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Research Summaries

Revisiting Capital Controls

Marcos Chamon



With the world economy recovering from the global financial crisis, capital is flowing back to emerging market economies (EMEs). Although capital flows to developing and emerging market countries are generally welcome—providing lower-cost financing and indicating market confidence in the fundamentals of the economy—sudden surges can complicate macroeconomic management and create financial stability risks. This article reviews recent IMF research on managing capital inflows, including the potential role for capital controls.

While capital flows to EMEs should be generally welcomed, those flows put upward pressure on currencies, which, if not sustained, can create costly dislocations when exchange rates come down, given the erosion in competitiveness and possible exposure to foreign-currency-denominated borrowing on domestic balance sheets. The global crisis has also heightened financial stability concerns that some of the flows may end up fueling credit and asset price booms that may not be sustainable, amplifying financial fragilities down the road. Such concerns

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Capital Flows and Financial Stability: Monetary Policy and Macroprudential Responses

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The resumption of capital flows to emerging market economies since mid-2009 has posed two interrelated challenges for policymakers: (i) preventing the flows from exacerbating overheating pressures and thereby undermining macroeconomic stability and (ii) minimizing the risk that prolonged periods of easy financing conditions will undermine financial stability. To address these challenges, policymakers have begun using macroprudential measures in addition to monetary policy. This article summarizes recent research on the interaction between monetary policy and macroprudential regulations in managing large capital inflows.

Experience has shown that macroeconomic stability is not a sufficient condition for financial stability. Before the onset of the global financial crisis, relatively stable growth and low inflation in advanced economies had created a deceptive picture behind which financial imbalances had built up. Moreover, microprudential regulation, with its focus on individual financial institutions, was not adequate to avoid system-wide risks. Hence, macroprudential supervision has gained popularity in a number of emerging market economies (IMF, 2011a).

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have led to renewed interest in the design and effectiveness of macroprudential policies, including capital controls.

The large literature on capital controls has mostly focused on their macroeconomic implications. Magud, Reinhart, and Rogoff (2007) provide a comprehensive survey and meta-analysis of that literature. On average, the studies they review find that capital controls have limited effectiveness in altering the overall volume of capital inflows and hence the level of the exchange rate. Some papers show controls can increase monetary policy autonomy. The evidence on the composition of flows is stronger, with a few studies finding that capital controls have managed to lengthen the maturity of debt inflows and tilt the composition away from portfolio flows toward foreign direct investment (FDI).

Ostry and others (2010) explore the “natural experiment” provided by the global financial crisis—where the shock originated in global financial markets—to test how the external liability structure and the controls aimed at making it safer attenuated the decline in growth during the crisis. As expected, portfolio debt is found to be much riskier than equity and FDI, but with the important qualification that financial sector FDI can be as risky as debt flows. Empirically, there appears to be a negative association between capital controls that were in place before the global financial crisis (as measured by the index in Schindler, 2009) and the output declines suffered during the crisis.

As mentioned above, the literature on capital controls has focused on macroeconomic aspects, with little emphasis on prudential aspects, and on the nexus between capital controls and other prudential policies. Part of the reason for this disconnect is that controls are typically covered in the international finance literature, whereas prudential policies by the banking one. Another key factor is the lack of suitable indices. Chamon and others (2011) seek to bridge that gap by developing new indices for financial-sector-specific capital controls, for the prudential regulation of foreign exchange (FX) in the domestic banking sector, and for domestic prudential policies. With those new indices, they analyze the impact on financial stability of three distinct segments of the prudential toolkit: capital controls (which discriminate by residency of the flows), FX regulations (which discriminate by currency), and other prudential (which do not discriminate by either residency or currency).

