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Research Summaries

Governance of Banks

Luc Laeven

Recent turmoil in financial markets following the announcement of heavy losses by major banks on exposures to mortgage-backed securities has reinvigorated an ongoing debate on whether banks are properly governed and regulated. If bank managers are subject to sound governance mechanisms, this enhances the likelihood that banks will efficiently mobilize and allocate savings, and encourage sound governance of the firms they fund, thereby lowering firms' cost of capital and accelerating economic growth. Until recently, virtually no research studied how a bank's private governance arrangements, including those covering its ownership and management structure, combine with national laws and regulations to determine bank performance and stability. This article reviews recent IMF research on the impact of bank governance and regulations on bank risk and valuation.

Research suggests that well-functioning banks promote economic growth. When banks efficiently mobilize and allocate funds, this lowers the cost of capital to firms and accelerates capital accumulation and productivity growth. Furthermore, banks as creditors and equity holders play an important role in governing firms. Thus, if bank managers are subject to *(continued on page 2)*

Is There a Foreign Aid Paradox?

Thierry Tressel

In recent years, world leaders have pledged a large increase in official development assistance to help poor countries achieve the Millennium Development Goals by 2015. To maximize the benefits of forthcoming aid flows, policymakers must be aware of the macroeconomic challenges that need to be addressed to maximize the benefits of large and volatile aid flows. This article reviews recent IMF research on the macroeconomic consequences of aid flows in low-income countries.

The best way to alleviate poverty in low-income countries is by an acceleration of economic growth. Unfortunately, the empirical literature on the growth effects of aid has found no robust positive conditional or unconditional effect of aid on economic growth in cross-country regressions. In a recent paper, Rajan and Subramanian (2005a) showed that, after correcting for the possibility that aid goes to the countries that are doing badly by using instrumental variables techniques, one does not obtain any significant positive or negative effect of aid on growth on average. This does not mean that aid cannot, under any circumstances, boost growth. Instead, the interpretation is that, in the *(continued on page 4)*

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sound governance mechanisms, this enhances the likelihood that banks will allocate society's savings efficiently and encourage sound governance of the firms they fund.

Nevertheless, little is known about which laws and regulations enhance the governance of banks. One standard rationale for government regulation of banks is that shareholders and creditors lack sufficient mechanisms for exerting sound governance over complex and opaque banks, especially in the presence of deposit insurance. But are banks different, and do the same corporate control mechanisms that work in nonfinancial corporations also work in banks?

As for any firm, shareholders of banks have an incentive to increase risk by increasing leverage, thereby enhancing the value of their equity stakes. Managers may prefer to opt for lower risk, given that their human capital is tied up with the firm. These conflicting risk preferences between the bank's shareholders and managers result in a classical principal-agent problem. There are, however, several reasons to believe that banks are special, both in terms of the complexity and the severity of the problem. First, society may care more about bankruptcies of banks than those of firms, given the strong negative externalities associated with bank failures. Second, banks are highly leveraged institutions, thus exacerbating the shareholder-manager conflict. Third, banks' debt holders chiefly consist of depositors who are likely to be ineffective in monitoring shareholders' actions, thus intensifying agency problems. Fourth, banks are considered by many to be extremely complex and opaque, and the resulting information problems may intensify agency problems. Finally, banks are heavily regulated. Banks in most countries face regulations on capital requirements, entry restrictions, portfolio restrictions, and deposit insurance. Although such regulation is a rational response to market failures in banking, certain regulations could exacerbate the problem. For example, deposit insurance, by reducing the incentives of debt holders to monitor the bank, may intensify the ability and incentives of stockholders to increase risk. The existence of bank regulation changes the nature of information problems, because the regulator itself is an interested party.

Recent papers by Caprio, Laeven, and Levine (forthcoming) and Laeven and Levine (2007a) assess the impact of ownership structure on bank risk and valuations, while controlling for international differences in bank regulations and investor protection. A critical contribution of these papers is that they simultaneously examine an individual bank's private governance structure, including its ownership and management structure, and the legal and regulatory environment in which it operates. Since both bank-level and country-level factors influence bank behavior, it is valuable to examine these together. As part of their research, the authors collected new information on the ownership and management structure of banks and merged this with data on bank regulations around the world. The new database covers detailed data on banks across 44 countries and traces the ownership of banks to identify the ultimate owners of bank capital and the degree of ownership concentration.

