

INTERNATIONAL Poverty Centre



United Nations Development Programme

Working Paper number 12

March, 2006

THE MONOPOLY OF GLOBAL CAPITAL FLOWS: WHO NEEDS STRUCTURAL ADJUSTMENT NOW?

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Working Paper

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ISSN: 1812-108X

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Terry McKinley

ABSTRACT

The U.S. economy is monopolizing global net savings, i.e., about two-thirds of the total. Other rich countries, such as Japan and Germany, oil exporters, such as Saudi Arabia, middleincome countries, such as China, and even some low-income countries, such as India and Indonesia, export capital to finance yearly U.S. current-account deficits. The resulting global imbalances are neither sustainable nor equitable.

Capital should be recycled to poorer countries, instead of funneled, overwhelmingly, to the world's largest rich country. Low-income countries need a substantially higher injection of real external resources and should be allowed to pursue more expansionary, growth-oriented economic policies. Blaming capital-exporting developing countries, such as China, for global imbalances is not the answer. Such countries are merely succeeding in developing rapidly.

Other rich countries, which account for most capital exports, have to take the lead in dramatically restructuring their expenditures. They will be able thereafter to absorb a greater share of developing-country exports. The danger of a recession in the U.S. is rising, threatening growth in the rest of the world. U.S. policymakers have to move aggressively to contain private consumption, especially real estate spending, in favor of productive private investment, and boost exports relative to imports. Without such a structural adjustment, the danger of a 'hard landing' for the U.S. economy—and, by implication, for the rest of the world—will escalate.

1 INTRODUCTION

Growth of the U.S. economy since the 1990s has relied on sucking in foreign savings at an alarming rate. The resulting rise in U.S. expenditures has been artificial, propped up by an increase in foreign liabilities, i.e., increasing foreign investment in U.S. assets, both financial and real. As a consequence, the U.S. external debt now stands at about 28 per cent of GDP and threatens to balloon further.

This economic stance is clearly not sustainable. How the U.S. extricates itself from such a dilemma depends, in good measure, on what the rest of the world does. The impact of the U.S. economy on other countries cannot be ignored: the U.S. accounts for about 30 per cent of the world's income and consumes about 20 per cent of everyone else's exports. If the U.S. plunges into recession, the rest of the world is likely to be dragged down with it.

Yet, current conditions are patently inequitable: the rest of the world piles up net savings (foregoes current consumption and investment) in order to allow the U.S.—an already very rich country—to live beyond its means. The level of expenditures in the U.S. exceeds its income by about seven per cent—a huge sum in absolute terms.

The upshot is that global savings are flowing in the wrong direction—namely, from both high-income and middle-income countries to, overwhelmingly, the largest rich country in the world. The U.S. absorbs about two-thirds of global excess savings. As a result, poor countries, the ones most in need of capital inflows, are crowded out of global resource transfers. The current scale of transfers to the U.S. far exceeds the doubling of aid to poor countries that rich countries are now considering. Many developing countries are already foregoing their own development in order to 'invest' in the U.S. economic expansion.

How did this situation arise? What are its implications for global economic trends? What does it imply for Official Development Assistance as a global mechanism for redistribution? What does it mean for changes in development strategies in developing countries? This paper tries to briefly address all of these inter-related issues.¹

2 THE 1990s U.S. ECONOMIC 'RECOVERY'

As a stylized fact, governments in industrial countries tend to run fiscal deficits of 2-4 per cent of GDP while private sectors (households and firms) provide net savings of a similar percentage. The current account tends to fluctuate around balance.² However, when the U.S. economy recovered from the 1991-1992 recession, its approach was unusual. Government cut down on its borrowing and by 1998 started running budget surpluses. Meanwhile, the private sector began spending at a faster rate and by 1997 became a net borrower. In an effort to reduce its large public debt (inherited from the Reagan era), the government ended up dampening demand for goods and services. Also, net exports remained negative, also dragging down demand.

