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Global Capital Market Integration: Implications for U.S. Economic Performance

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Craig K. Elwell
Specialist in Macroeconomics
Government and Finance Division

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Summary

The post-war period has seen a steady and sizable expansion of international economic integration. Trade in goods has grown rapidly, but trade in assets (*e.g.* bank accounts, stocks, bonds, and real property) has grown far faster. The rapid growth of international asset markets suggests that they confer important economic benefits. However, that growth also raises concerns about international capital flows as initiators or conduits of economic crisis among nations.

Several factors have contributed to the rapid growth of international capital flows. The collapse of the Bretton Woods System of international monetary management also initiated a fairly quick abandonment of controls on international capital flows in most industrial countries. Expanding investment opportunities in both developed and developing nations raised the incentives for cross border investing. Innovations in communication and information technology have dramatically reduced the cost of international communication and expanded access to data for assessing risk and reward. Also of importance has been the creation of new financial instruments that improve investment decision making.

The extent of capital market integration is evident in the huge increases in most financial realms over the last twenty years. These include bank deposits, securities (stocks and bonds) and foreign exchange. Foreign exchange transactions world-wide have grown so much that the value of annual foreign exchange trading exceeds the value of goods transactions by a factor of 50. Despite this growth data indicate that asset market integration still falls well short of creating one world market in assets.

The economic benefits of international capital flows are significant. The presence of well functioning international asset markets can extend the benefit of international trade well beyond the gains associated with the exchange of goods and services. International capital markets can facilitate a more efficient allocation of saving and investment across nations, allowing an optimal spreading of consumption spending over time. International trade in assets can also enable greater diversification of investment portfolios, leading to reduced investor risk. In conjunction with flexible exchange rates, high capital mobility also enhances the power of monetary policy as well as alters how monetary forces are transmitted and distributed through the economy.

Economists and policy makers have also long recognized that increased financial integration carries risks. One risk is that more points of economic and financial contact raise the prospect of the transmission of negative economic shocks, so called "contagion" effects. In addition, some argue that asset markets themselves are often destabilizing and can generate periodic crises. For the U.S. the main problem associated with mobile global capital has been occasional misalignment of the dollar exchange rate. For the U.S., a large, predominately domestically oriented economy, with a well developed financial system and a resilient structure of private markets, large international flows of capital are absorbed to economic advantage, with a minimum of disruption, even in the face of large currency swings.

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Introduction

Economic globalization has been occurring steadily since the end of World War-II, but that process clearly accelerated over the last two decades. The most dramatic change has been in the size and influence of international capital markets. These markets are an ever denser network in which residents of different countries can exchange assets. The assets traded include stocks, bonds, and bank deposits. Capital market transactions can be rooted in relatively short term goals associated with prudent portfolio management or long-term endeavors involving direct investment in plant and equipment. The rapid growth of these markets suggests that they confer important economic benefits. However, that growth also raises concerns about international capital flows as initiators or conduits of economic crisis. Such concerns are certainly heightened by major economic and financial crises in Europe in 1992-3, in Mexico in 1994, and East Asia in 1997-8 in which international capital flows seemed to have played a significant role.

The importance of U.S. international economic transactions with the rest of the world is well recognized by Congress, which in recent years has closely monitored many dimensions of U.S. trade performance. Financial market stability, the conduct of monetary policy, and trade deficits are all issues of congressional concern likely affected by international capital flows. This report assesses the extent of capital market integration, outlines and evaluates the economic benefits of greater integration, and examines the risks that increased capital flows may also carry. The focus is on how expanding international capital markets affect the U.S. economy.

Background

A high degree of international economic integration, in both goods and asset markets, is not unique to the current era. The world economy was highly integrated in the period stretching from the mid-1800's through the beginning of World War I. There was a dramatic retreat from this achievement in the inter-war period. But, since the end of World War II, there has been steady movement toward freer trade and increased interdependence, now reaching a point that rivals the degree of globalization reached in that earlier era. Nevertheless, there are aspects of the current world economy that are very different from those of that earlier period of high globalization. First, there are many more and greatly varied participants (countries) that make up the world trading system. Second, much improved capacities for communication and transportation have effectively shrunk the globe and made the process of economic integration far easier. Third, more so than in earlier times, trade and the mechanisms of trade have become vehicles that facilitate the transfer of technology and the

profitable absorption of research and development spillovers, making international trade an important propellent of the difficult process of economic development.

