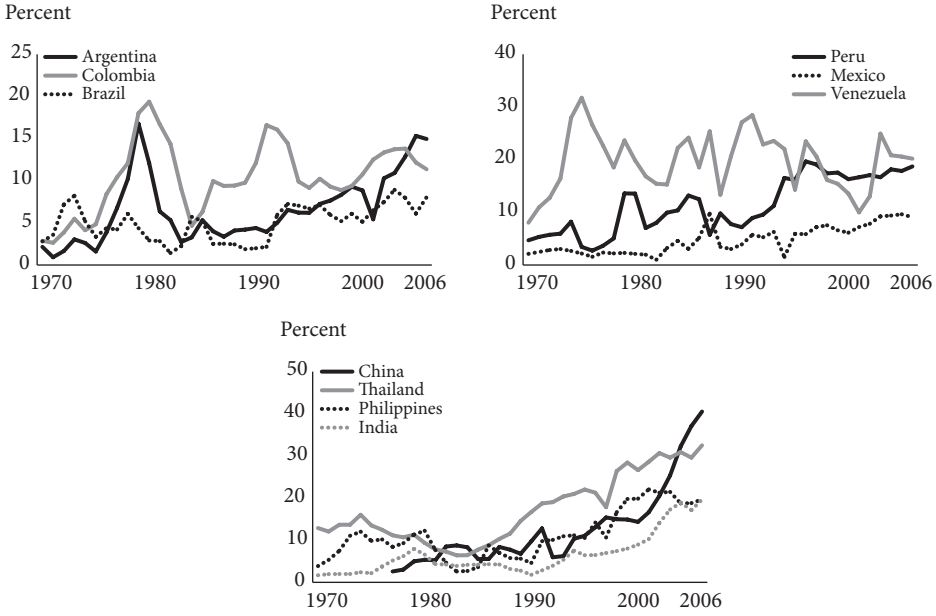
3 *Dealing with Liquidity Shocks and the Procyclicality of Private Capital Flows*

This chapter begins with a discussion of the ways and means of helping to reduce or mitigate risks associated with liquidity shocks and, more generally, with the procyclicality of private capital flows. As mentioned above, capital flow shocks have proven to be potentially devastating in the past, and the procyclicality of capital flows tends to amplify significantly the effects of real exogenous shocks. Although liquidity risks appeared low at the height of the 2003–2008 boom, given developing countries' high accumulation of international reserves and significant reduction of external short-term debt, the severity of the October shock has revealed once more their continued high vulnerability.

To significantly reduce or mitigate the effects of liquidity shocks, if left to themselves, those developing countries would have two costly choices or a combination thereof: They would have to reduce their outstanding external debt to very low levels and virtually abstain from using external finance, by consistently running current account and fiscal surpluses, which would, of course, limit their investment and growth potential. Or they would have to carry large international reserves, incurring significant financial costs, proportional to their country risk. To a large extent, this is precisely what happened in recent years, as shown in figure 3.1.

To avoid falling into such extremes, developing countries might try to partially protect themselves from liquidity risks by contracting contingent credit lines with

Figure 3.1. Net international reserves as a share of GDP



Source: Author's calculations based on data from *World Development Indicators* (World Bank 2007b) and IMF 2007.

international private banks. Both Argentina and Mexico did so after they suffered a sudden stop of capital inflows in 1995. Both contingent credit lines were called after the respective countries were hit by capital outflows in the aftermath of the Russian default of August 1998.[1] A study of that experience[2] shows that, in the Argentine case, the contingent credit line rendered little benefit to the country; in the Mexican case, the banks took too much risk. As a consequence, neither of these lines was renewed, and other countries and banks did not follow their example, to our knowledge.

Although there were specific design problems in both cases, in the last analysis the failure of these lines revealed two structural problems. First, by participating in only one or two contingent credit lines, private banks were not able to adequately diversify risks. International banks would be required to hold much lower reserves than individual countries if the banks were participating in a large number of such

1. Mexico called its line in September 1988, amid the first signs of capital flow retrenchment following the Russian crisis, an early decision that was bitterly contested by participating banks, which paid but refused to renew the credit line. Argentina waited to call its line until it was in the midst of a full-blown liquidity crisis in 2001, and by then it needed support from the International Monetary Fund and the World Bank to cover increased required collateral margins. It was finally able to withdraw only about one-third of the initial coverage, partly because of design failures.
2. Cordella and Levy Yeyati 2007.

lines around the world, thus achieving significant diversification gains. Because this was not the case, banks had to carry significant liquidity coverage, or otherwise hedge this high risk, at a substantial financial cost. Thus, both first-mover costs and coordination problems were behind these early failures and the subsequent lack of market development. Second, given the modest size of these facilities, the underlying reasons for private banks to behave procyclically remained intact: the incentives to rush out of the country before liquidity was exhausted. Thus, as the likelihood of a liquidity crisis began to increase, in the Argentine case, an increasing number of banks refused to roll over their initial commitments or otherwise hedged and reduced their exposure to the country, thus severely limiting the actual benefits of the contingent facility.