Had the private sector not spent more than it earned, there would have been no U.S. economic expansion in the 1990s. Net private sector savings plummeted from a positive six per cent of GDP (i.e., when its income exceeded expenditures) to a negative six per cent.³ This represented a turn-around of about US\$ 1.25 trillion in aggregate demand. What did this imply? Increasing credit to the private sector had to fuel this expansion. The sector's net

borrowing rose from nearly zero to about 14 per cent of GDP by 2000, enabling private expenditures to exceed income by a similar percentage. About half of private-sector net borrowing was from abroad—namely, from other peoples' savings.

When the U.S. private sector flipped from its historical role as a net saver to a net borrower, its financial position became increasingly tenuous. Private debt as a ratio to income reached unprecedented proportions. While most analysts exulted in the longevity of the U.S. recovery, those who were more perceptive warned that such underlying financial dynamics were unsustainable.⁴ However, the prevailing view was that there was no great cause for concern because private wealth (net worth) was keeping up with debt. This was due mainly to the rising market values of stocks and real estate.

When the stock market collapsed in 2000, one of the two main pillars of net worth collapsed along with it. Fortunately, real estate values did not similarly implode. Nevertheless, private sector spending slowed markedly, mainly because corporations began to reduce their private investment. A deep recession loomed unless the public sector pumped more spending into the economy.

3 AVERTING A MILLENNIUM RECESSION

At the first signs of a slowdown in early 2001, the U.S. government pulled out all the stops by running huge fiscal deficits. The Bush administration chose hefty tax cuts (mostly for the rich), combined with a big boost in military and security spending. Although these measures were an inefficient means to stimulate the economy, their sheer volume had the intended impact. The Government pumped roughly an additional US\$ 700 billion into the economy (over two per cent of GDP per year) from 2000 to 2003. The speed in applying this fiscal stimulus was unprecedented. In addition, the Federal Reserve lowered its policy interest rate in order to stimulate the economy

Although private corporations cut back on investment during this period, private households still borrowed in order to finance higher expenditures. Net borrowing by households has now risen to over six per cent of national income while government borrowing has reached almost four per cent (Cripps, Eatwell and Izurieta, 2005a).

A significant proportion of credit to households was directed into real estate, driving up prices in major housing markets. Households were prompted to take on more debt because the loosening of monetary policy lowered borrowing interest rates. Perversely, lower rates were driving household debts even higher.

This implied that the private-sector adjustment to the crisis of 2000 had been incomplete. Thus, if the real estate bubble collapses, this blow could trigger a downward spiral of the entire economy. Looser monetary policy (i.e., lowering interest rates) is unlikely, by itself, to avert such a crisis. Moreover, the private sector, already groaning under increasing debt, cannot be expected to boost growth. Almost one fifth of household income is already committed to debt servicing.

The increase in both government and private-sector deficits has implied that the U.S. current account has also been running big yearly deficits. Over time, U.S. exports have covered an increasingly smaller share of imports. Since 2003, they have covered, on average, only

about two-thirds of U.S. imports every year. During 2005, this deficit increased to about US\$ 750 billion, or 6 per cent of GDP—surely the largest current account deficit ever recorded.

The U.S. has been continuing its voracious consumption of imports while its exports have languished. In other words, it has been spending significantly more than its income could justify. Unlike a poor developing country, the U.S. can enjoy such a privileged position since it continues attracting capital from abroad. Foreigners have been eager to invest in its assets, despite the precariousness of its financial conditions. As a result, capital inflows to the U.S. have reached about 11 per cent of U.S. income, and the stock of U.S. external debt has climbed to about 28 per cent of GDP.⁵ The U.S. has now accumulated over US\$ 13 trillion in liabilities to the rest of the world. Simply servicing these liabilities would add to the current account deficit each year. And this servicing is likely to increase.⁶

Capital inflows to the U.S. buoy private spending by adding to financial wealth and non-earned income. About 40 per cent of such inflows are invested in corporate stocks and bonds, 30 per cent in public securities and the rest in capital stock and bank deposits. Similar to capital inflows, domestic 'holding gains', such as the gains from the continuing appreciation of real estate, have a positive effect on consumption—also without generating real cash income. Because of such factors as appreciation, the net worth of the U.S. population has reached about US\$ 50 trillion. Real estate accounts for half of this total value, followed in importance by corporate equities and pensions.