The results indicate that both FX regulations and capital controls tend to reduce the proportion of foreign-currency-denominated loans by the domestic banking sector and shift the country’s external liability structure away from port-

folio debt. Capital controls can have a direct effect on debt flows. FX regulations limit banks’ ability to lend domestically in foreign currency and so discourage bank funding in external debt markets (assuming they cannot have open FX positions) and hence reduce portfolio debt. Both FX regulations and capital controls can discourage FX lending in the domestic banking system. FX regulations can have a direct impact on the prevalence of FX loans. Capital controls can have an indirect effect—by restricting the bank’s ability to fund themselves abroad, the controls reduce the extent to which they lend domestically in foreign currency. Despite the effect on the composition of flows, neither capital controls nor FX regulations seem to affect the prevalence of credit booms in general. From a strictly prudential perspective, altering the composition without affecting the overall volume is an ideal outcome. This substitutability between controls and FX regulations suggests that, from a prudential perspective, capital controls are necessary only under particular circumstances (discussed below). Domestic prudential regulations seem more effective than capital controls or FX regulations in restraining credit growth. Experience from the global financial crisis suggests that countries that had capital controls and other prudential policies in place prior to the crisis fared better in terms of the output decline during the crisis, consistent with the findings in Ostry and others (2010).

The surge in inflows to EMEs prior to the global financial crisis, their sudden collapse at the height of the crisis, and their rapid recovery afterward has renewed interest in managing inflows and in the potential role of controls. There has been a series of recent IMF Staff Position and Discussion Notes on this topic.

Ostry and others (2010 and forthcoming) analyze, from a policy perspective, the conditions under which capital controls should be deployed. As a response to the macroeconomic risks from inflow surges, before resorting to controls one should first allow the exchange rate to reach a level that is consistent, on a multilateral basis, with medium-run fundamentals; build reserves to a level that is consistent with country-insurance metrics; to lower policy rates (if inflationary pressures are contained), and make sure that the domestic policy mix (monetary and fiscal policies) is consistent with internal balance and a sustainable path for public debt. Capital controls are a legitimate part of the policy toolkit for responding to flows, but only after the necessary adjustments in macro policy have been made.

Ostry and others (2011) focus on the policy response to prudential risks from inflow surges. They argue that multilateral considerations require macroeconomic policy to be

adjusted before contemplating controls even for prudential reasons. They call for a pragmatic approach to the different options, as both capital controls and prudential policies can create distortions. Capital controls will increase financing costs, and so will tighter prudential regulations (for firms that rely on bank financing). The measures should be targeted to the particular risks at hand. When the flows are intermediated by the regulated financial sector, a wide range of options is available, and different tools can be deployed at different points of the financial intermediation chain. For example, the risks of foreign currency mortgages can be addressed by tightening loan-to-value limits (domestic prudential), by placing additional restrictions on foreign currency lending (FX regulation), or by imposing capital controls to attenuate the flows that are fueling that lending. If, however, inflows bypass the regulated financial sector, then, by definition, prudential policies will have no effect, and the only remaining tools that may be relevant are economy-wide capital controls. The insights from these notes have helped shape the Fund's policy advice on how to manage inflows (IMF, 2011).

Ostry and others (2011) also provide insights into the design of capital controls, showing that much of the specifics can hinge on the underlying motivation for imposing them. Controls need to be broad in scope when imposed for macroeconomic reasons (since the concern is the overall level of inflows) but should be targeted to particular risks when imposed for financial stability concerns, as described above (although the scope for circumvention can limit the feasibility of narrow targets). Price-based controls are considered less distortionary than quantity-based ones (for the same reasons that trade economists prefer tariffs to quotas) and are more appropriate when the motivation is macroeconomic. However, from a financial stability perspective, quantitative controls may be more appropriate (although they should be transparent and rules-based). In fact, prudential-type controls are often quantitative in nature. From a macroeconomic perspective, controls should be deployed only against temporary surges; if flows are persistent, the economy should adjust to the new real exchange rate equilibrium). But from a financial-stability perspective, they could be deployed against more persistent inflows (which may allow for even more fragilities to be built-up).

While some of the factors "pushing" capital to EMEs may be temporary, there is a growing perception that we are living in a "new normal" where changes in fundamentals in EMEs and AEs have made the former a relatively more attractive destinations for capital. WEO projections indicate large flows to EMEs over the medium term. Many countries have adjusted

their macroeconomic and prudential policies in response to these flows, although the use of capital controls has remained relatively limited so far (see Eyzaguirre and others, 2011, for a review of the policy response in Latin America; and Pradhan and others, 2011, for a review with a focus on Asia).

The question of how to reap the benefits of capital flows while minimizing the risks should remain an important policy topic.

