As all countries of the world, the Cuban economy is being affected in a negative way by the financial and economic crisis that erupted in the developed world in 2007/2008. Recently, the Cuban government announced new austerity measures including electricity rationing, a reduction of food rations, and a cut in capital spending in the 2009 budget. Previously, in early 2009, strict restrictions on foreign exchange transfers had been introduced by the Central Bank.

This paper discusses the transmission mechanisms of financial stress from advanced to developing countries and the evidence available that there has been a strong transmission mechanism at play from the financial crisis in advanced countries to developing countries, how recessionary conditions in developed countries are affecting the developing world, and how country-specific factors determine the degree of vulnerability of developing countries. It analyzes the specific Cuban circumstances and comments in general terms on what type of policies the Cuban government could adopt to address the crisis.

TRANSMISSION MECHANISMS OF FINANCIAL STRESS FROM ADVANCED TO DEVELOPING COUNTRIES

The global financial crisis that began in September 2007 with the financial turmoil in the U.S. sub-prime mortgage market is the most significant since the Great Depression of the 1930s. Following the collapse of Lehman Brothers in September 2008, the financial turmoil turned into a full-blown crisis and raised the specter of another Great Depression. Initially concentrated on advanced countries, the turmoil reached emerging countries and other developing countries. Towards the end of 2008, many developing countries experienced major stress in their foreign exchange, stock, and sovereign debt markets. Exchange rates came under pressure in all regions, leading to a combination of depreciation and depletion of foreign reserves. Concerns about declining capital inflows and external sustainability drove up sovereign spreads, particularly in emerging Europe and Latin America. Moreover, the deteriorating economic outlook hit stock markets hard.

There were significant withdrawals from equity markets and debt funds in emerging economies, as investment from mature markets retracted to consolidate positions at home to face increasing financial losses. At the same time, bank lending was scaled back. Abrupt slowdowns in capital inflows have typically had serious consequences for activity in emerging countries. Industrial production in these countries dropped precipitously at the end of 2008 with the steepest decline being recorded in emerging Europe, reflecting waning

1. The views expressed in this paper are those of the author and should not be attributed to the International Monetary Fund, its Executive Board, or its management.

2. This section draws from Chapter 4 of the International Monetary Fund (IMF)’s World Economic Outlook (WEO) (Washington: International Monetary Fund, April 2009).
import demand from advanced economies as a result of the credit crunch.

The staff of IMF’s World Economic Outlook (WEO) has come up with financial stress indexes to analyze the crises. For advanced countries, the financial stress index comprises sub-indices related to the banking sector (bank stock price volatility, the spread between interbank rates and the yield on treasury bills, and the slope of the yield curve); securities markets-related variables (stock market returns, stock return volatility); and exchange rate volatility. For emerging countries the financial stress index includes measures of exchange market pressure (e.g., depletion of international reserves), emerging economy sovereign spreads, price volatility of banking sector stocks, stock price returns, and time-varying stock return volatility. The index for advanced countries up to February 2009 illustrates the unprecedented breadth and intensity of the crisis. In addition, an analysis covering the period from 1996 through the first quarter of 2009 shows that the peaks of both indices for advanced and emerging countries are broadly coincident with the most recent data available showing that the financial stressed conditions exist worldwide.3

The April 2009 WEO concludes that the current crisis in advanced economies is much more severe than any since 1980, affecting all segments of the financial system in all major regions. For emerging economies, the current level of financial stress is already at the peak seen during the 1997–98 Asian crisis. The WEO indicates that there is a strong link between financial stress in advanced and emerging economies, with crises tending to occur at the same time in both. Not surprisingly, transmission is stronger to emerging countries with tighter financial links to advanced economies. In the current crisis, bank lending ties appear to have been particularly important, and this is the transmission mechanism that has been observed for developing countries that are not normally viewed as emerging markets. The current level of advanced economy stress and the fact that it is rooted in systemic banking crises suggest that capital flows to emerging economies will suffer large declines and will recover slowly, especially banking-related flows.