These two effects, from capital inflows and domestic holding gains, continue to propel U.S. domestic consumption. The flip side of the current account deficit is that U.S. households have been able to consume seven per cent more goods and services than their incomes should warrant. Thus, U.S. standards of living have remained artificially high. This would not be possible unless investors in other countries financed the bill.

The inflows of capital into the U.S. are almost twice as large as the amount needed simply to finance its current account deficit. This implies that the corresponding capital outflows from the U.S.—nearly all of which are private—are almost the size of the current account deficit itself. This suggests, in turn, that capital inflows (a significant proportion of which are public flows from central banks in other countries) are not only financing excess consumption by U.S. citizens but also reciprocal investment by U.S. private investors abroad. In other words, central banks in other countries are helping subsidize U.S. foreign investment and profits.

The sustainability of this process has clear-cut financial limits. It depends, in fact, on an ever-increasing appreciation of U.S. assets. Domestic households have to be encouraged to continue purchasing over-priced assets (on the questionable assumption that they will continue to appreciate) and foreigners have to be motivated to continue acquiring U.S. assets, such as Treasury bonds, stocks, real estate and firms (on the additional problematic assumption that the U.S. dollar will not substantially depreciate). Thus, a sharp depreciation or sudden economic downturn could readily precipitate a major crisis.

4 WHAT CAN U.S. POLICYMAKERS DO?

U.S. policymakers have little room to maneuver to correct the economy's grave imbalances. Fiscal policy is already over-stretched. The private sector is already ridden with historically high levels of debt. The last major remaining option is correcting the current account deficit—

reigning in imports and boosting exports. A rise in net exports could contribute to increasing domestic aggregate demand.

The real effective exchange rate of the United States did, indeed, decline by about 17 per cent between 2002 and 2004.⁷ But both exports and imports were slow to respond. Instead of improving, the U.S. balance on current account worsened, widening from -3.7 per cent of GDP in 2001 to -5.7 per cent in 2004. Devaluation increased the country's import bill. During 2005, the rise in short-term interest rates in the U.S. appreciated the exchange rate (e.g., four per cent against a weighted average of the currencies of its trading partners). In addition, the rise in oil prices increased the cost of imports.⁸

Much more drastic devaluation will be necessary to significantly narrow the U.S. trade deficit. By one estimate, U.S. exports would have to grow three per cent faster each year than imports over the next decade in order to eliminate the deficit.⁹ This scenario is highly unlikely since historic trends have moved in the opposite direction.

Since some major trading partners, such as China, Hong Kong-China and Malaysia, peg their currencies to the dollar, they automatically depreciated their own currencies when the dollar fell in value.¹⁰ Since these countries, plus others such as Japan, have large stocks of foreign-exchange reserves, they also have the ability to protect the desired value of their currencies.

As another means to substantially reduce imports, the U.S. government could induce a sharp recession (cutting back on incomes that are spent on imported goods) or erect higher trade barriers.¹¹ Neither policy option is likely: neither is economically viable nor politically palatable. Under either option, people in the rest of the world would suffer since their exports to the U.S. would substantially decline.

So, the U.S. economy continues to muddle along. While growth continues, structural imbalances become increasingly acute. Making normal macroeconomic assumptions based on a 3.0-3.5 per cent yearly rate of growth leads to the conclusion that both the fiscal and current account deficits are bound to rise to very high, unsustainable levels (Izurieta, 2005a). By 2008, the fiscal deficit could well rise to nine per cent of GDP and the current account deficit to seven percent of GDP.¹² The country's external indebtedness could become increasingly burdensome (i.e., rising to over 50 per cent of GDP).

Unfortunately, there are no easy exits from this dilemma. But the general direction has to be a slowdown in the unsustainable rate of growth of aggregate demand in the U.S., in coordination with an acceleration in aggregate demand in the rest of the world. This acceleration has to start in other rich countries, such as Japan and members of the European Union.