References

- Chamon, Marcos, Atish R. Ghosh, Jonathan D. Ostry, and Mahvash S. Qureshi, 2011, "Managing Capital Inflows: The Role of Controls and Prudential Policies" (unpublished; Washington: International Monetary Fund).
- Eyzaguirre, Nicolás, Martin Kaufman, Steven Phillips, and Rodrigo Valdés, 2011, "Managing Abundance to Avoid a Bust in Latin America," IMF Staff Discussion Note 11/07 (Washington: International Monetary Fund).
- International Monetary Fund, 2011, "Recent Experiences in Managing Capital Inflows—Cross-Cutting Themes and Possible Policy Framework," prepared by the Strategy, Policy, and Review Department (Washington, February), www.imf.org/external/pp/longres.aspx?id=4542.
- Magud, Nicolas, Carmen Reinhart, and Kenneth Rogoff, 2007, "Capital Controls: Myth and Reality—A Portfolio Balance Approach to Capital Controls," Working Paper Series 2007-31 (San Francisco: Federal Reserve Bank of San Francisco), www.frbsf.org/publications/economics/papers/2007/wp07-31bk.pdf.
- Ostry, Jonathan D., Atish Ghosh, Karl Habermeier, Marcos Chamon, Mahvash S. Qureshi, and Dennis B.S. Reinhardt, 2010, "Capital Inflows: The Role of Controls," IMF Staff Position Note 10/04 (Washington: International Monetary Fund).
- Ostry, Jonathan D., Atish Ghosh, Karl Habermeier, Luc Laeven, Marcos Chamon, Mahvash S. Qureshi, and Annamaria Kokenyne, 2011, "Managing Capital Inflows: What Tools to Use?" IMF Staff Discussion Note 11/06 (Washington: International Monetary Fund).
- Ostry, Jonathan D., Atish Ghosh, Marcos Chamon, and Mahvash S. Qureshi, forthcoming, "Capital Controls: When and Why?" *IMF Economic Review*.
- Pradhan, Mahmood, Ravi Balakrishnan, Reza Baqir, Geoffrey Heenan, Sylwia Nowak, Ceyda Oner, and Sanjaya Panth, 2011, "Policy Responses to Capital Flows in Emerging Markets," IMF Staff Discussion Note 11/10 (Washington: International Monetary Fund).
- Schindler, Martin, 2009, "Measuring Financial Integration: A New Data Set," *IMF Staff Papers*, Vol. 56, No. 1, pp. 222–38.

Capital Flows and Financial Stability: Monetary Policy and Macroprudential Responses

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Macroprudential measures are defined as regulatory policies that aim to reduce systemic risks to protect the financial system against shocks (IMF, 2011b). During boom times, perceived risk declines; asset prices increase; and lending and leverage become mutually reinforcing. In principle, macroprudential measures could address the procyclicality of financial markets by making it harder to borrow during a boom, thereby making the subsequent bust less dramatic and mitigating the amplitude of the boom-bust cycle.

Macroprudential measures differ from traditional monetary policy instruments in some key respects. Both changes in policy rates and macroprudential measures are likely to affect aggregate demand and supply as well as financial conditions in similar ways. However, the two instruments are not perfect substitutes. First, the policy rate may be too blunt an instrument, as it impacts all lending activities regardless of whether they represent a risk to the economy (Ostry and others, 2010). By contrast, macroprudential measures are aimed specifically at markets in which the risk of financial stability is believed to be excessive. Second, in countries with open financial accounts, an increase in the interest rate might have only a limited impact on credit expansion if firms can borrow at a lower rate abroad. Third, interest rate movements aiming to ensure financial stability could be inconsistent with those required to achieve macroeconomic stability, and that discrepancy could risk de-anchoring inflation expectations.

It is useful to ask how policy intervention in a private borrowing decision can be justified. The question can be answered in two ways: first, by reference to negative externalities that arise because agents do not internalize the effect of their—often excessive—individual borrowing decisions on financial stability; and, second, by reference to the potential role for macroprudential regulations in mitigating the costs associated with financial crises.

