Western Hemisphere Department

CENTRAL AMERICA

Economic Progress and Reforms

Dominique Desruelle and Alfred Schipke
Editors

INTERNATIONAL MONETARY FUND

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Foreword

Central America has come a long way toward creating the conditions for dynamic and open societies. Political dialogue has replaced civil conflicts, the smooth transition of power from one administration to the next has become the norm, and there is broad consensus on the importance of maintaining macroeconomic stability, while making poverty reduction a top priority. This has been accompanied by substantial progress in economic reforms, at both the national and the regional level.

The fruits of these efforts are now becoming increasingly apparent. Over the past few years, Central America has experienced a strong pickup in economic growth, sustained capital inflows, and some reductions in poverty rates. Still, there is further work to be done. The recent surge in petroleum and food prices, combined with the potential adverse implications of a protracted U.S. slowdown could put at risk the hard-won gains of recent years and pose new and complex policy challenges. The good news is that, today, Central America is in a better condition to weather the storm and the authorities are taking swift actions to mitigate the impact of external shocks on the poor, while preserving economic stability. But at the same time, the region needs to continue implementing productivity enhancing reforms and reducing income inequality in order to lift people out of poverty.

The IMF stands ready to continue supporting the region through analytical work, policy advice, technical assistance, and, where needed, financial support. To this end, we plan to establish a regional technical assistance center for Central America, Panama, and the Dominican Republic (CAPTAC-DR) in Guatemala in early 2009, that should allow us to further deepen and strengthen our technical assistance across the region.

Dominique Strauss-Kahn
Managing Director
International Monetary Fund

* * *

Our publications on Central America have become the cornerstone of our analytical work and are an integral part of our policy dialogue with the authorities in the region. This volume is the third publication on Central America that was coordinated by our team in the Western Hemisphere Department, addressing a number of issues that are currently high on the authorities' policy agenda.

For example, at a time when Central America has signed a framework agreement for the establishment of a customs union and started negotiations on an Association Agreement with the European Union, a number of chapters in this publication discuss integration-related topics. They include the potential spillovers from a protracted slowdown of the U.S. economy and practical issues related to the implementation of the customs union. Because poverty reduction remains the number one challenge for the region, the publication also analyzes whether and to what degree fiscal policy can play a role in reducing inequality and improving the living conditions of the poor. Furthermore, with a view to improving the growth potential of the economy, the publication looks at issues related to the development of the financial system.

Central America has advanced significantly over the past decade. It will now be important to maintain the reform momentum to further reduce poverty and remaining vulnerabilities.

Anoop Singh
Director, Western Hemisphere Department
International Monetary Fund

Preface

This publication reviews Central America's integration efforts, its cyclical links with the United States, and progress made in implementing key economic reforms in selected areas, and complements two previous volumes on Central America (IMF Occasional Papers Nos. 243 and 257). The publication team was led by Dominique Desruelle and Alfred Schipke, respectively Chief of the Western Hemisphere Department's Central America Division and Regional Resident Representative in Central America, and includes authors from the Fiscal Affairs, Monetary and Capital Markets, and Western Hemisphere Departments.

The authors would like to thank Anoop Singh and David Robinson for their comments and guidance, and also many colleagues in the IMF's functional departments for their feedback. The authors would also like to acknowledge the comments and suggestions received from the authorities in the region, as well as from participants at the Sixth Annual Regional Conference on Central America, Panama, and the Dominican Republic in San José, Costa Rica (June 28–29, 2007).

Special thanks go to Kate Jonah, Xiomara Jordan, Carmen Sanabia, and Alicia Etchebarne-Bourdin for producing the print-ready manuscript under extremely tight deadlines. Also, the authors would like to express their gratitude to Ewa Gradzka and Mynor Meza Duering for their outstanding research support. Marina Primorac of the External Relations Department coordinated production of this publication and Sheila Gagen of EEI Communications spearheaded the editing process.

CHAPTER

1 Introduction and Overview

Dominique Desruelle and Alfred Schipke

Central America[1] has made substantial progress over the past years in moving economic reforms forward and deepening regional and global integration. As a result, Central America has benefited from continued macroeconomic stability and an improved growth performance. Despite this progress, the region is still vulnerable to adverse shocks and faces widespread poverty. The challenge now is to strengthen further the region's resilience to shocks and improve the living standards of all.

These are some of the issues addressed in this publication, which complements two previous IMF volumes on Central America.[2] After rapidly reviewing recent developments and the economic outlook, this chapter provides a brief overview of the publication. Because Central America is moving forward with economic integration, and because national policymaking is increasingly confronted with integration-related vulnerabilities, Chapter II analyzes Central America's process of integration and policy coordination. It highlights that Central America is a prime candidate for increased integration, but that the process needs to be accompanied by increased coordination of public policies at the regional level.

[1]Unless otherwise stated, in this publication Central America refers to Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and the Dominican Republic. Although for historical reasons, Panama is not formally part of Central America, it has very strong links to the region, especially in the financial sector, and is a member of the Central American Integration System. The same is true for the Dominican Republic, which participates actively in a number of Central American regional institutions, such as the Central American Monetary Council, the Council of Finance Ministers, and the Council of Financial Sector Superintendents.

[2]The first volume, edited by Rodlauer and Schipke (2005), was published as IMF Occasional Paper No. 243 and covers the following topics: (1) the macroeconomic implications of CAFTA-DR, (2) trade liberalization and tax coordination, (3) fiscal sustainability—a value-at-risk approach, (4) regional integration and exchange rate arrangements, (5) regional integration and financial system issues, (6) regional issues in macroeconomic statistics, and (7) the political economy of implementing pro-growth and anti-poverty policy strategies in Central America. The second volume, edited by Desruelle and Schipke (2007), was published as IMF Occasional Paper No. 257 and covers (1) growth performance, (2) pension reform, (3) assessing sovereign debt structures, (4) the development of public debt markets, and (5) characterizing monetary policy.

Given strong economic linkages with the United States, Chapter III then assesses the extent to which business cycles in Central America are subjects to spillovers from the United States. It finds that a cyclical fall in output in the United States typically has a significant and adverse impact on most countries in the region. Central America's high levels of poverty and income inequality place fiscal issues at the center of the policy debate. A key component of this debate is whether fiscal policies benefit the poor. Chapter IV analyzes the distributional effects of taxation and social spending in Central America, demonstrating that increased taxation combined with higher social spending can have a strong effect on reducing poverty.

The region's decision to move forward with the establishment of a customs union will further facilitate intraregional trade, but its implementation also presents the challenge of ensuring that the region's tax revenue are protected. Chapter V highlights important tax administrative requirements for establishing a Central American customs union based on international experience. Building on the recent progress, the chapter points out that important decisions still have to be made, and suggests that the implementation of the customs union should be gradual and go hand-in-hand with institution building. Following a discussion of financial sector issues related to banking and public debt markets in previous volumes, Chapter VI takes stock of Central America's private debt and equity markets and identifies key impediments for the development of these markets. Given the inherent size limitations of domestic markets, one of the recommendations of the chapter is to consider taking advantage of existing exchanges in Latin America or developing of a regional securities market.

Recent Developments and Economic Outlook

Until mid-2007, Central America benefited from a favorable global environment but more recently has been confronted with two significant external shocks—weakening external growth and commodity price hikes. The United States, the region's main trading partner, is experiencing an economic downturn, which was sparked by the bursting of the housing market bubble and ensuing financial turmoil. At the same time, the fuel and food commodity price boom has had a largely negative impact on the region. While the region is a net food exporter, it is a net importer of cereals, whose price rose dramatically in 2007; furthermore, as a net oil importer, the region has seen its oil import bill rise dramatically, from 5.7 percent of GDP in 2004 to 8.3 percent of GDP in 2007.

Against this backdrop, Central America's economic performance in 2007 was still robust, but the region also experienced higher inflation. On average the region posted a growth rate of 6.8 percent in 2006 and 6.7 percent in 2007 (Table 1.1, Figure 1.1), with particularly strong growth in Costa Rica, Honduras, the Dominican Republic, and Panama. As in other parts of the world, controlling

Table 1.1. Main Economic Indicators

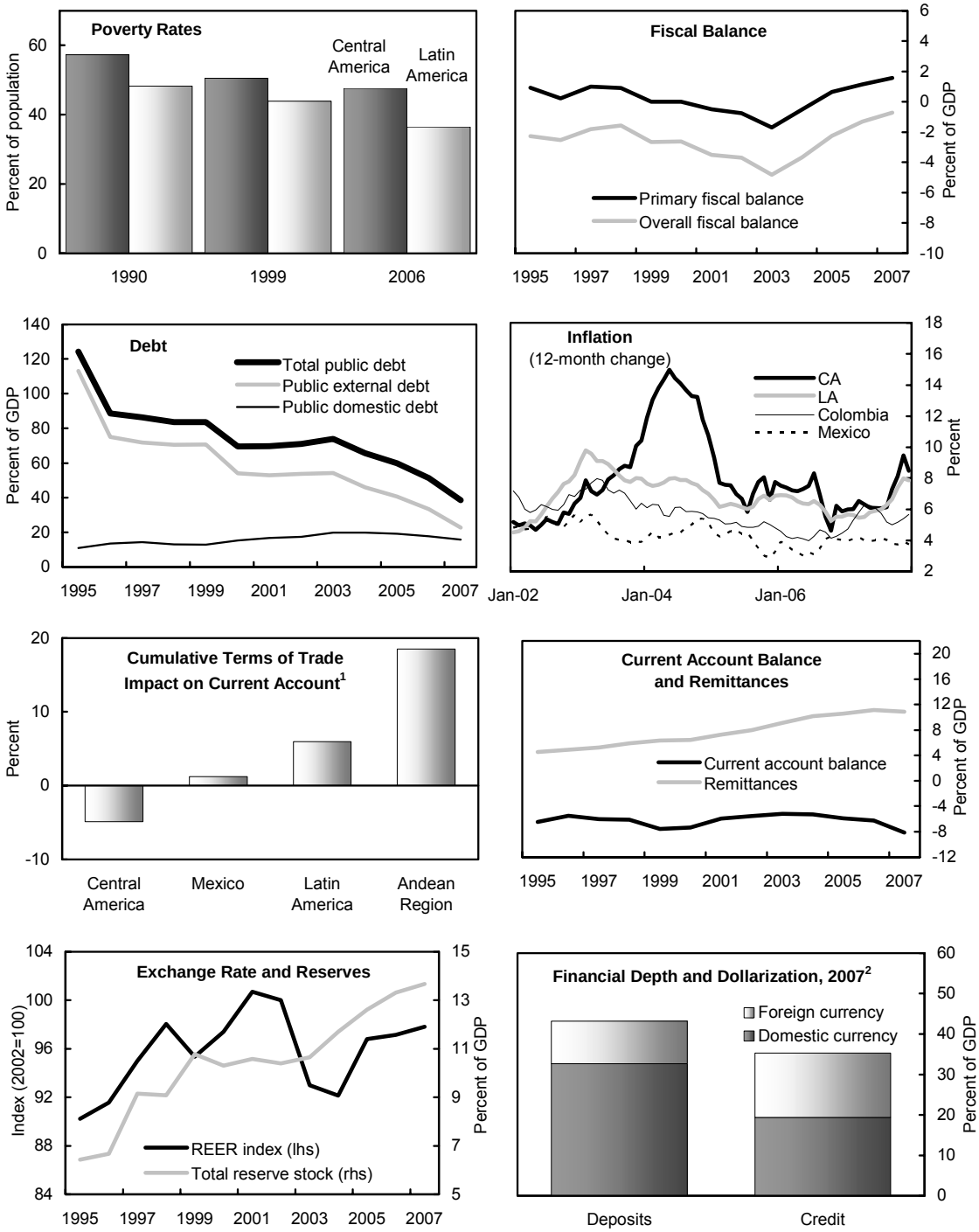
	Output Growth (annual rate in percent)				Inflation (e.o.p. rate in percent)[2]				Private Credit Growth (change in percent of GDP)			
	1995–2000 Avg.	2001–2005 Avg.	2006	2007	1995–2000 Avg.	2001–2005 Avg.	2006	2007	1995–2000 Avg.	2001–2005 Avg.	2006	2007
Central America[1]	**4.9**	**3.5**	**7.4**	**6.9**	**8.4**	**10.0**	**6.0**	**9.0**	**2.0**	**0.1**	**1.3**	**3.5**
CA simple average	**4.6**	**3.6**	**6.8**	**6.7**	**8.7**	**8.2**	**6.0**	**9.3**	**2.2**	**0.0**	**2.0**	**3.8**
Costa Rica	4.8	4.1	8.8	6.8	13.4	11.5	9.4	10.8	1.7	2.3	2.2	6.4
Dominican Republic	7.1	3.5	10.7	8.5	7.2	18.7	5.0	8.9	1.5	–1.0	–1.3	2.0
El Salvador	3.6	2.3	4.2	4.7	4.7	3.3	4.9	4.9	2.4	–0.4	–0.3	–0.5
Guatemala	3.7	3.0	5.2	5.7	7.3	7.8	5.8	8.7	1.0	1.4	2.0	4.0
Honduras	3.2	4.7	6.3	6.3	16.9	8.1	5.3	8.9	2.0	0.8	6.1	7.1
Nicaragua	5.2	3.2	3.9	3.7	10.0	6.8	9.4	16.9	1.8	–0.3	4.3	5.3
Panama	4.9	4.3	8.7	11.2	1.0	1.3	2.2	6.4	5.3	–3.0	1.3	2.4
Memorandum												
Latin America and Caribbean	**2.8**	**2.8**	**5.4**	**5.6**	**13.6**	**7.6**	**5.0**	**6.2**	**–2.4**	**–0.4**	**2.9**	**4.5**
United States	**3.8**	**2.3**	**2.9**	**2.2**	**2.6**	**2.6**	**2.6**	**4.1**	**0.9**	**1.4**	**1.9**	**2.6**

	Ext. Current Account (in percent of GDP)				Export Growth (US$, in percent)				Reserves (in percent of M2)			
	1995–2000 Avg.	2001–2005 Avg.	2006	2007	1995–2000 Avg.	2001–2005 Avg.	2006	2007	1995–2000 Avg.	2001–2005 Avg.	2006	2007
Central America[1]	**–5.0**	**–4.1**	**–4.9**	**–6.7**	**12.4**	**4.8**	**11.4**	**11.9**	**21.5**	**25.6**	**30.5**	**32.0**
CA simple average	**–6.5**	**–5.3**	**–5.5**	**–7.8**	**13.8**	**6.1**	**11.9**	**12.3**	**24.7**	**30.6**	**35.3**	**36.3**
Costa Rica	–3.4	–4.6	–4.7	–5.8	13.4	4.6	12.7	15.6	20.9	21.6	28.3	31.2
Dominican Republic	–2.3	0.7	–3.5	–5.6	8.9	1.6	7.1	4.4	11.8	11.1	21.2	25.0
El Salvador[3]	–1.8	–3.5	–3.8	–4.8	11.7	3.9	21.8	13.8	. . .	. . .	. . .	. . .
Guatemala	–4.5	–5.2	–5.0	–5.0	11.0	4.0	9.3	18.0	24.3	34.3	30.5	28.7
Honduras	–4.2	–5.5	–4.7	–10.0	33.3	8.8	2.9	7.7	33.7	52.0	52.0	45.5
Nicaragua	–22.8	–15.4	–13.2	–17.3	18.0	14.0	19.6	17.0	32.7	33.9	44.5	51.2
Panama[3]	–6.4	–3.8	–3.2	–6.0	0.5	5.8	9.7	9.4	. . .	. . .	. . .	. . .
Memorandum												
Latin America and Caribbean	**–-2.9**	**–0.1**	**1.6**	**0.5**	**11.0**	**9.9**	**19.0**	**12.8**	**29.0**	**33.4**	**33.1**	**42.8**

	Public Sector Balance (in percent of GDP)				Public Sector Debt (PSD) (in percent of GDP)				Foreign Currency PSD (in percent of total PSD)			
	1995–2000 Avg.	2001–2005 Avg.	2006	2007	1995–2000 Avg.	2001–2005 Avg.	2006	2007	1995–2000 Avg.	2001–2005 Avg.	2006	2007
Central America[1]	**–2.1**	**–3.6**	**–1.7**	**–0.9**	**63.6**	**55.1**	**46.1**	**37.4**	**76.1**	**73.2**	**63.0**	**59.7**
CA simple average	**–2.2**	**–3.6**	**–1.3**	**–0.8**	**89.3**	**68.1**	**51.2**	**38.6**	**76.1**	**77.1**	**69.6**	**65.0**
Costa Rica	–3.4	–4.2	–0.5	0.6	51.0	58.1	51.0	44.2	38.0	40.8	43.5	40.0
Dominican Republic	–1.6	–4.4	–3.5	–1.7	30.8	41.3	44.0	39.0	. . .	67.0	54.8	53.3
El Salvador[3]	–2.2	–3.7	–2.9	–2.4	29.7	40.2	41.9	41.1	. . .	. . .	. . .	. . .
Guatemala	–1.3	–1.5	–1.4	–1.0	16.3	18.9	21.9	21.0	94.1	94.8	68.5	66.7
Honduras	–3.1	–3.2	–1.7	–2.3	88.3	73.3	35.6	24.4	86.8	85.9	81.2	65.2
Nicaragua	–3.6	–4.6	0.2	1.2	341.9	180.7	106.5	50.2	. . .	96.9	100.0	100.0
Panama[3]	–0.6	–3.6	0.5	0.4	66.9	63.8	57.6	50.1	. . .	. . .	. . .	. . .
Memorandum												
Latin America and Caribbean	**–4.1**	**–2.9**	**–1.0**	**–1.3**	**49.2**	**61.8**	**51.4**	**50.4**	**32.4**	**51.5**	**30.9**	**27.0**

Sources: IMF *World Economic Outlook;* and IMF staff estimates.
[1]Weighted average. Weighted by PPP GDP.
[2]End-of-period rates, i.e., December on December.
[3]Fully dollarized. The concept of reserve coverage and foreign-currency-denominated public sector debt (i.e., currency risk) is not relevant.

Figure 1.1. Selected Macroeconomic Indicators



Sources: IMF, *World Economic Outlook* ; IMF, *International Financial Statistics* ; IMF, *Information Notification System* ; and Economic Commission for Latin America and the Caribbean.

Note: rhs = right hand scale; lhs = left hand scale; CA = Central America; LA = Latin America.

[1]Cumulative first-round impact on current accounts resulting from changes in primary commodity prices, for 2007, in percent of 2002 GDP.

[2]Excludes Panama and El Salvador.

inflation has been a major policy challenge. In part driven by higher international food and oil prices, inflation rose across the region, with average annual inflation of about 9 percent at end-2007, compared with an average of 6 percent at end-2006.

Continued fiscal prudence, improvements in tax and customs administration, and high growth resulted in a strong fiscal performance. Average public sector deficits fell to 0.7 percent of GDP in 2007 from 1.8 percent of GDP in 2006. With a slight increase in non-interest expenditure as a share of GDP in 2007, this further improvement in fiscal balances was driven by a modest decline in interest expenditure and, predominantly, by an increase in revenue. There are indications that a significant portion of the observed increase in revenue has been structural in a number of countries (Vladkova Hollar and Zettelmeyer, 2008; Cubero and Sowerbutts, 2008). Public debt levels continued their downward path from 46 percent of GDP in 2006 to 37 percent in 2007. Efforts to reduce vulnerabilities continued in all countries, and the share of foreign-currency-denominated debt fell from 63 percent in 2006 to just under 60 percent of total public debt in 2007.

While external positions generally remained strong, the regional current account deficit widened. On average, current account deficits increased from 5 percent of GDP in 2006 to 6.7 percent of GDP in 2007. The rising oil import bill in particular had an important effect in all countries of the region, although in some countries strong export growth and remittance flows partly offset the negative terms of trade shock. Despite strong competition from China, which adversely affected textile exports to the United States, overall exports grew by over 11 percent in both 2006 and 2007. As capital inflows to the region continued, international reserves remained at high levels, rising slightly in proportion to broad money.

The financial systems in the region were not directly affected by global market turmoil. In particular, there has been no evidence of exposure to the U.S. subprime market**.** Private sector credit, however, grew rapidly over the past two years, especially in Costa Rica, Honduras, Guatemala, and the Dominican Republic, reaching 24 percent on average in 2007 compared with 19 percent in 2006.

Faced with the prospect of a global growth slowdown, a U.S. downturn, high commodity prices, and continued fragility in global financial markets, Central America's growth outlook has moderated. Nevertheless, regional growth is projected to be still robust in 2008; and, under this scenario, most countries in the region would still have a positive output gap by the end of this year.[3] At the same time, actual inflation and inflation expectations have risen sharply, and the rise in food prices is threatening to undermine recent progress in reducing poverty. Thus, in the short term, macroeconomic policies will need to be oriented primar-

[3]Based on IMF (2008).

ily toward bringing inflation under control and easing the impact of the food price shock on the poor in a fiscally responsible manner. In addition, policymakers will need to continue to closely monitor external developments, which remain highly volatile, and be prepared to adapt domestic policies accordingly.

Overview

Moving Forward with Economic Integration and Cooperation

In parallel with increased global competition, Central America's regional integration is advancing rapidly, both with respect to policies and on the ground. In addition to moving forward with the implementation of the free trade agreement with the United States (Central America–Dominican Republic–United States Free Trade Agreement, CAFTA-DR), policymakers signed a framework agreement to establish a Central American customs union and have started negotiations on an association agreement with the European Union. At the same time, private sector companies and financial institutions are increasingly operating throughout the region. The Central American countries appear to be ideal candidates to benefit from increased integration because they share many characteristics in terms of size, proximity to the United States, history, and language. There are, however, differences in terms of economic development, with Costa Rica being the most advanced economy in the region. In addition to being able to take advantage of scale economies and specialization, a unified region with almost 40 million people would be able to represent its economic interests more effectively at the global level.

Not surprisingly, Central America has advanced the most in the area of trade, with respect to both intraregional trade and the global economy (Chapter II). This reflects a long process of trade liberalization that culminated in the entry into force of CAFTA-DR. Increased trade integration and Central America's objectives of moving forward with the establishment of a customs union and an Association Agreement with the European Union, however, calls for more fiscal coordination, among other things, to avoid harmful tax competition and minimize the impact of the fiscal implication of further trade liberalization. As trade integration increases, there might also be scope to seek convergence of specific taxes to minimize contraband and, still at a later stage, to develop a common framework for other indirect taxes. Although the Central American Council of Finance Ministers was established only a few years ago, it has become a crucial forum to foster fiscal coordination.

Financial sector integration also has been advancing rapidly over the past couple of years. After a first stage of integration that was dominated by the expansion of regional institutions with local capital, Central America is now experiencing a striking surge in the activities of international banks. This is a welcome development because it will foster the dissemination of international standards in terms

of capitalization, risk management, and corporate governance, and may result in more competition for the provision of financial services. At the same time, it presents challenges in terms of both supervision and regulation. The authorities at the regional level have already initiated a number of projects to address some of these issues (such as the adoption of a regional memorandum of understanding for consolidated supervision of regionally operating banks) and are currently assessing further the implications of this development for local regulatory frameworks and prudential requirements.

Successful integration also calls for appropriate institutions to foster exchanges of information, promote policy coordination, and facilitate the adoption of common standards, regulation, and norms. In key economic policy areas, Central America is substantially advanced in that it already has regional forums, such as the ones for finance ministers, central bank presidents, ministers of economy and trade, and financial sector superintendents, and their corresponding executive secretariats, including the Secretariat for Economic Integration (SIECA). As integration continues to move forward, these institutions will have to play an increasingly important role, spearheading policy coordination and standardization.

Central America's Regional Trends and U.S. Cycles

The economies of Central American and the United State are closely intertwined. The open nature of the region's economies, combined with the geographic proximity to the United States, has resulted in a number of transmission channels through which U.S. cyclical fluctuations could impact the region. As the implementation of CAFTA-DR moves forward, the links between the two regions are likely to become even stronger. The main channels through which shocks are transmitted are trade, financial flows, and remittances. An analysis of the links between the two regions is particularly timely given the significant U.S. slowdown and the resulting spillovers posing challenges for policymakers in Central America.

Central America has both strong trade and financial sector links to the United States. The United States is by far Central America's main export market. Since the early 1980s, the share of total merchandise exports to the United States has averaged about 40 percent, ranging from about 30 percent in Nicaragua to 50 percent in Honduras. The use of the U.S. dollar as the official currency in El Salvador and Panama, high levels of financial dollarization in some other countries of the region, and current exchange rate policies imply that changes in financial conditions in the United States are rapidly transmitted to Central America via interest rates. Financial sector links with the United States are further reinforced by rising foreign ownership of domestic banks.

Remittance flows sent by migrant workers to Central America have grown rapidly and now account for a large share of GDP and financial flows. With the exception of Costa Rica and Panama, remittances are sizable. In some cases, they

dwarf foreign direct investment, ranging from 8 percent of GDP in the Dominican Republic to 20 percent of GDP in Honduras in 2007.[4] Although the empirical evidence is still ambiguous, one would expect that in the short term, cyclical fluctuations in the United States are likely to influence remittance flows while, over the longer term, socioeconomic and institutional factors in both the host and recipient country are likely to be dominant.

Given these links, it should be no surprise that the Central American economies appear to be strongly influenced by cyclical fluctuations in the United States. Historical data show that business cycles in Central America move in the same direction as those in the United States. Based on empirical estimates discussed in Chapter III, a growth slowdown of 1 percentage point in the United States would typically be associated with a cyclical fall in output growth of 0.5 to 1 percentage point in most of the countries of the region, with the largest effects being felt in Costa Rica and El Salvador. In light of this dependence, a prolonged downturn in the United States would be expected to have significant implications for the region.

Equity and Fiscal Policy: Income Distribution Effects of Taxation and Social Spending

With the exception of Costa Rica, almost 50 percent of Central America's population lives in poverty, and the region faces high levels of income inequality. This situation calls for appropriate public policies to improve the living conditions of the poor. Fiscal policy in particular is at the center of this dialogue because taxation and social spending can have important effects on the market-determined distribution of income. As Chapter IV shows, improving income distribution is best achieved on the expenditure side, while taxes should be collected in the most efficient way.

Central American tax systems are generally regressive, with the exception of that in Panama. This is because of the prevalence of value-added (VAT) and sales taxes, whose effective tax rates relative to income are higher for poorer than richer households in most countries. However, regardless of their incidence, tax systems in Central America have only a small overall redistributive impact, consistent with international experience.

Public social spending in Central America, in contrast, is progressive relative to income. This said, there are important differences in the incidence of various components of social spending. Whereas spending on health and primary education is strongly progressive, social security and public pension systems are pronouncedly regressive, as is spending on tertiary education. The impact of social

[4]Excluding Panama and Costa Rica. Panama's remittance inflows are insignificant. Costa Rica in turn is both a recipient and host country of remittances.

assistance transfers is mixed and generally small, given the limited resources devoted to them.

The combined redistributive effect of taxation and social spending is progressive in all countries of the region, highlighting the fact that the redistributive potential of social spending is much larger than that of taxation. However, the distributional impact of total social spending in Central America is diluted by its relatively low level and, in some cases, by poor targeting, thus limiting its impact on high pre-fiscal-policy levels of poverty.

Reforms combining efficient taxation and well-targeted spending could significantly reduce poverty in the region. For instance, a reform that increases tax revenues through the VAT and devotes the proceeds to social spending would unambiguously result in an improvement in the income of the poorest households. A conservative simulation exercise shows that an increase in tax revenue collection of 1 percent of GDP that is distributed evenly in absolute terms to all income groups (in other words, that does not specifically target the poor) would still increase the income of the poorest 20 percent of the population by up to 6 percent.

Central American Customs Union and Issues for Tax and Customs Administration

In December 2007, the governments in the region[5] signed a framework agreement for the establishment of a Central American customs union, further demonstrating that the region has embarked on a gradual but dynamic process of deepening regional integration. The agreement defines important characteristics of the future customs union, such as the elimination of quantitative restrictions and charges that are equivalent to customs duties, the adoption of common legal and normative standards, and the strengthening of the existing institutional framework. With respect to the internal customs posts, the authorities decided to convert them gradually into trade facilitation centers, allowing them to keep collecting internal taxes and controlling fraud. Because taxes collected at the border will be transferred to the countries of destination, Central America opted against a common fund, which would have distributed revenue based on a particular formula.

The framework agreement is an important first step, but a number of important decisions are still needed regarding the customs union, especially in relation to tax and customs administration. Chapter V reviews the international experience in establishing customs unions, including the European Union, the South African Customs Union, the Gulf Cooperation Council, and the Southern Common Market (Mercosur). International experience suggests that institution building is

[5]The agreement was signed by Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua.

critical to support the process, that internal customs controls typically stay in place for long periods after the launch of customs unions, and that there is a need for a coherent and integrated strategy to adopt minimum legal and administrative standards.

Given Central America's circumstances, a gradual approach to establishing the Central American customs union appears appropriate. Such an approach could include the following steps: (1) a free trade agreement with free circulation of goods, which will require harmonizing technical restrictions; (2) temporary provisions for sensitive goods or sectors, along with a clear definition of the role of internal customs posts; (3) a gradual convergence of the free trade agreements signed by each country with nonmember countries, especially with respect to the level of tariffs, convergence deadlines, rules of origin, and the volume of goods involved; (4) the establishment of a Central American External Tariff (CET) that is eroded as little as possible by discrepancies, asymmetries, and bilateral free trade treaties; (5) the definition of a regional trade policy; and (6) institutional capacity building to support the entire process, based on staff training, integrated information technology systems, risk analysis, harmonized procedures, and the achievement of minimum standards in all key areas.

Financial Sector Development: Private Debt and Equity Markets

Financial sector intermediation in Central America takes place primarily through the banking sector. Assets in the banking system, which amount to 80 percent of regional GDP, are substantially higher than those of financial institutions, such as pension funds, insurers, and mutual funds. Regional banks dominated the banking system until recently, but an increasing presence of large international banks has changed this landscape. In line with other small developing countries, the allocation of savings and investment via capital markets is still very limited.

As Chapter VI reveals, while public debt markets are sizable, private equity and corporate debt markets are significantly underdeveloped. There are no equity markets in four countries of the region (Guatemala, Honduras, Nicaragua, and the Dominican Republic), and in the others, the markets are small and shrinking. At end-2006, fewer than 100 companies were listed in the entire region and market concentration was very high, with the top five companies making up, for example, two-thirds of market capitalization in Costa Rica and Panama. Furthermore, trading in secondary markets is almost nonexistent.

The importance of corporate bond markets varies substantially in size and importance across countries. Costa Rica accounts for 60 percent of all corporate debt securities outstanding in the entire region, faring relatively well compared with other emerging markets, followed by Panama and El Salvador. However, most debt securities have short maturities, and banks in the region account for the bulk of the demand. As in the case of equity markets, corporate debt markets in the other Central American countries remain at an incipient stage.

As regards corporate debt, these specific constraints include an unwillingness to disclose information to the public, ample liquidity in local and foreign banking systems, and several legal and regulatory shortcomings. For instance, in Guatemala, only financial institutions are authorized to raise funds in public markets. As concerns equities, some of the key obstacles have been the predominance of family ownership, poor corporate governance, memories of political and financial crises, and a weak institutional investor base.

There is no simple formula for the development of Central America's private debt and equity markets. However, a number of measures would be worth implementing quickly because they are not only critical for the development of capital markets but also important for the improvement of the business environment in general. For example, there is substantial scope in Central America to continue improving accounting and auditing standards as well as upgrading the frameworks for the establishment of companies, the execution of collateral, and the initiation of bankruptcy proceedings. More specific measures for the development of capital markets would, at a minimum, require improvements in security laws and regulation—which, in the case of mutual funds, asset-backed securities, and derivatives, are completely absent in some of the countries—as well as in infrastructure, such as clearing and settlement systems.

Countries of the region are too small to support a viable securities market each in the long run. One option could be to take advantage of existing exchanges in Colombia or Mexico. Alternatively, Central America as a whole could consider developing a regional securities markets, balancing the benefits from economies of scale against implementation and coordination costs. Developing a regionally integrated market would require the harmonization of securities laws and regulations, approval and listing processes, supervision standards, disclosure norms and corporate governance. In addition, a high degree of supervisory cooperation and political backing would be essential to underpin efforts by securities' exchanges and their members to harmonize, link, or integrate their operations. As Costa Rica, El Salvador, and Panama have already made significant efforts to move into this direction, and considering the length of this process, it may be advantageous for other countries to join these efforts.

The Road Ahead

Central America's commitment to implementing economic reforms over the past years has had significant positive results. The region has benefited from a strong growth performance, lower public debt levels, more solid financial systems, and improved external positions. Improved economic fundamentals and policy frameworks in turn have led to improved credit ratings and general optimism about the region's economic prospects, as reflected in increased investments by foreign companies, international financial institutions, and fund managers.

Today the region is in a better position to confront adverse shocks. However, the ongoing oil and food price shocks as well as a global and U.S. downturn will put to the test the region's policy frameworks and expose remaining weaknesses. Hence, as is fully recognized by authorities in the region, further reforms will be needed to reduce vulnerabilities and increase policy space to respond to external shocks. Furthermore, to anchor hard-won macroeconomic stability gains, it will be important to secure a significant reduction in poverty. The following chapters address the issues discussed above in more depth.

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CHAPTER

2 Moving Forward with Economic Integration

Dominique Desruelle and Alfred Schipke

Introduction

Central America appears to be an ideal candidate for economic integration. Despite differences in economic development, the countries share a common language, history, culture, and geography. At the same time, the economies are similar in terms of the size of their domestic markets and proximity to their largest trading partner, the United States. They face similar challenges from increased global competition in some of their key export markets (e.g., textiles) and are prone to similar shocks in the form of natural disasters (hurricanes, earthquakes, and volcanic eruptions) and terms of trade. With about 40 million people, Central America accounts for about 7 percent of Latin America's population and about 5 percent of its total output.[1] With a population about equal to that of Argentina or Colombia, if the region were economically integrated, it would be in a better position to take advantage of scale economies, coordinate large infrastructure projects to avoid duplication, and represent its economic interests effectively at the global level.

Indeed, faced with increased global competition, Central America has been responding by accelerating both regional integration and access to global markets. After a long period of trade liberalization and the more recent entry into force of the free trade agreement with the United States, policymakers are moving forward with the creation of a Central American customs union, and have started negotiations on an Association Agreement with the European Union. In addition, Central America has experienced an acceleration of cross-border activities, and more and more companies and financial institutions are operating regionally. These welcome developments will allow Central America to improve the growth potential of the region and significantly raise living standards. At the same time, increased integration calls for more policy coordination and, in certain areas, the establishment of common standards, regulations, and norms to maximize the benefits from integration and reduce vulnerabilities.

[1]Including the Dominican Republic, the total population of Central America makes up about 10 percent of the population in Latin America and the Caribbean and accounts for about 6 percent of its total output.

This chapter takes stock of Central America's integration process, discuss recent developments, and identify areas where more policy cooperation is warranted. In particular, it briefly reviews Central America's history of integration; analyzes how far the region has advanced in the area of trade, financial sector, labor market, and monetary integration; and highlights areas where more coordination and harmonization might be necessary.

History of Economic Integration

Central America's integration dates back to the nineteenth century. In fact, for a short period, Central American countries operated as a unified region after they gained independence from Spain (1821) and severed ties with Mexico (1823). The Central American Republic was made up of what are now Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua. Precipitated by efforts of the congress of the then Central American Republic to take control of customs revenue, the respective countries split to become separate republics in 1838.[2]

While the region has had strong advocates for economic integration since the breakup, integration efforts experienced a real boost in the 1950s. This was reflected in the signing of bilateral trade agreements among the countries of the region and the foundation of the Organization of Central American States (1951), and culminated with the Central American General Treaty of Economic Integration in 1960 (see Table 2.1). The latter was quite ambitious in that it envisaged not only the creation of a free trade zone, but also the establishment of a Central American common market. In many respects, the initial vision of integration was very similar to the early integration efforts of the European Union. In 1963, the Central American presidents even declared their intention to establish a monetary union, which was followed by an agreement of the central banks in 1964 setting out the procedures to establish such a union. To promote and finance economic integration, the governments of the region established the Central American Bank for Economic Integration (CABEI).

Despite these initial efforts, however, integration faced substantial obstacles and came almost to a complete standstill during the 1970s and 1980s. While this can be explained—at least in part—by the armed uprisings in some countries of the region,[3] this period also revealed that successful integration efforts require broad-based political support and that a road map for integration has to take into consideration each country's capacity to implement such agreements. It also highlighted that integration needs to be accompanied by the development of an appropriate institutional capacity.

Learning from this experience, the more recent phase of integration has been more pragmatic. Based on two regional agreements (Tegucigalpa, 1991, and

[2]For a discussion of past integration efforts, see Larraín and Tavares (2001) and Cline and Delgado (1978).

[3]The Organization of Central American States ceased to exist in 1973.

Table 2.1. Key Regional Agreements on Economic Integration

Name	Year
Organization of Central American States (San Salvador letter)	1951
Multilateral Treaty for Free Trade and Economic Integration in Central America	1958
Economic Association Treaty	1960
General Treaty for Central American Economic Integration[1]	1960
Central America Declaration	1963
Central American Monetary Agreement	1964
Central American Organization of States	1962
Agreement on Central American Tariff and Customs Union Regime	1984
Tegucigalpa Protocol	1991
Guatemala Protocol	1993
Central American Monetary Agreement	1999
Amendment to Tegucigalpa Protocol	2002
Treaty on Investment and Trade Services	2002
Framework Agreement for the Establishment of a Central American Customs Union	2007

Source: IMF staff.
[1]Costa Rica joined the treaty in 1962.

Guatemala, 1993), Central America still aims to establish a Central American common market by fostering the free movement of trade, capital, and labor. But the region moved away from the objective of import substitution and now embraces global opening. Also, in contrast to efforts in the 1960s, the process is meant to be gradual and participation voluntary, taking into consideration the unique circumstances of each country. The explicit goal of adopting a common currency was dropped.

In contrast to the European Union, where integration has gone hand in hand with the creation of supranational institutions (such as the European Commission, the European Anti-Trust Court, and the European Central Bank), Central America's recent integration process has largely relied on intergovernmental bodies (e.g. councils). For example, the recently signed framework for the establishment of a Central America Customs Union (see below) does not envisage the establishment of a supranational institution, but instead relies on national tax authorities and the destination principle to distribute tariffs collected at the external borders of the customs union.

Level of Integration and Recent Developments

Over the past few years, economic integration has advanced rapidly. At the policy level, governments have continued to move forward with trade and financial sector liberalization. Compared with the past, though, integration is accelerating even more rapidly on the ground, with more and more nonfinancial corporation and financial institutions operating across borders. In addition, integration is advancing not only among the Central American economies but also with respect to the region's integration into the world economy. To assess Central America's level of integration, the following sections review both policies and

outcomes with respect to the different areas of integration, covering trade, the factor markets (capital and labor), monetary integration, and institutional development.[4]

Trade Integration

Multilateral Trade Liberalization

As a result of a long process of liberalization, trade integration is relatively advanced in Central America. In 1993, the region committed itself to adopting a common trade nomenclature and in 1997 to implementing a common external tariff. Although the pace of implementation has been uneven across countries, a remarkable overhaul of tariff structures has taken place, bringing about a major reduction in average collected tariffs. Today, all countries in the region have tariff rates of less than 5 percent, which is low by international standards (see Table 2.2). More recently, reflecting the difficulties in completing the Doha Round on multilateral trade, with its large number of players and therefore slow progress of negotiations, Central America has sought alternatives. After the entry into force of the Central American–Dominican Republic–United States Free Trade Agreement (CAFTA-DR) in 2006/07, Central America started to negotiate an Association Agreement with the European Union in the fall of 2007, and has sought additional bilateral trade agreements.[5]

Bilateral Trade Agreements

CAFTA-DR

CAFTA-DR has been an important milestone in Central America's recent economic integration process, boosting trade, investment, and the region's growth potential. The implementation of the agreement also has contributed to much-needed institutional strengthening across a range of trade- and investment-related areas. With its implementation in all countries except Costa Rica (El Salvador, Guatemala, Honduras, and Nicaragua in 2006; the Dominican Republic in 2007), the member countries benefited immediately from tariff reductions on all non-agricultural and non-textile exports to the United States.[6] In the case of products

[4]Regional economic integration often takes place in stages. The first stage is usually the creation of a free trade area, in which member countries trade freely among themselves, while maintaining differential tariffs vis-à-vis third countries, followed by the establishment a customs union with a common external tariff. To avoid goods and services from third countries entering the free trade zone via the country with the lowest external tariff, specific rules of origin need to be in place. For a discussion of different models of customs unions in the world, see Chapter 5. A common market in turn also calls for the free movement of capital and labor across countries; a full economic and monetary union would also imply the adoption of a common currency, as in the case of the 15 countries that make up the European Monetary Union and as envisaged by the Gulf Cooperation Council, which plans to adopt a common currency by 2010 (see Cassel and Welfens, 2003).

[5]The first country in the region to do so, Costa Rica, started negotiations on a bilateral trade agreement with China in the fall of 2007.

[6]Tariffs on other goods will be phased out incrementally over a 5- to 20-year period.

Table 2.2. Average Collected Import Duty Rates, 1985–2006

(In percent of total imports)

				Average		
	1995	2000	2006	1990–95	1996–2000	2001–06
Costa Rica	7.2	2.2	1.9	8.0	3.2	2.1
Dominican Republic	12.8	14.3	4.3	15.3	12.9	7.6
El Salvador	6.5	3.0	2.8	6.0	4.0	3.0
Guatemala	8.4	4.5	3.4	7.8	6.0	4.4
Honduras	9.6	3.6	1.7	11.9	6.3	2.4
Nicaragua	4.5	3.1	1.6	10.4	3.7	2.2
Panama	9.4	7.5	7.2	11.1	8.5	7.7
Unweighted average	8.3	5.5	3.3	10.1	6.4	4.2

Sources: IMF, *Government Finance Statistics* (GFS); IMF, *World Economic Outlook* (WEO), April 2008.

that already had preferential access under the Caribbean Basin Initiative, the agreement provided increased certainty by making the preferences permanent and in certain areas, such as textiles, the agreement led to an easing of the rules of origin. With passage of an important referendum on October 7, 2007, Costa Rica is expected to implement the agreement in 2008 once complementary laws, including those opening the telecommunications and insurance markets, have been approved by congress.

Association Agreement with the European Union

Formally, the two regions decided to launch negotiations on an Association Agreement at the European Union–Latin America and the Caribbean Vienna Summit in May 2006. Although the Association Agreement goes substantially beyond economic issues, the establishment of a bi-regional trade and investment agreement is a central component. Both Central America and the European Union will negotiate as a region; the European Commission will negotiate on behalf of the European Union (EU), and Central America will be represented by a single spokesperson on a rotating basis from each country. It is expected that the negotiations will be completed in 2009.[7]

Central American Customs Union

As mentioned above, Central America started to establish a common external tariff in 1997. As a result, and prior to the implementation of the CAFTA-DR, about 95 percent of the tariff lines were harmonized (SIECA, 2008). However,

[7]Central America already has preferential access to the EU on the basis of the generalized system of preferences (GSP) and provides access to EU markets for all industrial products as well as duty-free access for some agriculture products from Central America. The first three rounds of negotiations took place in Costa Rica (October 2007), Brussels (February 2008), and Lima (May 2008).

the remaining 5 percent that need to be harmonized reflect politically sensitive items, such as agricultural products (e.g., sugar, chicken), textiles, petroleum derivatives, metal products, and pharmaceuticals.[8]

With the signing of the framework agreement in December 2007, Central America is a step closer to a customs union. In the agreement, the signatory countries (Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua) have laid out, in broad terms, the path toward the creation of such a union. According to the agreement, the customs union will be established in three stages: (1) the free circulation of goods, (2) the establishment of a common external tariff, and (3) the harmonization of trade-related regulation and norms such as sanitation. The third stage would also aim to harmonize trade-related institutions. Because a number of countries in Central America collect not only tariffs at the border (which are relatively small) but also a large share of domestic taxes, especially value-added taxes, the framework does not envisage the elimination of border controls in the near future. Given limitations in the short to medium term to establishing other forms of domestic controls, a premature elimination of borders would result in significant revenue losses. Instead, the agreement envisages converting the borders into "trade facilitation centers."

The agreement leaves open the possibility for other countries that form part of the system of economic integration in Central America (Belize and Panama) to join the customs union at a later stage. In May 2008, Panama announced interest in joining the negotiations. The Council of Ministers of Economy (COMIECO) is charged with implementing the agreement in consultation with other sectoral councils such as the Council of Finance Ministers. The next step will be to establish a specific timetable for the implementation of the different stages.[9]

Central America's Trade Structure

Central America's trade policy has been reflected in strong trade flows with the rest of the world, especially the United States. Today, Central America's exports and imports amount to about 90 percent of GDP, of which more than 40 percent is traded with the United States. However, only 1 percent of all U.S. imports come from Central America and the region's market share in the United States has declined since 2003, driven mainly by competition from China in textiles, the region's top export to the U.S. market.

[8]The common external tariff consists of four basic rates: zero for capital goods and raw materials not competing with those in Central America, 5 percent on raw material competing with those produced in Central America, 10 percent on intermediate goods not competing with those produced in Central America, and 15 percent of final consumer and other goods (SIECA, 2008). The tariff structure reflects the participation of the Central American countries in the so-called Central American Common Market (CAMC). Most-favored-nation (MFN) tariffs are defined by the Central American Customs Systems.

[9]On customs administration issues, see Chapter 5.

Table 2.3. Intraregional Trade

(In millions of U.S. dollars)

					Annual Growth (in percent)	
	2003	2004	2005	2006	2005	2006
Exports	**3,764**	**4,244**	**4,795**	**5,857**	**13.0**	**22.2**
Costa Rica	1,012	1,153	1,315	1,595	14.0	21.3
El Salvador	815	893	1,002	1,233	12.2	23.1
Guatemala	1,267	1,458	1,595	1,951	9.4	22.3
Honduras	299	328	406	505	23.8	24.2
Nicaragua	234	259	300	371	16.1	23.5
Panama	103	102	123	139	20.1	13.5
Dominican Republic	36	51	53	63	4.5	19.1
Imports	**4,345**	**4,212**	**5,524**	**6,193**	**31.1**	**12.1**
Costa Rica	483	473	536	563	13.3	5.0
El Salvador	998	1,095	1,179	1,269	7.7	7.6
Guatemala	1,251	835	1,520	1,557	82.0	2.4
Honduras	711	774	1,068	1,318	37.9	23.5
Nicaragua	450	528	619	763	17.3	23.3
Panama	286	330	361	430	9.2	19.3
Dominican Republic	165	176	241	293	36.5	21.6

Source: IMF, *Direction of Trade Statistics*.

Trade integration among the Central American countries has been accelerating, especially over the past few years (see Table 2.3). Guatemala and Costa Rica are net exporters to the region, with Costa Rica importing the least from the region. Intraregional trade is diverse: food and beverages made up a little over 30 percent of intraregional trade in 2007, and a wide range of manufactured goods were traded across the region, such as pharmaceuticals (12 percent), plastics, cables and wires, and paper products.[10]

Financial Sector Integration

In parallel with trade liberalization, Central America has also moved forward with financial sector liberalization. As a result, the Central American countries have open capital accounts, and there are no formal restrictions on the establishment or acquisition of financial institutions by regional or foreign banks or on the right

[10]See Secretariat for Economic Integration in Central America (2008).

of nonresidents to obtain new banking licenses.[11] In addition, under CAFTA-DR, the countries committed themselves to opening up the insurance market.

Despite the fact that Central America's financial system is largely bank based and capital markets are underdeveloped, financial sector integration has been advancing rapidly over the past few years. Initially, local financial institutions expanded regionally, establishing representative offices, branches, or subsidiaries in neighboring Central American countries. By 2005, regional financial institutions with local capital managed about 50 percent of total bank assets. This first stage of integration was rather unique when compared to other parts of the world, because the presence of large financial institutions from outside the region was more limited.

In tandem with CAFTA-DR, Central America is now experiencing a second phase of financial sector integration with large international financial institutions—such as HSBC, Citibank, Scotiabank, and others—acquiring regional and local banks and increasing their regional presence.[12] In addition, Bancolombia (from its subsidiary in Panama) has ventured into the region, acquiring the largest bank in El Salvador. Some local banks have expanded their operations to position themselves against the competition from abroad.[13] Over the past three years, the share of international banks has increased from less than 20 percent to almost 40 percent in terms of total bank assets (see Figure 2.1). This development has been particularly pronounced in El Salvador, whose banking sector today is now almost fully owned by large international financial institutions.

Labor Market Integration

Despite treaty provisions to foster the free movement of labor, formal labor market integration in Central America is in its infancy.[14] As stated in the Guatemala Protocol of 1993, the governments of Central America committed themselves to fostering the free movement of labor by putting the necessary policies into place. So far, little progress has been made and most labor movements are informal. More recently, however, countries with labor shortages have encouraged temporary cross-border movements in certain sectors. For example, labor shortages in agriculture and housing construction in Costa Rica in 2007 prompted the Costa Rican government to provide temporary work visas to workers from Guatemala and other Central American countries. There have been similar arrangements between El Salvador and Honduras.

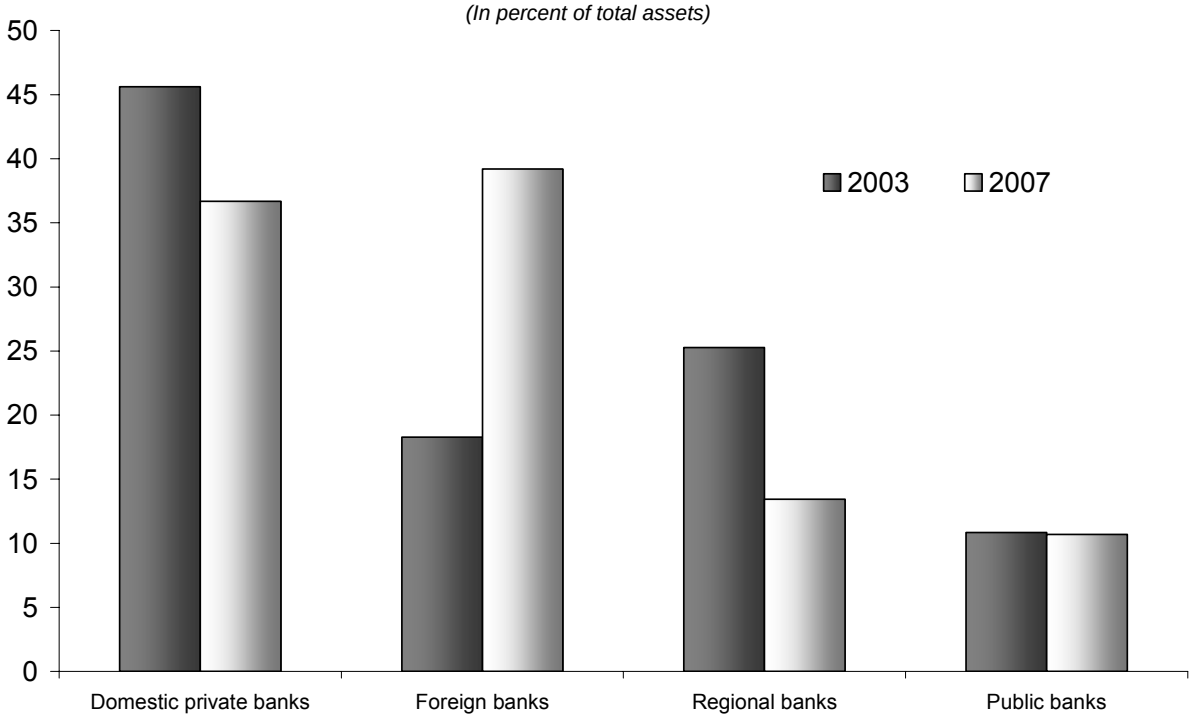
[11]Although there are no capital account restrictions, there are some limitations, which make it more costly for foreign market participants to enter the domestic market. For example, in most countries foreign brokers cannot participate in public debt auctions; they can only participate through domestic brokers.

[12]International banks have been present in Central America for decades, but their role and importance has changed over time. In Panama, international banks have operated since 1904; Citibank was Panama's fiscal agent for nearly 50 years. So far, international banks have focused on the retail but not on the wholesale or investment banking market.

[13]Local banks of this kind include Banco General, Banco Industrial, LAFISE, and Promerica.

[14]Of course, there has been substantial migration from Central America to the United States and, as a result of the former civil unrest in Nicaragua, a large number of Nicaraguans are working in Costa Rica.

Figure 2.1. Financial Institutions, 2003–07
(In percent of total assets)



Source: Financial sector superintendents.

Monetary Integration

Despite initial efforts, the goal of adopting a common currency was abandoned in the early 1990s. As mentioned above, Central America's experience of a common currency dates back to the period of the Central American Republic. After the breakup of the Central American Republic, the integration efforts of the 1960s initially envisaged the establishment of fixed exchange rate systems among the Central American economies and ultimate adoption of a common currency.[15] In 1963, the Central American peso was established as a unit of account with the objective of fostering trade within the region.[16] Even though the goal of adopting a common currency was abandoned and the role of the Central American peso became insignificant, the Central American peso is still used as a formal unit of account within regional institutions and regional import tariffs are expressed in Central American pesos.

Instead of a common currency, the Central American countries initially opted to peg their exchange rate to the U.S. dollar, though more recently some countries

[15]References to the objective of creating a common currency appear in documents dating back to the 1920s. See Pérez and Moreno Brid (2001).

[16]One Central American peso is equivalent to one U.S. dollar. Formally, the Central American Monetary Council can change its value and determine its use.

have been moving toward more flexible change rate systems.[17] As a result, today, the Central American countries cover the whole spectrum of exchange rate systems, ranging from countries with more flexible exchange rates (Guatemala and Costa Rica are moving toward inflation targeting, while the Dominican Republic targets monetary aggregates) to countries with a crawling band or peg (Nicaragua and Honduras) and to those that officially adopted the U.S. dollar (El Salvador and Panama).

In this context, the emphasis has been to improve the effectiveness of monetary policy in countries that have not officially adopted the U.S. dollar by strengthening central bank independence, moving toward open market operations to manage liquidity, and in some countries moving toward inflation-targeting frameworks. At the same time, the countries have committed themselves to foster gradual monetary and financial sector integration through a convergence of macroeconomic policies, especially in the areas of monetary, credit, exchange rate, and financial sector policies (see CAMC, 1999).

As integration deepens, the question of which exchange rate system might best serve the region in the long run is likely to resurface. In addition to floating currencies, other possibilities are the introduction of a common currency or official dollarization, that is, the adoption of the U.S. dollar as the official regional currency. A study by Kim and Papi (2005) using an optimal currency index shows that the region has become more suitable for a dollar peg or dollarization, reflecting an increase in the synchronization of business cycles and a reduction in inflation differentials between Central America and the United States. Nonetheless, the study also highlights that Central America would still be less suitable for a common currency than Western Europe was in the 1970s. In any case, as the European experience shows, the adoption of a common currency would require full commitment at the political level.

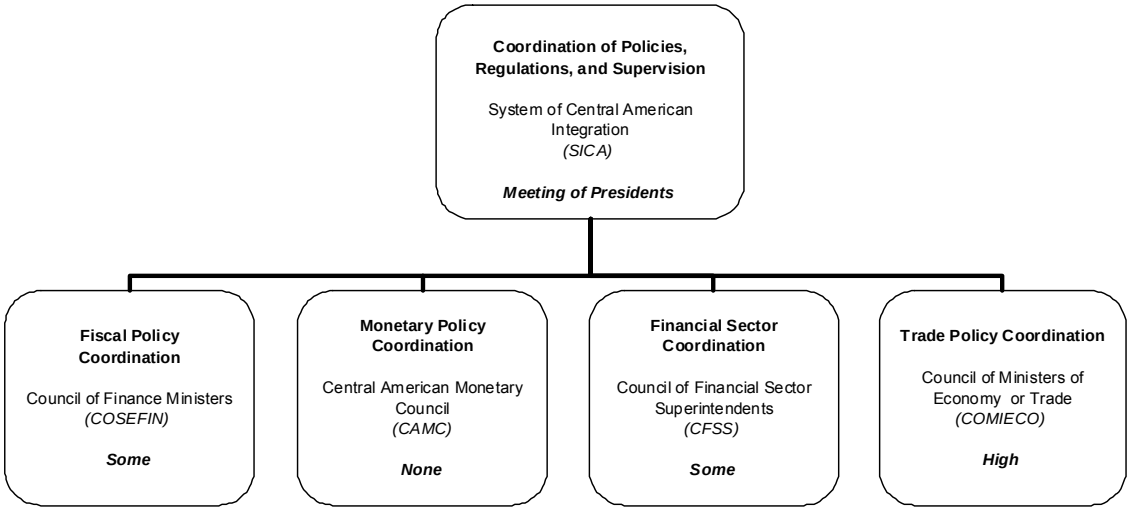
Integration and Development of Regional Institutions

Institutionally, Central America has advanced substantially over the years, and has established a number of key regional institutions (Figure 2.2.). At the highest level is the System of Central American Integration (SICA), which brings together the countries' presidents. In addition, there are a number of regional councils that involve the respective sectoral ministers or financial sector superintendents and are supported by their respective executive secretariats. These councils have become the cornerstone of regional coordination efforts.[18]

[17]For decades, starting in the 1920s, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua pegged their respective currencies to that of their largest trading partner, the United States. Honduras maintained its parity for the longest time, until 1990. The Dominican Republic used the U.S. dollar as legal tender between 1905 and 1947.