Some of the middle-income developing countries exporting capital to the U.S. could engage in expenditure-switching—i.e., rely more on domestic demand and less on external demand. However, this change in policy regime assumes that these countries will not be sacrificing, in the process, their success in rapidly accumulating capital and growing. This is a central question for China, for example.

Many low-income developing countries are clearly in need of dramatic demand expansion. They need the freedom to implement more expansionary fiscal and monetary policies. And to grow, they also have to increase their exports to both middle-income and rich countries. Their success will hinge, in large part, on acceleration of growth in Japan and the European Union, and continuing growth in large countries such as Brazil, China and India.

5 THE DYNAMICS OF THE WORLD ECONOMY

What are the consequences for the world economy of the severe imbalances in the U.S. economy? One of the salient features of the current global economy is that global savings has been rising—from 22.9 per cent of world GDP during 1991-1998 to 24.9 per cent in 2004 (Table 1).¹³ Some recent commentators have speculated that global savings is now 'excessive'. The implication is that the world economy is suffering from "a paradox of thrift".¹⁴ But by strict accounting, it is not possible for savings to exceed investment at the global level. Only measurement errors could produce such a result.

By contrast, severe imbalances between savings and investment *among countries or groups of countries* are certainly possible. Some countries can be large importers of 'net savings' while others can be large exporters. However, if the imbalances among such countries are severe, the resulting resource transfers are not likely to be sustainable. Abrupt corrections in the imbalances become more probable, particularly for large importers of savings.

It is also probable that the global distribution of net savings (or 'excess' savings) is inequitable. Rich countries, which least need more savings, absorb most of the 'excess' savings in the world while poor countries, which most need more savings, receive little—or, worse still, export their net savings to other countries. For example, for developing and transition economies as a whole, savings now exceeds investment by 2.3 percentage points of GDP (Table 1). During 1991-1998, investment exceeded savings by an average of 2.1 percentage points per year. The current disparity is equivalent to net lending of capital to rich countries.

This condition is not characteristic of all regions or all individual countries. For example, in Africa (which includes the oil-exporting countries of North Africa), domestic investment exceeds domestic savings—although only marginally. This imbalance is even more pronounced for sub-Saharan Africa. Countries in this region are grossly 'deficient' in savings. They have to rely on significant net lending of capital from other countries.

TABLE 1

Trends in Gross Domestic Savings and Investment

(Per cent of GDP)¹⁵

Category	Investment 1991-1998	Savings 1991-1998	Investment 2004	Savings 2004
World	24.0	22.9	24.6	24.9
Industrial Countries	21.6	21.1	20.7	19.4
--United States	18.5	16.1	19.6	13.6
--Euro Area	21.1	21.4	20.2	20.9
-- Germany	22.7	21.8	17.7	21.3
-- France	19.4	20.4	20.0	19.8
--Japan	29.2	31.6	23.9	27.6
--United Kingdom	16.8	15.6	17.0	14.8
--Newly Industrialized Asia	31.8	33.8	24.9	31.3
Developing and Transition Economies ^a	27.5	25.4	29.2	31.5
--Africa	20.1	16.6	21.0	20.6
--Developing Asia	32.8	31.3	35.5	38.2
--Middle East	25.6	22.9	25.4	32.0
--Latin America	21.2	18.3	19.8	21.0
--CIS ^b	16.2 ^c	24.2 ^c	21.4	29.4

Source: IMF, *World Economic Outlook 2005*, Table 43, pp. 271-273. Notes: 'a': Includes Central and Eastern Europe and Russia, 'b': Includes Russia. 'c': Denotes 1999 (data not available earlier).

For most of the IMF regional groupings of developing and transition economies, domestic savings exceeds domestic investment (net savings is positive). The disparity is largest among countries in the Commonwealth of Independent States—a result driven mainly by the net savings of Russia (an oil exporter). There is also a marked disparity between savings and investment among countries in the Middle East, chiefly because of the rising prices of their oil exports. For example, the differential in Saudi Arabia between savings and investment is an astounding 20 percentage points of GDP. The disparity is also large for Developing Asia, with China's surplus savings looming large in the regional aggregate. Surpluses in other Asian countries, such as Malaysia and Indonesia, are also prominent.