There has been a rapidly growing literature addressing this question using both approaches. For example, Bianchi and Mendoza (2011), among a few others, focus on “overborrowing” tendencies of agents and consequent externalities. In this line of thought, regulations induce agents to internalize the externalities brought by their decision and thereby increase macroeconomic stability. However, “overborrowing” is not a general feature. Benigno and others (2011) find that in normal times, “underborrowing” is much more likely to emerge than is “overborrowing.” Others focus on the interactions between monetary policy and macroprudential measures. Kannan, Rabanal, and Scott (2009), N’Diaye (2009), and

Angeloni, Faia, and Lo Duca (2010) incorporate macroprudential instruments into general equilibrium models in which monetary policy has a nontrivial role. However, these papers feature a closed economy and are hence not suitable for an analysis of emerging market countries, or they lack the necessary microfoundations for a thorough analysis.

Unsal (forthcoming) complements the existing literature on the interplay between monetary policy and macroprudential measures by adding an open-economy dimension with a fully articulated financial sector. The objective is to quantitatively assess the ability of alternative monetary and macroprudential responses, as well as capital controls, to manage capital inflow surges. In the model, firms can finance their investment through retained earnings or borrowing from domestic or foreign sources. Macroprudential policy entails higher costs for financial intermediaries that are likely to be passed on to borrowers. Hence, in the model, macroprudential measures are defined as an additional “regulation premium” to the cost of borrowing, and that premium rises with credit growth. This approach is meant to capture the notion that such measures make it harder for firms to borrow during boom times and therefore make a subsequent bust less dramatic (IMF, 2011c).

The initial shock is modeled as a decline in investors’ perception of risk, and it plays out through the familiar financial accelerator mechanism (Ozkan and Unsal, 2010). As financing costs decline, firms borrow and invest more. Stronger final demand and higher asset prices boost firms’ balance sheets and reduce the risk premium further. As capital inflows surge, the currency appreciates, which helps limit overheating and inflation pressures. Eventually, higher leverage triggers an increase in the risk premium, and financial conditions normalize. However, both monetary and macroprudential policies have a nontrivial role in mitigating the impact of the shock.

The simulations suggest that macroprudential measures could be a useful complement to monetary policy in stabilizing the economy after a financial shock that triggers capital inflows. When policymakers adopt macroprudential measures that directly counteract the easing of the lending standards, the responses of domestic and foreign debt, as well as asset prices, to a surge in capital inflows become more muted.

However, capital controls—macroprudential measures that discriminate against foreign liabilities—are less effective in mitigating the impact of the shock. Naturally, capital inflows are smaller under this scenario, but regulation fails to achieve its very first objective of limiting financial vulnerabilities. The policy essentially generates a shift from foreign loans to domestic loans, leaving aggregate credit growth nearly unchanged. In fact, the welfare losses are considerably higher than in the case of broad-based macroprudential measures.

However, macroprudential responses alone are not sufficient and should not be seen as a substitute for an appropriate monetary policy response. When macroprudential measures, rather than monetary policy, are used to stabilize the economy, demand and inflation will be more volatile than under other policy regimes, and the welfare loss will be excessively large. The reason is that a solely macroprudential approach stabilizes firms' borrowing and investment but not aggregate consumption, as this type of policy would leave the interest rate constant.

These results support the use of macroprudential policies in macroeconomic policymaking given large capital inflows generated by a positive financial shock. However, a few practical issues remain. For example, whether macroprudential measures could help monetary policy in stabilizing the economy under different type of shocks is not obvious. In fact, Unsal (forthcoming) finds that, in response to a technology shock, which creates a trade-off between macroeconomic stability and financial stability, the positive contribution of macroprudential measures to economic stability becomes negligible.

The transmission mechanism of monetary policy could be impaired during periods of large capital inflows. For example, by depressing local long-term yields, the rapid resumption of capital flows to emerging markets after the global crisis has raised concerns about policymakers' ability to tighten monetary stances. Jain-Chandra and Unsal (forthcoming) find that global interest rates have been a key driver of long-term bond yields in emerging Asia. However, the interest rate channel of the monetary transmission mechanism remains powerful, as it works mainly through short-term interest rates in Asia (IMF, 2011c).

