Commentary: The Integration of World Capital Markets

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Every day we see more and more evidence of the growing internationalization of capital markets. Investors diversify their portfolios and corporate treasurers tap debt and equity funds abroad. These tendencies are strengthened by the expansion of derivative products markets that now permit market participants to hedge long-term currency and interest rate risks.

It is important to consider therefore the economic effects of these links among national capital markets, including the effects on investment, growth, monetary policy, and exchange rates. In their paper for this conference, Michael Mussa and Morris Goldstein have combined a wide-ranging summary of the existing research on the integration of world capital markets with their own carefully considered judgments on these issues. Since I found their judgments to be sound and carefully considered, I will not discuss their specific remarks, but will comment instead on a few of the issues raised by their paper and, more generally, by the subject of capital market integration: the international mobility of savings, the European exchange rate mechanism (ERM), and the impact of capital mobility on the effectiveness of domestic monetary policy.

The limited mobility of savings

Any consideration of the extent of world capital market integration highlights the paradox that although the ***gross*** flows of funds among

countries are very large, the ***net*** flows are surprisingly small. The key fact is that countries with high saving rates have high domestic rates of investment. Savings stay largely in the country in which the saving is done.

Compare for example the situations in the United States and Japan. The United States has a national saving rate net of depreciation of about 5 percent of GDP while Japan has a net national saving rate over 15 percent of GDP, a difference that reflects government tax and budget policies, social arrangements, and cultural attitudes. In a completely integrated world capital market, we would expect that capital would flow from the high saving countries like Japan to low saving countries like the United States on a large enough scale to eliminate any link between the national saving rates and the corresponding rates of investment. What we see instead is that there is only a small tendency in this direction. Thus the United States has a capital inflow of about 2 percent of GDP, bringing net domestic investment to about 7 percent of GDP while Japan has a capital export of about 2 percent of GDP, leaving a net domestic investment rate of more than 13 percent of GDP.

Although the United States and Japan are at the extreme ends of the savings spectrum among major industrial countries, the same pattern of behavior can be observed among the other industrial countries as well. More than a decade ago, Charles Horioka and I studied the relation between national saving rates (relative to GDP) and the corresponding domestic investment rates among the twenty-four industrial countries of the Organization for Economic Cooperation and Development (OECD) (Feldstein and Horioka, 1980). We found that each extra dollar of sustained saving in a country leads to a sustained increase of 80 to 90 cents in fixed investment and inventory accumulation.

This estimate of a "savings retention rate" of 80 to 90 percent has turned out to be remarkably robust. The Feldstein-Horioka study has been replicated and extended by many other researchers, but always with similar empirical results. Mussa and Goldstein discuss the attempts by some economists to explain away this result as a statistical artifact rather than a fundamental economic fact and correctly reject those

explanations. They also provide a very useful discussion of some of the reasons why savings tend to remain in the country in which they originate.

I will extend their discussion with a few remarks on five aspects of this issue.

First, it is useful to note that the investment-saving relation that I have been describing refers to ***national*** saving and not just to private saving. Moreover, statistical estimates (Feldstein and Bacchetta, 1991) show that total domestic investment responds in the same way to changes in private saving and to changes in government saving (or budget deficits). This reinforces the conclusion that the causation goes from international differences in saving rates to international differences in investment rates rather than the other way around.

Second, it should be stressed that the investment-saving relation is a ***long-tern*** relation based on comparison of decade-average investment rates and decade-average saving rates. Year-to-year fluctuations in national saving are often balanced by changes in international capital flows, but this does not continue when the savings differences are sustained.

In the United States, the increased budget deficit in the early 1980s led to a capital inflow and the associated trade deficit. This link between the two was widely noted and frequently referred to as the problem of the twin deficits. But that link between the budget deficit and the trade deficit (and capital inflow) was temporary. Between 1987 and 1990, the U.S. current account deficit declined from **3.6** percent of GDP to only 1.6 percent of GDP even though the persistence of the government deficit and the decline of private saving actually caused the U.S. net private saving rate to decline over these years. The declines in U.S. national saving and in the capital inflow have been matched by a corresponding decline in investment as a share of GDP.

A third aspect of the estimated saving-investment relation that should be kept in mind is that it is an average relation based on data for a cross-section of countries. There is good reason to believe that

the saving retention coefficient may differ among countries. Some evidence indicates that the saving retention coefficient is in fact lower within the European community than it is for the OECD as a whole and may be declining as those capital markets become more closely integrated.

Mussa and Goldstein note that estimates of the saving retention coefficient in less developed countries (LDCs) are generally lower than estimates of the coefficient in the industrial countries of the OECD. They say that they are surprised by this result since the less developed countries have less developed capital markets and are more dependent on domestic saving to finance local investment. My judgment is that the low estimated saving retention coefficient for the LDCs reflects the difficulty of measuring saving rates accurately in less developed countries where much of the economy is rural and much of the saving and investment is done within households or villages. Because the country-to-country differences in saving rates are not accurately measured, the impact of the true underlying differences in saving rates cannot be accurately assessed. This is the traditional "errors in variables" estimation bias that is well known to cause estimated coefficients to understate the corresponding true parameter values when the explanatory variable is measured with random error.

