IMF RESEARCH
BULLETIN
VOLUME 8, NUMBER 1 MARCH 2007
http://www.imf.org/imfresbulletin

In This Issue

Research Summaries

Globalization and Macroeconomic Volatility

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The causes and consequences of macroeconomic volatility have received renewed attention because of the financial crises experienced by a number of developing countries over the past two decades. Such crises are, of course, extreme manifestations of macroeconomic volatility, but they have clearly highlighted its negative impact on economic growth and welfare. Many of these crises have been associated with the rapid opening up of some developing economies to global trade and financial flows—a phenomenon broadly referred to as globalization. This article briefly surveys recent IMF research on the effects of globalization on macroeconomic volatility.

Recent research has led to a dramatic shift in our understanding of the complex relationship between macroeconomic volatility and long-term economic performance. For example, during the 1980s, the impact of macroeconomic volatility on growth and welfare was generally believed to be minor at most. In contrast, research in the 1990s reached a strikingly different conclusion—that macroeconomic volatility may actually reduce long-term growth and could result in large welfare costs (Kose, 2005). *(continued on page 2)*

International Financial Integration and Domestic Financial Systems

Thierry Tressel

Over the past decades, financial globalization has progressed in many countries, sometimes motivating bold statements in favor of or against integration of capital markets. A growing body of evidence shows that assessing the benefits of financial globalization requires a more precise understanding of the role of country-specific influences—in particular, the two-way interactions between the forces of integration, on the one hand, and domestic policies and institutions, on the other hand. This article reviews the most recent IMF research on the role of domestic financial institutions in helping countries realize the benefits of financial globalization.

Financial globalization has advanced at a solid pace over the past decades. Lane and Milesi-Ferretti (2006) have constructed a comprehensive database of external positions of nations, and of the composition of external assets and liabilities. They document the increasing importance *(continued on page 4)*

Globalization and Macroeconomic Volatility

(continued from page 1)

Although economic theory does not provide a clear guide to the effects of either trade or financial integration on volatility, recent research has documented substantial changes in the dynamics of macroeconomic volatility in developing countries over the past two decades, during which there has been a significant increase in international trade and financial flows. For example, there is strong evidence that increased trade linkages tend to exacerbate output volatility. Kose, Prasad, and Terrones (2003), using aggregate cross-country data, find that trade openness increases the volatility of output and consumption growth in developing economies. Di Giovanni and Levchenko (2006) employ an industry-level panel dataset and find that openness to trade results in higher sectoral volatility through its positive impact on specialization.

The effects of financial integration on macroeconomic volatility have been rather difficult to uncover. Kose, Prasad, and Terrones (2003) document a trend decline in average output volatility in industrial, emerging market, and low-income developing countries since the early 1980s. They also find, however, that the ratio of consumption growth volatility to income growth volatility increased during this period for emerging market economies. This result runs exactly counter to one of the presumed theoretical benefits of financial integration—that it allows countries to share income risk and smooth consumption. In addition, Kose, Prasad, and Terrones find that the relative volatility of consumption growth increases with the degree of financial openness, but only up to a certain threshold level of integration. Levchenko (2005) provides a dynamic general equilibrium model to explain the puzzling result about the positive association between financial integration and the volatility of consumption.

There has been an intensive debate about the role played by capital account liberalization in triggering financial crises. Has financial globalization, by itself, led to economic crises? A recent survey by Kose, Prasad, Rogoff, and Wei (2006) concludes that there is little empirical evidence to support the widely held view that capital account liberalization, by itself, increases vulnerability to crises. In fact, some of the studies they survey find that capital account openness reduces the probability of currency crises, while others report there is no systematic evidence that countries with higher capital mobility tend to have a higher incidence of crises.