REAL AND PRICE EFFECTS ON DEVELOPING COUNTRIES OF THE RECESSION IN ADVANCED COUNTRIES

In addition to the capital outflows and the reduction of bank credit, the global financial and economic crises affect developing countries in a number of ways. As advanced countries enter into a recession, their demand for goods and services from developing countries declines. Indeed, the projected percentage decline in world trade in 2009 is more than threefold the projected decline in world output. This is a particular serious external shock for countries where exports account for a large part of GDP. For commodity exporters the decline in export revenue is not only a function of a drop in volume demand but also a drop in commodity prices. In the case of Cuba, tourism services have become the main source of foreign exchange earnings and the decline in national income in the main countries of origin of tourists visiting Cuba is bound to have a negative impact. The decline in national income is also likely to limit the amount of remittances sent by Cubans outside the island to their relatives.

COUNTRY SPECIFIC VULNERABILITIES

Individual country situations determine how vulnerable they are in the face of external shocks. There are a number of economic characteristics that play an important role in this respect.

On the external side, the strength of the external current account balance is an important consideration—to the extent that a country does not start the crisis with a large external current account deficit, a widening of the external current account deficit is a possible escape valve to the advent of the crisis. The level of net international reserves is another key aspect that determines how a country can weather the international storm. Countries with plentiful reserves can afford to draw them down to continue to meet its international obligations and maintain a minimum level of imports. Countries that have a flexible exchange rate regime can face better the external shocks by allowing the exchange rate to absorb part of the external shock. Balance sheet considerations are important in this respect because a country that has a high level of external in-

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3. April 2009 WEO.
debtedness can ill afford to allow a large depreciation of its currency. Borrowers from such a country with un-hedged foreign exchange debt would face problems meeting obligations and banks would face elevated credit losses. Concerns about financial stability could reduce external financing, and foster capital flight and dollarization, creating a negative feedback loop. Finally, on the external side, countries that face large external refinancing commitments (rolling over maturing medium- and long-term and short-term external debt) are particular vulnerable as the global financial and economic crises unfolds.

On the domestic side, the capacity of a country to face the global crises depends heavily on the fiscal space that governments have to introduce stimulus packages. Countries that have moderate fiscal deficits and have a sustainable debt position can afford to increase spending to arrest the decline in output and the increase in unemployment. Of course, the domestic and the external characteristics of a country are not independent of each other.

THE IMPACT ON CUBA

In analyzing the impact of the global crisis on Cuba, it is useful to frame the analysis in the context of Cuba’s balance of payments and its fiscal accounts. The main transmission mechanisms from the crisis in the global economy to Cuba are the impact on the prices of the main commodities that Cuba exports and of its imports (reflecting international market conditions); the demand for Cuban services like tourism and professional services provided abroad by Cuban citizens; changes in the level of remittances; availability of foreign bank credit; and the possibilities of external debt rescheduling. There is not a stock market in Cuba which spares the country from the type of capital outflows observed in other countries. The changes on these variables affect in turn the level of economic activity and the public finances.

TRADE ACCOUNTS

According to information published by the Oficina Nacional de Estadísticas, Cuba’s commodity exports are concentrated on mining exports (mostly nickel) that accounted for 57% of total exports of US$3,701 million in 2007, and nontraditional exports such as pharmaceutical and biotechnical products and medical equipment that accounted for some 29% of total exports.4 The share of sugar exports has declined to only about 5%. On the import side, imports of machinery and transport equipment, fuel, and food accounted for close to 70% of total imports of about US$10.1 billion.5 After registering trade deficits of some US$6.3 billion in 2006 and 2007, Cuba’s trade deficit widened to over US$10.6 billion in 2008 as total imports reached US$14.2 billion due in large part to an increase in oil and food prices, while exports were about US$3.6 billion, slightly less than the previous year.6 This negative swing of more than US$4 billion in the trade balance in 2008 probably produced a proportional swing in the external current account balance from a small surplus of close to US$500 million in 2007 to a deficit of more than US$3 billion in 2008, significantly diminishing the room for maneuver that Cuba had to confront the crisis in 2009.7

The behavior of international nickel prices (LME spot price, CIF European ports) suggests that the nickel industry has been significantly affected by the global recession. In 2008, nickel prices dropped by 43% and WEO projections indicate a further decline of another 30% in 2009. Nickel prices for 2010 are only expected to improve by some 10%. Taking into account that