It turns out that banks around the world are generally not widely held, despite government restrictions on the concentration of bank ownership. About 75 percent of major banks have single owners that hold more than 10 percent of the voting rights. Of these controlling owners, more than half are families. Although concentration of ownership is also common among nonfinancial firms, and is believed by many to be an effective mechanism to exert corporate control, most governments restrict the concentration of bank ownership and the ability of outsiders to purchase substantial stakes in banks without regulatory approval, generally to limit concentrations of power in the economy. Caprio, Laeven, and Levine (forthcoming) show that these regulatory restrictions are often ineffective or not well enforced. Families employ various schemes, such as pyramidal structures, to build up control in banks. Existing regulatory restrictions on bank ownership are largely ineffective in preventing family ownership of banks.

Strong shareholder protection laws may enhance the governance of firms by limiting the expropriation of minority shareholders. For banks, however, not everyone agrees that shareholder protection laws will effectively thwart expropriation. Even with strong investor protection laws, small stakeholders may lack the means to monitor and govern complex banks. Furthermore, bank regulations may be sufficiently pervasive to render shareholder protection laws superfluous. Thus, the impact of investor protection laws on banks may differ from their impact on other firms. Research on non-banks also shows that the incentives of the controlling shareholders to expropriate resources are negatively related to their cash-flow rights, and that greater cash-flow rights can mitigate the adverse effects of weak shareholder protection laws.

The analysis in Caprio, Laeven, and Levine generates four key results on the governance of banks. First, larger cash-flow rights by the controlling owner boost valuations. The evidence is consistent with theoretical predictions that concentrated ownership reduces incentives for insiders to expropriate bank resources, which, in turn, boosts valuations. Second, stronger legal protection of minority shareholders is associated with more highly valued banks. This suggests both that expropriation of minority shareholders is important in many countries and that legal mechanisms can restrict expropriation of bank resources. Third, greater cash-flow rights mitigate the adverse effects of weak shareholder protection laws on valuations. Thus, a marginal improvement in

legal protection has less of an impact on a bank's valuation as the controlling owner's cash-flow rights increases. Put differently, a marginal increase in ownership concentration has a particularly large impact on valuations when legal protection of minority shareholders is weak. These last two findings support a skeptical view of regulatory strategies seeking to minimize ownership concentration if these strategies also reduce the controlling owner's cash-flow rights, especially in environments with weak legal protection of minority shareholders. Fourth, after controlling for the cash-flow rights of the controlling owner, bank regulations do not have an independent association with bank valuations. Taken together, the results indicate that the same core corporate control mechanisms that influence the governance of nonfinancial firms also influence bank operations.

Laeven and Levine (2007a) examine the impact of ownership structure, managerial shareholdings, and national laws and regulations on banks' risk-taking. Given that banks' risk-taking depends on the charter value of the bank (e.g., Boyd and DeNicolò, 2005), their analysis also controls for bank valuation. They extend the Caprio, Laeven, Levine dataset by adding data on managerial ownership and board representation. They find that large owners with substantial cash-flow rights tend to induce banks to increase risk, but the relationship between ownership structure and risk-taking depends on the role of the large owner in managing the firm, investor protection laws, and regulations. This finding is consistent with a variety of theoretical models predicting that large owners have the incentives to induce managers to increase risk-taking after collecting deposits and debt from investors. They also find that effective legal protection of small shareholders reduces the need for large shareholders and their impact on corporate behavior; further, the impact of cash-flow rights of the large owner on bank risk-taking diminishes when the large owner is also an executive manager with substantial human capital and private benefits of control tied to the bank's existence.

On management structure, Laeven and Levine (2007a) find that small changes in managerial shareholding are unassociated with bank risk-taking, but bank risk falls when the large shareholder is an executive manager. These findings are consistent with predictions that a bank manager has substantial human capital invested in the bank and may also enjoy private benefits of control (see Litov, and Yeung, forthcoming).

In terms of regulatory policies, the two key components of Basel II—capital requirements and official supervisory oversight of banks—do not reduce bank risk-taking. Rather, regulations that promote loan diversification reduce bank risk, while regulations that restrict banks from diversifying income flows by providing nonlending services increase bank risk-taking.

Laeven and Levine (2007b) provide direct evidence in support of agency problems in banks. They find that diversification of activities within a single financial conglomerate intensifies agency problems between corporate insiders and small shareholders, with adverse implications for the market's valuation of the conglomerate. Their results are consistent with theories that stress intensified agency problems in financial conglomerates engaged in multiple activities and indicate that economies of scope are not sufficiently large to produce a diversification premium.

