This chapter contains two essays focusing on developing countries. The first deals with the determinants and the implications of inflows of workers’ remittances, while the second essay examines the sources of output volatility in these economies. The topics covered are of particular interest in light of the significant magnitude and rapid growth in remittances, and given that the present, relatively benign global macroeconomic conditions provide a window of opportunity to address some of the policy-driven sources of output fluctuations.

The first essay points out that remittances to developing countries have grown steadily over the past 30 years, and currently amount to about $100 billion a year. For many developing economies, remittances constitute the single largest source of foreign exchange, exceeding export revenues, foreign direct investment (FDI), and other private capital inflows. Moreover, remittances have proved remarkably resilient in the face of economic downturns. The essay finds that remittances can help improve a country’s development prospects, maintain macroeconomic stability, mitigate the impact of adverse shocks, and reduce poverty. Remittances allow families to maintain or increase expenditure on basic consumption, housing, education, and small-business formation; they can also promote financial development in cash-based developing economies. The essay therefore argues that significant benefits might flow from measures to reduce the cost of sending remittances, for instance by removing barriers to entry and competition in the remittance market. The analysis also suggests that the potential negative impact on remittances provides further grounds to be wary of exchange rate and similar restrictions. On a cautionary note, remittance-service providers must be appropriately regulated to diminish the risk of money laundering or terrorist financing. However, regulatory frameworks must take into account, and where possible minimize, any adverse impact on the cost of sending remittances.

Volatility of output growth has negative effects on long-term growth, welfare, and income inequality, particularly in developing countries. The second essay observes that although output volatility has been on a downward trend in most emerging market and developing countries in recent years, it remains considerably higher than in industrial countries. Also, unlike in industrial countries, the lion’s share of output volatility in emerging market and developing countries is driven by country-specific factors, underscoring the key role of domestic policies in reducing output volatility. Thus, the analysis suggests that while these countries have made important strides in strengthening macroeconomic and structural policies in recent years, more can and should be done to further reduce output volatility. A number of reform areas stand out as particularly important, particularly in sub-Saharan Africa and Latin America. These include improving the implementation of fiscal policy, making further progress in developing the financial sector, and carrying forward structural reforms to diversify the production base and reduce vulnerability to terms-of-trade shocks.

Workers’ Remittances and Economic Development

Flows of workers’ remittances to developing countries have grown steadily over the past 30 years, and currently amount to about $100 billion a year. This rising trend is likely to persist as population aging continues, and pressures for...
migration from developing to advanced economies increase. For many developing economies, remittances constitute the single largest source of foreign exchange, exceeding export revenues, FDI, and other private capital inflows. Moreover, remittances have proved remarkably resilient in the face of economic downturns and crises.

As a result, interest in remittances and their impact is rapidly growing, whether in policy circles including the G-8, among the research community, or indeed among potential remittance-service providers. Remittances are increasingly viewed as a relatively attractive source of external finance for developing countries, one that can help foster development and smooth crises. At the same time there are concerns, chief among them that remittances can be abused to launder money and finance terrorism. Unfortunately, to date there has been little systematic cross-country research on remittances. Against this background, this essay documents some key characteristics of remittances, discusses the available evidence on their determinants and impact, and highlights some of the most salient opportunities and policy challenges, including how to encourage and regulate remittances.

Growing workers’ remittances are just one of the many channels through which rising global migration flows may affect developing country welfare. On the positive side, migrants themselves often find better opportunities in their destination countries: they may also learn skills and gain experience that will prove valuable if they repatriate. Further, emigration may encourage the development of commercial networks, promote trade and investment flows, and lead to significant diaspora philanthropy. Set against this, “brain drain” and the loss of specialized human capital may hamper the development prospects of those left behind, for instance by affecting the tax base. A broad discussion of migration, however, would go well beyond the scope of this essay.

**Stylized Facts**

Overall, workers’ remittances constitute one of the largest sources of external finance for

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**Figure 2.1. Workers’ Remittances and Other Foreign Exchange Flows to Developing Countries**


Remittances to developing countries have been rising steadily over time. Currently, they are almost comparable to FDI, and exceed both non-FDI private capital inflows and official aid in magnitude.

![Graph showing remittances, FDI, non-FDI private capital inflows, and official aid from 1970 to 2003.](image-url)

Sources: IMF, Balance of Payments Statistics Yearbook; and IMF staff calculations.

1For a detailed definition of the components of remittances, see Appendix 2.1.
developing countries. Total remittance inflows grew five-fold between 1980 and 2003 to reach $91 billion, or 1.6 percent of developing countries’ GDP—an amount not far short of total inward FDI, and larger than all other private capital inflows (Figure 2.1). These numbers, it should be noted, reflect official balance of payment statistics. As discussed in Appendix 2.1, there are severe problems with these data, which in particular are likely to exclude remittances occurring through informal channels (such as hawala, cash carried by friends and relatives, and in-kind remittances). As a result, actual remittances may be significantly underestimated.