Recent research has also analyzed the sources of volatility by employing a variety of econometric methods. For example, Satyanath and Subramanian (2004) find that democratic institutions have a strong and significant causal impact on macroeconomic stability using cross-section and panel regressions. Hakura (2005) estimates a dynamic factor model to decompose the volatility of output growth into global, regional, and country-specific factors. She finds that country-specific factors play a more important role in explaining the volatility of output in developing countries than in industrialized economies. She also documents that a variety of factors—including financial sector development, terms of trade variation, and volatility of fiscal policy—play important roles in accounting for the country-specific component of output volatility in developing countries.

Recent financial crises in emerging market economies have often coincided with "sudden stops" of financial flows and resulted in highly volatile macroeconomic fluctuations. Recent studies analyze various aspects of sudden stops. For example, Levchenko and Mauro (2006) study the behavior of different types of financial flows during sudden stops and find that bank lending and official flows display sharp declines after sudden stops. Eichengreen, Gupta, and Mody (2006) argue that sudden stops are fewer and generally less costly when an IMF arrangement exists. Catão (2006) documents that recent sudden stops appear to have characteristics similar to those that occurred in the early financial globalization period before 1914. Mendoza (2006) reports that sudden stops can take place as endogenous responses to adverse shocks to fundamentals in dynamic stochastic general equilibrium models with credit constraints.

Several recent studies focus on the dynamics of volatility in Latin America—a region that has long suffered from chronically high volatility. Aiolfi, Catão, and Timmermann (2006), using a new set of business cycle indices, find that the average volatility was significantly higher in Argentina, Brazil, Chile, and Mexico than in industrial economies over the period 1870–2004. Sahay and Goyal (2006) document that macroeconomic outcomes and policies appeared to be more volatile in periods of relatively low growth in several Latin American countries. Singh (2006) concludes that although external shocks have played an important role, fiscal policy has been the primary factor accounting for the high volatility in the region. Kose, Rebucci, and Schipke (2005) argue that regional trade agreements, such as the North American Free Trade Agreement (NAFTA) and the Central America-Dominican Republic-United States Free Trade Agreement (CAFTA-DR), could help moderate the extent of volatility in the region by accelerating the diversification of the export base and by fostering intra-industry and vertical trade linkages with the United States.

While emerging market economies have faced high episodes of volatility on account of financial crises, they have also posted much better average growth rates than other developing countries during the period of globalization. Have increased trade and financial linkages changed the negative relationship between volatility and growth we have

discussed previously? Kose, Prasad, and Terrones (2005 and 2006) document that both trade and financial integration significantly weaken this negative relationship during the past two decades. Specifically, they find that the estimated coefficient on the interaction between volatility and trade integration is significantly positive in their regressions. They also find a similar, although less significant, result for the interaction of financial integration with volatility. In a related paper, Rancière, Tornell, and Westermann (2005) document that financial liberalization policies could increase leverage and investment growth. While this leads to higher growth, it could also be associated with a greater incidence of financial crises. Cerra and Saxena (2005) document a negative relationship between volatility and growth, since economic contractions are not followed by offsetting fast recoveries in most cases.

Finally, the design of policies to prevent financial crises has been a significant component of recent research efforts. Borensztein and others (2004) analyze how the debt structures of countries affect their vulnerability to crises. They argue that debt with different degrees of seniority and financial instruments with equity-like features could help reduce the risks associated with sovereign debt structures. Catão and Kapur (2006) find that while there is a positive association between volatility and debt accumulation, the ability of borrowing is limited by the higher default risk stemming from volatility. Becker and others (2006) document that while financial shocks are the underlying cause of output drops in emerging markets, real shocks, such as terms of trade fluctuations, appear to play an important role in developing countries. While their findings emphasize the importance of sound policies and strong institutions to mitigate the impact of negative external shocks, they also argue that underutilized financial instruments, including GDP growth-indexed bonds, could play a useful role in providing country insurance to cope with financial crises. In order to provide strong incentives for crisis prevention, Ostry and Zettelmeyer (2005) propose that a country's potential access to IMF credit lines be linked to the quality of the country's policies during noncrisis periods.

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