[18]Formally, the Council of Ministers of Economic Integration (COMIECO), which comprises the respective ministers of economy or commerce, is responsible for all integration-related issues in consultation with the respective sectoral ministers.

Figure 2.2. Regional Institutions of Economic Policy Coordination



Source: IMF staff.

Note: The figure is illustrative and does not necessarily reflect the formal legal structure. The degree of policy coordination is classified as: "none," "some," and "high."

Areas for Increased Policy Coordination

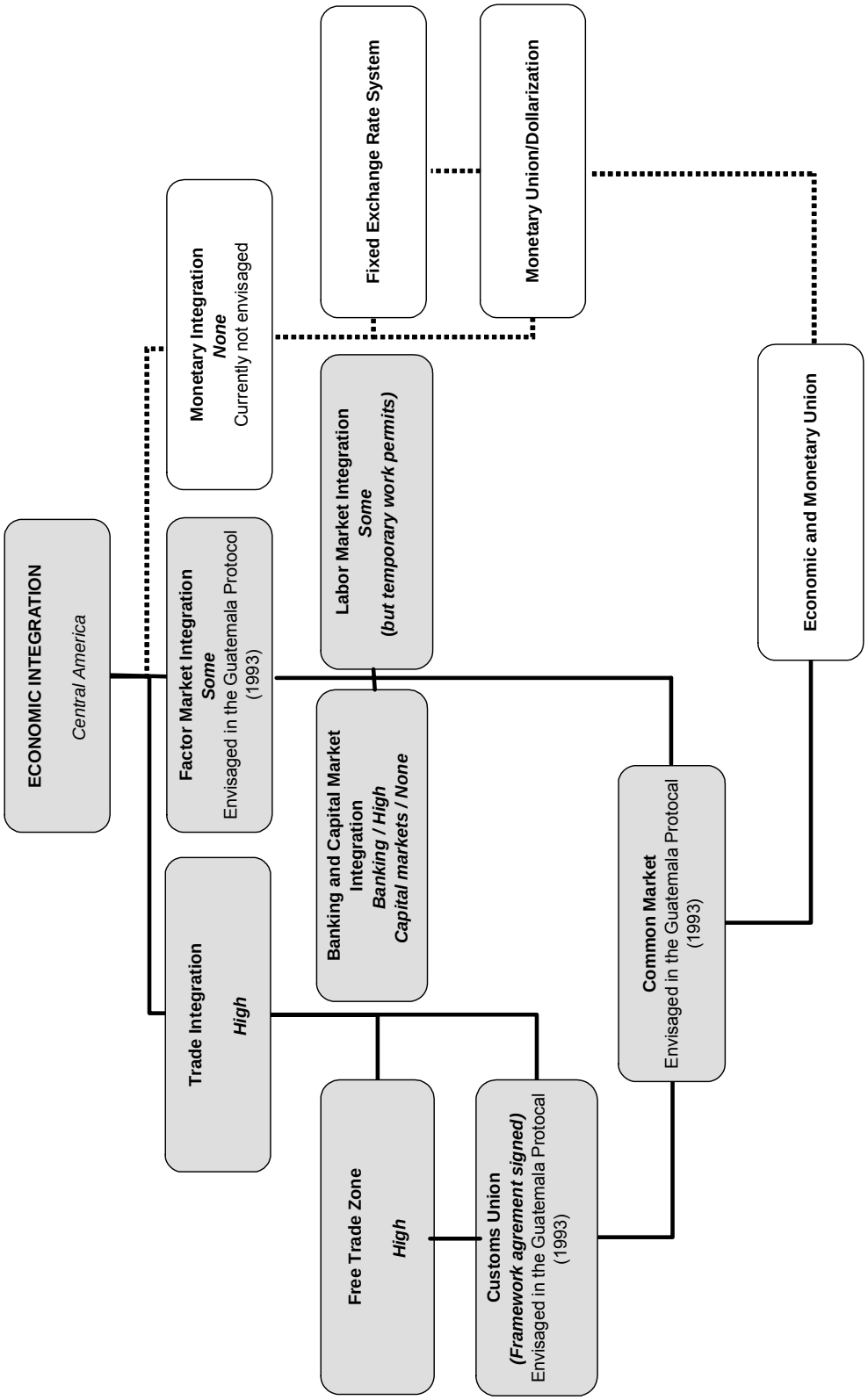
As Figure 2.3 summarizes, Central America is already highly integrated in trade and to quite some degree in the financial sector as well. As economic integration deepens, there is a need for more coordination of policies and, in certain areas, the harmonization of regulation, supervision, and norms. These efforts will maximize the benefits of integration while reducing integration-related vulnerabilities. At this juncture, both fiscal policy and financial sector regulations and supervision are of particular importance.

Trade Integration and Fiscal Policy Coordination

Despite the growth of regional arrangements, the largest benefits of trade liberalization materialize in a multilateral context. The completion of the Doha trade round is, therefore, still the most important vehicle for promoting strong global growth and sustained poverty reduction, and although Central America's regional and bilateral trade arrangements are expected to be beneficial, they need to be viewed as a step toward multilateral opening.

Trade liberalization, however, requires complementary reforms to maximize the benefits from increased trade. For Central America to fully benefit from trade liberalization, complementary and productivity-enhancing reforms are needed to ensure that resources are reallocated and lead to productivity increases in the face of new trading opportunities. In particular, there is substantial scope for improving institutions, the business environment, property rights, the rule of law, and corporate governance. At the same time, the reforms need to be accompanied by increased labor market flexibility and significant investment in human capital. This will ensure that resources can move to the most productive sectors.

Figure 2.3. Level of Economic Integration



Source: IMF staff.

Note: The level of integration is classified as "none," "some," and "high."

The implementation of CAFTA-DR, the establishment of a customs union, and an Association Agreement with the European Union will provide additional economic benefits to the region. However, increased trade integration might be associated with revenue losses, at least in the short term, and may lead to further harmful tax competition to attract foreign investment. This would be detrimental to most countries in the region, given their low revenue-to-GDP ratios (ranging from 12 percent in Guatemala to 18 percent in Honduras) and the need to raise tax revenue to address social needs and fight poverty.

Faced with these challenges, there is need for more fiscal coordination, in addition to strengthening tax systems at the national level. Although the Central American Council of Finance Ministers (COSEFIN) was established only in 2006, it has already taken a number of important steps to forge common positions and foster policy coordination. In the area of fiscal incentives, it undertook a stocktaking exercise by developing a matrix of existing tax incentives.[19] At its meeting in March 2008, it approved an important policy framework for a regional convention on good practices on tax incentives, emphasizing transparency, avoidance of tax competition within the region, and coherence with World Trade Organization (WTO) obligations.[20] Other areas of recent successful cooperation have been in the development and approval of model legislation for (1) transfer prices, (2) thin capitalization to reduce the risk that companies will use debt to avoid taxation, and (3) double-taxation treaties. In addition, as a result of the coordination among Central American ministers, the framework agreement for a customs union now includes provisions that will protect the collection of internal revenue at the border.[21]

These are important steps. In the future, there may also be merit in considering convergence of specific taxes to avoid contraband and the definition of common principles (e.g., minimum rates) for other indirect taxes.

Financial Sector Coordination and Harmonization

Increased financial sector integration is a welcome development. The formation of regional conglomerates and cross-border lending in Central America allow fi-

[19]Also, given the region's commitment to establishing a customs union, COSEFIN created a working group of directors of tax and customs administrations to design an implementation plan that would take into account the experiences of other customs unions in the world to protect the low revenue base.

[20]Initially, the convention would include El Salvador, Guatemala, Honduras, and Nicaragua, with an option for Costa Rica to join at a later date.

[21]Ministers are working together to evaluate the benefits and requirements of implementing medium-term expenditure frameworks (MTEFs). MTEFs are an important mechanism to impose fiscal discipline on spending ministries, develop and communicate strategic spending priorities to the public, and allow for budget efficiency.

nancial institutions to take advantage of scale economies and therefore reduce funding costs, which in turn fosters investment and growth. At the same time, companies and households have more opportunities to diversify risk, making them less vulnerable to adverse shocks. The recent expansion of activities by international financial institutions in Central America is an additional positive development, because it could foster the dissemination of international standards in terms of capitalization, risk management, and corporate governance, and could generate greater competition in the provision of financial services. In some countries, the increased presence of international institutions has also led to an acceleration of the consolidation process of locally based financial firms. The increasing presence of international institutions therefore has the potential to further improve the efficiency and stability of the Central American financial systems.

However, the increased presence of global banks could exacerbate latent vulnerabilities. They could expose the region to large fluctuations associated with developments abroad, or lead to volatile capital flows if global banks engage in cross-border treasury operations. Access to deep funding pools could contribute to lengthening credit booms and increasing credit dollarization. Finally, these banks may create risky financial positions that are difficult to evaluate, reduce transparency of consolidated operations, and possibly segment the credit market leaving local banks with riskier positions (Medeiros and others, 2008). As international banks apply standardized credit evaluations, small and medium-sized companies might face more difficulties in obtaining credit, given the lack of adequate information on the operations of such institutions. This calls for an improvement of accounting standards and increased transparency. Yet the arrival of international institutions also could lead to a significant increase in consumer lending, which would need careful monitoring.

Therefore, to minimize integration-related vulnerabilities, more coordination and, in certain areas, harmonization is needed. In the case of regionally operating institutions, there is a risk of regulatory arbitrage—that is, efforts by institutions to exploit differences and loopholes in regulation across countries and the transfer of risks to less supervised areas. To overcome this risk, Central America needs to move toward the convergence of prudential standards (capital adequacy ratios, for example, range from 8 to 12 percent), regulation, and supervision (see Table 2.4). The regional Council of Financial Sector Superintendents has initiated a number of projects to address some of the more immediate supervisory issues. For example, in September 2007, the members of the council signed a regional memorandum of understanding (MOU) to foster consolidated supervision of regional institutions, which now needs to be implemented. In addition, the council has initiated a project to assess the implications of the surge in assets managed by international banks. The project analyzes the potential challenges for local supervisors and identifies appropriate prudential responses. Also, the project assesses

Table 2.4. Reserve and Prudential Requirements
(In percent)

	Capital Requirements	Reserve Requirements		Liquid Asset Requirements	
		Domestic currency	Foreign currency	Domestic currency	Foreign currency
Costa Rica	10.00	15.00	15.00	. . .	. . .
El Salvador[1, 2]	12.00	≈22.00	n.a.	6.00	n.a.
Guatemala	10.00	14.60	14.60	none	none
Honduras	10.00	≈9.00[3]	12.00	9.00	≈19.00[4]
Nicaragua	10.00	16.25	16.25	. . .	. . .
Panama[2]	8.00	none	n.a.	30.00	n.a.
Dominican Republic	10.00	20.00[5]	20.00	none[6]	none

Sources: Country authorities; and IMF staff.
[1]Liquidity requirements are 25 percent for current account deposits and 20 percent for savings and term deposits. At present, the weighted average requirement is about 22 percent. In mid-2008, and as a precautionary measure in the run-up to the 2009 presidential and congressional elections, banks were required to hold an additional 3 percent as liquid reserves abroad. After official dollarization, reserve requirements were substituted by remunerated liquidity requirements.
[2]El Salvador and Panama are officially dollarized economies.
[3]While domestic currency reserve requirements are 12 percent, for banks that direct 80 percent of their lending to the "productive" sector (i.e., neither consumer nor commercial loans), reserve requirements are 7 percent. Currently, the effective rate is about 9 percent.
[4]Foreign currency liquid asset requirements are 24 percent, however, banks that have 70 percent of their foreign currency loan portfolio in the "productive" sector are required to hold 14 percent in liquid assets (as of November 2008). The effective rate is about 19 percent.
[5]Includes cash in vault (up to a maximum of 5 percent of liabilities subject to reserve requirements).
[6]A compulsory investment requirement is being phased out gradually, which accounted for less than US$8 million at end-September 2008.

whether the changed access to foreign liquidity will have implications for the stability and volatility of cross-border capital flows.[22]

Given the potential risks of spillovers from local institutions that operate regionally, stress in the banking system of one country could quickly be transmitted to others in the region. Although there is scope in Central America to improve bank resolution frameworks at the national level, increased emphasis also should be placed at the regional level on arrangements for crisis management and mechanisms for early coordinated intervention of regionally operating institutions.

The Central American Monetary Council has made substantial progress in a number of areas to facilitate financial sector integration. For example, to foster financial market integration, in 2007, countries in the region signed an agreement creating a regional payment and security exchange settlement system. In addition to creating a regional platform, the agreement will further strengthen the respective national payment systems.[23]

Although the banking system is well developed and integration is advancing rapidly, domestic capital markets are underdeveloped and remain segmented in

[22]For a detailed discussion about the benefits and challenges of the entry of international financial institutions in Central America, see Medeiros and others (forthcoming).

[23]As of August 2008, El Salvador, Guatemala, and the Dominican Republic have signed the agreement. For the agreement to become effective at least three countries had to ratify it.

terms of currency, creditworthiness, regulation, restrictions on domestic institutional investors, and the absence of a regional exchange. The development of capital markets in Central America presents a challenge given the lack of potential scale economies, a limited local investor base, and high transaction costs. The development of a regional market could potentially overcome some of these limitations and entail benefits for both investors and issuers in terms of better risk diversification and more efficient allocation of capital allocation, as well as greater access to regional savings.

The establishment of such markets would be more long term and require first a conversion of standards and regulation and potentially the creation of a regional trading platform or a regional exchange. Because public debt markets are better developed than equity and corporate debt markets, which are almost nonexistent, the first priority would be to advance in this area. Jointly, the Central American Monetary Council and Council of Finance Ministers have taken initial steps to harmonize public debt market standards and debt management practices. This project has already led to some advancement in establishing common market conventions and calculation standards, adopting standardized securities in new issuance, and building consensus toward analytical approaches.[24] Progress, however, has been varied across the region, and much remains to be done. With respect to equity and corporate bond markets, in 2006, Panama, Costa Rica, and El Salvador signed an agreement to establish a regional exchange with the objective of creating a regional capital market. In addition, the exchange and securities superintendents signed an MOU in 2007 to promote the harmonization of norms and legislations and to encourage the sharing of comparable information as well as to announce the establishment of a regional executive secretariat.

Increased integration, both among the Central American economies and with the rest of the world, will further aid macroeconomic policy coordination. As the recent oil and commodity price hikes demonstrate, Central America faces common shocks. In addition, spillovers from strong linkages with the United States (via trade, the financial sector, and remittance flows) call for similar policy responses across countries.[25] Faced with these common shocks, the respective regional councils are well placed to deepen their analysis of common challenges and increasingly discuss the merits of different policy responses.

Improved Macroeconomic Data and Harmonization of Statistics

Deepening economic integration, increased access to global financial markets, and corresponding stronger linkages across countries call for the provision of timely, comparable, and adequate macroeconomic statistics to ensure sound eco-

[24]For a discussion of the development of capital markets, see Chapter 6 and Shah (2007).

[25]See Chapter 3 on linkages between Central America and the United States.

nomic policymaking and continued investor confidence. Despite statistical deficiencies in a number of areas, Central America has a good track record in improving macroeconomic statistics at the country level and has embarked on three large multiyear projects to improve monetary and finance, fiscal, and external statistics (see Appendix 2.1). Improving macroeconomic statistics in these areas requires commitment at the highest level, appropriate resources, continuous investment in human capital, and a medium-term perspective. Once sufficient progress has been made in these areas, there would be additional scope to harmonize national accounts data as well.

Conclusions

Responding to increased global competition, Central America's regional integration is advancing rapidly both with respect to policies and on the ground. Because the countries share many characteristics in terms of size, proximity to the United States, history, and language, they appear to be well positioned to benefit from increased integration. In addition to being able to take advantage of scale economies and specialization, a unified region with almost 40 million people would be able to represent its economic interests more effectively at the global level than the individual countries would.

Reviewing the different areas of economic integration ranging from trade, factor markets, and the monetary sector, not surprisingly, Central America has advanced the most in the area of trade, with respect to both intraregional trade and the global economy. This advance reflects a long process of trade liberalization that culminated in the implementation of CAFTA-DR. Increased trade integration and Central America's objective of moving forward with the establishment of a customs union and an Association Agreement with the European Union require more fiscal coordination, among other things, to avoid harmful tax competition and minimize the impact of the fiscal implication of further trade liberalization. As trade integration increases, there might also be scope for the convergence of specific taxes to avoid contraband and the adoption of a common framework for other indirect taxes. Although only recently established, the Central American Council of Finance Ministers has become a crucial forum to foster fiscal coordination.

Despite the fact that Central America's financial systems are largely bank based and capital markets are underdeveloped, financial sector integration has also advanced rapidly over the past few years. The first stage of financial sector integration was dominated by the expansion of regional institutions with local capital, but Central America is now experiencing a dramatic surge in the arrival of international banks. This will foster the dissemination of international standards in terms of capitalization, risk management, and corporate governance, and will expose Central America's local institutions to more competition. At the same time, it presents challenges potential challenges in terms of both supervision and regu-

lation. Authorities at the regional level have already initiated a number of projects to address some of these issues (such as the regional memorandum of understanding for consolidated supervision of regionally operating banks) and are currently assessing the challenges for local supervisors, regulatory frameworks, and prudential requirements.

Successful integration also calls for appropriate institutions to foster the exchange of information, promote policy coordination, and facilitate the adoption of common standards, regulations, and norms. In the key area of economic policies, Central America is substantially advanced in that it has appropriate regional forums for finance ministers, central bank presidents, ministers of economy and trade, and financial sector superintendents, as well as their corresponding executive secretariats, including the Secretariat for Economic Integration in Central America (SIECA). As integration continues to move forward, these institutions will play an increasingly important role, spearheading policy coordination and standardization.

Moving forward with increased regional and global integration will bring substantial benefits to Central America. However, the process should be accompanied by appropriate improvements in policy coordination and the adoption of common regulations, standards, and norms to maximize benefits and minimize integration-related risks.

Appendix 2.1. Harmonization of Macroeconomic Statistics

Central America has made significant efforts in recent years to improve data quality and provision at the national level, with a view to ensuring sound economic policymaking and fostering investor confidence. Despite the progress so far, statistical deficiencies remain, with uneven data quality across sectors and countries. Outdated methodologies, poor source data, and inconsistency across sectors affect countries to different degrees, hampering policy formulation and monitoring. Deepening economic integration, increased access to global financial markets, and corresponding stronger economic linkages across countries imply that the provision of both timely and adequate statistical information becomes ever more important and call for the harmonization of statistics to ensure comparability across countries. To address some of these shortcomings, the Central American countries have embarked on three large regional projects to harmonize monetary and finance, fiscal, and external statistics.

Monetary and Finance Statistics

Mirroring Central America's integration efforts, in 2006, the region initiated the first project to harmonize monetary and finance statistics. The focus of the project has been to (1) improve existing monetary and financial statistics compilation systems; (2) expand coverage by gathering data from all the major financial insti-

tutions in the region, including offshore banks and other financial intermediaries, such as pension funds, insurance companies, and investment funds; and (3) define common classification and valuation criteria for financial instruments and economic sectors.

The first stage of the project was completed in 2007, and all Central American countries, including Panama and the Dominican Republic, now have harmonized systems in place for compiling monetary and financial statistics based on the standardized report forms for monetary data. The second stage of the project is expected to conclude in mid-2008 with the dissemination of harmonized monetary statistics by the national authorities and on the website of the Central American Monetary Council.

This harmonization project is rather unique in that it is comparable only to the efforts to achieve statistical harmonization in the European Union. This experience has not only become the model for the new Central American harmonization projects in the fiscal and external sectors (see below) but could also become a model for other regions in the world. Also, the Central American authorities are considering expanding the project to a third stage, which would cover the compilation of data for other financial corporations (insurance companies, pension funds, etc.) and the derivation of the matrices to support the balance sheet approach to debt vulnerability analyses.

Fiscal Statistics

Given the current state of fiscal statistics, characterized among other things by differences in institutional and transaction coverage, compilation methodologies, and data sources, in 2008, the Council of Finance Ministers initiated a project to harmonize government finance statistics. A major benefit of the project will be the compilation and dissemination of homogeneous data for all countries in the region, using an analytical framework to facilitate the monitoring of fiscal policy across countries and allow for international comparisons.

The project has two main components: (1) compilation and dissemination of sub-annual and annual government finance statistics using the IMF's *Government Finance Statistics Manual 2001 (GFSM 2001)* format; and (2) preparation of a detailed migration plan to gradually adopt the full *GFSM 2001* methodology and develop new or improved data sources. The first component of the project will rely on available data sources to compile government finance statistics (GFS) data according to the *GFS Yearbook Questionnaire*, the *High Frequency Questionnaire*, and a simplified public debt template. The second component would require a diagnosis of current GFS compilation and dissemination practices, identification of institutional data gaps, and the elaboration of specific steps and a timetable to implement the *GFSM 2001* methodology gradually. The initial phase of the will take longer and may require the development of subsequent projects and detailed action plans at a larger stage.

External Statistics

Increased cross-border financial flows, especially as they relate to portfolio and foreign direct investment as well as remittances, require an improvement of external statistics (among other things). This will improve not only the effectiveness of policy analysis but also the monitoring of financial external vulnerabilities. The Central American countries recognize this and have therefore embarked on a regional project to harmonize and improve external sector statistics. Although compilation systems for external sector data are diverse across the region, there is potential to produce of a common set of external sector statistics. Their harmonization will enable data comparison across different countries and preparation of regional external sector statistics. The project should establish the basis for improved quality and consistency of macroeconomic statistics prepared by national statistical agencies through common statistical definitions.

The project is aimed at the compilation of comprehensive and consistent external sector statistics region-wide, bringing together internationally accepted core principles, standards, and practices for compilation and dissemination, in line with the fifth edition of the *Balance of Payments Manual* (*BPM5*). The project is composed of the following steps: (1) development of harmonized compilation systems for balance of payments statistics and international investment positions; (2) improvement in the coverage of external sector statistics through collection of data for most relevant items, including trade, remittances, income account, portfolio investment, and direct investment, where applicable; and (3) improvement of data consistency across macroeconomic statistics produced by national statistical agencies, using agreed-upon common definitions of financial instruments, economic sectors, and valuation criteria, among others, in all countries.

Compared with monetary and fiscal statistics, one of the main challenges for improving external sector statistics is that they rely to a greater extent on private sector information.[26] As an important prerequisite of data quality, the authorities should evaluate the current underpinning of national legal frameworks that support data collection from the financial and nonfinancial private sector for statistical purposes. It is expected that quarterly statistics on the international investment position and external debt statistics could become available for all countries in the region in 2010.

[26]Unlike government finance and monetary and financial statistics, which regularly rely on administrative data, the Central American countries could consider whether balance of payments statistics should be compiled at the intraregional level. However, it may be advisable to leave this resource-intensive taks for a later stage, once external sector statistics are fully harmonized.

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CHAPTER

3 Central America's Regional Trends and U.S. Cycles

Shaun K. Roache

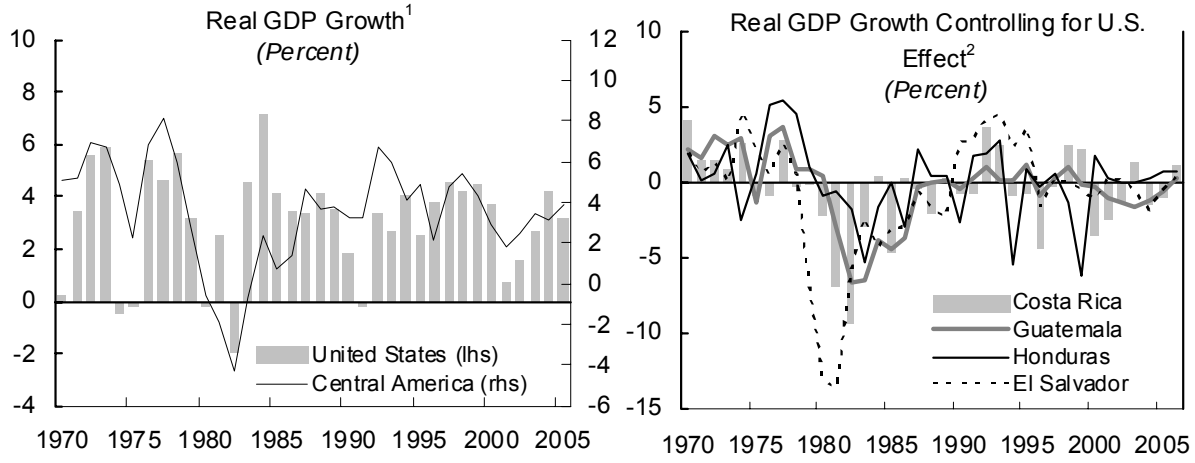
Introduction

The economies of Central America share a close relationship with the United States, with considerable comovement of GDP growth over a long period of time. The open nature of the region's economies, combined with the geographical proximity to the United States, have produced a number of transmission channels through which U.S. cyclical fluctuations can affect Central America. The trade channel is particularly important, with more than half of all the region's merchandise exports over the preceding five years destined for the United States, up from about one-third in the late 1990s. Other possible channels include the financial sector, and remittance flows from migrant workers in the United States, which accounted for 14 percent of regional GDP (excluding Panama) during 2006.

Figure 3.1 suggests that Central America and the U.S. economy are moving in tandem, but just how dependent is growth in the region on the United States? Is some part of the economic cycle uniquely Central American? If not, what explains the periods during which certain economies appear to have decoupled from the United States? These are some of the questions addressed in this chapter. An analysis of the linkages between the two regions is particularly timely given the protracted U.S. growth slowdown, which could pose challenges for policymakers in Central America. After a short description of the stylized facts about the economic linkages between Central America and the United States, the following analysis uses the common cycles method of Vahid and Engle (1993) to provide some answers to these questions.[1]

[1]The common cycles method of Vahid and Engle (1993) applies the insights of cointegration to the analysis of stationary, or in this case, cyclical economic data.

Figure 3.1. GDP Growth, 1970–2006



Sources: IMF, *International Financial Statistics*; and author's calculations.

[1]Weighted average excluding Nicaragua and Panama.

[2]Residuals from an ordinary least squares (OLS) regression of country GDP growth on U.S. GDP growth.

Stylized Facts

Commonly, three channels of transmission are thought to explain the close economic relationship between Central America and the United States: trade, financial flows, and remittances.

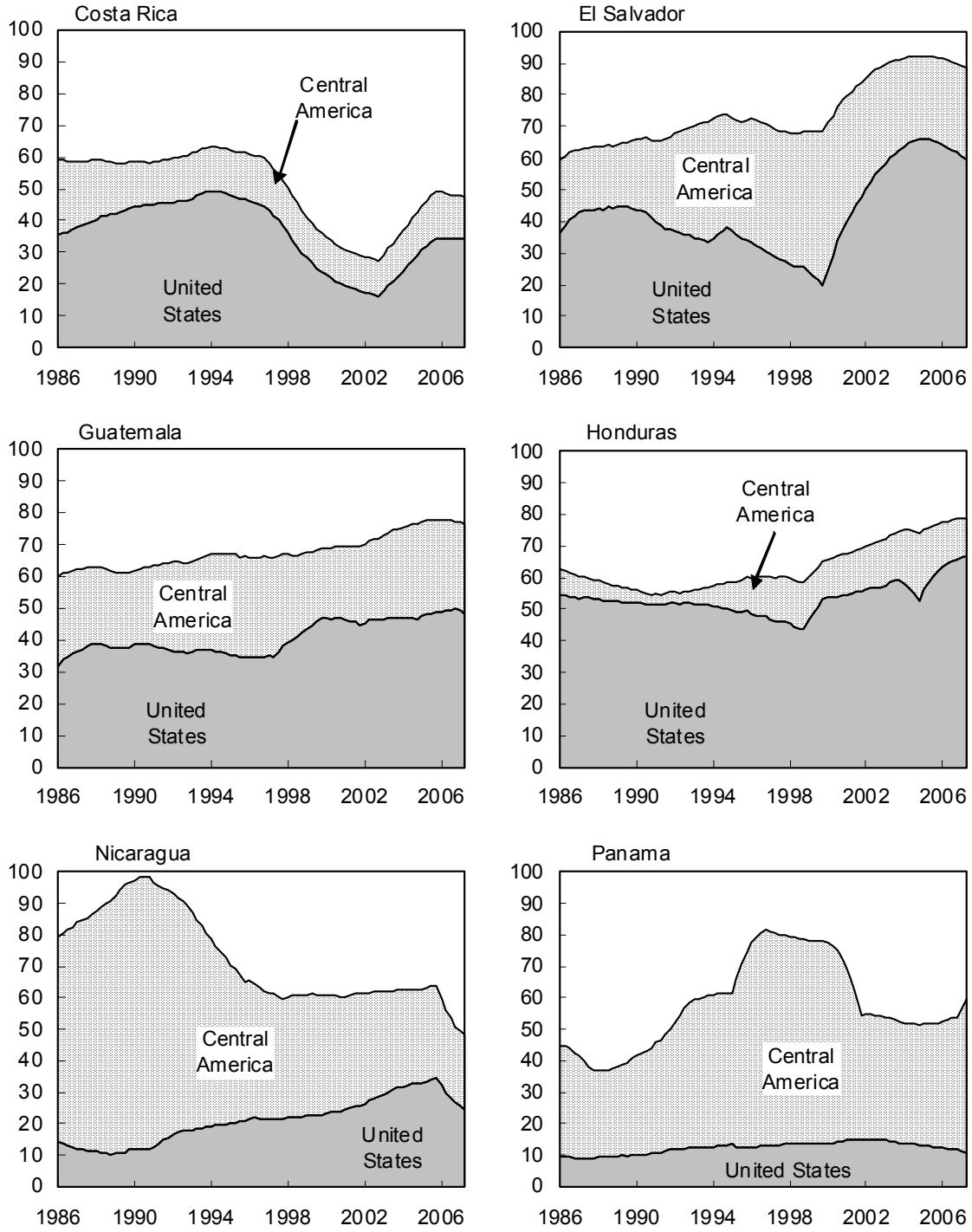
Trade Linkages

Trade is likely to be the most important linkage. Since the early 1980s, the share of total merchandise exports from the region as a whole to the United States has averaged about 40 percent, ranging from 27 percent in Nicaragua to 53 percent in Honduras (Figure 3.2).[2] The second largest share is exports to other Central American countries, which has averaged about 20 percent over the same period. Do exports to the region help to diversify exposure away from the U.S. economy? The answer would be "yes" in two circumstances: either there is a unique Central American business cycle or there is divergence in the long-run rate of trend growth between the region and the United States, an issue that will be explored below. The two possibilities would have very different implications for both the behavior of exports and the overall economy given that exports accounted for 20 percent of regional GDP in 2006.

[2]The figures in this chapter refer to exports of goods and exclude services. Services are an increasingly important component of exports for some countries, particularly for economies with a large and developing tourist industry such as Costa Rica.

Figure 3.2. Destination of Exports, 1986 Q1–2007 Q2[1]

(Percent of total exports)



Source: IMF, *Direction of Trade Statistics*.

[1]Rolling five-year sum of quarterly export data.

Financial Linkages

Financial linkages are important, owing in part to the high—albeit varying—degrees of dollarization across Central America. Given that many transactions take place in U.S. dollars, financial conditions in the United States and the region should share some similarities, most obviously in terms of interest rates. The obvious rejoinder is that real interest rate parity, as described in theory, has little evidence to support it, in spite of open capital accounts.[3] Indeed, complete interest rate synchronization rarely holds between Central America and the United States, even for officially dollarized economies such as El Salvador and Panama, reflecting some frictions and other imperfections in the financial sector.

Another, more direct linkage with U.S. financial conditions is through external debt. The debt owed to foreign banks that report to the Bank for International Settlements (BIS) by Central American borrowers from all sectors (excluding Panama) accounted for about 15 percent of GDP at the end of 2006.[4] Although only 3 percent of GDP was directly owed to U.S. banks, the remainder was also likely to be U.S. dollar denominated, given the pattern of trade flows (Figure 3.3). In addition, loans with a maturity of less than one year—on which interest rates are set frequently and therefore reflecting prevailing global financial conditions—account for almost half of outstanding claims by BIS banks on Central America.

Foreign ownership of domestic banks, that is, ownership of domestic banks by institutions from outside of the region, may also introduce spillovers, particularly if these institutions take a global view of their portfolio and formulate their policies on the basis of financial conditions in their home economy. The degree of foreign ownership varies widely across the regions from less than 15 percent in Guatemala to more than 90 percent in El Salvador.[5] However, the large-scale entry of foreign banks is still a relatively new development, so it is not yet clear how financial sector linkages will be affected.

Remittances

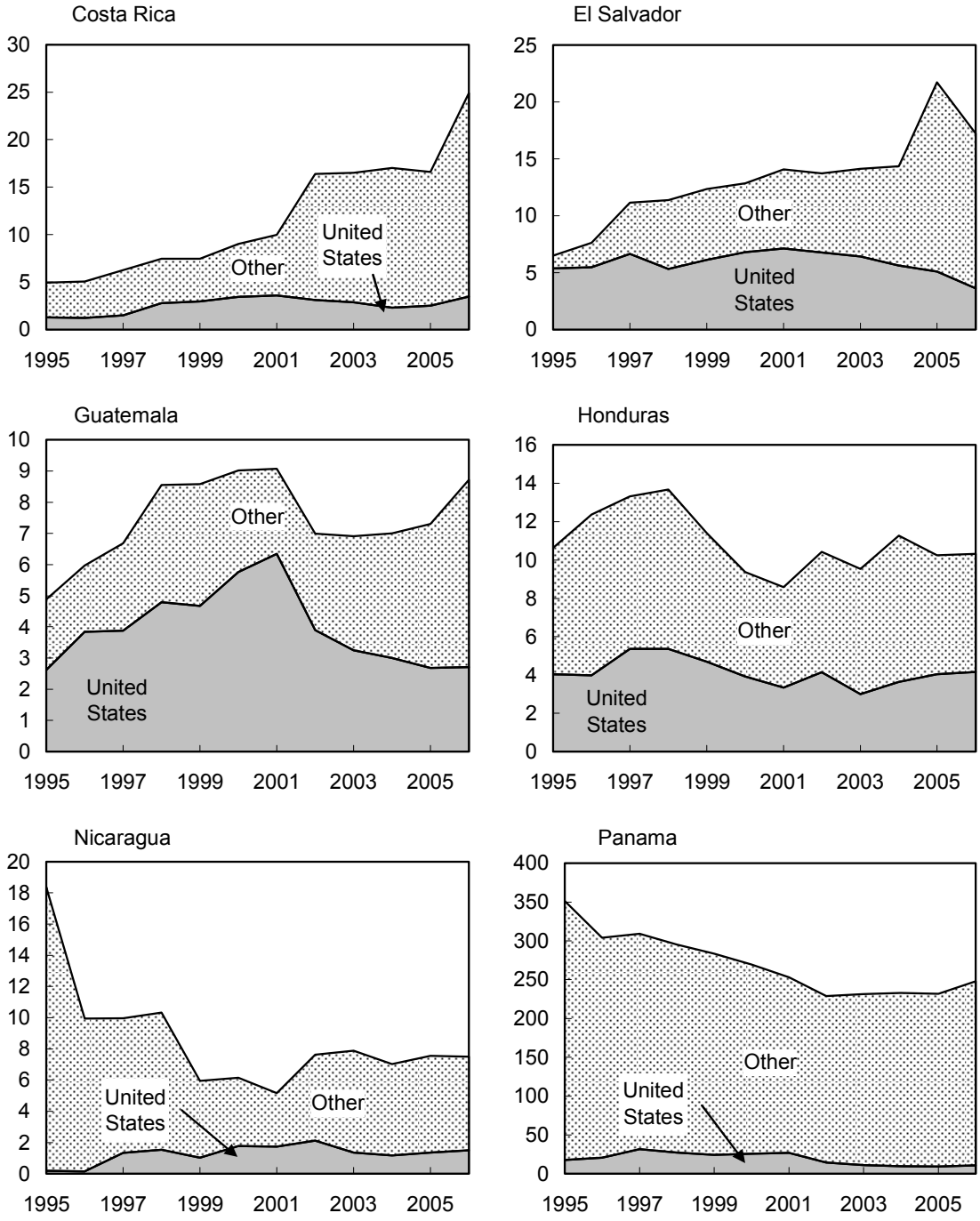
Remittance flows sent by migrant workers to Central America have grown rapidly in recent years and, for some countries, now account for a significant share of GDP and rival or even dwarf foreign direct investment (FDI) as a source of

[3]These results have been based largely on short-horizon data. Recent work (see Chinn and Meredith, 2005) suggests that the relationship may be stronger for long-term interest rates.

[4]These figures exclude Panama because of the scale of that financial system's offshore activities. These figures also exclude local lending by foreign banks that have acquired a presence in domestic banking systems.

[5]Even before the large-scale entry of foreign banks, financial sector integration had gained momentum over the past few years, as some regional institutions that originally focused on the home market expanded regionally (see Morales and Schipke, 2005).

Figure 3.3. External Debt Owed to BIS-Reporting Foreign Banks by Domicile
(Percent of GDP, 1995–2006)



Source: Bank for International Settlements.

Table 3.1. Comparing the Size of Remittances, 2006

	Billions of U.S. Dollars	Percent Change Since 2000	Percent of GDP	Percent of FDI inflows	Percent of Exports of G&S
Costa Rica	0.5	n.a.	2.3	74	4
El Salvador	3.3	89	18.1	667	69
Guatemala	3.6	541	10.2	1,111	66
Honduras	2.2	n.a.	25.0	774	60
Nicaragua	0.7	105	12.2	235	28

Sources: National authorities; IMF, *International Financial Statistics* (IFS); and author's calculations.

external financing (Table 3.1). Over the long term, socio-demographic and institutional factors in the host and recipient countries are likely to have a dominant influence.[6] In the short run, it would, however, be reasonable to presume that cyclical economic conditions in the host country would influence these remittance flows.

The empirical evidence, however, is somewhat ambiguous. Evidence from Roache and Gradzka (2007) suggests that remittances may not have been an important source of spillovers from the United States until now. This, of course, could be the result of weaknesses in the remittances data. It could also be due to migrant workers "smoothing" their remittance flows, for example, by sending a fixed U.S. dollar amount each month or quarter, irrespective of income fluctuations, at least within reason. Alternatively, immigrants might attach more weight to being employed than to the wage received, and thus are less likely to be unemployed (other things being equal) than their native-born counterparts.

Literature Review

The relevant literature for this chapter relates to the existing studies on Central American economic linkages and the ones that focus on the applications of the codependence methodology to business cycles.

[6]For a survey of theoretical models that describe remittance behavior, see Rapoport and Docquier (2005).

Central America Linkages

Although the results from global and broader regional studies indicate that Central America is one of the more globally integrated regions of the world (see Desruelle and Schipke, 2007), little work has been done specifically on intraregional integration. One of the most comprehensive studies is Fiess (2007), which measures business cycle synchronization within the Central America region and sensitivity to the United States initially using simple correlations of band-pass filtered GDP data from 1965 to 2002. There is evidence of a close relationship among Costa Rica, El Salvador, Guatemala, and Honduras and between this group and the United States, suggesting that a significant portion of variability is being driven by external factors. The other two countries, Nicaragua and Panama, exhibit low or even negative correlations in most cases. Controlling for the common effect of the United States causes correlations to decline, although they remain fairly high between Costa Rica and Guatemala (0.48), Costa Rica and El Salvador (0.41), and Guatemala and Honduras (0.42).

The study also presents coherence measures over assumed business cycle frequencies of 6 to 32 quarters for Central America using industrial production and other monthly indicators from the 1995–2003 period. These results tend to confirm those from simple correlations. Business cycle synchronization was highest between Costa Rica and El Salvador (0.53), El Salvador and Guatemala (0.53), El Salvador and Nicaragua (0.51), and Honduras and Nicaragua (0.55). Comparing the CAFTA-DR (Central American-Dominican Republic Free Trade Agreement with the United States) trade blocs to others, it was shown that intra-CAFTA-DR coherence was lower than that seen within NAFTA (North American Free Trade Agreement) and the European Union but similar to that within Mercosur.

Kose and Rebucci (2005) estimate country-specific vector autoregressions for five Central American economies, the Dominican Republic, and Mexico using data from the period 1964–2003. Six shocks are assumed to drive business cycle dynamics, three domestic and three external. The domestic variables include real GDP growth, the consumer price index (CPI) inflation rate, and the trade balance–to-GDP ratio. External variables include U.S. real GDP growth, a measure of the ex post U.S. real interest rate, and the ratio of oil to nonfuel commodity prices (a proxy for the terms of trade). External shocks accounted for one-third of output variance, with a wide range across economies from Costa Rica (67 percent) and Guatemala (55 percent) to the Dominican Republic (10 percent) and Nicaragua (18 percent).

Kose and Rebucci (2005) also present multicountry vector autoregressions (VARs) using GDP growth rates for the United States, Mexico, and the same six regional economies above, to assess the importance of regional shocks. The block recursive structure placed the United States and Mexico in the first block, the five Central American countries in the second, and the regional economy of

interest in the final block. With this set-up, NAFTA shocks explained an average of 22 percent of output variance for regional economies, with Honduras (34 percent), Costa Rica, and El Salvador (both at 26 percent) showing most sensitivity. Regional shocks were more important, explaining on average one-half of output variance, with the range across countries much tighter. Domestic shocks explained the remainder (24 percent), with the Dominican Republic and Nicaragua most affected by idiosyncratic disturbances.

Common Business Cycles

Cerro and Pineda (2002) apply the codependent approach to investigate real output trend and cycle dynamics for 11 Latin American economies using quarterly constant price GDP data from 1960 to 2000.[7] Tests indicated the existence of seven common trends and four common cycles, allowing the decomposition into trend and cycle components. The correlations of the cyclical components show that correlations across the region peaked in the 1970–80 decade, declined through 1980–90, but have been rising since then. Although intraregional correlations appear high compared to the results from other studies (often above 0.5), there was little evidence that either Chile or Mexico were influenced by the common regional cycle.

Hecq, Palm, and Urbain (2006) test for the presence of comovements in annual GDP series for five Latin American countries—Brazil, Argentina, Mexico, Peru, and Chile—for the period 1950–1999. The main purpose of this study is to develop a test for strong and weak form reduced rank structures, with the first referring to the existence of common cycles within first-differenced data and the latter within first differences adjusted for long-run effects. They find evidence for two to three cointegrating vectors and three codependent vectors (of each kind, strong and weak form), depending upon the specification, indicating linkages across the economies. The reduced form restrictions implied by a common cycles structure also appear to improve model accuracy, on the basis of root mean-squared errors.

Hecq (2005) uses annual GDP data from the period 1950–2002 for six Latin American countries (Brazil, Chile, Colombia, Peru, Mexico, and Venezuela), and finds three common trends and three common cycles. This paper provides an innovation by using an iterative approach to improve the performance of the Johansen test in small samples, and concentrates more on the method than the results.

[7]Countries include Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Venezuela. Imports were used to interpolate the GDP series when quarterly data were not available.

Data and Common Cycle Methodology

The data used for the analysis is annual real GDP from the period 1950–2006 for six Central American countries—Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama—and the United States. The data are taken from the IMF's *International Financial Statistics* and, for earlier periods, the Penn World Tables. Summary statistics for this data in annual percent changes are presented in Table 3.2 with a more detailed summary in Appendix Table 3.A1. For advanced economies, much use has been made of quarterly data; although these data are usually preferable for analyses of business cycles, it remains difficult to obtain data at this frequency that is both comparable across countries and available with a sufficient history for the Central America region.

As the literature review shows, many methods are available to assess linkages and common cycles across economies. The focus in this chapter is on two particular methods: simple correlations, using a variety of cyclical decompositions; and the common cycles approach first described by Engle and Kozicki (1993) and Vahid and Engle (1993).

These two methods are intuitive and provide a clear description of the common forces that drive business cycle fluctuations. The results are easy to interpret, can be compared against those of other well-known methods of business cycle analysis, and allow for the testing of hypotheses. As with any methodology, there are drawbacks and the most important of these is the emphasis on association rather than causation. These methods have little, or nothing, to say explicitly regarding the underlying economic forces that drive synchronization. Some interpretation can be imposed upon the results, but this will be more conjecture than firm conclusion.

The common cycles technique is an extension of the cointegration framework outlined by Johansen (1988). Cointegration implies that one or more linear combinations of nonstationary variables can remove the trend from the data. As shown by Stock and Watson (1988), for n variables, the existence of r cointegrating vectors implies the existence of $n - r$ common stochastic trends. For economic output series, one interpretation of this result could could be that, over the long run, there exist common forces driving the underlying growth process.

An analogous indicator of comovement among nonstationary series is codependence. A strong form of codependence is the serial correlation feature as described by Engle and Kozicki (1993). In this case, there exist some linear combinations of the variables that remove correlations, and hence predictability, based on the set of past values. These linear combinations are defined as cofeature vectors and may be compared to cointegration vectors for stationary data. The approach, briefly described in Appendix 3.1 borrows from Vahid and Engle (1993), where full technical details of the theory are presented.

Table 3.2. Real GDP Growth: Summary Statistics

	1951–2006				1995–2006			
	Mean	Standard deviation	Max.	Min.	Mean	Standard deviation	Max.	Min.
Costa Rica	5.4	4.1	18.4	–7.3	4.8	2.7	8.4	0.9
El Salvador	3.3	4.0	12.0	–11.8	3.1	1.4	6.4	1.7
Guatemala	3.9	2.5	9.5	–3.5	3.5	0.9	4.9	2.4
Honduras	3.8	4.0	17.9	–8.6	3.6	2.1	6.0	–1.9
Nicaragua	3.2	6.4	15.0	–26.5	4.2	1.7	7.0	0.8
Panama	4.7	4.8	18.7	–13.4	4.5	2.6	8.1	0.6

Sources: Heston, Summers, and Aten, Penn World Table Version 6.2 (2006); IMF, IFS; and national authorities.

Results

Growth Correlations

Surprisingly, in many cases correlations of GDP growth rates are neither particularly high nor statistically significant (Table 3.3). A cluster of economies—Costa Rica, El Salvador, and Guatemala—correlate fairly closely, but the links do not appear to be too strong. Even to the United States, correlations appear to be low and, for some economies, have not risen in the most recent decade or so. One possible interpretation is that linkages are weak. A second, more plausible, alternative given the stylized facts presented before is that GDP growth rates are a combination of changes in the trend and cycle and that the linkages of both components differ.

Four Common Trends and Three Common Cycles

The first step in the common cycles approach is to select the lag order of the system by identifying the vector autoregression—using nonstationary level data—with the lowest Aikake information criteria (AIC).[8] A five-lag system was selected by the AIC and other criteria (Appendix Table 3.A2). If the series are cointegrated, this implies an error-correction representation with four lags; this was used as the basis for the cointegration tests.

Cointegration tests, run on a number of lag specifications for robustness, suggest three cointegrating vectors, which implies four common trends among the GDP series. Appendix Table 3.A3 shows the results of the cointegration tests at the 5 percent level of significance and also indicates one weakness of the Johansen

[8]Although the AIC possesses a nonzero limiting probability of overfitting a VAR model—that is, selecting too many lags—Gonzalo and Pitarakis (2001) have shown that this bias is a decreasing function of the system dimension and that the AIC outperforms other criteria in large dimensional systems. Also, Hecq, Palm and Urbain (2006) have shown that the inefficiencies of overfitting a common cycles model tend to be small.

Table 3.3. GDP Growth Correlations, 1950–2006 and 1995–2006

	Correlation of GDP Growth Rates Including the United States						Correlation of GDP Growth Rates Controlling for the U.S. Effect[1]					
	Costa Rica	El Salvador	Guatemala	Honduras	Nicaragua	Panama	Costa Rica	El Salvador	Guatemala	Honduras	Nicaragua	Panama
						1950–2006						
El Salvador	**0.54**						**0.47**					
Guatemala	**0.38**	**0.39**					**0.36**	**0.37**				
Honduras	0.12	**0.26**	**0.44**				0.01	0.15	**0.42**			
Nicaragua	0.13	**0.33**	0.10	-0.21			0.13	**0.34**	0.10	-0.24		
Panama	0.21	0.13	0.09	-0.07	0.23		0.23	0.14	0.09	-0.07	0.23	
United States	**0.34**	**0.37**	0.13	**0.35**	0.05	0.00						
						1995–2006						
El Salvador	0.47						0.30					
Guatemala	**0.63**	**0.79**					**0.58**	**0.68**				
Honduras	-0.23	0.06	0.06				-0.32	0.16	0.02			
Nicaragua	0.09	0.26	0.04	-0.25			-0.10	-0.05	-0.10	-0.42		
Panama	**0.71**	0.16	0.49	0.32	0.07		**0.60**	-0.19	0.39	0.10	0.02	
United States	0.49	0.21	0.32	0.01	**0.59**	**0.63**						

Source: Author's calculations.

Note: Figures in bold are statistically significant at the 5 percent level.

[1]These correlation coefficients use residuals from a regression of country *i*'s growth rate on a constant and the U.S. growth rate, over the same sample period.

(1988) methodology with small samples and overparameterization (see Cheung and Lai (1993) and Ho and Sorensen (1996) among others). Often, the likelihood ratio tests are too liberal, leading to an overestimate of the number of cointegrating vectors *r*. This bias is magnified as the lag length increases. The test for common cycles is based on calculating the canonical correlations of the (7 x 1) vector Δy_t and its lagged values and the first lag of the three error correction terms. The value of the test statistic described by equation (8) are presented in Table 3.A3. In this test, the null hypothesis is that there are at least $n - s$ common cycles and, at the 5 percent level of significance, it was not possible to reject the hypothesis of four common cycles among the GDP series. This conclusion was insensitive to the number of cointegrating relationships. Also, in most cases, the combined number of cointegration and cofeature vectors spanned R^n, that is, $r + s = n$.

Trends and Cycle Decomposition

When the number of cycles and trends sum to the number of variables—that is, $r + s = n$—a special case allows the decompositon of each GDP series into a separate trend and cycle component. This Beveridge-Nelson-style decomposition of the y_t vector into permanent (trend) and transitory (cyclical) components can be derived for each country, as shown by Vahid and Engle (1993) and extended in Gonzalo and Granger (1995).

The first step in recovering these components is to estimate the system described by equation (10). This was estimated using iterative three-stage least squares, which accounts for endogeneity of some regressors and provides efficiency gains

over the two-stage procedure owing to the existence of common exogenous shocks—for example, the oil price—on output. This allows for the estimates for the cointegrating and cofeature vectors.

To see how these estimates may be used to recover the trends and cycles, it is important to recall that a cointegrating combination of I(1) variables eliminates the trend from the data, leaving only the cycle. By analogy, a codependent combination of the same variable eliminates the cycle, leaving only the trend[9]. Figures 3.4 through 3.6 show the derived trends and cycles to their Hodrick-Prescott (HP)-filter counterparts. One cautionary note regarding the common cycle model is the relatively high volatility of the trend component, a tendency also seen in the original application to U.S. consumption by Vahid and Engle (1993). Trend or underlying, GDP growth is often assumed to be smooth over time, with a lower frequency of perturbations.

As a robustness check, the model was also run assuming four shared cycles and three shared trends. The results were not qualitatively different, although for some countries, the cycle tended to be somewhat more volatile. This is particularly true for Guatemala, for which the low volatility of the official GDP series tends to imply a very shallow cycle with this model.

Cyclical Correlations

Correlations of the cyclical part of GDP from this model are much higher than for the annual growth rate or the HP filter cycle (using three or four common cycles, see Appendix Figures 3.A1 and 3.A2). This is true for almost all economies. This result is not an inevitable outcome of the methodology; recall that there are three common cycles and it is conceivable that some economies would have exposure to some cycle, but not others. However, with this sample of countries, it appears that the exposure to these common cycles is similar. The results are stronger, but also similar in terms of the ranking of countries to the correlations of growth rates. Costa Rica, El Salvador, and Honduras appear to be the most sensitive to the U.S. business cycle.