Economic integration of the world economy has increased greatly over the last fifty years, but the degree of globalization varies by type of market. If one looks at labor markets it seems very clear that little integration has occurred. These markets are very segmented and national in scope, with negligible cross border flows and very little *direct* competition between countries. Product and asset markets present a very different picture, however.

The simplest measure of product market integration, goods trade as a percent of Gross Domestic Product (GDP), has risen steadily over the post-war era. For the world as a whole the International Monetary Fund (IMF) estimates that this ratio has doubled since 1950 and continues to rise. The U.S. fits into this general pattern with merchandise exports as a share of GDP rising from 3.6% in 1950 to about 7.3% in 1999. Yet this ratio very likely underestimates the growth of global integration. The underestimation is the result of services, which are not widely traded, being the fastest growing share of total output in advanced economies. If trade is measured as a share of total "tradeable" goods production, the growth in importance of trade is all the more impressive. For example, for the U.S. this ratio, using the most recent estimate, has climbed from 8.9% in 1950 to 35% in 1995.[1]

Nevertheless, global integration for trade in goods still falls well short of what has occurred in the international markets for assets. The sections that follow look more closely at the phenomenal growth of international capital flows.

What Caused the Growth of International Capital Flows?

The early post-war international financial architecture laid out under the Bretton Woods Agreement of 1944 did not allow unfettered capital flows.[2] Capital controls played an important operational role in that system of fixed but adjustable exchange rates. Capital controls at that time gave member nations some wiggle room between external and internal financial conditions. Domestic policy goals could be pursued, within a limited range, without immediately upsetting the stability of the pegged exchange rate. If the exchange rate did require adjustment, capital controls helped ensure that realignments were orderly.

At a more fundamental level, it was thought that capital controls were needed to facilitate the reconstruction and growth of the international trading system that laid in ruin in the wake of prolonged depression and world war. Experience in the inter-war period (1918-1938) led policy makers to believe that uncontrolled capital flows were volatile and to often caused currency instability. To defend their currencies countries often resorted to higher tariffs or broader import quotas, actions inimical to the steady growth of world trade. Therefore, if the first priority of the new world

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[1] See: The International Monetary Fund (IMF), *World Economic Outlook*, May 1997.

[2] For a survey of the evolution of the international monetary system see: Eichengreen, Barry. *Globalizing Capital: A History of the International Monetary System.* Princeton, NJ. Princeton University Press 1996.

financial system was to expand trade, stable currencies would be needed, and that precluded freely mobile international capital.

The Reduction of Capital Controls.

The very success of the Bretton Woods system in restoring world trade sowed the seeds of its own demise, including the system international capital controls. As liberalization of trade and the liberalization of domestic financial institutions proceeded apace in most industrial economies, regulators found it increasingly difficult to distinguish between foreign exchange transactions for purposes of trade and those intended for capital transactions. The volume of "disguised" capital flows rose dramatically as traders in assets increasingly evaded capital controls .

Over the course of the 1960's and early 1970's the global financial system grew evermore unstable, with periodic currency crises and large destabilizing capital flows occurring despite formal capital controls. The U.S. and other industrial nations formally abandoned the Bretton Woods system in 1973, moving to a system of floating exchange rates. Capital controls did not instantly vanish at this time, but in most industrial countries such controls were reduced at an accelerating pace, falling to extremely low levels of restriction by the mid-1990's.

The removal of capital controls can be seen as a "fait accompli", but as discussed more fully below, there was also a growing recognition of the several economic benefits of capital mobility. In addition, there was more confidence by major governments that the several risks posed by capital mobility could be managed.

The Expansion of Global Investment Opportunities.

The large increase in international capital flows has not been just a result of removing barriers, however. The world economy has also seen a significant expansion of investment opportunities across the globe, raising the incentives for cross border capital flows. Many developing nations have improved their macroeconomic stability, greatly extended commitments to the private market as the focus of microeconomic decision making, and pursued more open trade policies. These are actions that helped to make a wider spectrum of nations more attractive places to invest, broadening the global scope for profitable investment.