At a regional level, the Western Hemisphere and developing Asia in particular have experienced a major increase in remittance inflows, and currently account for the bulk of total remittance receipts (Figure 2.2). In absolute terms, the five single largest recipients of remittances during 1990–2003 were India, Mexico, the Philippines, Egypt, and Turkey (Figure 2.3). As a share of GDP, however, remittances are especially high among low-income, island, enclave, or generally small economies, such as Lesotho, Tonga, Samoa, Kiribati, and Cape Verde. In 24 countries, remittances during 1990–2003 amounted on average to more than 5 percent of GDP. In such countries, remittances are also very large relative to other sources of foreign exchange, such as aid or exports.

For remittance outflows, data are even patchier than for inflows. The main sources of recorded remittances are the United States, Saudi Arabia, Switzerland, Germany, and France (see Figure 2.2). Since the late 1990s, the United States has been by far the largest source of remitt-

1See also Ratha (2003) for an analysis of recent trends.
2However, over the past two decades, data collection practices appear to have improved. Further, there may have been some shift of remittances from informal to formal channels, reflecting both a general easing of exchange rate restrictions, and increased regulation, especially in the wake of the terrorist attacks of September 11, 2001. As a result, while the actual level of remittances is likely still underestimated, their growth rate may be overstated.
Development Impact of Remittances

At a very broad level, remittances help loosen the budget constraints of their recipients, allowing them to increase consumption of both durables and nondurables. Remittances also allow for increased human capital accumulation (through both education and health care), and for increased physical and financial investments (for example, in residential real estate or in starting up small businesses). In turn, these increased expenditures could affect a broad range of development outcomes.\(^3\) For instance, long-run output growth could accelerate as a result of the additional investments in physical and human capital. Such an outcome might be especially likely where a well-developed financial system and institutions allow remittances to be effectively intermediated and efficiently used. Potentially offsetting this, significant remittances could weaken recipients’ incentive to work (Chami, Fullenkamp, and Jahjah, 2003), or

\(^{3}\)See Rapoport and Docquier (2005) for a fuller survey and discussion.
might lead to real exchange rate appreciation and a concomitant contraction of tradable sectors (the so-called Dutch disease).

Even where remittances only have a minimal growth effect, they could have a marked impact on welfare. To the extent that the poorer sections of society depend on remittances for their basic consumption needs, increased remittances would be associated with reductions in poverty, and possibly inequality. Again, the relatively stable nature of remittances suggests that countries with access to significant remittance inflows may be less prone to damaging fluctuations, whether in output, consumption, or investment. In extreme cases, remittances might reduce the probability of financial crises. Such considerations are strengthened by the fact that remittances, unlike capital inflows, are unrequited transfers, which do not create future debt-servicing or other obligations.

As a first step, these hypotheses are tested using data on a broad sample of up to 101 countries, over the period 1970–2003. The sample and data are described in detail in Appendix 2.1. Results are also presented separately for a subsample of up to 50 economies that are relatively more dependent on remittances (specifically, where the average ratio of remittances to GDP exceeds 1 percent). Box 2.1 analyzes in greater detail the impact of remittances, and more generally of emigration, in the Caribbean countries, a group of small economies characterized by very large remittance inflows.

One important analytical consideration is that remittances may both influence and themselves be influenced by the economic variables of interest, such as output growth. In those countries and in time periods where growth is relatively weak, remittances may increase both because emigration increases and because workers

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Figure 2.4. Remittances and Other Foreign Exchange Flows: Volatility and Cyclicality


Remittances to developing countries, as compared with other forms of inflows, are very stable and display relatively little procyclicality. This makes them an attractive source of external finance.

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Sources: IMF, Balance of Payments Statistics Yearbook; and IMF staff calculations.

1 Volatility is defined as the standard deviation of the ratio of the relevant inflow to GDP.

2 Cyclicality is defined as the correlation between the detrended relevant inflow and detrended GDP.

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Set against this, poorer and lower-skilled households may benefit relatively little from remittances, both because they are less able to meet the costs associated with emigrating in the first place (Chiquiar and Hanson, 2005) and because immigration policy in advanced economies often favors skilled workers with a permanent occupation (Carling, 2004).
CHAPTER II   TWO CURRENT ISSUES FACING DEVELOPING COUNTRIES

The Caribbean is the world’s largest recipient of remittances, as a share of its GDP, and also has the highest emigration rate in the world, with evidence of massive brain drain. The region therefore provides an excellent case study of the determinants and effects of remittances and emigration.

Over the past decade, remittance flows to the Caribbean region have steadily increased, while other sources of external funding have declined. As a result, remittances currently constitute the second largest source of external finance for the Caribbean, behind private capital flows. Between 1990 and 2002, remittances increased from 3 percent to 13 percent of the region’s GDP (see the figure). In contrast, over the same period, foreign direct investment (FDI) declined from 11 percent to 7 percent, while official development assistance (ODA) decreased from 4 percent to 1 percent of GDP. As of 2002, 8 Caribbean countries (Haiti, Dominica, the Dominican Republic, Grenada, Guyana, Jamaica, St. Kitts and Nevis, and St. Vincent and the Grenadines) ranked among the world’s top 30 recipients of remittances, relative to GDP.

