Board of Governors of the Federal Reserve System

Speech

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Global Economic Integration and Decoupling

During the past decade, one of the most prominent themes sounded by policymakers, observers, and analysts of international economic developments has been "globalization." Based on rapid advances in trade, finance, transportation, and communications, the world economy has become increasingly tightly knit. Large numbers of the world's population--including those in China, India, and the former Soviet Union--have emerged from their relative isolation to participate more fully in the global economic system. The impression has been that national borders and regional differences are becoming less and less relevant as businesses increasingly operate in a single global market.

In the past year or so, however, especially as the housing sector in the United States slowed sharply and turmoil erupted in many financial markets, a different theme has come to the foreground: "decoupling." This term refers to apparent divergences in economic performance among different regions of the world economy. First, there has been a perception that the business cycles of the United States and other industrial economies are becoming less synchronized, with the U.S. economy weakening more sharply than many other industrial economies over the past several quarters. Second, decoupling is often used to refer to the fact that economic growth in the emerging market economies is holding up, even as growth slows substantially in the United States and, to a lesser extent, elsewhere in the industrial world. Finally, and as a related point, observers point to the fact that even as the financial markets of many industrial countries have been roiled by the turmoil that emerged last August, conditions in the traditionally volatile financial markets of emerging market economies have proved surprisingly resilient.

In my talk today, I would like to address two questions: First, is the world economy genuinely experiencing divergences in economic and financial performance being described as "decoupling"? And second, if true, can we reconcile the perception that globalization has made economies increasingly interlinked with the suggestion that the most recent U.S. slowdown has not been matched by slowing elsewhere to the extent that we have seen in recent cycles?[1]

Global Integration through Trade and Finance

Undoubtedly, economies have become more integrated in recent decades. For example, U.S. imports of goods and services have risen relative to the U.S. gross domestic product (GDP), from 10 percent in the second half of the 1980s to nearly 18 percent today. U.S. trade with other industrialized countries has more than doubled over this same period. Industrialized country trade with emerging market economies has experienced a far more dramatic increase.[2]

These increases in trade are the natural result of various forces. Transport costs have been a big factor. Air shipping costs have declined over time, although some of this has been eroded recently with greater security costs and the rise in fuel prices. Costs of ocean shipping have come down, due to containerization, bulk shipping, and other efficiencies.[3] Policy-induced barriers, such as tariffs and other means of restraining international trade, also have declined, with progress especially marked in

developing Asia and in Eastern Europe after the breakup of the Soviet Union.

Additionally, information about production opportunities in foreign countries has become easier to attain, promoted in part by immigrants and multinational companies facilitating networking and by the enhanced availability of information through the Internet. These developments have led to expanded trade in traditional manufactured goods, but also have led to an expanded breadth of types of traded goods and especially services.

As a consequence of these developments, internationally integrated production has risen. From the U.S. perspective, this rise has primarily occurred through growth in the import share of intermediate inputs used across all private industries. In the last decade alone, the imported input share rose from around 8-1/4 percent in 1997 to 10-1/2 percent by 2006.

The international movement of workers leads to macroeconomic consequences, particularly for smaller developing countries. In 2007, an estimated $240 billion in remittances went to developing countries, more than double the flow in 2001. These remittances represent a significant source of developing country income and broaden the scope for cyclical spillovers.[4]

Another area of impressive growth in international linkages has been in financial services. We've seen increased cross-listings of stocks and more cross-border ownership and control of exchanges, banks, and securities settlement systems. Outside of the United States, in 1997, 15 percent of the assets in private equity portfolios were in foreign equities. A decade later, this share has risen to 24 percent. For U.S. investors, the comparable shares grew from 9 percent of total equity portfolios to 19 percent. Bond portfolios have also become more international, especially for foreign investors.

While financial integration has occurred globally, this growth has been uneven. Integration among industrialized countries, measured by the ratio of the sum of their foreign assets and liabilities to GDP, has tripled since 1990, while an analogous measure for emerging and developing economies has increased only about 50 percent.[5]

One result of this financial integration is that the financial channels are growing in importance in the transmission of shocks between economies.[6] The extent of this integration has become painfully evident to investors and financial institutions during the current episode of financial turmoil, with the collapse of the subprime mortgage market in the United States spreading losses and funding pressures to many corners of the globe.