Moreover, monetary policy can influence the propagation of a financial shock. Focusing on financial and trade channels that have been crucial in the transmission of the recent global crisis to emerging market countries, Ozkan and Unsal (forthcoming) suggest that capital inflows have contributed to the rapid recovery from the crisis in a number of emerging market economies with limited financial contagion from the global economy. They show that, in the absence of financial spillovers from the global economy, an emerging market economy under a fixed exchange rate regime is likely to experience less volatility in investment, consumption, and output compared with an inflation targeting regime. In the presence of financial contagion, however, this result is overturned.

The research summarized above clearly shows that the ongoing integration of capital markets across national borders beckons researchers to pay greater attention to the role of capital flows in shaping macroeconomic outcomes and policy responses. However, the policy debate on these issues is still far from reaching a consensus.

References

- Angeloni, Ignazio, Ester Faia, and Marco Lo Duca, 2010, "Monetary Policy and Risk Taking," Bruegel Working Paper 2010/00 (Brussels: Bruegel).
- Benigno, Gianluca, Huigang Chen, Cristopher Otrok, Alessandro Rebucci, and Eric Young, 2011, "Financial Crisis and Macro-Prudential Policies," CEPR Discussion Paper DP8175 (London: Centre for Economic Policy Research).
- Bianchi, Javier, and Enrique G. Mendoza, 2011, "Overborrowing, Financial Crises and 'Macro-Prudential' Policy?" IMF Working Paper 11/24 (Washington: International Monetary Fund).
- International Monetary Fund, 2011a, "Recent Experiences in Managing Capital Inflows—Cross-Cutting Themes and Possible Guidelines," prepared by the Strategy, Policy, and Review Department (Washington, February), www.imf.org/external/pp/longres.aspx?id=4542.
- _____, 2011b, "Macroprudential Policy: An Organizing Framework," prepared by the Monetary and Capital Markets Department (Washington, March), www.imf.org/external/pp/longres.aspx?id=4545.
- _____, 2011c, Regional Economic Outlook: Asia and Pacific—Managing the Next Phase of Growth (Washington, April).
- Jain-Chandra, Sonali, and D. Filiz Unsal, forthcoming, "Monetary Policy in the Presence of Capital Flows: Evidence from Asian Emerging Markets," IMF Working Paper (Washington: International Monetary Fund).
- Kannan, Prakash, Pau Rabanal, and Alasdair Scott, 2009, "Macroeconomic Patterns and Monetary Policy in the Run-Up to Asset Price Busts" IMF Working Paper 09/252 (Washington: International Monetary Fund).
- N'Diaye, Papa, 2009, "Countercyclical Macro Prudential Policies in a Supporting Role to Monetary Policy," IMF Working Paper 09/257 (Washington: International Monetary Fund).
- Ostry, Jonathan D., Atish R. Ghosh, Karl Habermeier, Marcos Chamon, Mahvash S. Qureshi, and Dennis B.S. Reinhardt, 2010, "Capital Inflows: The Role of Controls," IMF Staff Position Note 10/04 (Washington: International Monetary Fund).
- Ozkan, Gulcin, and D. Filiz Unsal, 2010, "External Finance, Sudden Stops, and Financial Crisis: What is Different this Time?" IMF Working Paper 10/158 (Washington: International Monetary Fund).
- _____, forthcoming, "Global Financial Crisis, Financial Contagion, and Emerging Markets" IMF Working Paper (Washington: International Monetary Fund).
- Unsal, D. Filiz, forthcoming, "Capital Flows and Financial Stability: Monetary Policy and Macroprudential Responses," IMF Working Paper (Washington: International Monetary Fund).



Seven Questions about Post-Conflict Economic Recovery

Antonio C. David, Fabiano Rodrigues Bastos, and Marshall Mills



Wars impose devastating human losses, destroy infrastructure, weaken institutions, and erode social capital. At the same time, periods following the end of conflict can also present economic opportunities. Despite conventional wisdom suggesting that reconstruction efforts in wartorn countries should lead to faster growth, post-conflict economic performance has varied widely. This article provides brief answers to seven questions about growth performance following the end of conflict.

Question 1: Should we expect a growth rebound in the aftermath of wars?