Remittances to the Caribbean are an important source of finance for private investment. Mishra (2005b) uses data from 1980–2002 for 13 Caribbean countries to analyze the macroeconomic impact of remittances. The estimates (based on a panel-data regression model that allows for country- and year-specific fixed effects) show that remittances have a statistically and economically significant impact on private investment. A 1 percentage point increase in remittance inflows increases private investment by 0.6 percentage point (all measured relative to GDP). This result is striking, given the common perception that remittances are used largely for consumption purposes. It is, however, consistent with the micro-level studies discussed in the main text, which show that remittances have a strong impact on investment in real estate, small enterprises, and agriculture.

There is also evidence that, in countries with larger remittances, real private consumption is less volatile. Micro-level studies, again discussed in the main text, indicate that remittances act as insurance, increasing significantly in response to adverse shocks (the Caribbean region is one of the most vulnerable regions in the world to natural disasters; see Rasmussen, 2004). So far, few studies have confirmed this insurance hypothesis at the macroeconomic level. However, Mishra (2005b) finds that remittances to the Caribbean do increase after a negative output shock, although with a lag. A 1 percent decrease in real GDP is associated with an increase in remittances of about 3 percent after a two-year lag.

**Box 2.1. Workers’ Remittances and Emigration in the Caribbean**

The Caribbean is the world’s largest recipient of remittances, as a share of its GDP, and also has the highest emigration rate in the world, with evidence of massive brain drain. The region therefore provides an excellent case study of the determinants and effects of remittances and emigration.

Over the past decade, remittance flows to the Caribbean region have steadily increased, while other sources of external funding have declined. As a result, remittances currently constitute the second largest source of external finance for the Caribbean, behind private capital flows. Between 1990 and 2002, remittances increased from 3 percent to 13 percent of the region’s GDP (see the figure). In contrast, over the same period, foreign direct investment (FDI) declined from 11 percent to 7 percent, while official development assistance (ODA) decreased from 4 percent to 1 percent of GDP. As of 2002, 8 Caribbean countries (Haiti, Dominica, the Dominican Republic, Grenada, Guyana, Jamaica, St. Kitts and Nevis, and St. Vincent and the Grenadines) ranked among the world’s top 30 recipients of remittances, relative to GDP.

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The magnitude of remittances to the Caribbean region is not surprising, given that the region has the highest emigration rates in the world: about 12 percent of its labor force has emigrated to OECD countries. The aggregate emigration rates, however, mask significant variation in the composition of emigrants by skill; in particular, the emigration rate is much higher among workers with more schooling. A majority of the Caribbean countries have lost more than half of their labor force in the tertiary education segment (with more than 12 years of schooling), and more than 30 percent of their labor force in the secondary education segment (9–12 years of schooling). The tertiary-educated labor force in Jamaica and Guyana decreased during 1970–2000 by 89 percent and 83 percent, respectively, owing to emigration to the OECD. In fact, almost all the Caribbean nations are among the top 20 countries in the world with the highest tertiary migration rates (Docquier and Marfouq, 2004; Mishra, 2005a). This likely reflects the combination of “pull” factors (higher wages abroad), “push” factors (limited domestic job opportunities for the highly educated), and low migration costs (not least because of the geographical proximity of the United States).

Mishra (2005a) finds that the costs of skilled-worker emigration are indeed significant. Calculations based on a labor demand-supply framework indicate that the changes in domestic labor supply and wages stemming from high-skill emigration lead to welfare losses for those workers and producers who stay in the country of origin. Adding to these losses are other costs to the economy, such as government expenditure on educating emigrants and the decline in productivity of those who stay behind. Set against this, of course, the migrants themselves experience large welfare increases.

There are two approaches the Caribbean countries could take with regard to migration and remittances: (1) introduce growth-enhancing reforms at home, thereby improving the investment climate and creating incentives that retain the highly skilled; and (2) seek to increase the benefits of emigration by adopting a “diaspora approach.” This approach uses the diaspora to build networks for trade, tourism, and investment promotion; harnesses its knowledge, skills, and assets; and attracts increasingly efficient forms of remittances.

Highly skilled workers might be less likely to emigrate if the higher education system were reoriented toward providing skills demanded within the region, in particular by the service sectors that dominate these economies. Such reorientation could include, for example, the establishment of hotel management institutes designed to meet the needs of the tourism industry. Given the heavy subsidies to tertiary education, governments also need to design policies to ensure that migrants internalize the costs of their education.

There is also scope to increase the growth benefits from migration, for instance by encouraging remittances. As discussed in the main text, remittances can boost welfare and growth, including through their impact on physical and human capital investment. Using remittances to finance development presents both an opportunity and a challenge. On the one hand, remittances are large and increasing, whereas aid and FDI have been declining; this suggests that the importance of remittances as a source of investment financing can only increase. On the other hand, it is not straightforward to design policies to encourage remittances and to channel them toward productive uses. The evidence presented in this box suggests that remittances are already having an important positive impact on the Caribbean economies. It is important that governments continue to ensure a favorable climate for remittance flows, and where possible enhance it by reducing some of the barriers, such as high transaction costs and long delays in check clearance, that discourage remittances.2

already abroad increase their financial help to families back home. Such endogeneity would bias the results from any simple regression analysis. The essay tries to minimize this problem by employing instrumental variable techniques. The main results of the analysis are as follows.