Recent analysis of the size and sources of spillovers between the United States, the euro area, Japan, and other industrial countries finds a central role for international trade. But spillovers also occur through commodity prices and through financial variables such as short- and long-term interest rates and equity prices.[7] For example, when liquidity conditions tighten in one country, globally active banks may attempt to pull liquidity from overseas affiliates, reducing the liquidity consequences at home but simultaneously transmitting the shock abroad.[8] What is particularly interesting is that in some cases, financial linkages might now be more important for transmission than the traditional trade linkages.

Decoupling During the Recent U.S. Slowdown

I turn now to evidence regarding decoupling during the recent U.S. slowdown. Part of the reason the hypothesis of decoupling has gained so much traction is that the economies of the world had appeared particularly "coupled" during the last major downturn in the United States, the high-tech slowdown in 2001 and 2002. Over the two years prior, during 1999 and 2000, quarterly real GDP growth in the United States averaged about 3-1/2 percent at an annual rate; U.S. growth then slowed sharply to about 1 percent during 2001 and 2002 before recovering over the subsequent two years. In

other major industrialized countries, average growth slowed similarly, but the recovery was slower.[9] In the emerging market world, economic growth moved in tandem with U.S. growth, falling from more than 6 percent to about 3-1/2 percent, then recovering to more than 6-1/2 percent.[10]

What about our more recent experience? During the first three quarters of 2007, the U.S. economy was growing at a solid pace of about 3 percent at an annual rate. Over the next two quarters, U.S. growth slowed to an average of about 3/4 percent, while growth in other industrialized countries stayed much closer to trend rates at about 2-1/2 percent, and growth in the emerging market economies, at 6-1/2 percent, held up quite well.

It is important to keep in mind, however, that we are still in the midst of the current episode. Financial markets remain stressed; housing markets in many countries are adjusting after a sharp run up in prices; and the effects of the turmoil on economic activity in the United States and elsewhere are still working themselves out. Accordingly, it is too early to tell how correlated U.S. and foreign activity will have been in this period.

One piece of research on business cycles in G-7 economies, done by staff at the Federal Reserve Board, shows how difficult it is to establish with any confidence that business cycles have become more synchronized in recent decades, despite trade and financial integration having clearly increased.[11] Other research, which shows a modest convergence of business cycles across a larger group of industrial economies, fails to find an increase in the correlation of industrial country cycles with emerging market economy cycles.[12]

The other dimension of recent linkages is financial, where the evidence is clearer. First, few question the importance of financial linkages between the United States and other industrial economies, which is an area where decoupling clearly has not occurred during the recent episode. While industrial country markets for stocks and bonds have displayed a high degree of co-movement for years, in the current episode we are seeing notable new correlations across money markets, with disruptions in funding markets showing up in the euro area, Switzerland, the United Kingdom, and Canada, as well as in the United States. Some of the effects of the U.S. subprime mortgage crisis on financial markets in these countries occurred as a result of direct or indirect balance sheet exposures by their financial institutions to U.S. securities. Other adverse consequences for foreign financial institutions occurred when entire markets, such as that for asset-backed commercial paper, became impaired.

In contrast, some have pointed to the apparent resilience of financial conditions in emerging market economies during the past year as an example of decoupling. In particular, the disruptions in the advanced economies have had only limited impacts on money markets in emerging market economies, and other financial market indicators in emerging market economies appear to have held up relatively well. For example, the spreads of emerging market sovereign bond yields over U.S. Treasury securities have risen since June of last year, but by only about 1/3 of the rise in the average U.S. corporate high-yield spread over U.S. Treasury securities. That rise is roughly half the average in several previous episodes of pressure on U.S. corporate bond prices over the period from 1998 to 2005; these episodes include, among others, the Russian and Long-Term Capital Management crisis of 1998, the 2002 surge in corporate defaults and bankruptcies, and growing concerns about U.S. auto companies in 2005.