6. The total export and import figures for 2008 are those of the Oficina Nacional de Estadísticas as reported by Reuters. Pavel Vidal Alejandro reports in “La Macroeconomía Cubana en 2008: Datos de cierre de año,” Economics Press Service No. 1, IPS, La Habana (15 de enero de 2009), that information given to the National Assembly in December 2008 indicate that food imports rose by US$840 million in 2008 because increases in food prices and that the increases in oil prices augmented the oil import bill by US$1,337 million. Food imports also rose in 2008 because of the damage done to agricultural production by the three hurricanes that went through Cuba that year.
most of Cuba’s mineral exports are nickel and that other mineral prices have also declined, a rough calculation would suggest that there could be about a two-third decline in the value of Cuba mineral exports from 2007 to 2009 (from a level of US$2094 million in 2007). Moreover, it has been reported in the press that the Canadian company Sheritt International closed one of the three nickel processing plants in Cuba due to the collapse of the nickel prices so that the decline in output in 2009 could be larger.8

Sugar international prices, meanwhile, increased in 2008 by 25% and are expected to increase by another 30% in 2009 due to production problems associated with bad weather in India, a major sugar exporter, and in Brazil. However, given the problems that the sugar sector has been experiencing in recent years in Cuba, it is unlikely that this sector can take advantage of higher prices and play a positive role in addressing the crisis. Unfortunately, not much information is available regarding the pharmaceutical and biotechnology sector (which has become an important source of foreign exchange earnings) to allow analyzing its competitiveness and prospects for the short term. To the extent that governments in most countries are being forced to restrain spending, it is possible that external demand for these Cuban exports will be sluggish. The reported figure of total exports of US$3.6 billion in 2008 should include an increase in oil exports which are actually re-exports of oil received from Venezuela. Pujol reported that these were around US$880 million in 2008.9 This appears to be a high estimate in view of the reported total exports figure for 2008 unless there was a sharp drop in other exports.

On the import side, food imports, which accounted for 15% of total imports in 2007, experienced price increases of some 25–40% according to various indices in 2008. However, the WEO commodity food price index projections show a decline for 2009: wheat prices are projected to decline by 15% and hold more or less steadily in the next two years. The projected decline of soybean prices is larger. It would appear, then, that Cuba will get some relief on the food imports side this year. A similar story can be told about oil prices for 2009 (oil imports accounted for almost 25% of total imports in 2007). After rising over 35% on average in 2008, average prices in 2009 are likely to return to the 2007 level. However, they are expected to rise in 2010 and 2011, suggesting that oil imports will continue to pressure Cuba’s import bill in the future. It should be noted, however, that Cuba’s oil imports come from Venezuela under very favorable financing terms and that oil imports do not pressure the foreign exchange reserves since the imports are being financed essentially by the accumulation of debt to Venezuela. The prices of the other important component of imports, machinery and transport equipment, are not likely to rise in 2009 and in the near future due to the recessionary conditions around the world. However, in US dollar terms, prices may rise somewhat if the dollar depreciates vis-à-vis the currencies of exporters to Cuba like China.

There are three other items of the external current account that need to be analyzed to assess the possible impact of the global financial crisis on Cuba: tourist receipts, other service exports, and remittances.

Tourism
Cuba’s tourism industry does not seem to have been affected in 2008 by the advent of the global crisis or the hurricanes that hit the island. In fact, visitors rose by some 6% and tourist receipts by about 13%. This is a much better performance than that of other Caribbean destinations, some of which experienced negative growth last year.

The Cuban government has reported that during the first five months of 2009, the number of tourist arrivals increased by 2%. However, notwithstanding this growth, the Minister of Tourism declared in May that, all in all, he expected fewer tourists in 2009 than in 2008. This belief is supported by what is happening in the economies of the countries where tourists to Cuba

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8. According to Reuters, Prensa Latina reported on January 5, 2009 that Cuba planned to produce around 76,000 tons of nickel and cobalt in 2009, or the same amount as in 2007. However, this was before the announcement by Sherritt International.
originate. For example, the April 2009 WEO projects that real GDP growth and real domestic demand for Canada, Germany, Italy, Spain and the United States, taken as a group, will both decline by 3% in 2009, stay unchanged in 2010, and only recover by 3% in 2011. These data suggest that citizens from these countries will travel less abroad in 2009 and 2010.