When developing countries are grouped by income levels, savings exceeds investment in lower middle-income and upper middle-income countries, but not in low-income countries.¹⁶ Net savings has grown in both upper and lower middle-income countries since 1990. For upper middle-income countries, for example, savings now exceeds investment by five percentage points of GDP. In lower middle-income countries, this disparity is two percentage points. By contrast, in low-income countries, where savings is most needed, it falls short of investment by three percentage points. These are the countries most in need of an injection of capital.

In other words, the real issue is whether global net savings are being recycled to poorer developing countries, such as in South Asia and sub-Saharan Africa, or to richer countries, such as the United States and the United Kingdom. Both South Asia and Sub-Saharan Africa have tended to suffer from 'deficient' savings: their domestic savings rates are not high enough to finance even their current domestic investment rates (much less the higher rates they need). The average savings rate in sub-Saharan Africa is particularly low, namely, 18 per cent of GDP.

In industrial countries as a whole, domestic savings are also 'deficient'. Both savings and investment have been declining in rich countries but savings has been dropping faster. In 2004, investment exceeded savings by 1.3 percentage points of GDP (Table 1). But this result is attributable principally to the low savings rates of countries such as the United States (where savings is only 13.6 per cent of GDP) and the United Kingdom (where it is only 14.8 per cent of GDP). In the United States, investment exceeded savings by a whopping 5.5 per cent of GDP in 2004. As a result, it urgently needs to suck in savings from other countries

Other rich countries, such as Japan and Germany, are contributing a large share of global surplus savings, on which the United States and the United Kingdom are drawing to finance their domestic investment. In Japan, for example, domestic savings is 27.6 per cent of GDP, exceeding investment by 3.7 percentage points. The newly industrialized economies of Asia (Hong Kong-China, the Republic of Korea, Singapore and Taiwan Province) collectively contribute net savings amounting to 6.4 percentage points of their aggregate GDP (Table 1). Their aggregate domestic savings rate is about 31 per cent of GDP and their domestic investment just under 25 per cent. In Developing Asia, which is much poorer, the aggregate savings rate is about 38 per cent, with China's rate being very high, at 47 per cent.¹⁷

Countries with high savings rates often try to keep the value of their currencies low in order to promote export-led growth. This can result in large current account surpluses. These are the external counterparts of the disparities between their high domestic savings rates and their lower domestic investment rates. For example, less investment translates into lower domestic income and lower income translates, in turn, into lower consumption of

imported goods (as well as exportables). An export-led growth model often relies on holding down domestic income—particularly the real wages of workers in export sectors.

In effect, these countries export capital to countries with current account deficits.¹⁸ The world's biggest importer of capital—because it is running the biggest current account deficit—is the United States (Table 2). It is soaking up about two-thirds of the current-account surpluses (i.e., net savings) of all current-account surplus countries. The principal exporters of savings are industrialized countries, such as Japan and Germany; newly industrialized countries, such as the Republic of Korea and Singapore; oil exporters, such as Russia and Saudi Arabia; and rapidly growing middle-income countries, such as China (see Tables 2 and 3).

TABLE 2.

Current Account Balances of Industrial Countries

(Billions of U.S. Dollars, 2004)

Country	Current Account Balance
Deficit Industrial Countries	
United States	-666
Spain	-49
United Kingdom	-47
Australia	-39
Italy	-25
Surplus Industrial Countries	
Japan	+172
Germany	+96
Switzerland	+43
Norway	+34
Sweden	+28
Newly Industrial Economies	
Singapore	+28
Rep. of Korea	+27
Taiwan Province	+19
Hong Kong SAR	+16

Source: IMF, *World Economic Outlook 2005*, Table 26, p. 238.

For Neo-Classical Economics, the general direction of capital in the global economy makes little sense. Rich countries, where capital is relatively cheap (has a low rate of return), should be exporting capital to poorer countries, where it is relatively expensive (has a high rate of return). But this is not evident when global aggregates are calculated. Rich countries export capital mainly to other rich countries. Even many middle-income developing countries are transferring their net savings to a few rich countries instead of investing them in poorer countries. Not only is this stark imbalance inherently unstable but also it is conspicuously inequitable.