Multilateral official institutions are in a much better position than private banks to deal with these issues. In particular, as many authors have observed,[3] the International Monetary Fund (IMF) should play the role of international liquidity lender of last resort, because of both its mandate and its large capital base, though some authors suggest it would need to substantially increase its capital to effectively play this role in a world of potentially very large private capital flow reversals. For countries affected by endogenous crises, IMF programs require significant corrective policy actions and hence ex post negotiated conditionality. For exogenous liquidity shocks, such as the ones discussed here, the adequate instrument is, instead, a contingent credit line that disburses automatically when the exogenous shock arises.[4] The Contingent Credit International Line was an intended step in this direction, but it failed because of major design problems. First and most important, it lacked automatic disbursements. But also, eligibility criteria were such that only the strongest countries could apply—those that probably would not need the contingent credit line in the first place. And these countries did not want to signal any hidden weaknesses by applying to participate in a credit line that they were highly unlikely to call and that therefore did not render enough expected benefits. The new IMF Medium-Term Strategy contemplated the enactment of an automatic disbursement facility that would overcome the design failures of the Contingent Credit International Line, but little progress had been achieved over three years of discussion, until the international financial crisis struck full-blown last October, and then it was approved in a matter of days.

Because this paper focuses on the roles of multilateral development banks, it does not further discuss the IMF's role. Obviously, multilateral development banks cannot and should not assume the role of the IMF as a liquidity provider of last resort in major liquidity shocks. They have neither the mandate nor the capital base to play that role effectively, given the sheer differences in magnitude between private capital flows and official

3. Fischer 1999; Summers 1999; Cordella and Levy Yeyati 2005; Forbes 2006.

4. It is often difficult to tell exogenous shocks from endogenous shocks, however. Because of this, contingent credit lines may use parametric guidelines to disburse automatically (for example, a minimum increase of the overall Emerging Markets Bond Index or a minimum reduction of terms of trade or commodity prices).

development flows. But they could help to counteract directly and to some degree, even if far from fully, the procyclicality of private capital flows (and even to mitigate somewhat the effects of exogenous liquidity shocks) in at least two ways: by adopting a countercyclical role through their lending and by offering credit contracts with state-contingent disbursements. These two complementary options are discussed below. As mentioned above, multilateral development banks can also help indirectly reduce the problems associated with the procyclicality of private capital flows (as well as, in the margin, the probability and severity of liquidity shocks) by helping reduce currency, commodity price, and output volatility risks. The latter topics are discussed in subsequent chapters.

Is lending by multilateral development banks countercyclical?

It is common these days for multilateral development banks to publicize their countercyclical lending roles in their official statements. Indeed, as many critics of multilateral development banks have insisted, official lending can be justified solely for countries that have no access, or very expensive access, to private capital markets[5] or in cases in which there are major proven externalities associated with cheaper official lending.[6] However, these critics have consistently failed to notice the problems and risks associated with the procyclicality of capital flows and with exogenous liquidity shocks. Thus, a proper answer to their criticism is that official lending should be available precisely at times when private flows falter, and as a consequence, they should behave countercyclically, in contrast to the behavior of private capital flows.

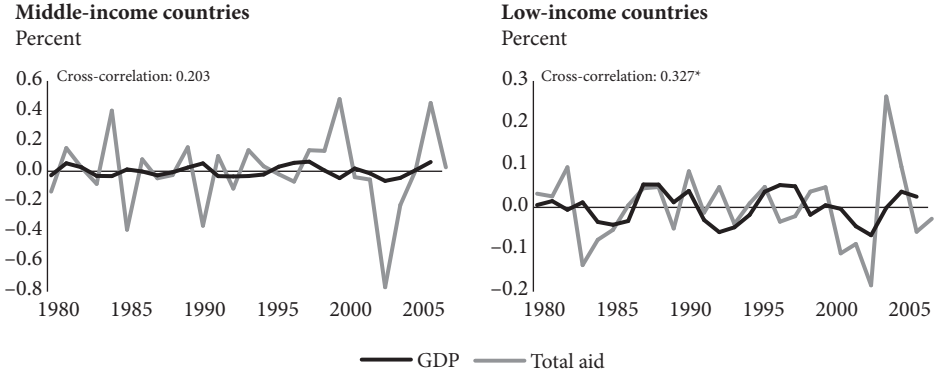
However, a cursory look at the data quickly dispels the notion that this is a generalized practice, as it should be. First, total aid flows behave procyclically, as shown in figure 3.2.