Services Exports
The assessment of the prospects for the exports of services in the areas of health, education, and sports is more difficult because no disaggregated information is published by the Cuban government on how the value of these services is calculated. Taking into account the estimates of tourist receipts for 2007 of US$2.23 million, the services export data published in the 2007 Annual Report of the Central Bank of Cuba indicate that exports of health, education and other countries were close to US$ 6,000 million, a rather large amount for a country the size of Cuba. A similar amount for the exports of non-tourist services is likely to be reported for 2008. A large share of these services goes to Venezuela and it is possible that these services are valued at prices favorable to Cuba as another form of Venezuelan foreign aid to Cuba. One would expect that, given the deteriorating economic conditions in Venezuela, the value of Cuban exports of these services would decline in 2009.

Remittances
Remittances to Cuba are also likely to be affected negatively by the projected decline of economic activity in countries like the United States and Spain, from where remittances to Cuba originate. Based on a review of studies on remittances to Cuba, the author has estimated that remittances could have been in the neighborhood of $800 million in 2005 and 2006. Assuming that remittances may have only marginally increased in 2008, the possible decline of remittances in 2009 could be rather small, probably less than $50 million, based on the belief that people sending remittances to their relatives and friends are likely to try to maintain the levels of sending given the dire circumstances in Cuba. The liberalization of U.S. restrictions on remittances by Cuban-Americans to Cuban relatives in the island is bound to have a positive impact on the value of remittances to Cuba.

Surprisingly, the 2007 Central Bank of Cuba Report notes that net remittances actually turned negative in 2007 to the tune of a net outflow of almost US$200 million, from a net inflow of US$277 million in 2006. According to its 2007 Annual Report, this is because of donations given by Cuba in the area of health care and education to over 70 countries. So it is possible that Cuba may need to reduce these donations as a means of confronting its crisis in 2009 and in the near future. The mentioned Central Bank Report shows net factor payments (interest payments and profit remittances) of US$960 million in 2007, compared with US$618 million in 2006. Cuba is also trying to confront the crisis by freezing foreign exchange transfers of foreign investors this year as noted earlier. There have been press reports that Cuba has fallen behind on the service of its debt and that it is requesting new debt restructuring agreements from some of its foreign creditors.

FINANCIAL (CAPITAL) ACCOUNT
An analysis of the impact of the crisis on Cuba’s financial account can only be speculative at best, given that the Central Bank does not publish information bearing on this issue. Regarding foreign direct investment (FDI), there is evidence that FDI has dropped in the last decade because the Cuban government has become more selective on the type of investment that it allows in Cuba. As a result, the number of joint venture enterprises has declined from a peak of 400 in 2001–02 to fewer than 250 in 2007. In a separate study, the author has estimated that FDI in 2005 and 2006 probably did not exceed US$275 million each year. The value of FDI may have increased in 2007 and 2008 particularly because of the increased economic relations with China and Venezuela and of the

11. Lorenzo L. Pérez, “Relaciones Económicas Internacionales de Cuba,” Table 11. This estimate was done assuming that the FDI numbers cited in a report to the National Assembly of June 2007 are carried out over a 3–year period.
interest on investments in the petroleum sector. However, FDI in Cuba has been most likely negatively affected in 2009 because of the world recession and the policy adopted by Cuba of blocking profit remittances abroad. The latter policy must have done great damage to foreign investors’ interest in the island.

The latest external debt statistics published by the Cuban Government refer to the end of 2007. The Central Bank 2007 Annual Report indicates that the “active” debt (the debt that Cuba is servicing) increased by US$1.1 billion in 2007 to US$8.9 billion (51% to official creditors, 21% to banks, and 28% to suppliers). The increase was almost solely related to government and bank credits. Unfortunately, no information is provided on whether the increase in the debt may have been the result of the recognition of debt incurred in earlier years or because the depreciation of the US dollar versus the currencies of its main trading partners. In addition, the Cuban government acknowledges a debt of some US$7.6 billion to Western governments that it is not currently servicing. These two amounts add up to an overall foreign debt of US$16.5 billion.