Between 1996 and 2004, the U.S. current account deficit rose by US\$ 549 billion, to reach US\$ 666 billion (see Wolf, 2005a). This amount represented over eight times the total Official Development Assistance provided by all donor countries in 2004. This highlights the regressive structure of the global transfer of resources.

Other rich countries, such as the United Kingdom, Australia and Spain, also have sizeable deficits (Table 2). But the U.S. current account deficit alone (US\$ -666 billion) accounted for over 200 per cent of the aggregate deficit (i.e., US\$ -328 billion) of rich countries in 2004. Basically, the rest of the world—including current-account surplus countries such as Japan, Germany and Switzerland—have compensated by maintaining large surpluses. This category also includes newly industrialized countries in Asia, such as Singapore and the Republic of Korea.

Up until 1998, developing and transition countries were running sizeable current account deficits; thereafter, however, they swung rapidly into surplus. For example, while the aggregate current account of developing and transition countries had a deficit of US\$ -115 billion in 1998, it had reached a surplus of US\$ 247 billion in 2004 (Table 3). This surplus covered about 37 per cent of the current account deficit of the United States.

TABLE 3

Current Account Balances of Developing and Transition Economies 1997-2004

(Billions of U.S. Dollars)

Grouping or Country	1997	1998	2003	2004
All Developing and Transition Countries	-85.6	-115.1	+149.1	+246.6
Africa ^a	-6.2	-19.4	-1.7	1.1
--Sub-Saharan Africa	-9.0	-17.7	-11.4	-9.7
Central/Eastern Europe	-21.1	-19.3	-37.0	-50.6
CIS Countries	-8.8	-9.6	36.2	64.4
--Russia	-2.6	-2.1	+35.4	+59.6
Developing Asia	+7.7	+49.3	+85.8	+103.3
--China	+34.4	+31.6	+45.9	+70.0
--India	-3.0	-6.9	+6.9	+2.1
--Other Asian Countries	-23.8	+24.6	+33.1	+31.3
Middle East	+9.5	-25.5	+59.3	+112.5
Latin America	-66.7	-90.5	+6.6	+15.9
--Brazil	-30.3	-33.3	+4.2	+11.7

Source: IMF, *World Economic Outlook 2005*, Table 28, p. 241. Note: 'a' includes N. Africa.

In Asia, two-thirds of the swing from deficits to huge surpluses occurred during 1996-1998, as a result of the financial crisis that swept the region. Developing Asia's current account surplus had reached US\$ 103 billion in 2004, with China alone accounting for US\$ 70 billion. Countries in the Middle East have also begun to rapidly generate current account surpluses because of the rise in oil prices. In 2004, their aggregate surplus was about US\$ 113 billion. Saudi Arabia has had the largest surplus among this group. Another major current-account surplus region is the Commonwealth of Independent States. Russia, which is about US\$ 60 billion in surplus, dominates the regional aggregate.¹⁹

The only developing region listed in Table 3 that is running an aggregate current account deficit is sub-Saharan Africa. Its deficit position, e.g., about US\$ -10 billion in 2004, is little changed from 1997. Instead of running a deficit, South Asia achieved a small current account surplus by 2004, with India leading the grouping with a surplus of about US\$ 2 billion. So some poor regions have recently joined the capital-exporting band wagon.

One of the most noteworthy features of this global imbalance is that governments in countries with current account surpluses—including those in developing countries—have been financing over forty per cent of the U.S. current account deficit. Thus, it is not just the private sector that has been speculating on U.S. assets. The tragedy for developing countries, in particular, is that in order to do so, their governments have been following restrictive fiscal and monetary policies while building up large foreign-exchange reserves.

In other words, these countries have been sacrificing productive investment in their own countries. Since the current account balance must equal savings minus investment, by macroeconomic definition, investment has fallen relative to savings in developing countries while their current account surpluses have increased (see World Bank 2005a, pp. 56-57).