Innovations in Communication and Market Access.

In addition, innovations in the U.S. and other industrial countries have greatly improved access to international capital markets by individuals and institutions. Advances in communications and information technology have led to a particularly dramatic reduction in the cost of overcoming space and time in financial transactions. In many countries the cost of telephone communication and high speed computing has fallen precipitously in recent years. Such innovations help reduce the *information asymmetries* that are thought to impair the efficiency of financial markets by quickly providing investors with a broader array of data with which to evaluate potential return. Also of importance has been the creation of an array of new financial instruments such as mutual funds, hedge funds, and credit derivatives that enable

investors to choose with greater ease and precision their desired balance between risk and reward.

The Extent of Capital Market Integration

There is no one measure of the degree of integration of international capital markets. Evidence on trends in several types of cross-border asset transactions can give a picture of the general size and scope of the capital market integration that has occurred, however.

Cross-Border Asset Transactions.

The two major categories of private cross-border asset flows are *direct investment* (*i.e.,* investment in real property such as land, factories, or office buildings) and *portfolio investment* (*i.e.,* investment in financial assets such as bank accounts, stocks, and bonds). The IMF using data through 1997 reports (see Table 1.) that between 1970 and 1997 gross cross-border flows of *direct investment* in the industrial countries grew by a multiple of 31, rising from $14.5 billion to $448 billion.[3] Yet this large increase appears tepid compared to the growth of gross flows of *portfolio investment* that, over the same time period, saw transactions explode by a multiple of nearly 200, rising from $5.3 billion to $1040 billion. The growth of both types of investment are likely evidence of rising capital market integration, but (as discussed below) are responses to different economic incentives presented by world capital markets.

Table 1. Cross-Border Capital Flows for Major Industrial Countries
(In billions of dollars)

	1970	1975	1980	1985	1990	1995	1996	1997
Foreign Direct Investment	14.5	34.3	82.8	75.9	283.2	369.0	357.5	448.3
Portfolio Investment	5.3	27.1	60.9	233.4	329.6	764.3	1,162.6	1040.2

Source: International Monetary Fund

The rapid growth of portfolio investment is more than just a burgeoning of international bank deposits. Securities (equities and bonds) transactions have also grown substantially. For example, in 1975 no major industrial country had cross-border securities transactions that exceeded 5% of GDP. By 1997, however, the multiple for these type of transactions ranged from 1 to 7 times GDP. The United States, for example, saw cross-border transactions in bonds and equities grow from 4% of GDP in 1975 to 213% of GDP in 1997.

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[3] See: The International Monetary Fund, *International Capital Markets :Developments, Prospects, and Key Policy Issues.* Washington, DC. September 1998.

Another dimension of asset market integration is the sharp increase in the use of international markets to raise funds, with new issues of international equity rising nearly six fold just during the 1990's. Non-resident holding of public debt has also increased in most industrial countries. For the U.S. the share of total public debt held by non-residents went from 15% in 1983 to 39% in 1999. We also observe all large securities markets trade in large numbers of non-resident companies. Capital flows to and from developing countries are on a smaller scale but have shown similar growth.

Foreign Exchange Transactions.

One more measure that is reflective of the huge increase in cross-border asset transactions is the scale of foreign exchange transactions. The acquisition of an asset not denominated in one's home currency usually requires the acquisition of the appropriate foreign currency. Therefore, large asset flows must induce large currency transactions. The Bank of International Settlements (BIS) estimates using data available through 1995 that *daily* nominal turnover in foreign exchange markets has risen *six fold* between 1986 and 1995, with the value of daily transactions soaring from $188 billion to about $1.2 trillion (see Table 2.). That latter figure is equal to over 85% of the foreign exchange reserves held by *all* countries in that year. On an annual basis, transactions of that magnitude are also more than *50 times* the value of world wide trade in goods and services in a typical year.

Table 2. Foreign Exchange Trading

	1986	1989	1992	1995
Global estimated turnover (In billions of U.S. dollars)	188	590	820	1,190

Sources: Bank of International Settlements and International Monetary Fund.

Evidence of Limited Market Integration.