My fourth comment deals with foreign direct investment. I have recently been studying the effect of foreign direct investment (both inbound and outbound) on overall domestic investment rates. As a by-product of that study, I have found that taking foreign direct investment into account does not alter the estimated saving retention coefficient.

Finally, as Mussa and Goldstein note, a high saving retention coefficient suggests that the Eastern European countries will have to finance their own investments with national saving. Mussa and Goldstein are optimistic that these countries will have high saving rates just as Korea, Taiwan, and other Asian newly industrialized countries (NICs) did. That is certainly possible. One reason is that there was relatively little private saving during the years of Communist power. Since national saving is the difference between the saving of the

savers and the disaving of the disavers and there is little past private saving to disave, national saving can be high even if the current workers do not save at particularly high rates.

But there are reasons to worry that saving in Eastern Europe will not be as high as it is in the Asian NICs. In particular, I worry that the combination of high retirement pensions provided by the government and a generous safety net will leave little reason for most individuals to save. If so, high investment levels will require a capital inflow from abroad. It is important for those countries to provide good investment opportunities to foreign investors if they are to attract such funds. Despite the generally high saving retention coefficient, these relatively small economies can compete successfully for the international pool of investable funds for a decade or more if they do offer attractive enough investment opportunities to foreign investors.

The European exchange rate mechanism

Although this conference deals with the integration of world capital markets, it is interesting to look at the somewhat narrower issue of the integration of capital markets within Europe. The end of capital controls within Europe was a very important step toward capital market integration within the European Community. It was also the end of capital controls and the availability of internationally mobile short-term capital that made it impossible to sustain artificial exchange rate levels. The result was the realignments of exchange rates in the fall of 1992 and in the summer of 1993 and the decision to shift to a de facto floating exchange rate system. It is still very much a managed float, but with the bands widened to 15 percent limits it can be described accurately only as a floating rate system.

All of this puts the possibility of full monetary union further off into the twenty-first century and increases the probability that it won't happen at all. As many of you know, I think this is a favorable development for the economic well-being of Europe (Feldstein 1992b, 1992c, 1993). I would also call attention to an article in the *Financial Times* on August *15,* 1993, that described a study by the staff of the European Commission itself that concluded that monetary union would significantly increase the rate of unemployment in the

European Community. That study was apparently completed some time ago, but had been suppressed until now.

Capital mobility and monetary policy

Discussions of increased global capital market integration inevitably raise concerns about the effect that it has on the Federal Reserve's ability to make monetary policy and on the efficacy of monetary policy.

I believe that the common assertion that increased integration of the world capital markets weakens the Fed's ability to make monetary policy is wrong. There is simply no evidence to support such an assertion. If monetary policy is defined by changes in short-term interest rates, there has been no reduction in the Fed's ability to achieve the changes that it wants. If monetary policy is defined by changes in a broad monetary aggregate like M2, the difficulties that the Fed has been experiencing reflect the very limited scope that remains for reserve requirements rather than the greater international links in capital markets.

Does the mobility of capital affect the impact of monetary policy on the economy? My reading of the evidence is that it strengthens the effectiveness of monetary policy by adding an important international trade channel and an important price channel to the ways that monetary policy affects the domestic economy.

Consider the experience of the early 1980s. It was clear that the Fed was taking a tough stand and was determined to reduce the rate of inflation. That determination made dollar assets less risky and contributed to the rise of the dollar. The increase in the dollar reduced inflation directly by lowering the cost of imports and by forcing domestic firms to reduce their prices to compete with the lower cost imports. More generally, the rise in real interest rates that resulted from monetary and fiscal policies increased the value of the dollar and thereby reduced inflation and demand. These international channels mean that monetary policy does not have to get all of its effect through the traditional domestic route of changes in fixed investment and inventories.

Future developments

I turn finally to some speculation on what might change in the future. Savings retention coefficients may well decline in the years ahead. That decline would reflect financial innovations and the growing sophistication of institutional investors and corporate financial officers.

Cross-border portfolio investments may increase as institutional investors recognize that international diversification reduces risk and can result in both higher yields and lower variability than current portfolios. In the fixed income markets, the availability of long-term derivatives also permits institutional portfolio investors to hedge the currency risk while diversifying the interest rate risk. Similarly, corporations may do more cross-border borrowing using long-term swaps to eliminate unwanted currency risks.

But while such trends are under way, we are still far from a fully integrated world capital market. For now, the key feature of the international capital market is still a high degree of short-term integration combined with a strong tendency for most saving to remain and be invested in the country where the saving is done.

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