In addition, while stock prices in some emerging market countries have not performed well, a broad aggregate for these markets shows stock prices up over the past year, while the advanced economy indexes have exhibited double-digit declines, on average.[13] Certainly, stock prices in the emerging market economies moved downward during acute periods of U.S. financial stress over the past year. However, these movements were similar in scale to those seen in industrial country equity markets, and during the intervening periods when global pressures were less intense, the prices of emerging market equities rebounded more substantially than those of industrial countries.

Reconciling Apparent Decoupling with Integration

How do we reconcile the obvious expansion of international trade, labor, and financial flows with the evidence, albeit mixed, of decoupling in the recent period? Three different points can help us achieve this reconciliation.

The first point is purely conceptual. The conventional wisdom is that greater international trade leads demand shocks to reverberate more intensely across international markets. However, we need to recognize that economic theory does not predict that greater economic and financial integration will necessarily result in increased co-movement of output across nations. One way in which integration might lead to less synchronization is through the tendency of international trade to promote specialization of production. If economies become more specialized, then their economic growth, and even equity markets, may be driven more by developments that are specific to the industries that have taken root in each country.[14]

The second point in this reconciliation stems from the observation that the correlation of business cycles will be specific to the shocks driving the cycles. In 2001 and 2002, the sharp decline in growth in the foreign countries soon after the U.S. economy slowed reflected the global nature of the bursting of the technology bubble and its worldwide transmission through equity markets and manufacturing.

In the current slowdown, the implosion of the housing sector is playing the most prominent role in dragging down U.S. GDP growth. As construction utilizes local inputs and results in an output that is not traded internationally, its spillovers abroad are more limited. To be sure, a portion of the decline in domestic demand in the United States has been absorbed by foreign economies as our imports have fallen and exports have risen. However, these indirect spillovers are small compared with the more direct effects that would result from a shock in the tradable goods sector or from one of more global origin. Although the financial turmoil triggered by problems in the U.S. housing sector has been more international in scope, in particular with respect to other industrialized countries, its effects on the real side of foreign economies appears to have been limited, at least to date.

The recent period also has been one of enhanced demand for commodities and sharp run-ups in many commodity prices, including for fuels, metals, and food. The actual increase in demand is benefiting many producers of commodities and is helping to offset the effect of weakening of export markets in industrial countries, thus contributing to the resilience of output in many emerging market economies.

The third and final point is that structural changes in emerging market economies have helped these countries during the recent period. One change in particular is the strengthening of the policy environment. With improved economic and financial policies, emerging market economies are more flexible and less subject to internal and external shocks that scare investors and disrupt asset markets. Inflation rates have come down dramatically since 1995, in part as a result of better monetary policy, assisted in many cases by more flexible exchange rate regimes that allowed monetary authorities to focus more intensively on domestic price stability.

In addition, structural progress has been made on the fiscal side in emerging markets. Fiscal balances are much improved, and many emerging market economies are running current account surpluses. Improvements in the policy environment have helped reinforce perceptions that emerging market assets, on average, are less risky than in the past and are less likely to be sold off in the event of financial disruptions and generalized retreats from risk, such as we have seen since August. As evidence of this, as I noted earlier, emerging market credit spreads have become less sensitive to movements in industrial country corporate spreads, and this trend has been ongoing even prior to the events of the last year.

Inflation and Decoupling
Up until now, I have been discussing whether movements in economic activity have or have not decoupled from each other. But whether or not business cycles have diverged, it is clear that the sharp increase in many commodity prices has given rise to highly coincident increases in inflation rates around the world. In industrialized economies, such as the United States, rising inflation has chiefly reflected the surge in energy prices, whereas in developing countries, for which food takes up more of household budgets, rising food costs have been a more important culprit. The reasons for the trajectory and persistence of increases in prices of food and energy this year, as global growth has moderated, are not entirely clear. The upward trend in prices of food and energy over the past several years, however, importantly reflects the pressures posed by rapidly growing demand in developing economies against relatively inelastic global supplies of commodities.