Peace dividends in terms of economic growth are not as certain as many expect. Economic theory does provide strong arguments for a rapid acceleration in economic growth once conflict ends. Standard models predict that, after the destruction of the capital stock observed during the war years, catch-up would be driven by high returns to physical investment relative to the steady state. Furthermore, the end of conflict might also spur increases in total factor productivity because the political and institutional uncertainty linked to war is resolved. But the persistent effects of conflict on human capital and, in many cases, the destruction of nonrenewable resources makes expectations for growth patterns in post-conflict periods less clear-cut (Blattman and Miguel, 2010). Moreover, the nature of the political and institutional environment bequeathed by the conflict can also be an important determinant of the speed of recovery, as discussed below. The empirical literature presents mixed results and points to a great deal of diversity in post-conflict economic performance (Cerra and Saxena, 2008; Chen, Loayaza, and Reynal-Querol, 2008). In fact, the evidence from our dataset containing civil strife episodes in sub-Saharan Africa, confirms that economic performance varies significantly across post-conflict episodes (David, Rodrigues Bastos, and Mills, 2011).

Question 2: What are the main determinants of post-conflict economic performance?

We examined a broad range of factors in a panel of sub-Saharan African countries. Not too surprisingly, changes in the terms of trade (the ratio of the price of exports to the price of imports), have the most statistically and economically significant association with different measures of economic performance after conflict, but we were somewhat surprised to find that institutional quality, specifically as measured by constraints on the executive, was the second strongest explanatory variable. Typically, changes in the terms of trade are associated with an increase in the marginal probability of positive economic performance by about 30 percent. The study controls for a broad set of variables, including legal origin (French or British), the income differential with respect to the United States, population, investment-to-GDP ratio, real interest rate, trade openness, foreign direct investment, and foreign aid flows. Foreign aid had a positive but not statistically or economically significant association with positive economic performance after conflict.

Question 3: How do the terms of trade affect growth in post-conflict settings?

Changes in the terms of trade can affect growth through multiple channels. In some models, the terms of trade affect the expected real rate of return on savings and hence the savings rate and growth (Mendoza, 1997). Other channels include wealth effects that influence domestic demand and incentives affecting the sectoral allocation of resources as the marginal product of factors changes in the tradable sector. Some specific characteristics of post-conflict environments might amplify the typical impact of the terms of trade on economic growth. For example, the onset of peace is likely to reduce overall uncertainty regarding the economic environment and could affect the elasticity of the economy's savings rate to changes in the return on savings and therefore to changes in the terms of trade. It is also possible that, following widespread destruction of human capital and other sources of growth during conflict, natural resources become the primary source of growth, magnifying the impact of terms of trade shocks (Blattman, 2010). Moreover, post-conflict periods are frequently accompanied by commodity export booms (Collier, 2009), in which expansions

are driven by both quantity and price effects, for example as country authorities can negotiate better deals.

Question 4: Why and how are political institutions important for growth in post-conflict settings?

Our results indicate that the likelihood of a post-conflict recovery increases when the executive authority is more limited. This is far from an obvious finding: one could argue that fewer restrictions on the executive support the quick adoption of fundamental reforms and ensure political stability in the aftermath of conflicts. This may be true in some cases, but our findings point to a systematic relationship in the other direction. They are consistent with some explanations featured in the literature. Acemoglu (2008) develops a model in which barriers to competition can emerge as political power becomes more concentrated. Aldashev (2009) surveys models in which constraints on the executive act as a mechanism to reduce expropriation risks, providing incentives for investment and growth. Finally, constraints on the executive could also contribute to consensus building among political players and help to consolidate the peace process. Constraints on the executive are also likely to reduce the probability of retaliation against political losers, thus contributing to stability. Building on these observations, some have gone so far as to suggest recruiting executives for post-conflict countries from outside the country (Rajan, 2011).

Question 5: What is different about institutions in post-conflict settings?

In general, institutions tend to change only slowly, offering little scope for policymakers searching for immediate levers to prop up growth. But post-conflict environments may be conducive to rapid institutional change, partly because conflict is likely to have weakened vested interests and increased the political appetite for reform. Therefore, a post-conflict environment may provide an opportunity to improve institutional quality more rapidly than is usually possible.

Question 6: What is the role played by international aid in post-conflict economic recovery?