While there is little doubt that international capital markets have grown in size and interconnectedness, other evidence suggests integration of the world capital markets is far from complete. For example, *net* capital flows (capital outflows minus capital inflows) have not grown nearly as much. The size of such flows can be approximated by the absolute value of the advanced countries' current account balances. In recent years, this number has averaged near 2.0% of their cumulative GDPs, not a remarkably large size. Similarly, despite their huge growth, direct investment flows (i.e., investment in real capital as opposed to portfolio investment) remain a small percent of total investment, averaging between 5% to 7% for the advanced economies. Also, several empirical studies have shown a very high correlation between domestic investment and saving, suggesting that international capital mobility plays a small role in the finance of domestic investment. Of course, this high correlation could also reflect the imperfect mobility of trade in goods and

services or the targeting of the current account balance by the government (that is, using policy instruments to keep the current account balance within a narrow range.)[4]

Another way to assess the extent of capital market integration is by the degree that asset prices have converged across countries. If one looks at onshore/offshore yields for identical instruments denominated in the same currency a sharp convergence has, indeed, occurred. There has also been a high degree of convergence for rates of return on similar instruments in *different* currencies.[5]

A better indicator of the extent of capital market integration, however, is the relative level of *real (inflation adjusted)* national interest rates across countries. Full integration of world capital markets would tend to eliminate differences in real interest rates (for assets of equivalent risk). Because of a lack of accurate data on expected inflation and forward exchange rates across countries, tests for such convergence are difficult. However, evidence on nominal interest rates in the United States, Germany, and Japan does not show a substantial reduction in the dispersion of nominal bond yields over time.[6]

One is left with the sense that while international capital markets are far more integrated than was true only twenty years ago, economic integration probably falls short of forming a single global market. Nevertheless, the substantial degree of financial integration that has occurred carries a raised potential to strongly influence the domestic economy and the conduct of economic policy.

The Economic Benefits of Capital Market Integration

That international capital flows have expanded so greatly in recent years is strong evidence that there are sizable economic incentives propelling these flows. Economic theory gives us some insight into what these incentives are and how economic efficiency is increased by international capital market integration.

Extending the Gains from Trade.

The presence of well functioning international asset markets can extend the benefits of international trade well beyond the gains associated with the exchange of goods and services. International capital markets can facilitate a more efficient allocation of saving and investment across nations allowing an optimal spreading of consumption spending over time. International trade in assets can also enable greater diversification of investment portfolios, leading to reduced investor risk.

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[4] See: Feldstein and Charles Horioka, *"Domestic Savings and International Capital Flows,"* Economic Journal, June 1990. Also see: Alan M. Taylor, "International Capital Markets in History: The Saving-Investment Relationship," NBER Working Paper 5743, September 1996.

[5] Bank For International Settlements, 66th Annual Report, Basle, June 1996.

[6] Marston, Richard. *International Financial Integration: A Study of Interest Differentials Between the Major Industrial Countries*. Cambridge University Press, 1995.

Expanding Intertemporal Trade. Gains from trade can arise from *intertemporal* exchanges. These are exchanges of *current* goods and services for claims on *future* goods and services, that is, an exchange of goods and services for an asset (*i.e.* cash in a bank account, stock, or bond). When the United States (or any trading nation) borrows from abroad to import materials for a current investment project, it is undertaking intertemporal trade. In such a transaction, the borrowing nation gains because it can support a higher rate of investment in capital goods than what current domestic saving alone could finance. The lending nation gains an asset yielding a higher rate of return than is available in the home economy. Because of the difference in their preferences for spending over time, the international asset market allows both parties to the transaction to raise their economic well-being. The borrower's economic well-being is raised by being able to spend more in the current period than current income allows. The lender's economic well-being is raised by being able to spend more in some future period. A country that is a net borrower will also run a trade deficit, while the country that is a net lender will run a trade surplus. This type of international asset transaction allows a more global utilization of the world's saving, a more efficient allocation of investment spending across nations, and a preferred distribution of spending over time.