Furthermore, disbursements by multilateral development banks, aggregating at the regional level (shown in the third column of table 3.1), have tended to behave countercyclically in six cases, and in only two of these cases is this result statistically significant, while it has tended to be procyclical in twelve cases, four of which are statistically significant. Because this result could be due to lags between commitments and disbursements, the exercise was performed with commitment figures, and it yields essentially the same result (shown in the fourth column of table 3.1).

To illustrate whether lending has tended to be more countercyclical recently, or whether it has been countercyclical at times of sharp slowdowns, figure 3.3 presents the results of estimations using rolling windows. The individual graphs show no clear trend in most cases. They also show that even in the two regional cases in which lending was found to be significantly countercyclical during the estimation period

5. Meltzer 2000; Lerrick 2006; Einhorn 2001and 2006.
6. Presumably either through the associated technical assistance, conditionality, or incentives to undertake activities with large externalities (for example, environmental preservation).

Figure 3.2. Cyclical component of GDP and total aid



*Significant at 10 percent. The cyclical component is defined as the standard deviation of GDP from its trend.
Source: Author's calculations based on data from *World Development Indicators* (World Bank 2007b) and annual reports of multilateral development banks, 2000–2007.

in table 3.1, this result was driven by specific subperiods[7] and was not a consistent characteristic during the whole sampling period. Finally, there is some evidence in these graphs of countercyclical lending during times of crisis. These exercises were repeated for the largest countries in each region and found, as expected, significant divergence but essentially the same results. Overall, there are more cases of procyclical than of countercyclical lending during the sampling period. There are almost no cases of consistent countercyclical lending during the whole period, and lending tends to be countercyclical in times of deep crisis.

Why does multilateral lending tend to be procyclical more often than not, except in periods of deep crisis? In the author's view, as former insider, this is a consequence both of a lack of clear policies and of bureaucratic incentives. Normally, boards and management (especially chief financial officers) are all too happy to lend more, if possible, to countries that are doing well. Conversely, they are reluctant to lend more when countries are in a slowdown because "country risk" tends to increase in such periods, to a large extent precisely because of the procyclicality of private capital flows. It is difficult to find regional or country directors (or top management or board decisions) who refuse lending requests from countries that are doing well and who deliberately attempt to reduce exposure, as should be done, in such cases. The bureaucratic incentives are just not there. Lending programs and country strategy documents, on the contrary, often explicitly envision increases in lending if countries are doing well and very rarely contemplate increases in lending if countries are hit by exogenous shocks and find their access to private capital markets reduced.

7. 1992–1999 in the case of World Bank lending to East Asia and Pacific, and 1988–1994 in the case of World Bank lending to Sub-Saharan Africa.

Table 3.1. Correlations of GDP and disbursements by multilateral development banks (Regional data)