Developing-country investments in U.S. assets do provide a rate of return. However, for countries badly in need of development finance, especially in much of sub-Saharan Africa and South Asia, the opportunity costs of choosing U.S. assets—namely, the loss of investment resources—are indeed large. These countries need financing for fiscal expansion, with a focus on public and private investment. Correspondingly, the U.S. economy has to undergo some form of fiscal slowdown—in order to bring its expenditures into line with its income. This would imply a rise in its low rate of domestic savings, with the increase becoming available to finance domestic investment.

6 THE RISE IN FOREIGN-EXCHANGE RESERVES

One way that developing countries finance the gargantuan U.S. current account deficit is to hold US dollar-denominated international reserves. These are estimated to constitute about 70 per cent of all international reserves. Almost all reserves are held in five major currencies (the U.S. dollar, Euro, Japanese Yen, British pound and Swiss franc) (World Bank, 2005a). The rate of return for such secure financial assets is low, usually about 2-3 per cent per year.

China has been a large holder of foreign-exchange reserves (i.e., about US\$ 416 billion in 2003 (Table 4). But its reserves have been increasing rapidly.²⁰ Hong Kong-China held another US\$ 118 billion in 2003. India also held about US\$ 104 billion. As of 2003, Japan held, by far, the largest stock of such assets, namely, US\$ 674 billion. Newly industrialized countries in Asia also hold large reserves: the Republic of Korea had about US\$ 156 billion and Singapore about US\$ 96 billion in 2003. While reserves held by Asian economies have been dramatically on the rise since 1990, the reserves held by industrial countries, such as Germany and France (as well as the United States), have been stagnant.

In aggregate, developing and transition economies have been increasing their international reserves since the late 1990s. One useful measure is to compare reserves to imports (since reserves are often accumulated as a precaution against a sudden increase in imports). From 1997 to 2004, the ratio of reserves to imports for developing and transition economies increased by almost 50 per cent (Table 5).

TABLE 4

Total Reserve Holdings, 1990 and 2003

(US\$ Billions)

Country	1990 Reserves	2003 Reserves
Japan	87.8	673.6
China	34.5	416.2
United States	173.1	184.0
Rep. of Korea	14.9	155.5
Hong Kong, China	24.7	118.4
India	5.6	103.7
Germany	104.5	96.8
Singapore	27.7	95.7
Russian Federation	---	78.4
France	68.3	70.8

Source: World Bank, *World Development Indicators 2005*, Table 4.15, pp. 254-256.

By the end of 2004, developing countries alone held an estimated US\$ 1.6 trillion in reserves. Most of these reserves were held by middle-income developing countries. But some low-income countries, such as India, recorded large increases (Table 4).

In the Middle East, the ratio of reserves to imports increased by about 23 per cent. However, in Russia, a big oil exporter, this ratio skyrocketed. Even in sub-Saharan Africa, this ratio increased by 30 per cent, although from a relatively low base.

Many of the developing countries holding large foreign-exchange reserves, particularly those in Asia, have systematically tried to sterilize their impact on their domestic money supply. This has aborted the expansion of domestic credit, which could have stimulated private investment and closed the gap of investment with domestic savings. In 2004, for example, the gap between the increase in foreign currency holdings and the domestic monetary base was 11 percentage points of GDP in China and eight percentage points of GDP in India (Wolf, 2005b). Countries have insisted on holding large reserves as a buffer against financial instability. Instead of selling reserves, they have resorted to sterilization of their monetary impact because of their inordinate fear of inflation.

If the central banks of these countries had sold the foreign exchange that they had accumulated from trade surpluses in exchange for domestic currency circulating within their economies, they could have financed larger imports, particularly capital goods. Thus, in two basic respects, holding excessive foreign-exchange reserves has an opportunity cost: 1) such holdings prevent the transfer of real resources into the economy through increased imports and 2) such holdings could have been used to supply more credit for domestic private investment.