- Using a standard cross-country growth regression framework, there is no statistically significant direct link between real per capita output growth and remittances (Table 2.1). Likewise, there is no significant relationship between remittances and some of the other variables, such as education levels and investment ratios, which are included as controls in the growth regression. Further, these results apply regardless of the level of financial development in the recipient economy. It has been argued that that the growth impact of remittances might be felt most strongly in certain sectors, including in particular residential real estate: migrants might be most willing to remit funds if these are used for purposes that reinforce their links to their home country (Bouhga-Hagbe, 2004). Indeed, there is some evidence that construction activity is correlated with remittance inflows, but the sample size here is very limited.

- Turning to the link between poverty and remittances, if remittances are used mainly to finance basic consumption, they may have an effect on poverty even though their growth impact may be minimal. The results indeed suggest a strong link between poverty, whether measured using the poverty headcount or the poverty gap, and remittances (see Table 2.1; Adams and Page, 2003, and Adams, 2004a, report similar results). The impact may seem to be economically small: on average, a 2½ percentage point increase in the remittances/GDP ratio is associated with less than a ½ percentage point decrease in the share of people living in poverty. However, the analysis controls separately for the impact of average income and of inequality, as proxied by the

### Table 2.1. Regression Results: Impact of Workers’ Remittances

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Impact of Workers’ Remittances&lt;sup&gt;4&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Full sample</td>
</tr>
<tr>
<td><strong>Growth</strong></td>
<td></td>
</tr>
<tr>
<td>Output growth</td>
<td>−0.30</td>
</tr>
<tr>
<td>Education</td>
<td>−0.43</td>
</tr>
<tr>
<td>Investment</td>
<td>0.48</td>
</tr>
<tr>
<td><strong>Poverty</strong></td>
<td></td>
</tr>
<tr>
<td>Poverty headcount</td>
<td>−0.02*</td>
</tr>
<tr>
<td>Poverty gap</td>
<td>−0.01*</td>
</tr>
<tr>
<td><strong>Volatility</strong></td>
<td></td>
</tr>
<tr>
<td>Output volatility</td>
<td>−0.29**</td>
</tr>
<tr>
<td>Output worst drop</td>
<td>−0.74**</td>
</tr>
<tr>
<td>Consumption volatility</td>
<td>−0.45**</td>
</tr>
<tr>
<td>Investment volatility</td>
<td>−1.31**</td>
</tr>
<tr>
<td>Credit ratings</td>
<td>0.22**</td>
</tr>
</tbody>
</table>

<sup>1</sup>“Output growth” is measured in real, per capita terms.

<sup>2</sup>“Education” is measured using the secondary enrollment rate.

<sup>3</sup>“Investment” is measured using the investment/GDP ratio.

<sup>4</sup>Workers’ remittances are measured using the remittances/GDP ratio, except for the poverty regressions, where they are measured using logs of the remittances/GDP ratio. Coefficients are standardized: they indicate by how many standard deviations the dependent variable will change, if workers’ remittances increase by one standard deviation. Bold-facing, followed by either * or **, denotes significance at the 10 percent or 5 percent level, respectively. See Appendix 2.1 for details of the additional control variables.

<sup>5</sup>“Remittance-dependent” economies are defined as those where the remittances/GDP ratio exceeds 1 percent.

5As instruments for remittances, following Rajan and Subramanian (2005), we rely on two key geographic and cultural variables, which are both plausibly exogenous, and likely causally related to migration and hence to remittance flows. These variables are (1) the geographic distance between the country that is the recipient of remittances (“home country”), and the country that acts as host for the largest number of the source country’s migrant workers (“host country”); and (2) the presence of a common language in home and host countries. Since these instruments do not allow for sufficient variation over time, it is impossible to estimate the impact of remittances using a panel specification.

6Faini (2002, 2004) finds a significant positive relationship between growth and remittances using cross-country data, but his results are not robust to alternative specifications. Chami, Fullenkamp, and Jahjah (2003) find a significant negative relationship between growth and remittances; however, the instruments they employ do not seem well placed to handle the endogeneity problem.

7Roughly the increase observed in Mexico during the past 25 years, and equal to one between-country standard deviation.
Gini coefficient, and these variables are themselves likely to be influenced by remittances. As a result, the true impact of remittances on poverty may be substantially larger.

As for the link between volatility and remittances, micro-level studies suggest that remittances play a critical role in reducing the vulnerability of individuals to shocks such as natural calamities or civil wars (Rapoport and Docquier, 2005). The results here indicate that the presence of remittances also reduces the volatility of aggregate output, consumption, and investment (Table 2.1). Further, the impact is economically large: a 2½ percentage point increase in the remittances/GDP ratio is on average associated with a one-sixth decrease in output volatility. Of particular interest, an increase in remittances is associated with a reduction in the magnitude of the “worst drop” in output over the sample period, confirming that remittances may help dampen crises and recessions. Owing to data constraints, one cannot test the hypothesis that remittance inflows may help reduce the likelihood of balance of payments crises; however, remittances display a significant, positive association with credit ratings for sovereign debt. Overall, this provides strong evidence that remittance inflows help stabilize economic activity in recipient countries.