---

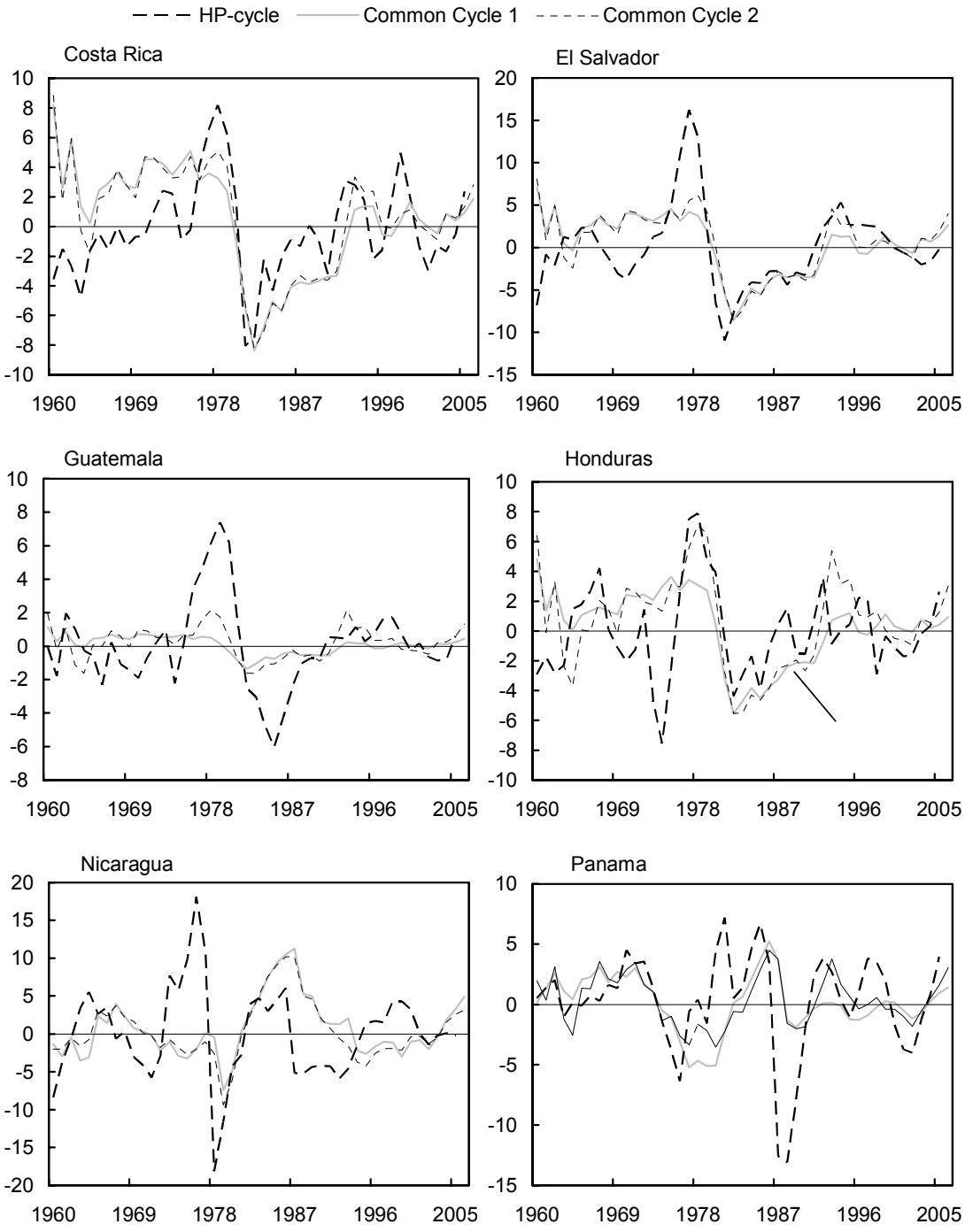
[9]The following terms describe the trend and cyclical factors, respectively:

$$\tilde{\boldsymbol{\alpha}}'\mathbf{y}_t = \tilde{\boldsymbol{\alpha}}'\mathbf{C}(1)\sum_{s=0}^{\infty}\boldsymbol{\varepsilon}_{t-s}$$
$$\boldsymbol{\alpha}'\mathbf{y}_t = \boldsymbol{\alpha}'\mathbf{C}^*(L)\boldsymbol{\varepsilon}_{t-s} \qquad (11)$$

where $\tilde{\boldsymbol{\alpha}}$ is the (n x s) matrix of cofeature vectors and $\boldsymbol{\alpha}$ is the (n x r) matrix of cofeature vectors. The trend and cycle for each series can then be recovered using the following expression, where the (n x s) matrix $\tilde{\boldsymbol{\alpha}}^{-}$ and (n x r) matrix $\boldsymbol{\alpha}^{-}$ are formed from the partition of the inverse of the matrix $\left[\tilde{\boldsymbol{\alpha}}' \quad \boldsymbol{\alpha}'\right]'$:

$$\mathbf{y}_t = \tilde{\boldsymbol{\alpha}}^{-}\tilde{\boldsymbol{\alpha}}'\mathbf{y}_t + \boldsymbol{\alpha}^{-}\tilde{\boldsymbol{\alpha}}'\mathbf{y}_t = \textit{trend} + \textit{cycle} \qquad (12)$$

Figure 3.4. Cyclical Components of GDP, 1960–2006[1]

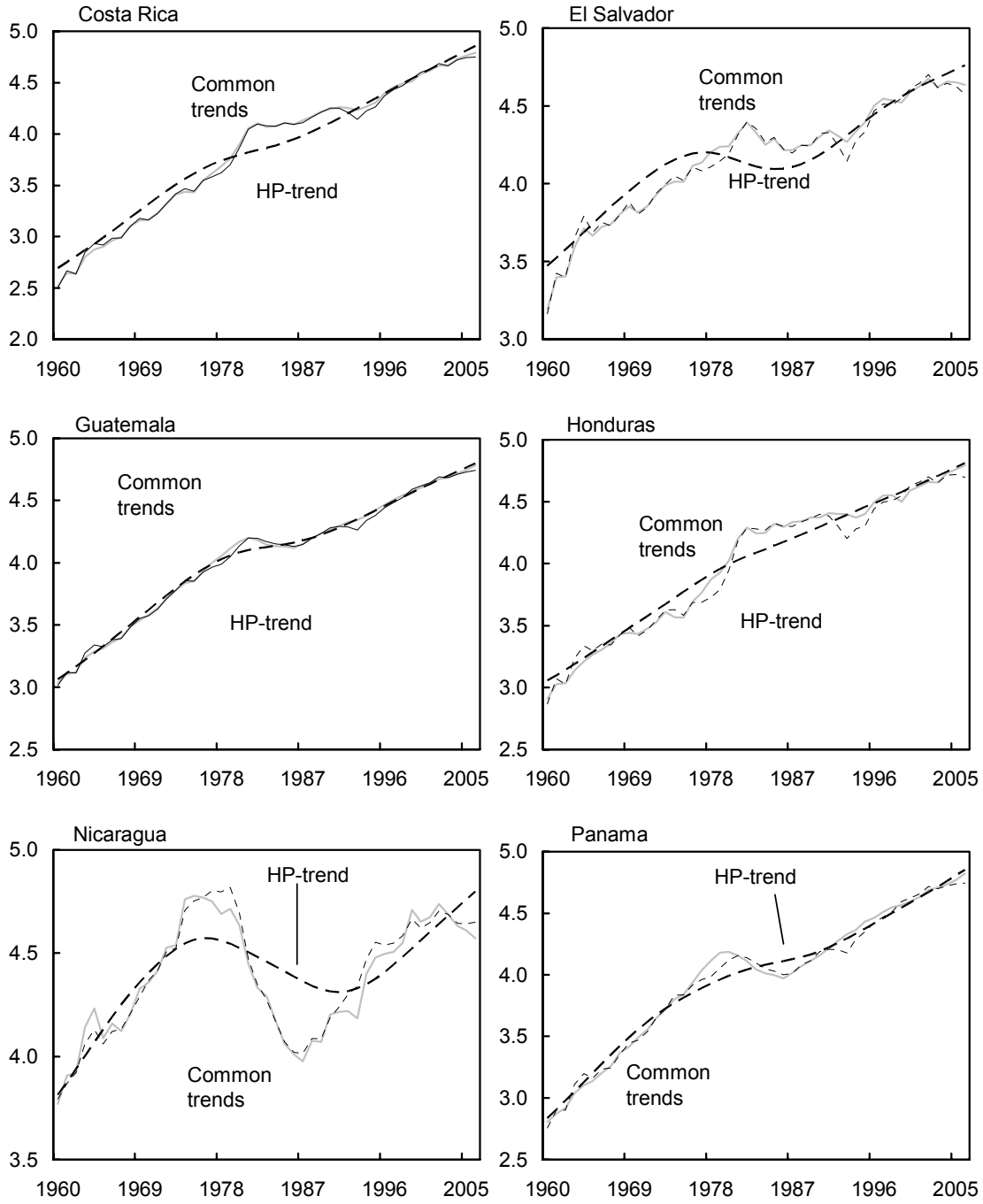


Source: Author's calculations.

Note: HP=Hodrick-Prescott.

[1]There are two cyclical components from the common cycles model for each country. Cycle 1 is estimated from a model with 4 cofeature vectors (i.e., 3 common cycles and 4 common trends). Cycle 2 is estimated from a model with 3 cofeature vectors (i.e., 4 common cycles and 3 common trends).

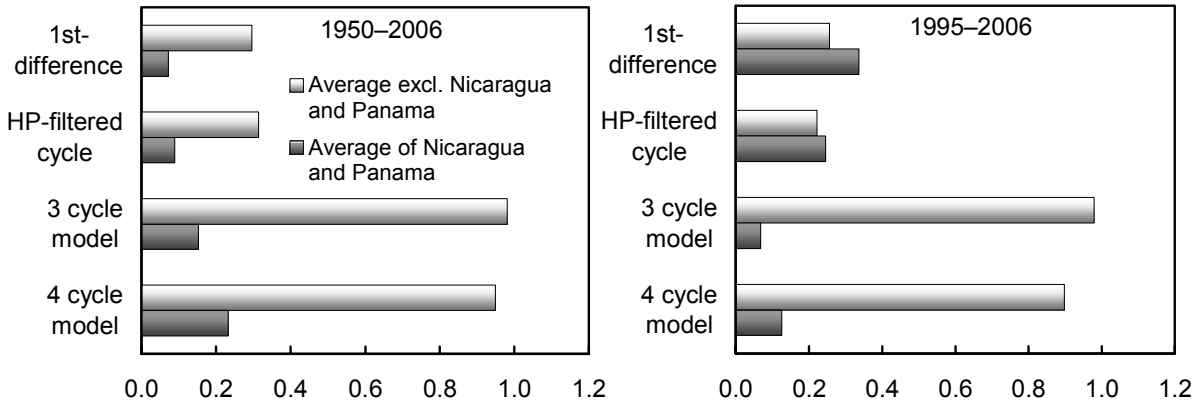
Figure 3.5. Trend Components of GDP, 1960–2006[1]



Source: Author's calculations.

[1]There are two trend components from the common cycles model for each country. Trend 1 (solid line) is estimated from a model with 4 cofeature vectors (i.e., 3 common cycles and 4 common trends). Trend 2 (broken line) is estimated from a model with 3 cofeature vectors (i.e., 4 common cycles and 3 common trends).

Figure 3.6. Average Correlation of Cyclical GDP Component to the United States: Comparison of Methods[1]



Source: Author's calculations.

[1]The methods include first-differenced log values, the first difference of the cyclical component from the Hodrick-Prescott filter, and the first difference of the common cycle factor recovered from the Vahid and Engle (1993) decomposition.

Cyclical and Trend Elasticities to the United States

In the sample used, it is reasonably assumed that there is one truly exogenous cycle, that is, that of the United States (ignoring, for now, the possibility of common exogenous shocks, which could characterize the 1970s oil supply disruptions). Although correlations show that the cycles in most Central American countries and the United States tend to move in the same direction, it does not tell us anything about elasticities; that is, the extent to which growth in Central America would respond to a cyclical shock in the U.S. Assuming a one-way causality from the United States to Central America allows for the use of very simple methods to estimate elasticities, without running into all of the interpretation and estimation problems related to endogenous regressors.[10]

[10]The cyclical contribution to GDP growth is approximated by the first difference in the cyclical series extracted above. Then, for each Central American country, the first-differenced cycle was estimated as the sum of: a constant γ (which should be zero in the long run); the first differenced U.S. cycle and the elasticity εUSC; the first differenced U.S. trend and the elasticity εUST; and a residual e that could reflect country-specific factors or linkages with other economies in the sample. Given the exogeneity assumption, this relationship—equation (13) below—may be estimated using ordinary least squares (OLS).

$$\Delta y_{it}^{C} = \gamma_i + \varepsilon_i^{USC} \cdot \Delta y_{USt}^{C} + \varepsilon_i^{UST} \cdot \Delta y_{USt}^{T} + e_{it} \qquad (13)$$

The codependent combination of variables eliminates the influence of past shocks. As a result, it should be possible to discard autoregressive terms or lags of the U.S. cycle. If such variables were incorrectly omitted from equation (13), the result would likely be strong serial correlation of the equations residuals, something that can be tested using well-known procedures.

The results suggest that Central American is very cyclically sensitive to the United States, with elasticities highly significant for four countries (Guatemala's elasticity is somewhat lower than the others, owing mostly to the low volatility of the historical GDP series).[11] In contrast, long-run trend shocks in the United States have a lesser impact, indicating that trends are determined much more by regional developments. Running diagnostics for each of these estimations confirms that the model is well-behaved and supports our earlier assertions that this simple functional form captures the true cyclical elasticities (Appendix Table 3.A5).

Variance Decomposition by Factor

How much of the variation in GDP is due to the trend and how much to the cycle, at least as it is defined here? Previous research answered this question using a VAR approach (see Vahid and Engle (1993) and Cerro and Pineda (2002). Generally, it was found that one type of shock completely dominates variance and, using the same methods, similar results are obtained using this sample. However, the shock that dominates is very sensitive to the ordering. Without strong priors from theory to suggest which shock should be ordered first—such as cyclical or trend shocks—there would be a powerful incentive to identify a new decomposition method.[12]

The results suggest that for most Central American countries, the cycle contributes most to changes in GDP (see Figure 3.7). One exception is Honduras, for which the trend is more important and more closely linked to the U.S. trend than other countries. The other exception is Guatemala, with the cycle tending to dampen down changes in the trend; this can occur owing to the inclusion of covariance terms in equation (16). Once again, as with the estimated elasticities, the curiously low volatility of the historical GDP series may be playing some role in this result.

[11]Using the index for economic activity (IMAE) instead of GDP, the elasticity is about 0.4 in the case of Guatemala.

[12]An application of the portfolio risk contribution is used to assess this. To describe this method, first recall that in our case, there are three common cycles and four common trends, which are scaled up by the factor loadings to yield the level of GDP. This implies that it is possible to write GDP as a factor model, where the (n x 1) vector $\mathbf{f}$ contains r cycles and s trends:

$$\mathbf{y}_t = \mathbf{A}\mathbf{f}_t \tag{14}$$

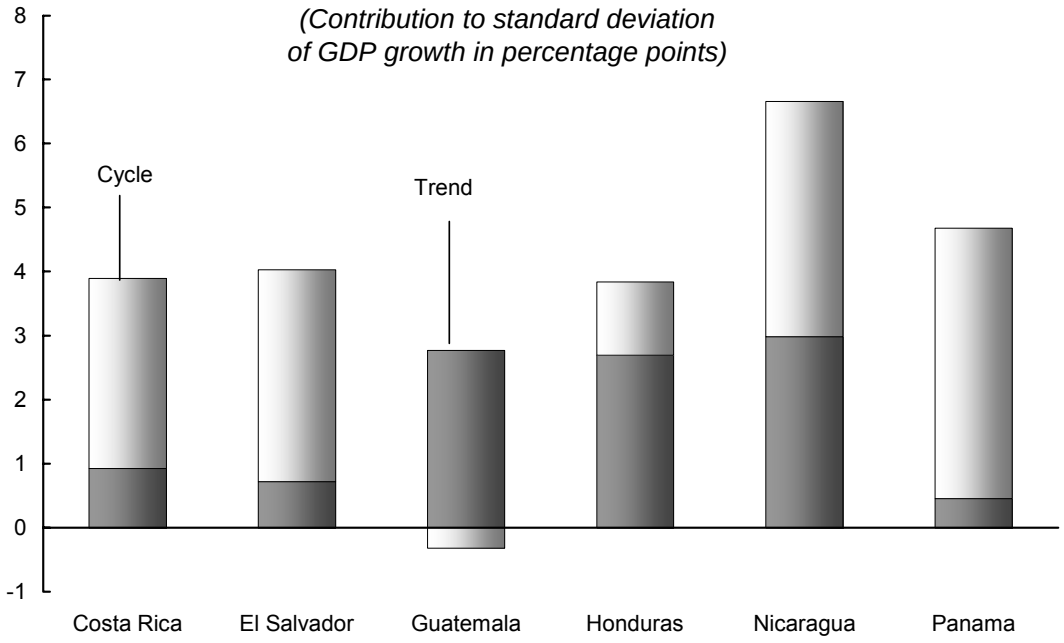
For any individual country, this can be written as:

$$y_{it} = a_{i1} f_{1t} + a_{i2} f_{2t} + \cdots + + a_{in} f_{nt} \tag{15}$$

The variance in this case can be written as:

$$\text{var}\left(y_i\right) = \sum_{j=1}^{n} \sum_{k=1}^{n} a_{ij} a_{ik} \text{ cov}\left(f_j, f_k\right) \qquad \forall \quad j,k = 1,..., N \tag{16}$$

Figure 3.7. Contribution of Cycle and Trend to GDP Growth: Common Cycles Method, 1950–2006



Source: Author's calculations.

Strong Linkages and Policy Implications

Almost all of the countries in the sample—including the United States—share a common business cycle. Clearly, the United States is the dominant economy and, as a result, there is evidence of a powerful cyclical linkage running from the United States to Central America, a linkage that is stronger than simple regressions of GDP growth rates would imply.

Indeed, growth elasticities using GDP suggest a much weaker cyclical relationship. This is due to the weak links between long-run growth shocks in Central America and the United States, the most important of which are related to armed conflicts in particular countries but also common terms of trade shocks and poor policy responses (see Macías, Meredith, and Vladkova Hollar, 2007). If the long-run component of Central America's GDP growth is not stripped out, reflecting these shocks, estimated cyclical linkages with the United States will seem lower than they really are, which could complicate the policy response.

How will these cyclical linkages evolve? They are unlikely to weaken in the absence of a significant diversification of exports and investment inflows, beyond the United States and, perhaps, the region itself. The CAFTA-DR trade agreement, the most important economic change in recent years, may play the pivotal role in determining how external linkages develop.

Most obviously, CAFTA-DR may encourage more integration with the United States not only through trade, but also through investment flows and the financial sector. This would tend to strengthen cyclical linkages. For example, Mexico's experience under NAFTA suggests that trade flows between Centra America and the United States could increase rapidly as a result of CAFTA, while FDI from the United States would rise (Kose and others, 2005).

However, it is also conceivable that CAFTA-DR would have an externality effect that could weaken the dependence upon the U.S. cycle. It seems reasonable to assume that CAFTA-DR could have a positive effect on productivity growth, through higher investment and technology transfer. This in turn could encourage investment from new sources that have not been a strong presence in the region, such as Asia. Improved competitiveness may also increase the region's penetration in other markets. In other words, CAFTA-DR could have positive externalities beyond the obvious linkages with the agreement's members. Other bilateral trade agreements, including those currently being negotiated with the European Union, could also encourage cyclical diversification (Desruelle and Schipke, 2007).

The more difficult question is how long-run trend growth, which has been responsible for long periods of decoupling with the United States, will evolve across the region. The diversification of exports, with a greater share now destined for other countries in the region rather than the United States, suggests that Central America may be experiencing its own growth dynamic. Perhaps this is the early stage of the positive externality process from CAFTA mentioned earlier. How could this process provide some insulation against cyclical fluctuations in the United States? First, by encouraging linkages with new markets beyond CAFTA. Second, and less likely, by building the region's critical economic mass to the point that it could generate its own economic cycle.

Whether a rise (or fall) in economic growth is due to the cycle or long-run structural factors should influence the public policy response. The clearest example is fiscal policy. Evidence suggests that government tax revenues in the region rise by more than one-for-one with growth in the economy.[13] For example, if GDP growth over a year is 5 percent, tax revenues will grow by more than 5 percent, causing the tax-to-GDP ratio to rise (and vice versa for a decline).[14]

[13]For instance, Cubero and Sowerbutts (forthcoming) find that, in the case of Costa Rica, the elasticity of tax revenues with respect to GDP is about 1.1 (and much higher than that for income taxes).

[14]Over the long run, the tax-to-GDP ratio should be expected to stabilize at some level, given an unchanged tax structure.

The decision to save or spend this additional income is a straightforward application of the permanent income hypothesis. If the rise in growth is due to permanent structural factors, then the optimal response would be for the government to fully "spend" it, either through higher expenditure or lower taxes.[15] If the rise in growth is cyclical, and by definition temporary, it would be optimal to "save" most of it and spread the benefits of temporarily higher income through time. In other words, governments would be well advised to adjust their spending to the "structural" level of revenues; that is, the level explained by potential or long-run growth.

Appropriate policy settings rely upon a good understanding of the nature of growth. Although a simple trend-cycle analysis incorporating major trading partners cannot provide all the answers, it does provide some important clues. For Central America, the message seems to be that if regional growth is picking up (or falling) at the same time as it is in the United States, then it is reasonable to presume that some portion of that improved growth performance is due to temporary cyclical factors.

Conclusions

The economies of Central American and the United State are closely intertwined. The open nature of the region's economies, combined with the geographic proximity to the United States, has resulted in a number of transmission channels through which U.S. cyclical fluctuations could impact the region. The main channels through which shocks are transmitted are trade, financial flows, and remittances. As the implementation of CAFTA-DR moves forward, the links between the two regions are likely to become even stronger.

Given these links, it should be no surprise that the Central American economies appear to be strongly influenced by cyclical fluctuation in the United States. Historical data show that business cycles in Central America move in the same direction as those in the United States. Based on empirical estimates a growth slowdown of 1 percentage point in the United States would typically be associated with a cyclical fall in output growth of 0.5 to 1 percentage points in most of the countries of the region. In light of this dependence, a prolonged downturn in the United States would be expected to have significant implications for the region.

[15]Ignoring absorption capacity constraints in the economy for simplicity could imply other consequences from higher spending, such as higher inflation and rapid real exchange rate appreciation.

Appendix 3.1. The Common Cycles Method

Let y_t denote the (7 x 1) vector of log GDP series for the economies in our sample. As confirmed by standard tests (Table 3.A1), these data are I(1) while their first differences Δy_t are I(0). As a result, Δy_t has the following Wold representation:

$$\Delta \mathbf{y}_t = \mu + \mathbf{C}(L)\boldsymbol{\varepsilon}_t \tag{1}$$

where $C(L)$ is a matrix polynomial in the lag operator and ε is an (7 x 1) vector of stationary innovations. Assuming that $\mu = 0$ for algebraic convenience, the Beveridge-Nelson decomposition allows the original I(1) series to be expressed as the sum of a trend (T) and a cyclical (C) component.

$$\mathbf{y}_t = \mathbf{C}(1)\sum_{s=0}^{\infty} \boldsymbol{\varepsilon}_{t-s} + \mathbf{C}^*(L)\boldsymbol{\varepsilon}_{t-s} = T_t + C_t \tag{2}$$

Stock and Watson (1988) show that a number of common trends r may be shared among the variables in vector y. In this case, the matrix C(1) may be decomposed into the product of an (n x ($n - r$)) matrix of rank $n - r(A)$ with a (($n - r$) x n) matrix of rank $n - r(B)$ as follows:

$$\mathbf{y}_t = \mathbf{AB}\sum_{s=0}^{\infty} \boldsymbol{\varepsilon}_{t-s} + \mathbf{C}^*(L)\boldsymbol{\varepsilon}_{t-s} = \mathbf{AZ}_t + \mathbf{C}_t \tag{3}$$

where A is an (n x ($n - r$)) matrix of factor loadings with full column rank. Analogously, the vector y may also share common cycles. If common cycles exist, then there must exist linear combinations of the y vector that do not contain the cycle and for which history has no predictive power. This would imply that the following condition, for some set of linearly independent vectors α* known as cofeature vectors, will hold:

$$\boldsymbol{\alpha}^{*\prime}\mathbf{C}_t = 0 \tag{4}$$

When applied to Δy, the cofeature transformation α* eliminates all the positive powers of the lag operator; in other words, it removes the serial correlation of first differences. This same transformation, when applied to the levels, removes the common cycles.

We test for the existence of common cycles using the canonical correlation procedure outlined in Vahid and Engle (1993). The first step is to estimate a vector error correction model to recover the error correction series, otherwise known as the long-run relationship:

$$\Delta \mathbf{y}_t = \boldsymbol{\Phi}\mathbf{y}_{t-1} + \sum_{s=1}^{p} \boldsymbol{\Gamma}_s \Delta \mathbf{y}_{t-s} + \boldsymbol{\varepsilon}_t \tag{5}$$

Then, defining two (7 x 1) random vectors ϱ_t and η_t, which are linear combinations of the (7 x 1) vector Δy_t and the ((7p + r) x 1) vector of lags and error correction terms (which will be termed x_t):

$$\boldsymbol{\rho}_t = \mathbf{A}'\Delta\mathbf{y}_t$$
$$\boldsymbol{\eta}_t = \mathbf{B}'\left[\Delta\mathbf{y}_{t-1} \quad \cdots \quad \Delta\mathbf{y}_{t-p} \quad \boldsymbol{\beta}\mathbf{y}_{t-1}\right] = \mathbf{B}'\mathbf{x}_t \tag{6}$$

The (n x n) matrix A and the (n x (np + r)) matrix B are chosen such that four conditions hold. The first two state that the individual elements of both ϱ_t and η_t have unit variance; the third condition states that the ith element of ϱ_t and the jth element of η_t are uncorrelated; and the final condition states that the elements of ϱ_t and η_t are ordered in such a way such that:

$$1 \geq \lambda_1 \geq \cdots \geq \lambda_n \geq 0 \tag{7}$$

where the correlation r_i is known as the ith canonical correlation between the two vectors Δy_t and x_t. The canonical correlations and the values of A and B can be calculated from the covariance matrices of Δy_t and x_t through eigenvalues and eigenvectors. The test statistic is analogous to the trace statistic from the Johansen (1988) procedure, with the null hypothesis that the dimension of the cofeature space is at least s (or equivalently that there are at most $n - s$ common cycles) being:

$$C(p, s) = -(T - p - 1)\sum_{i=1}^{s} \log\left(1 - \lambda_i^2\right) \tag{8}$$

where the λ^2's are the s smallest squared canonical correlations between ϱ_t and η_t. Under the null, this statistic is chi-squared with $s^2 + snp + sr - sn$ degrees of freedom.

Suppose there are s linearly independent cofeature vectors; in this case, the (s x n) matrix of cofeature vectors that has full column rank. Vahid and Engle (1993) suggest that these equations may be regarded as s pseudo-structural equations for the first s terms of the vector Δy:

$$\tilde{\boldsymbol{\alpha}}'\Delta\mathbf{y}_t = \mathbf{v}_t \tag{9}$$

In other words, there are s linearly independent combinations of the elements of Δy_t that have no dependence on the relevant past, such that the residual term is stationary, analogous to cointegration. The system is completed by including the unconstrained reduced form equations for the remaining ($n - s$) elements of the (n x 1) vector:

$$\begin{bmatrix} \mathbf{I}_s & \tilde{\boldsymbol{\alpha}}^{*\prime} \\ \mathbf{0}_{(n-s)\times s} & \mathbf{I}_{n-s} \end{bmatrix} \Delta \mathbf{y}_t = \begin{bmatrix} \mathbf{0}_{s\times(np+r)} \\ \boldsymbol{\Pi}_1^*, \ldots, \boldsymbol{\Pi}_1^* \beta^* \end{bmatrix} \cdot \begin{bmatrix} \Delta \mathbf{y}_{t-1} \\ \\ \Delta \mathbf{y}_{t-p} \\ \tilde{\boldsymbol{\alpha}}' \mathbf{y}_{t-1} \end{bmatrix} + \mathbf{v}_t \tag{10}$$

This system may then be estimated using maximum likelihood or other estimation procedures, such as iterative three-stage least squares.

Table 3.A1. Real GDP Summary Statistics
(Using first-difference of log values, unless otherwise specified)

	Sample Size	Mean	Standard Deviation	Skewness	Unit Root Test *p*-Values[1] Levels	Changes
Costa Rica	56	5.1	3.9	–0.2	0.20	0.00
El Salvador	56	3.1	4.0	–1.9	0.51	0.03
Guatemala	56	3.8	2.4	–0.7	0.66	0.01
Honduras	56	3.7	3.8	0.0	0.20	0.00
Nicaragua	56	2.9	6.7	–2.4	0.20	0.00
Panama	56	4.5	4.7	–1.1	0.45	0.00
United States	56	3.3	2.2	–0.5	0.81	0.00

Source: Author's calculations.
[1]One-sided *p*-values from Augmented Dickey-Fuller unit root tests with lags selected usiing Aikake information criteria.

Table 3.A2. Vector Autoregression (VAR) Lag Order Selection Criteria[1]

Lag Order	Likelihood Ratio	AIC	SBC	HQ
0	. . .	–15.3	–15.0	–15.2
1	703.9	–29.4	**–27.3**	–28.6
2	92.3	–30.0	–26.1	–28.5
3	80.4	–30.8	–25.1	–28.6
4	68.2	–31.9	–24.3	–29.0
5	**83.1**	**–35.2**	–25.8	**–31.6**

Source: Author's calculations.
Note: Bolded figures identify the lag order selected by each criteria for the VAR in levels of all seven variables.
[1]The criteria include: small-sample adjusted log likelihood ratio test; Aikake information criteria (AIC); Schwarz-Bayes information criteria (SBC); and the Hanan-Quinn information criteria (HQ).

Table 3.A3. Tests for the Number of Cointegrating Vectors: Probability Values

Null hypothesis	Trace Test, Lag order 1	2	3	4	5	Maximum Eigenvalue Test, Lag order 1	2	3	4	5
$r = 0$	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
$r \leq 1$	0.045	**0.003**	0.003	0.000	0.000	0.001	0.000	0.000	0.000	0.000
$r \leq 2$	**0.018**	0.104	**0.002**	0.000	0.000	**0.014**	**0.009**	0.000	0.000	0.000
$r \leq 3$	0.508	0.130	0.057	0.001	0.000	0.266	0.055	0.006	0.000	0.000
$r \leq 4$	0.590	0.301	0.094	0.000	0.000	0.357	0.234	**0.049**	0.000	0.000
$r \leq 5$	0.317	0.439	0.242	0.000	**0.000**	0.327	0.421	0.229	0.000	**0.000**
$r \leq 6$	0.375	0.318	0.279	**0.010**	0.086	0.375	0.318	0.279	**0.010**	0.086

Source: Author's calculations.

Table 3.A4. Tests for the Number of Cofeature Vectors

Null hypothesis	Probability Values, Number of cointegrating vectors 2	3	4	5	Canonical Correlation, Number of cointegrating vectors 2	3	4	5
$s > 0$	0.9821	0.9866	0.9581	0.9464	0.94	0.95	0.95	0.95
$s > 1$	0.9657	0.9619	0.8009	0.7509	0.85	0.91	0.91	0.91
$s > 2$	0.6962	0.4756	**0.2669**	**0.0597**	0.73	0.76	0.85	0.85
$s > 3$	**0.1776**	**0.0904**	0.0073	0.0001	0.66	0.66	0.75	0.81
$s > 4$	0.0083	0.0020	0.0000	0.0000	0.55	0.62	0.63	0.72
$s > 5$	0.0000	0.0000	0.0000	0.0000	0.37	0.39	0.47	0.50
$s > 6$	0.0000	0.0000	0.0000	0.0000	0.22	0.23	0.27	0.29

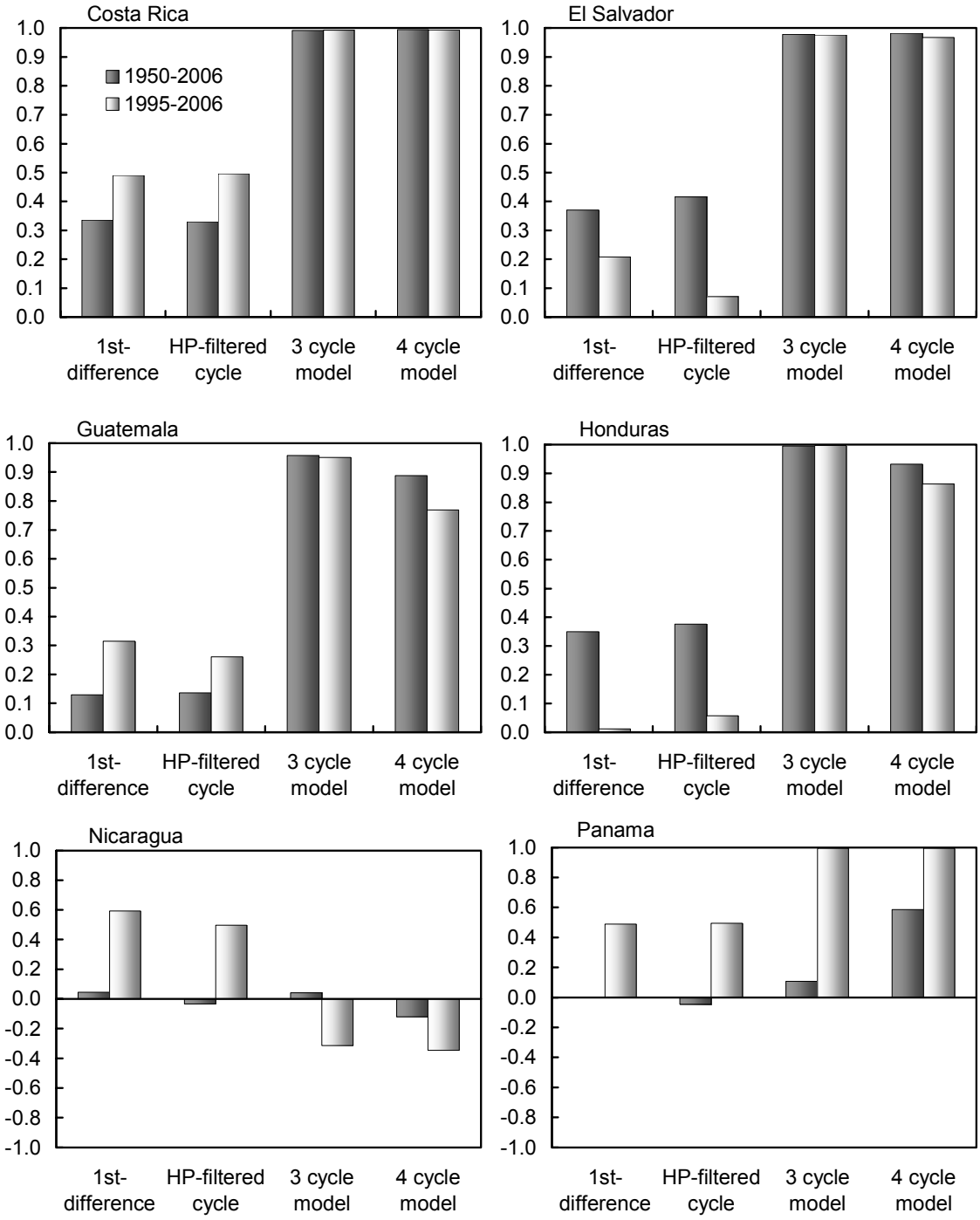
Source: Author's calculations.

Table 3.A5. Growth Elasticity Models: Diagnostics

	Observations	*R*-Squared	DW-Statistic	LM Autocorrelation Test[1]	LM Heteros-cedasticity Test[1]
Cycle equations					
Costa Rica	56	0.81	1.84	0.1435	0.0487
El Salvador	56	0.73	1.92	0.2971	0.2034
Guatemala	56	0.21	1.89	0.2332	0.1312
Honduras	56	0.97	1.81	0.0887	0.0212
Trend equations					
Costa Rica	56	0.23	1.79	0.1435	0.0487
El Salvador	56	0.40	1.43	0.2971	0.2034
Guatemala	56	0.04	1.02	0.2332	0.1312
Honduras	56	0.71	1.99	0.0887	0.0212

Source: Author's calculations.
[1]Probability value of the test statistic if the null hypotheses (of no autocorrelation or heteroscedasticity) were true.

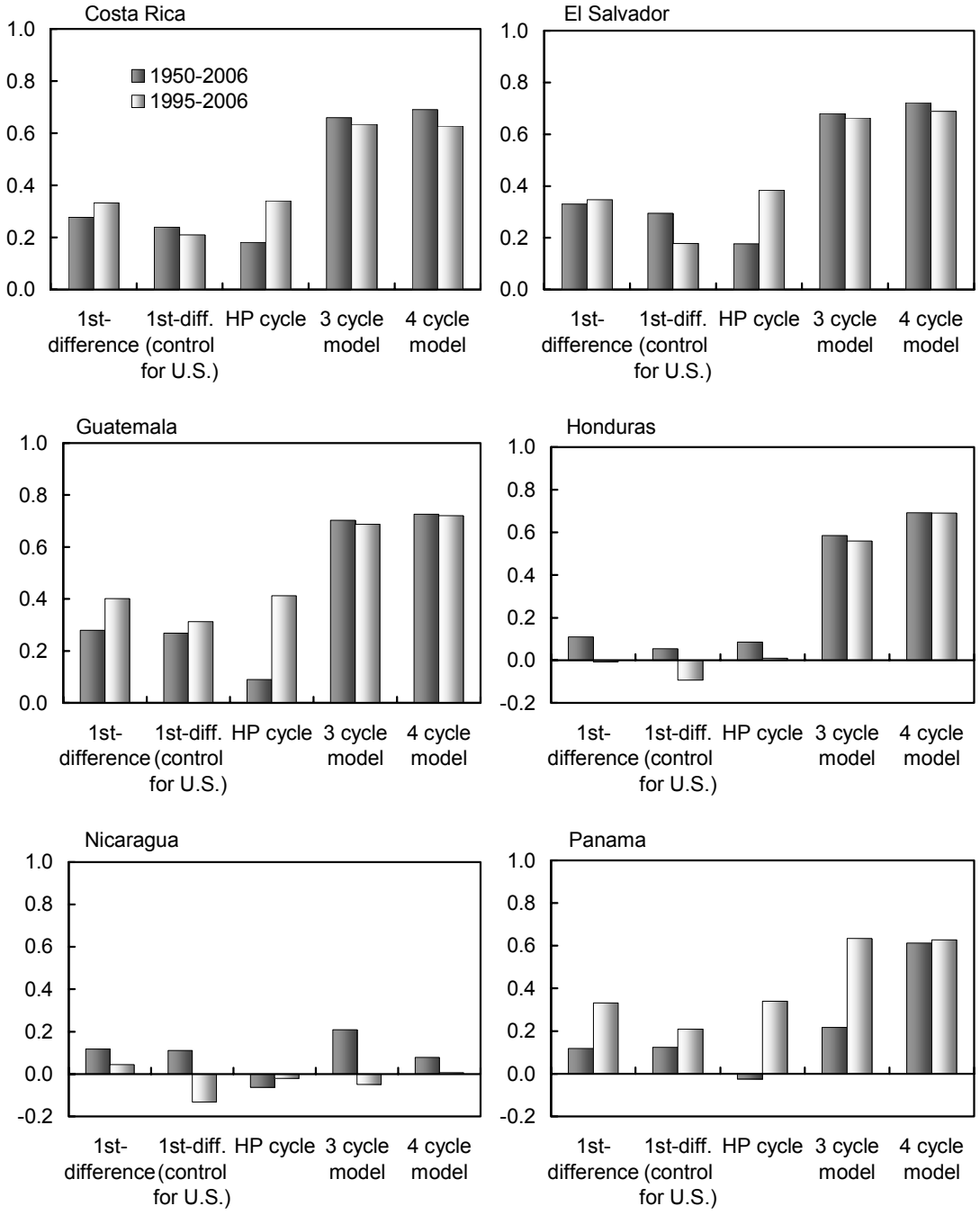
Figure 3.A1. Average Correlation of Cyclical GDP Component to the United States: Comparison of Methods[1]



Source: Author's calculations.

[1]The methods include first-differenced log values, the first difference of the cyclical component from the Hodrick-Prescott filter, and the first difference of the common cycle factor recovered from the Vahid and Engle (1993) decomposition.

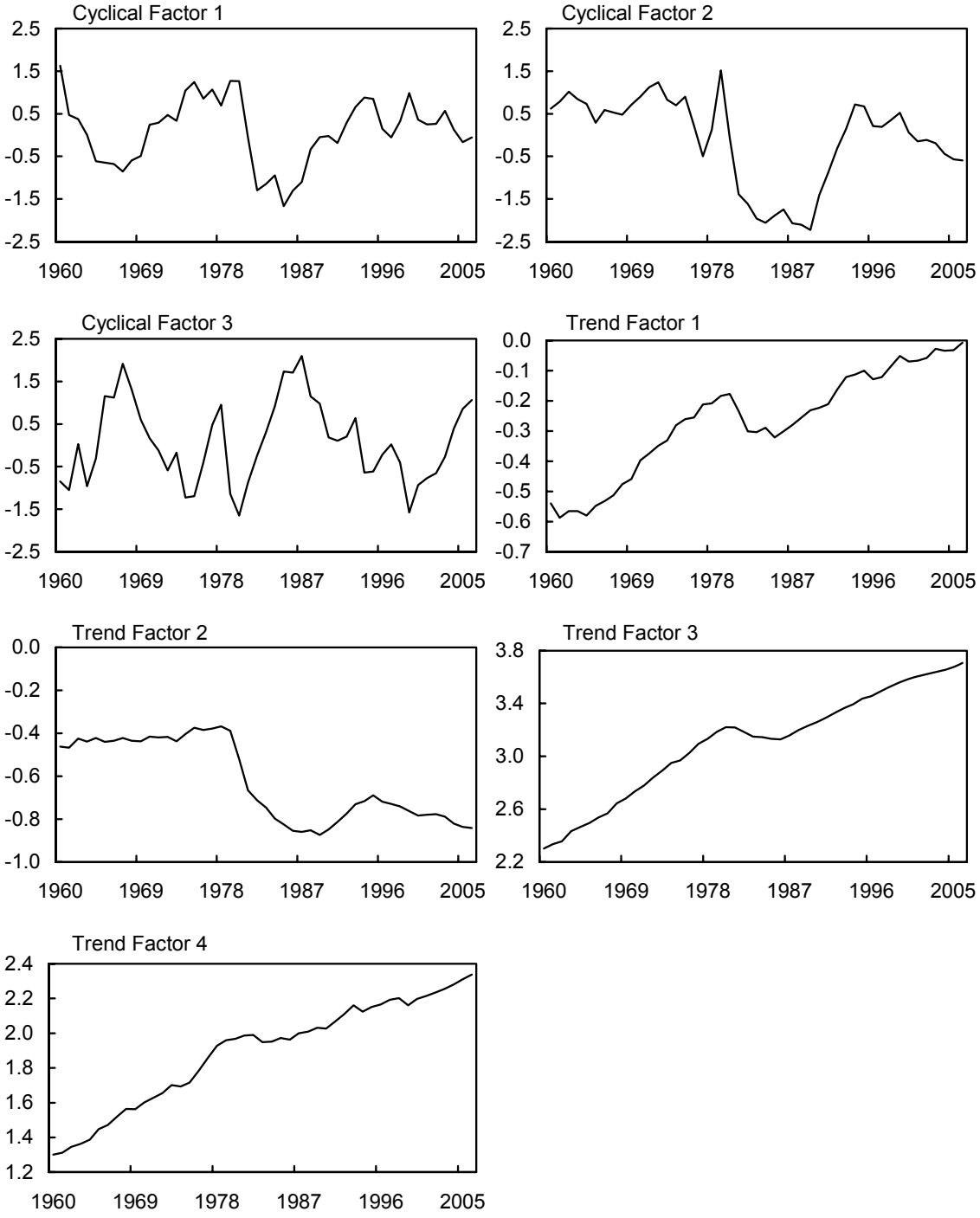
Figure 3.A2. Average Correlation of the Cyclical Component of GDP to Other Central American Countries: Comparison of Methods[1]



Source: Author's calculations.

[1]The methods include first-differenced log values, first-differences adjusted for the U.S. effect by running an OLS regression on contemporaneous U.S. first differences, the first difference of the cyclical component from the Hodrick-Prescott filter, and the first difference of the common cycle factor recovered from the Vahid and Engle (1993) decomposition.

Figure 3.A3. Common Cyclical and Trend Factors



Source: Author's calculations.

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CHAPTER

4 Equity and Fiscal Policy: Income Distribution Effects of Taxation and Social Spending

Rodrigo Cubero and Ivanna Vladkova Hollar

Introduction

Central America's high levels of poverty and income inequality place the distributional effects of fiscal policy at the center of policy dialogue. Central American governments have made poverty reduction one of their key policy objectives; even while its incidence has edged down in the past decade, poverty in Central America remains well above that in Latin America as a whole. Inequality in income distribution, moreover, is as high as in other parts of Latin America and stands out in a global context. Distributional outcomes are, fundamentally, a function of the distribution of productive resources (physical and human capital, land) and their rates of return, factors that are deeply embedded in historical and geographical conditions. However, public policies can affect the market-determined distribution of income, either through changes in the distribution of resources and their returns or through a redistribution of market income. Through appropriate policies, governments in the region can also help address the mechanisms that perpetuate inequality.

This chapter is concerned with the distributional effects of taxation and social spending in Central America, taking the underlying distribution of resources as given. The chapter surveys a number of existing tax and expenditure studies for the countries in the region, and assembles their underlying data in a coherent comparative framework to assess the combined distributional impact of taxation and social spending in Central America. The chapter also presents, as a reference, some evidence for other countries in Latin America and Europe.

The focus on the distributional impact of taxation merits justification. There is some consensus in policy circles that the redistributive goals of fiscal policy can best be achieved through well-targeted spending. The empirical evidence for developed and developing countries suggests that the overall effect of taxes on income distribution is generally limited, and that even relatively profound

changes in tax structures have only a small distributional impact.[1] In contrast, the distributional effects of public spending, especially of well-targeted social spending, can have substantial positive effects on equity and poverty reduction.[2] Many analysts thus conclude that tax policy considerations should focus on efficiency issues, and that the redistributive aim of fiscal policy should be accomplished through the expenditure side.[3] However, the distributional impact of taxation remains a relevant question for tax policy debates, which are largely influenced by incidence and equity considerations.[4,5] A clearer understanding of the distributional effects of certain taxes, and of the determinants of such effects, may help shape more equitable tax systems without necessarily sacrificing efficiency.

The scope of the analysis in this chapter imposes some limitations. First, the chapter focuses on taxation and social spending, and thus does not reflect all components of fiscal policy. The direct distributional effects of other components of spending, and the indirect effects of the overall fiscal stance, are not included in the analysis. Second, the incidence and distributional impact are treated in a static sense. For instance, the analysis of social spending on education does not take into consideration its impact on the future earning potential of the poor; neither does the chapter consider how taxation and the public provision of social services and transfers might interact with each other or affect behavior (for example, in changing incentives to work or invest).[6] Third, although the efficiency, effectiveness, and administrative simplicity of taxation and social spending are clearly important subjects for policy discussion, and may impinge on distributional outcomes, this chapter does not directly address them. Fourth, the reliance on existing studies of tax and spending incidence limits the degree to which cross-country comparisons can be taken literally: methodology and assumptions made for estimating the incidence of taxation and spending differ from study to study. It also constrains the time frame of the data: the available

[1]See, for example, Pechman (1985) for the United States and Engel, Galetovic, and Raddatz (1999) for Chile.

[2]See Chu, Davoodi, and Gupta (2000), who find that a large revenue-neutral increase in the ratio of direct to indirect tax revenues (i.e., increasing the share of taxes that are potentially more progressive) has only a small impact on the Gini coefficient, whereas an increase in secondary school enrollment (an outcome of public spending) has a relatively large impact on improving income distribution.

[3]See, for instance, Harberger (2003), IDB (1998), and Lora (2007).

[4]As Bird (2003, p. 12) states, ". . . tax recommendations that assume that distributional considerations are either unimportant or can easily be accommodated by (unspecified) adjustments somewhere else simply do not resonate in the policy context of most countries. Distributional issues not only matter in tax policy but often dominate in the minds of those who shape that policy."

[5]In tax policy, there are two different notions of equity. There is said to be *horizontal* equity if individuals or households that earn the same income, regardless of its source, pay the same taxes. *Vertical* equity, on the other hand, is generally taken to imply that the tax burden should increase with income. This latter notion is the one that is relevant for an analysis of the incidence and distributional effects of taxation.

[6]In particular, the potentially negative effects of income taxation on capital accumulation, and of certain categories of social transfers on the incentives to work, impose a constraint on the degree of redistribution that can optimally be achieved through fiscal policy.

studies for the region are mostly based on data for 2000 (2003 for Panama and 2004 for Guatemala).

Nonetheless, the main findings and conclusions of the chapter are qualitatively robust. We find that the overall distributional effect of taxation in the region is small. In contrast, the redistributive impact of social spending is much larger, leading to a progressive combined redistributive effect of these two components of fiscal policy in all countries of the region. We also show that raising tax revenues, even if solely through the value-added tax (VAT), and devoting the proceeds to social spending would unambiguously result in an improvement in the income of the poorest households. Despite the limitations noted in the previous paragraph, the main qualitative conclusions of the chapter are robust: they hold for all countries in the region for which data are available and are consistent with evidence elsewhere. Moreover, they are unlikely to have been affected by changes in taxation or social spending in Central America in recent years. Tax structures change only slowly, and existing studies suggest that the distributional impact of major recent tax reforms in Nicaragua (Gasparini and Artana, 2003) and Guatemala (Auguste and Artana, 2005) have been small. Social spending has continued to trend up across the region, so the combined redistributive effect of taxation and social spending is likely to have become more progressive.

The chapter is organized as follows. The next section examines the features and distributive effects of tax systems in the region, while the third section focuses on social spending trends and distributive effects. The fourth section integrates the conclusions from the tax and spending incidence analysis, allowing an overall view of the net distributive impact of fiscal policy across Central America. The final section draws some policy implications.

Tax Systems in Central America: Structure and Distributional Impact

This section surveys the effects of the tax system on income distribution in Central America. For a given pattern of income distribution, the distributional effects of the tax system are a function of two factors: the size of tax collections relative to GDP and the incidence of the tax system on different income groups. The analysis below considers these two factors in turn. After a brief description of the structure and evolution of tax systems in the region, we survey the existing evidence on the incidence of taxation in Central America and discuss the progressivity of individual taxes.

Structure and Evolution

Tax systems in Central America are characterized by a low share of tax revenue in GDP. The average tax burden of the central government in Central America in 2003 was around 13 percent of GDP, marginally higher than its 1995 level

(Table 4.1).[7] The regional average was below the tax ratio for Latin America as a whole, which in turn is low by international standards. In the Organization for Economic Cooperation and Development (OECD) countries, for instance, central governments collected an average of 21 percent of GDP in 2003. However, there were important variations across Central America: central government revenues were only 8.7 percent of GDP in Panama in 2003 but 16.3 percent in Honduras. It must be noted, though, that throughout the region governments have strived to increase tax collections relative to GDP. With the exception of Guatemala and Costa Rica, the ratio went up by as much as 2 percentage points of GDP between 2003 and 2006. Appendix Table 4.A1 highlights another import characteristic of government revenue in Central America: tax revenue accounts for most central government revenues across the region. The exception is Panama, where taxes represented just 56 percent of central government revenue in 2006.[8]

Compared with advanced economies, Central America relies much more on indirect taxes (VAT and trade taxes) and less on income taxes. Tax structures in Central America are similar to those in other Latin American countries but very different from the structure prevalent in OECD countries. First, income taxes contribute on average about one-quarter of overall collection in Central America (and Latin America as a whole), compared with one-half in the OECD (Table 4.1). The exception is Panama, where income taxes account for more than 40 percent of tax collections. By contrast, the average share of trade taxes in total tax revenues is about 14 percent in Central America (and about one-fourth in Panama and the Dominican Republic), compared with only 1¼ percent in the OECD. Taxes on goods and services (VAT, sales, and excise taxes) account for similar shares of total revenue in Central America and the OECD. Other taxes, including property taxes, play a relatively small role in Central America (with the exception of Honduras), Latin America, and, to a lesser extent, OECD countries.

There has been an important shift in Central American tax structures away from trade taxes and toward VAT in recent years. Between 1995 and 2006, and despite a substantial increase in international trade volumes in the region, the share of trade taxes in total tax revenue fell from a regional average of 20 percent to just over 10 percent as a result of the rapid process of trade liberalization the region has undergone (Table 4.1 and Appendix Table 4.A1). The revenue loss has been made up by an increase in VAT, whose share in total collections rose from 32 percent to 38 percent. Also, the contribution of income taxes has slightly increased, while the share of excise taxes has fallen.

[7]The choice of years for Table 4.1 (1995 and 2003) was dictated by data availability for the set of comparator countries and the fact that the underlying studies on which the following tax and social spending incidence analysis is based use data that range between 2000 and 2004. However, Appendix Table 4.A.1 presents data on the level and structure of central government revenue (including nontax revenue) for the Central American countries in 2006.

[8]Income from the Panama Canal accounts for a large share of government revenues.

Table 4.1. Evolution and Structure of Tax Revenue

	Total Tax Revenue		Income Taxes		Taxes on Goods and Services				Trade Taxes		Other Taxes	
					VAT and sales		Excises					
	1995	2003	1995	2003	1995	2003	1995	2003	1995	2003	1995	2003
	(In percent of GDP)											
Costa Rica	12.3	13.6	3.1	4.0	4.2	4.7	1.4	2.7	3.6	1.5	0.0	0.6
Dominican Republic	13.6	14.9	3.1	4.4	6.5	3.8	0.0	3.1	4.0	3.5	0.0	0.1
El Salvador	11.4	11.5	3.2	3.3	4.9	6.1	n.a.	0.6	2.1	1.2	n.a	0.4
Guatemala	8.0	11.7	1.6	1.5	2.9	5.3	1.0	1.2	1.9	1.4	0.6	2.3
Honduras	17.8	16.3	4.9	3.5	3.5	6.0	2.6	1.4	2.0	1.5	4.8	3.9
Nicaragua	12.2	15.2	1.7	3.8	3.6	6.2	5.1	4.1	0.9	1.0	1.0	0.1
Panama	11.4	8.7	4.7	3.4	1.7	1.5	1.6	1.2	2.2	1.5	1.2	1.1
Central America, Panama, and Dominican Republic average	**12.4**	**13.1**	**3.2**	**3.4**	**3.9**	**4.8**	**2.0**	**2.0**	**2.4**	**1.7**	**1.0**	**1.2**
OECD average[1]	**19.7**	**20.8**	**8.8**	**9.9**	**5.7**	**6.0**	**3.3**	**3.2**	**0.5**	**0.2**	**1.5**	**1.5**
Latin America average[2]	**11.9**	**13.5**	**3.1**	**3.4**	**3.9**	**5.5**	**1.8**	**2.1**	**1.9**	**1.4**	**1.2**	**1.1**
	(In percent of total tax revenue)											
Costa Rica	100	100	25.4	29.6	33.7	34.8	11.6	19.8	29.4	11.3	0.0	4.5
Dominican Republic	100	100	22.8	29.5	47.8	25.5	n.a.	20.8	29.4	23.5	0.0	0.7
El Salvador	100	100	28.2	29.0	43.2	52.5	n.a.	4.8	18.5	10.4	10.2	3.3
Guatemala	100	100	20.0	12.8	36.3	45.3	12.2	10.1	23.8	12.0	7.8	19.8
Honduras	100	100	27.5	21.5	19.7	36.8	14.6	8.6	11.2	9.2	27.0	23.9
Nicaragua	100	100	13.7	25.0	29.4	40.8	41.7	26.7	7.4	6.6	7.8	0.9
Panama	100	100	41.0	39.1	14.8	17.2	14.0	13.8	19.3	17.2	10.9	12.6
Central America, Panama, and Dominican Republic average	**100**	**100**	**25.5**	**26.6**	**32.1**	**36.1**	**18.8**	**15.0**	**19.8**	**12.9**	**3.7**	**9.4**
OECD average[1]	**100**	**100**	**44.6**	**47.6**	**28.8**	**28.8**	**16.7**	**15.2**	**2.5**	**1.0**	**7.5**	**7.4**
Latin America average[2]	**100**	**100**	**25.8**	**24.9**	**32.8**	**40.8**	**15.3**	**15.6**	**15.7**	**10.5**	**10.4**	**8.1**

Source: IMF staff calculations, based on data from country authorities.

[1]Includes Canada, Mexico, United States, Australia, Japan, Korea, New Zealand, Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, and United Kingdom.

[2]Includes Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

Distributional Effects of Taxation

Methodological Considerations

Analysis of the distributional effects of the tax system requires assumptions about the economic incidence of taxes. Determining how much tax a person pays implies making judgments about who ultimately bears the burden of the taxes (economic incidence), as opposed to who is legally liable to pay them (statutory incidence). These two notions of incidence can and do differ, given that statutory taxpayers may shift the tax liabilities partly or fully to others. The extent to which they can do so depends on a number of country-specific factors,

such as the price elasticities of supply and demand for the goods concerned, the openness of the economy, its market structure, and regulations on business competition. Incidence can be established through computable general equilibrium (CGE) models or, more often (given the formidable data requirements of CGE models), by imposing tax shifting assumptions. The conventional assumptions made are that consumption taxes (VAT, sales, excise, and import taxes) are fully shifted forward to consumers,[9] export taxes are paid by the producers, and personal income taxes are paid by the income recipients. For payroll taxes, employee contributions are assumed to be borne by the employees, but the cost of employer contributions can be either borne by the employer or shifted to the employee. In the case of corporate income taxes, more demanding assumptions are needed, as they can be shifted backward to capital owners or workers (through lower returns) or forward through higher consumer prices.[10]

Conclusions on the distributional effects of taxation are sensitive to incidence assumptions. They must, therefore, be taken with caution. CGE models suggest that changes in incidence assumptions can substantially alter the conclusions about who bears the cost of taxes (Gemmell and Morrissey, 2002). Moreover, some of the standard assumptions may be less appropriate for developing countries, in particular those regarding the incidence of indirect taxes. Shah and Whalley (1991) argue that import quotas, price controls, informal markets, and widespread evasion limit the scope for forward shifting of import and sales taxes. However, analytical convenience and lack of reliable data on the price elasticities of demand and supply limit researchers' options.

The distributional impact of taxes and their redistributive potential can be measured using several indicators. The following are the most commonly used indicators:

- *Tax progression*. Tax progression measures the effective tax ratio—that is, the tax effectively paid relative to income—per quantile (decile, quintile, quartile) of income. A tax is *proportional*, *progressive*, or *regressive* if the effective tax ratio remains constant, grows, or falls, respectively, as one moves up the income distribution scale.[11] The analysis below uses a normalized measure of tax progression, referred to as the *relative tax burden*. It is defined as the effective tax rate, as a proportion of income, that each income group pays divided by the average tax rate for the population as a whole.

[9]This assumption implies infinitely elastic supply curves, so that producers shift the taxes fully to the prices paid by consumers. In practice, the actual extent of shifting will be a function of price elasticities of demand and supply.

[10]For these taxes, the key assumptions are about the intersectoral and international mobility of capital. See Mintz (1996) and Cullis and Jones (1998).

[11]A less stringent indicator, called average rate progression, measures how the effective tax ratio changes as income increases. There is progression if the marginal effective tax ratio is greater than the average ratio as income increases. *Progression*, in this broader sense, indicates *progressivity* only under certain assumptions (e.g., that there is no re-ranking of individuals between pretax and post-tax). For a description and mathematical expression of different measures of progression, see Gemmell and Morrissey (2002).