Banks' credit allocation also responds to improvements in the corporate governance of firms. De Nicolò, Laeven, and Ueda (2007) show that firms that depend on banks and other intermediaries for their financing grow more if they have better corporate governance quality. Thus, there are reasons to believe that sound governance of both banks and firms is crucial for economic growth.

Future work on bank governance should consider not just the conflicts that may arise between large shareholders and managers. Laeven and Levine (2007c) show that, in reality, ownership structures are often complex. About one-third of publicly listed firms in Europe have multiple large owners that each control more than 10 percent of the votes. The market value of firms with multiple block holders differs from that of other firms and depends on the distribution of cash-flow rights across these multiple large owners.

Overall, these papers' findings both question the view that banks do not respond to private governance mechanisms and challenge the current approach to bank supervision and regulation that relies on capital regulations and official supervisory monitoring of banks.

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Is There a Foreign Aid Paradox?

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past, aid was used in ways that have not systematically led to an acceleration (nor to a deceleration) of growth.

Is the lack of consistent results disappointing? Undoubtedly yes. However, this may not be a surprise, considering the findings of existing research on the growth effects of capital flows. Indeed, cross-country regressions have also failed to uncover strong macroeconomic gains associated with financial globalization in general (Kose and others, 2006). Thus, as in the case of other types of capital flows, the costs and benefits of aid must be analyzed through the lenses of their "indirect effects" on institutions and macroeconomic management.

A concern sometimes raised is that, by expanding a government's external resource envelope, foreign aid might weaken institutions by reducing a government's sense of accountability to its citizens. For example, sustained periods of large aid inflows could potentially weaken efforts to mobilize domestic revenues, resulting in significant public financing gaps when aid is phased out (Gupta and others, 2005). Rajan and Subramanian (2007) provide evidence consistent with such institutional mechanisms by showing that industries that are most sensitive to bad governance grow at a slower pace in countries that receive more aid. Greater selectivity of aid may reduce such adverse governance effects. Claessens, Cassimon, and van Campenhout (2007) show that, fortunately, the allocation of aid has become more selective in recent years, and has become more responsive to economic fundamentals and the quality of a country's policy and institutional environment.

Aid flows to poor countries are often very volatile and unpredictable, which reduces their effectiveness (Bulíř and Hamann, 2006; Celasun and Walliser, forthcoming). Indeed, volatile and unpredictable aid flows can significantly complicate public expenditure management. It would be highly damaging if spending on recurrent expenditures (such as in the health and education sectors) had to be adjusted upward and downward at a high frequency to match the vagaries of aid flows. Moreover, weak monitoring and management of public expenditure may limit the capacity to quickly absorb large amounts of aid effectively.

When facing volatile and unpredictable aid flows, poor countries should aim to spend them in the medium term to fight poverty. However, in the short term, saving aid in the form of international reserves can be justified from a public finance point of view. Indeed, Celasun and Walliser (2006) find that, in the past, countries have sometimes recoursed to higher domestic financing of expenditures when experiencing sharp drops in aid receipts. In contrast, saving part of temporary aid surges would help avoid excessive reliance on domestic financing and prevent an unsustainable build-up of expenditures. As a general principle, effective medium-term budgeting requires that aid-recipient countries smooth recurrent expenditures while providing funds for key lumpy expenditures (Heller and others, 2006; Heller, 2005).

Another key macroeconomic concern arises when large aid flows are spent on goods and services produced in the domestic economy, which can push up the price of nontraded goods relative to the price of traded goods (the real exchange rate), resulting in a loss of competitiveness in export-oriented, high-value-added sectors. This phenomenon is often called Dutch disease. Rajan and Subramanian (2005b) confirm that Dutch disease is a real concern by showing that, in countries that received more aid in the 1980s and 1990s, export-oriented, labor-intensive manufacturing industries grew more slowly than other industries. Similarly, Prati and Tressel (2006) find that foreign aid inflows depress overall exports of poor countries, as Dutch disease would imply. They do not find, however, any negative effect of aid disbursed when countries experience large exogenous shocks (droughts, large negative commodity price shocks, hurricanes, or earthquakes) or during post-war reconstruction. This suggests that aid may help production recover from adverse events, which in their sample accounts for about 40 percent of observations. Kang, Prati, and Rebucci (2007) do not find signs of Dutch disease in response to "global" aid shocks in about half of aid-recipient countries. Country case studies by Berg and others (2007) find that aid-recipient countries were often reluctant to let the real exchange rate appreciate as aid flowed in, by either not spending the aid in the year it was received, or by sterilizing the monetary expansion associated with the increase in public spending.