Since the early 1980's the U.S. has incurred trade deficits of moderate to large size, using international borrowing to push spending beyond current production. While there is a cost to such borrowing, there is considerable benefit of being able to pursue desired consumption and productive investment now rather than later.[7] Similarly, nations like Japan have been able to run trade surpluses, using international lending opportunities to earn higher returns on their excess national savings and expanding the prospects for spending in the future. Such net flows have not grown as fast as gross flows of capital so that external sources of finance still claim only a small share of the total funding of domestic investment in most industrial countries (for the U.S. in 1998 the trade deficit represented about 3.5% of GDP and about 15% domestic investment spending). The trend, nevertheless, has clearly been toward larger external imbalances (surpluses and deficits).

Enhancing Portfolio Diversification. A look at the record of U.S. capital transactions in a given recent year shows that the *volume* of those transactions greatly exceeds what would be minimally necessary to finance the nation's trade deficit**.** For example, in 1997 the U.S. had a trade deficit of about $331 billion. The U.S. could have financed this by just selling $331 billion in assets to foreigners. However, what occurred that year was U.S. residents purchased about $430 billion in foreign assets (a capital outflow) and foreigners purchased about $753 billion in U.S. assets (a capital inflow).[8] It is clear that with a total turnover (*i.e.,* outflows plus inflows) of assets of well over a trillion dollars, a large amount of pure asset swapping occurred. Such asset for asset transactions, like trade in goods, yields important economic benefits. Investors are most likely *risk adverse*, weighing an endeavor's expected yield *and* the riskiness of that return, and preferring for a given return projects with lower

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[7] See: CRS Report RL30561, *The U.S. Trade Deficit in 1999: Recent Trends and Policy Options*, by Craig K. Elwell.

[8] See: Office of the President. *Economic Report of the President.* February 1999, pp 455.

risk. Risk aversion suggests that investors will prefer to hold a portfolio of assets that does not offer the highest overall return, but does offer a more certain-*less risky*-return.

International trade in assets can make both parties to the trade better off by allowing them to reduce the riskiness of their investment return. Trade does this by allowing investors to *diversify* their portfolios, that is, to spread their holdings across a wider spectrum of assets than is possible without trade and thereby reduce their exposure in any individual asset. Diversification is a sound aspect of prudent portfolio management and thought to be a major benefit of open international capital markets potentially raising economic return .[9] The overall yield can in fact rise as more high risk (and high yielding) projects are attempted because the cost of failure can now be diffused across a broader range of holdings. Similarly, failure will carry less potential for individual mis-steps having large destabilizing effects that reverberate across countries.

It is difficult to acquire information on the overall mixture of foreign and domestic assets in the investment portfolios of a country's residents. Data for the U.S. can give a rough notion of changes in diversification over the twenty years from 1977 to 1997.[10] In 1977 the foreign assets held by U.S. residents were equal to about 4.4% of the U.S. capital stock (*i.e.* value of the stock of fixed reproducible tangible wealth taken as a proxy for the total value of the U.S. investment portfolio). U.S. assets held by foreigners were equal to 2.4% of the capital stock in 1977. By 1999 U.S. holdings of foreign assets had risen to 21.1% of the capital stock, and foreign holdings of U.S. assets had increased to 25.0% of the capital stock.

These are certainly substantial increases and do indicate that capital market diversification has increased greatly. Nevertheless, these percentages still fall well short of full diversification. Based on the size of the U.S. economy relative to the rest of the world, portfolio theory suggests a ratio of asset mixing for the U.S. in the 50%-70% range (depending on the measure of assets chosen). Given that there is a strong presumption among economists that diversification offers large benefits it is perhaps surprising that greater international diversification has not occurred. It does seem likely that the process of asset trading will continue to grow, however.

Influence on Domestic Monetary Policy.

Increased integration of the U.S. economy with world capital markets has influenced the effectiveness and the impact of domestic monetary policy. One of the main consequences of high international capital mobility has been to make the

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[9] See: Levy, Hiam and Marshall Sarnat. "International Portfolio Diversification" in Richard J. Herring. *Managing Foreign Exchange Risk.* Cambridge, Eng., Cambridge University Press, 1983, pp.115-142.

[10] Data for foreign asset holding was taken from the International Investment Position of the U.S. for 1999 and data for the total capital stock are estimates for Private Fixed Reproducible Wealth. Both series are compiled by the U.S. Department of Commerce, Bureau of Economic Analysis.

maintenance of fixed exchange rate pegs much more difficult. The U.S. abandoned fixed exchange rates in 1973, allowing the dollar's exchange value to float over a very broad range.