- Lorenz and concentration curves. The progression of a tax can be graphically represented by a concentration curve, which measures the cumulative tax paid per quantile of pre-tax income. The progressivity of a tax can then be assessed by comparing the pre-tax Lorenz curve for income with the concentration curve for that tax.[12] A tax is progressive over the entire income distribution scale if the concentration curve lies consistently under the pre-tax Lorenz curve (Lorenz dominance).

- Quasi-Gini coefficients. Tax progression and concentration curves are local indicators of progressivity: they show the progressivity or regressivity of the tax as one moves from one section of the income distribution scale to the next. But if the pretax Lorenz and concentration curves cross one or several times (so that Lorenz dominance fails), no unambiguous conclusion can be reached about the overall progressivity or regressivity of the given tax. In this case, summary global indicators are useful, because they allow for a complete ordering of distributions. A simple and widely used global measure of tax incidence is the quasi-Gini coefficient for a given tax—that is, the Gini coefficient for that tax's concentration curve.[13] The higher the quasi-Gini coefficient for a given tax, the more progressive it is.

- Kakwani index. A closely associated measure is the Kakwani index (K), which is the difference between the quasi-Gini coefficient for a given tax and the Gini coefficient for pre-tax income. If $K > 0$, the tax burden is distributed more unequally than pre-tax income, and thus the tax is progressive (it contributes to reducing inequality in income distribution). If $K < 0$, the tax is regressive.

- Reynolds-Smolensky index. The Kakwani index does not take into account the importance of the revenues associated with a given tax relative to the economy and, therefore, does not provide an indication of the redistributive potential of the tax. The Reynolds-Smolensky (RS) index, defined as the pre-tax Gini coefficient minus the quasi-Gini index for post-tax income, addresses this problem directly. It measures how income inequality changes (in terms of Gini points) as a result of the introduction of the tax.[14] The sign of the RS index is consistent with that of the K index: if positive (negative), the tax is progressive (regressive). But the magnitudes of K and RS may be very different: a tax that is highly progressive but whose revenues account for a

[12]Conceptually, a concentration curve and a Lorenz curve differ in that the former plots cumulative shares of *X* (e.g., tax payments) with respect to the percentile distribution of *Y* (e.g., pre-tax income), whereas the latter represents the cumulative share of *Y* with respect to the quantile distribution of *Y*. The concentration curve for post-tax income relative to pre-tax income is the same as the post-tax Lorenz curve if, and only if, the ranking of individuals by their pre- and post-tax income does not change.

[13]The Gini coefficient for a concentration curve is called quasi-Gini (as opposed to the Gini coefficient proper, which corresponds to a Lorenz curve). If two concentration curves coincide, their quasi-Gini coefficients are the same; the reverse, however, does not necessarily hold: a given quasi-Gini may derive from different patterns of distribution.

[14]Obviously, the Kakwani and Reynolds-Smolensky indices for a given tax have the same signs.

small share of total income would have a negligible redistributive capacity. The tax's Kakwani index would be high, but its Reynolds-Smolensky index would be very small.

The analysis above was expressed in terms of income, but the progressivity of taxes can also be measured in terms of the underlying distribution of expenditure or consumption. The foundation for the use of consumption rather than current income as a measure of welfare (or capacity to pay) lies in the argument that consumption patterns are less volatile and may be a more reliable indicator of actual or perceived permanent income. But whether current consumption levels provide a better measure of a household's (or individual's) capacity to pay is a highly controversial issue (see Box 4.1).

The Distributional Impact of Taxes in Central America

This section summarizes the available evidence on the incidence of taxation in Central America and its distributional effects.[15] The analysis below is based on current total income as a measure of welfare, to impart some consistency or comparisons across countries.[16] Data for the incidence of taxation in Honduras (from Gillingham, Newhouse, and Yakovlev, forthcoming) and Nicaragua (from Gómez Sabaini, 2005b), and for social spending in all countries, are based on quintiles of income. Thus, to enable the netting out of tax and social spending effects in the section on "Net Distributional Effects of Fiscal Policy," data for tax incidence for Costa Rica and El Salvador, which were based on deciles, were converted to quintiles of income.[17] Finally, the underlying data are limited to central government taxes, except in the case of the case of Honduras, where municipal taxes are included, and Nicaragua, where taxes for the city of Managua are reflected. Implicit taxes (such as price controls) and the inflation tax are excluded.[18] To provide a broader international perspective, the regional data on the incidence and distributional effects of taxation are complemented by data for other

[15]The section is based on the most recent studies available for Costa Rica (Bolaños, 2002), El Salvador (Acevedo and González Orellana, 2005), Guatemala (Auguste and Artana, 2005; and Schenone and de la Torre, 2005); Honduras (Gillingham, Newhouse, and Yakovlev, forthcoming), Nicaragua (Gasparini and Artana, 2003; and Gómez Sabaini, 2005b), and Panama (Rodríguez Arosemena, 2007). For Honduras, see also Gómez Sabaini (2005a). Unfortunately, there are no recent data for the Dominican Republic; however, some information is drawn from Santana and Rathe's (1993) assessment of tax incidence, based on 1989 data.

[16]In the case of Panama, the data for the incidence of taxes and social spending in Rodríguez Arosemena (2007) are based on income per capita, and were approximated to total income using the number of individuals per decile.

[17]For this reason, the figures for tax progression and global measures of incidence shown in this paper are not the same as those presented by the authors of the source papers. Measures of tax progression and distribution are sensitive to the number of income groups used. For a given underlying distribution, the larger the number of groups, the higher the several indicators of inequality will be. In the case of Panama, the data are ordered by quintiles of income per capita.

[18]The inflation tax, however, is broadly acknowledged to be regressive, because the poor normally have a higher ratio of money to income and a reduced ability to hedge against the effects of inflation. Bolaños (2002) finds that the inflation tax has a very regressive effect in Costa Rica.

Box 4.1. On What Basis Should the Tax Burden Be Measured? Income vs. Consumption[1]

The notions of progressivity and regressivity refer to how the tax burden is distributed relative to some measure of an individual's or household's welfare level, which in turn is an indicator of the household's capacity to pay taxes. The traditional measure used in tax incidence studies is current income per household (or per income group), which may be seen as a proxy for the set of opportunities available to the household. However, there are several problems with current income:

- It is volatile and subject to temporary shocks. A survey conducted over a particular period ignores the position of the household relative to its life cycle, and may over- or underestimate the income of a household over longer horizons. Ideally, the capacity to pay should be measured relative to permanent or lifetime income.
- There is a bias toward underrepresentation of certain types of income in surveys, particularly income from self-employment, professional services, and capital (interest, dividends), or the implicit income from nonmarket transactions such as in barter and subsistence economies.
- Inheritances, transfers, and family remittances are often not well captured in survey-based measures of household income. This is a particular concern in the case of Central American countries, where family remittances are an important source of income and welfare, especially for the poor.[2]

To avoid some of these problems, many researchers have proposed the use of consumption, instead of income, as a measure of welfare for tax incidence analyses.[3] Consumption is less volatile than current income and might be taken as a reasonable proxy for permanent income. It is also less likely to be under-reported. Finally, donations, remittances, and other transfers, even if not fully captured in income, are usually reflected in consumption levels. Consequently, consumption tends to be more evenly distributed than income in most countries, and studies that use consumption as a welfare measure tend to find that overall taxation, and consumption-based taxes in particular, are more progressive than studies that use current income (Fullerton and Rogers, 1993). This is indeed what is found for El Salvador, Nicaragua, Panama (Appendix Table 4.A4), Guatemala (Auguste and Artana, 2005), and Honduras (Gillingham, Newhouse, and Yakovlev, forthcoming).

But the use of consumption is also not without problems. Conceptually, consumption may be a deficient measure of permanent income in the presence of bequest motives or precautionary savings, so that present savings cannot be clearly interpreted as future consumption. Indeed, richer households are empirically found to permanently consume a lower share of their income than poorer households, even at later stages of their life cycles. An even more serious difficulty with consumption is practical: many household surveys do not measure it. Therefore, data availability, especially for cross-country comparisons, constrains the analyst to use current income. The use of income in this chapter was forced by that constraint.

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[1]This box is based mainly on Barreix, Roca, and Villela (2006) and Auguste and Artana (2005).

[2]Another problem with current income is that it does not consider the number and age of members in a household, which clearly affect the household's welfare and capacity to pay for a given income.

[3]See, for instance, Poterba (1989), Fullerton and Rogers (1993), Barthold (1993), and Metcalf (1994).

Latin American countries, the United States (federal taxes only), and the European Union. Comparator countries were chosen on the basis of both relevance[19] and the availability and comparability of data.

The tax systems in Central America are generally regressive. While the richer segments of the population pay the bulk of the taxes in Central America (Table 4.2, Panel B) just as in other parts of the world, the poor pay more taxes relative to income, as shown by the relative tax burden (Table 4.2, Panel C).[20] This is also reflected in negative Kakwani indices, implying that the tax burden is distributed more evenly than income. The tax systems in Guatemala and Panama, however, provide examples of conflicting evidence between tax progression measures and Gini indices, so that no unambiguous conclusion about the progressivity or regressivity of the systems can be reached. In these two countries, as in the rest of the region, the poorest quintile pays more taxes relative to income than the richest quintile and the population as a whole. Yet the quasi-Gini index for taxes is slightly larger than the Gini for income (the Kakwani index is positive), suggesting that the overall tax systems are mildly progressive (in the case of Guatemala, basically proportional) according to this summary measure.[21] For the Dominican Republic, there are no recent studies on the incidence of overall taxation, but Santana and Rathe (1993) find that the Dominican tax system was progressive in 1989.[22]

[19]Latin American countries offer an interesting comparator set, because they have levels of economic and institutional development that are broadly similar to those of Central American countries. The comparison with the European Union and the United States brings into perspective both the experience of rich countries and also what are widely perceived to be two different models for the role of the state in the economy.

[20]An analysis of tax progression combines two pieces of information: the distribution of income before taxes, and the distribution of overall tax payments across income groups. The three panels in Table 4.3 show the interplay of these factors.

[21]This paradox arises because the concentration curve for taxes and the Lorenz curve for income cross (Lorenz dominance fails). It also illustrates the potential weaknesses of the Gini coefficient as a summary measure of inequality. The Gini index implicitly gives the same weight to equal transfers of resources between quintiles separated by the same distance, regardless of their position in the income scale. Thus, if $10 were taken from both the lowest quintile and the richest quintile and given to the middle quintile, or given to the second and the fourth, the Gini coefficient would remain unchanged, even though such redistributions would imply a much larger relative loss in the income for the poorest quintile. Consider a situation in which the concentration curves for taxes and income coincide (i.e., the tax system is neutral), implying that their Ginis are the same. Assume now that the taxes paid by the middle quintile are reduced by $30, $10 of which is shifted to the bottom quintile and the other $20 to the top quintile. If the pretax income of the richest quintile is more than double that of the poorest, this redistribution of tax payments would increase the relative tax burden of the poorest much more than that of the richest, yet the quasi-Gini for taxes would become greater than the Gini for income. The result for Panama seems driven by the strong progressive effect of income taxes, which have a much greater weight in total tax revenues in this country than in the rest of the region.

[22]The effective tax rates paid (as a percentage of income) by the poorest 40 percent of households, the following 35 percent, the next 20 percent, and the top 5 percent were, respectively, 11.5 percent, 13 percent, 15.6 percent, and 17.2 percent.

Table 4.2. Distribution of Income and Taxes, by Income Quintile

	Panel A. Distribution of Pretax Income (Percent of total)					Gini
	1st	2nd	3rd	4th	5th	Index
Costa Rica (2000)	4.2	8.8	12.1	19.8	55.2	45.1
El Salvador (2000)	2.9	7.5	12.9	21.5	55.2	47.4
Guatemala (2004)	4.0	7.9	12.4	19.5	56.1	46.3
Honduras (2004)	3.2	7.6	12.8	20.8	55.6	47.2
Nicaragua (2000)	3.6	6.8	10.4	16.8	62.4	51.0
Panama (2003)	1.7	5.9	10.9	19.1	62.4	53.8
Bolivia (2000)	1.0	5.1	11.1	20.1	62.8	55.6
United States (federal, 2004)	4.0	8.9	13.8	20.2	53.1	43.8
EU-15 (2001)	4.1	9.2	15.9	24.5	46.3	39.9
	Panel B. Distribution of Overall Tax Payments (Percent of Total)					Quasi-Gini
	1st	2nd	3rd	4th	5th	for Taxes
Costa Rica (2000)	4.4	9.0	11.9	19.2	55.5	44.9
El Salvador (2000)	7.6	12.0	16.0	22.4	42.0	31.7
Guatemala (2004)	4.5	7.8	11.9	18.8	57.0	46.4
Honduras (2004)	6.1	8.8	13.7	19.8	51.6	40.8
Nicaragua (2000)	7.1	10.4	13.9	18.9	49.7	37.4
Panama (2003)	2.2	5.5	8.8	14.4	69.1	57.1
Bolivia (2000)	1.6	7.2	13.3	20.3	57.6	49.8
United States (federal, 2004)	0.9	4.4	9.7	17.6	67.3	58.4
EU-15 (2001)	2.1	6.3	12.7	22.6	56.4	50.0
	Panel C. Relative Tax Burden[1]					Kakwani
	1st	2nd	3rd	4th	5th	Index
Costa Rica (2000)	104.3	102.8	98.5	96.9	100.5	-0.2
El Salvador (2000)	261.4	159.8	123.7	104.4	76.1	-15.7
Guatemala (2004)	112.2	98.4	95.7	96.3	101.6	0.1
Honduras (2004)	190.7	116.7	106.3	95.1	92.8	-6.4
Nicaragua (2000)	195.9	154.7	133.4	112.4	79.6	-13.6
Panama (2003)	127.8	93.5	80.4	75.6	110.8	3.3
Bolivia (2000)	151.7	143.5	120.4	101.4	92.0	-5.8
United States (federal, 2004)	23.0	50.1	70.1	87.2	126.8	14.6
EU-15 (2001)	51.2	68.5	79.9	92.2	121.8	29.6

Sources: Acevedo and González Orellana (2005); Auguste and Artana (2005); Barreix, Roca, and Villela (2006); Bolaños (2002); Gillingham, Newhouse, and Yackovlev (forthcoming); Gómez Sabaini (2005b); Cossío Muñoz (2006); Rodríguez Arosemena (2007); U.S. Congressional Budget Office (2006); and EUROMOD.

[1]Effective tax/income ratio relative to the average ratio; a value greater than 100 indicates that the income group pays a higher percentage of its income relative to the average.

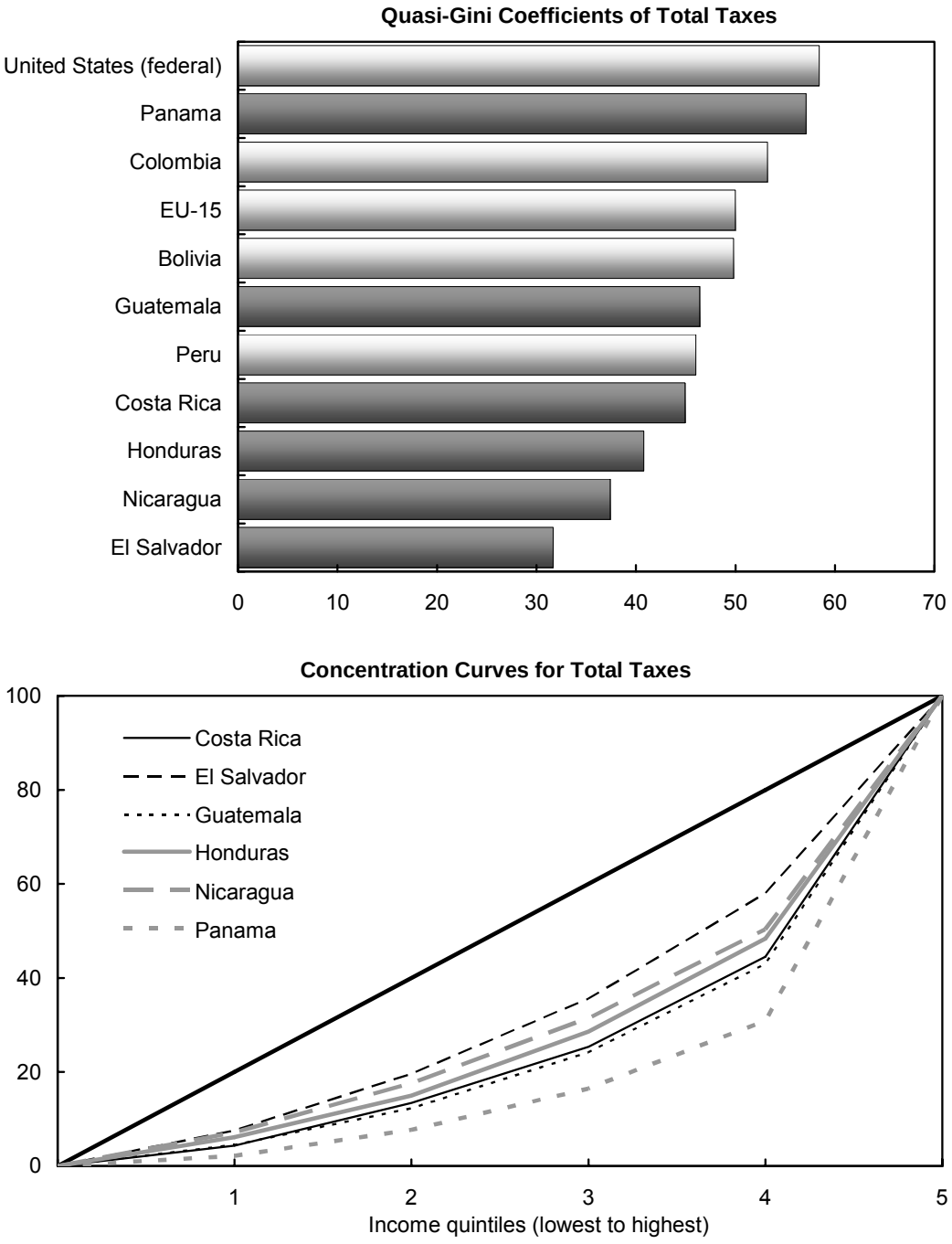
The degree of overall tax regressivity varies substantially across Central America. In El Salvador, Honduras, and Nicaragua, the burden of taxation falls disproportionately on the poor (Table 4.2, Panel C). In El Salvador, for instance, the poorest quintile of the population pays more than two and a half times as much taxes

relative to their income as the average citizen, and three and a half times what the richest quintile pays. This stark pattern of regressivity stems from the combination of a relatively even distribution of absolute tax payments across income groups (the low tax quasi-Ginis and higher concentration curves shown in Table 4.2, Panel B and Figure 4.1, respectively), and a highly unequal distribution of income (Table 4.2, Panel A). By contrast, the relative burden of taxes is distributed fairly evenly in Costa Rica and Guatemala. In these two countries, tax progression is U-shaped: mildly regressive in the first three (Guatemala) or four (Costa Rica) quintiles and then progressive. This pattern of distribution favors the middle classes. The distribution of the tax burden is also U-shaped in Panama, but with a much deeper trough: there, the bottom quintile pays 28 percent more taxes than the average household, while the top fifth pays 11 percent more.

Tax systems in the Central American countries for which data are available are found to be much less regressive or more progressive if consumption is used instead of income as a measure of welfare. As Appendix Table 4.A4 shows, the distribution of consumption or expenditure is more even than that of income in El Salvador, Nicaragua, and Panama: the quasi-Gini indices for consumption in those three countries are smaller than the Gini coefficients for income by 15.7, 11.6, and 15.3 percentage points, respectively. Therefore, the incidence of taxation results in a much less regressive effective rate measured relative to consumption. In El Salvador and Nicaragua, overall taxation—found to be steeply regressive relative to income—becomes almost proportional when consumption is used, while the Panamanian system becomes strongly progressive. Similar results are reported by Auguste and Artana (2005) for Guatemala, and by Gillingham, Newhouse, and Yakovlev (forthcoming) for Honduras. As Box 4.1 indicates, this is consistent with the international evidence. The box also notes the limitations of using consumption for tax incidence analyses.

On the basis of income, taxation in Central America is generally more regressive than in the Andean countries, the United States, and the European Union (EU). As shown in Tables 4.2 and 4.3 and in Figure 4.1, the quasi-Gini indices for overall taxes in Central America, with the exceptions of Guatemala and Panama, are low compared with those in the Andean countries, the United States, the EU-15 as a whole, and most of its member countries. The low tax quasi-Ginis indicate, as explained above, a fairly even distribution of absolute tax payments across income groups. Given the prevailing income disparities, this results in an unequal distribution of the tax burden relative to income and negative Kakwani indices for taxes across the region (except Guatemala and Panama). In contrast, for the United States, most European countries, and the EU-15 as a whole, the tax systems are progressive, as reflected in consistently upward-sloping tax progression patterns, high quasi-Gini coefficients for taxes, and positive Kakwani indices. Two interesting exceptions are Sweden and Denmark, where the tax systems are regressive, though, as shown below, the overall effect of fiscal policy is powerfully progressive.

Figure 4.1. Incidence of Total Taxes



Sources: IMF staff calculations based on Agosin (2004); Acevedo and González Orellana (2005); Auguste and Artana (2005); Bolaños (2002); Gómez Sabaini (2005b); Gillingham, Newhouse, and Yackovlev (forthcoming); and Barreix, Roca, and Villela (2006).

Note: EU-15: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.

Table 4.3. Redistributive Impact of the Overall Tax System[1]

	Gini for pre-tax income (A)	Quasi-Gini for taxes income (B)	Kakwani Index (C = B - A)	Tax pressure[2]	Quasi-Gini for post-tax (D)	RS Index[3] (E = A - D)
Central America						
Costa Rica (2000)	45.1	44.9	–0.2	20.8	45.1	0.0
El Salvador (2000)	47.4	31.7	–15.7	8.1	48.8	–1.4
Guatemala (2004)[4]	46.3	46.4	0.1	17.3	46.3	0.0
Honduras (2004)	47.2	40.8	–6.4	14.4	48.3	–1.1
Nicaragua (2000)	51.0	37.4	–13.6	27.5	56.2	–5.2
Panama (2003)	53.8	57.1	3.3	6.4	53.6	0.2
Andean countries[5]						
Bolivia (2000)	55.6	49.8	–5.8	16.6	56.7	–1.1
Colombia (2003)	53.7	53.2	–0.5	7.7	53.7	0
Peru (2000)	53.5	46.0	–7.5	7.6	54.3	–0.8
United States (federal, 2004)	43.8	58.4	14.6	19.8	40.2	3.6
Europe[6]						
EU-15 (2001)	39.9	50.0	10.1	—	37.7	2.2
Denmark (2001)	41.9	38.2	–3.7	—	44.1	–2.2
Ireland (2001)	45.6	57.0	11.4	—	43.3	2.3
Italy (2001)	40.1	48.3	8.2	—	38.7	1.4
Portugal (2001)	42.2	69.4	27.2	—	38.7	3.5
Spain (2001)	39.9	60.0	20.1	—	36.0	3.9
Sweden (2001)	38.9	35.2	–3.7	—	41.1	–2.2

Sources: Acevedo and González Orellana (2005); Auguste and Artana (2005); Barreix, Roca, and Villela (2006); Bolaños (2002); Gillingham, Newhouse, and Yackovlev (forthcoming); Gómez Sabaini (2005b); Cossío Muñoz (2006); Rodríguez Arosemena (2007); U.S. Congressional Budget Office (2006); and EUROMOD.

[1]All data are based on total current income by current income quintiles, unless otherwise noted.

[2]Tax pressure is the ratio of total taxes paid to total household income before taxes; for Colombia and Peru it is total taxes paid/GDP.

[3]RS is the Reynolds-Smolensky index.

[4]Data are before constitutional court rulings in 2003 and 2004 and the tax reform in 2004. But Auguste and Artana (2005) show that these reforms had little impact on income distribution (an RS index of 0.5; see Auguste and Artana; Table 23, p. 60).

[5]Data for the three countries are based on, and ordered by, per capita income; data for Colombia and Peru are based on deciles.

[6]Data for European countries are based on, and ordered by per capita income.

Tax systems in the region, whether progressive or regressive, have a limited effect on the overall distribution of income. This is consistent with international experience. The impact of taxes on income distribution is a function of three variables: the pre-tax distribution of income, the distribution of tax payments across income groups, and the ratio of total taxes considered in the incidence analysis to total income before taxes (here called the tax pressure).[23] The overall redistributional impact of taxation can be measured by the difference between

[23]This latter ratio may differ, sometimes substantially, from the tax-to-GDP ratio. The differences may arise in the numerator; for example, if the coverage of taxes used for the analysis of incidence is limited to a subset of total taxes. The differences may also arise in the denominator, and may stem from a considerable gap between GDP and national income, as well as from differences in total income measured from national accounts vis-à-vis household surveys. This is the case for Nicaragua, as explained in the next footnote.

the pre-tax income Gini coefficient and the quasi-Gini coefficient for after-tax income, that is, the Reynolds-Smolensky index. As Table 4.3 shows, the redistributive potential of taxes in Central America, whether progressive or regressive, is fairly small. This results from the low rates of tax pressure in some countries, and the relatively similar distributions of taxes and income (small Kakwani indices) in others. Only for Nicaragua is the implied redistribution effect somewhat large, because the marked regressivity of the tax system combines with a relatively high ratio of taxes to household income.[24] Table 4.3 shows that in the Andean countries, the United States, and Europe, as in Central America, taxation has only modest effects on the distribution of income. This is indeed a common finding in tax incidence studies. As will be shown in the third and fourth sections of this chapter, this finding contrasts with the large redistributive potential of social spending.

How Progressive Are Individual Taxes?

Income taxes are generally progressive in Central America, but—with the exceptions of Panama and Honduras—less so than in comparator countries, and they contribute little to overall income redistribution. Global measures of incidence indicate that income taxes are progressive in Central America, particularly in Panama (Appendix Table 4.A2 and Figure 4.2).[25] In Guatemala and Panama, the progression of income taxation from lower to upper income quintiles is U-shaped rather than smoothly upward-trending.[26] Given that income taxes contribute on average about one-fourth of an already small tax take across Central America, their overall redistributive impact is, however, quite small (at or under 0.4 percentage point of the pre-tax Gini coefficient for all countries) (see Appendix Table 4.A3). Even in Panama, where the income taxes considered[27] are strongly progressive (a large positive Kakwani index) and account for a greater share of total tax revenue, their low share in income results, as in the rest of the region, in a small redistributive effect. Although the finding that income taxes are progressive in Central America is consistent with the evidence for developed and

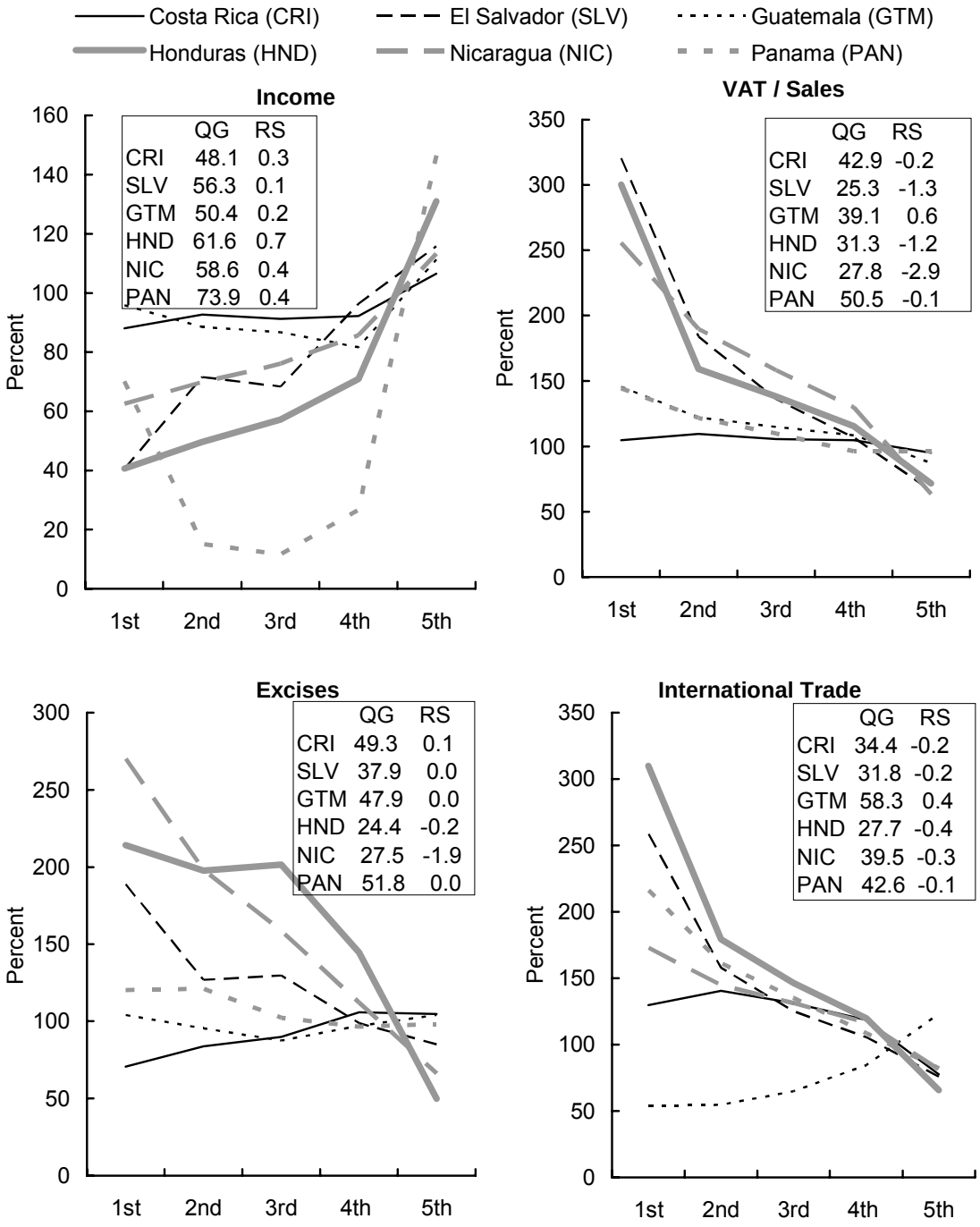
[24]The measured tax pressure for Nicaragua is high because the coverage of taxes for the incidence analysis is broad (including property and sales taxes for the city of Managua) and total disposable income was only 51 percent of GDP for 2000, according to the information used by Gómez Sabaini (2005b).

[25]Social security contributions are treated as taxes on wages by Bolaños (2002), and are therefore included under the income tax for Costa Rica. This contributes to underestimate the progressivity of income taxes in Costa Rica relative to the rest of the region.

[26]This pattern of incidence is consistent with what Gemmell and Morrissey (2005), in their survey article, find for corporate income taxes: a U-shaped progression (regressive, then progressive). This may be due to the existence of exemptions for particular types of income or taxpayers and to the fact that small but poor entrepreneurs tend to be less capable of exploiting deductions and other tax-minimizing opportunities in self-employment taxes.

[27]The underlying study (Rodríguez Arosemena, 2007) considers only taxes on income from wages and self-employment. Corporate income taxes are excluded.

Figure 4.2. Progression of Taxes
(*Relative tax burden by income quintile)*



Sources: IMF staff calculations based on Agosin (2004); Acevedo and González Orellana (2005); Auguste and Artana (2005); Bolaños (2002); Gillingham, Newhouse, and Yackovlev (forthcoming); and Gómez Sabaini (2005b).

Note: QG= Quasi-Gini coefficient of taxes. RS=Reynolds-Smolensky index. Positive values denote progressivity. VAT=Value-added tax.

developing countries,[28] Appendix Tables 4.A2 and 4.A3 also show that income taxes are much more progressive in the Andean countries and the United States (except, in some cases, with respect to Panama and Honduras), and that their distributional effect is much stronger in these comparator countries.[29]

With the exception of Costa Rica, VAT and sales taxes are notably regressive if assessed relative to income, and account for much of the regressive impact of overall taxation. Despite the conventional wisdom that VAT or sales taxes have a regressive impact on income distribution, the cross-country literature surveys present mixed results.[30] The evidence for Central America, however, is clear. As Appendix Table 4.A2 and Figure 4.2 show, VATs and sales taxes have a steeply regressive structure in Guatemala, Honduras, Nicaragua, Panama, and, more prominently, in El Salvador. In the latter, the poorest 20 percent of the population pay over three times more VAT relative to their income than the average household in the country and five times as much relative to the rich est 20 percent. Yet, the Kakwani index for the VAT in Nicaragua is even higher than in El Salvador, because the underlying income distribution is more unequal.

Because VATs or sales taxes are the single most important source of tax revenue for most Central American countries, their pronounced regressivity does have a tangible effect on the overall income distribution in El Salvador, Honduras, and especially Nicaragua, as reflected in the negative and substantial Reynolds-Smolensky indices for these three countries (Appendix Table 4.A3). In contrast, local and global indicators of regressivity are much lower for the VAT in Costa Rica, where all income quintiles but the richest pay a slightly higher effective rate than the average. This seems to be the result of targeted exemptions; in particular, the exclusion from the tax of a basic basket of goods and services consumed mostly by the poor. On average, the VAT is more regressive and has a stronger negative redistributive effect in Central America than in the Andean countries, as Appendix Table 4.A3 suggests.

The regressivity of the VAT in Central American countries is partly explained by the high ratio of consumption to income in the poorer households, and is thus substantially reduced or reversed if measured relative to consumption. The stan-

[28]Gemmell and Morrissey (2005) conclude, from their review of the existing literature, that income taxes are generally progressive, although personal income taxes are more consistently so than corporate taxes. Chu, Davoodi, and Gupta (2000) summarize tax incidence studies on a cross-section of developing countries in various regions over 1975–98. Their tabulation suggests that, regarding income tax systems, 12 of the 14 cases studied for 8 different countries show progressivity, 1 is regressive, and 1 inconclusive. See also Engel, Galetovic, and Raddatz (1999) for Chile. Payroll taxes, on the other hand, are more likely to be regressive (Chu, Davoodi, and Gupta, 2000).

[29]Income taxes without social security are negative for the bottom two income quintiles in the United States because of earned income tax credits.

[30]Although several studies suggest that the incidence of VATs and sales taxes is regressive when considered relative to income (e.g., Gemmel and Morrissey, 2005, in their survey), there is evidence that VATs have a progressive incidence in some African countries (Sahn and Younger, 1999; and Muñoz and Cho, 2004). Appendix Table 4.A.3 shows that the VAT is progressive in Ecuador and Venezuela, even when considered relative to income.

dard economic explanation for the regressivity of consumption-based taxes is that consumption is more evenly spread than income, so that the ratio of consumption to income tends to be very high (and the savings rate correspondingly low or negative) for the poorest income groups and much lower for the richer ones. This explanation holds true in Central America. For instance, in El Salvador, the ratio of consumption to income is 177 percent for the lowest quintile, compared with 52 percent for the highest.[31] Indeed, as Appendix Table 4.A4 shows, if consumption is used instead of current income as an indicator of welfare or of permanent income, the VAT becomes much less regressive in El Salvador and Nicaragua, and turns progressive in Panama. Similarly, Auguste and Artana (2005) and Gillingham, Newhouse, and Yakovlev (forthcoming) find, for Guatemala and Honduras, respectively, that the VAT turns from regressive relative to income to mildly progressive when measured relative to consumption. Jenkins, Jenkins, and Kuo (2006) investigate the incidence of the VAT in the Dominican Republic on the basis of household expenditure, and find that the tax is highly progressive: the effective tax rate paid by the richest quintile is twice as large as that paid by the poorest.

Moreover, in developing countries with subsistence economies and large informal markets, the regressivity of the VAT may be overestimated. As Jenkins, Jenkins, and Kuo (2006) argue, the goods and services on which poor households spend most of their income in developing countries are often traded in informal markets and, even if they are legally included in the tax base, administratively it is impractical to tax them. The study by these authors of the incidence of VAT in the Dominican Republic addresses this issue. Also, barter and self-consumed production, which are more prominent in poorer countries, are naturally excluded from the VAT. These economic factors introduce progressivity in the tax.

In addition to economic factors, the regressivity of the VAT may also be due to tax design factors. Appendix Table 4.A4 shows that even when measured relative to consumption, the VAT is regressive in El Salvador and Nicaragua. This suggests that the exemptions from the tax may be disproportionately benefiting the rich in these countries.[32] Many VAT exemptions fall on services, which normally account for a larger share of expenditures for higher income groups. The regressivity of the VAT can be reduced if exemptions and zero-ratings are reduced to a narrow and well-targeted basket of goods and services consumed disproportionately by the poor.

[31]It is likely that in El Salvador and other Central American countries, remittances from abroad are underrepresented in household income but not in consumption, contributing to consumption rates well over unity for the poorer households.

[32]A VAT with no exemptions should, in principle, be roughly proportional to consumption. To the extent that there are well-targeted exemptions that reduce the effective VAT rate relative to the consumption basket of the poorer households, the VAT should be slightly progressive when measured in terms of consumption. In this sense, as Barreix, Roca, and Vilella (2006) argue, the consumption- or expenditure-based analysis of VAT incidence provides a way to check who ultimately benefits from the VAT exemptions.

Excise taxes are also regressive, except in Costa Rica and Guatemala. In El Salvador, Honduras, and Nicaragua, excise taxes are strongly regressive. Indeed, in the latter two countries, they are the most regressive tax, and because their share in total taxation is also sizable, they have a palpable effect on the overall distribution of income, as indicated by the Reynolds-Smolensky index (Appendix Tables 4.A2 and 4.A3). As in the case of VAT, the incidence of the tax depends largely on the consumption patterns for the taxed goods. The regressive incidence of excise taxes in these countries is driven mainly by taxes on alcohol, tobacco, and fuel, because consumption of these goods accounts for a larger share of the income of poorer households.[33] In Panama, excise taxes are also regressive as a whole, but much less so.[34] By contrast, excise taxes are essentially neutral in Guatemala (with a somewhat U-shaped progression pattern and a small positive Kakwani index) and fairly progressive in Costa Rica. In Costa Rica, excise taxes are even more progressive than income taxes (as measured by their quasi-Gini and Kakwani indices) because of their broader coverage, which includes luxury goods.[35] As in Central America, the evidence on the incidence of excise taxes is mixed for other countries: as Appendix Tables 4.A2 and 4.A3 show, excise taxes are highly progressive in Bolivia but regressive in the United States.

International trade taxes are highly regressive in all countries but Guatemala. The tax progression and global incidence indicators in Appendix Tables 4.A2 and 4.A3 show that, in Central America, the burden of taxes on international trade (mostly import tariffs, as export taxes are very small in the regional economies) also falls disproportionately on the poor. The main reason for the regressivity of trade taxes is that tariffs tend to be higher on imported consumption goods that are also produced domestically, especially food and lightly processed manufactured goods, which represent a larger share of the consumption basket of poorer households. Guatemala appears to be an exception, suggesting that imported goods subject to tariffs may be more prominent in the consumption patterns of the rich in this country.[36]

[33]Taxes on fuel, tobacco, and alcohol are assessed and designed for the purpose of mitigating potential externalities. Equity issues are not a consideration. They do, however, play a role in the case of taxes on luxury goods.

[34]Consistent with the findings for other countries, in Panama excise taxes on tobacco and alcoholic and other drinks are very regressive, but those on cars and other luxury items are progressive (Rodríguez Arosemena, 2007).

[35]Nonetheless, Bolaños (2002) argues that a legal reform in 2001—which substantially reduced average tax rates and their dispersion—may have reduced or eliminated the progressivity of these taxes in Costa Rica.

[36]Auguste and Artana (2005)—on whose data the figures in the aforementioned tables are based—admit that the progressivity of import tariffs may be considerably overestimated in their study, because they excluded intermediate good imports from the analysis. The authors also explain that some imported goods, despite being classified as final goods, may have been used as intermediate goods for the production of other goods and services whose consumption may be distributed more evenly across income groups. A previous study (Mann, 2002) found that import tariffs are roughly proportional.

Social Spending in Central America: Trends and Distributional Impact

The overall impact of social spending on income distribution depends critically on the resources devoted to social spending and the distribution of those resources across income groups. Social spending includes capital and current spending on education, health, social protection (social insurance and social assistance), housing, water and sewage, and culture, sports, and recreation. The first part of this section surveys the trends in social spending in Central America, addressing the issue of whether countries have been devoting more resources to social spending and drawing attention to the signs of improved stability of those resources. The second part of the section surveys existing studies on the incidence and distributive impact of social spending.

Social Spending Trends

Though social spending in Central America has increased considerably over the past decade, it remains relatively low in some countries. The share of social spending in GDP—a measure of the *macroeconomic priority* assigned to social spending[37]—was on average 11½ percent of GDP in 2004 for Central America, an increase of 2¼ percent of GDP since 1995 (Table 4.4). There are, however, substantial differences across the region in the levels of social spending: Costa Rica and Panama continue to devote by far the highest amount of resources to social spending (18½ and 17 percent of GDP, respectively), followed by Honduras (13 percent), while Guatemala directs only 6½ of GDP to social spending. Public spending on education and health in the region is roughly similar, as a share of GDP, to the Latin American average (and median), but the aver- age and median levels of public spending on social protection[38] are significantly below those of Latin America as a whole. Public spending on social protection varies significantly across Central America, largely a reflection of differences in pension spending (Figure 4.3). Social assistance spending (including, for example, any conditional cash transfer programs) amounts to about 1¾ percent of GDP on average for Central America.

The increase in public social spending levels has reflected an increase in total expenditures as well as an increase in the share of social spending in overall public expenditures. While the overall level of central government expenditures has grown over the past decade (by upwards of 3 percentage points of GDP in El Salvador, Guatemala, and the Dominican Republic), so has the share of social expenditures in total expenditure (Figure 4.4). At one end of the distribution,

[37]The share of social spending in total public expenditure is, on the other hand, a measure of the *fiscal priority* of social spending.

[38]Social protection includes both social insurance (mainly pensions) and social assistance.

Table 4.4. Evolution of Social Spending, 1995 vs. 2003/2004

(In percent of GDP)

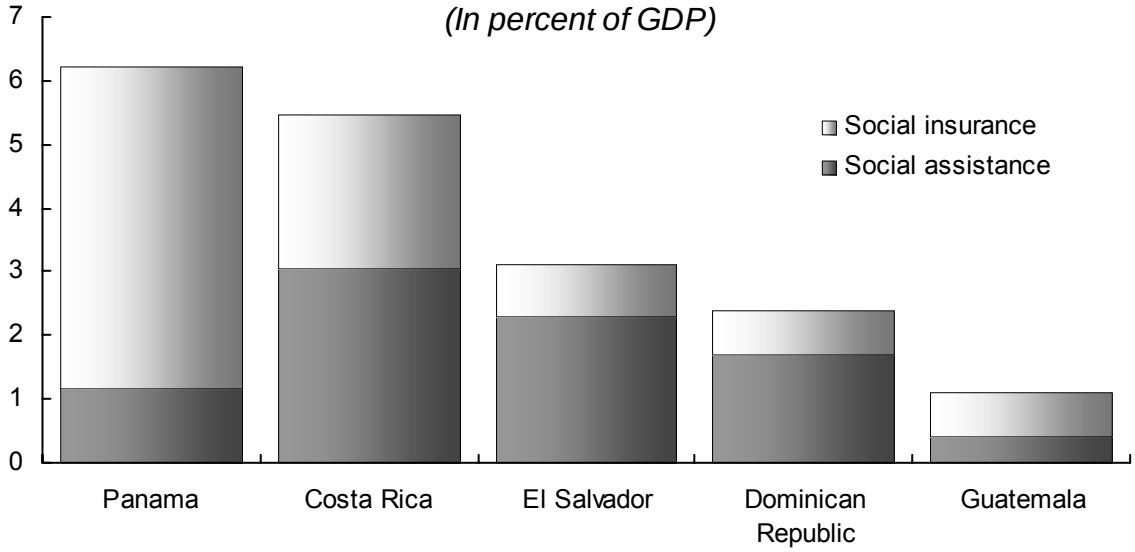
	1995	2003/04	Increase	1995	2003/04	Increase
	Total Social Spending			Of which, Education Spending		
Costa Rica	15.8	18.6	2.8	4.2	5.7	1.4
Dominican Republic	6.1	7.4	1.3	2.1	3.0	0.9
El Salvador	6.2	8.6	2.4	2.1	3.0	0.9
Guatemala	4.1	6.5	2.4	1.7	2.6	0.8
Honduras	7.8	13.1	5.3	3.8	7.2	3.5
Nicaragua	7.2	8.8	1.7	2.8	4.1	1.3
Panama	17.3	17.3	0.0	4.3	4.7	0.4
Regional average:						
Central America	9.2	11.5	2.3	3.0	4.3	1.3
Latin America[1]	11.0	12.6	1.6	3.4	4.3	0.9
Regional median:						
Central America	7.2	8.8	1.7	2.8	4.1	1.3
Latin America[1]	7.8	12.4	4.6	3.6	4.1	0.5
	Of which, Health Spending			Of which, Social Protection[2]		
Costa Rica	4.7	5.7	1.0	5.2	5.6	0.4
Dominican Republic	1.2	1.6	0.3	0.4	1.1	0.7
El Salvador	1.4	1.5	0.1	2.1	3.1	1.0
Guatemala	0.9	1.0	0.1	0.7	1.2	0.4
Honduras	2.6	3.5	0.9	0.2	0.5	0.3
Nicaragua	2.8	3.0	0.2	…	…	…
Panama	5.8	6.0	0.2	5.7	5.5	-0.2
Regional average:						
Central America	2.8	3.2	0.4	2.4	2.8	0.4
Latin America[1]	2.5	2.7	0.2	4.4	5.0	0.6
Regional median:						
Central America	2.6	3.0	0.4	1.4	2.1	0.7
Latin America[1]	2.4	2.4	0.1	2.4	4.2	1.8

Sources: ECLAC (2006); and Ministry of Finance of El Salvador.

[1]Includes Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

[2]Includes social insurance and social assistance programs.

Figure 4.3. Composition of Social Protection Spending
(In percent of GDP)

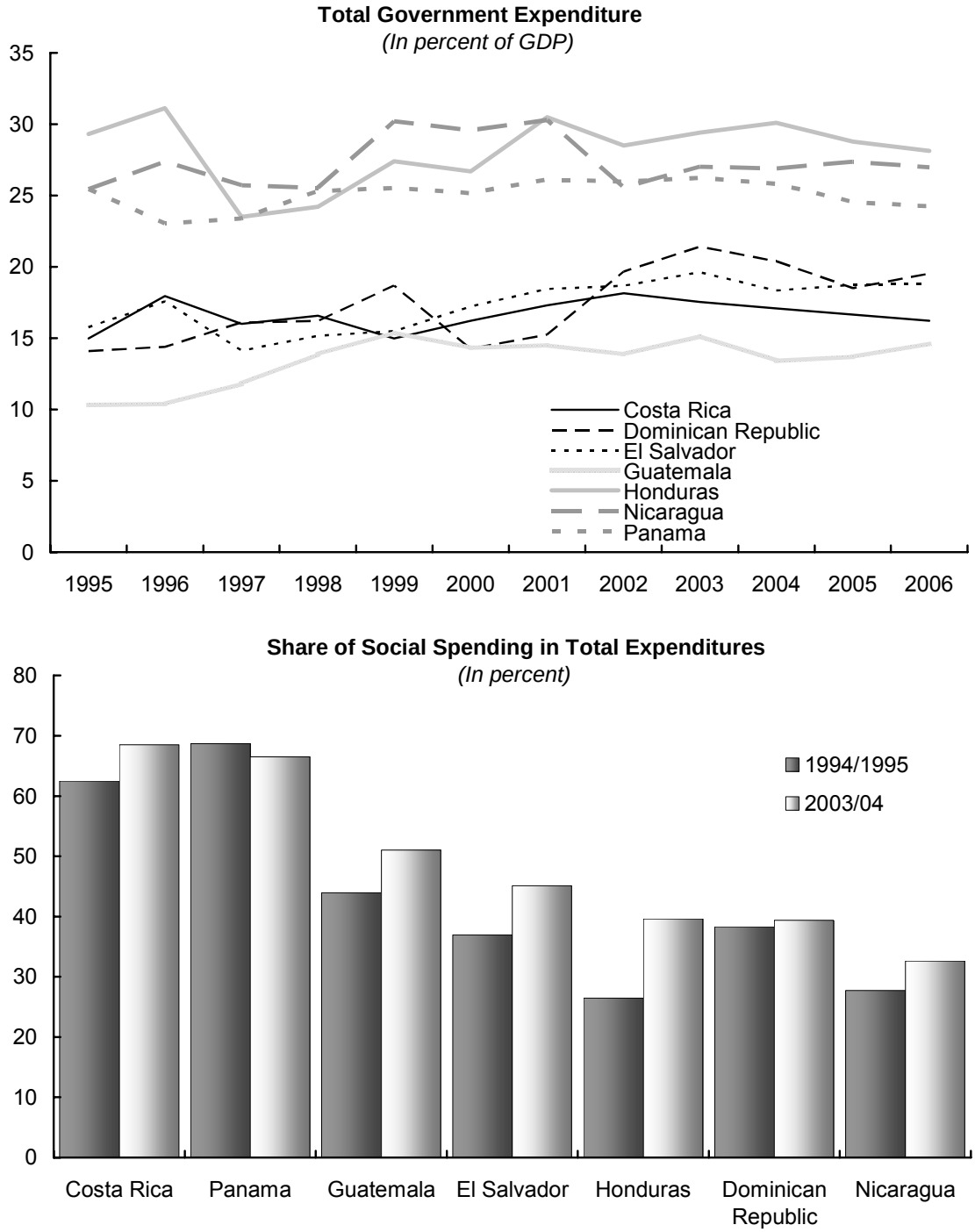


Sources: IMF staff calculations based on ECLAC (2006); Lindert, Skoufias, and Shapiro (2006); Petrei and Rodriguez Arosemena (2006); and country authorities.

social spending represents 68½ percent of total expenditure in Costa Rica, increasing by 6 percentage points from its 1994–95 level. At the other end of the distribution, Honduras, the Dominican Republic, and Nicaragua all direct less than 40 percent of expenditure to social spending. However, Honduras has increased the share of social spending in total expenditure by a notable 13 percentage points over the past decade, and Nicaragua by about 5 percent, aided by a significant decline in interest payments under debt relief from the Heavily Indebted Poor Countries (HIPC) Initiative. Developments in all countries indicate that higher fiscal priority is being placed on social spending. The evidence also suggests that public funding of social programs, although procyclical, has become less volatile over time.[39] A commitment to protecting social spending would generally be reflected in acyclical behavior of total public social expenditures and countercyclical behavior of expenditure on social assistance programs. The evidence indicates, however, that public social spending in Central America, as well as across Latin America, has instead been procyclical. A simple analysis of the correlation between the cyclical component of real output

[39]Overall public spending in Central America has also been pronouncedly procyclical. Empirical evidence suggests that procyclical government expenditure seems to be the norm rather than the exception outside the Group of Seven (G-7) industrial countries, where fiscal policy appears to be acyclical (Talvi and Végh, 2005). A survey of recent trends in public expenditure in Latin America shows that the procyclicality of government spending is, on average, higher for Latin American countries than for other developing countries, and notably higher for Costa Rica and Guatemala (Clements, Faircloth, and Verhoeven, 2007).

Figure 4.4. Evolution of Government Expenditures



Sources: IMF staff calculations based on ECLAC (2006); and national data sources.

growth and the cyclical component of real spending[40] shows that, with the exceptions of Costa Rica and Honduras, social spending varied positively with the economic cycle in both the early 1990s and in more recent years (Appendix Table 4.A5). However, despite the increase in the volatility of growth observed in the second sub-period (1998–2004), the volatility of overall social spending, as well as of some key categories, decreased over that same sub-period (Appendix Table 4.A6).

The Incidence and Distributional Impact of Social Spending

Methodological Considerations

An analysis of the incidence of social spending requires identifying the actual beneficiaries of social spending programs. This can be done directly in some cases but only indirectly in others, resulting in the potential for heterogeneous assumptions on incidence across different studies. Although only a few of the studies surveyed in this section provide methodological details, there appears to be relative homogeneity in the way some beneficiaries are identified (e.g., for primary spending, by way of primary school enrollment ratios based on household surveys) and heterogeneity in others (e.g., for social assistance to the disabled, by various proxies such as general share of the disabled in total population or enrollment in programs for the disabled).

In discussing the incidence of social spending, it is useful to distinguish between two concepts: absolute incidence (the share of total spending that each income group receives) and relative incidence (the distribution of social spending relative to the distribution of pre–fiscal policy income in the economy). A distribution of social spending in which, for example, the lowest quintile receives 45 percent of the total while the top quintile receives 5 percent of the total is progressive in absolute terms. In contrast, a distribution of social spending in which the bottom quintile receives 10 percent of spending and the top quintile receives 30 percent is not progressive in absolute terms, but can improve the income distribution if it is more equally distributed than income itself. The latter would thus be progressive in relative terms.[41]

The absolute and relative incidences of social spending are measured with the same set of indicators used to assess the distributional impact of taxation, but with a different interpretation. The quasi-Gini coefficient of spending is conceptually analogous to the quasi-Gini coefficient for a given tax, because it represents the Gini coefficient for the concentration curve of spending. However, the possible values of the quasi-Gini coefficient of spending lie between –1 and 1, with a negative value denoting progressivity in absolute terms (in other words, the concentration curve of spending lies *above* the 45-degree line). The Kakwani

[40]The cyclical components were extracted using a Hodrick-Prescott filter.

[41]Box 8.1 of IDB (1998) provides a very clear mathematical and graphical illustration.

index (K), defined as the difference between the quasi-Gini coefficient of spending and the Gini coefficient of the original income distribution, measures relative progressivity of spending. If $K < 0$, spending is progressive relative to the original income distribution.

Distributional Impact of Social Spending in Central America

Available data suggest that total public social spending in Central American countries is progressive in relative but not absolute terms. Costa Rica, Guatemala, and Panama (the three countries for which available incidence studies provide information on the most comprehensive definition of social spending) all have positive quasi-Gini coefficients of spending (Table 4.5, Panel A, column 2), which means that, in absolute terms, social spending is not progressive. However, social spending is much more equally distributed than pre-spending income, and thus is progressive in relative terms, as denoted by the negative values of the Kakwani index (Table 4.5, Panel A, column 3).

If social security is excluded, however, social spending becomes much more progressive (Table 4.5, Panel B, column 2, and Figure 4.5). In fact, social spending excluding social security is progressive in absolute terms (i.e, strongly pro-poor) in Costa Rica, El Salvador, and Panama.

Though progressive in relative terms in all cases, the magnitude of the distributional effect of social spending varies considerably across the region. The redistributive potential of social spending is a function of both the incidence and the level of social spending. Combined with high shares of social spending in GDP, the distributional impacts of social spending in Costa Rica and Panama are the two highest in the region, with reductions in the Gini coefficient of 6 and 7.4 points, respectively. In contrast, despite pro-poor targeting, El Salvador finds itself toward the opposite end of the distribution, with a more muted reduction in its Gini coefficient (3.6 points), roughly on par with Guatemala and Honduras, where social spending achieves a reduction in inequality of about 3 Gini points.

A comparison with the distributional impact in other regions reveals a number of interesting observations:

- In absolute terms, as measured by the reduction in Gini points, the redistributive impact of social spending in Costa Rica and Panama is comparable to that of some European countries and exceeds that observed in the Andean countries. The reduction of the pre–fiscal policy Gini coefficient of 6–7.5 Gini points in Costa Rica and Panama is in line with the absolute distributional impact of social spending in Italy, Spain, and Portugal (Table 4.5, column 5), and greater than the redistributive impact of social spending in the three Andean countries, which ranges between 3.5 and 5 Gini points.