Our analysis of post-conflict growth experiences in Africa does not yield evidence of a statistically or economically significant impact of foreign aid on economic growth. Indeed, more generally, a large body of empirical work finds no robust evidence of the effectiveness of international aid in promoting growth (see Easterly, 2009). The possible explanations for these findings include (i) limited absorptive capacity and real exchange rate appreciation in aid-receiving

countries (Rajan and Subramanian, 2005); and (ii) adverse effects of volatile aid flows (World Bank, 2011). Nevertheless, it is important to keep in mind the critique of Clemens, Radelet, and Bhavnani (2004), who argue against the use of aggregate measures of aid when looking at its growth impact. Limitations of econometric techniques and difficulties in addressing endogeneity problems also call for caution when interpreting these results. Finally, aid plays a vitally important humanitarian role in post-conflict countries and could be important for immediate stabilization purposes, which may not be reflected in the near-term GDP statistics.

Question 7: If the main correlates of post-conflict performance are in many ways beyond the reach of policymakers, what policy lessons can be drawn from the analysis of post-conflict growth experiences?

The title of our paper asks, “Post-Conflict Recovery: Institutions, Aid, or Luck?” Movements in the terms of trade can be viewed mainly as a matter of luck, but there is still much post-conflict countries can do. The results illustrate that promoting export diversification, leveraging international markets, and mitigating the macroeconomic impact of volatile terms of trade are relevant policies. Countercyclical fiscal and monetary policies would be the first line of defense in attenuating volatility in the terms of trade, but they do not replace structural measures to improve the long-term competitiveness of the economy. Authorities can also promote financial instruments that allow for hedging against fluctuations in the terms of trade. Finally, reforms that restrain the ability of the executive to interfere with property rights, to stifle competition, and to generate business uncertainty are conducive to good economic performance and resilience.

References

- Acemoglu, D., 2008, “Oligarchic Versus Democratic Societies,” *Journal of the European Economic Association*, Vol. 6, No. 1, pp. 1–44.
- Aldashev, G., 2009, “Legal Institutions, Political Economy, and Development,” *Oxford Review of Economic Policy*, Vol. 25, No. 2, pp. 257–70.
- Blattman, C., 2010, “Post-Conflict Recovery in Africa: The Micro Level,” in *Oxford Companion to the Economics of Africa*, ed. by E. Aryeetey, S. Devarajan, R. Kanbur, and L. Kasekende (Oxford: Oxford University Press).
- Blattman, C., and E. Miguel, 2010, “Civil War,” *Journal of Economic Literature*, Vol. 48, No. 1, pp. 3–57.

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Seven Questions about Post-Conflict Economic Recovery *(continued from page 7)*

- Cerra, V., and S. Saxena, 2008, “Growth Dynamics: The Myth of Economic Recovery,” *American Economic Review*, Vol. 98, No. 1, 439–57.
- Chen, S., N. Loayaza, and M. Reynal-Querol, 2008, “The Aftermath of Civil War,” *World Bank Economic Review*, Vol. 22, No. 1, pp.63–85.
- Clemens, M., S. Radelet, and R. Bhavnani, 2004, “Counting Chickens When They Hatch: The Short-Term Effect of Aid on Growth,” Working Paper 44 (Washington: Center for Global Development).
- Collier, P., 2009, “Post-Conflict Recovery: How Should Strategies Be Distinctive?” *Journal of African Economies*, Vol. 18, AERC Suppl. No. 1, pp. i99–i131.
- David, A., F. Rodrigues Bastos, and M. Mills, 2011, “Post-Conflict Recovery: Institutions, Aid, or Luck?” IMF Working Paper 11/149, (Washington: International Monetary Fund).
- Easterly, W., 2009, “Can the West Save Africa?” *Journal of Economic Literature*, Vol.47, No. 2, pp. 373–447.
- Mendoza, E., 1997, “Terms of Trade Uncertainty and Economic Growth,” *Journal of Development Economics*, Vol. 54, pp. 323–56.
- Rajan, R., 2011, “Failed States, Vicious Cycles, and a Proposal,” Working Paper 243, (Washington: Center for Global Development).
- Rajan, R., and A. Subramanian, 2005, “What Undermines Aid’s Impact on Growth?” NBER Working Paper 11657 (Cambridge, Massachusetts: National Bureau of Economic Research).
- World Bank, 2011, *World Development Report 2011: Conflict, Security, and Development* (Washington).

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