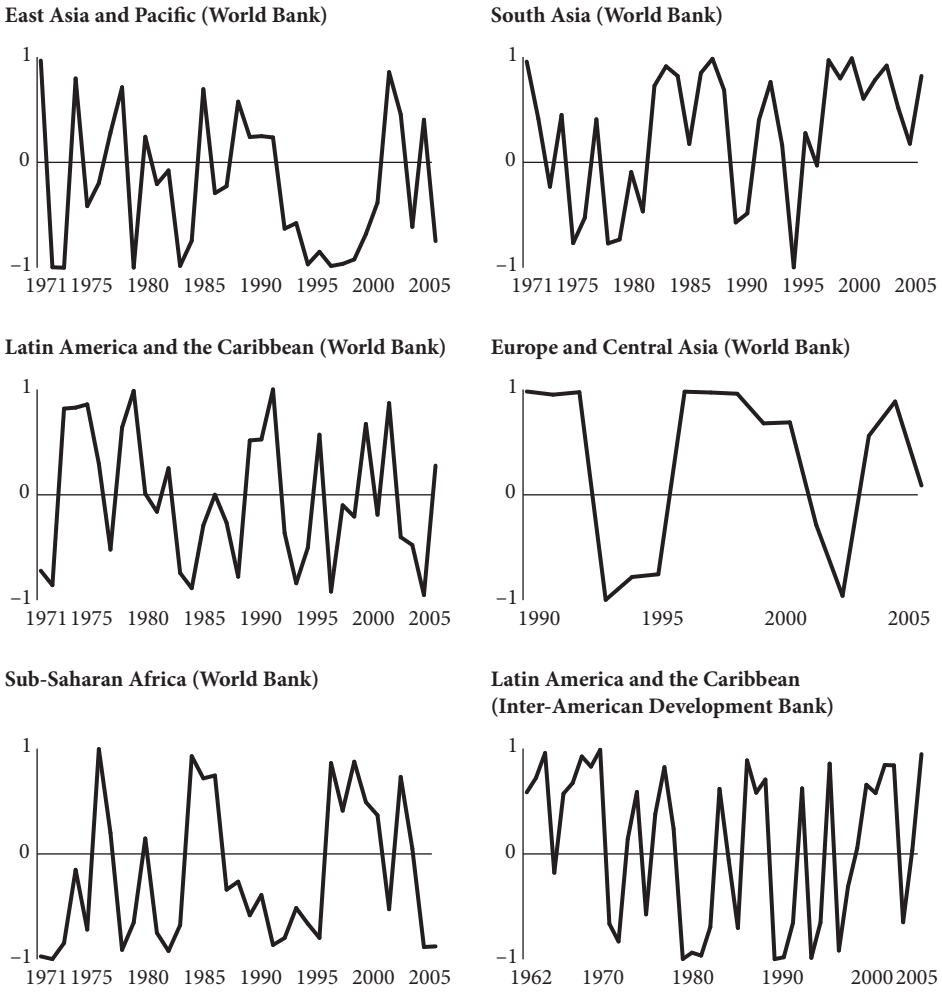
	Period	Disbursements	Commitments
Inter-American Development Bank (Latin America and the Caribbean)	1960–2006	0.051	
European Bank for Reconstruction and Development (Europe and Central Asia)	1994–2006	0.513	0.499*
World Bank (East Asia and Pacific)	1960–2006	–0.315*	–0.1611
World Bank (Europe and Central Asia)	1980–2006	0.350*	–0.371*
World Bank (Latin America and the Caribbean)	1960–2006	0.104	–0.202*
World Bank (Middle East and North Africa)	1960–2006	0.362*	0.388*
World Bank (South Asia)	1960–2006	0.179	0.055
World Bank (Sub-Saharan Africa)	1960–2006	–0.215*	–0.222*
Asian Development Bank (East Asia and Pacific)	1994–2006	–0.286	0.388*
Asian Development Bank (South Asia)	1994–2006	–0.018	0.2503
African Development Bank (Sub-Saharan Africa)	1994–2006	0.2417	0.1898
International Finance Corporation (Latin America and the Caribbean)	1962–2006	0.4551**	0.4045**
International Finance Corporation (East Asia and Pacific)	1968–2006	0.2655*	0.1990*
International Finance Corporation (Middle East and North Africa)	1963–2006	–0.0129	0.1211
International Finance Corporation (South Asia)	1967–2006	–0.1696	0
International Finance Corporation (Sub-Saharan Africa)	1964–2006	0.2349	0.0858
IFC (Europe and Central Asia)	1983–2005	0.2007	0.1048

Note: Calculations correspond to pairwise correlations between the standard deviation of cyclical components for each variable.

* Significant at 10 percent.
** Significant at 5 percent. Reported values of disbursements were calculated as the correlation of the cyclical component of GDP and disbursements over the sample period.

Source: Author's calculations based on data from the World Bank, European Bank for Reconstruction and Development, Asian Development Bank, African Development Bank, International Finance Corporation, and World Development Indicators (World Bank 2007b).

Figure 3.3. Rolling correlations: Regional GDP and disbursements by multilateral development banks (10-year windows)



Note: Reported values were calculated as the correlation between the cyclical component of GDP and disbursements taking, as a reference, 10-year rolling windows over the sample period.
Source: Author's calculations based on data from *World Development Indicators* (World Bank 2007b) and annual reports of the World Bank and Inter-American Development Bank, 2000–2007.

Usually, when a country's exposure to multilateral development banks is reduced in good times, it is the country authorities' decision to do so (for example, to reduce borrowings and prepay outstanding debt) that drives this result, much to the regret and occasional protests of multilateral development bank management.[8] Thus, multilateral development banks tend to behave procyclically, much as private banks do, in good times and for essentially the same reasons. And when country conditions deteriorate because of endogenous or exogenous factors, they tend to restrict lending much as private banks do and also for the same reasons, except when countries get into real trouble and borrow from the IMF. In those cases, multilateral development banks are asked to join the IMF programs with increased lending, not without some protest that liquidity provision should be the exclusive role of the IMF and that it is not part of the long-term "development" objectives of the multilateral development banks.