Table 4.5. Redistributive Effect of Total Social Spending: Central America and Selected Regional Comparators

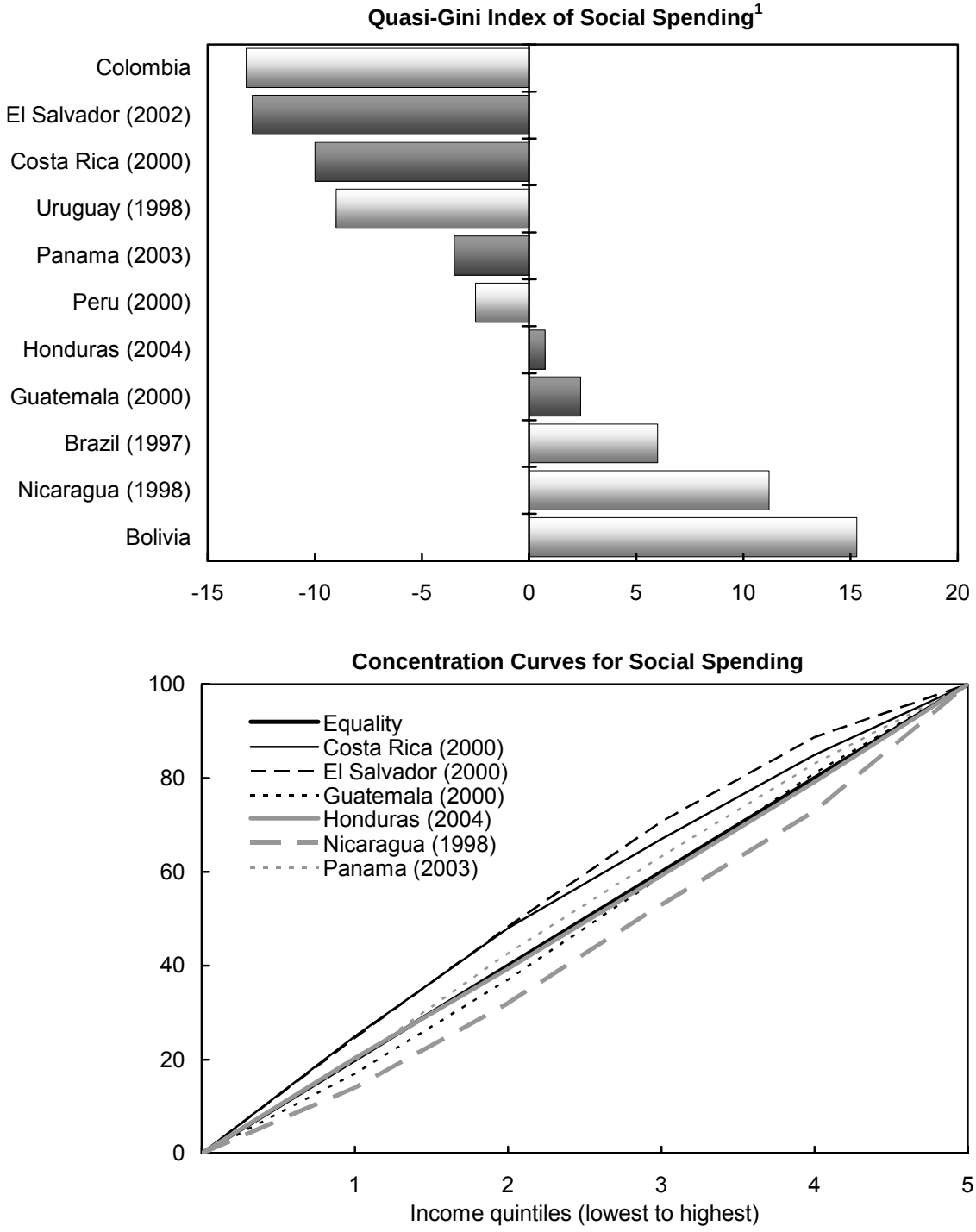
	Pre-Spending Gini (Income)	Quasi-Gini of Spending	Kakwani Index	Share of Social Spending[1]	Impact on Gini (RS Index)[2]	Post-Spending Gini
	(1)	(2)	(3=2–1)	(4)	(5)	(6=1–5)
	Panel A. Total Social Spending, Including Social Security					
Central America						
Costa Rica (2000)	45.1	3.0	-42.1	18.2	6.2	38.9
Guatemala (2004)	46.3	14.0	-32.3	6.3	3.0	43.3
Panama (2003)	53.8	11.2	-42.7	17.4	6.8	47.0
Latin America: worst and best income distribution						
Brazil (1997)	56.0	27.0	-29.0	19.1	7.0	49.0
Uruguay (1998)	41.0	23.0	-18.0	21.2	2.0	39.0
Selected other comparator countries						
EU-15 (2001)	41.7	-24.5	-66.2	24.0	8.8	32.8
Denmark (2001)	43.7	-79.9	-123.6	29.2	13.1	30.6
Ireland (2001)	47.8	-38.0	-85.8	13.8	13.2	34.6
Italy (2001)	42.8	7.2	-35.6	24.4	6.1	36.6
Portugal (2001)	44.4	-12.2	-56.6	21.1	6.1	38.4
Spain (2001)	42.1	0.9	-41.2	19.6	6.3	35.8
Sweden (2001)	40.7	-18.3	-58.9	28.9	11.3	29.4
	Panel B. Total Social Spending, Excluding Social Security					
Central America						
Costa Rica (2000)	45.1	-9.0	-54.1	12.5	6.0	39.1
El Salvador (2000)	47.4	-12.9	-60.3	5.3	3.6	43.8
Guatemala (2004)	46.3	2.4	-43.9	5.2	3.1	43.2
Honduras (2004)	47.2	0.7	-46.4	10.5	3.2	44.0
Nicaragua (1998)	51.0	11.2	-39.8	8.6	5.6	45.5
Panama (2003)	53.8	-3.5	-57.3	11.9	7.4	46.4
Andean countries						
Bolivia	55.6	15.3	-40.3	8.0	4.5	51.1
Colombia	53.7	-13.2	-66.9	5.5	5.0	48.7
Peru	53.5	-2.5	-56.0	5.5	3.5	50.0

Sources: IMFstaff calculations based on Barreix, Roca, and Villela (2006, for the Andean countries); ECLAC (2006), EUROMOD (for the European countries); World Bank (various country poverty assessment reports); Gillingham, Newhouse, and Yackovlev (forthcoming); and Petrei and Rodriguez Arosemena (2006).

[1]For Latin America, the average share of social spending in GDP over 2000–04. For Europe, 2001 data.

[2]Reynolds-Smolensky index. Positive values represent progressivity.

Figure 4.5. Incidence of Total Social Spending



Sources: IMF staff calculations based on data from ECLAC (2006); and national authorities.
[1]Excluding public spending on social protection.

However, given the initial income distribution, post–social spending inequality in Central America remains high. With the exception of Costa Rica, the post–social spending Gini in Central America is still above the pre–social spending Gini in European countries (Table 4.5, column 6). In other words, the incidence and scale of social spending is insufficient to bring down inequality in Central America even to pre–fiscal policy levels in Europe.

- Although the progressivity of total spending in Central America is not substantially different from that of some European countries, other European countries show that it is possible to improve targeting further. The average quasi-Gini coefficient of –24.5 for social spending in the EU-15 is linked to an incidence of social spending in which 81 percent accrues to the lowest three quintiles. By contrast, the lowest three quintiles receive about 70 percent of social spending in El Salvador; 60–65 percent in Costa Rica, Guatemala, Panama, and Honduras; and about 50 percent in Nicaragua.

How Progressive Are Individual Social Spending Components?

Public spending on social protection—mainly pensions—is pronouncedly regressive in Central America. This conclusion emerges from a comparison of the quasi-Gini coefficients of spending with and without social protection. The findings for Costa Rica, Panama, and Guatemala (summarized in Table 4.6) corroborate those of a World Bank study of public transfers across Latin America and the Caribbean (Lindert, Skoufias, and Shapiro), which found that all 16 social insurance programs studied are regressive in absolute terms.[42] This result was due in large part to the fact that coverage of these programs was defined by participation in formal labor markets, which excludes the majority of the poor. Moreover, in Guatemala, the study found that net pension subsidies were even more unequally distributed than pretransfer income. The findings for social assistance, where eligibility is not tied to formal labor market participation, are mixed: although a "typical" social assistance program[43] in Latin America and the Caribbean transfers 38 percent more to the bottom quintile than a universal or neutral allocation, targeting varies tremendously (Lindert, Skoufias, and Shapiro, 2006). Furthermore, despite better targeting, the overall impact of social assistance

[42]The bulk of social insurance spending is public pension spending. Conceptually, despite formal contributions to the scheme, social security systems that incur tax-financed deficits are financed by tax revenues and compete for resources with other social protection programs. The World Bank study focuses on net transfers (pension benefits received minus total contributions). Clearly, although necessary owing to data constraints, this treatment is an oversimplification of the true concept of "net pension benefits"—the net present value (NPV) of the pension benefits versus the NPV of the pension contributions of each household.

[43]The "typical" distributional effect is derived from the median value of a distributional capacity index, calculated for a wide range of social assistance programs in eight countries: Argentina, Brazil, Chile, Colombia, the Dominican Republic, Guatemala, Mexico, and Peru. This distributional capacity measure is not directly comparable to the measures used in this paper.

Table 4.6. Incidence of Social Protection Spending

(Share of total spending on social protection accruing to each quintile, in percent)

	Population Income Quintiles (lowest to highest)					Percent of Social
	1	2	3	4	5	Spending
Costa Rica (2000)						
Social protection	12	12	12	18	45	28.9
Pensions	8	9	12	19	52	24.5
Contributive regime[1]	5	9	11	19	56	22.9
Noncontributive regime	51	22	15	11	2	1.6
Work protection	21	26	24	21	8	0.4
Assistance to vulnerable groups	38	25	16	14	8	4.0
Panama (2003)						
Social protection	1	3	7	19	70	23.2
Pensions	0	3	6	19	72	21.7
Labor standards and inspection	2	9	18	28	43	0.0
Labor complaints and resolutions	2	9	18	28	43	0.1
Labor force formation	9	12	16	26	38	1.1
Protection of minors	30	27	20	12	12	0.2
Assistance to the elderly and disabled	9	22	51	18	0	0.0
Other	11	14	17	24	34	0.0
Guatemala (2000)						
Social protection	8	13	15	18	46	25.2
Social insurance	1	3	5	15	76	10.2
Pensions	1	2	4	12	81	
Survivorship	4	4	4	13	75	
Alimony	1	6	10	24	60	
Social assistance	14	21	24	21	20	15.0

Sources: Trejos, 2001 (Costa Rica); Petrei and Rodriguez Arosemena, 2006 (Panama); and World Bank, 2003a (Guatemala).

[1]Pension benefits are assessed on a gross basis (not net of contributions).

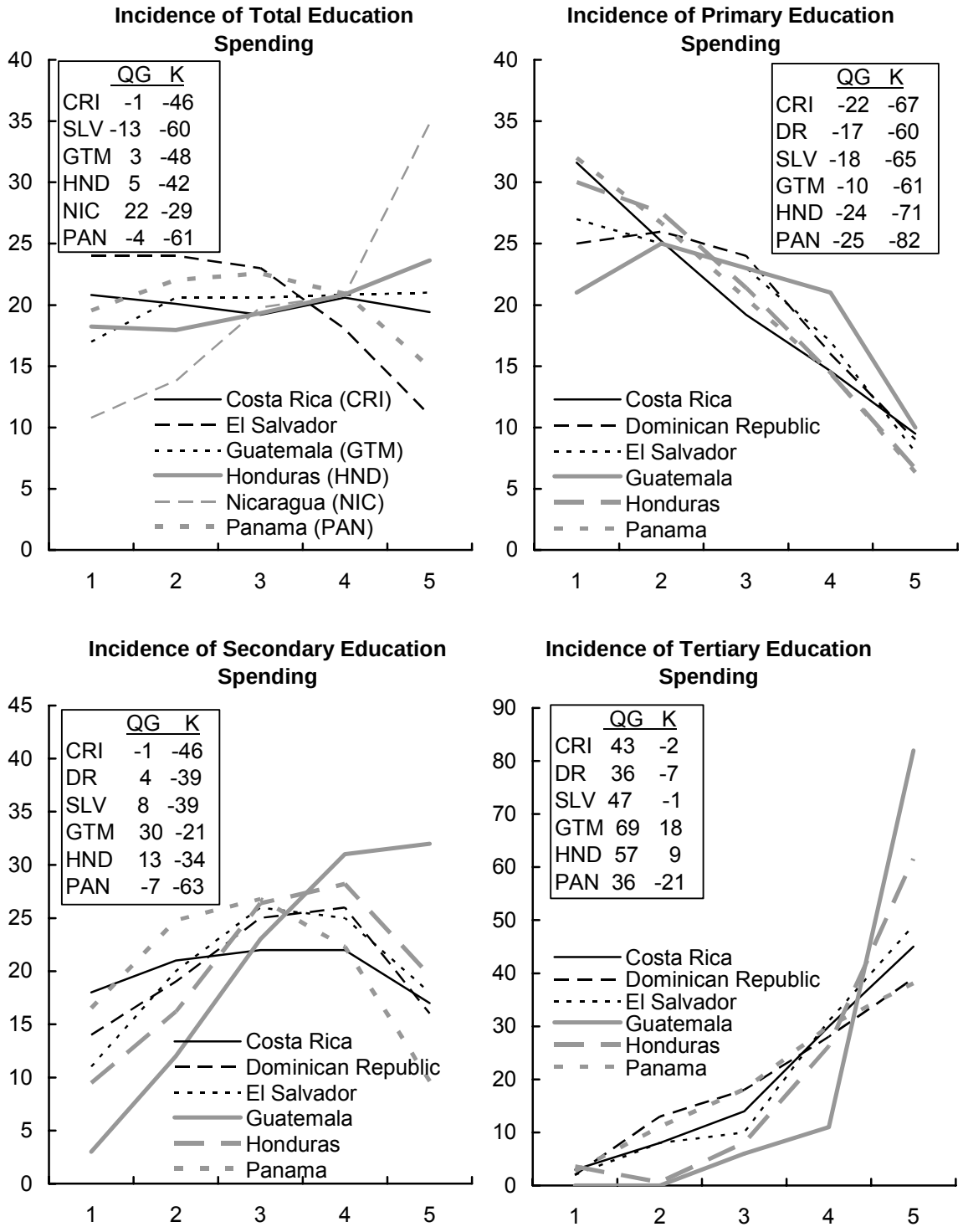
transfers on poverty and income distribution tends to be muted by the low share of public spending allocated to these programs.[44]

While overall education spending has generally neutral redistributive effects, spending on primary education is strongly progressive, even in absolute terms. In Costa Rica, Guatemala and Honduras, overall education spending accrues relatively equally across all quintiles. It is progressive in absolute terms in El Salvador and to a lesser degree in Panama (Figure 4.6). In Nicaragua, although public edu-

[44]See Lindert, Skoufias, and Shapiro (2006) for case studies of specific social protection programs in Guatemala and the Dominican Republic; and Regalia and Robles (2005) for a discussion of social assistance programs in the Dominican Republic.

Figure 4.6. Incidence of Public Spending on Education

(In percent of total, by quintile, noncumulative)

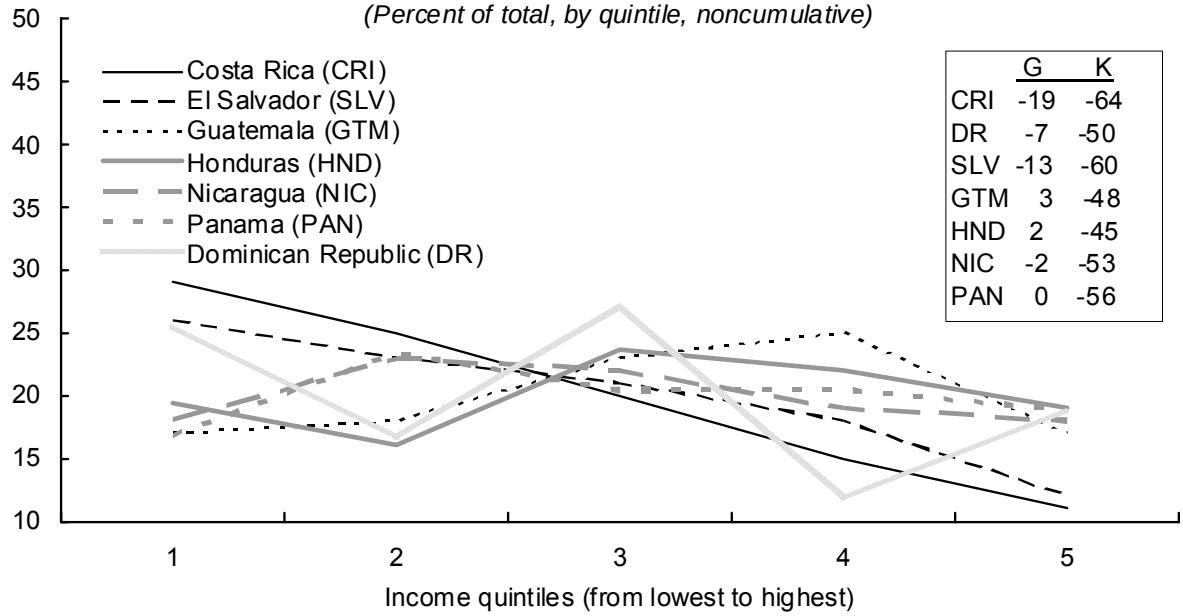


Sources: IMF staff calculations based on ECLAC (2006), World Bank (various country Poverty Assessment reports); and Petrei, Rodriguez, and Arosemena (2006).

Note: QG = Quasi-Gini of education spending; K = Kakwani index.

Figure 4.7. Incidence of Public Spending on Health

(Percent of total, by quintile, noncumulative)



Sources: Staff calculations based on ECLAC (2006); World Bank (various country Poverty Assessment reports); and Petrei and Arosemena (2006).

cation spending is progressive in relative terms, it accrues disproportionately to the richest quintile, which receives about 35 percent of total public spending. The distributional effects of education spending, however, differ considerably among different levels of education. Thus, public spending on primary education is unambiguously pro-poor in all countries of the region. Public spending on secondary education follows an inverted U-shape, with the highest share of benefits accruing to the middle three quintiles, except in Guatemala, where it exhibits strong regressivity. In sharp contrast, spending on tertiary education is regressive across the board, with an average of only 25 percent of public spending on tertiary education accruing to the bottom 3 quintiles of the income distribution. In Guatemala and Honduras, tertiary education spending is regressive even in rela tive terms; that is, its distribution is worse than the original income distribution, reflected in the positive Kakwani index.

The distribution of public spending on health is progressive in absolute terms in four of the seven Central American countries surveyed. Costa Rica and El Salvador are able to direct 26–27 percent of total public spending on health to the poorest quintile, and 70–74 percent of total to the bottom three quintiles (Figure 4.7). Nicaragua and the Dominican Republic show a more modest, but still pro-poor, incidence of public health spending, while health spending in Guatemala, Honduras, and Panama has a neutral absolute incidence, with about 60 percent of spending accruing to the bottom three quintiles, in proportion with their share of total income.

Net Distributional Effects of Fiscal Policy: A Summary Analysis

This section examines the combined net distributional impact of taxation and social spending in Central America. The information on the distribution of income before fiscal policy, and on the incidence of taxes and social spending, can be pieced together to produce an estimate of the net *direct* distributional effect of fiscal policy. The latter can be measured by comparing the concentration patterns of income before and after fiscal policy interventions, as summarized by the Reynolds-Smolensky index.

In Central America, available data suggest that the net redistributive effect of fiscal policy is progressive but modest, especially given the extent of income inequality. The net distributional effects of taxes and social spending result from the interaction of several channels of transmission: the initial distribution of income, the shares of taxation and social spending in income, and their distribution across income groups. Tables 4.7 and 4.8 summarize the main findings on the incidence of taxation and social spending in Central America: Table 4.7 provides an estimate of the net impact of these components of fiscal policy as reflected in the Reynolds-Smolensky index, and Table 4.8 shows the percentage changes in the income of each quintile that result from these policies. The conclusion that emerges is clear: while taxation has a small regressive effect, social spending has a larger progressive impact. The net effect is therefore progressive: the quasi-Gini index for income after fiscal policy is smaller than the Gini coefficient for pre-fiscal policy income (a positive Reynolds-Smolensky index), and the income of the upper quintiles is redistributed to the poorer two quintiles. Therefore, inequality falls as a result of fiscal policy interventions.

The size and composition of the overall redistributive effect of fiscal policy vary considerably in the five Central American countries for which full information is available. The net impact is strongest in Costa Rica and Panama, with a reduction in income inequality of 7–8 percentage Gini points, and an increase in the income of the poorest quintile of 60 and 162 percent, respectively. In both, a broadly neutral tax system combines with high levels of fairly well-targeted social spending, although in Panama the importance of nontax revenues enhances the progressivity of the estimated net impact.[45] In Guatemala, despite the broadly neutral effect of the tax system, low levels of social spending and its incidence limit the distributive impact to a modest 3.7 Gini points. In Nicaragua, taxation is highly regressive but more than offset by social spending, so that fiscal policy brings the Gini coefficient down by 3.1 points. However, the amount of redistribution through social spending is small relative to the tax burden, and thus the

[45]The large share of social spending to tax revenue in Panama—made possible by the large proportion of nontax revenue in total government revenue (see Appendix Table 4.A.1)—explains the redistributive impact of fiscal policy shown in Table 4.8, whereby the income of the top quintile is reduced by only 3 percent while the income of all other quintiles increases, substantially so in the bottom two.

Table 4.7. Redistributive Effect of Taxation and Social Spending: Central America and Selected Regional Comparators

	Pre-Fiscal Policy Gini (Income) (1)	Post-Taxation Gini[1] (2)	Post-Social Spending Gini[1] (3)	Post-Fiscal Policy Gini (4)	RS Index[2] (5)
Central America					
Costa Rica (2000)	45.1	45.1	39.1	38.3	6.8
El Salvador (2000)	47.4	48.8	43.8	45.8	1.6
Guatemala (2004)	46.3	46.3	43.2	42.6	3.7
Honduras (2004)	47.2	48.3	44.0	44.5	2.7
Nicaragua (1998)	51.0	56.2	45.5	48.0	3.1
Panama (2003)	53.8	53.6	46.4	45.8	8.0
Andean countries					
Bolivia	55.6	56.7	51.1	51.3	4.3
Colombia	53.7	53.7	48.7	48.3	5.4
Peru	53.5	54.3	50.0	50.4	3.1
Selected other comparator countries					
EU-15 (2001)	41.7	39.2	32.8	29.1	12.5
Denmark (2001)	43.7	45.8	30.6	25.7	18.1
Ireland (2001)	47.8	45.3	34.6	30.4	17.4
Italy (2001)	42.8	40.7	36.6	33.7	9.1
Portugal (2001)	44.4	40.6	38.4	34.3	10.2
Spain (2001)	42.1	37.9	35.8	31.3	10.8
Sweden (2001)	40.7	42.8	29.4	26.1	14.5

Sources: Barreix, Roca, and Villela (2006, for the Andean countries and European comparators); and IMF staff calculations based on ECLAC (2006); World Bank (various country poverty assessment reports); Bolaños (2002), Agosin et al. (2005); and Gillingham, Newhouse, and Yackovlev (forthcoming).

[1]For Latin America, excludes social security. For Europe, includes social security.

[2]Reynolds-Smolensky Index. Positive values denote progressivity.

net increase in the income of the poorest quintile is only 8 percent. Finally, in El Salvador and Honduras, the effects of both taxation and social spending on income distribution are modest, yielding a correspondingly small net impact.

The net redistributive impact of fiscal policy in Central America is similar to that of the Andean region, but much smaller than in European countries. As shown

Table 4.8. Impact of Fiscal Policy on Prefiscal Policy Income, by Quintile[1]

(In percent of prefiscal policy income)

	Population Income Quintiles (from lowest to highest)				
	1	2	3	4	5
Central America					
Costa Rica	59.1	18.4	6.1	-1.8	-10.1
El Salvador	19.0	2.0	-1.8	-4.5	-5.2
Guatemala	12.8	2.2	-3.1	-8.1	-15.0
Honduras	19.4	1.9	-3.8	-6.6	-10.6
Nicaragua	8.6	0.8	-3.9	-11.5	-14.8
Panama	161.8	51.9	22.8	10.6	-3.0
Andean countries					
Bolivia	48.0	22.1	11.5	7.8	-2.8
Selected European comparator countries					
EU-15	92.2	39.6	7.9	-8.0	-20.4
Denmark	164.5	31.3	-19.6	-33.2	-44.2
Ireland	525.2	78.3	12.9	-6.8	-21.9
Italy	56.9	28.3	14.5	0.5	-14.0
Portugal	92.2	31.0	8.4	1.8	-14.5
Spain	82.4	37.1	14.4	0.3	-15.5
Sweden	114.1	33.9	-6.5	-17.8	-28.9

Sources: IMF staff calculations based on country studies, EUROMOD; and Barreix, Roca, and Villela (2006).

[1]Fiscal policy refers to only taxation and social spending.

in Tables 4.7 and 4.8, in the Andean countries tax systems tend to be regressive and social spending progressive, with the latter offsetting the former and yielding a modestly progressive net effect. The situation is very different in the European Union, where tax systems are on average progressive (but with a small distributional impact) and social spending is not only sharply progressive but also very-powerful. The net effect is large and strongly progressive, with the post–fiscal policy quasi-Gini index 12.5 points lower than the pre–fiscal policy Gini coefficient, and the income of the poorest quintile almost doubling as a result of fiscal redistribution. Even Costa Rica's and Panama's relatively good performance (by regional standards) is dwarfed by the experience of the EU countries. Interestingly, Tables 4.7 and 4.8 show two different distributive patterns in the EU comparators: one in which the tax system is progressive, even strongly so, and redistribution is complemented by social spending (Ireland, Italy, Portugal, Spain);

and another in which the tax system is moderately regressive, but where social spending is so potent and well targeted that it yields a very strong progressive effect overall (Sweden, Denmark).

The Central American and international evidence clearly shows that the redistributive potential of taxes is much smaller than that of social spending. As Tables 4.3, 4.5, and 4.7 illustrate, fiscal policy interventions through social spending tend to have a much larger effect on the income Gini coefficient than taxation, for two main reasons. One is economic: globalization of trade and capital flows, the extent of the informal economy, and efficiency considerations pose limits on the capacity of governments to raise revenue through income taxes, as well as on the progressivity of these taxes. Inevitably, a considerable share of revenues must be raised through taxes on the consumption of goods and services. Social spending, in contrast, can be designed so that funds are directed in absolute terms mainly or solely to the poorest households. Therefore, although the relative progressivity of taxation (i.e., the burden of taxation each income group faces relative to its income) is constrained in practice, absolute progressivity (i.e., in which poorer households receive more in absolute monetary terms than richer ones) is possible in social spending programs. The second reason is purely arithmetic: every dollar redistributed through absolutely progressive social spending, even if raised through neutral or even regressive taxes (in relative terms), would have a stronger proportional effect on the income of the poor than on the income of the rich. The more unequal the original distribution of income, the more powerful the redistributive power of fiscal policy through well-targeted social spending.

Tax-financed increases in social spending would reduce inequality and raise the income of the poor in the sampled Central American countries. Table 4.9 shows the results of various simulations in which social spending is raised by 1 percent of GDP and financed through an equivalent increase in tax collection.[46] There are four different simulations, combining two sets of permutations. First, the increase in taxes is assumed to be financed by an increase in all taxes proportional to their current shares in total collection (admittedly, an unrealistic case) or, alternatively, to come solely from an increase in the VAT.[47] Second, the proceeds are assumed to be distributed according to the current incidence of social spending or, alternatively, in an equal amount to everyone (i.e., for every additional $100, $20 is channeled to each quintile). These alternative scenarios are designed to provide a minimum benchmark for the redistributive power of tax-financed increases in social spending: any reform that improves the incidence of taxation

[46]For simplicity, it is assumed that no revenues are lost in the process of redistribution.

[47]Two considerations motivated the focus on the VAT as one alternative permutation. The first, already referred to above, is the fact that globalization limits the scope for the taxation of capital and—to a lesser extent—labor income, which leads developing countries to raise taxes mainly through increases in the VAT. The second is the weight given in policy debates to the potential regressivity of the VAT taken in isolation, without acknowledging its overall distributional effects once the allocation of the proceeds is considered.

Table 4.9. Simulated Impact of Specified Fiscal Policy Reform on Postfiscal Policy Income

(Percentage Change in Postfiscal Policy Income Before the Reform)

	Population income quintiles (from lowest to highest)					Change in Gini[1]
	1	2	3	4	5	
Simulation 1: 1 percent of GDP increase in overall tax collection devoted to social spending						
Costa Rica	3.3	1.4	0.6	-0.1	-0.9	-0.6
El Salvador	4.4	1.3	0.4	-0.2	-0.5	-0.4
Guatemala	3.7	2.1	1.1	0.2	-1.1	-0.7
Honduras	4.0	1.4	0.5	0.0	-0.7	-0.5
Nicaragua	3.3	2.1	1.3	0.1	-0.8	-0.6
Panama	5.4	2.7	1.2	0.4	-1.2	-0.8
Simulation 2: 1 percent of GDP increase in overall tax collection channeled evenly to income groups						
Costa Rica	2.5	1.1	0.7	0.0	-0.8	-0.5
El Salvador	3.2	0.9	0.3	-0.1	-0.4	-0.3
Guatemala	4.6	2.1	0.9	0.1	-1.1	-0.7
Honduras	3.9	1.6	0.6	0.0	-0.7	-0.5
Nicaragua	6.1	2.7	1.2	0.1	-1.1	-0.8
Panama	5.5	2.3	1.2	0.4	-1.1	-0.7
Simulation 3: 1 percent of GDP increase in VAT collection devoted to social spending						
Costa Rica	3.3	1.4	0.5	-0.2	-0.8	-0.6
El Salvador	3.9	1.1	0.3	-0.2	-0.4	-0.4
Guatemala	3.3	1.7	0.9	0.1	-0.9	-0.6
Honduras	3.3	1.1	0.3	-0.1	-0.5	-0.4
Nicaragua	2.2	1.4	0.9	-0.2	-0.4	-0.4
Panama	5.4	2.5	0.9	0.1	-1.0	-0.7
Simulation 4: 1 percent of GDP increase in VAT collection channeled evenly to income groups						
Costa Rica	2.5	1.1	0.6	0.0	-0.7	-0.5
El Salvador	2.7	0.7	0.2	-0.1	-0.3	-0.2
Guatemala	4.2	1.7	0.6	-0.1	-0.8	-0.6
Honduras	3.2	1.3	0.3	-0.1	-0.5	-0.4
Nicaragua	5.1	2.0	0.7	-0.2	-0.7	-0.6
Panama	5.4	2.0	0.8	0.1	-0.9	-0.7

Source: IMF staff calculations.

[1]Quasi-Gini coefficient for postfiscal policy income after the reform minus quasi-Gini coefficient for postfiscal policy income before the reform, times 100.

(e.g., through the elimination of regressive exemptions) or the targeting of spending beyond its current level or beyond an unambitious flat distribution would yield much stronger redistributive effects. The outcome of the exercise is qualitatively the same across all permutations. The net distributional effect of a fiscal

policy reform that increases tax revenue by 1 percent of GDP and devotes the proceeds to social spending is progressive. It would reduce the income Gini coefficient between 0.5 and 0.8 percentage points in Costa Rica, Guatemala, Nicaragua, and Panama, and between 0.2 and 0.4 percentage points in El Salvador and Honduras.[48] Two key messages emerge:

- First, improving the targeting of social spending beyond a mere absolute neutrality results in considerable gains in inequality reduction. In the case of Nicaragua, if the current pattern of absolute regressivity in social spending were improved to at least a flat distribution, the impact of a rise in social spending on the income of the poorest quintile would be doubled.
- Second, the redistributive impact of the increase in social spending is not much affected by whether it is financed through an increase in the VAT (despite its regressivity) compared with other taxes: the differences in terms of Gini index impact are small, except in the case of Nicaragua, where the VAT is more regressive relative to other taxes and to the original (pre–fiscal policy) income distribution.

Conclusions

The limited redistributive potential of taxation, especially compared with that of social spending, suggests that a key focus of tax policy should be raising revenue efficiently. The distributional impact of taxes is generally small, whether a tax is progressive or regressive. Moreover, there is often a trade-off between the progressivity of a tax and its potential to raise revenue: if the progressivity of the tax derives from the granting of exemptions or the application of differential tax rates, its base may be eroded.

Therefore, increasing the progressivity of the tax system may reduce the pool of resources available for redistribution through social spending and may ultimately be detrimental for reducing poverty and inequality. By contrast, broadening the tax base—even if that implies eliminating progressive exemptions—may enhance the overall progressivity of fiscal policy.

This, however, does not imply that equity should not be a consideration in tax policy debates. The evidence in this chapter shows that income taxes can be much less progressive and VATs and sales taxes much less regressive in some countries than others. This might in part reflect different economic structures, but weaknesses in tax design can also be a factor, and one that may simultaneously harm equity, efficiency, effectiveness, and administrative

[48]These findings are in line with those from a similar simulation exercise reported in IDB (1998), which finds that a hypothetical 1 percent of GDP rise in VAT revenues that is distributed equally (in absolute terms) among all income groups would reduce the income Gini coefficient by between 0.4 and 0.6 percentage points in Guatemala, Colombia, and the Dominican Republic, and between 0.3 and 0.4 in Argentina and Chile.

simplicity. Exemptions that disproportionately favor the richer segments of society may, for instance, make the tax more regressive, elicit evasion, and reduce revenue.

Although social spending can potentially have a powerful redistributive effect, its impact on poverty and income distribution in Central America is undermined by its relatively low level. Countries in the region have made a visible effort in recent years to increase social expenditures. But, despite broad variations across the region, public social spending remains generally low both relative to GDP and as a share of total public spending.

The targeting of social spending in the region can also be improved. The evidence discussed in this chapter suggests that spending on health and primary education is strongly progressive. By contrast, spending on pensions and tertiary education is very regressive. The access and coverage of these two components of spending should be improved to enhance their impact on the poor. Well-targeted social assistance programs, such as cash transfers to households conditional on children attending school, can have a significant effect on poverty reduction, especially in the long run.

The combined effect of taxation and well-targeted social spending can substantially improve the income of the poor, even if the tax system individually considered is regressive. In Panama, for instance, as in many European countries, the net effect of fiscal policy is estimated to more than double the income of the poorest 20 percent of the population.

Table 4.A1. Central America: Evolution and Structure of Tax Revenue

	Total Revenue		Total Tax Revenue									
			Total[1]		Income Taxes		VAT/Sales		Excises		Trade Taxes	
	2003	2006	2003	2006	2003	2006	2003	2006	2003	2006	2003	2006
	In percent of GDP											
Costa Rica	13.9	13.8	13.6	13.6	4.0	4.0	4.7	5.1	2.7	2.7	1.5	1.5
Dominican Republic	15.9	18.0	14.9	16.9	4.4	4.5	3.8	5.1	3.1	4.7	3.5	2.6
El Salvador	12.7	13.8	11.5	12.9	3.3	4.1	6.1	6.7	0.6	0.6	1.2	1.1
Guatemala	12.5	12.6	11.7	11.7	1.5	2.3	5.3	5.4	1.2	1.1	1.4	1.1
Honduras	18.4	19.7	16.3	18.1	3.5	4.9	6.0	6.6	1.4	1.0	1.5	1.4
Nicaragua	16.4	18.8	15.2	17.5	3.8	5.1	6.2	7.3	4.1	4.0	1.0	1.0
Panama	15.3	18.4	8.7	10.3	3.4	5.1	1.5	1.9	1.2	0.7	1.5	1.6
Central America, Panama, and DR average	**15.0**	**16.4**	**13.1**	**14.4**	**3.4**	**4.3**	**4.8**	**5.4**	**2.0**	**2.1**	**1.7**	**1.5**

Source: IMF staff calculations, based on data from the authorities.

[1]Other taxes are excluded from the table, so the sum of income, VAT, excise and trade taxes is not equal to total tax revenue.

Table 4.A2. Progression of Taxes in Central America and Comparator Countries

	Relative tax burden by income quintile[1]				
	1st	2nd	3rd	4th	5th
Income taxes					
Costa Rica (2000)	88.0	92.8	91.3	92.2	106.6
El Salvador (2000)	40.5	71.6	68.3	96.3	115.8
Guatemala (2004)	95.8	88.5	86.7	81.7	111.2
Honduras (2004)	40.6	49.6	57.2	70.9	131.0
Nicaragua (2004)	62.5	69.8	76.1	85.7	113.3
Panama (2003)	70.1	15.1	11.6	26.7	146.7
U.S. (Fed, 2004, with Social Sec)	12.1	45.7	67.8	86.2	129.3
U.S. (Fed, 2004, w/o Social Sec)	-53.1	-3.6	31.5	60.2	161.9
VAT/Sales Tax					
Costa Rica (2000)	104.6	109.5	105.5	104.7	95.1
El Salvador (2000)	320.4	183.9	136.0	106.6	66.0
Guatemala (2004)	145.6	122.1	114.9	108.4	87.4
Honduras (2004)	272.1	144.6	125.4	104.4	76.5
Nicaragua (2004)	255.6	189.8	158.2	129.9	63.5
Panama (2003)	144.3	121.6	109.8	96.3	96.2
Bolivia (2000)	86.0	109.9	105.8	99.9	98.5
Excise Taxes					
Costa Rica (2000)	70.8	83.9	90.0	105.9	104.7
El Salvador (2000)	188.8	127.0	129.7	98.8	85.2
Guatemala (2004)	104.1	95.5	87.5	97.0	104.1
Honduras (2004)	192.2	178.2	181.0	131.1	53.7
Nicaragua (2004)	269.9	198.2	158.7	112.1	66.4
Panama (2003)	120.3	121.1	102.3	96.5	98.1
Bolivia (2000)	86.0	109.9	105.8	99.9	98.5
U.S. (Federal, 2004)	274.4	169.9	130.7	104.6	65.3
Trade Taxes					
Costa Rica (2000)	129.8	140.5	131.2	118.5	77.6
El Salvador (2000)	258.6	157.8	124.9	105.5	75.8
Guatemala (2004)	53.6	54.7	65.0	84.5	122.8
Honduras (2004)	282.8	164.1	133.9	109.6	69.3
Nicaragua (2004)	172.9	144.6	131.2	116.5	81.3
Panama (2003)	216.0	161.4	135.0	108.6	82.2

Sources: Acevedo and González Orellana (2005); Auguste and Artana (2005); Barreix et al. (2006); Bolaños (2002); Gillingham, Newhouse, and Yakovlev (forthcoming); Gómez Sabaini (2005b); Cossío Muñoz (2006); Rodríguez Arosemena (2007); U.S. Congressional Budget Office (2006); EUROMOD.

[1]Effective tax/income ratio relative to the average ratio; a value greater than 100 indicates that the income group pays a higher percentage of its income relative to the average.

Table 4.A3. Redistributive Impact of Taxation in Central America and Comparator Countries

	Gini pre-tax income (A)	Quasi-Gini for taxes (B)	Kakwani Index (C = B - A)	Tax pressure[1]	Quasi-Gini post-tax (D)	RS Index[2] (E = A - D)
Income taxes						
Costa Rica (2000)	45.1	48.1	3.0	9.6	44.8	0.3
El Salvador (2000)	47.4	56.3	8.9	1.3	47.3	0.1
Guatemala (2004)	46.3	50.4	4.1	3.7	46.2	0.2
Honduras (2004)	47.2	61.6	14.4	4.9	46.4	0.7
Nicaragua (2000)	51.0	58.6	7.6	4.5	50.7	0.4
Panama (2003)	53.8	73.9	20.1	2.1	53.4	0.4
Colombia (2003)	53.7	89.4	35.7	1.4	51.3	2.4
Ecuador (2003)	40.8	83.1	42.3	0.7	40.3	0.5
Peru (2000)	53.5	58.2	4.7	1.4	53.5	0.0
Venezuela (2003)	42.3	84.0	41.7	0.4	42.1	0.2
U.S. (Federal, 2004)[3]	43.8	59.9	16.1	19.0	40.0	3.8
U.S. (Federal, 2004)[4]	43.8	75.5	31.7	11.1	39.8	4.0
VAT/Sales taxes						
Costa Rica (2000)	45.1	42.9	-2.2	5.1	45.3	-0.2
El Salvador (2000)	47.4	25.3	-22.1	5.4	48.7	-1.3
Guatemala (2004)	46.3	39.1	-7.2	8.2	47.0	-0.6
Honduras (2004)	47.2	31.3	-15.9	7.0	48.4	-1.2
Nicaragua (2000)	51.0	27.8	-23.2	11.1	53.9	-2.9
Panama (2003)	53.8	50.5	-3.3	1.9	53.9	-0.1
Bolivia (2000)	55.6	54.7	-0.9	5.6	55.7	-0.1
Colombia (2003)	53.7	46.9	-6.8	6.3	54.1	-0.4
Ecuador (2003)	40.8	44.5	3.7	6.4	40.6	0.2
Peru (2000)	53.5	35.8	-17.7	4.9	54.7	-1.2
Venezuela (2003)	42.3	47.3	5.0	4.7	42.7	-0.4
Excise Taxes						
Costa Rica (2000)	45.1	49.3	4.2	2.6	45.0	0.1
El Salvador (2000)	47.4	37.9	-9.5	0.5	47.5	0.0
Guatemala (2004)	46.3	47.9	1.6	2.0	46.3	0.0
Honduras (2004)	47.2	24.4	-22.8	0.8	47.4	-0.2
Nicaragua (2000)	51.0	27.5	-23.6	7.3	52.9	-1.9
Panama (2003)	53.8	51.8	-2.0	1.3	53.8	0.0
Bolivia (2000)	55.6	85.3	29.7	1.8	55.5	0.1
U.S. (Federal, 2004)	43.8	21.3	-22.5	0.8	44.0	-0.2
Trade Taxes						
Costa Rica (2000)	45.1	34.4	-10.7	1.1	45.3	-0.2
El Salvador (2000)	47.4	31.8	-15.7	0.9	47.6	-0.2
Guatemala (2004)	46.3	58.3	12.0	3.2	45.9	0.4
Honduras (2004)	47.2	27.7	-19.5	1.8	47.5	-0.4
Nicaragua (2000)	51.0	39.5	-11.6	2.4	51.3	-0.3
Panama (2003)	53.8	42.6	-11.2	1.1	53.9	-0.1

Sources: Acevedo and González Orellana (2005); Auguste and Artana (2005); Barreix et al. (2006); Bolaños (2002); Gillingham, Newhouse, and Yakovlev (forthcoming); Gómez Sabaini (2005b); Cossío Muñoz (2006); Rodríguez Arosemena (2007); U.S. Congressional Budget Office (2006); EUROMOD.

[1]Tax pressure is the ratio of total taxes paid to total income before taxes.

[2]RS is the Reynolds-Smolensky Index.

[3]Including social security taxes.

[4]Excluding social security taxes.

Table 4.A4. Comparison of Income- vs. Consumption-Based Measures of Progressivity for Total and VAT Taxes[1]

	Tax Progression Quintiles					Gini Income or Cons.[2]	Quasi-Gini Taxes	Kakwani Index
	1	2	3	4	5			
El Salvador								
All taxes (income)	261.4	159.8	123.7	104.4	76.1	47.4	31.7	-15.7
All taxes (consumption)	101.1	101.2	99.1	98.9	100.4	31.8	31.7	-0.1
VAT (income)	320.4	183.9	136.0	106.6	66.0	47.4	25.3	-22.1
VAT (consumption)	123.9	116.5	108.9	101.0	87.1	31.8	25.3	-6.5
Nicaragua								
All taxes (income)	195.9	154.7	133.4	112.4	79.6	51.0	37.4	-13.6
All taxes (consumption)	113.3	107.0	101.7	96.5	97.9	39.5	37.4	-2.1
VAT (income)	255.6	189.8	158.2	129.9	63.5	51.0	27.8	-23.2
VAT (consumption)	147.8	131.2	120.6	111.5	78.1	39.5	27.8	-11.6
Panama								
All taxes (income)	127.8	93.5	80.4	75.6	110.8	53.8	57.1	3.3
All taxes (consumption)	45.2	51.6	56.6	67.7	144.9	38.5	57.1	18.6
VAT (income)	144.3	121.6	109.8	96.3	96.2	53.8	50.5	-3.3
VAT (consumption)	51.0	67.2	77.3	86.3	125.8	38.5	50.5	12.0

Sources: Acevedo and González Orellana (2005); Gómez Sabaini (2005b); Rodríguez Arosemena (2007)

[1]Household are ordered by income quintiles.

[2]Quasi-Gini index for consumption, as consumption distribution is ordered by income quintiles.

Table 4.A5. Cyclicality of Public Social Spending in Central America

	Correlation of Cyclical Components of HP-Filtered Series					
	Overall period	*t*-value	1990–97	*t*-value	1998–2004	*t*-value
Costa Rica						
Total Social Spending	0.11	0.41	0.36	0.96	-0.35	-0.85
Education	-0.06	-0.23	0.46	1.29	**-0.87**	-3.95
Health	0.09	0.33	0.35	0.91	-0.27	-0.63
Social Protection[1]	0.27	1.03	0.16	0.39	0.39	0.94
Dominican Republic						
Total Social Spending	0.30	1.09	-0.04	-0.09	**0.88**	3.67
Education	**0.66**	3.06	0.10	0.25	**0.92**	4.63
Health	**0.71**	3.49	0.34	0.90	**0.93**	5.00
Social Protection[1]	**0.53**	2.19	0.59	1.77	0.53	1.23
Guatemala						
Total Social Spending	**0.55**	2.38	-0.08	-0.20	**0.82**	3.23
Education	**0.52**	2.18	-0.14	-0.36	**0.76**	2.65
Health	**0.48**	1.99	-0.26	-0.65	**0.80**	3.01
Social Protection[1]	0.02	0.06	-0.22	-0.56	0.02	0.05
El Salvador						
Total Social Spending	**0.45**	1.83	0.39	1.04	0.64	1.86
Education	0.13	0.47	0.02	0.04	0.32	0.75
Health	**0.82**	5.23	**0.81**	3.43	**0.85**	3.64
Social Protection[1]	0.12	0.45	-0.18	-0.45	0.64	1.88
Honduras						
Total Social Spending	0.11	0.40	0.08	0.19	0.14	0.33
Education	-0.23	-0.85	-0.24	-0.62	-0.14	-0.32
Health	-0.08	-0.31	-0.03	-0.06	-0.16	-0.36
Social Protection[1]	0.28	1.03	0.18	0.45	0.47	1.19
Nicaragua						
Total Social Spending	**0.44**	1.77	0.41	1.10	0.55	1.48
Education	**0.51**	2.11	0.45	1.23	0.64	1.88
Health	**0.56**	2.41	0.58	1.76	0.58	1.58
Panama						
Total Social Spending	**0.54**	2.34	**0.77**	3.00	0.36	0.85
Education	**0.68**	3.35	**0.63**	1.98	**0.75**	2.54
Health	0.17	0.61	-0.13	-0.33	0.41	1.00
Social Protection[1]	0.15	0.54	0.47	1.29	-0.18	-0.41

Sources: ECLAC; country national authorities; and IMF staff calculations.

Bolded values indicate significance at a 5 percent significance level.

[1]Social protection includes social insurance (social security) and social assistance.

Table 4.A6. Average Annual Rate of Growth and Volatility of GDP and Public Social Spending

	1991–97		1998–2004[1]		1991–2004[1]	
	Average annual growth rate	Coefficient of variation	Average annual growth rate	Coefficient of variation	Average annual growth rate	Coefficient of variation
Regional Comparison						
Central America						
Gross domestic product	4.49	0.20	3.50	0.33	4.00	0.28
Public social spending	6.45	0.79	8.09	0.58	7.27	0.66
Education	6.28	1.06	7.97	0.57	7.12	0.78
Health	3.92	1.11	7.17	0.93	5.54	1.02
Latin America (20 countries)						
Gross domestic product	3.60	0.41	1.40	1.15	2.60	0.73
Public social spending	4.60	1.16	2.80	1.08	3.80	1.19
Education	4.10	2.48	3.30	1.75	3.70	2.30
Health	2.30	2.36	1.70	2.58	2.00	2.47
By Individual Country						
Costa Rica						
Gross domestic product	4.85	0.59	4.71	0.64	4.78	0.59
Public social spending	5.85	1.24	5.67	0.66	5.76	0.96
Education	7.06	1.56	7.79	0.76	7.42	1.14
Health	3.69	1.46	6.39	0.98	5.04	1.15
Dominican Republic						
Gross domestic product	5.17	0.53	4.98	0.78	5.08	0.62
Public social spending	11.47	2.20	5.02	2.33	8.49	2.31
Education	16.02	1.16	4.46	4.56	10.69	1.83
Health	11.36	2.21	4.80	4.75	8.33	2.79
El Salvador						
Gross domestic product	5.27	0.41	2.51	0.31	3.89	0.55
Public social spending	10.16	0.81	6.91	1.06	8.54	0.90
Education	8.28	0.67	6.28	1.44	7.28	1.00
Health	9.81	1.22	4.77	1.27	7.29	1.30
Guatemala						
Gross domestic product	4.10	0.17	3.12	0.34	3.61	0.28
Public social spending	8.92	1.47	8.00	1.63	8.46	1.49
Education	6.21	1.50	8.63	1.37	7.42	1.39
Health	2.91	3.96	6.04	2.86	4.47	3.17
Honduras						
Gross domestic product	3.78	0.66	2.88	0.83	3.33	0.72
Public social spending	3.14	4.28	12.94	0.85	8.04	1.60
Education	0.75	5.95	14.78	0.59	7.77	1.27
Health	0.83	15.80	11.33	1.19	6.08	2.29
Nicaragua						
Gross domestic product	3.01	0.98	3.75	0.53	3.38	0.73
Public social spending	2.14	3.67	10.75	2.38	6.45	2.90
Education	5.73	4.34	8.41	2.19	7.07	2.98
Health	-0.19	-60.06	8.57	2.48	4.19	4.06
Panama						
Gross domestic product	5.93	0.47	4.07	0.63	5.00	0.55
Public social spending	8.48	1.11	4.26	1.35	6.37	1.22
Education	9.65	1.03	1.92	1.72	5.78	1.41
Health	6.47	1.27	5.90	1.89	6.18	1.53

Sources: ECLAC, 2006; and IMF staff calculations on data from national authorities.

[1]Calculations through 2003 for the Latin American average.

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CHAPTER

5 Central American Customs Union and Challenges for Tax and Customs Administration

Andrea Lemgruber-Viol

Introduction

In December 2007, the governments of Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua signed the Framework Agreement for the Establishment of the Central American Customs Union (CACU). The agreement is an important step in the process toward regional integration, and is based on a broad sharing of experiences, negotiation, and joint work by officials from the five countries, together with representatives of Panama and the Dominican Republic. As international experience shows, the existing models of customs unions (CUs) are diverse; each type of union reflects the particular circumstances of the member countries. Thus, Central America is embarking on a gradual but dynamic process of deepening regional integration, with a view to achieving sustainable economic and social development.

Although the agreement establishes a legal framework for the customs union, there are many future challenges to consider and decisions to be made. Important issues that will determine the effectiveness of the region's customs and tax administrations (CTAs) have yet to be settled.[1] These include the following: the free circulation of goods and how to proceed regarding the control of sensitive goods; the operation of the internal customs posts (or the "centers of trade facilitation"); the administration and control of the free trade zones (where the so-called *maquiladora* companies are located); the fact that the signatories to the agreement can still conclude bilateral free trade agreements regarding non-CACU members, and how this may negatively affect customs administration; and the model for distributing the revenue collected through customs to the destination country.

[1]The term CTA refers to both customs and domestic tax administrations; these activities may be carried out by two separate institutions or by one integrated administration.

To face these challenges, the Central American CTAs will require a well-defined strategic plan. Such a plan should address three main areas: (1) normative convergence, (2) institutional development, and (3) administrative and operational strengthening. The CTAs in particular need a modernization strategy because they are critical institutions that support the regional integration process from its beginning phases. The CTAs support a key objective of integration—trade facilitation. At the same time, they help protect the member countries against tax fraud and contraband, while generating revenue to finance the countries' expenditures. Thus, their efficiency and effectiveness will determine the success of the integration process and its progression toward more advanced stages.

This chapter examines the process of establishing the CACU from the perspective of the CTAs and is organized as follows. It analyzes the process of regional integration and describes the main characteristics and the effects of integration on CTAs. It then identifies certain minimum requirements that the CTAs need to meet to support the integration process and discusses some international experiences regarding customs and tax arrangements in a customs union. The chapter also addresses key tax and customs principals in defining an appropriate model for the CACU and examines the modernization needs of the Central American CTAs.

The Regional Integration Process: Requirements and Implications for the CTAs

Regional integration is a gradual process that involves the deepening of *both* economic and institutional relations. For example, larger trade and financial flows are typically accompanied by effective information sharing between country authorities and unified procedural codes for facilitating and controlling those flows. Dorrucci and others (2004) demonstrate that the two processes are closely correlated and that institutional integration helps deepen economic integration.

As discussed in Chapter II, regional integration is, in practice, a *continuum* and allows for various arrangements to reflect the particular circumstances of each group of countries. Each stage of integration has direct implications for customs and tax administration.

- Free Trade Area (FTA): tariffs and quotas are abolished for imports from area members, but national tariffs and quotas against nonmember countries are retained.
- Customs Union (CU): an FTA with common tariffs and quotas for trade with nonmembers (known as the common external tariff—CET).
- Common Market (CM): a CU with no nontariff barriers to trade or restrictions on the movement of capital and labor.

- Economic and Monetary Union (EMU): A full economic union (which is also potentially a monetary union) would entail a significant degree of coordination of national policies and harmonization of relevant domestic laws to eliminate distortions.

The CTAs are affected by the integration process in quantitative terms (number of taxpayers, returns and tax transactions) and in qualitative terms (different business processes, management capacity, and organizational arrangements). Larger economic flows imply more service and enforcement activities (e.g., phone calls, Internet hits, customs clearances, transfer pricing operations). In order for the CTAs to handle a large volume of work in a cost-effective way, the CTAs will need to modernize their processes, including electronic filing, services and payment; risk analysis; and strategic management. They will also need to share information with their international counterparts, implement a series of tax treaties, and perform joint audits. Integration will also create new possibilities for fraud and evasion. This will require the CTAs to adapt and to respond quickly. An example is the VAT (value-added tax) carousel fraud that emerged in the European Union (EU) with the elimination of the intra-EU borders and led to subsequent changes in the administration of the intra-EU VAT.

To address these challenges, the CTAs will need to meet a series of requirements at the various stages of the integration process (Table 5.1). These are legal, institutional and operational requirements that typically consist of establishing standards for minimum or good practices in each area and implementing an effective tax and customs modernization strategy. A practical example is the European Union's accession requirements.[2] Minimum standards should be established for all core functions of a CTA, including human resources policies and infrastructure. The greater the effort to establish common institutional and administrative arrangements, the greater the advantages to be gained—but also the greater the requirements. Furthermore, different institutional arrangements are needed at different stages of the regional integration process. For instance, the CTAs support the initial stages of economic integration because tariff and trade policies are the first to change. Other institutions are developed at more advanced stages.

Meeting many of these requirements calls for an intense process of political negotiation and institutional change, which presents considerable challenges especially for developing countries. For this reason, actual integration experiences usually fall somewhere between the abovementioned "full stages"; that is, the established requirements are partially met, or temporary exceptions are adopted. One example of this is the current arrangements that are legally defined as a

[2]These include, for example, adapting national VAT laws to be aligned with the European Union's VAT 6th Directive, the completion of Fiscal Blueprints, and a number of other requirements. Box 5 provides more information on the EU's Fiscal Blueprints.

Table 5.1. Regional Integration Process: Main Requirements on CTAs

Level of Integration	Objectives and Characteristics	Institutional and Legal Requirements	Administrative Requirements
FTA	Elimination of internal tariffs.	Establishment of treaties on information sharing among countries of the group.	Certification of origin.
	Elimination or reduction of trade restrictions (quantitative quotas).	Adoption or negotiation of treaties on double taxation.	Electronic information sharing.
	Elimination or reduction of charges and measures having an equivalent effect to a customs duty.	Gradual convergence of various bilateral free trade treaties signed with nonmember countries.	Basic coordination of customs procedures.
	Maintenance of national tariff and trade policies in respect of nonmember countries.		
CU	Elimination of internal tariffs.	Adoption of a common customs code, regulations, and various manuals.	High level of coordination of customs procedures.
	Elimination of trade restrictions (quantitative quotas).	Standardization or harmonization of materials related to customs transit, customs valuation, documentation, technical barriers (sanitary, etc.)	Creation of compatible or unified information technology systems.
	Elimination of charges and measures having an equivalent effect to a customs duty.	Harmonization of trade regulations (certificates, labels, etc.), trade defense, public procurement system, etc.	Mutual assistance programs (joint audits, coactive collection, presence of officials from other countries in customs, etc.)
	Adoption of a common external tariff.	Code of conduct for customs officials.	Strengthening of external customs posts.
	Adoption of common policy on trade with nonmember countries.	Training school.	Use of internal customs posts for specific controls and domestic taxes.
			Integrated customs border posts.
CM	Free circulation of persons (labor) and capital, in addition to the elimination of restrictions that prevent the circulation of goods and services.	Elimination of internal customs and internal para-customs controls.	High degree of cooperation and data sharing.
	Unification of customs and trade policies and other legislation.	Unification of customs procedures and documentation.	Integrated planning and tasks (risk controls, integrated plan for combating fraud).
		Harmonization of indirect taxation.	Greater attention to integrated work on income tax: investment flow, royalties, transfer prices.
		Harmonized tax concessions policy (duty-free areas, special arrangements, etc.).	
EMU	Unification of monetary policy and adoption of a single currency.	Greater integration at the administrative, documentary, information-sharing, and procedural levels.	Integrated electronic systems (management, statistics, records, etc.)
			Integrated strategic planning.