The impact of remittances, especially on output growth, may be hard to detect using macroeconomic data alone. First, as discussed, it is hard to disentangle the precise direction of the links, a problem that may not be fully solved by instrumental variable techniques. Further, some of the channels involved, such as those operating through human capital accumulation, may only be detectable over very long time periods. As a result, other studies that exploit household-level data, and usually draw on extensive surveys or on national censuses, may prove more convincing. Typically, these studies do find that households with access to remittances provide their children with significantly more education, engage in small-business formation on a greater scale, and accumulate more assets; further, the impact of remittances is especially large among poorer households, since these are subject to more severe credit constraints. On the whole, there are good grounds to conclude that remittances may play an important role in fostering growth, although more research is needed to understand the precise channels through which this might occur.

Set against this, remittances, like any other foreign exchange inflow, may carry a potential for Dutch disease-type issues. They may, for instance, lead to real exchange rate appreciation and increases in property prices, with remittances possibly influencing the local housing market, with apartment prices in central Yerevan now comparable to North American prices.
negative effects on those not fortunate enough to receive remittances. Nevertheless, and consistent with our analysis, Rajan and Subramanian (2005) find that remittances, unlike official aid or natural resource revenues, do not have systematic, adverse effects on a country’s competitiveness, including in labor-intensive, low-skilled, and tradable sectors. Part of the explanation may be that, since remittances accrue to private agents rather than to governments, they do not carry the same potential for stimulating corruption or wasteful spending. Also, given the relative stability of remittances, they seem unlikely to cause the real exchange rate volatility, or to require the difficult adjustments in other tradable sectors, that are often associated with fluctuations in natural resource exports.

The analysis so far has focused on historical outcomes. Looking ahead, remittance flows could also be exploited to accelerate financial development in recipient countries. In particular, to the extent that recipients can be persuaded to turn their remittances into deposits with financial institutions, remittances have the potential to bring a larger share of the population into contact with the formal financial system, expanding the availability of credit and saving products such as education loans, mortgages, and savings accounts (“banking the unbanked”). In turn, financial development will itself have positive effects on growth and development, both directly and by encouraging a more effective utilization of remittances. In a related vein, those banks involved in channeling remittance payments are increasingly finding that remittance flows (and the fees they generate for financial institutions) can be effectively securitized, like other future-flow receivables (Ketkar and Ratha, 2001). For instance, since 1994 there have been almost 40 issues of remittance-backed bonds in Latin America, accounting for over $5 billion. Such securitization has been an attractive way for some developing country banks to achieve investment-grade ratings, significantly reducing their borrowing costs.

While remittances yield important economic benefits, there is also a risk that they could be used to facilitate money laundering and the financing of terrorism. These important concerns are examined in Box 2.2 (see also El-Qorchi, Maimbo, and Wilson, 2003), which in particular argues that informal remittance-service providers need to be brought into the formal arena through an appropriate regulatory framework. Regulations should be clear and simple, and should neither impede the flow of remittances nor drive remittance systems further underground.

### Determinants of Remittances

Given the broadly positive impact of workers’ remittances on the economy, it is important to identify what factors may encourage remittances. The existing literature on the determinants of remittances is therefore briefly summarized. Since this literature is typically limited to one-country studies, with little comprehensive analysis, the essay then analyzes data on a broad sample of countries.

Remittances can be analyzed using two broad approaches: the “altruism” approach, and the “portfolio” approach. The altruism approach is based on the economics of the family; remittances are driven by migrant workers’ concern for the income and consumption needs of family members left in the home country. Under the portfolio approach, in contrast, migrant workers earn income, and must then allocate their savings between home country and host country assets. Here, remittances are fundamentally driven by an investment motive. Many studies combine the two approaches in their empirical analysis.

---

Remittance flows are an important source of financing for many countries. As discussed in the main text, a large proportion of remittances likely flow through informal remittance systems. The use of informal remittance-service providers may pose a particular risk of misuse for money laundering and financing of terrorism. There is a need to deal with this risk by integrating informal remittance-service providers into the formal arena through a regulatory framework. Such a framework, however, must take into account, and where possible minimize, any adverse impact on the cost of sending remittances and on the incentive to provide remittance services.

The regulatory framework, in both remitting and receiving countries, should focus on remittance-service providers that are not currently under any regulatory or prudential financial oversight, which includes compliance with Anti-Money Laundering and Combating Financing of Terrorism (AML/CFT) requirements. Banks and other financial institutions that conduct remittance operations but are already under the supervision of the relevant authorities, including for AML/CFT requirements, would not need to be subject to this remittance regulatory framework.

For regulatory purposes, the Financial Action Task Force (FATF), the international standard setter advises in its Special Recommendation VI that countries should license or register money or value-transfer providers, and that the latter should meet AML/CFT requirements. Countries will need to decide on a registration or licensing regime on the basis of domestic circumstances and their accepted tradition for regulatory practices. FATF has recognized that government oversight should be flexible and commensurate with the risk of misuse.