For the moment, higher headline rates of inflation have shown only a few tentative signs of embedding themselves in core inflation or in longer-term inflation expectations. However, policymakers around the world must monitor the situation carefully for signs that the increases in relative prices globally do not generate persistently higher inflation. Additionally, in those countries where strong commodity demands are associated with rapid growth in aggregate demand that outstrips potential supply, actions to contain inflation by restraining aggregate demand would contribute to global price stability.

Conclusion
To sum up, the evidence sometimes presented as indicative of a divergence in economic performance, referred to as decoupling, is not definitive. It is certainly the case that in recent quarters, the U.S. economy slowed to a greater extent than other industrial economies, and economic activity in the industrial economies, in aggregate, has slowed more than in the emerging market economies. This experience contrasts with that near the start of this decade, when the economic downturn of 2001 through 2002 was felt more uniformly throughout the global economy. In addition, financial conditions in most emerging market economies have remained relatively stable, considering the turmoil that overtook industrial country financial markets over the past year.

Even so, neither economic growth nor financial markets in the different regions of the world moved in lockstep in the past, nor are they expected to do so across all business cycles. It is far from clear that the divergences in performance we have seen of late, which are tentative in any event, represent distinct breaks from historical benchmarks. The recent divergences of economic performance reflect a particular set of shocks that have hit the global economy, as well as changes in the way that different economies have responded to those shocks.

As our global economy becomes more intertwined and complex, the nature and transmission of business cycles and the associated policy responses will no doubt continue to evolve. Economies benefit from having independent monetary policies that provide room to respond flexibly to alternative configurations of economic and financial shocks. These benefits could be increased if exchange rate flexibility were to become more widespread and monetary policies given greater latitude to respond to shocks wherever they originate.

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Footnotes

1. The views I express are my own and not necessarily those of other members of the Board of Governors. Shaghil Ahmed, Steven Kamin, and Michael Leahy, of the staff of the Board of Governors of the Federal Reserve System, and Linda Goldberg, of the staff of the Federal Reserve Bank of New York, contributed to these remarks. Return to text

2. Data from 1986 compared with 2007 (International Monetary Fund, 1986-2007). Return to text

3. Hummels (forthcoming). Return to text

4. Federal Reserve Bank of Atlanta (2008); also see The World Bank (2005). Return to text

5. Lane and Milesi-Ferretti (2007). Return to text

6. Imbs (2004) shows that financial integration raises business-cycle synchronization among a sample of industrialized countries, even though financial integration leads countries to be more specialized. Return to text

7. Bayoumi and Swiston (2007); International Monetary Fund (2007). Return to text

8. Cetorelli and Goldberg (2008) provide evidence of this transmission by globally active U.S. banks Return to text

9. The industrialized-country aggregate referred to here is a weighted average of the real GDP growth rates of Canada, Denmark, the euro area, Japan, Norway, Sweden, and the United Kingdom. The weights are proportional to U.S. dollar-denominated GDP computed at market exchange rates. Growth in industrialized countries went from about 3-1/2 percent to 1-1/2 percent, then recovered only to 1-3/4 percent. The recovery in the other industrialized countries took longer than in the United States, with growth picking up further after 2004, but the pattern was broadly similar. Return to text

10. The emerging market economies aggregate is based on the real GDP growth rates of Argentina, Brazil, Chile, China, Colombia, Hong Kong, India, Indonesia, Korea, Malaysia, Mexico, Peru, the Philippines, Russia, Singapore, South Africa, Taiwan, Thailand, Turkey, and Venezuela with the same weighting scheme as that used for industrial countries. Return to text

11. Doyle and Faust (2005). Return to text

12. Kose, Otrok, and Prasad (2008). Return to text

13. Stock price calculations are based on MSCI indexes for all emerging market economies and on the “World Index” for non-emerging-market economies. Return to text

14. Catao and Timmermann (2004). The authors identify high and low volatility states over the past 30 years. They find that the country factor contribution drops markedly when global equity market volatility rises, and that country-return correlations become tighter when global and industry factors are both in a high-volatility state. Return to text

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