CU (e.g., Mercosur and the South African Customs Union).[3] However, these are in fact "incomplete CUs" whose processes are still partially met or under development. In some cases of integration, the law and regulations are far-reaching, but implementation falls short owing to a lack of information systems, unified procedures, or administrative capacity. At other times, although operational and institutional conditions are in place for increasing effectiveness, there is no legal basis on which to act. The next section highlights some of the requirements for tax and customs administrations that are associated with the establishment of FTAs and CUs. The experience of the Central American countries is then analyzed.

Free Trade Areas

The FTA eliminates intrazone tariffs and quota restrictions. However, each country maintains its national trade policy with respect to nonmember countries. Therefore, the basic task of the customs administration is to differentiate between intra- and extrazone goods, given that they will face different tariff levels and controls. Certifying the origin of goods[4] becomes a critical requirement, as free circulation of goods applies only to goods that originate in the FTA. If the principle of free circulation of goods were to apply to goods not originating in the FTA, the differences in tariffs among the countries would lead to trade diversion. As a result, in an FTA, customs must perform the additional task of applying different tariffs and controls depending on whether goods are intra- or extrazone in origin. This often involves managing distinct rules of origin through the FTA's protocol of origin.[5] Furthermore, given that many trade arrangements between countries are in practice incomplete FTAs, customs often administers a list of intrazone sensitive goods to which the concept of free circulation does not

[3]The legal definition of an FTA and a CU is given by Article XXIV of the General Agreement on Tariffs and Trade (GATT).

[4]Rules of origin certification are complex in their general application. According to the Kyoto Agreement, goods deemed to have originated from a country are those that have been completely obtained in that country and, in the event that other countries also participated in the productive process, in the country where the final substantial transformation took place. In practice, this certification is applied on the basis of three criteria: whether there was a change in the tariff classification, what type of transformation occurred (e.g., origin is not conferred by operations such as canning, packing, or labeling), and the value added in the country (in general, materials not originating in the FTA should not exceed 40 percent of the final value of the product). Protocols of origin contain definitions of the original product and the rules of accumulation, transportation, re-inclusion or exemption, certificate of origin, methods of customs cooperation, and ex post checking of documents of origin, as well as other data.

[5]There are rules of nonpreferential origin—which each country determines unilaterally—and rules of preferential origin—which are defined in the context of an FTA. The IDB's and AECI's Guide to Good Practices on Aspects of Customs Management in the Processes of Territorial Integration, 2006 *(Guía de Buenas Prácticas Sobre Aspectos de la Gestión Aduanera en los Procesos de Integración Territorial)* points out that preferential rules of origin are normally much stricter than nonpreferential rules and need to be defined precisely. This is because goods that are subject to nonpreferential rules are afforded advantageous terms of trade. The members of the World Trade Organization (WTO) are required by the GATT to notify the WTO of their preferential and nonpreferential rules of origin.

apply and on which tariffs continue to be collected.[6] Examples of these goods vary but typically include various agricultural products, oil, alcohol, and tobacco; and goods that can pose threats to local industries. In other cases, countries may maintain *charges* (e.g., fees, export or import licenses) and *measures* (e.g., sanitary, phytosanitary, and food standards, labeling requirements) that have the same effect as a customs duty. In these cases, the work of the customs administration becomes more complex because it has to administer the exceptions associated with the FTA while facilitating trade within the zone.

Domestic tax administrations are, at this stage, perhaps less affected than customs, but they must still make some important changes. These include increased information sharing and joint audits with customs, closer control of foreign trade and investment transactions (e.g., transfer pricing, thin capitalization, and the effects of customs fraud on income tax obligations), and information exchange with other administrations in the region.

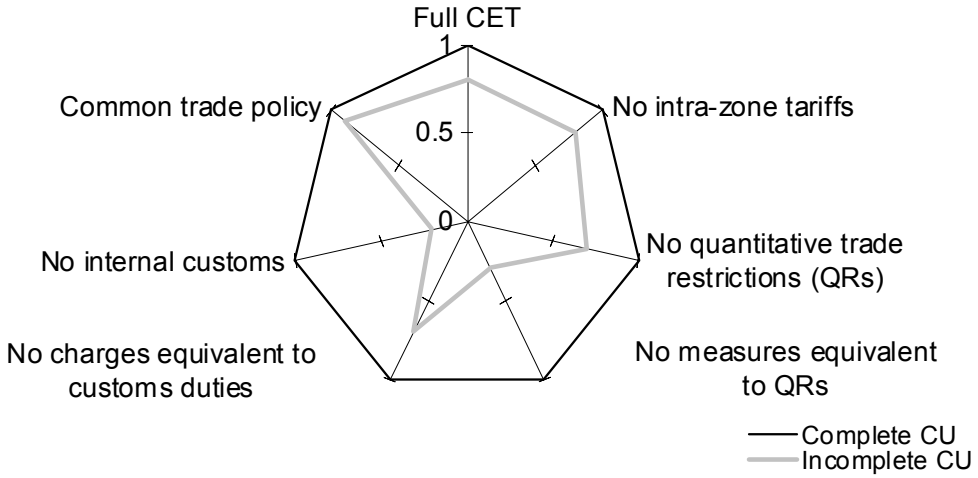
Customs Union

One of the main characteristics of a Customs Union is the application of a common external tariff (CET) to trade from third countries. By applying a CET, countries in a CU subject extrazone goods to an identical tariff regardless of their point of entry into the zone. Therefore, after clearing customs at the external customs point (actual borders with the extrazone), all goods in the CU can circulate freely within the CU. At this stage, there is no need for controlling origin to differentiate intra- and extrazone goods, though the rules of origin remain applicable to trade with nonmembers (e.g., to apply antidumping policies). The application of similar controls and procedures at all external customs posts is an important requirement. This ensures harmonization of rules and procedures and helps avoid fraud schemes in customs posts that are weaker administratively. At this stage, coordination among different customs is critical, and minimum standards of procedures, risk control, and human resource policies (including a code of ethics) should be enforced. The trade-off between free trade and effective control may be addressed only by modern, integrated institutional and operational arrangements.

A CU does not automatically imply the elimination of internal customs controls among the CU's member countries. Although this may be the case in "complete" CUs, in practice most CUs maintain customs controls within the zone to regulate sensitive goods (lists of exception and drugs, arms, and banned substances). Another reason for maintaining intrazone customs controls is to collect domestic

[6]Even in more advanced arrangements, a list of sensitive goods still applies for public policy reasons, such as health or public safety (e.g., flora and fauna under threat of extinction or deemed special, psychotropic and other products banned because of public health considerations, specific national defense and army equipment, and cultural goods or goods that are part of the protected public wealth).

Figure 5.1. Complete and Incomplete Customs Union (CU)



Source: IMF staff.

taxes (VAT and excises). Incomplete CUs persist for a number of reasons: there are exceptions to the CET; there are quantitative quotas, charges, and measures that have the same effect than a customs duty; there are weaknesses in customs' administrative capacity in some member countries (e.g., customs is unable to apply minimum standards and is vulnerable to fraud or corruption); information sharing is ineffective; or there is a lack of integrated rules and procedures. Figure 5.1 depicts the concepts of complete and incomplete customs unions. A complete CU is rated "level 1" for all relevant categories, and thus it is represented by the outer line of the polygon. The inner line represents a hypothetical case of an incomplete CU. For example, a CET less than 1 would denote that a CET is in force but there are exceptions in effect.[7]

Other relevant issues for a CU are (1) the model for distributing customs revenue (e.g., revenue from applying the CET) among its member countries and (2) the collection of domestic taxes on consumption. Revenues from the CET that are collected at external customs may be deposited into a central fund to finance common expenditures (as is the case in the European Union) or may be distributed according to the final destination of goods. Moreover, such distribution may take place on the basis of economic and statistical criteria. Each model implies a different political commitment and different management methods.

[7]The notion of an "incomplete CU" should be seen as a didactic and pragmatic way of representing a process in transition. In practice, many CU arrangements live with transitory phases and while they are more advanced than FTAs, they do not comply with all the legal requirements for a CU. Countries should recognize the need to move as fast as possible and minimize the length of the transitory phase. They should avoid embarking on a process of deferring the economic benefits of a union, while living with the administrative complications of the transitory phase. In this sense, the notion of the "incomplete CU" is meant to help countries recognize that they are still within a transitory or incomplete phase, despite calling themselves a member of a legal CU in most cases.

Likewise, a proper method for levying domestic consumption taxes (VAT and excise taxes) will need to be put in place, given that rates vary among country members. If internal customs posts are in place, adjustments and controls can be made at these borders. However, problems may emerge in the absence of internal customs posts. The application of different tax rates combined with the application of the destination principle may create opportunities for arbitrage and fraud. Therefore, an efficient risk control system and information sharing are necessary. As mentioned earlier, these are challenges even for the advanced European CTAs.

International Experiences in Establishing Customs Unions and the Role of the CTA

A comparative analysis of selected international experiences is helpful for guiding discussions on the CACU. Lessons learned from various international experiences show that (1) institutional building is critical to support the process; (2) internal customs controls are often in place for long periods; and (3) a coherent, integrated strategy to adopt certain legal and administrative standards is needed.

Establishing a customs union implies costs arising from coordination efforts (meetings, joint audits, integrated information systems), training, infrastructure investment (e.g., customs ports, warehouses, scanners, computers), and other related costs. Partly because of these costs and challenges, there are actually few customs unions compared with other types of regional trade agreements.[8]

The most advanced integration experience is that of the European Union (Treaty of Rome, 1957). The Treaty established a customs union and a calendar for dismantling customs duties. However, because of restrictions stemming from the existence of internal customs and measures having the same effect as a customs duty (especially sanitary rules), the process of establishing a "complete" CU took almost 40 years. Until 1992 (Treaty of Maastricht), internal customs controls were in place throughout Europe. Goods had to be cleared at these posts even though customs duties were not paid.[9] Since 1993, the European Union has been operating without internal customs controls. Goods imported from outside the

[8]The lack of political will to transfer competency to supranational or regional institutions is another reason for the small number of customs unions. Fuentes (2007, p. 3) mentions that FTAs represent 84 percent of the official regional agreements, whereas CUs and preferential regimes account for 8 percent each. Plummer (2006, p. 933) points out that "in Asia and North America there are no customs unions; in Europe there is essentially one (EU); in Latin America there is also one (Mercosur); there are only a few others scattered over Africa and the Middle East but none of the latter are customs unions in the 'pure sense' operating with a fully implemented, genuine CET, with a complete 'free-circulation' philosophy and where internal borders have been eliminated."

[9]The main controls performed in customs were as follows: collection of VAT and special taxes, compilation of statistics on intra-Community trade, and application of technical barriers (e.g., health and veterinary certificates, approvals).

zone are cleared at external customs in the first port of entry in the Union. The tariffs collected on these goods flow into a common fund that is part of the EU general budget. The elimination of internal customs controls has led to a VAT regime in which there is no border charge for intra-Community transactions. Instead, the payment of VAT is deferred until the tax is declared in the next VAT return. Goods subject to special taxes circulate under special relief arrangements. Box 5.1 summarizes the major steps in the European integration process.

The operation of the EU model is based on a series of minimum requirements that were developed over the years. A solid institutional base was established early, with strong legislative and technical capacity at all levels. Examples of this capacity include strong administrative cooperation among the CTAs in the EU, automatic information sharing, integrated information technology (IT) systems (e.g., the VIES system that enables members countries to share VAT-related information), risk systems and fraud prevention, standardized sanitary and other para-customs controls, full harmonization of the CET and the trade policy relating to nonmember countries; unified customs procedures (European Customs Code), and considerably improved external customs facilities. Despite this progress, fraudulent schemes have presented serious problems in the European Union. VAT carousel fraud alone has involved losses of about 10 percent of net VAT revenue in some countries and has resulted in proposals for a radical change in the way the VAT is levied and collected on cross-border transactions within the EU.[10]

Other existing customs unions are examples of "incomplete" arrangements. These include the South African Customs Union (SACU),[11] the Gulf Cooperation Council (GCC),[12] and the Southern Common Market (Mercosur).[13] Each of these arrangements follows a different integration model that is suited to the specific economic circumstances of the member countries and reflects their political commitments.[14]

[10]Carousel fraud has resulted in significant revenue losses because of nonpayment by defaulting traders of VAT that has been fully deducted by—or refunded to—another trader. To combat intra-Community VAT fraud, several EU member states have proposed fundamentally changing the VAT system. One option that is being considered is to apply the requirement to pay VAT for intra-Community transactions using the reverse charge mechanism. Under the reverse charge procedure, the purchaser of the goods, rather than the seller, is liable to account for the VAT on the sale. The supplier does not charge VAT, but specifies on the VAT invoice that the reverse charge applies. Provided that the purchaser correctly accounts for the VAT under the reverse charge procedure, the purchaser retains the right to claim an input tax credit for excess VAT paid on purchases.

[11]The SACU includes Botswana, Lesotho, Namibia, South Africa, and Swaziland.

[12]The GCC includes Bahrain, Oman, Qatar, Saudi Arabia, and the United Arab Emirates.

[13]The member countries of Mercosur are Argentina, Brazil, Paraguay, and Uruguay.

[14]Other CU examples are the East African Community (EAC), the EU-Turkey Customs Union, the EU-San Marino Customs Union, the Economic and Monetary Community of Central Africa, the West African Economic and Monetary Union (WAEMU), the Southern Africa Development Community (SADC), and the Common Market for Eastern and Southern Africa (COMESA).

Box 5.1. Evolution and Construction of the European Union

(1) Treaty of Rome (1957): created the European Economic Community as a customs union and set a transition period. The major changes introduced as a result are as follows:

- Elimination of customs duties on imports: 12-year calendar for full elimination, but fully implemented in 1968, a year and a half before the deadline set.
- Elimination of levies having an equivalent effect as customs duties: no fixed calendar.
- Establishment of the common external tariff: 12-year transition period, also entered into force in 1968, a year and a half before the deadline set. Frequently amended over time; in 1987, it became the Harmonized Commodity Description and Coding System.
- Elimination of quantitative restrictions on imports and exports: prohibited since the Treaty of Rome was signed and actually implemented during the transition period.
- Elimination of measures having an equivalent effect to a customs duty: also prohibited by the Treaty of Rome, though they remained in existence until the creation of the Common Market in 1992. The elimination was not achieved because of the continued existence of internal customs controls, the lack of harmonization of national policies on sanitary, veterinary, and quality controls, approvals, etc.; and the need to carry out tax audits in customs.
- Implementation of a common trade policy: also with a 12-year transition period, during which time policies were to be coordinated for the establishment of a common policy at the end of the period. The policy is now basically harmonized with regard to changes in tariffs, the signing of tariff and trade agreements, trade liberalization policies, export policies, and trade protection measures (antidumping and antisubsidy duties).
- Harmonization of legal framework: even in 1968, when the CET was implemented, the customs legislation was a long way from being harmonized, and then a series of regulations was adopted over time but encountered restrictions (even attempts at cancellation). The Customs Code was approved in 1992, unifying various regulations on customs matters, and entered into force in 1994.

(2) Maastricht Treaty (1992): legal basis for the creation of the European Union as a Common Market and actual establishment of the free circulation of goods. (The free circulation of services, persons, and capital was added later.)

- Elimination of physical borders in the zone: internal customs facilities and intra-Community customs documents eliminated.
- Elimination of technical barriers and measures with an equivalent effect, following the establishment of harmonized minimum standards and recognition by all the countries of the internal standards of each country.
- Elimination of fiscal borders: implies the adoption of a new approach to the collection of indirect taxes. This occurs through the transitional arrangements, whereby payment of the VAT and excise taxes on intra-Community trade is taxed in the country of destination.
- Formation of the monetary union: the process began in 1999 with a transition period for the adaptation of economic and monetary policies, and the euro was introduced in 2002 for a group of countries.

Source: IDB and AECI (2006).

- The SACU is the oldest customs union, dating to 1910. However, throughout its existence, it has been marked by economic and political asymmetries and weak administrative capacity (Kirk and Stern, 2003). The 2002 agreement created a new model for the distribution of customs and excise taxes.[15] In this model, customs duties are distributed based on the share of each country in intrazone imports, while revenue from excise taxes is distributed on the basis of the share of each country in regional GDP. However, a common problem has been having access to reliable statistical information for supporting the revenue-sharing mechanisms.

- The GCC was established in 1981. The process of establishing a customs union started in 2003 as part of the plan to issue a common currency and set up a common market in 2010. Internal border controls are mainly administrative controls that are in place to monitor the intraregional commercial flow of alcohol and arms. These controls are scheduled to be eliminated by 2012.[16] During the transition period, tariffs are collected at the first point of entry into the GCC,[17] and the distribution of this revenue is based on the final destination of the goods. There are plans to introduce a common fund for tariffs, but such a fund does not yet exist.

- Mercosur was created by the Treaty of Asunción (1991). After a four-year transition phase, it was established in 1995 as an incomplete customs union, with free circulation of goods for about 80 percent of intraregional trade. Currently, lists of exceptions still apply to sensitive goods. A CET is applied, although there are exceptions for a fixed number of goods by country. These lists are reviewed by member countries every 6 months. Mercosur continues to have internal customs controls and verification of origin. There is no common distribution fund, and in some cases there is still double collection of the CET (e.g., at the external and internal borders). Even though Mercosur has a common customs code, it has not been ratified by all member countries. This is a goal to be achieved in 2008. There are still large asymmetries among the member countries in customs' capacity, which pose risks regarding the elimination of internal customs posts.

[15]Kirk and Stern (2003) state that the inclusion of excise taxes in the Community distribution fund has been an uncommon characteristic of SACU since 1969, because excise taxes are basically domestic taxes.

[16]An important element that sets the GCC apart from other customs unions is the fact that the Gulf states have not introduced a VAT, although its introduction is planned. Work is under way on the design of a VAT that does not lend itself to the types of intra-Community VAT fraud that have been experienced in the European Union.

[17]The first point of entry into the GCC for most extraregional trade is the port of Dubai, where most of the tariffs are collected for the other countries of the region. Dubai is the principal importer in the region and could be considered the most efficient. For example, customs clearance in Saudi Arabia takes 16 days, whereas the average time needed for customs clearance in the port of Dubai is 3 days.

Key Tax and Customs Principles in Defining an Appropriate Model for the CACU

The signing of the Framework Agreement for Establishing the CACU, in December 2007, demonstrated the political will to create an effective trade arrangement in the region. The framework agreement defined the most important characteristics of the CACU: elimination of quantitative restrictions and charges having an equivalent effect as a customs duty, adoption of common legal and normative standards, maintenance of internal customs posts, transfer of taxes collected at the border to the countries of destination (i.e., no establishment of a common fund), and strengthening of the existing institutional framework without creating a supranational body. Box 5.2 summarizes the major elements of the 2007 framework agreement.

Despite the framework agreement, there are still a number of decisions to be made and challenges to be addressed to design an appropriate CU model for the region. Generally speaking, such decisions involve the administration of a number of exceptions (e.g., sensitive goods, the CET, and the numerous tax exemption regimes—*zonas francas*); implementation, coordination, and control issues; and institutional capacity building. Specific issues to be dealt with include the following:

- The free circulation of goods. Regarding intrazone commerce, a high portion of goods originating in Central America already circulate without tariff and nontariff restrictions. However, decisions are still pending for the so-called "Annex A Goods," which consist of a series of products facing restrictions: sugar (all five members); ground coffee—unroasted coffee (all five members); roasted coffee (between Costa Rica and all others); oil products (between Honduras and El Salvador); ethyl alcohol (between Honduras and El Salvador and between Costa Rica and El Salvador); and alcoholic beverages (between Honduras and El Salvador). As mentioned before, "incomplete" CUs often operate with lists of sensitive goods for some time. This should therefore be seen as part of the gradual convergence process in Central America, but should be addressed sooner rather than later. For the time being, additional customs controls will be needed to certify the origin and classification of goods and to discourage fraudulent transactions associated with traders who are trying to take advantage of these restrictions.
- The maintenance of internal customs posts. In the current economic and institutional context of the CACU, maintaining customs posts at the internal borders is a well-founded decision. For the foreseeable future, customs controls at the internal borders will be needed to monitor the goods on the exception lists, to collect domestic taxes on consumption, and to control prohibited goods (drugs and arms). The Central American countries are still in the process of developing a reliable VAT collection and enforcement

Box 5.2. Main Features of the Framework Agreement for Establishing the Central American Customs Union

General: Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua reaffirmed their intention to establish a customs union in their territory. The union will be based on the principles of currently available integration tools, and on Article XXIV of the GATT (General Agreement on Tariffs and Trade), which is part of the WTO (World Trade Organization) agreement.

Phases for the development of the customs union: the customs union will be established in a gradual and progressive way. It will be developed in three main phases: (1) promotion of free circulation of goods and trade facilitation, (2) modernization and convergence of the legal framework, and (3) institutional development.

Customs control: the internal customs posts will continue to operate and promote coordinated efforts to facilitate trade and collect revenue.

Quantitative restrictions and charges having equivalent effect to a customs duty: barriers such as permits, licenses, quotas, or other equivalent measures that hinder trade among member countries will not be allowed in the union.

Sanitary and veterinary standards and nontariff barriers: member countries will develop a common system of sanitary and veterinary standards as well as a common definition of nontariff barriers.

Modernization and convergence of the legal framework: the main objectives of this phase will be to (1) reach full harmonization regarding the common external tariff (CET), (2) establish external customs points as entry points for goods coming from countries outside the customs union, (3) harmonize the regional legal framework related to all areas covered by the agreement, taking into consideration previous commitments in terms of international trade, and (4) promote the gradual convergence of the different free trade agreements signed by each member country.

Tariff regime: the union will have a unique tariff system regarding the Harmonized System (HS)[1] code, description of goods, and tariffs; the member countries will also establish the necessary mechanisms to administer the tariff regime once it is fully harmonized.

Procedures and requirements: the member countries will coordinate their customs services with a view to applying the same procedures, forms, requirements, and deadlines; they will also apply common information technology systems and similar guidelines for staff conduct, taking into consideration international best practices in terms of customs administration. The member countries will also harmonize the other requirements and services not related to customs (e.g., sanitary requirements, veterinary requirements, quality control).

Origin of goods: the Council of Ministers of the Economy and Trade (COMIECO) will take the necessary actions to ensure convergence of the different rules of origin applied by the member countries.

Tax regime: member countries will apply the principle of destination to international trade operations. The member countries will also agree on the mechanisms for collecting taxes on international and intraregional trade.

Institutional development: the objective of this phase is to establish the principles for the institutional strengthening required for the adequate operation and consolidation of the customs union.

Structural and investment fund: the member countries will establish an international structural and investment fund targeted to contribute to their sustainable development.

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[1]The Harmonized Commodity Description and Coding System (HS) of tariff nomenclature is an internationally standardized system of names and numbers for classifying traded products that was developed and is maintained by the World Customs Organization.

Box 5.3. Joint Customs Posts Currently in Operation in Central America

The Central American countries started a pilot project of joint operations in some internal and external customs. This project is important as a way of sharing experiences, adopting harmonized procedures, and facilitating trade. In fact, despite the existence of a Unified Manual of Customs Procedures (signed by Guatemala, Honduras, El Salvador, and Nicaragua), customs operations and procedures in the region are far from harmonized, and there are inconsistencies even within countries. The absence of a stable, professional customs career system in some countries has hindered human resource development and the creation of a corps of customs officers who can interpret and apply customs norms consistently. Therefore, the pilot project is a good opportunity to identify differences in the application of standards and practices, and to narrow these gaps.

There are four joint internal customs border posts in operation: El Amatillo, El Salvador (El Salvador–Honduras); El Poy, El Salvador (El Salvador–Honduras); Las Chinamas, El Salvador (Guatemala–El Salvador); and El Guasaule, Honduras (Nicaragua–Honduras).

Regarding the external customs, eight joint customs (mainly ports) are in operation: Puerto de Acajutla (El Salvador–Guatemala); Puerto Cutuco (El Salvador–Guatemala); Tecún Uman (El Salvador–Guatemala); Puerto Quetzal (El Salvador–Guatemala); Puerto Santo Tomás de Castilla (El Salvador–Guatemala); Puerto Barrios (El Salvador–Guatemala); Puerto Cortés (El Salvador–Honduras); and Peñas Blancas (Nicaragua–El Salvador–Guatemala).

mechanism, and evasion in the region is high.[18] Thus, the absence of border controls could lead to increased VAT fraud and losses in VAT revenue. That said, there is much to be done to ensure that customs controls are effective, while not losing sight of trade facilitation, which is a challenge to any modern customs authority.[19] In this regard, the Central American authorities intend to transform the internal customs border posts into "centers of trade facilitation," while still leaving them to perform a revenue collection function. Thus, the presence of internal customs controls can be seen as a necessary phase to achieve a CACU that controls fraud, protects its citizens, and facilitates formal transactions. Along these lines, progress is being made in the establishment of joint internal customs border posts between a number of Central American countries, as indicated in Box 5.3.

- The free economic zones. The Central American countries are competing to attract foreign investment by providing investors with a series of tax exemptions and benefits. This policy has led to the proliferation of free economic

[18]The next section includes a brief discussion of informality and evasion in the region.

[19]Many tools can help achieve an efficient, effective customs administration: risk management for channel selectivity, automated and integrated systems, electronic filing and payments, joint border controls, unified or harmonized documentation, information sharing, special expedited procedures for reliable taxpayers (authorized economic operators), ex post auditing, and others.

zones, where the so-called maquiladoras are located (see Table 5.2).[20] This is a sensitive issue, given that the maquiladoras are not subject to the regular tax and tariff regime (application of the CET, payment of VAT, etc.) and create distortions in the investment flow inside the CACU. A particularly important issue is to define the borders between this in-bond regime and the rest of the economy. In other words, because the goods produced in the free economic zone are not subject to the CET and VAT, they should not be brought into the domestic market free of tariffs and domestic taxes. In some cases, duty-free allowances can be granted for limited amounts of goods purchased from these in-bond enterprises by individuals or by tourists entering the customs territory, provided (in the case of the latter) that the goods are for final consumption. However, a current problem, which could be aggravated in the CACU, is an increase in the incidence of fraud in connection with these regimes. Work is under way to compile an inventory of existing tax exemptions and incentives. However, the Central American CTAs still lack information, the capacity, and resources to effectively control the free economic zones and other preferential regimes that abound in the region (e.g., tax incentives for the tourism sector). For instance, despite the importance of tax benefits in the region, tax expenditure budgets are not estimated and monitored regularly.

- Bilateral free trade agreements and the common external tariff. The framework agreement states that the CACU should promote the gradual convergence of the different trade agreements currently in place. Despite this general goal, the agreement does not prevent each member country to negotiate free trade agreements unilaterally with nonmember countries. This clearly is a problem for the CACU.[21] This practice is not common in customs unions—such as the European Union—or even in "incomplete" ones—such as Mercosur. The most pressing problem associated with the unilateral negotiation of trade agreements by CU member countries with third partners is the impossibility of maintaining a CET, and the requirement for increased customs control. This policy may result in divergent tariffs among countries, various exemption periods, and different coverage of goods. In turn, this

[20]These are in-bond, export-led industries fueled by foreign investment and technology. They import machinery and inputs duty-free and re-export final products after relatively simple assembly and transformation.

[21]Several active trade agreements operate under different arrangements, partners, timing, and coverage. The countries that have agreements in place are Mexico (Mexico and Costa Rica; Mexico and Nicaragua; Mexico and El Salvador–Guatemala–Honduras); the Dominican Republic and Central America; Panama and El Salvador (free trade agreement); Panama and Costa Rica–Guatemala–Honduras–Nicaragua (preferential agreement); Chile and Central America (currently in place with Costa Rica and El Salvador); Canada and Central America (currently in place with Costa Rica); United States and Central America (Central American Free Trade Agreement–Dominican Republic, CAFTA-DR; pending approval for Costa Rica); CARICOM and Costa Rica; Taiwan Province of China and Guatemala; Taiwan Province of China and Nicaragua (pending congressional approval); Taiwan Province of China and El Salvador–Honduras (pending congressional approval); and Colombia and Guatemala–El Salvador–Honduras (in negotiation) (SIECA, 2008).

Table 5.2. Central America: Statistics on Free Economic Zones

	Number of Firms	Total Employment	Main Sectors	Zone Exports as % of Total Exports
Costa Rica	196	36,000	Machinery; textile; pharmaceutical; plastic; rubber	52
El Salvador	200	76,134	Clothing; tuna fishing; machinery; medical products; paper	62
Guatemala	241	72,000	Industrial, commercial and services; textiles	N/A
Honduras	204	353,624	Textile; footware; services; electronic; equipment assembly; food processing	60
Nicaragua	110	340,000	Textiles; food; telecommunications; food processing; electronics; chemicals; tobacco; packaging	80

Sources: International Labor Organization; and Boyenge (2007).

will lead to trade diversion, administrative complexity, and opportunities for fraud. For example, the free trade treaties that the Central American countries signed with the United States (Central American Free Trade Agreement–Dominican Republic, or CAFTA-DR) have become especially important, because the United States is the most important trading partner in the region. However, as a result of the CAFTA-DR, the external tariff went from being 95.7 percent harmonized (see Table 5.3), to an estimated 66.7 percent harmonized in the first year of the agreement. These tariff positions are expected to converge to a 99.1 percent harmonization within 15 years. Given that the Central American tariff levels are relatively low (the average nominal tariff was 5.4 percent in 2005 (Fuentes, 2007), there are few incentives for trade diversion. However, the proliferation of bilateral agreements hurts the CACU and could delay its full implementation. Furthermore, this problem adds significant complexity to customs control because customs officers must apply tariff classifications and certify the origin of goods under multiple treaties.

- The distribution of customs revenue. The framework agreement establishes that taxes levied on international trade should respect the destination principle, and that the member countries should agree on collection mechanisms. In contrast to the European Union, the CACU does not establish a fund for financing a common budget. Against this background, the most important issue is to determine how resources will, in practice, be distributed. There are questions regarding the transfer of revenue collections: (1) periodicity (e.g., weekly or monthly), (2) form (e.g., using intermediary bank accounts of the country of entry and subsequently transferring the funds to the destination

Table 5.3. Common External Tariff

Tariff Positions	Quantity	Percent
Harmonized positions	6108	95.7
Nonharmonized positions	275	4.3
of which:		
Agricultural products	177	64.4
Industrial goods	98	35.6
of which:		
Machines	2	0.7
Medicines	19	6.9
Metals	22	8.0
Oil	1	0.4
Textiles and clothes	3	1.1
Wood	16	5.8
Others	35	12.7

Source: SIECA (2008).

country, or having taxpayers pay directly to an account of the destination country),[22] and (3) control (how to ensure that the correct value of revenue is properly accounted and transferred to the destination country).[23] These questions are similar to those that some federations are facing regarding their internal revenue sharing formulas and systems, with cases in which some government levels may be collecting on behalf of others (e.g., Quebec–Canada). As these experiences show, it is critical to set up a reliable mechanism that is automated, transparent, and subject to external audit. Clearly, an effective online and integrated IT system that can support sound management of a revenue-sharing or revenue-distribution system is key in this regard.

- The institutional model and capacity building. As discussed before, economic and institutional integrations are mutually supportive. Currently, Central America has a regional institutional framework that was defined by the Guatemala Protocol (1993). The framework agreement establishes that the member countries will adapt the current institutional base as needed, but in a cost-effective way. Thus, the CACU will apparently not rely on a complex, costly supranational structure. If this is so, the CACU will depend on stronger, better coordinated national institutions, including the CTAs. The CTAs in the region still fall short of some international best practices and will require continuous modernization over the next years. A CTA's institutional development goes hand-in-hand with a degree of autonomy. This means that

[22]It is strongly recommended that all collection take place through the banks; that is, that customs posts do not receive cash payments, for obvious reasons of control and security.

[23]Some countries allow officials from other countries to work in their customs offices to help clear goods destined for their country.

these organizations need to be protected from political influence regarding their technical decisions, be managed with a strategic direction and evaluated through performance indicators, have a stable and professional workforce, and be capable of executing an adequate budget. Without strengthening these institutions, it will be difficult to build the required network of coordination and information exchanges that is vital for the region. Therefore, the effective establishment of the CACU will require an enormous effort of institutional strengthening and capacity building. To face these challenges, a road map should be drawn up for Central American CTAs based on a careful assessment of these institutions' current status, including their strengths and weaknesses. The next section discusses this issue.

Requirements for Modernizing the Tax and Customs Administrations

The Central American CTAs have already met major milestones in the ongoing process of regional integration. Positive achievements include the implementation of a series of regional commercial norms (i.e., the Central American protocol of origin); customs transit; a common customs code (CAUCA) and its regulations (RECAUCA); and some unified tax documents (the single tax invoice—FAUCA). Some of these instruments need to be revised and adapted under the CACU framework. Even though their application is not always consistent, these experiences are a baseline from which to start. Other welcome initiatives are the joint customs posts (referred to in Box 5.3) and the Central American Tax and Customs Training School. Many CTAs have implemented modernization plans and are moving in the right direction.

Nevertheless, the CTAs still face significant shortcomings in terms of institutional development, managerial capacity, and human and material resources (Box 5.4). These shortcomings can be observed across the region, although there are development gaps and asymmetries within countries, as well. Such asymmetries represent a particular challenge for establishing the CACU. This is because less developed institutions are the "weak spots" that hinder full information exchange and have less strict controls over corruption. A "complete" CU can hardly be achieved while such problems persist.

The CTAs in the region face high levels of informality and evasion. The size of the informal economy in the Central American countries is estimated to be an average of 43 percent of GDP (Schneider, 2003)[24]—slightly higher than the average of 41 percent for 17 Latin American countries. Some estimates of VAT evasion (based on the findings of IMF technical assistance missions) point to

[24]There is no estimate for El Salvador.

Box 5.4. Assessing Central America's Customs and Tax Administrations

Central American Customs and Tax Administrations (CTAs) have recently implemented a series of modernization projects and have experienced significant improvement, although asymmetries exist among them regarding performance and effectiveness. Overall, the region has adopted comprehensive modernizing strategies and antievasion laws; many of them supported by the IMF and other technical assistance agencies (e.g., Inter-American Development Bank, Inter-American Center of Tax Administrations (CIAT), U.S. Treasury, and World Bank). Some countries have integrated customs and domestic tax administrations (Guatemala and Honduras); in others, two separate institutions perform such tasks (Costa Rica, El Salvador, and Nicaragua). A detailed assessment of these institutions' performance, a careful identification of gaps in relation to international good practices, and a strategy for institutional strengthening are critical steps on the way forward. Some relevant areas to address and evaluate are as follows:

Institutional framework and management capacity. In general terms, the Central American CTAs have room to improve their institutional development. Poor and unstable management, lack of legal powers, and political interference in operational activities are still a concern in some countries. Achieving greater autonomy and flexibility in terms of personnel management and budget is crucial for some countries in the region (Honduras, Nicaragua). All countries have progressed toward adopting strategic plans and some have quite sophisticated systems of performance indicators (Costa Rica, Guatemala).

Human resources. In general, CTAs in the region still lack a legally established professional career system (Honduras, Nicaragua), transparent personnel evaluation and promotion systems, and public exams or other objective methods of hiring. These requirements are basic standards for CTAs to perform their activities as a state institution effectively; technical personnel should not be subject to the vagaries of the political cycles. Training is an area in which all the CTAs have progressed, and Honduras now has a regional training school for tax and customs officials.

Information technology. There has been significant improvement in this area. Most of the countries have established reliable electronic filing and payment systems (Nicaragua is still in process of implementing the system for all types of taxpayers). Nevertheless, there is a need to enhance the IT platform and develop new systems to replace obsolete ones (Honduras, Nicaragua). Customs IT systems differ among countries, and compatibility with a view to exchanging information is a concern. Some countries use systems that they have developed in-house (Costa Rica, Guatemala). Others use a standard customs software ASYCUDA (El Salvador, Honduras, Nicaragua—although in different versions), which may not provide the necessary flexibility and tools.

Core operations. All countries have worked to update their taxpayer registers, but inconsistencies still persist. Audit is clearly a function to be strengthened, given that much of the work done consists of low value-added checks rather than specialized and targeted audit activities (El Salvador, Honduras, Nicaragua). Another challenge in the region is to grant greater arrears collection powers to the CTAs (such as seizure of assets and collection from third parties). Customs should advance more rapidly to apply an effective risk management system, in order to facilitate trade while applying effective controls. Some of the countries in the region (Honduras) still perform a high level of physical verification, whereby goods pass through the red channel instead of the more selective yellow or green (no inspection) channels; or do not have all three standard channels (Guatemala).

figures above 30 percent for some countries. Along the same lines, VAT productivity (i.e., the amount of VAT revenue collected as a proportion of gross domestic product (GDP) per point of the VAT rate) is still low in some countries, particularly in Guatemala and Nicaragua (see Table 5.4). Even though the figures in the table refer to 2002/2003, they are still a good indication, given that productivity does not change rapidly. The productivity is also affected by the high level of exceptions granted in some VAT legislation. The productivity figures also highlight regional asymmetries.

Tax revenue performance has improved recently in Central American countries, reflecting the effect of modernization programs in the CTAs and legal changes that have been introduced recently. Nevertheless, the region remains characterized by a relatively low tax burden.

Therefore, a comprehensive strategic plan for modernizing the CTAs in the region is key for implementing the CACU. This plan should cover the various institutions involved in the process, and attention should be given to coordination efforts between the CU member countries. Implementation will need to be gradual, progressive, and consistent with the local administrative capacity, given that some countries lack sufficient professional resources. At a strategic level, the CTAs should review the minimum requirements for an FTA and a CU (based on those specified in Table 5.1). They should start developing a plan to close the gaps between the current situation and international good practices.

An exercise similar to the European Union's Fiscal Blueprints (Box 5.5) is thus recommendable for the Central American countries. Such an exercise would help evaluate the CTAs' institutional and operational capacity.

An assessment along the lines of the EU's Fiscal Blueprints would provide valuable information for designing a proper strategic plan for the integration process. In the meantime, based on the basic requirements for a customs union that are listed in Table 5.1, one can identify some key steps that the Central American countries need to take to progress towards the establishment of the CACU. These are identified below.

Normative and Institutional Convergence

- Seek rapid ratification of the framework agreement in each member country, and of the other regulations needed to govern its implementation.
- Define the institutional arrangements for the administration of the CACU (with key attention to CTAs' needs in terms of infrastructure platform, human resources development, and political independence).
- Establish the rules of operation of the Structural and Investment Fund (which could support some necessary investments on the CTAs).

Table 5.4. Comparative Data on Tax Burden, Size of the Informal Economy, and VAT Productivity

(In percent)

	Tax Burden	Informal Economy	VAT (GDP) Productivity
Costa Rica	14.0 (2006)	26.2	0.58 (2003)
El Salvador	13.3 (2006)	n.a.	0.47 (2003)
Guatemala	12.0 (2006)	51.5	0.39 (2002)
Honduras	15.3 (2006)	49.6	0.50 (2003)
Nicaragua[1]	17.5 (2006)	45.2	0.18 (2003)

Sources: Tax burden and value-added tax (VAT) productivity: IMF staff; informal economy: Schneider (2003).

[1]The Nicaraguan GDP methodology could lead to underestimation.

Box 5.5. The EU Fiscal Blueprints: Setting a Benchmark for Customs and Tax Administrations

The fiscal blueprints (FB) exercise is an interesting example of benchmarking that the Central American CTAs could follow as a preparatory step toward strengthening the region's institutions and preparing them for implementing the CACU. "The fiscal blueprints are practical guidelines laying down clear criteria based on EU best practice, against which a tax or fiscal administration is able to measure its own operational capacity. They can be used to analyze gaps between the existing situation in individual countries and the blueprint standards and thus provide a basis for plans to undertake fiscal reforms." The EU defines two main purposes of the fiscal blueprints: (1) to provide a set of best practices and recommendations for tax administrations and (2) to serve as a tool for the tax administration to provide a speedy and clear identification of its strengths and weaknesses.

The FBs were developed in 1999, during a period of EU expansion, "to serve as a tool for the candidate countries for accession to the EU to enhance their administrative capacity in adopting, applying and enforcing the Community legislation in preparation for membership." This exercise was carried out in cooperation with the Intra-European Organization of Tax Administration (IOTA).

The current version of the Fiscal Blueprints (2007) has fourteen chapters, each specifying an overall aim, strategic objectives and key indicators:

1) **Framework, structure and basis**: Overall framework of a tax administration; structure and organization; tax legislation.

2) **Human and behavioral issues**: Ethics; human resources management.

3) **Systems and functioning**: Revenue collection and enforcement; tax audit; administrative cooperation and mutual assistance; fraud and tax avoidance.

4) **Taxpayer services**: Taxpayer rights and obligations; systems for taxpayers' management; voluntary compliance.

5) **Support**: Information technology; communications.

Source: EU Fiscal Blueprints (2007).

- Review and harmonize the CET, taking into account the need to review bilateral trade agreements and formulate a clear policy in this area.
- Work toward the gradual convergence of the various free trade treaties, in particular the bilateral agreements signed by each of the countries with nonmember countries.
- Review and approve the new version of the common customs code (CAUCA IV) and the relevant regulations (RECAUCA), in accordance with the standards in each country and with the framework agreement.
- Review and harmonize the regional regulations in the areas covered by the framework agreement, especially specific rules of origin, customs transit, sanitary and phytosanitary measures, security measures, technical barriers to trade, trade defense, trade in services and investments, rules of public procurement, intellectual property, competition policy, and public procurement.
- Analyze and review documents and agreements related to the coordination of domestic taxes (a key aspect is convergence with respect to exemptions and incentives).
- Adopt the Agreement on Good Investment Practices, with a view to adopting a common policy on tax concessions for free trade zones in the region and to establishing a "level playing field" for the countries competing for foreign investment.
- Implement the agreements on information sharing and agreements on mutual assistance and technical cooperation; start building knowledge on advanced issues, such as transfer pricing rules, thin capitalization, and treaties to avoid double taxation (these issues have started to be addressed in some meetings of the regional ministers of finance).
- Strengthen the Central American Customs and Tax Training School.

Administrative and Operational Requirements

- Establish good practices and identify minimum standards for the CTAs in the region.
- Define and implement IT systems with minimum functionalities, flexible responses, and high communicability (in particular, attention should be given at the outset to the operating status of the customs systems: unified customs information system, electronic sharing of customs data forms, the electronic transmission of international transit declarations, etc.).
- Strengthen external customs posts.
- Harmonize procedures and risk analysis criteria for customs control, with clear channel selectivity and also separation of the prior, immediate, and ex post audits.

- Streamline and clean up the taxpayer registers, managing reliable data information that will be the crucial backbone of all exchanged information in the region.
- Expand e-filling and e-payment for all types of taxpayers throughout the region.
- Strengthen taxpayer services, including online help (websites and e-mails), giving attention to providing clear and targeted information for economic operators doing business in the CACU area.
- Start a coordinated program of tax education to reach taxpayers in the region, focusing on the CACU requirements and encouraging better compliance in the whole region.
- Apply massive controls and cross-checking methods to all taxpayers, but focus audit efforts (external audits) on targeted, high-value cases (selected through risk analysis).
- Strengthen key areas in the fight against smuggling and fraud: customs and domestic tax intelligence, audit, and control; and increase cooperation among such areas.

Conclusions

The signing of the framework agreement to establish the CACU poses great challenges for the Central American countries and their CTAs. At their current level, the Central American CTAs have clear needs for improvement when compared with international models of good practices. A further challenge not to be underestimated is implementing a customs union in a region characterized by a large informal economy, high levels of evasion and fraud, and relatively low levels of revenue collection.

Effective implementation of the CACU will require considerable efforts among the Central American countries at the strategic, institutional, and operational levels. This should be based on an agreed-upon and well-defined strategic plan for the future development of the CACU. Such a plan should specify clear strategic guidelines, related operational activities, funding and resource allocation for each activity, the responsible institutions for each activity, sequencing of the activities and the linkages among them, realistic targets, performance indicators, and deadlines.

In light of these challenges, a gradual approach to establishing the CACU is appropriate. However, efforts should be made in order to minimize the transitory phase and to reach the full benefits of a complete customs union. This effort should begin with the establishment of an effective free trade area in the region, while standards are prepared and institutions are strengthened to pave the

way for the customs union. The basic goals in the process can be described as follows:

- Creation of a single customs territory, in the form of an FTA with free circulation of goods, which will require harmonizing technical restrictions.
- Temporary provision for sensitive goods or sectors, along with a clear definition of the role of internal customs posts.
- Gradual convergence of the free trade agreements signed by each country with nonmember countries, especially with respect to the level of tariffs, convergence deadlines, rules of origin, and the volume of goods involved.
- Establishment of a CET that is eroded as little as possible by discrepancies, asymmetries, and bilateral free trade treaties.
- Definition of a regional trade policy.
- Institutional capacity building to support the entire process, based on staff training, integrated IT systems, risk analysis, harmonized procedures, and the achievement of minimum standards in all key areas.

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CHAPTER

6 Financial Sector Development: Equity and Private Debt Markets[1]

Hemant Shah, Ana Carvajal, Geoffrey Bannister, Jorge Chan Lau, and Ivan Guerra

Introduction

Banks and their affiliates dominate the financial system. While growing rapidly, financial intermediation in Central America continues to take place mainly through the banking sector. Assets in the banking system are significantly larger (80 percent of regional GDP) than those of the pension funds, insurers, and mutual funds (9 percent). Bank lending to the private sector (ranging from 19 to 82 percent of GDP across countries, and 42 percent of the region) significantly outstrips equity and bond financing provided by capital markets (12 and 6 percent of GDP, respectively (Table 6.1)). Until recently, the banking system has been dominated by regional financial conglomerates. With the recent acquisitions of several major regional banks,[2] global financial institutions have acquired an important market share and regional presence.

The underdevelopment of capital markets reflects a common pattern among developing countries and certain business characteristics in Central America that suppress securities issuance. It is commonplace in small and developing countries for banks to dominate financial intermediation, and for capital markets to develop later and more slowly. But the current state of underdevelopment of the Central American securities markets also reflects the small size of most regional businesses, the dominance of family-owned businesses and conglomerates, and gaps in corporate governance and disclosure within the region. These conditions generate informational asymmetries that may justify the observable preferences

[1]For more detailed studies on individual countries, see Shah and others (2007).

[2]Citibank of Grupo Cuscatlan (2006), Banco Uno (2006), HSBC of Banistmo (2006), and GE Consumer Finance of Banco de América Central—BAC (2005).

Table 6.1. Financial System
(At end of 2006)

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama	Total
				Number of				
Commercial banks	17	13	12	23	16	7	87	175
Insurance companies	1	32	17	18	14	5	18	105
Mutual funds	128	4	8	n.a.	n.a.	n.a.	23	163
Pension funds	24	7	2	n.a.	6	n.a.	2	41
Stock exchanges	1	1	1	2	n.a.	n.a.	1	6
Stock brokers	20	10	13	21	8	6	34	112
				Size (in percent of GDP)				
Commercial banks:								
Total assets	57.2	33.2	64.1	38.6	90.8	57.4	221.1	80.4
Claims on private sector	39.3	19.0	43.5	26.8	47.6	33.2	81.7	41.6
Total deposits	13.2	20.6	41.7	28.7	56.7	41.1	155.0	51.0
Assets under management:								
Insurance companies	—	—	2.0	1.3	3.3	1.8	4.9	1.9
Mutual funds[1]	7.3	—	2.9	—	—	—	2.9	1.5
Pension funds	7.0	2.1	18.5	—	19.2	—	0.4	5.4
Equity market capitalization	8.6	—	41.4	—	—	—	39.8	11.8
Corporate debt outstanding	23.3	0.6	4.4	0.4	0.0	0.4	12.1	6.0
Memorandum:								
Annual CPI inflation (percent)	11.5	7.6	4.6	6.6	5.6	9.4	2.5	
Deposit interest rate (percent)	9.8	9.8	4.4	4.5	9.3	4.9	3.8	
Gross domestic product (US$ million)	21,384	31,600	18,654	35,304	8,981	5,369	17,113	138,405
Total public debt (US$ million)	10,011	12,892	6,637	8,737	3,511	8,046	10,452	60,285
of which: central government	7,405	8,379	6,187	6,613	3,369	5,760	10,452	48,166
of which: central bank	2,606	4,513	450	2,123	142	2,286		12,120
of which: eurobonds/external issuance	2,405	7,266	3,290	3,957	3,021	4,527	7,788	32,254

Sources: Country authorities; IMFstaff; IMF, International Financial Statistics; central banks; ministries of finance; country regulators; and local stock exchanges.
[1]For El Salvador, the figure refers to *administradoras de cartera* which are not technically mutual funds.

in corporate financing. Bank financing is preferred by a wide margin, as banks may have advantages in monitoring the use of funds by borrowers.[3] The regional conglomerates also prefer financing through the "house" bank rather than from the market for reasons of corporate control. Corporate debt issuance ranks a distant second and equity financing ranks last, in concordance with standard corporate finance theory (Myers, 1984). Moreover, a good part of the current very limited equity issuance is also driven by regulation and overstates the true preference for equity funding. For example, in case of banks in El Salvador, equity listings are mandatory. Equity shares, however, are usually placed with conglomerate shareholders and seldom change hands.

In addition to limited corporate financing through the capital markets, there is little use of asset-backed securitization in the region. Except for Panama and Costa Rica, there has been no meaningful onshore securitization of assets in the region. This reflects the relatively liquid state of many of the region's banking

[3]See Diamond (1984). Indeed, anecdotal evidence suggests that borrowers may provide banks with accounting data different from those reported for tax purposes.

systems, gaps in the facilitating regulatory and tax framework, and insufficient standardization of underlying assets, particularly mortgages.

The underdevelopment of institutional investors inhibits long-term demand for securities and capital market development. In developed—and increasingly in emerging—markets, insurers, mutual funds, and pension funds are the major and natural investors in tradable securities. In Central America, for a variety of reasons, these investors are as yet poorly developed. With an aggregate resource envelope of barely 9 percent of regional GDP, they lack the resources to contribute meaningfully to demand for capital market securities and thus to capital market development.

Lack of confidence in the enforcement and real value of financial contracts are major constraints on retail demand. There have been several episodes of financial distress in the region, including bank failures (e.g., in the Dominican Republic, Honduras, Guatemala, and Nicaragua); the mutual fund crisis in Costa Rica; and sovereign debt problems in Nicaragua and the Dominican Republic. The region has also experienced significant political strife. These factors have generally weakened confidence in regional currencies and regional financial securities. Most countries face problems with the execution of collateral and lack effective out-of-court settlements. Judicial proceedings are often lengthy, unpredictable, and biased, with overburdened courts that lack specialized judges. In addition, bankruptcy laws are outdated and need to be modernized.

The low number and volume of issuances also reduce possibilities of meaningful diversification for regional retail investors. At the same time, even small investors are generally aware of and able to access investment opportunities abroad. The resulting weaknesses in the retail demand for regional private securities can be overcome only gradually through improved confidence in the financial system, better supervision and disclosure, and an increased supply of investable securities. This chapter takes stock of the development of both the equity and private debt markets, identifies obstacles, and makes recommendations of how to improve the functioning of these markets.

Regulation and Supervision of Securities Markets

Basic Legal and Regulatory Framework for Securities Markets

Securities regulation needs to be developed in several key areas and in most countries. The laws relating to securities markets are still being promulgated, completed, or modernized in several countries. There are significant shortcomings in several areas, including corporate governance for listed companies, powers of the regulator, division of oversight between the regulator and the exchanges, and the regulators' ability to cooperate with other jurisdictions. In addition, many countries need to introduce or develop the legal framework for newer

Table 6.2. Securities Markets: Basic Legal and Regulatory Framework

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
Regulator							
Legal framework	Yes	Yes	Yes	No, it is only a registry	Yes	Yes	Yes
Corporate governance							
Legal framework	Very basic	Very basic	Very basic	Very basic	Very basic	Very basic	Very basic
Code of corporate governance for listed companies	Yes	No	No	No	Yes	No	Yes
Mutual funds							
Legal framework	Yes	Yes	No[1]	No[2]	Yes	Yes	Yes
Complimentary regulations	Yes	Yes	No	No	Yes	No	Yes
Private pension funds							
Legal framework	Yes	Yes	Yes	na	Yes, but only for public pensions	Yes, but not implemented	Yes
Complimentary regulations	Yes	Yes	Yes	na	Yes	No	Yes
Asset-backed securities							
Legal framework	Yes	Yes, but limited	No	No	Yes, but limited	Yes	Yes
Complimentary regulations	Yes	No	No	No	Yes	No	No[3]
Trust							
Legal framework	Yes	No	Yes	Yes	Yes	No	Yes

Sources: Country authorities and IMF staff.

[1]Brokerage houses administer *carteras de inversión;* which are poorly regulated quasi-mutual funds.

[2]The legal framework includes *sociedades de inversion;* which are poorly regulated quasi-mutual funds.

[3]Participants do not consider it an impediment.

topics or products. The more important gaps include asset-backed securities (ABS) (in El Salvador, Guatemala, and, to some, extent the Dominican Republic and Honduras) and mutual funds (El Salvador and Guatemala) (Table 6.2). Enabling regulations in many areas remain to be introduced. Guatemala and Nicaragua have the farthest to go to complete the basic legal framework for securities. The former has yet to pass a modern basic securities market law, and the latter just approved a new securities law in 2006, but has yet to enact all the regulations necessary for its implementation.

The process for authorization of securities issuance needs to be improved and streamlined throughout the region. Approval by regulators for issuance tends to concentrate on the more formal requirements and less on material issues that can affect transparency and the value of the securities. In terms of timeliness of approval, regulators frequently do not provide comments all at once. Market participants also complain of inconsistent responses across time and over similar issues. The gaps in coordination between the regulator and the exchange in the process of authorization and listing also lead to unnecessary delays. Thus, the authorization process ends up being protracted (often six months or more), costly, and uncertain, creating an incentive in favor of bank loans rather than securities issuance.

Some regulators have taken measures to alleviate these problems. Useful approaches include establishing deadlines for all comments (Costa Rica) and for the authorization of an issue (Costa Rica, El Salvador, and Panama) and establishing fast track approval (basically a "shelf" registration regime) for certain types of bond issues (Costa Rica, and Panama for commercial paper).

Structure of Securities Regulators

The nature and structure of securities regulators vary across the region. Costa Rica, the Dominican Republic, El Salvador, and Panama have specialized regulators for securities markets.[4] In Honduras and Nicaragua, securities regulators are housed within a regulatory unit that oversees the whole financial sector. Guatemala does not have a securities regulator, only a securities registry. Five of the regulators have a governing board and a superintendent in charge of day-to-day operations, while Panama has only a board, with no separate managerial figure (Table 6.A1).

Regional securities regulators enjoy only limited independence and self-funding. In most countries (with the exception of Honduras and Panama), the minister of finance and/or the governor/president of the central bank are represented in the governing board of the regulatory agencies; moreover, in the cases of Costa Rica and Nicaragua, they themselves are members of the board.[5] Although not uncommon internationally, such representation could reduce the independence of the regulator. Most regulators are also largely dependent on public funding either through the ministry of finance (Guatemala, El Salvador, Honduras, and Panama) or the central bank (Costa Rica, the Dominican Republic, and Nicaragua). Levies on market participants provide only a fraction of the regulator's budget, with the public sources accounting for 75–100 percent of the funding in Guatemala, El Salvador, Costa Rica, and Nicaragua. In the Dominican Republic, the regulator is almost entirely financed by a special fund established by the central bank. Such dependence on public funding tends to restrict independence of securities regulators, especially relative to bank regulators that tend to be better funded from market levies.

Securities regulators are also restricted by the application of civil service rules. In Guatemala, Honduras, and Panama, securities regulators are constrained to varying extents by regulations governing staffing and salaries, which limit their ability to hire qualified personnel, because private sector salaries tend to be significantly

[4]Costa Rica is a hybrid case in that three superintendencies (for banking, pensions, and securities) share the same governing board. This paper does not discuss it fully, but the presence of several financial conglomerates makes effective consolidated supervision of the financial sector an important issue.