Freed from the need to use monetary policy to strictly maintain the exchange rate at the pegged value, monetary policy gains greater autonomy to pursue domestic stabilization goals. Policy induced changes in interest rates can be pursued to affect domestic inflation and output targets with diminished concern over the effect of that change on the dollar exchange rate. This is not to say that the monetary authority can be absolutely indifferent to the effect of its actions on the exchange rate, and movement of the exchange rate does feedback on domestic policy targets (*e.g.*, a changing exchange rate has temporary impacts on the price level and inflation). But, a floating exchange rate is clearly not as binding a constraint on policy action as is a fixed exchange rate.

The loosening of this restraint has been associated with a dramatic reduction of the U.S. inflation rate over the last twenty years, as monetary policy focused persistently on lowering inflation. The dollar exchange rate was not completely ignored over this period , but much wider bands of fluctuation allowed the monetary authority to focus more relentlessly on dis-inflation policy.

With a floating exchange rate for the dollar and integrated capital markets, the mechanism by which monetary policy changes are transmitted to the economy has also changed. Monetary policy now carries an enhanced influence via changes in the exchange rate. This means that monetary policy goals can be achieved with less change in interest rates as some of the needed adjustment can now be achieved with changes in the exchange rate.

Monetary policy changes are initiated by adjustments in the rate of growth of the money supply, inducing changes in the level of domestic interest rates and changing rates of spending in interest sensitive activities such as housing, consumer durables and business investment. Interest rate changes will, in turn, cause the exchange rate to change. This occurs because changes in the level of domestic interest rates, relative to foreign interest rates, will affect the demand for dollar-denominated assets and the demand for the dollars needed to buy those assets. The exchange rate will automatically adjust with the change in demand for foreign exchange.

With the added impact of the exchange rate on exporting and import-competing industries, any given policy induced change of interest rates will have a stronger ultimate impact on domestic demand. In addition, this leads to a more equitable distribution of impact as the burden of adjustment is borne more broadly by both interest sensitive and exchange rate sensitive sectors of the economy. The degree of equity involved can be disrupted in situations like the early 1980's when a dramatic run-up of the dollar exchange rate produced disport ionate burdens on the exchange rate sectors of the economy (*i.e.* the tradeable goods sectors). This episode underscores the point that even under a flexible exchange rate regime, movements of the exchange rate cannot be ignored.

Economic Concerns with International Capital Flows

Increased capital market integration also carries risks. One is that more points of economic and financial contact raise the prospect of the transmission of negative economic shocks through so called "contagion" effects. In addition, some argue that asset markets themselves are often destabilizing and can generate periodic crises. The unsettling prospect is that in a system of highly mobile international capital the economy is open to assault by currency speculators who may incite excess volatility of exchange rates and other assets, and impose economic instability and hardship on the U.S. economy.

Exposure to External Shocks.

Increased interdependence increases the points of contact among the economies of the world. Most often these enhanced linkages are a positive construct that help raise economic efficiency, but from time to time they can play a negative role as conduits for economic "contagion." With increased globalization, economic maladies on the other side of the world will more quickly spread to the U.S., perhaps bringing undeserved economic misfortune to our citizens.

Expanding trade in goods and assets and the associated increase of global market integration will increase the risk of economic shocks carrying from one economy to another. In practice, however, such shocks are seldom carried from the initiating country to others on the same scale. This attenuation of the transmitted shock is largely due to differences in economic size and to differences in the degree of integration. The U.S. is far larger then any single trading partner. Further, trade for the U.S. is a small share of total economic activity. Taken together, these two factors most often assure that a foreign economic calamity has small ripple effects on the United States. Of course, these factors can be expected to exert less and less of an attenuating effect as trade, interdependence, and the relative size of our trading partners grows, but there are other forces that will likely work to attenuate the impact of foreign economic shocks.