Arellano and others (2005) construct a two-sector general equilibrium model to estimate the impact of aid volatility on consumption, investment, and the structure of production. They show that shocks to aid flows lead to substantial welfare losses in the model. They also find that countries that experience greater aid volatility have a lower share of manufacturing exports in total exports. In a two-sector general equilibrium model, Prati and Tressel (2006) show that macroeconomic policies, including sterilization, can help reduce the adverse effects of volatile aid flows by saving part of aid surges, and find consistent evidence in cross-country regressions. As these studies suggest, saving part of temporary increases in aid flows in anticipation of

future aid shortfalls can be justified for a variety of reasons, including the need to build reserve buffers against future negative shocks, adjust spending paths to a country's absorptive capacity, and limit risks of Dutch disease (see also Isard and others, 2006).

Instead of evaluating the overall macroeconomic consequences of aid, other studies have focused on assessing the direct effects of specific types of aid. Mishra and Newhouse (2007) examine the relationship between health aid and infant mortality, and obtain a statistically significant effect. They find that doubling per capita health aid leads to a 2 percent reduction in the infant mortality rate. For the average country, this implies that increasing per capita health aid by $1.60 per year is associated with 1.5 fewer infant deaths per 1,000 births. The effect can be seen as a lower bound of the actual effect, as not all health aid is spent on reducing infant mortality. Using a dataset of both bilateral aid and nongovernmental organization (NGO) aid flows, Masud and Yontcheva (2005) find that NGO aid reduces infant mortality and does so more effectively than official bilateral aid. The impact on illiteracy is less significant.

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Pietro Cova; Internazionali Divisione Economie Avanzate e Finanza Internazionale, Italy; 10/15/07–11/9/07

Kala Krishna; Pennsylvania State University; 12/3/07–12/7/07

Warwick McKibbin; The Australian National University, Canberra, Australia; 7/16/07–1/31/08

Dennis Quinn; Georgetown University; 10/15/07–4/20/08

Kang Tan; Australian National University, Canberra, Australia; 7/16/07–1/31/08

Country Study

Mozambique

Jean A.P. Clément and Shanaka J. Peiris

Mozambique, a post-conflict coastal country endowed with vast natural resources, is one of the few economic success stories in sub-Saharan Africa. Since its civil war ended in 1992, Mozambique has achieved impressive broad-based GDP growth (8 percent a year, on average) and lowered poverty (the poverty headcount index went from 69 percent in 1997 to 54 percent in 2003). This represents a more sustained growth takeoff relative to those seen in many other post-conflict economies. As such, Mozambique appears well placed to achieve the United Nations Millennium Development Goal of halving the poverty rate by 2015. However, its per capita income is $303 (well below the sub-Saharan Africa average of $580), and almost a third of the population still lives on less than $1 a day. Sustaining Mozambique's impressive growth takeoff is thus key to ensuring swifter and deeper poverty reduction. Recent IMF staff research on Mozambique to be presented in our forthcoming book, Post-Stabilization Economics in Sub-Saharan Africa: Lessons from Mozambique, *thus focuses on second-generation reforms to consolidate macroeconomic stability, enhance productivity growth, and ensure a virtuous cycle of natural resource use.*

Mozambique's growth takeoff since the end of its civil war has been impressive and comparable to that of several fast-growing Asian economies, particularly the ASEAN-4,[1] India, and Vietnam. Its commitment to the stabilization effort, success in implementing first-generation structural reforms, and substantial donor assistance helped make this growth possible. The support of the international community, including the International Monetary Fund and World Bank, also helped Mozambique sustain its reform momentum and expand such basic services as primary education and health. Political stability and the consolidation of democracy in three general and presidential elections, which yielded a fairly unified government with a firm commitment to stability and growth, have helped underpin growth.

However, now that the post-stabilization rebound has largely run its course and first-generation reforms have been completed, more must be done to sustain Mozambique's growth takeoff and further ease poverty. Mozambique has relatively sound political institutions, a favorable geography, and low income inequality—conditions common to many countries that have seen sustained growth takeoffs. What, then, may be the major constraints to sustaining Mozambique's takeoff in the years to come?