[5]In Nicaragua only the governor of the central bank is a board member since a recent legal amendment eliminated the participation of the minister of finance.

higher. In El Salvador, the budget of the securities regulator and personnel contracts are subject to approval of the ministry of finance. Regulators in Costa Rica and the Dominican Republic enjoy the highest level of autonomy within the region.

Authority, Staffing, Budget, and Quality of Enforcement

The regulator's authority varies considerably across the region. Several regulators face limitations on their legal authority to regulate and supervise securities markets. The most critical case is that of Guatemala, where the registrar has no material powers to regulate, supervise, or enforce. In Honduras and Nicaragua, regulators believe the law provides them with sufficient powers, but these are so far untested. In other countries, there are important limitations on the powers of regulation and supervision. Common areas of weaknesses include (1) the disciplinary framework for regulators (e.g., in Costa Rica, the Dominican Republic, El Salvador, and Panama), where there is a need to better define civil and criminal misconduct, manipulation of markets, and insider trading and widen the range of sanctions; and (2) the power to share confidential information and cooperate with foreign regulators (Panama, the Dominican Republic, and Costa Rica), which can affect regional integration efforts. Some of the regulators have limited powers over rating agencies and external auditors. In both cases, international best practices have experienced considerable changes in recent years.

The staff size and budgets of securities regulators also vary considerably. In terms of resources, it is possible to identify three tiers: (1) Guatemala, Honduras, and Nicaragua, with a staff of fewer than 10; (2) El Salvador and Panama, with a staff of around 40 and a budget of about US$1.5 million; and (3) Costa Rica and the Dominican Republic, with personnel in the hundreds and budgets of about US$4 million.

The quality of supervision and enforcement varies, given the level of market development, authority, supervisory capacity, and resource constraints. There is little supervision of securities intermediaries, stock exchanges, and issuers in Guatemala, where the registrar fulfills only "registry" functions. In Honduras and Nicaragua, supervision is very limited due to resource and capacity constraints, although the securities markets are also relatively underdeveloped. Panama faces a special challenge due to the limited resources available compared with the development of the market. Costa Rica appears to have been able to set up reasonable supervisory programs using a risk-based approach. Enforcement appears to be weak in the whole region, because of limitations in the legal framework (as explained above) and also because of a culture of weak enforcement.

Securities exchanges have been given some self-regulatory powers in most countries. In the case of Nicaragua, the new securities law approved in 2006 provides this role to the exchange. However, in other cases, the division of responsibilities

between the regulator and the exchange is unclear, the laws are too broad, and the regulators have yet to establish more specific memoranda of understanding delineating the role of the securities exchanges. In El Salvador, the self-regulatory powers of the exchange are not well defined in the current legal framework. Exchanges have also been weak in the exercise of their self-regulatory powers, particularly in the areas of supervision and enforcement, with Costa Rica and to a lesser extent Panama ahead of their regional peers.

Market Infrastructure

Securities Exchanges

Securities exchanges exist in all seven countries. Guatemala has two exchanges, and all the others have one (Table 6.A2). In almost all the countries only the securities exchanges are authorized to operate trading systems. The majority of securities exchanges are mutualized corporations, except in El Salvador, Nicaragua and Panama, where they are demutualized. In the cases of El Salvador and Panama, the exchanges are themselves listed. All exchanges have electronic, automated systems, with the exception of Honduras. Only two countries (Costa Rica and Panama) have continuous trading systems for the secondary market. Trading systems for secondary markets are all order driven and there are no market makers. The Costa Rica exchange has a pilot project for market makers in the equity market. Only two listed companies have volunteered for the program so far, and a market maker is appointed for one, making it still early to assess its impact.

Regional securities exchanges have enjoyed some unusual privileges, in an effort to promote the development of the securities market. For example, primary public debt issuance is restricted to the securities exchange in several countries.[6] Moreover, in some countries, it is mandatory to conduct all secondary market transactions of publicly offered securities (Costa Rica) and all repo transactions (Costa Rica, Guatemala, and Nicaragua) through the respective exchanges. At the same time, secondary market transactions in listed equity and corporate debt are not always required to be routed through the exchanges (Panama, Honduras).

[6]In Panama, all public debt auctions must be conducted through exchange brokers. In Costa Rica, banks can participate directly in an auction, whereas other investors must submit their bids through brokers and pay-related commissions. In El Salvador, the Ministry of Finance auctions are open not only to brokers but to other approved investors, including domestic and foreign banks, whereas central bank auctions are only open to brokers. See Shah and others (2007).

Clearing, Settlement, and Depository Services

Clearing and settlement processes have several weaknesses and are not uniform across the region. Almost all the countries have deficiencies in the legal framework for clearing and settlement, mainly in the recognition of the concepts of netting, novation, irrevocability, and finality. All these legal issues have been addressed in a regional treaty on payments that was developed with the support of the Consejo Monetario Centroamericano. All countries have already signed it and it is currently in the process of legislative ratification. Settlement cycles differ across the region (Table 6.A3).[7] Clearance and settlement arrangements vary: Costa Rica does multilateral netting, while El Salvador and Panama do netting for the cash side, and the securities side is settled on a gross basis.

Risk management practices in clearing and settlement also vary. Guatemala and Honduras have no formal risk management mechanisms. In all the other countries, there are some risk management mechanisms, with Costa Rica and Panama being more advanced. Risks from the securities leg are managed through predeposit (El Salvador, the Dominican Republic, and Panama) or blocking of securities after trade and lending facilities (Costa Rica). Risks from the cash leg are managed through preapproved debt limits in a bank account (El Salvador and Panama) or a settlement fund (Costa Rica). Only in Costa Rica and El Salvador does settlement occur in central bank money. Delivery versus payment (DVP) is far from common in the region, with only Costa Rica and Panama achieving DVP. There is a need to strengthen legal and operational aspects of depository and custodial arrangements (see Brenner, 2006, pp. 183–85). In general, the legal framework lacks specific provisions clarifying the role of the depository and custodial institutions, except in Costa Rica, El Salvador, and Panama, and oversight of the depository and custodial arrangements by the regulator has been weak. Dematerialization is required only in El Salvador; however, in Nicaragua it is mandatory for listing, and immobilization of securities (the holding of material securities within a depository institution) is required for trading in Costa Rica and Panama.

In practice, most new issuances of private securities in the region have been dematerialized; however, in some countries (Panama) investors can subsequently request the paper securities from the issuer, reversing the benefits of dematerialization.

Custodial infrastructure for corporate securities is underdeveloped and insufficiently centralized. Public debt accounts for the lion's share of capital markets and is often not issued in dematerialized or standardized form, with depository

[7]El Salvador, Costa Rica, and Panama settle at $t + 3$ ($t + 1$ in Costa Rica for debt), Dominican Republic and Guatemala at $t + 1$. Nicaragua and Honduras do not have a standardized cycle; moreover, in Honduras the Bolas does not provide clearing and settlement services, and brokerage houses settle their trades directly between themselves.

functions being performed by the central bank or a public sector bank. Coupled with the very small issuance of private securities, this creates a poor environment for the development and economic viability of central depository agencies. Honduras has no centralized securities depository (CSD); in the few private issuances that were dematerialized, the issuers carry their own books. In Costa Rica, the Dominican Republic, El Salvador, and Panama, CSD functions are provided by a separate legal corporation, owned by the securities exchange (except Panama where it is owned separately). In Guatemala and Nicaragua, custodial services are performed by a department of the securities exchange. Despite small domestic capital markets, participants do not always agree on a single CSD. In Costa Rica, the central bank is considering an amendment to the legal framework to allow it to provide CSD services for corporate securities, and in the Dominican Republic, Banco de Reserva and CEVALDOM have been competing in provision of CSD services and are currently involved in protracted negotiations about centralizing them.

Regional CSDs are undercapitalized, in need of technical improvements, and have insufficient links to other CSDs. Many investors, particularly foreign ones, regard regional CSDs as undercapitalized and in need of technological improvements. Currently, CEVALDOM (the Dominican Republic) and Latin Clear (Panama) are pursuing alliances with external partners to improve their technological infrastructure and capital base. The central securities depositories of Costa Rica, El Salvador, and Panama have signed sub-custody arrangements with each other, which facilitates cross-country custody.

Rating Agencies and Price Vendors

Rating agencies have a presence throughout the region, except Nicaragua (see Table 6.A3). None of the nationally recognized rating agencies from the United States has a direct presence, but several local rating agencies are affiliated with Fitch Ratings. Rating agencies are subject to a licensing requirement and thus supervision by the securities regulator in all countries except Guatemala, which has no regulator, and Panama, where the securities regulator can only register a rating agency, with no powers to supervise or sanction. In many countries, the legal framework requires rating by a local company. Given the relatively low demand for rating services in the region, it would be natural for agencies to want to operate regionally, without establishing a physical presence in each country.

The region has a major problem of illiquid securities and insufficiently developed price vendors. As discussed below, the regional capital markets are illiquid, particularly in private securities. Illiquidity creates important problems of valuation of security portfolios, especially for mutual and pension funds and other investors who must mark to market their portfolios. Only Costa Rica and Panama—two countries with regionally more developed mutual and pension funds—have begun to address these issues. In Costa Rica, the regulators have developed com-

mon regulations for the valuation of pension funds, mutual funds, and the trading portfolio of banks. Regulations do not prescribe a single methodology for the whole financial sector, merely that all members of a financial group use the same methodology to value their portfolios.[8] In Panama, the securities exchange is working with Balmer, a Mexican price vendor, to develop a methodology for price valuation. Accurate pricing of illiquid securities is a major problem and would have to be tackled urgently, as deposit-taking activities of loosely regulated investment managers are converted into mutual funds (e.g., in El Salvador and Guatemala—see note 4) and as defined contribution pension plans grow. In June 2007, Proveedora Integral de Precios de Centroamericana (PIPCA), a price vendor with Mexican/Costa Rican capital, announced that it will start providing prices to investors in Costa Rica, Panama, and El Salvador.

Business Environment and the Framework for Public Issuance

Basic business conditions represent a major long-term challenge to improving securities markets in the region. The regional scores on basic business conditions (Table 6.A4) are generally low.[9] For 2006, out of 175 countries, El Salvador received the highest score in Central America (ranked 71), and Guatemala the lowest (ranked 118). The region scores even lower in terms of protecting investors (countries ranking from 83 to 156) and enforcing contracts (49–164). For development of securities markets, the quality of accounting and auditing, the adequacy of commercial and corporate law, ability to create and enforce collateral, efficiency of the bankruptcy framework, and more generally the requirements to set up corporations are particularly relevant. Our analysis below does not look at these issues in any detail, but it is consistent with the generally weak ranking of the region on these aspects by the World Bank and other studies.

Accounting Standards, Auditing, and Transparency

Unlisted companies are not required to use international financial reporting standards (IFRS) in the majority of the countries. Guatemala, Honduras, and Nicaragua use local generally accepted accounting principles (GAAP), although in Honduras, IFRS will become mandatory in January 2008. In El Salvador, aversion of IFRS as of 2003 is applicable. Thus, only in Costa Rica, the Dominican Republic, and Panama are unlisted companies required to use IFRS. However,

[8]Operationally, the Costa Rican exchange (BNV) is the de facto pricing vendor. BNV has two committees, one with industry participation to deal with methodological issues, and the other with external advisors to deal with price disputes.

[9]The composite scores for the World Bank's "Doing Business" indicator include such factors as procedures for starting a business, ease in hiring and firing, property registration, investor protection, tax collection, contract enforcement, cross-border trading, and business closure.

even in these countries, implementation remains a challenge because of the lack of familiarity with IFRS.

Qualifications for auditors are generally low. Several of the top global auditing firms are present in the region. Although these firms employ high international standards in conduct of their work, the minimum requirements for being licensed to work as an auditor are generally low, and limited to basic (not professional) academic degrees. None of the countries requires professional examinations. Continuous education is not mandatory, and efforts to implement such requirements have been rejected in some countries.[10] Oversight of the audit profession is very limited. Regulators in several countries do require higher standards for auditors authorized to audit regulated financial institutions and listed companies. As a general rule, the level of transparency is low for unlisted companies. Companies without a public issuance are not required to make their financial statements available to the public. Thus, even for corporate businesses, public issuance involves a major change in the degree of transparency and disclosure that they are used to. In three countries (El Salvador, the Dominican Republic, and Panama), companies are required to audit and file their financial statements with a public entity; but they are not available to the public.[11] In Guatemala, legislation introduced in 2004 sought to impose audits on large taxpayers but the provision was suspended by the supreme court.

Corporate and Commercial Laws, Collateral, and Bankruptcy

Requirements for registration of a corporation are not a major problem. There is room for streamlining, but this does not appear to be a critical constraint vis-à-vis other issues relating to basic business conditions. In particular, in the cases of Costa Rica and the Dominican Republic the average time required for registration is far longer than in the rest of the region. Panama and El Salvador have made significant progress in facilitating business formation, and Panama now has the most efficient process in Latin America. Honduras has also made important progress owing to the outsourcing of the corporate registry to the chamber of commerce.

Many countries face problems with the constitution of collateral. The main problem relates to delay in the registration process and the security of registration, which were cited as important challenges in the Dominican Republic, Nicaragua, and Honduras. Also, in some countries, the lack of registration of pledges on movable assets is a significant factor that limits its reliability and acceptance by creditors.

[10]For example, in Panama the attempt by the *Junta Técnica de Contabilidad* to implement continuous education requirements was ruled unconstitutional by the supreme court.

[11]All companies in El Salvador, and companies above a threshold in the Dominican Republic and Panama.

The majority of the countries also face problems with the execution of collateral. In most countries, execution requires judicial proceedings that are lengthy and somewhat unpredictable owing to overburdened courts and lack of specialization of judges. Nevertheless, some attempts to streamline execution of collateral have been made. Nicaragua and the Dominican Republic have created special parallel judicial procedures for banks, although inadequate independence of the judiciary is perceived to be a major problem in Nicaragua. In Honduras, a recent amendment to the notary law allows execution of collateral directly by a notary through a much abbreviated process. However, these provisions have not yet been adequately tested. In some countries (Costa Rica and Honduras), market participants have bypassed judiciary proceedings through the use of "security trusts" as an alternative means of enforcement of collateral.

Throughout the region, bankruptcy laws are outdated and need to be modernized. The most common problems are excessive protection of debtors, excessive judicial intervention, and a lack of expertise of bankruptcy judges in economic and financial matters, all of which result in lengthy and somewhat unpredictable proceedings. Most of the countries also lack frameworks for effective out-of-court settlements, resulting in considerable delays in enforcing contracts or closing businesses. Some countries (Costa Rica and the Dominican Republic) have made amendments to bankruptcy laws to permit reorganization proceedings that allow illiquid but potentially viable companies to remain operating (similar to the U.S. Chapter 11). However, these reforms have shortcomings that have limited their use in practice.

Taxation

Tax treatment of securities income also generally deters investment in private securities. This is a complex subject and not examined comprehensively in this study. However, the available information suggests that regional tax systems are generally not neutral, by and large favoring investment in public debt over private securities, and bank deposits over debt and equity securities (Table 6.A5). Typically, interest and capital gains from private debt and equity securities are taxed at higher rates than corresponding public debt. Dividends are taxed in addition to corporate income tax, and private securities are subject to certain transfer taxes and value-added taxes that do not apply to public securities. Costa Rica, in particular, has a very complex framework, with different tax treatments depending on the nature of the issuer, the currency, and the investor. El Salvador seems to be the most neutral, with the same tax treatment across the board. The Dominican Republic is a close second.

The Regulatory Framework for Public Issuance

Securities regulators have addressed some of the weaknesses of the business framework by establishing stronger accounting and auditing requirements for

public issuance. The most important examples relate to the accounting and auditing framework and the level of financial transparency required. Listed companies in all countries except Guatemala are required to use either IFRS (in Costa Rica, the Dominican Republic, El Salvador, and Honduras) or U.S. GAAP (in Nicaragua and Panama). In addition, listed companies in all countries are required to audit and publish their financial statements. The majority of the regulators have also tried to impose additional professional and independence requirements on external auditors authorized to audit listed firms, as well as a registry of such auditors.[12] Securities regulators have imposed nonfinancial disclosure requirements for equity and corporate debt issuers; however, the framework is weak for equity issuers, particularly in the area of corporate governance.

Requirements for Equity Issuance

There is no minimum issuance or minimum float requirement in most of Central America. A minimum issuance amount of C 100 million (about US$2 million) is specified in Costa Rica, the only country to require a minimum issuance amount for equity. None of the seven countries requires a minimum float.

Disclosure requirements for equity issuers are weak in most countries. The most common problems relate to (1) timely disclosure to the public of insider and/or substantial holdings, (2) timely disclosure to the public of material events,[13] and (3) the minimum requirements for the prospectus, which generally fall short of international best practices (Tables 6.A6 and 6.A7).

In addition, corporate governance and protection of minority rights are weak throughout the region. All the countries in the region have a basic framework for corporate governance for unlisted companies in their commercial codes, and this framework does not differ significantly from other countries with a Napoleonic tradition. However, for companies with publicly issued securities, this basic framework should be complemented with other provisions that afford an appropriate level of protection to minority shareholders. This additional framework is almost absent in the region. Most countries lack adequate public disclosure of insider and/or substantial holdings. Only in four countries (Costa Rica, the Dominican Republic, Honduras, and Panama) does acquisition of control in a listed company (under certain circumstances) require a mandatory tender offer to all shareholders. Only two countries (Honduras and Panama) have developed codes of corporate governance, but even in those countries the codes require further strengthening in issues such as independent directors, qualifications of di-

[12]However, in some countries (Panama and Costa Rica) the use of regulatory powers over external auditors has been challenged before the courts.

[13]No disclosure of material events is required in Guatemala, and the deadlines for disclosure are loose or not defined in the Dominican Republic and El Salvador.

rectors, and use of supporting committees by the board. In Costa Rica, the Bolsa Nacional de Valores has issued a Corporate Governance Code for voluntary adoption. In addition, the banking, securities, and pension regulators are developing a corporate governance code for supervised entities.

Requirements for Corporate Debt Issuance

Disclosure requirements for corporate debt issuers are more complete than those for equity. In the majority of the countries disclosure requirements are reasonable; the main exception is Guatemala, where private debt issuers are not required to disclose material events, nor to update the information in the prospectus. Perhaps the main area of weakness is the timeliness of disclosure of material events (Tables 6.A8 and 6.A9).

Most countries require a rating for each issue. As in many other developing countries, the legal framework of all countries (except Panama) requires mandatory rating of corporate debt issuances. Given the shortcomings in the availability and reliability of financial information, as well as in other research and analysis services, such a measure is reasonable. However, in two countries (Honduras and the Dominican Republic) two ratings are required in certain circumstances, which could be deemed excessive.

Authorization Process

Authorization of securities issuance needs to be streamlined throughout the region. There are several problems. The regulators frequently do not provide comments all at once, drawing out the approval process. The regulatory reviews tend to be more formal and less focused on material events that affect the value of securities. Market participants complain of inconsistent responses across time and issues. The coordination of authorization and listing between the regulator and the exchanges[14] also needs improvement in several countries. There are of course also problems of inadequate filing of documents by potential issuers. As a result of these problems, the authorization process ends up being protracted (often six months or more), costly, and uncertain, creating incentives to favor bank loans rather than securities issuance.

Some regulators have taken some measures to alleviate these problems. Useful approaches include establishing deadlines for all comments to the issuers (in

[14]In El Salvador, the law requires presentation of the issuance documents first to the exchange by a broker, and then by the exchange to the securities regulator.

Costa Rica), for the authorization process (in Costa Rica[15] and Panama), and establishing a fast-track approval process (basically a "shelf" registration regime) for certain types of bond issuances (e.g., in Costa Rica, and in Panama for commercial paper).

In addition, review of compliance with periodic disclosure has been limited. In most countries, supervision is limited to verifying the timely submission of information, but the actual content is not rigorously examined. Costa Rica has made more advances in this area. In addition, in a number of countries, market supervision and enforcement have been weak owing in part to weaknesses in the legal framework (inadequate description of offenses and/or adequate sanctions). Thus, the public perception in some of these countries is that there is insider trading and market manipulation, with insufficient action taken by the regulator.

Institutional Investors

As with many small and emerging countries, and despite recent rapid growth, the regional institutional investor base remains poorly developed and as yet does not offer a significant source of demand for securities.[16]

Pension funds are not well developed in most Central American countries and their investment regime is constrained. Guatemala, Honduras, Nicaragua, and Panama still have significant gaps in their legal framework for private pension funds (Table 6.A10). Guatemala and Nicaragua do not report any significant activity by pension funds. While Panama does have public sector pension funds, defined contribution private pension plans exist only in Costa Rica, the Dominican Republic, El Salvador, and Honduras. Moreover, all countries have fairly tight limitations on investment, particularly in private securities, by pension funds. Equity investment is not allowed to exceed 10 percent of the total portfolio in any country, and investment in corporate debt and ABS are also tightly restricted.

Aggregate assets of the regional pension funds amounted to only about US$7.4 billion at end-2006, or about 5.4 percent of regional GDP. Total assets of public and private pension funds (Table 6.3) are significant only in El Salvador and Honduras (about 19 percent of GDP) and in Costa Rica (7 percent). Information available on asset composition is sketchy, but it appears that only about 5 percent of the total assets were invested in stocks, and another 8 percent or so were invested in local corporate debt, with public securities and foreign securities accounting for the lion's share.

[15]Securities regulators in Costa Rica are planning to increase the staff dealing with the authorization process substantially in 2008 and also set up an advisory committee to revise current processes.

[16]Although, as discussed later in this chapter, the supply of securities is probably a more binding problem.

Table 6.3. Pension Funds

	Number of Authorized Pension Funds					
	2001	2002	2003	2004	2005	2006
Costa Rica	32	27	26	24	24	24
Dominican Republic	0	0	9	8	7	7
El Salvador	3	2	2	2	2	2
Honduras	5	5	5	5	6	6
Panama	2	2	2	2	2	2
Total	**42**	**36**	**44**	**41**	**41**	**41**

	Assets Under Management (US$ million)					
	2001	2002	2003	2004	2005	2006
Costa Rica	559	772	1034	830	1112	1502
Dominican Republic	0	0	34	184	368	643
El Salvador	790	1099	1599	2224	2949	3495
Honduras	0	0	0	0	0	1727
Panama	22	28	35	52	72	73
Total	**1371**	**1899**	**2702**	**3290**	**4501**	**7440**

	Assets Under Management (percent of GDP)					
	2001	2002	2003	2004	2005	2006
Costa Rica	3.4	4.6	5.9	4.5	5.6	7.0
Dominican Republic	0.0	0.0	0.2	1.0	1.3	2.0
El Salvador	5.7	7.7	10.6	14.1	17.4	18.7
Honduras	0.0	0.0	0.0	0.0	0.0	19.2
Panama	0.2	0.2	0.3	0.4	0.5	0.4
Total	**1.4**	**1.9**	**2.8**	**3.1**	**3.6**	**5.4**

Sources: Country authorities and IMF staff.

Mutual funds have an even smaller presence in the region. They exist in only two countries, Costa Rica and Panama.[17] El Salvador and Guatemala have yet to develop an adequate legal framework, while Nicaragua has yet to issue detailed regulation for mutual funds (see Table 6.A10). The mutual funds industry in the region needs to overcome a bad image problem, given its origination in informal and poorly regulated investment pools, involving considerable maturity transformation, whose risks are not always adequately controlled, regulated, or understood by the depositors. Finally, there are problems in authorization requirements and regulations that are deemed burdensome by market participants, for

[17]El Salvador and Guatemala have loosely regulated quasi-mutual-fund-like products (*carteras de inversion* in El Salvador and *sociedades de inversion* in Guatemala) under which brokerage houses, some associated with banks, accept deposits into special accounts that seek to obtain a higher return by investing mostly in public securities. Several institutions in Costa Rica suffered significant problems in 2002, after which the regulation of these products was substantially improved to conform to international norms.

Table 6.4. Mutual Funds

	Total Number of Mutual Funds Authorized for PO					
	2001	2002	2003	2004	2005	2006
Costa Rica	129	131	144	135	131	128
Panama	13	14	14	16	21	23
Total	**142**	**145**	**158**	**151**	**152**	**163**

	Number of Funds Authorized for Equity Investment					
	2001	2002	2003	2004	2005	2006
Costa Rica	3	3	3	3	2	2
Panama	n.a.	n.a.	n.a.	n.a.	8	10
Total	**3**	**3**	**3**	**3**	**10**	**12**

	Number of Funds Authorized for Corporate Debt Investment					
	2001	2002	2003	2004	2005	2006
Costa Rica	50	59	73	47	62	57
Panama	n.a.	n.a.	n.a.	n.a.	13	13
Total	**50**	**59**	**73**	**47**	**75**	**70**

	Total Assets Under Management (US$ million)					
	2001	2002	2003	2004	2005	2006
Costa Rica	1,618	1,787	2,813	1,346	1,254	1,569
Panama	270	304	282	494	524	488
Total	**1,888**	**2,091**	**3,095**	**1,840**	**1,778**	**2,057**

	Percent of Net Assets Invested in Local Equities					
	2001	2002	2003	2004	2005	2006
Costa Rica	1	0	0	0	0	0
Panama	0	0	0	0	2	3
Total	**0**	**0**	**0**	**0**	**1**	**1**

	Percent of Net Assets Invested in Local Corporate Debt					
	2001	2002	2003	2004	2005	2006
Costa Rica	4	4	5	3	2	5
Panama	0	0	0	0	98	97
Total	**3**	**4**	**4**	**2**	**31**	**27**

	Total Assets Under Management (percent of GDP)					
	2001	2002	2003	2004	2005	2006
Costa Rica	9.9	10.6	16.1	7.2	6.3	7.3
Panama	2.3	2.5	2.2	3.5	3.4	2.9
Total	**2.0**	**2.1**	**3.2**	**1.7**	**1.4**	**1.5**

Sources: Country authorities and IMF staff.

example, in Costa Rica. The mutual fund industry appears to face several efficiency challenges. There are 163 mutual funds with aggregate assets of only about US$2.1 billion (Table 6.4). On average, a mutual fund manages only about US$12 million, which is very low, even allowing for multiple funds managed by the same house. Second, the industry suffers from a lack of sufficient diversity of regional private sector assets that would enable local mutual funds to add value in a special niche. The Panamanian funds appear to invest the bulk of their assets in local corporate bonds, while in Costa Rica the funds appear not to invest in equity, with 27 percent in corporate bonds, and the rest in sovereign and foreign securities. This makes the Costa Rican funds susceptible to foreign competition.

The penetration rates for the insurance industry are very low, especially in life and annuity segments. An enabling legal framework exists in most countries, and insurance companies face little or no restrictions on their investment plans. However, the insurance industry is currently inconsequential for the development of markets given the low level of assets under management (0–5 percent of GDP), which reflects the low income levels as well as a significant transfer of their exposure to foreign reinsurers. The business also appears to be rather fragmented, with 105 companies operating at the end of 2006.

Equity Markets

Current Status

Several Central American equity markets are severely underdeveloped. There are no equity markets in four out of the seven countries (Guatemala, Honduras, Nicaragua, and the Dominican Republic), and markets are small and shrinking in the other three (El Salvador, Costa Rica, and Panama (Tables 6.5 and 6.6)). Market capitalization in El Salvador and Panama, at about 40 percent of GDP, compares reasonably well with other small developing countries, but it is quite low at 8 percent of GDP in Costa Rica. Market concentration is very high, with the top five companies making up more than half of capitalization in El Salvador and more than two-thirds in Costa Rica and Panama. Trading in secondary markets is almost nonexistent, with only 1 and 3 percent of market capitalization changing hands per year.

The universe of listed stocks is extremely small and shrinking. At the end of 2006, there were 88 equity issues listed in the Central America region. There are 18 companies listed in Costa Rica (compared with 25 in 2001), 24 in Panama (28 in 2001), and 43 in El Salvador (40 in 2002). The relatively larger number of listed firms in El Salvador is the result of public sector privatizations implemented through the stock market and the fact that banks, insurance companies, pension funds, and other financial institutions are required by law to list on the stock exchange. Although these measures have boosted listings and market

Table 6.5. Equity Market Capitalization and Turnover

	Equity Market Capitalization (US$ million)					
	2001	2002	2003	2004	2005	2006
Costa Rica	2,466	2,141	1,696	1,406	1,417	1,841
El Salvador	0	1,937	1,972	3,500	4,849	7,716
Panama	2,602	2,950	3,075	4,047	5,732	6,819
Total	**5,068**	**7,028**	**6,743**	**8,953**	**11,998**	**16,376**

	Equity Market Capitalization of the 5 Top Companies					
	2001	2002	2003	2004	2005	2006
Costa Rica	2,021	1,810	1,436	1,189	1,228	1,527
El Salvador	0	1,377	1,386	2,220	2,891	4,460
Panama	1,664	1,975	2,298	3,139	4,314	5,424
Total	**3,685**	**5,162**	**5,120**	**6,548**	**8,433**	**11,411**

	Equity Market Capitalization (percent of GDP)					
	2001	2002	2003	2004	2005	2006
Costa Rica	15.0	12.7	9.7	7.6	7.1	8.6
El Salvador	0.0	13.5	13.1	22.1	28.6	41.4
Panama	22.0	24.0	23.8	28.5	37.0	39.8
Total	**5.3**	**7.1**	**6.9**	**8.4**	**9.5**	**11.8**

	Market Capitalization of the 5 Top Companies (percent of GDP)					
	2001	2002	2003	2004	2005	2006
Costa Rica	12.3	10.7	8.2	6.4	6.2	7.1
El Salvador	0.0	9.6	9.2	14.0	17.0	23.9
Panama	14.1	16.1	17.8	22.1	27.9	31.7
Total	**3.9**	**5.2**	**5.2**	**6.2**	**6.7**	**8.2**

	Trading Volume (US$ million)					
	2001	2002	2003	2004	2005	2006
Costa Rica	86	81	33	45	28	25
El Salvador	23	24	10	503	80	197
Panama	45	59	45	54	75	149
Total	**154**	**164**	**88**	**602**	**183**	**370**

	Turnover Ratio (percent)[1]					
	2001	2002	2003	2004	2005	2006
Costa Rica	7.0	3.5	1.7	2.9	2.0	1.5
El Salvador	n.a.	2.5	0.5	18.4	1.9	3.1
Panama	1.7	2.1	1.5	1.5	1.5	2.4
Total	**3.1**	**2.7**	**1.3**	**7.7**	**1.7**	**2.6**

Sources: Country authorities and IMF staff.

[1]Trading volume divided by market capitalization.

Table 6.6. Equity Issuance and Delisting

	Number of Listed Companies					
	2001	2002	2003	2004	2005	2006
Costa Rica	25	22	20	22	20	18
El Salvador	0	40	39	39	45	43
Guatemala	0	3	3	3	3	3
Panama	28	26	25	26	26	24
Total	**53**	**91**	**87**	**90**	**94**	**88**

	Number of IPOs					
	2001	2002	2003	2004	2005	2006
Costa Rica	5	1	3	2	0	0
El Salvador	0	0	0	0	0	0
Panama	3	3	0	3	1	4
Total	**8**	**4**	**3**	**5**	**1**	**4**

	Value of IPOs					
	2001	2002	2003	2004	2005	2006
Costa Rica	61	200	46	13	0	0
El Salvador	0	0	0	0	0	0
Panama	75	70	0	190	25	95
Total	**136**	**270**	**46**	**203**	**25**	**95**

	Number of Companies that Requested Delisting During Year					
	2001	2002	2003	2004	2005	2006
Costa Rica	3	4	5	0	2	2
El Salvador	3	0	0	6	2	1
Panama	1	4	2	2	0	2
Total	**7**	**8**	**7**	**8**	**4**	**5**

Sources: Country authorities and IMF staff.

capitalization, very few of these stocks are traded in the secondary market. More worrisome is the fact that, over time, equity listings have been shrinking because of companies delisting following foreign purchases of local companies and to avoid information disclosure, with fewer initial public offerings (IPOs) than delistings. Finally, although the volume of new equity issuance is variable, it seems to have fallen considerably from the highs (US$270 million in 2002) to US$95 million in 2006.

The relatively low development of equity markets in Central America is a trait shared with many smaller economies. The analysis above suggests that the equity markets in the region are neither a particularly good source of price discovery nor of raising new capital. Table 6.A11 compares the size of capital markets in Central American countries with other countries with comparable GDP. Equity

market capitalization is perhaps somewhat inflated owing to the public listing requirement imposed on financial intermediaries. Table 6.A11 also allows a comparison of the region as a whole with countries with comparable GDP. In GDP terms, the region is comparable in size to Chile, Colombia, Israel, Malaysia, and Pakistan, whose equity market capitalization ranged from 36 to 156 percent of GDP. By contrast, the region's aggregate equity market capitalization amounted to less than 12 percent of GDP. Although this comparison between an incompletely integrated region and a country has many obvious limitations, it may be suggestive of both the difficulties of achieving equity markets of a viable size for smaller economies, and some of the potential gain from regional integration, a subject to which we revert later.

Incentives and Obstacles to Equity Issuance

The limited number of equity issues is the result of a number of causes that are common to the region as a whole. Problems are perceived to be more on the supply side than the demand side.

Supply Side

- Size of firms and family ownership: The small size of regional economies and of most firms naturally limits the need or ability to raise equity financing through public issuance. Most of the firms that reach a critical size where equity issuance would be a possibility[18] belong to family groups and are tightly held. While a company can be relatively easily controlled with a majority, and certainly with a super-majority, of shares, in Central America there is a strong aversion to minority shareholders of any size. Therefore, there is very limited float in the market, including in some of the largest listed companies.
- International acquisitions: Market participants suggest that for many of the larger firms, and especially for the banks, the apparent goal of the major owner/managers is to build up the company for eventual sale to foreign investors. Such whole business sale is an additional incentive to maintain nearly total control in the hands of the founder and family members, and thus avoid public issuance.
- Information: As discussed earlier, there is a culture of secrecy regarding business practices and a firm's financial statements, for both competitive and tax-related reasons, and owners are reluctant to reveal information necessary for public offering.

[18]Fifteen companies account for a market capitalization of $11.4 billion, or more than $750 million on average. By contrast, the bottom 64 listed issues account for a market capitalization of $4.0 billion, with an average size only one-tenth of the top 15.

- Process of issuance: As mentioned before, for a variety of reasons, the time required to obtain regulatory approval of an IPO can be very lengthy (up to six months or more) and uncertain despite rapid approval envisaged in the law,[19] leading some companies to seek listings abroad (e.g., in El Salvador) rather than in their respective countries, or to obtain bank finance.
- Cheap cost and ease of bank financing: The current high level of liquidity in the regional banking systems implies relatively attractive loan financing. Together with the ease of bank loans (in terms of fewer disclosure requirements) and speed, this creates a weak environment for supply of equity securities. Many large firms that might issue equities also have tight relationships with banks and can extract favorable terms for loan financing. Many of these companies of critical size are usually part of financial conglomerates that set up their own bank and get cheap financing at least up to the prudential limit of related borrowing. For other smaller firms, the fixed costs of issuance make debt financing more attractive.
- Tax treatment: As in most countries in the world, funding through debt results in a tax-deductible expense. Although lower tax rates apply to listed companies (e.g., in Costa Rica and Panama) for most issuers, the after-tax cost of servicing the debt seems lower than after-tax returns required for additional equity issuance because equity income is subject to multiple taxation (corporate income tax, dividends, and capital gains tax). In addition, as discussed earlier, private securities are subject to taxes that public securities are often exempt from.
- Lack of liquidity in the secondary market: Secondary market trading in equity is extremely limited. For most equity issuers, this obviously reflects problems related to issuance, such as the lack of a genuine free float, size, or lack of dematerialization. However, some potential issuers also suggest that this reduces their interest in equity issuance, because equity markets do not provide meaningful price discovery or exit options for large shareholders.

Demand Side

- Underdevelopment of regional institutional investors: As discussed earlier, the regional institutional investor base is very weak. There are few mutual funds, fewer still with a mandate to invest in equity, resulting in paltry investment in equities. The same is true of pension funds, which face even stronger restrictions on equity investment. Thus, institutional investors in equity markets neither provide a sufficiently strong demand nor act as a mechanism of market discipline.

[19]For example, in El Salvador, where the law requires an approval within 15 days. However, the law also requires sequential presentation of the issuance documents first by the broker to the exchange and then by the exchange to the regulator.

- Lack of meaningful diversification: The small and shrinking universe of corporate listings offers very poor diversification opportunities through investment in national securities. While a regional equity portfolio would improve the size and scale of diversification, constructing a regional position is currently not easy in the absence of a seamless market. Furthermore, for investors capable of doing so, it would be more interesting and perhaps less operationally difficult to access well-developed foreign markets than several fragmented regional markets. Similarly, foreign investors are likely to be uninterested in the regional markets in the absence of adequate size, depth, and liquidity; absence of most regional markets from emerging market indices that serve as portfolio benchmarks; and absence of any regional equity index.
- Corporate governance and investor protection: All of the real and perceived problems of poor corporate governance and investor protection act as a powerful constraint on investor demand. Although the supply constraints are more binding currently, these factors are likely to inhibit demand and the growth of equity markets over the long term.

Corporate Debt Markets

Current Status

The regional corporate debt markets are small overall and vary dramatically in size and importance across the region. Corporate bond markets have grown (Table 6.7) from US$6.3 billion in 2001 (6.6 percent of GDP) to US$8.3 billion in 2006 (6 percent of GDP). Costa Rica accounts for 60 percent of corporate debt securities outstanding in the region, with Panama being the distant second at 25 percent, and El Salvador the only other regional country with a measurable debt market. In Costa Rica, the debt market (in terms of outstanding book value) has grown steadily from US$3.0 billion in 2001 to US$5 billion in 2006. While Costa Rican market size (at 23 percent of GDP) compares well with other emerging markets, the markets in the Dominican Republic, Guatemala, and Honduras remain at an incipient stage, but there appears to be good growth momentum in the Dominican Republic (Table 6.8).

Regional corporate bond markets share several common features. First, there appears to be more liquidity in secondary bond markets than in equity markets. Costa Rica leads in volume and Panama leads in terms of turnover ratio. Second, most issuers are financial institutions, mainly banks. Third, most corporate debt securities have short maturities, typically between 3 and 12 months. In some countries, though, it is possible to find maturities of up to three to five years. Issuance of asset-backed securities is minimal in the region. The exception is Panama, where there have been 12 securitizations, of which 11 are collateralized by mortgages. Most of the securitizations, however, correspond to just one issuer, a specialized lending company focused on housing for lower-income families.

Table 6.7. Corporate Debt Outstanding and Turnover

	Total Amount of Outstanding Debt (US$ million)					
	2001	2002	2003	2004	2005	2006
Costa Rica	2,951	3,302	3,407	4,264	4,666	4,985
Dominican Republic	0	0	0	1	120	187
El Salvador	340	363	439	865	698	823
Guatemala	0	62	80	76	118	143
Honduras	0	0	0	0	0	3
Nicaragua	51	50	38	35	27	21
Panama	1,307	1,327	1,538	1,554	1,631	2,079
Total	**4,649**	**5,104**	**5,502**	**6,795**	**7,260**	**8,241**

	Total Amount of Outstanding Debt (percent of GDP)					
	2001	2002	2003	2004	2005	2006
Costa Rica	18.0	19.6	19.5	23.0	23.4	23.3
Dominican Republic	0.0	0.0	0.0	0.0	0.4	0.6
El Salvador	2.5	2.5	2.9	5.5	4.1	4.4
Guatemala	0.0	0.3	0.3	0.3	0.4	0.4
Honduras	0.0	0.0	0.0	0.0	0.0	0.0
Nicaragua	1.2	1.2	0.9	0.8	0.6	0.4
Panama	11.1	10.8	11.9	11.0	10.5	12.1
Total	**4.9**	**5.2**	**5.6**	**6.4**	**5.7**	**6.0**

	Total Traded Volume During Year (US$ million)					
	2001	2002	2003	2004	2005	2006
Costa Rica	1,020	954	959	1,188	938	985
Dominican Republic	0	0	0	0	38	50
El Salvador	1,997	1,056	494	939	665	913
Guatemala	0	56	74	78	128	135
Honduras	0	0	0	0	0	0
Nicaragua	21	13	18	7	6	6
Panama	1,044	1,414	1,434	1,343	1,681	2,254
Total	**4,082**	**3,494**	**2,979**	**3,555**	**3,456**	**4,343**

	Corporate Debt (Turnover Ratios)					
	2001	2002	2003	2004	2005	2006
Costa Rica	34.2	30.5	28.6	31.0	21.0	20.4
Dominican Republic	n.a.	n.a.	n.a.	n.a.	63.5	32.7
El Salvador	n.a.	300.5	123.2	144.0	85.1	120.1
Guatemala	n.a.	181.9	104.6	99.6	132.0	103.2
Honduras	n.a.	n.a.	n.a.	n.a.	n.a.	0.0
Nicaragua	43.8	25.7	40.9	20.2	20.3	23.9
Panama	80.9	107.4	100.1	86.9	105.6	121.5
Total	**90.9**	**71.6**	**56.2**	**57.8**	**49.2**	**56.0**

Sources: Country authorities and IMF staff.

Table 6.8. Corporate Debt Issuance and Delisting

Number of Companies with Outstanding Debt Issues

	2001	2002	2003	2004	2005	2006
Costa Rica	59	54	53	51	47	43
Dominican Republic	0	0	0	1	4	9
El Salvador	44	45	47	52	54	56
Guatemala	0	47	48	47	49	35
Honduras	0	0	0	0	0	2
Nicaragua	9	9	7	6	6	6
Panama	32	35	39	41	45	52
Total	**144**	**190**	**194**	**198**	**205**	**203**

Number of New Corporate Debt Issues

	2001	2002	2003	2004	2005	2006
Costa Rica	56	45	36	67	57	43
Dominican Republic	0	0	0	0	0	0
El Salvador	12	5	20	13	14	18
Guatemala	0	3	1	3	4	2
Honduras	0	0	0	0	0	2
Nicaragua	1	2	1	0	2	1
Panama	8	12	8	14	18	22
Total	**77**	**67**	**66**	**97**	**95**	**88**

Value of New Corporate Debt Issues (US$ million)

	2001	2002	2003	2004	2005	2006
Costa Rica	141	121	134	307	719	261
Dominican Republic	0	0	0	1	120	77
El Salvador	2,247	865	11,163	1,608	5,850	70,258
Guatemala	0	26	2	74	157	13
Honduras	0	0	0	0	0	3
Nicaragua	1	3	5	0	2	10
Panama	138	356	166	329	634	835
Total	**2,527**	**1,371**	**11,470**	**2,319**	**7,482**	**71,458**

Number of New Companies That Requested Authorization for Debt Issuance During Year

	2001	2002	2003	2004	2005	2006
Costa Rica	3	3	2	3	0	3
El Salvador	0	0	0	1	5	10
Dominican Republic	3	0	0	2	5	2
Guatemala	0	3	1	3	4	2
Honduras	0	0	0	0	0	2
Nicaragua	1	2	1	0	2	1
Panama	2	1	1	6	4	7
Total	**9**	**9**	**5**	**15**	**20**	**27**

Number of Companies That Requested Delisting During Year

	2001	2002	2003	2004	2005	2006
Costa Rica	0	0	0	0	0	0
Dominican Republic	0	0	0	0	0	0
El Salvador	2	3	0	6	2	1
Guatemala	0	0	1	0	0	2
Honduras	0	0	0	0	0	0
Nicaragua	0	0	0	0	0	2
Panama	20	22	2	14	7	8
Total	**22**	**25**	**3**	**20**	**9**	**13**

Sources: Country authorities and IMF staff.

The institutional investor base varies from one country to the other, but is generally thin. Banks account for most of the demand for corporate debt securities. In some instances, bank demand is partly driven by tax incentives. Pension funds are important institutional investors in Costa Rica and El Salvador, and they could play a potentially important role in the Dominican Republic and Honduras. In most regional countries, except the Dominican Republic, regulations bias the asset allocation toward government securities and impair the growth of the corporate debt market. As discussed before, mutual funds (except in Panama) and insurers play a limited role in investing in corporate bonds.

Foreign investors and high net worth individuals are important in select markets. Bond market data are scarce, but market conversations suggest significant foreign investor interest in El Salvador and Panama. Some of the mortgage and remittances securitizations structured locally were placed with foreign investors. Finally, high net worth individuals also invest in corporate debt securities. Generally, bond issues that target high net worth individuals are "pre-placed" ahead of the formal listing in the securities exchanges.

Incentives for Corporate Bond Issuance and Investment

Market Environment

The degree of dollarization and level of domestic interest rates, and broadly the confidence in the domestic currency and monetary arrangements, are important hurdles to the growth of domestic corporate bond markets. Panama and El Salvador are fully dollarized, and other countries have high levels of de facto dollarization. Thus, corporate debt issuance is divided between domestic and foreign currencies, making each market smaller, and external borrowings for the latter an important alternative. The growth of corporate bond markets is also hampered by several problems in the public debt management. These include high levels of debt in some counsuance between governments and central banks, lack of a coherent public debt management strategy, issuance of nontradable and nonstandard securities, and poor liquidity. These problems make it difficult to establish a

- As discussed, financial disclosure in the region is generally poor. This prevents credit rating agencies from issuing investment-grade ratings, even by local rating standards, to many issuers.
- All countries except Panama require a rating for public issues of corporate debt. In El Salvador, every debt issue requires a rating, and two ratings if the security is purchased by pension funds. Competition among rating agencies to secure a rating mandate is reported to lead to a "race to the bottom" at times. Given the low thresholds for capital and experience required by authorities to establish and to operate a rating agency, there are some concerns about the reliability and comparability of ratings issued by different agencies.

Moreover, market participants are not always sophisticated enough to price different ratings or those issued by different agencies discriminatingly.

- Mark-to-market valuation of portfolios is seldom used in the region, and in some countries (e.g., Guatemala), loss recognition based on mark-to-market is not recognized by tax authorities. This creates incentives against regular trading and contributes to the low liquidity in the secondary market.

Supply Side

- Many potential corporate issuers are partly family-controlled or a part of a conglomerate. Corporate control motives and the unwillingness to disclose information to outsiders favors "house" banking financing over market financing. In addition, the financing needs of large "blue-chip" corporations are met in more developed external markets, which offer better rates and deeper pools of capital. Indeed, several important conglomerate members have raised market financing in the United States.

- Excess liquidity in the banking sector poses strong competition to all alternative funding, including equity and bond markets. Currently, liquidity in the regional banking sector has been high owing to favorable cyclical factors and a strong flow of remittances (exceeding 10 percent of GDP in El Salvador, Honduras, Nicaragua, and Panama).

- The small size of most regional businesses, the small size of their funding needs, and the fixed costs of listing requirements reduce the number of enterprises in each country for whom bond issuance is an economic alternative to bank financing. Moreover, although an issuance of, say, above US$5 million may be made cost-effective, it is insufficient to create adequate liquidity in secondary markets and thus interest institutional investors.

- In some countries, certain legal and regulatory factors impede faster development of corporate bond markets. For instance, in Guatemala, only financial institutions are authorized to raise funds in public markets, and only if they have an investment-grade rating. Disclosure requirements are generally moderate,[20] but issuers complain of fatigue owing to an issuance authorization process that is excessively bureaucratic and to treatment that is at times arbitrary and inconsistent.[21] In addition, in Honduras, two credit ratings are required for investment by pension funds, whereas in the Dominican Republic, two separate approvals by securities and pension regulators are required, which is onerous for most issuers.

[20]Or weak, as in Guatemala, where private debt issuers are not required to disclose material events, nor to update the information in the prospectus.

[21]As discussed above, some but not all regulators have tried to streamline the registration process, including deadlines for comments, for the authorization process, and for shelf registration systems.

Demand Side

As mentioned earlier, the generally weak confidence in private securities, disclosure, and enforcement of contracts depress demand from domestic and regional investors.

- Corporate debt suffers also from some "crowding out" by government securities in most markets. Government securities enjoy several advantages over corporate debt securities. Foremost among them is the favorable tax treatment, that is, lower tax rates or exemptions, on interest and capital gains from investments in government securities. Banks do not need to hold reserve requirements against government bond holdings, which is not usually the case for corporate debt securities. Public securities are also often much larger issues, more liquid, and more continuously offered. The crowding out trend would likely be reinforced as bank supervision practices in the region converge to Basel II.
- The average corporate debt issue is about US$50 million. This is not too small, but many issues are often well below this size and too small to satisfy the maximum concentration limits to be observed by pension funds, and often too illiquid for mutual and pension funds that must mark to market or need to trade.

Asset-Backed Securities

Current Status

ABS markets in the region remain incipient. There have been a few transactions of domestic mortgage-backed securities: 12 in Panama, 1 in Guatemala, and a few in Costa Rica. In addition, there have been a few ad hoc securitizations backed by cash flows, for example, of auto loan and credit card receivables, factoring (IOUs), remittances from abroad, and public infrastructure (Costa Rica). Many of these transactions have been structured abroad, use a foreign law, and are denominated in foreign currency. The large number of factors affecting debt markets adversely also discourages asset-backed securitization. But securitization also suffers from a few more specific problems within the region.

Problems in Issuance of Asset-Backed Securities

- Except for Costa Rica and Panama, the law poses material problems for the issuance of ABS. In El Salvador and Guatemala, there is no specific legal framework governing the issuance of ABS, though one is under consideration in El Salvador. In the Dominican Republic and Honduras, the laws contain very few provisions on securitization; therefore, important issues such as bankruptcy remoteness are not explicitly contemplated. Trusts are the pre-

ferred vehicle for securitization in many countries, but trust laws do not exist in the Dominican Republic and Nicaragua and have important limitations on the type of intermediaries that can act as trustees (Honduras).

- In the face of the current large liquidity, regional banks lack strong economic incentives to securitize their assets. Many banks are eager to book and hold assets and value the size of their balance sheets and regional market share rankings more than profitability, because size is often an important indicator of safety to the lay depositors.

- For several reasons, regional banks have had a wait-and-watch attitude toward ABS. Many regional banks lack experience and expertise in the issuance of asset-backed securities. Because securitization transactions are also relatively new for the regulators, banks worry about the potentially longer delays and difficulties of receiving issuance authorization and rating for ABS, and prefer the relatively easier process for issuance of bonds. Many banks also prefer, for strategic reasons, to establish their bond issuance programs successfully prior to venturing into the ABS arena. Others, aware of the imperfections in their underlying documentation and asset origination standards, prefer not to be exposed to the scrutiny of rating agencies and investors until they have taken internal measures to clean up.

- As with many countries in the world, creation of a mortgage and transfer of assets attract taxation based on the asset value or loan amount, and in some cases, financial transaction taxes on payments, resulting in multiple levels of taxation for the same underlying financing transaction. In some countries (e.g., the Dominican Republic), transfer of mortgages to the special purpose vehicle entails a significant additional stamp tax. In El Salvador, a special purpose vehicle collateralized by mortgages is also required to pay municipal taxes. In the Dominican Republic, ABS-related payment flows would attract financial transaction taxes. In Guatemala, net income from mortgages guaranteed by the Instituto de Fomento Habitacional (IFHA) is tax-exempt and the underlying mortgages are not subject to capital provisioning. Because these provisions may not apply to a special purpose vehicle, banks, therefore, have strong incentives to hold the mortgages in their loan books.

- Mortgages are not originated to common standards, even within individual banks, as is the case for mortgages in the Dominican Republic and Guatemala. In several countries, mortgages are linked to individual bank's deposit interest rates rather than an external interest rate benchmark. The low reliance on marking to market also can cause problems because sale of securitizable assets to the special purpose vehicle may create gains and losses, with tax implications.

- Finally, the quality of the infrastructure supporting the ABS market differs between countries. In Guatemala, for instance, the registration of mortgages is easy. In contrast, the obsolescence of the real estate property registrar in

Nicaragua works against the introduction of real estate investment trusts and mortgage-backed securities.

Despite the very low level of ABS activity so far and the problems cited above, securitization represents one of the most important opportunities for developing domestic fixed income markets. The need for public debt sustainability limits the amount of sovereign debt. Corporate debt markets tend to be substantially smaller in emerging rather than mature capital markets and the growth rate of highly rated corporate securities issuance is likely to remain low in Central America for many reasons discussed earlier. In this context, ABS represent the most interesting opportunities for expansion of potentially highly rated securities that can offer pension and mutual funds, insurance companies, and retail investors a high-quality and diversified investment opportunity.

Although many hurdles remain in development of this market segment, its potential is also becoming evident. Panama is a good example of the growth potential of ABS markets. In Panama, the legal and regulatory framework does not impede the issuance of ABS, relatively clear tax policies avoid double taxation of ABS instruments, there has been a good pipeline of relatively standardized mortgages, and full dollarization has helped secure the interest of foreign investors. Under these favorable conditions, Panama has led the region in the number of securitizations backed by domestic assets, which were placed successfully with both domestic and foreign investors.

Several factors suggest potentially good growth rates in ABS starting from a low base. The takeover of several regional financial groups by foreign institutions bodes well for securitization. The global financial institutions are more likely to be more interested in maximizing return on equity than regional market shares, are more familiar with securitization techniques, and, even in the current highly liquid environment, may be interested in securitization and fee-based income. Successful placement of initial transactions by leading institutions could encourage many others, who would not like to incur the costs of being the first movers, to follow suit.

Scope for Developing Capital Markets in the Region

The seven Central American private capital markets are at a very low stage of development compared with those in advanced economies, but also with those in economies of comparable size, in terms of market capitalization, type and number of private financial securities available, and liquidity. The major structural and historical factors explaining the current state—political and economic uncertainties; banking, debt, and currency crises; small size of the economy; small size of businesses; family-owned businesses; and aversion to disclosure—are changing, but slowly. There are important gaps in the development of securities laws, regu-

latory agencies, and market infrastructure as well as in many of the basic preconditions for development of securities markets and a more broad financial system.

The Case for Policy Action

There are important costs from the failure to develop more vigorous private capital markets for local businesses. The underdevelopment of private capital markets is a major hindrance to external equity financing. However, it may not be a major hindrance to financing per se, and excessive reliance on the banking system represents a deliberate and often rational choice, for the vast majority of the relatively small regional businesses with, say, less than US$25 million in financing. In the globalized world of today, the larger businesses (say, those needing financing of more than US$50 million) do not find it too difficult to access the financial centers of Miami, New York, or Latin America. Thus, apart from the financing difficulties of the medium-sized businesses, the principal costs of poorly developed regional capital markets for local businesses may lie in generally lower valuations of their businesses, higher costs of financing, discontinuous growth prospects, and relatively greater difficulties of exit for principal shareholders.

The consequences may be worse for institutional and retail investors. For investors—particularly pension and mutual funds, insurers, and retail investors—the lack of a well-developed capital market implies failure to attain a well-diversified portfolio of regional financial assets. This is a particularly important problem for institutions such as insurers or pension funds that must invest in regional assets because of regulation or currency preferences. To the extent that local investors may be presumed to be among the more willing and informed investors in regional private financial securities, they bear disproportionate costs of this underdevelopment.

Banks may also suffer in the long run from a strategic weakness as a result of poorly developed capital markets. Banks may gain in the short run from underdeveloped capital markets, through a higher market share of financing. In the long run, such underdevelopment may constrain the growth prospects of local banks, which must maintain an adequate access to external equity capital and long-term borrowings. It also impedes the banks' ability to securitize their assets, which may be needed in an environment of tighter liquidity or capital adequacy.

A thin capital market may make several public policy choices more difficult. Small and illiquid Central American capital markets would undoubtedly reduce the degree of foreign portfolio investment in the region. Such markets would also raise the cost of policy-based restrictions in favor of domestic investments typically imposed on banks, pension funds, and insurers, resulting in larger costs for affiliates and greater possibilities of cherry-picking and front-running from investment of approved investable securities. Other implications may include poorer financing possibilities for housing or large infrastructure projects, reduced

possibility of divestment or value realization in privatization, and greater concentration of risks in the banking system.

Limited Scope for Developing Individual Country Capital Markets

The preceding discussion underscores that the development of the seven individual private securities markets is a difficult and complex challenge with no quick or simple solution. The fundamental issues of small size of individual economies and businesses, a culture of family ownership and aversion to minority shareholders, a lack of equity culture among investors, and the like cannot be resolved quickly.

In the four countries with no stock markets currently, investors and issuers alike may not have a realistic option to create a sustainable domestic stock market any time soon, and may be better off adopting a market in the region as their own. The Dominican Republic, Guatemala, Honduras, and Nicaragua are unlikely to see more than a handful of equity issuance and listings per year in the near future. Given the uncertainties of the equity approval process and market reception and the limited investor base, issuers in these markets may well prefer to list in one of the more established exchanges of Costa Rica, El Salvador, or Panama. For investors in these four countries, stock markets that offer only a handful of stocks, with little float and liquidity, cannot provide a meaningful diversification possibility to retail or institutional investors who must explore investment opportunities abroad. For investors whose scale of investment, regulatory freedom, and sophistication permit investment in equity markets abroad, the latter are likely to be so superior in terms of diversification possibilities, trading environment, and liquidity that their interest in domestic equity markets will become marginal.