These internal policies, incentives, and attitudes reflect, in our opinion, a serious identity problem. Multilateral development banks tend to behave too much like private banks and investors, actually competing with them in good times (and with much internal discussion about how to become more competitive in terms of cost) and not substituting for them enough in not-so-good times, with the exception of really bad times, when they are pushed to do so by the IMF. By following this course, multilateral development banks actually play into the hands of their critics and are often not fulfilling a clear development role. Perhaps some stakeholders and some managers remain to be convinced that lending by multilateral development banks should be countercyclical, and this report should help to persuade them. In any case, it is clear that for multilateral development banks to actually perform countercyclically most of the time, lending and risk-management policies must change explicitly. The way country programs are designed should undergo significant changes, and incentives for area and country directors must change as well.

Lending by multilateral development banks to lower income countries, which normally have very limited access to private capital markets, tends not to behave procyclically as often as the banks' overall lending. See table 3.2 and figure 3.4. A significant portion of this lending comes from concessional resources that are managed with rules that are different from those applied to ordinary resources, which help to limit procyclicality. For example, allocations from the International Development Association are based on an internal assessment of the quality of the countries' institutions and policies. Such assessments turn out to be mildly procyclical in practice, as staff analysts tend to rate well countries that are growing well. It would be important to add countercyclical criteria, in an explicit way, to these assessments, thus increasing allocations to countries that are undergoing adverse exogenous shocks, other things being equal.

8. This was the case with several Asian countries that reduced borrowings from the World Bank in the early 1990s and many Latin American and Caribbean countries that have recently prepaid debts to multilateral development banks.

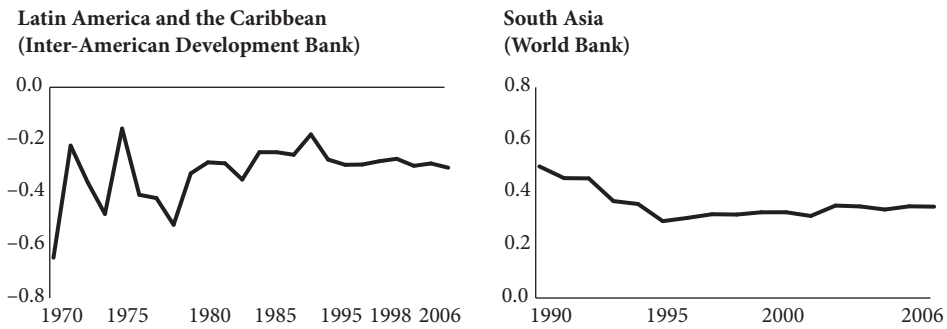
Table 3.2. Correlations of GDP cycles and disbursements by multilateral development banks to low-income countries (Regional data)

	Period	Disbursements
Inter-American Development Bank (Latin America and the Caribbean)	1961–2006	–0.3053*
European Bank for Reconstruction and Development (Europe and Central Asia)	1994–2006	–0.0395
Asian Development Bank (South Asia)	1997–2006	0.0599
World Bank (South Asia)	1980–2006	0.3468*

*Significant at 10 percent.

Note: Reported values were calculated as the correlation of the cyclical component of GDP and net disbursements to low-income countries over the sample period.

Figure 3.4. Rolling correlations of GDP cycles and disbursements by multilateral development banks to low-income countries



Note: Reported values were calculated as the correlation between the cyclical component of GDP and net disbursements to low-income countries taking, as a reference, 10-year rolling windows over the sample period.
Source: Author's calculations based on annual reports, *World Development Indicators* (World Bank 2007b), and IMF *International Financial Statistics*.

Multilateral development bank experience with contingent disbursements

Some multilateral development banks have experimented in a limited way with contingent loans or credit lines. For example, a few years back the World Bank instituted the deferred drawdown option, which could be exercised with any approved loan: after the loan was approved through usual procedures, the government could opt to defer disbursements to a later date (during the next three years), depending on actual need. However, there were very few takers, apparently because of pricing issues and lack of full automaticity of the deferred disbursements. The World Bank's board recently approved a reform to overcome these limitations. A few operations had been approved

before the October crisis, and significant interest had been expressed by many mostly middle-income countries. Other multilateral development banks have also offered contingent loans and credit lines in modest amounts.

For these cases to enter the mainstream, it would appear that multilateral development banks need to incorporate arrangements for more significant contingent lending within country strategy programs, as part of an explicit countercyclical strategy, and not just leave it to options to be exercised on a case-by-case basis when individual loans are negotiated.