The figures above are very different from the estimates published by the Cuban Transition Project of the University of Miami: a total debt of US$23.8 billion at the end of 2007.12 The University of Miami estimates are derived from newspaper accounts which incorporate announcements of new credits given by Venezuela, China, Brazil, Iran and other countries. Venezuela extended credits to finance Cuban oil imports and China granted a revolving credit line to finance Chinese exports to Cuba. The University of Miami data shows that Cuba was able to continue to borrow heavily from some of its new creditors in 2008 and that its debt increased to US$31.7 billion by year end. The author has not found any official estimate of the stock of debt at end-2008. However, Vidal Alejandro reports the official figure for end-2008 “active” debt at US$9.9 billion, an increase of US$1 billion in 2008.13

There is another source of information that sheds some light on the impact of the crisis on Cuba. This is the data of bank credits of some 42 reporting countries that is published by the Bank for International Settlements (BIS). This source reports that bank credits to Cuba were US$1.8 billion at end 2007, which is essentially the figure that the Central Bank of Cuba reports. What is interesting to the question at hand is that BIS reports that bank credits to Cuba had increased to US$3.1 billion by September 2008, but that they declined to US$2.8 billion by December 2008. No information is yet available for 2009. The BIS data for the last quarter of 2008 suggests that bank credits may have been pulled back beginning in that quarter as the global financial crisis intensified. The steps taken in 2009 to restrict foreign exchange transactions by the Cuban government may have accelerated this trend and caused a reduction in credit transactions carried out in purely commercial basis. However, there is no information that the Venezuelan and Chinese programs have been reduced in 2009.

PUBLIC FINANCES

Finally, there is the impact of the global crisis on Cuba’s public finances. From 2000 to 2007, the fiscal deficit in Cuba averaged slightly above 3% of GDP according to official statistics. In 2008, the deficit more than doubled in terms of GDP reaching 6.7% but this was not related to the global crisis. There was an increase in spending associated with the three hurricanes that went through Cuba last year and with an increase in subsidies due to the rise in international food prices. Total revenue was higher than budgeted in 2008 on account of non-tax revenue that includes dividend payments of state enterprises and sales of assets and services.14 For 2009, the budget target is a deficit of 3,842 millions of Cuban pesos (5.6 percent of officially projected GDP). Tax revenue are projected roughly at the same nominal value of 2008 with a decline of the sales tax (associated with a decline in sales of electronic products) being offset by an increase in direct taxes.

14. No information is provided in official documents what are these sales of assets and services. By themselves they accounted for 31 percent of gross receipts in 2008 and are budgeted to be 34 percent in 2009.
The reduction in the fiscal deficit is projected on the basis of an increase of 10 percent of non-tax revenue and a cut of capital spending of 6.5 percent in nominal terms. No information is provided in the submission to the National Assembly on how the deficit is going to be financed. Given the fact that capital investment is being cut and the reductions in bank credit, the deficit is likely to be financed by the Central Bank and result in an increase of domestic liquidity.

SUMMARY OF THE IMPACT OF THE CRISIS ON CUBA

To summarize, analyzing the potential impact of the global crisis on Cuba in 2009 and beyond it is not an easy task. A lot would depend on events outside the control of the Cuban authorities but policies do matter too. On the external side, nickel exports are likely to suffer another sharp decline (some US$600 million) in 2009, although in recent days there has been speculation that nickel prices may recover in 2009 if industrial production has a turnaround in advanced countries sooner than originally expected. The value of other exports like sugar and pharmaceutical/biotechnical products could increase somewhat in 2009, but given the state of the sugar industry and world demand, any rise of these exports is unlikely to offset the decline in nickel exports. However, the decline in food and oil prices will provide some relief to the import bill, as well as the decline in the volume of imports because of the deceleration of economic activity in Cuba. All in all, the trade deficit is likely to be significantly smaller in 2009 than in 2008.