According to a benchmarking exercise comparing the characteristics of fast-growing Asian and post-stabilization sub-Saharan Africa countries with those of Mozambique,[2] the country must make more progress in enhancing all levels of voice and participation at the institutional level, given the relatively high degree of societal fractionalization and regional disparities, so that more areas and groups benefit from growth. Mozambique's economic institutions—particularly in terms of regulatory quality and the rule of law—are also relatively weak, though improving. Regarding the rule of law, it is possible to sustain growth while building institutions over the longer term, especially if efforts are made to invest in human capital and further integrate Mozambique into the global economy.

At the macroeconomic level, the consolidation of overall stability and a second wave of reforms would likely help Mozambique accumulate more capital and enhance its productivity growth. Inflation should be firmly anchored to single-digit levels, and real exchange rate overvaluations should be avoided. In this regard, it would be important for Mozambique to pursue a prudent macroeconomic policy mix and fine-tune its monetary policy framework.

Peiris (forthcoming) argues that fiscal policy could continue to focus on achieving the Millennium Development Goals but should be carefully managed to ensure long-term fiscal sustainability and avoid a loss of competitiveness. Foreign aid inflows amounting to about 15 to 20 percent of GDP could continue to be fully spent as long as they are allocated to, and reach, the most economically and socially productive priority sectors through a strengthening of public financial management systems. This would help elicit a supply response and mitigate the so-called "Dutch disease" effect of aid. The Heavily Indebted Poor Countries and Multilateral Debt Relief Initiatives have reduced Mozambique's debt levels and provided it with the fiscal space to maintain a relatively high level of expenditures. Given the low tax-to-GDP ratio and the need to guard against aid volatility and gradually reduce donor dependence, however, an annual average

[1]ASEAN is the Association of Southeast Asian Nations. The ASEAN-4 refers to Indonesia, Malaysia, the Philippines, and Thailand.

[2]See "Sustaining Growth Takeoffs: Lessons from Mozambique," chapter 1 in Clément and Peiris (forthcoming).

revenue increase of 0.5 percent of GDP should continue to be targeted through the Medium-Term Fiscal Framework. This can be achieved by widening the tax base and improving revenue administration. This approach would provide an exit strategy from aid dependence in the long run and ensure that at least recurrent spending could be financed from domestic resources. In this manner, the government could firmly anchor inflationary expectations and avoid recourse to unsustainable domestic borrowing to offset declining external assistance that could occur in the future, particularly after 2015.

In a shock-prone economy like Mozambique's, more consistent and sophisticated management of monetary and exchange rate policy is also critical. Saxegaard and Peiris (forthcoming) argue that the use of monetary policy for stabilization purposes in sub-Saharan Africa poses a number of challenges that have not been fully analyzed in a literature focusing mainly on the conduct of monetary policy in industrial countries and emerging markets. They attempt to incorporate these elements in a dynamic stochastic general equilibrium (DSGE) model, estimated using recently developed Bayesian estimation techniques on data for Mozambique, and to use such a model to analyze the conduct of monetary policy in Mozambique in response to aid and numerous other exogenous shocks. To the authors' knowledge, this is the first attempt at estimating a DSGE model for sub-Saharan Africa, except possibly for South Africa. Their results confirm that a "spend and absorb" response to aid shocks is probably best in normal circumstances, although in a more realistic setting in which the economy is prone to a wider set of shocks a "lite" inflation-targeting regime would perform best at minimizing macroeconomic volatility. The transition to a full-fledged inflation-targeting regime would require a deepening of domestic financial markets and building the Bank of Mozambique's forecasting capacity and credibility through greater central bank autonomy and transparency.

The export sector, particularly manufacturing exports, is often the engine of growth. Mozambique's impressive export performance mainly reflects natural-resource-based megaproject exports. Thus, Saxegaard (forthcoming) analyzes the causes underlying the comparatively lackluster performance of the non-megaproject export sector. Although the real effective exchange rate (REER) does not imply that Mozambique's competitiveness has been deteriorating, Saxegaard suggests that the REER may have been temporarily overvalued in times of tight exchange rate management in Mozambique. This calls for greater exchange rate flexibility to cushion against exogenous shocks and avoid real exchange rate overvaluation. In addition, there is some evidence that many of the country's traditional export products may be facing declining world demand. This, coupled with the concentration of exports, suggests that efforts should be made to diversify the export base. Doing so would require structural reforms to improve competitiveness, including reducing the cost of doing business. In this regard, Lledo (forthcoming) identifies the top constraints to sustained private sector development in Mozambique as limited access to finance resulting from a poor institutional lending environment, followed by infrastructure gaps and by burdensome regulatory procedures to license, register, and inspect businesses, employ workers, and trade.