Registration systems and licensing systems are alternative approaches to applying a regulatory framework to remittance-service providers, each consistent with FATF recommendations. Registration systems raise few barriers to participation in the financial system but require sufficient resources for ex post monitoring by the supervisors to ensure compliance with the supervisory and AML/CFT requirements, using the information acquired during the application process. Licensing systems filter participation at the application stage to ensure that the remittance-service providers are suitable; this can reduce the level of compliance oversight afterwards. Because licensing puts more of the emphasis on the application phase, the initial requirements can result in fewer providers signing up.

Remittance-service providers should be consulted before regulations and the associated requirements are issued. Remittance-service providers in general want to protect against flows from criminal proceeds, and even support adoption of a formal regulatory environment to avoid being associated with criminals who engage in money laundering or financing of terrorism activities. Consultation is also important when assessing whether a registration or licensing regime should be adopted, since it will allow the authorities to gauge whether informal providers will be amenable to participating in the selected framework. If there are preexisting remittance-service provider associations, this will make the authorities’ task easier. If not, the authorities need to find different avenues for seeking the views of remitters to be regulated, including promoting the formation of associations and supporting self-regulation to ease providers into the formal system.

Requirements should be clear and simple, regardless of whether a registration or a licensing regime is adopted. This may include, depending on a country’s choice of a registration or a licensing regime, an application process, the need for

<table>
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</tr>
<tr>
<td>Registration systems and licensing systems are alternative approaches to applying a regulatory framework to remittance-service providers, each consistent with FATF recommendations. Registration systems raise few barriers to participation in the financial system but require sufficient resources for ex post monitoring by the supervisors to ensure compliance with the supervisory and AML/CFT requirements, using the information acquired during the application process. Licensing systems filter participation at the application stage to ensure that the remittance-service providers are suitable; this can reduce the level of compliance oversight afterwards. Because licensing puts more of the emphasis on the application phase, the initial requirements can result in fewer providers signing up.</td>
</tr>
<tr>
<td>Remittance-service providers should be consulted before regulations and the associated requirements are issued. Remittance-service providers in general want to protect against flows from criminal proceeds, and even support adoption of a formal regulatory environment to avoid being associated with criminals who engage in money laundering or financing of terrorism activities. Consultation is also important when assessing whether a registration or licensing regime should be adopted, since it will allow the authorities to gauge whether informal providers will be amenable to participating in the selected framework. If there are preexisting remittance-service provider associations, this will make the authorities’ task easier. If not, the authorities need to find different avenues for seeking the views of remitters to be regulated, including promoting the formation of associations and supporting self-regulation to ease providers into the formal system.</td>
</tr>
<tr>
<td>Requirements should be clear and simple, regardless of whether a registration or a licensing regime is adopted. This may include, depending on a country’s choice of a registration or a licensing regime, an application process, the need for</td>
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</table>

Note: The main authors of this box are Chee Sung Lee and Maud Bökkerink.

Kapur (2004) among others argues that “. . . remittances are an important mechanism to fund terrorism, civil wars, and liberation struggles. . . . In Somalia . . . a large portion of the remittances went to supply arms to the rural guerrillas who toppled the government in January 1991.” Other examples include support in Sweden for the Free Aceh Movement, in Canada for the Liberation Tigers of Tamil Eelam, and in the United Kingdom for the Kashmiri cause.
background checks, onsite and offsite monitoring, and compliance programs.

• As most remittance-service providers are small businesses, application procedures should be clear-cut and simple. Authorities should require an annual renewal of the authorization granted, so that regulators have at least yearly contact with providers. The authorities should be in a position to determine the principal provider but special attention needs to be focused on providers who are agents, franchise outlets, or subsidiaries of larger providers with extensive networks.

• Owners and managers of remittance-service providers need to be identified and subjected to at least a background check. Countries that choose a licensing regime may need to carry out thorough fit-and-proper tests to keep persons with criminal records from owning or managing a money transfer office. Applicants involved in financial crimes or possessing a history of insolvency should not be granted authorization.

• Countries should have onsite inspections and offsite monitoring to ensure compliance with regulatory requirements. For this purpose, remittance-service providers could be required to report and submit selected financial data and other information. This may help improve information on financial flows and the regulators’ understanding of the remittance business.

• Under current circumstances, one important remaining vulnerability concerns the settlement of balances because remittance-service providers may continue to use formal and informal arrangements for this purpose. This area is likely to remain opaque to supervisors, and further work on understanding settlements is needed.

• If a risk-based assessment determines that the remittance sector is vulnerable to abuse for money laundering and the financing of terrorism, all the remittance-service providers should put in place an AML/CFT compliance program.

AML/CFT requirements include the need for appropriate customer identification, record keeping, and the reporting of suspicious transactions.

• Appropriate documentation to identify customers is a strict regulatory requirement for all financial sector activities, including remittance services. This requirement may pose difficulty for remittance-service providers’ customers, who include undocumented or illegal migrant workers. Countries have addressed this difficulty in several ways. One practice is to set the cash threshold above which identification is needed at a level higher than average remittance amounts. Some countries allow the use of identification cards issued by a national consulate.

• Record keeping by remittance-service providers is essential and some countries have devised simple formats or provided software to assist providers. Guidelines are needed to ensure that transactions are transparent and traceable, to assist investigations when abuse is detected.