Factors That Dampen International Shocks. First, well functioning markets will provide automatic offsets to external shocks through movement of exchange rates, interest rates, and prices. Second, quickly responding and prudently applying economic policy, most often monetary policy, can help to mitigate the effects of external shocks. A third factor attenuating the impact of external shocks is that increased global integration also allows shocks to be absorbed by a far larger global market, thereby reducing the effect on any individual economy. Further, by providing more rapid and more comprehensive flow of market information about risk and profitability of investment prospects around the globe integrated asset markets help facilitate a quicker adjustment to disruption and a more efficient allocation of the world's limited saving in both the short-run and the long-run.[11]

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[11] For further discussion see: *International Capital Markets : Developments, Prospects, and Key Policy Issues.* IMF, September 1998.

Impact of the Asian Economic Crisis on the United States. In recent years, we have seen the American economy prospering despite sharp and prolonged recessions in Japan, Europe, and Mexico. Nor have troubles in several Asian countries had a sizable effect on the United States. During this most recent crisis the U.S. has maintained vigorous economic growth, achieved record low levels of unemployment, and avoided any re-acceleration of inflation.

The Asian crisis did have an impact, however, in that it contributed to a substantial widening of the U.S. trade deficit. Sizable inflows of Asian capital, seeking high and more certain U.S. asset yields, pushed up the dollar exchange rate, weakening exports and encouraging imports. Several tradeable goods sectors of the economy were hurt by these changes. On the export side, agriculture and commercial aircraft experienced damped export sales. While on the import side the steel industry and the textile and apparel industries came under considerable pressure from low price competition from the crises affected countries.

On the other hand, there have been economic benefits derived from that crisis. Lower import prices have elevated real income in the U.S. and dissipated inflation pressures. In addition, large capital inflows have kept domestic interest rates lower than they otherwise would be, a boon to U.S. borrowers and interest sensitive sectors such as housing and consumer durables.

Weighing Risk and Reward. There is no doubt that increased global integration raises the exposure of to the U.S. economy from external shocks. But, such integration also boosts the rewards to the economy through improved efficiency. So far there is no conclusive evidence that the added risk exceeds the added reward. While individual sectors were hurt, the overall U.S. economy weathered recent international storms with little difficulty and some benefit. Moreover, we have seen that the prudent application of domestic macroeconomic policy can do much to assure that on balance the rewards from this ongoing process continue to exceed the economic risks.

Asset Price Volatility and Periodic Misalignments.

Beyond their potential for transmitting economic shocks, integrated financial markets themselves can be the source of problems. Specifically, those markets may produce excess "volatility" of asset prices, most importantly exchange rates, causing economic disruption and costly adjustment. Because exchange rates communicate important economic signals to those involved in international trade and investment, the argument can be made that any tendency for foreign exchange markets to "overreact" to events will transmit confusing and error-filled data to international traders and investors, causing a mis-allocation of global resources.

Has Volatility Been Excessive? Of course, where one perceives volatility and disruption, another sees global asset markets working quickly and usefully in response to changes in economic fundamentals that affect risk and profitability. Whether international asset markets overreact and whether such overreaction carries more costs than their efficiency benefits warrant is an open question. It is difficult to determine what constitutes excessive volatility. While exchange rates have in recent years appeared to be rather volatile, evidence does not point to significant increases

in the variability of other asset prices. And even the increase in exchange rate volatility has not been conclusively shown to be excessive in the sense that it has gone beyond what could be attributable to an efficient market function.[12]

The recent currency crisis in several Asian countries highlights these issues. The international capital market has clearly induced sharp and painful depreciations of the foreign exchange value of these countries' currencies. Yet, what is also increasingly evident is that these countries were pursuing "questionable" macroeconomic policies, had "suspect" banking and financial practices, and promoted "imprudent" exchange rate management regimes. International asset markets serve economic efficiency by reacting quickly and strongly to "bad" fundamentals.[13] Thus, globalization and rapid capital flows, in this view, have the very positive role of limiting the ability of countries to pursue incompatible and unsound economic and financial policies. To the extent that there is still a degree of overreaction by currency and other asset traders it is possible that these economies will be forced through a measure of "unnecessary" adjustment. Does the efficiency gain more than offset the "unnecessary" cost? There is no definitive answer. But we might keep in mind that the economic purpose of IMF assistance in such circumstances is not to bail-out enterprises generally, rather it is to offset the *unnecessary* adjustments forced by the currency markets *over-reaction*. It is possible that the global markets in conjunction with well targeted economic assistance may be a workable and efficient mix, enhancing the operation of the world economy, and providing indirect benefit to the U.S. as it improves the wealth and stability of our economic "neighborhood."

