Social Progress Report in Latin America*. Washington, DC: IDB.
- International Monetary Fund (IMF). 2001a. *Direction of Trade Statistics*. Washington, DC: IMF.
- . 2001b. *International Financial Statistics*. Washington, DC: IMF.
- . 2001c. *World Economic Outlook*. Washington, DC: IMF.
- Krugman, Paul. 1993. Lessons of Massachusetts for EMU. In F. Giovazzi and F. Torres (eds.), *The Transition to Economic and Monetary Union in Europe*. New York: Cambridge University Press.
- Machinea, José Luis. 2002. La volatilidad cambiaria y la coordinación macroeconómica en el Mercosur. Inter-American Development Bank. Mimeo.
- Mckenzie, Michael D. 1999. The Impact of Exchange Rate Volatility on International Trade Flows. *Journal of Economic Surveys* 13(1) February.
- Mistry, Percy S. 1999. Coping with Financial Crisis: Are Regional Arrangements the Missing Link? In UNCTAD, *International Monetary and Financial Issues for the 1990s*, vol. 10. Geneva.
- Ocampo, José Antonio. 1999. Reforming the International Financial Architecture: Consensus and Divergences. CEPAL Serie-Temas de Coyuntura no. 1.
- . Forthcoming. Developing Countries' Anticyclical Policies in a Globalized World. In Amitara Duff and Jaime Ros (eds.), *Development Economics and Structuralist Macroeconomics Essays in Honour of Lance Taylor*. United Kingdom: Edward Elgar.
- Panizza, Ugo, Ernesto Stein, and Ernesto Talvi. 2000. Measuring Costs and Benefits of Dollarization: An Application to Central American and Caribbean Countries. Inter-American Development Bank. Mimeo.
- Steinherr, A. 1984. Convergence and Coordination of Macroeconomic Policies: Some Basic Issues. *European Economy* no. 20, July.
- World Bank. 2001. *World Development Indicators*. Washington, DC: World Bank.
- Zahler, Roberto. 2000. Estrategias para una cooperación/unión monetaria. *Integración y Comercio* no. 13, January-April. Inter-American Development Bank.