• The requirement for suspicious transaction reporting could pose difficulties for remittance-service providers. Awareness-raising, education, and training will be needed to improve the quality and number of suspicious transaction reporting.

Countries should impose sanctions for non-compliance with regulatory requirements. There are two levels of sanctions. First, the authorities must have the power to take actions against providers that choose not to register nor be licensed. Second, registered or licensed providers who do not comply with supervisory or AML/CFT requirements should be subject to sanctions similar to those imposed on other financial institutions, ranging from warnings and fines to revocation of permission to operate.

Some other important considerations for a regulatory framework are as follows.

• In developing countries, where beneficiaries are often in remote areas or otherwise have no access to banks and other financial institutions, customers may continue to rely mainly on informal remittance-service providers. In these countries, implementation of an effec-
At a broad level, remittance flows are clearly tied closely to migration patterns (although a full joint analysis of remittances and migration is beyond the scope of this essay). Drawing on the existing literature, the analysis here focuses on five broad groups of variables that could affect remittances (by changing either migrant stocks or the average remittances per migrant worker).

- **Economic activity in the migrant workers’ host country.** Improved host country economic prospects increase migrants’ employment chances and wages. This allows existing migrants to send more remittances, and may also encourage greater emigration from the home country, increasing future remittances.
- **Economic activity in the migrant workers’ home country.** Negative shocks to output, employment, and wages in the home country reduce the income of any family members left behind by the migrants. This may again encourage existing migrants to send more remittances, as well as push more people to emigrate. Home country economic activity is measured here using domestic GDP, lagged to minimize endogeneity problems.
- **Economic policies and institutions in the home country.** The presence of exchange rate restrictions and black market premia may discourage workers’ remittances and economic development. Empirically, host country economic activity is measured using “world output,” world oil prices are included as an additional control.
- **Economic policies and institutions in the home country.** Economic policies and institutions in the home country. The presence of exchange rate restrictions and black market premia may discourage workers’ remittances and economic development. Empirically, host country economic activity is measured using “world output,” world oil prices are included as an additional control.

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**NOTES**

13For a panel of 22 advanced economies during the period 1991–2000, remittance outflows are strongly and significantly correlated with the presence of foreign workers (after controlling for a time trend and country-specific fixed effects). A 2 percentage point (one within-group standard deviation) increase in the number of foreign workers as a share of the population is significantly associated with a ¼ percentage point (0.6 within-group standard deviation) increase in remittance outflows as a share of GDP. Likewise, Swamy (1981) reports a strong relationship between remittance inflows and the number of emigrants for Greece, Yugoslavia, and Turkey.

14Also, for many countries, data on the stock of migrant workers residing abroad, and their incomes, are very limited.

15Specifically, a weighted average of output in foreign countries, with weights equal to either (1) the share of migrant workers from the home country residing in each foreign country, where such data are available; or (2) the trade shares otherwise.
migrants from sending remittances. In particular, it is likely to shift remittances away from formal channels, such as banks, toward informal and unrecorded channels; any remittances may also be kept in the form of foreign currency cash. Macroeconomic instability, as manifested in high inflation or real exchange rate overvaluation, may have similar effects. In contrast, greater financial sector development, by making remittances easier and cheaper to send and receive, may encourage remittances. Empirically, economic policies and institutions are measured here using an indicator of whether multiple exchange rate systems are present; an indicator of restrictions on holding foreign exchange deposits; black market premia; financial sector depth, as measured by the ratio of bank deposits, bank assets, or stock market capitalization to GDP; and inflation.

- General risks in the home country. Political instability, or low levels of law and order, may discourage migrants from sending remittances, at least for investment purposes—for instance, because of the risk of expropriation or theft. Such risks are proxied here by the International Country Risk Guide measures of political risk and of law and order.

- Investment opportunities. Greater potential returns on host country assets as opposed to home country assets may encourage migrants to invest their savings in the host country, rather than sending them back as remittances. Investment opportunities on host country assets relative to home country assets are proxied here using the U.S. LIBOR.\[16\]

The analysis uses annual data on a panel of 87 countries during the period 1980–2003. The 1980s and the 1990s were also analyzed separately; since the results are similar to those for the full sample, they are not reported. The data are described in greater detail in Appendix 2.1. A panel regression is estimated, with workers’ remittances as a share of recipient-country GDP as the dependent variable. Throughout, we control for country-specific fixed effects\[17\] and a time trend.