The Problem of Asset Price Misalignment. A more critical issue for the U.S. and other industrial economies in an international environment of large and rapid capital flows is the prospect for asset prices becoming *misaligned*, that is, straying, and remaining for a time, well beyond a level that is consistent with underlying economic fundamentals. This was likely true for the dollar in the 1984-85 period, for the U.S. stock market just prior to the crash in 1987, and for the Japanese Yen in 1995. Such misalignments often impose disproportionate burdens on sectors of the economy (*e.g.*, exchange rate impacts on tradable goods sectors) and their correction is potentially disruptive to the wider economy (*e.g.*, inducing financial market instability).

Misalignments are difficult to identify at the time they are occurring because there is usually a substantial margin of uncertainty about whether a given level of asset prices is inconsistent with macroeconomic fundamentals. Those fundamentals will most often be consistent with asset prices moving in the direction they are moving. The problem is deciding if they have moved too far.

Once identified, misalignments can be hard to correct because of the huge volumes of private capital flows that may need to be offset. The corrective actions of the central bank of one nation may be unable, in some circumstances, to counter the tide of private capital supporting the misalignment. In these cases coordinated

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[12] See: Bank for International Settlements. *Financial Market Volatility : Measurement, Causes, and Consequences*, BIS Conference Papers, March 1998.

[13] See CRS Report 97-1021, *The Asian Financial Crisis*, by Dick K. Nanto.

intervention by several governments may be more effective at correcting the misalignment. Such coordinated strategy did help to correct the soaring dollar in 1985 and the "overvalued" yen in 1995. Such actions are also thought to carry an important "signaling" function in the sense that their effectiveness does not stem so much from the quantity of their financial market actions but from their role as an indicator of the participating governments' commitment to more sustainable economic policies. In general the governments of the industrial economies may not have shown a capacity to always avoid the periodic policy missteps that induce asset market misalignments, but, to an extent, they have revealed a capability to effectively deal with the misalignments in a way that is not overly disruptive to economic activity.

Foreign Finance and Economic Stability. A related concern with globalized asset markets is that countries with open capital markets will from time to time be recipients of large net inflows of financial capital, which will just as quickly leave. These rapidly shifting funds can be a destabilizing force, creating inflationary pressure and pushing up the real exchange rate. On the other hand, capital inflows can be a useful and efficient source of financial capital. The desirability and undesirability of such inflows will hinge critically on the factor or factors that caused them. If the capital inflow is the consequence of flawed or misguided macroeconomic policies, then, indeed, such capital flows may quickly desert the economy, and perhaps precipitate a crisis. If, on the other hand, those inflows are caused by sound economic policy and good long-term investment prospects, then such inflows can be enduring and beneficial.

Conclusion

Large, highly mobile international capital flows are an economic fact of life. The growth of these markets has been phenomenal and the process has not likely ended. It is very clear that larger more integrated asset markets offer considerable opportunities to raise economic efficiency and enhance economic well being, but these flows can also conduct or create economic disruption. The problem for the policy maker is to ensure that the benefits of asset market integration exceed the costs.

For the United States rising capital market integration appears to have brought more pluses than minuses. The U.S. has availed itself of the expanding opportunities for intertemporal trade and financial portfolio diversification that more integrated markets offer. The disruptive effects caused by these markets seem to have been modest for the United States. Increased asset price volatility and augmented channels for "contagion" have been easily absorbed by the U.S. economy. Asset price misalignment has been a problem for the U.S. on occasion. Of course, this problem has its roots in the conduct of economic policy as well as the behavior of the international capital market. When needed, the U.S. has been able to effect corrections of misalignments with only modest disruption of economic performance.

For a large, predominately domestically oriented economy, with a well developed and prudently regulated financial system, and with a resilient structure of private markets such as the U.S., large international flows of capital are absorbed to apparent economic advantage, with a minimum of disruption, even in the face of large currency swings.

For smaller, more internationally linked economies, with less developed financial markets, capital market integration may not be as easy to maintain stable economic growth. However, the importance of *global* economic stability suggests the United States is likely to have an interest in helping to develop and support an international architecture that extends the benefits of mobile international capital to all economies.