Technical measures such as dual listing standards, aggressive promotion of public issuance to "targeted" companies, or tax incentives may all help, but are unlikely to result in a stock market that would reach a "take-off" stage. The regional listing standards are already very accommodating, and development of a "lower tier" equity market with even more liberal disclosure and approval standards is not a realistic option. Promotion by the relevant exchanges to coax new listings certainly has merit, but it is issuers' unwillingness rather than a failure of marketing that is the primary problem. Although equity listings can be motivated through favorable tax treatment, it is preferable to remove unequal treatment rather than offer new incentives. Thus, for the four countries with no stock market at the moment, it may be worth making a hard and realistic assessment of the merit of developing a domestic stock market versus essentially adopting one of the existing regional markets.

Proximity to the United States may also be an issue. The region's proximity to the more developed financial markets in the United States, the sizable diaspora present in the United States, dollarization, and the history of periodic economic

turbulence have all created incentives to transfer or maintain savings abroad. The relative familiarity with the more developed U.S. markets and financial products raises the bar for investing in domestic securities.

Even the three better-developed markets may struggle for viability in an increasingly globalized world. Collectively, these three countries have 90 stocks, most of which are not at all liquid, and none of which carries a minimum free float. The total market capitalization (end-2006) was only about US$16.4 billion, with the top five stocks in each market (15 in all) accounting for about US$11.4 billion. Individually these exchanges are able to absorb issuances up to, say, US$50–$100 million, but they would be of limited interest to both large issuers and global investors. Thus, even if they survive individually, these stock markets are likely to struggle for viability without some form of integration. Under these circumstances, it may be worth examining if financing of corporations and investment in securities could be facilitated by bolstering the integration of the several small exchanges scattered across the region.

Scope for Regional Integration of Private Capital Markets

Given the limited number and size of issuers, it is worth considering the creation of a regional capital market, balancing the benefits from economies of scale with the cost of implementation and coordination. Such analysis merits a complete assessment that is beyond the scope of this section. However, the section addresses many elements that need to be discussed, including past experience with capital market integration and some possible steps forward to addressing the most important concerns.

International Experiences with Integrating Capital Markets

Past experience in mature and emerging market countries suggests powerful forces urging vertical and horizontal integration of securities exchanges and related services. In the United States, there were more than 100 regional exchanges in the late 1800s; the number fell to 18 by 1940 and 7 by 1980. Similarly, in India, although there are 22 regional stock exchanges, the two major ones attract about 90 percent of the trading volume, and many of the remaining regional exchanges have united under a common platform. There have been important cross-border mergers and/or acquisitions, including Euronext (which has brought together the exchanges of Portugal, France, Belgium, and the Netherlands) and OMX (which has brought together the markets of the Nordic and Baltic countries) (Box 6.1), and more recently the case of NYSE and Euronext. There have been similar instances of mergers and integration of several centralized securities depositories.

At the same time, few of these examples can serve as a complete or easy model for the region. Each of them has very special features and contexts, and although regional authorities can draw some useful lessons from them, none of them would serve as a reasonably complete or relevant model for the region.

Box 6.1. Steps Toward Integration of Regional Capital Markets

While relevant to the entire region, so far the most significant steps toward integration have been taken by the three countries with the most developed securities markets: Costa Rica, El Salvador, and Panama. So far their initiatives have had limited success, and concerned regulators and exchanges are now trying to advance the integration through a somewhat more systematic "regional" approach.

Regulators. The three regulators have tried a "fast track" approval of primary issuance of securities and mutual funds on a bilateral basis, so far with limited success. In 2003, El Salvador and Panama signed a memorandum of understanding (MoU) committing to a fast track registration. In addition, Panama granted El Salvador the status of recognized jurisdiction. In practice, this mutual recognition has not worked well, as Panamanian firms wishing to list in El Salvador have faced additional regulatory requirements. In 2003 El Salvador and Costa Rica signed another MoU, only to engage in best efforts to streamline the registration process. Thus, there was limited progress except in clarifying the main differences between the two regulatory frameworks. In 2004 Panama and Costa Rica initiated the same process, but Costa Rica chose not to sign an MoU, preferring instead a move toward more uniform regional standards of issuance, supervision, and enforcement, before entering into such agreements. However, in 2005, Panama unilaterally recognized Costa Rican jurisdiction allowing fast track registration of Costa Rican issuers in Panama. As of now, Panama has given a fast track registration to eight corporations and mutual funds originally registered in El Salvador and Costa Rica.

More recently, regulators have started exploring the implications of regional integration, following the 2006 regional seminar by the Toronto Center. The Dominican Republic has proposed the creation of a Central American Institute of Securities Markets, along the lines of the *Instituto Iberoamericano de Mercados de Capitales*, a Spanish learning center. In the absence of a full consensus, the regulators have agreed to create a council of Central American superintendents and requested a second seminar, facilitated by the Toronto Center, on global experience in capital market integration and the next steps for the region.

Security exchanges. Regional integration has been considered since the creation of Bolcen, the Association of Central American and Caribbean stock exchanges, in 1994. Its main objective is to promote capital market development with the overarching goal of achieving one single market with interconnected exchanges. However, so far there has been limited progress.

Separately, the stock exchanges of Costa Rica, El Salvador, and Panama signed an MoU in September 2006 for the development of a common trading platform permitting member brokers to trade in real time in all three markets through correspondent local brokers. The goal was to have these arrangements developed by March of 2007, and thus serve as a catalyst for regulatory action. However, technical problems, such as different settlement conventions and the disagreement on common trading, have stalled the project. The exchanges agreed to seek technical support from OMX—the operator of the Nordic exchanges. In parallel, the Panama Stock Exchange is also exploring an order-routing system with South American countries. Local intermediaries would place orders from their clients to buy and sell foreign exchange listed securities to those exchanges for a fee.

Challenges to Developing a Regional Market in Central America

Central America would face particularly important challenges if it chose to integrate regional markets. The region is not fully integrated in terms of economies and monetary or fiscal policies. Unlike the European Union or Eastern Caribbean Currency Union, Central American capital markets remain divided in im-

portant respects, including currencies, restrictions on domestic institutional investors, the presence of as many as eight exchanges and custodians, the mutual structure of most exchanges, and the presence of competing exchanges and custodians. To advance toward a regionally integrated market, substantially greater progress would need to be made toward harmonizing securities laws and regulation, approval and listing processes, supervision standards, disclosure, and corporate governance norms. While a full study of these issues is beyond the scope of this effort, the following section touches on key issues and approaches to developing a regional strategy on capital market integration, if any.

Central American regulators and exchanges have been considering some approaches to integration in recent years, but with limited success. The progress so far has been slow and these efforts reveal many important regulatory and operational differences; a lack of consensus (Box 6.2) on the need for, urgency of, or approach toward regional integration; and some important differences in confidence in the capacity of regulators across countries. Securities regulators would have many legitimate concerns in dealing with cross-border integration of markets. Regulators have a mandate to protect investors, which they implement through a system of disclosure for issuers, prudential regulations for intermediaries, observance of market conduct, and supervision. Allowing foreign issuers and/or intermediaries direct access to the local market under a different framework than that applicable to local players poses important concerns to regulators (see Tafaris and Peterson, 2007):

- Permitting foreign access to local investors without direct oversight would result in unknown risks to investors and capital markets, with the regulator possessing few or no powers to investigate or discipline foreign issuers or intermediaries.
- Such regional integration could be abused to seek regulatory arbitrage, with issuers and intermediaries registering in jurisdictions with weaker investor protection while still enjoying access to the local market.
- Local access to foreign players subject to very different frameworks might also make it difficult for local investors to understand the differences between the different investment options.
- There are important legal, political, and reputation risks for the regulator if a scandal or fraud arises involving foreign issuers or intermediaries that access the market in different conditions than those afforded to locals.

The regional integration process must address these regulatory concerns to be successful. The key elements would include (1) comfort in the requirements established by the home country regulator, (2) comfort with the capacity of the home country regulator for reviewing the information provided by issuers, (3) a robust framework that permits exchange of information and cooperation, and

Box 6.2. Integration in Nordic/Baltic Securities Markets

The Nordic/Baltic region offers a good example of both the benefits and difficulties involved in consolidation of securities exchanges and related centralized security depository (CSD) services. OMX began as a derivative exchange in 1985. Recognizing that the well-developed but small Nordic markets could not compete effectively in the long run against major European bourses, OMX merged with the Stockholm Stock Exchange in 1998, when a joint trading platform initiative started on all the Nordic exchanges.

OMX's bid for London Stock Exchange (LSE) in 2000 was unsuccessful, but efforts to create a unified Nordic market advanced, with common member and trading rules instituted in the Nordic region in 2001, the merger of OMX and the Helsinki Stock Exchange (HEX, including the Tallinn and Riga exchanges already owned by HEX) in 2003, the acquisition of Vilnius Stock Exchange in 2004, and mergers with Copenhagen (2005) and Icelandic (2006) Stock Exchanges. Today, OMX is the fifth largest equity exchange and third largest equity derivatives exchange and a global leader in exchange technology. OMX directly or indirectly also owns the central securities depositories in most of these countries, and accounts for more than 80 percent of the exchange trading in the Nordic and Baltic countries. There has been some talk of including the Warsaw stock exchange. In 2007, OMX and NASDAQ announced their intention to combine the two companies.

The Nordic/Baltic exchange benefits companies, members, and investors alike. Listed companies gain exposure to a much broader investor base, exchange members enjoy more efficient access to trading in a large number of securities, and investors can easily choose among more investment alternatives than the pre-merger national exchanges did. All of this boosts trading, liquidity, and market discipline and enhances corporate transparency.

Several aspects of the OMX experience may be relevant to Central America. The initiative was led largely by the private sector. The process was certainly difficult and entailed acquisition/merger of one exchange at a time, with CSD integration usually following. Some of the individual stock exchanges retained their separate legal identity, remain a subsidiary, and operate under different local securities laws and regulators. As with Central America, countries in the OMX umbrella do not have a common currency. OMX has dealt with these regulatory and brand distinctions, while reducing the operating differences between national markets, by sharing the same trading system, providing common listing and index structures, enabling efficient cross-border trading and settlement, offering cross-membership, and providing one market source of information.

In some ways, the Nordic/Baltic mergers were more difficult than future mergers in Central America could be. The countries and companies in the OMX group are much more diverse in size, did not have the same degree of political and regulatory cooperation that currently exists in Central America, and do not speak the same language. OMX has found practical solutions to these, for example, by creating two lists, Nordic and Baltic, with varying listing standards, and adopting English as its corporate language.

At the same time, OMX history suggests that merging exchanges is a complex process that is likely to take years, and may require strong leadership. It also suggests that there may be several paths toward an eventual creation of a single Central American market. For example, exchanges may continue to maintain their separate identity and ownership structures, while sharing a common technology platform, or two exchange groups (say, one combining Panama, Costa Rica, and El Salvador and another the other four) may emerge first, followed by an eventual merger between them.

(4) regional legal frameworks that meet minimum standards of investor protection and regulatory authority. In this context, it is worth mentioning that the regional (MoU) in order to share information and set up a framework for mutual cooperation and technical assistance. They also agreed to meet periodically and discuss integration efforts.

In addition, the region would face major operational challenges in integrating the current variety of trading platforms and settlement systems. As discussed under market infrastructure, the regional exchanges do not share compatible platforms, and there are substantial variations in settlement cycles, degree and requirement of dematerialization, and degree of delivery versus payment. Because countries in the region do not share currencies, integration may require development of a platform that can trade and settle multiple currencies. While the technical solutions to these problems are feasible, the challenge lies in several regional exchanges, CSDs, settlement banks, and related institutions agreeing to collaborate toward a unified system, to share costs, and to appoint a common management structure that would manage such a transition without any interruption of existing trading arrangements.

The transition toward a more harmonized and perhaps eventually integrated regulation may involve the following approach. Building on ongoing regional efforts, it may be reasonable to postulate a three-pronged strategy involving (1) incremental harmonization of regulation and supervision; (2) mutual recognition of foreign securities and regulatory actions; and (3) raising/converging regulatory capacity to regionally appropriate standards. In terms of harmonization, it would be most useful if the countries that need to develop new laws or regulation sought out regional counterparts with a similar need or prior experience in developing them, aim to introduce new laws and regulation that aspire to a good regional/international standard, and minimize national deviations from the regional standard to the greatest extent possible. Similarly, supervisory practices could be harmonized to the maximum extent possible in areas of common interest. As harmonization of regulation and supervisory practices meet certain norms, regulators could increasingly rely on regulatory actions (e.g., registration, licensing, and submission of periodic information and off-site and on-site supervision) by their counterparts. In parallel, regulators can also recognize certain jurisdictions—whose practices may differ in important respects—as providing adequate investor protection, and admit securities issued in such jurisdictions as tradable within their own markets.[22] Third, there would be a need to raise the capacity of all regulators (e.g., staff strength, quality, training, implementation of

[22]Ideally, this could involve a "blanket" acceptance of securities admitted to public issuance and trading in another jurisdiction, or it may involve a fast track approval process, focusing more on disclosure to foreign jurisdictions but minimizing or eliminating a substantive approval process in another.

common manuals), and develop institutional mechanisms to consult among regulators and resolve issues that arise during transition. Third-party consultants may be judiciously used to facilitate this process and maintain regional commitment and confidence.

There may be some merit in phasing such regulatory convergence. Countries where the underlying law and regulation are better developed and whose markets are more active could take the lead in thinking through a harmonized legal and regulatory framework. Others may prefer to adopt the regulatory framework that results from such consultations. Similarly, there may be merits in phasing the application of harmonized regulatory standards to some brokers, issuers, and markets before being extended to all issuers and markets.

A common regional securities market linking the seven Central American countries may make more sense than other possible configurations. While securities markets are integrating across countries for a variety of reasons, it may be legitimate to inquire if a common market for these seven countries is necessarily the dominant choice. The principal arguments against this may be reservations among the more developed markets about the magnitude of efforts required to bring up others to a regional standard, the greater economic incentives of the private sector in integrating with, say, a more developed market such as Mexico or Colombia versus those in the region, and the ease of bilaterally adopting a more developed market standard of a senior partner versus negotiating regional standards among seven more equal partners. These are compelling considerations. Arguments in favor include the relatively small size of all seven regional economies compared with neighbors such as Colombia, Peru, Mexico, or Venezuela; common language; physical proximity; political appeal and acceptance; other initiatives such as a common customs union and supervision of financial conglomerates; and the existence of regional political bodies and a regional association of exchanges. This is ultimately a choice for the regional policymakers and private sector. But it may be fair to say that while some top companies may be able to "graduate" eventually from Central American exchanges to a more developed foreign market, for the large majority of issuers, a regional securities market may be a more friendly marketplace than alternatives. Thus, if neither elimination of all exchanges in Central America nor continuance of seven national markets is a desirable outcome, it would make sense to strive toward a Central American marketplace.

The integrated market need not imply a single, physical location. This study is not sufficiently in depth to offer detailed operational recommendations. However, a convergence of the regional markets need not only imply a single marketplace. Indeed, as the Nordic/Baltic experience suggests, it may entail maintenance of several exchanges linked to a common electronic platform, coupled with ownership and shareholding arrangements that may eventually replace mul-

tiple existing institutions. Such incremental convergence can take many paths that nonetheless offer substantial benefits of an essentially regional rather national market.

If a regional market is desirable, regional authorities may need to take the lead in establishing the vision. The discussion above clearly underscores the need for strategic leadership and consensus by the regional authorities. National regulators and interested private sector representatives are likely to be too handicapped by a parochial vision, limited authority, and perhaps conflicting interests, to successfully steer the process without a strong and clear political commitment. Such commitment is needed to ensure the necessary changes in the securities laws and even possibly a treaty to ensure a sound framework for regional integration, while empowering and tasking regulators and exchanges with the requisite regulatory and operational tasks. Operationally, this may mean adoption of a resolution by the political authorities and creation of a regional tripartite working group to spearhead the work. The analyses and groundwork underlying the existing initiatives and proposals could be harnessed, together with the necessary external support (e.g., of the Toronto Center and/or interested international financial institutions) to jump-start the process.

Articulating a vision for promoting regional integration of capital markets is a major and radical step. The problems in the process cannot be underestimated, and the success is unlikely to be achieved without years of hard work. Yet, it does appear that without such an effort, the region may fail to achieve many of the benefits of an efficient and liquid capital market, and these opportunity costs warrant such an effort. This may require the authorities to resolve at the highest level their goal and vision for facilitating such an interlinked market; lead in developing a consensus among the many regulators, private sector interests, and institutions involved (no small task); and harmonize national securities laws in line with such a regional vision.

While the private sector must have a lead role in arrangements relating to integrating the marketplace, the public sector can provide powerful incentives for integration. The market participants, particularly in the smaller exchanges, already realize the somewhat dim prospects for growth and profitability within individual markets, and many are already positioning themselves through partnerships with regional counterparts. Second, a decisive signal by the authorities to harmonize varying regulation could provide just the powerful signal about the eventually successful emergence of a regional market to align issuers, investors, and intermediaries toward such a goal. Finally, it is worth recalling that about 90 percent of market capitalization and trading in securities is in government securities. Efforts by regional governments facilitating listing and trading in a shared or linked marketplace could be the most powerful driver of a regional integration process.

Conclusions

A number of remedial measures could be considered to promote national and regional capital markets. However, such efforts should focus on the removal of obstacles and expansion of potential opportunities, rather than direct promotion, tax concessions, or subsidies aimed at capital market transactions. The following summarizes the main insights and recommendations of this chapter (Table 6.A12).

Securities Laws and Regulation

The regional legal framework needs strengthening in several areas. Securities laws need to be updated in most countries, and overhauled in El Salvador. Securities laws need to be amended to provide to regulators better and clearer powers over the market and its participants, widen the range of sanctions, and facilitate MoUs and the exchange of information between regulators, as well as with the stock exchanges. Regulatory framework for mutual funds, asset-backed securitization, and derivatives need to be completed or thoroughly modernized in several countries, and particularly in Guatemala, Nicaragua, and El Salvador.

Securities Regulators

There is a need to strengthen the budget and staff of securities regulators in El Salvador, Guatemala, Honduras, and Nicaragua. However, as discussed under regional integration, these regulators may wish to make maximum use of regulation, laws, and good supervision practices already available within the region and elsewhere, and develop required regulation jointly. We do not have specific recommendations on the regulatory structure (e.g., within or outside the central bank, or a combined or single regulatory agency), save to say these arrangements should ensure a degree of independence to the regulators, and the ability to attract and retain the right staff. The latter may require independence from civil service pay scales.

There is a need to substantially simplify and speed up the issuance approval process in most of the region. The process is generally considered bureaucratic, lengthy, uncertain, and involving multiple levels of scrutiny (between regulators and stock exchanges in all countries, and between two regulators in some). There is a need to make this process more efficient, time-bound, and certain, without sacrificing thoroughness or lowering standards. Key measures would include setting business standards for responses and clearances, responding to all aspects of an application at one go, focusing on materiality rather than formality, eliminating scrutiny by multiple regulators in all cases, and better coordinating with the stock exchange. This should be supplemented with a proactive, regular, and business-like dialogue with representative of issuers and investors to identify and

address problems, and develop applications, criteria, and supervision approaches for new products jointly with market participants.

Developing Institutional and Retail Investor Bases

Further development of institutional investors, particularly mutual and pension funds, is needed to facilitate sound intermediation in securities markets. Several countries still have important gaps in the basic enabling laws (El Salvador, Nicaragua, and Guatemala) for mutual funds, and some need to force and facilitate the transition of poorly structured and regulated quasi-mutual funds into properly regulated mutual funds. Regulatory reforms in some countries (e.g., Guatemala) allowing private pension funds would facilitate the establishment of an institutional investor base. Also, there is potential scope to relax investment restrictions on pension funds, particularly for foreign and private sector securities. Restrictions on pension fund products need to be reviewed comprehensively to permit the offer of diverse portfolios suitable to different investors.

Further efforts are also needed to develop a retail investor base. The low income, past crises, and lack of investable securities have created a weak investor base. Although the underlying structural problems of income, education, and lack of securities can be addressed only in the long term, there is also a need to educate investors regarding financial products such as equity, bonds, asset-backed securities, and mutual funds, and inform investors of regulatory efforts to improve corporate governance, disclosure, and safety of market conduct. Again, regional cooperation and development of standards and educational tools may be particularly efficient.

Corporate bond rating standards could be made more uniform across the region. Countries with no rating or multiple rating requirements (e.g., El Salvador, where pension funds are required to invest only in bonds with two ratings) should converge to requiring one rating. A mandatory rating is needed in the region to improve transparency and pricing at this stage of the market, but requirements for two ratings are excessive for most of the regional issuers, and unnecessary for investment by institutional investors. The regional rating agencies are not of uniform quality, and there may be a need to gradually improve the capital and experience thresholds required from rating agencies, but such a move needs to be tempered given the low issuance activity within the region, and the low income of agencies. Standardization of criteria for rating agency accreditation and facilitating the regional operation of agencies (e.g., through mutual recognition) could both improve rating standards and homogenize ratings across the region.

Several steps are needed to develop a regulatory framework and market for ABS. Securitization represents the most promising step toward developing fixed income private markets in the region, given the presence now of several regional and foreign financial conglomerates with skill and interest in ABS, strong demand from even the limited base of institutional investors, and successful com-

pletion of several transactions in Panama. In some countries of the region (the Dominican Republic, El Salvador, Honduras, and Nicaragua), authorities still need to address important gaps in the current law or regulation. Most of the countries also need to resolve more subtle and specific gray areas or problems in tax treatment (particularly double taxation), inefficiency of registration or execution of collateral, bankruptcy remoteness, and borrower consent requirements.

Banks, institutional investors, and financial regulators need to collaborate in improving standardization of mortgages and other securitizable assets, and related pricing norms. Such standardization is critical to facilitating future securitization, and there may be a role for moral suasion, fine-tuning of prudential parameters, and developing criteria for any government-supported mortgages or insurance to encourage such standardization. Finally, development of adequate pricing standards and methodology for more complex and structured products such as securitization is an important need. Development of regulation, standards, and pricing methodologies are all useful areas for further regional collaboration.

Development of Equity Markets

There is a need to promote development of a regional corporate governance code. Such a code should ideally be developed jointly by investors, issuers, regulators, and government, but the latter needs to take a substantial lead in making it happen. There is a need to encourage greater participation of minority shareholders in family-owned companies, and the discussions surrounding development of a corporate governance code could be used by the authorities and private business leaders to foster this change.

Market Infrastructure

Regulators, exchanges, and CSDs could take several steps to improve the efficiency and security of exchanges. These measures could include requirement of dematerialization for new security issuance, a phased program to dematerialize existing securities (with the authorities taking the prominent lead with respect to government and central bank debt), favoring a private sector–led (but widely held) CSD, and eliminating requirements on specific investors (such as Asps in the Dominican Republic) for holding securities outside CSDs. In some countries, CSDs need resources to be adequately capitalized and to implement needed technological upgrades, a process that is severely hampered by the current low volume of trading and resulting revenue. The authorities could facilitate these measures by reining in public sector banks or central banks from attempting to develop CSDs.

Improvements in DVP and settlement are needed in most countries. Several countries do not have DVP or settlement in central bank funds. More important, the settlement practices vary across exchanges, and these differences are an

important operational hurdle to be overcome in successfully linking or integrating the regional exchanges. With the emergence of regional financial groups, a region-wide settlement bank is easier to find.

Broader Policy Measures

There is a need to eliminate uneven taxation of securities income. In particular, relative tax concessions aimed at public securities and bank deposits should be reviewed and either extended to income from private securities or all such income should be taxed uniformly. Second, there is a need to improve general tax collection to a point that successful tax avoidance and maintenance of two books of accounts are not serious impediments to public issuance of private securities.

Governments should consider eliminating unnecessary incentives to "promote" capital markets. In particular, concessions and regulations aimed at conducting repo transactions through the stock exchanges for institutional investors, issuance of public debt through the stock exchange (which generates fees for the exchange and brokers), and requiring pension funds to deal through brokers in primary markets may be phased out. While these measures might have been useful to jump-start exchanges and brokers in the past, they are not necessarily rational or value-additive for markets today. Such changes should be phased in without reducing price transparency, and prices of both on- and off-exchange transactions should be captured, consolidated, and disseminated in a timely way.

Instead, the governments could consider supporting private capital markets through several measures in public debt management, infrastructure financing, or privatization. Key measures include increasing the share of the standardized, tradable portion of the public debt; consolidating public debt both across issues and between the central bank and the government; developing a domestic yield curve; dematerializing government securities, and facilitating retail investment in public debt. Another important policy tool could be the use of securitization techniques for infrastructure financing. In addition, governments could support equity market development through full or partial privatization of large state-owned companies (especially utilities) through the exchanges, without necessarily eliminating a strategic buyer, and setting high standards of disclosure and corporate governance.

More generally, governments should continue to work on improving the business environment. As noted in this report, improvements are needed in all areas. However, for the development of securities markets, the most critical issues are improving the accounting and auditing framework applicable to all corporations, the legal framework for the constitution, and execution of collateral, as well as insolvency proceedings. Some of these issues would require changes in the judiciary.

Appendix Tables

Table 6.A1. Structure and Resources of Securities Regulators

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
Name	Superintendencia General de Valores	Superintendencia de Valores de la Republica Dominicana	Superintendencia de Valores	Registrador del Mercado de Valores	Comisión Nacional de Bancos y Seguros	Superintendencia de Bancos y de Otras Instituciones Financieras	Comisión Nacional de Valores
Nature	Dependency of the central bank	Separate legal entity	Separate legal entity	Dependency of the central government	Dependency of the presidency	Separate legal entity	Separate legal entity
Governance structure	Board and superintendent	Board and superintendent	Board and superintendent	Registrar	Board and superintendent	Board and superintendent	Board only
Composition of the board	7 members, including 5 from private sector, the ministry of finance, and the president of the central bank.	7 members, including the superintendent, 1 representative of the central bank, 1 from the ministry of finance and 4 from the private sector.	5 members, including the superintendent, 1 from the ministry of finance; 1 from the central bank; 1 from shortlist from the unions, 1 from shortlist from professional associations.	There is no board.	3 members, one acts as President of the Comisión Nacional de Bancos y Seguros.	6 members, including 4 from private sector, the bank Superintendent, and the president of the central bank.	3 members from private sector.
Funding	Central bank: 80%; fees on participants: 20%	Central bank	Central government: 90%; fees on participants: 10%	Central government	Central government: 50%; fees on participants: 50%	Central bank: 25%; fees on participants: 75%	Central government: 40%; fees on participants: 60%
Budget	Central Bank Budget	Separate budget	Central government budget	Central government budget	Central government budget	Separate budget	Central government budget
2006 funding (US$ million)	4.01	3.86	1.57	n.a.	n.a.	n.a.	1.23
2006 staff	109	115	45	5	3	7	42

Sources: Country authorities; and IMF staff.

Table 6.A2. Securities Exchanges

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
Stock exchange							
Number	1	1	1	2	1	1	1
Name	Bolsa Nacional de Valores	Bolsa de Valores de la Republica Domincana	Bolsa de Valores de El Salvador, S.A. de C.V.	Bolsa de Valores Nacional and Bolsa de Productos y Mercancias	Bolsa de Valores de Centroamérica	Bolsa de Valores de Nicaragua	Bolsa de Valores de Panamá
Nature	Mutualized	Mutualized	Mutualized and listed itself	n.a.	Mutualized	Demutualized	Demutualized and listed itself
Trading systems for secondary market transactions							
Is it automated?	Yes	Yes	Yes	Yes	No	Yes	Yes
Continuous/discontinuous	Hybrid: continuous with market calls	Discontinuous	Discontinuous	n.a.	n.a.	Discontinuous	Continuous
Order driven/quote driven	Order-driven (Limit order book)	Order driven	Order driven	Order driven	Order driven	Order driven	Order driven

Sources: Country authorities; and IMF staff.

Table 6.A3. Clearing and Settlement Systems

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
Clearing and Settlement							
Entity in charge	Bolsa Nacional de Valores (BNV) with participation of Central de Valores (CEVAL)	CEVALDOM, Central de Valores Dominicana	BVN, using accounts at the central bank. Securities are liquidated at the CSD	Can be done on or off exchange. If on the exchange, the BVN is in charge	Carried out off exchange by parties in the trade	n.a.	Latin Clear with participation of Banco Nacional de Panama
Settlement period	*t* + 3 for equity; *t* + 1 for debt; *t* + 0 for repos	*t* + 1	*t* + 3 for secondary market; *t* + 0 for repos	*t* + 1 if done in the BVN	Agreed bilaterally by parties	Not defined by regulation	*t* + 3
System	Multilateral netting (MN)	Gross for securities; MN for cash	Gross for securities; MN for cash	n.a.	Agreed bilaterally by parties	n.a.	Gross for securities; MN for cash
Risk management	Blocking of securities after trade; settlement fund	n.a.	Predeposit of securities; overdraft limits in bank accounts	None	None	n.a.	Predeposit of securities; individual bank guarantees
Is it DVP?	Yes, model 2 (1.5 hours difference between cash settlement and securities settlement)	No	No	No	No	No	Yes, model 2
Is it central bank money?	No	No	Yes	No	No	No	No
Central Security Depository (CSD)							
Is dematerialization mandatory?	No, but immobilization is required for trading	No	Only for corporate debt	No	No	Dematerializa-tion required for listing and trading	No, but immobilization required for trading
Is there a CSD?	CEVAL	CEVALDOM	CEDEVAL	The exchange itself	There is no CSD	CENIVAL	Latin Clear
Rating Agencies							
Are there rating agencies?	Yes	Yes	Yes	Yes	Yes	No	Yes
Number of registered rating agencies	2	2	n.a.	3	1	n..a.	5

Sources: Country authorities and IMF staff.

Table 6.A4. Indicators of Ease of Doing Business, 2006

		Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama	Central America Average	Latin America Region	OECD
Ease of doing business	**Rank**	105	117	71	118	111	67	81	95.7		
Starting a bussiness	**Rank**	**99**	**119**	**123**	**130**	**138**	**62**	**26**	**99.6**		
	Procedures (number)	11	10	10	13	13	6	7	10	10.2	6.2
	Time (days)	77	73	26	30	44	39	19	44	73.3	16.6
	Cost (% of income per capita)	23.5	30.2	75.6	52.1	60.6	131.6	23.9	56.8	48.1	5.3
	Min. capital (% of income per capita)	0	1.1	119.7	26.4	28.6	0	0	25.1	18.1	36.1
Getting credit	**Rank**	**33**	**33**	**33**	**48**	**21**	**48**	**13**	**32.7**		
	Legal rights index	4	4	4	4	6	4	6	4.6	4.5	6.3
	Credit Information index	6	6	6	5	5	5	6	5.6	3.4	5
	Public registry coverage (% adults)	2.5	11.9	30.5	16.1	8.3	12.5	0	11.7	7	8.4
	Private bureau coverage (% adults)	39.2	57.1	79.6	9.2	18.7	3.4	59.8	38.1	27.9	60.8
Protecting investors	**Rank**	**156**	**135**	**99**	**135**	**151**	**83**	**99**	**122.6**		
	Disclosure index	2	5	6	3	1	4	3	3.4	4.3	6.3
	Director liability index	5	0	2	3	5	5	4	3.4	5.1	5
	Shareholder suits index	2	7	6	6	4	6	7	5.4	5.8	6.6
	Investor protection index	3	4	4.7	4	3.3	5	4.7	4.1	5.1	6
Paying taxes	**Rank**	**160**	**146**	**85**	**122**	**152**	**153**	**164**	**140.3**		
	Payments (number)	41	87	66	50	48	64	59	59.3	41.3	15.3
	Time (hours)	402	178	224	294	424	240	560	331.7	430.5	202.9
	Total tax rate (% profit)	83	67.9	27.4	40.9	51.4	66.4	52.4	55.6	49.1	47.8
Enforcing contracts	**Rank**	**114**	**108**	**116**	**149**	**124**	**49**	**164**	**117.7**		
	Procedures (number)	34	29	41	36	36	20	45	34.4	39.3	22.2
	Time (months)	51	38	52	122	40	41	57	57.3	53.5	29.3
	Cost (% of debt)	18.7	35	15	26.5	30.4	21.8	50	28.2	23.4	11.2
Closing a business	**Rank**	**118**	**142**	**79**	**83**	**102**	**66**	**71**	**94.4**		
	Time (years)	3.5	3.5	4	3	3.8	2.2	2.5	3.2	2.6	1.4
	Cost (% of estate)	14.5	38	9	14.5	8	14.5	18	16.6	13.6	7.1
	Recovery rate (cents on the dollar)	17.6	7.4	29.2	28.3	23	34.3	32.3	24.6	25.7	74
Economy characteristics	GNI per capita (US$)	4590	2370	2450	2400	1190	910	4630	2648.6		
	Population	4,327,228	8,894,907	6,880,951	12,599,059	7,204,723	5,486,685	3,231,502			

Source: World Bank, Doingbusiness.org.

Note: Indices range from 0 to 10, with higher scores indicating more favorable business conditions. Rankings compare 175 economies during 2006.

Table 6.A5. Taxation of Income from Securities

	Costa Rica		Dominican Republic		El Salvador		Guatemala		Honduras		Nicaragua		Panama	
Corporations														
Income tax	30%	Special regime for SME	29%	S	25%		5%	General regime (gross)	25%	Temporary SS tax	30%		30%	
							31%	Optional regime (net)	5%					
Government Debt														
Capital gains		E	29%	S	10%		10%	General regime	10%	WH/ND	E		E	
					E	Individuals trading at Stock Exchange	31%	Optional regime						
Interest	NS	dollars	E		25%	S	10%	WH/D except for Fis			E		E	
	8%	colones			10%	WH for corporations	31%	Net income for supervised Fis						
		WH/D			E	Individuals trading at Stock Exchange								
Private Debt Securities														
Interest														
Listed	8%	WH/D	E		25%	S	10%	WH/D	10%	WH/ND	10%	WH/ND	E	
					10%	WH for corporations								
					E	Individuals trading at Stock Exchange								
Not listed	15%	WH/D	10%				10%	WH/D	10%	WH/ND	10%	WH/ND	5%	if CNV registered
													S	WH/ND
Special cases	8%	colones WH/N	E					All supervised Fis have no WH but pay	25%	Corporate income tax for banks and Fis				
	NS	dollars						31% net income tax						
	NS	at state owned banks												
	NS	BHV colones or dollars												
	NS	BPDC colones												

Table 6.A5 *(continued)*

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
Capital gains							
Listed	S	29%	S 10% Individuals trading at Stock Exchange	10% General regime	S	E	E
				31% Optional regime			
Not listed	S	29%	S	10% General regime	S	NS	5% of transaction amt
				31% Optional regime			10% of capital gains
Other taxes							
Listed	N	3.00% Transfer taxes		VAT exempt		N	
		0.15% Check taxes					
		1.00% Fixed asset tax					
Not listed	N	3.00% Transfer taxes		12% VAT		N	0.01% Stamp duty
		0.15% Check taxes					1.00% Special Fund
		1.00% Fixed asset tax					
Equity Securities							
Dividends							
Listed	5.00%	29.00% in cash	25% S for corporations	E		S	N E
		E in stock	E if share's issuer declared them and paid tax				
Not listed	XXX	29.00% in cash	25% S for corporations	E		S	E 10%
		E in stock	E if share's issuer declared them and paid tax				E WH/ND fpr dividends from non-taxable sources
Capital gains							
Listed	S	29.00% S	10%	10% General regime	S	N	E
			E Individuals trading at Stock Exchange	31% Optional regime			

Not listed	S			S	10%		10%	General regime		S	NS		5%	of transaction amt
							31%	Optional regime					10%	of capital gains
Other taxes														
Listed	N		3.00%	Transfer taxes			3%	Stamp duty		N	N		E	
			0.15%	Check taxes										
			1.00%	Fixed asset tax									0.01%	Stamp duty
Not listed	N						3%	Stamp duty		N	N		1.00%	Special Fund
Bank Deposits														
Interest	NS		29%	S	25%	S	10%	WH/D except for Fis	ISR	for deposits over L50K	10%	WH/ND, if over $5K	E	
Other taxes	N			E	10%	WH for corporations	N		N		N			
					E	for individuals								
Mutual Funds														
	0%	Interest on securities that already paid or were exempted from tax	E	Interest	25%	S	N		10%	WH/D	N		E	if listed
	5%	Other interest for securities that did not pay tax	29%	Dividends	10%	WH for corporations							E	for dividends if portfolio is listed
	5%	Capital gains WH/ND			E	Individuals								
Pension Funds														
Tax treatment of the PF					E		N		D	for contributions	N			Mandatory public pension funds contri-butions are not deductible as expenses but pensions are tax free
	E	Capital gains	29%	Capital gains					NS	for capital gains				

Table 6.A5 *(concluded)*

		Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
Other incentives	D	for voluntary contributions		Contributions are not considered from income tax	Banks can manage funds and contributions are deductible from income tax			Contributions to private deductible from income tax

Sources: Country authorities; and IMF staff.
Notes: S = Subject to income tax
E = Exempt
D = Deductible from income tax
WH = Withholding tax
NS = Not subject to tax
N = Nonexistent
ND = Nondeductible from income tax

Table 6.A6. Equity Issuers: Registration Requirements

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
1. System							
Do issuers have to carry out separate registration and listing processes?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2. Registration Requirements							
a) Is there a minimum issuance amount?	C100 million	No	No	No	No	No	No
b) Minimum free float requirement?	No	No	No	No	No	No	No
c) Is dematerialization mandatory?	No, but immobilization required for trading	No	No	No	No	No	No, but immobilization required for trading
3. Financial Statements							
a) Mandatory filing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b) Mandatory auditing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c) Accounting principles?	IFRS	IFRS	IFRS as of Oct-03	Local GAAP	Local GAAP IFRS in 2008	US GAAP	IFRS or US GAAP
d) Number of audited periods that have to be presented	n.a.	3 fiscal years	n.a.	n.a.	3 fiscal years (or less if company is new)	3 fiscal years	Last fiscal year
4. Prospectus							
a) Mandatory filing?	Yes	Yes	Yes	Yes[1]	Yes	Yes	Yes
b) Minimum content							
Issuance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Issuing company	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Risk factors	Yes	Yes	No	Yes	Yes	Yes	Yes
Financial results (Management report)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Directors, managerial staff, employees	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Insider/substantial holdings, related-party operations.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5. Legal and Administrative Information							
a) Company by-laws	Main info in prospectus; rest available at SUGEVAL	Yes	Yes	No	Yes	Yes	Yes If company provides
b) Issuance agreement	Yes	Yes	Yes	No	Yes	Yes	Yes

Sources: Country authorities; and IMF staff.

Note: IFRS = International Financial Reporting Standards; GAAP = Generally Accepted Accounting Principles.

[1]If the offering is carried out off the exchange.

Table 6.A7. Equity Issuers: Ongoing Disclosure Requirements

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
1. Quarterly Financial Statements							
a) Is filing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b) Deadline	20 days if issuer does not consolidate; 30 business days if issue consolidates with local companies; 40 business days if issuer consolidates with foreign companies	Not defined	30 days after end of quarter quarter	3 days after close of of quarter	20 calendar days after end	1 month	2 months after end of quarter
2. Annual Financial Statements							
a) Is filing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b) Deadline	40 days if issuer does not consolidate or consolidates with local companies; 45 days if issuer consolidates with foreign companies	Not defined	35 days after close of fiscal year	n.a.	30-Apr	3 months	3 months after end of fiscal year
c) Do they have to be audited?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Material Events							
a) Mandatory disclosure	Yes	Yes	Yes	No	Yes	Yes	Yes
b) Deadline	No later than 1 business day	Not defined	8 days	n.a.	15:00 hours of following day	Immediate	1 business day after it happened
4. Insider Holdings							
a) Must insider participation be disclosed?	Yes	No	Yes	No	No	No	Yes
b) Is there a threshold?	No	n.a.	10%	n.a.	n.a.	n.a.	No
c) Filing deadline	5 business days	n.a.	8 days	n.a.	n.a.	n.a.	In the prospectus
d) Is this information public?	Yes, at the SUGEVAL	n.a.	Yes, in the registry	n.a.	n.a.	n.a.	In the prospectus
5. Substantial Holdings							
a) Must substantial holdings be disclosed?	Yes	Yes	Yes	No	Yes	Yes	Yes
b) Percentage share that must be disclosed?	10%	Not defined	10%	n.a.	10%	5%	25%
c) Filing deadline	5 business days	Not defined	8 days	n.a.	n.a.	1 month	No, must be included in prospectus
d) Is this information public?	Yes, at the SUGEVAL	n.a.	Yes in the registry	n.a.	Yes	Yes	Yes, in prospectus
6. Prospectus							
a) Must prospectus be updated frequently?	Yes	Yes	No	No	Yes	Yes	Yes
Frequency	Annually	Annually	n.a.	n.a.	Any time the conditions of the offering have changed	Annually	Annually; 30 days after general report is submitted

Sources: Country authorities and IMF staff.

Table 6.A8. Debt Issuers: Registration Requirements

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
1. System							
a) Do issuers have to carry out separate registration and listing processes?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b) Is there an obligation to list debt issuances?	No[1]	No	Yes	Yes	Yes	Yes	No
c) Is there an obligation to carry out secondary market transactions in the stock exchange?	Yes	No	Yes	Yes	Yes	Yes	No
d) If no, is there an obligation to report all OTC transactions?	N.A	No. Mandatory as of 2008	n.a.	n.a.	n.a.	n.a.	No
2. Registration requirements							
a) Is there a minimum issuance amount?	C 100 million	No	No	No	No	No	No
b) Is standardization mandatory?	Yes	Yes	No	No	Yes	Yes	Yes
c) Is dematerialization mandatory?	No	No	Yes	No	No	No	No
d) Is a legal representative of debt holders required?	No	Yes	No	Yes	Yes	No	No
3. Risk rating							
a) Is rating mandatory?	Yes	Yes	Yes	No	Yes	Yes	No
b) If yes, number of required ratings	1	2	1 (2 for pension funds)	n.a.	1	1	
4. Financial statements							
a) Mandatory filing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b) Mandatory auditing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c) What are the accounting principles?	IFRS	IFRS	IFRS	Local GAAP	IFRS	US GAAP	IFRS or US GAAP
d) Number of audited periods that have to be presented	N.A.	3 fiscal years	Last fiscal year	N.A.	3 fiscal years	3 fiscal years	n.a.
5. Prospectus							
a) Mandatory filing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b) Minimum content:							
Issuance	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Issuance guarantees	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Issuing company	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Risk factors	Yes	Yes	No	Yes	Yes	Yes	Yes
Financial results (Management report).	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6. Legal and administrative Information							
Is there mandatory filing of the following documents:							
a) Company by-laws	Yes	Yes	Yes	Yes	Yes	Yes	No
b) Issuance agreements	Yes	Yes	Yes	Yes	Yes	Yes	Yes
c) Guarantees	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Sources: Country authorities; and IMF staff.
Notes: OTC = Over the counter; IFRS = International Financial Reporting Standards; GAAP = Generally Accepted Accounting Principles.
[1]But all secondary market transactions have to be carried out in the stock exchange.

Table 6.A9. Debt Issuers: Ongoing Disclosure Requirements

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
1. Rating							
a) Mandatory update?	Yes	Yes	Yes	n.a.	Yes	Yes	n.a.
b) Frequency	Biannually	Not defined	Every 3 months	n.a.	Every 3 months	Every 3 months	n.a.
2. Quarterly Financial Statements							
a) Is filing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b) Deadline	20 days if issuer does not consolidate; 30 business days if issuer consolidates with local companies; 40 business days if issuer consolidates with foreign companies	Not defined	30 days after end of quarter	Not defined	20 calendar days after end of quarter	1 month	2 months after end of quarter
3. Annual Financial Statements							
a) Is filing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
b) Deadline	40 days if issuer does not consolidate or consolidates with local companies; 50 days if issuer consolidates with foreign companies	Not defined	45 days after end of fiscal year	Not defined	30-Apr	3 months	3 months after end of fiscal year
c) Mandatory auditing?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4. Material Events							
a) Mandatory disclosure?	Yes	Yes	Yes	No	Yes	Yes	Yes
b) Deadline	Immediate but not later than 1 business day	Not defined	8 days	n.a.	15:00 hours of following day	Immediate	1 business day after it happened
5. Prospectus							
a) Mandatory update?	Yes	Yes	Only if sub-scription period was extended	No	Yes	Yes	Yes
b) Frequency	Annually	Annually	n.a.	n.a.	Any time offer conditions have changed	Annually	Annually; 30 days after general report is is submitted

Sources: Country authorities; and IMF staff.

Table 6.A10. Regulations of Mutual and Pension Funds

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
Mutual Funds							
Is there a legal framework?	Yes	Yes	No[1]	No[2]	Yes	Yes	Yes
Has the regulator issued complementary regulations?	Yes	Yes	n.a.	n.a.	Yes	No	Yes
Are the funds allowed to invest in:							
a) Public debt	Yes	Yes	n.a.	n.a.	Yes	n.a.	Yes
b) Stocks	Yes	Yes	n.a.	n.a.	Yes	n.a.	Yes
c) Corporate debt	Yes	Yes	n.a.	n.a.	Yes	n.a.	Yes
d) Securitization issuances	Yes	Yes	n.a.	n.a.	Yes	n.a.	Yes
e) Foreign securities	Yes	Yes	n.a.	n.a.	Yes	n.a.	Yes
Pension Funds							
Is there a legal framework?	Yes	Yes	Yes	No	Only for public pension funds	Yes, but not implemented	Yes
Has regulator issued complimentary regulations?	Yes	Yes	Yes	n.a.	Yes	n.a.	n.a.
Are the funds allowed to invest in:							
a) Local public debt	Max 50%	No	Max 50%	n.a.	Max 50%	n.a.	n.a.
b) Stocks	Max 10%	Yes	Max 5%	n.a.	Max 10%	n.a.	n.a.
c) Corporate debt	Yes	Yes	15-40%	n.a.	Max 10%	n.a.	n.a.
d) Securitization issuances	Yes	Yes	Max 20%	n.a.	Max 30% with rating	n.a.	n.a.
e) Foreign securities	Max 25%	No	Max 20% but must be done through the local stock exchange	n.a.	No	n.a.	n.a.

Sources: Country authorities; and IMF staff.
[1]Brokerage houses administer '*carteras de inversión*,' which are poorly regulated quasi-mutual funds.
[2]The legal framework includes '*sociedades de inversion*,' which are poorly regulated quasi-mutual funds.

Table 6.A11. Size of Emerging Capital Markets

(As of end-2006)

	GDP (US$ billion)	Equity Market Capitalization (US$ billion)	Equity Market Capitalization (% of GDP)	Bonds Outstanding (US$ billion)	Private Bonds Outstanding (US$ billion)	Equity + Private Bond Markets (% of GDP)
China	2,630.1	1,144.4	43.5	1,212.9	421.6	59.5
Brazil	1,067.7	708.4	66.3	795.2	228.8	87.8
Russia	979.0	1,030.0	105.2	124.5	61.4	111.5
Korea	888.3	815.1	91.8	1,110.8	643.2	164.2
India	886.9	816.5	92.1	345.7	40.8	96.7
Mexico	840.0	368.9	43.9	401.9	188.6	66.4
Turkey	392.4	154.0	39.2	226.4	8.7	41.5
Indonesia	364.2	137.3	37.7	105.8	20.5	43.3
Taiwan, Prov. of China	355.7	649.6	182.6	223.3	118.9	216.1
Saudi Arabia	348.6	322.8	92.6	3.4	n.a.	92.6
Poland	338.7	148.5	43.8	160.7	6.4	45.8
South Africa	255.2	383.6	150.4	135.5	57.4	172.9
Argentina	212.7	399.7	187.9	137.5	22.6	198.5
Thailand	206.3	137.8	66.8	121.8	46.0	89.1
Hong Kong SAR	189.5	1,715.4	905.0	115.4	95.3	955.3
United Arab Emirates	168.3	138.6	82.4	31.9	31.1	100.8
Malaysia	150.9	235.1	155.8	178.5	115.6	232.4
Chile	145.2	168.6	116.1	49.9	31.6	137.9
Czech Republic	141.8	50.8	35.8	88.5	15.7	46.9
Israel	140.2	130.4	93.0	19.6	11.1	100.9
Central America	*138.1*	*16.4*	*11.9*	*68.5*	*8.2*	*17.8*
Colombia	135.1	52.1	38.6	60.9	1.9	40.0
Singapore	132.2	363.8	275.3	124.2	67.9	326.7
Pakistan	129.0	46.9	36.4	34.3	0.6	36.8
Romania	121.9	26.6	21.9	4.4	1.1	22.8
Philippines	116.9	67.9	58.1	77.0	11.6	68.0
Nigeria	115.4	27.8	24.1	n.a.	n.a.	24.1
Hungary	114.3	42.3	37.0	87.1	14.7	49.9
Egypt	107.4	79.4	73.9	4.6	2.3	76.1
Ukraine	106.1	36.1	34.1	8.7	3.0	36.9

Kuwait	96.1	127.1	132.2	3.1	n.a.	132.2
Peru	93.3	48.0	51.4	17.7	5.5	57.3
Morocco	57.4	48.2	84.0	0.5	n.a.	84.0
Qatar	52.7	61.8	117.2	11.0	8.6	133.5
Croatia	42.5	29.0	68.2	14.3	0.9	70.4
Slovenia	37.3	15.4	41.2	2.0	0.2	41.8
Oman	36.0	12.9	35.9	1.2	n.a.	35.9
Guatemala	*35.3*	*n.a.*	*n.a.*	*8.9*	*0.1*	*0.4*
Dominican Republic	*31.6*	*n.a.*	*n.a.*	*13.1*	*0.2*	*0.6*
Tunisia	30.6	4.4	14.5	3.5	n.a.	14.5
Bulgaria	30.6	8.9	29.0	3.0	1.0	32.2
Lithuania	29.8	10.1	33.9	4.2	n.a.	33.9
Kenya	23.2	9.7	41.9	n.a.	n.a.	n.a.
Lebanon	22.6	7.1	31.5	43.9	0.9	35.3
Costa Rica	*21.4*	*1.8*	*8.6*	*15.0*	*5.0*	*31.9*
Latvia	19.6	3.0	15.2	1.2	0.4	17.2
El Salvador	*18.3*	*7.7*	*42.0*	*7.5*	*0.8*	*46.5*
Cyprus	18.2	16.5	90.3	4.9	3.1	107.2
Estonia	16.4	5.7	34.9	1.8	1.6	44.8
Panama	*17.1*	*6.8*	*39.8*	*12.5*	*2.1*	*52.0*
Jordan	14.3	27.8	194.2	0.2	0.0	194.3
Ghana	12.9	1.2	9.7	n.a.	n.a.	n.a.
Zambia	10.9	1.0	8.9	n.a.	n.a.	n.a.
Jamaica	10.6	5.9	55.6	4.0	1.1	66.3
Honduras	*9.0*	*n.a.*	*n.a.*	*3.5*	*0.0*	*0.0*
Mauritius	6.4	3.4	53.7	0.2	n.a.	53.7
Malta	6.1	1.8	29.9	0.3	n.a.	29.9
Nicaragua	*5.4*	*n.a.*	*n.a.*	*8.1*	*0.0*	*0.4*
Barbados	3.4	0.3	7.5	0.8	0.4	17.8

Sources: Local exchanges; Bloomberg.

Table 6.A12. Summary of Recommendations

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
Regulator's capacity to effectively regulate and supervise the market							
Independence							
Create a securities regulator			X				
Review role and composition of the board	X	X	X		X	X	
Strengthen administrative independence by removing limitations on number and salaries of staff					X		X
Appoint commissioner							X
Delink periods of commissioners from presidential periods					X		
Powers							
Securities market law	Amend	Amend	Revamp	Revamp			Amend
Provide explicit powers over brokerages	X						
Provide explicit powers over auditors	X						X
Provide explicit powers over rating agencies							X
Exchange of information		X					X
Disciplinary framework	X						X
Legal protection of staff							X
Resolve gaps in regulation and supervision of issuances by financial institutions		X					X
Establish informal mechanisms to discuss issues with industry							X
Carry out diligences with supreme court to explain powers							X
Supervision and enforcement							
Implement risk-based supervision of securities intermediaries	X	Too limited activity to assess	Enhance	Establish a securities regulator	Too limited activity to assess	Too limited activity to assess	Enhance
Implement a more active enforcement policy	X	Too limited activity to assess		Establish a securities regulator	Too limited activity to assess	Too limited activity to assess	
Clarify responsibilities of the exchange via MoU or other document	X	X	X	X	X	X	X

			Market infrastructure				
Trading							
Eliminate obligation to conduct repos through brokerage houses							
Work toward DVP		X	X	X	X	X	
Ratify treaty on payments	X	X	X	X	X	X	X
Central securities deposit							
Impose dematerialization and work on conversion of current physical securities		X	?	X	X	X	Prohibit reversion of demate-rialization
Eliminate central bank custody		X					
Capitalize CSD		X					X
Price formation							
Develop mechanisms for appropriate price disclosure		X					
Develop a strategy for mark to market valuation of *carteras de inversión*			X				
			Legal and regulatory framework for issuance				
Equity issuers							
Strengthen disclosure requirements for equity issuers		Enhance public disclosure	X	X	X	X	X
Include disclosure of insider holdings			Stricter rules	X	X	X	X
Include disclosure of substantial holdings				X			
Include disclosure of material events				X			
Deadlines for disclosure		Establish	Shorten				
Enact code of corporate governance		X	X	X	Improve	X	Improve
Debt issuers							
Stop non-standard issues	Central bank				Government, corps.		
Strengthen disclosure requirements by ensuring timely disclosure of material events			X				

Table 6.A12 *(concluded)*

	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Nicaragua	Panama
Registration process							
Streamline registration process		X					
Improve coordination with Stock Exchange			X		X		X
Expand shelf registration of bonds							X
ABS							
ABS regulation	Clarify authority of public institutions to constitute trusts for ABS purposes	Strengthen ABS framework	Enact ABS law	Enact ABS law	Strengthen ABS framework	Develop regulations for ABS	
Develop standardized mortgage contracts		X					
Develop reference rate		X					
Issue regulations for marketing of foreign securities		X					
Legal and regulatory framework for investment in securities							
Mutual funds							
Issue mutual fund regulations		X			X	X	Review
Enact mutual fund law			X	X			
Reduce rating requirement for pension fund investment			X				
Phase out *carteras de inversión*			X				
Pension funds							
Allow investment in government debt		X					
Allow investment in foreign securities		X					
Eliminate a second, individual security approval for AFPs' investments and replace it by general criteria for approved investments		X					

			Preconditions				
Commercial and corporate law							
Streamline process to constitute companies		X					
Streamline registration of mortgages		X			X		
Develop mechanisms for expedited execution of collateral	X		X				X
Modernize bankruptcy framework	X	X	X		X		X
Accounting, Auditing, and Transparency							
Implement IFRS			X	X	Complete	X	
Consider the inclusion of thresholds for filing and auditing of financial statements	X	Review thresholds	X	X	X	X	X
Enhance auditors requirements and oversight	X	X	X	X	X	X	X
Taxation							
Review taxation framework of different financial products		Eliminate/clarify imposition of 4.3% tax at origination and transfer to the SPV	Review taxation issues on mutual funds draft law				
Remove tax on financial transactions		X					

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This is an excellent and timely publication. In fact, at a time when simultaneous external shocks are striking the global economy, this publication constitutes a significant and valuable guide for policymakers in the region. It not only fills a void in applied research on Central America, but also provides specific policy recommendations on how to pave the way for sustainable economic growth and poverty reduction.

The authors, while recognizing the progress the region has made over the past years in terms of macroeconomic stability and growth performance, highlight the main challenges ahead to further reduce vulnerabilities and improve policy effectiveness aimed at bringing down income inequality and poverty. In this context, the book calls for more policy coordination among the Central American countries to keep up with increased regional and global integration. It makes recommendations on how to attract more foreign investment and reap the benefits of a customs union, without sacrificing needed tax revenue. On financial markets, the publication constitutes an important source of information on the main obstacles the region faces for the development of private debt and equity markets and the steps to follow.

The insights of this publication will be useful for policymakers, academics, students, and the informed public alike.

María Antonieta Del Cid Navas de Bonilla
President, Central American Monetary Council
and Central Bank of Guatemala

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