Overall, the regression results confirm that policies and regulations can play an important role in determining remittance inflows (Table 2.2). More specifically, world output has a statistically significant, positive impact on remittances: stronger economic activity in migrants’ host countries increases the remittances sent to their home country.\[18\] Home country output has a significant negative impact on remittances, consis-

\[16\] For most developing countries, reliable measures of domestic rates of return are not available.

\[17\] These fixed effects may capture the impact on remittances of much of the cross-country variation in migration flows. However, their presence implies that we cannot estimate separately the impact of any largely time-invariant geographical, historical, or cultural factors affecting migration levels (such as geographical distance, or the presence of a common language, a shared border, or a single market between the host countries where migrants work and their home country).

\[18\] This suggests that, while remittances are typically relatively stable, they may nevertheless be subject to significant external shocks, especially where migrant workers are heavily concentrated in a single country and/or sector. In a dramatic illustration, the sharp drop in mining jobs in South Africa led to a collapse in remittances to Lesotho, from more than 50 percent of GDP in 1991–92 to less than 20 percent in 2003–04. In contrast, world oil prices have no significant effect on average remittances.
tent with the earlier finding that remittances help smooth fluctuations. The presence of multiple exchange rates also has a significant negative impact on remittances. Data on black market premia and on restrictions on holding foreign exchange deposits are only available for a limited number of countries, but within this subsample both variables likewise have a significant negative impact on remittances. Economically, the effects of policies and regulations are quite large: a full removal of all exchange rate distortions and restrictions is associated with an increase in remittances of 1–2 percentage points of GDP.\footnote{Financial development did not have a significant impact on remittances, nor did the broad measures of political risk or law and order.\footnote{Relative investment opportunities, as proxied by the U.S. LIBOR, also had no significant effect on remittances; the fact that remittances are little affected by rate-of-return considerations may help explain their relative stability when compared with many types of capital flows. It should be noted that remittance payments often incur significant transaction costs (involving both explicit fees and exchange rate spreads), and in some cases time delays. There are no systematic cross-country, time-series data on such costs (see Figure 2.5 for some estimates). However, the costs have drawn significant attention in the context of remittances from the United States to Latin America.\footnote{Owing to a lack of systematic data, this essay does not analyze the role of the tax treatment of remittances. However, anecdotal evidence suggests that incentives such as tax exemptions or preferential credits for migrants may affect significantly the share of remittances sent through the banking system. For instance, in Tajikistan, eliminating the taxation of remittances led to an increase in recorded remittances from $4 million in 2002Q1 to $56 million in 2004Q1.}} Financial development did not have a significant impact on remittances, nor did the broad measures of political risk or law and order.\footnote{Results are only shown for the ratio of bank deposits to GDP, but the conclusion holds regardless of the precise measure of financial development employed. For analyses of remittances to Latin America, see Amuedo-Dorantes, Bansak, and Pozo (2004), DeSipio (2000), Lindsay Lowell and de La Garza (2000, 2002), Meyers (1998), Orozco (2000, 2003, 2004a, 2004b), Suki (2004), Suro (2003), and Suro and others (2002).}
are as follows. First, transaction costs have declined significantly over the past few years, but often still amount to 5–10 percent or more of the sum remitted. Second, transaction costs display significant variation across countries. They seem to be especially low in some high-volume markets, such as remittances to Mexico; this may reflect greater intensity of competition among remittance-service providers, or the ability of such providers to spread fixed infrastructure costs over a larger volume of customers. Third, further reductions in transaction costs, even assuming no change in the volume of remittances sent, would automatically lead to increases in remittance receipts for developing countries. They could also encourage a shift in remittances away from informal, cash-based channels and toward formal channels.

Conclusions and Policy Challenges

For many developing countries, remittances are a very large source of foreign exchange, and have proved far more stable and less procyclical than other such sources. Remittances can help improve a country’s development prospects, maintain macroeconomic stability, mitigate the impact of adverse shocks, and reduce poverty. Remittances allow families to maintain or increase expenditure on basic consumption including food, on housing, education, and small-business formation; they can also promote financial development in cash-based developing economies.

To maximize the benefits from potential remittance flows, however, a number of key policy challenges need to be tackled.

- While the cost of sending remittances has declined in recent years, it remains very variable, and in several cases is still high. To the extent possible, efforts must be undertaken to reduce the cost of sending remittances, including by removing barriers to entry and competition in the remittance market. For instance, authorities could publicize information about available options for money transfers and the associated costs.

- Different macroeconomic and exchange rate policies may act to encourage or discourage remittances, and especially those flowing through the formal financial system. This potential impact must be taken into account by authorities, particularly in those countries where remittance inflows (actual or potential) are significant. For instance, the analysis provides additional grounds to be wary of exchange rate restrictions, such as restrictions on personal payments or the presence of multiple exchange rate systems. To some extent, unstable macroeconomic policies and exchange rate misalignments may also deter remittances.

- Remittance receipts could be leveraged by households to obtain better access to banking and financial services. Such an outcome would be more likely if formal financial intermediaries, including banks and microfinance institutions, entered the remittance market more actively. Again, governments may help here by reducing entry barriers.

- Remittance-service providers must be appropriately regulated and supervised to minimize the potential risk of money laundering, terrorist financing, or consumer fraud. However, regulatory frameworks must take into account, and where possible minimize, any adverse impact on the cost of sending remittances, and the incentive to provide remittance services.

- Better information is needed on the magnitudes and sources of remittances, including both inflows and outflows. Without such information, other challenges (such as regulating remittances, or developing new financial products to serve the needs of remittance senders and recipients) will remain extremely difficult.

- Remittances, like any other foreign exchange inflow, carry a potential for Dutch disease–type issues. In general, this does not appear to have had major adverse effects on economic performance. However, it does suggest that, in the presence of significant changes in remittance inflows, authorities may need to accept a greater degree of exchange rate flexibility than would otherwise be the case.