The efficient and transparent management of natural resources is vital to ensure a virtuous cycle of resource use. Mozambique has proven resources of coal, diamonds, gold, titanium, and petroleum, as well as the potential to produce hydropower. But countries rich in natural resources have seldom attained sustained growth. To avoid the "resource curse" that has plagued much of sub-Saharan Africa, Mozambique needs (1) an efficient tax and regulatory regime to attract investment while maximizing benefits to the economy, and (2) more transparent management of resource revenue. Hartley and Otto (forthcoming) show how such an approach is being put in place in the mining sector in Mozambique by enacting a new mining fiscal regime in line with best international practices and by strengthening transparency by considering adherence to the principles of the Extractive Industries Transparency Initiative.

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IMF Staff Papers

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(forthcoming)

"Banks During the Argentine Crisis: Were They All Hurt Equally? Did They All Behave Equally?"
Adolfo Barajas, Emiliano Basco, V. Hugo Juan-Ramón, and Carlos Quarracino

"Escaping from the Resource Curse: Evidence from Botswana and the Rest of the World"
Atsushi Iimi

"Price Variability Under Price Level Stability—A Study of Sierra Leone's Price Dynamics Using Micro-Level Price Data"
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"Volatility of Development Aid: An Update"
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"Business Cycle Dynamics in a Small Open Economy"
Applied Economics Letters

Cerra, Valerie; Saxena, Sweta C.
"Growth Dynamics: The Myth of Economic Recovery"
American Economic Review

Clements, Benedict; Jung, Hong-Sang; Gupta, Sanjeev
"Real and Distributive Effects of Petroleum Price Liberalization: The Case of Indonesia"
The Developing Economies

Klemm, Alexander
"Allowances for Corporate Equity in Practice"
CESifo Economic Studies

Other External Publications (Books, Conference Volumes, etc.)

Arora, Vivek
"Corporate Income Tax"
International Encyclopedia of Social Sciences (2nd edition)
(New York: Macmillan Reference USA/Thomson Gale)

Cerra, Valerie; Rivera, Sandra; Saxena, Sweta C.
"Crouching Tiger, Hidden Dragon: What are the Consequences of China's WTO Entry for India's Trade?"
China's Accession to WTO: Impacts on China and the Asia Pacific Region, ed. by Tianshu Chu (Cheltenham, UK: Edward Elgar).

Gupta, Sanjeev; Clements, Benedict; Bhattacharya, Rina; Chakravarti, Shamit
"Fiscal Consequences of Armed Conflict and Terrorism in Low- and Middle-Income Countries"
The Economic Analysis of Terrorism, ed. by Tilman Brück (London: Routledge)

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IMF Working Papers

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Elo, Kinga Z.

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Conference on International Macrofinance

The International Monetary Fund and the World Economy and Finance Research Programme of the UK Economic and Social Research Council will hold a conference on international macrofinance at the IMF headquarters in Washington, DC, on April 24–25, 2008. The conference will provide a forum to present recent theoretical and empirical research narrowing the gap between "open-economy macro" and "finance" approaches to international financial issues.

While there is a very active literature on macrofinance linkages in the context of closed economies, applications to an open economy setting have just begun. International finance has traditionally relied on partial equilibrium analyses, while open-economy macroeconomics has avoided incorporating realistic financial features in its general equilibrium models because of the technical difficulties of doing so. Recent methodological advances now permit researchers to embed more realistic financial market structure in open-economy models.

This conference aims to stimulate the innovation process and its diffusion to the analysis of relevant policy issues. Possible topics using this new approach include (but are not restricted to):

- Monetary policy and asset prices in an open economy
- Policies for managing capital flows
- Global liquidity and credit risk
- International risk-sharing and financial markets
- General equilibrium international portfolio models
- Reserve management and sovereign wealth funds
- Exchange rates and financial markets

Interested authors should submit either a draft of the paper or a detailed abstract by January 15, 2008 to *RESIMF@imf.org*. In the selection process, preference will be given to papers that are already in draft form. The final versions of the papers selected for the conference are due by April 10, 2008.

Papers presented at the conference will be considered for publication in a special issue of the *Journal of International Economics* (JIE), subject to the standard JIE refereeing procedures. Inquiries about the conference may be directed to *RESIMF@imf.org*.

The conference organizers are Michael Devereux (University of British Columbia), Akito Matsumoto (IMF), Alessandro Rebucci (IMF), and Alan Sutherland (University of St. Andrews).