Only some qualitative conclusions can be offered for services and remittances in 2009. On tourism, there is a great uncertainty given the decline in income in the main countries of origin for Cuban tourism, but there is likely to be a positive-but-difficult-to-quantify effect of the lifting of U.S. restrictions on the travel to Cuba of Cuban-Americans who reside in the United States. A similar comment can be made about remittances to Cuba. The exports of services provided by educators and physicians will depend mostly on the understandings with Venezuela but they are unlikely to rise. One flow that is very much a function of the Cuban government policy is the level of grants provided to other countries in the form of services. This could come down as a result of the difficult Cuban situation. The Cuban government already has introduced restrictions on foreign exchange transfers for profit remittances and interest payments which may result in a substantial reduction on this type of outflow. All in all, the services and remittances flows on a net basis are also likely to improve, which combined with developments on the trade accounts and an accumulation of external debt service arrears, should result in the external current account deficit tending to disappear in 2009.

Regarding the financial account, in the current international environment and with the Cuban government restricting profit remittances and debt service, it is unlikely that FDI will be more than a few hundred million dollars, notwithstanding the frequent announcements of the opening of hotels in Cuba. Private bank credit to Cuba is likely to continue to contract during 2009. The key variable here is disbursements from bilateral credits from Venezuela, China, and other countries that have extended lines of credit to Cuba. Unless there is a major change in its policy, Venezuela will continue to cover the oil import bill and this oil financing could prove sufficient to cover the external current account deficit in its entirety. Cuba also may resort again to stop making amortization payments of its external debt. There are reports that this is occurring already. The other possible source of financing is the gross international reserves of the Central Bank of Cuba. The Central Bank does not publish information on its gross reserves. The Economist Intelligence Unit publishes a series on gross reserves that it has been built based on their estimates of the balance of payments and on a stock figure at a certain point in time. Its estimate for end-2008 is just under US$4 billion, or less about 3 and one-quarter months of 2008

15. *The Miami Herald* reported on July 2, 2009 that Cuba has failed to make three installment payments to Russia on a US$355 million credit signed in September 2006. This report is based on information published by the Russian Federation’s Audit Chamber. No information is provided on when these installments fell due. There are also anecdotal reports that Cuba is not paying the oil financing provided by Venezuela.
merchandise imports. But liquid gross reserves could actually be less, and, in any event, the Central Bank appears to be unwilling to run down its reserves by a substantial amount.

CONCLUDING REMARKS
So far, the Cuban government has faced the impact of the global crisis by introducing foreign exchange restrictions, accumulating debt service arrears, lowering government subsidies by reducing its commodity distribution program, and by rationing energy. On the financing side, the government is counting on the continuation of bilateral credits from friendly governments. Over the medium term, it is probably relying on an expansion of tourism, a recovery of nickel exports, and the development of the oil industry to better balance its external accounts. The problem with this approach is that it is imposing unnecessary hardships on the Cuban population by not encouraging a supply response from the economy to the crisis that could be obtained from price liberalization and a reduction of government intervention in economic activities. The official exchange rate continues to be at a totally unrealistic level that distorts economic activity. The exchange controls recently put in place are bound to discourage FDI in the future. The further accumulation of debt arrears will further damage the creditworthiness of Cuba, and the reliance on a few creditors is risky because these credits are being given for political reasons and political conditions could change in the future.

Cuba is not trying either to avail itself of the types of mechanisms that the international community offers to countries in dire financial situations like the one faced by Cuba. It is true that to rejoin the international community in many key forums, Cuba needs to reach some understandings with the U.S. administration to avoid the United States blocking such efforts and attaining debt relief. But clearly, the ball is now in Cuba’s court after the actions taken recently by the Obama administration.

A comprehensive response to the crisis would need to envisage a macroeconomic program that incorporates an inevitable fiscal adjustment and strong price liberalization measures throughout the economy, including the attainment of a realistic exchange rate level. Other measures that would need to be taken would be in the structural area, reducing government intervention in the economy, establishing the rule of law, and allowing the private sector (Cuban citizens included) to expand economic activities in Cuba. Such a program could be presented to international financial organizations and to the international community at large to obtain financial aid and multilateral debt relief.