Holding reserves can also have explicit costs. When central banks sell government securities in order to sterilize the monetary impact of their reserves, they usually have to pay higher interest rates on these securities than they receive on the foreign assets in which they hold their reserves (e.g., U.S. dollar-denominated Treasury bonds). Central banks also face exchange-rate risks in this situation. If they hold a large share of their reserves in U.S. dollar-denominated assets—as most countries do—then depreciation of the dollar would lead to a significant capital loss in domestic currency terms.²¹

TABLE 5

Trends in International Reserves of Developing and Transition Economies 1997-2004

(Ratio of Reserves to Imports)

Grouping or Country	1997	2000	2004
Sub-Sahara Africa	28.0	33.6	36.4
Russia	14.9	40.6	94.7
Other CIS Countries	16.2	17.6	29.2
Developing Asia	44.6	50.0	80.5
China	87.2	67.4	101.6
India	43.4	52.6	98.8
Middle East	71.4	76.4	87.8
Latin America	50.9	41.7	51.4
Brazil	66.0	43.5	66.0
Mexico	33.8	27.6	42.8
All Developing & Transition Economies	43.7	46.8	65.2

Source: IMF, *World Economic Outlook 2005*, Table 35, p.260.

The cumulative effect of amassing such large stockpiles of reserves is a slowdown in global growth relative to potential. This is particularly pronounced in developing countries if they hold foreign assets, such as U.S. treasury bonds and corporate equity, instead of investing in domestic capital (Stiglitz and Charlton, 2005). This is a system in which global recession is temporarily averted essentially by expanding the consumption of relatively rich populations in industrial countries, in this case, principally in the United States. And this excessive level of consumption is financed by increasing levels of U.S. external debt, both public and private.

7 THE POLICY OPTIONS FOR CORRECTING GLOBAL IMBALANCES

What kind of structural adjustment can correct the severe global imbalances in income flows and asset accumulation? What can rich countries—both those with huge current account deficits and surpluses—do? What do middle-income countries need to do, particularly those with large current account surpluses? And what strategies should low-income countries employ, notably those that neither generate nor attract much development finance?

Rich countries tend to blame rapidly growing middle-income countries, such as China, for the global imbalances. Many middle-income countries in Asia have been running large current account surpluses. However, at the global level the largest surpluses in Asia (such as for mainland China, Hong Kong-China, Indonesia, Malaysia and Thailand) taken together do not cover more than 17 per cent of the U.S. deficit. In contrast, other rich countries balance out over half of the U.S. deficit (World Bank, 2005a). Among rich countries, Japan's surplus alone covers over one quarter of the U.S. deficit.

In comparison, all developing country surpluses cover, at the global level, a little over one-fifth of the U.S. deficit. Lower middle-income countries alone account for 18 per cent. Among this group, China accounts for about 10 per cent of the U.S. deficit. So adjustment in developing countries is not likely to contribute decisively to correcting the massive imbalances distorting the global economy.

One of the central implications of this analysis is that greater emphasis should be placed on rich countries.²² Japan and countries in the Euro zone (mainly Germany) need to deploy more expansionary fiscal and monetary policies. This expansionary adjustment will raise domestic investment relative to domestic savings and stimulate aggregate demand, including the demand for imports. This is crucial for the expansion of exports from developing countries since the U.S., by running huge current account deficits, has been absorbing a disproportionate share of such exports. The currencies of other capital-exporting rich countries should be allowed to appreciate and their import regimes should become more liberalized. In order to stimulate domestic investment, they will also need to lower policy interest rates.

7.1 THE U.S. POLICY RESPONSE

What should U.S. policymakers do? The general direction of policy is evident. Policymakers need to slow domestic spending. And, in compensation, they need to narrow the huge trade deficit. Recent devastation from hurricanes and the jump in oil prices compound problems that were already severe and worsening. The likelihood of a sharp recession has intensified. Hence, policies should be geared, as soon as possible, to mitigating such a danger.

Policymakers should follow a gradual approach: reducing military and security expenditures, along with corporate-welfare expenditures (such as cotton subsidies), while raising tax revenue (beginning with re-instating income tax rates that were cut and then making the tax structure more progressive). The savings from expenditure reductions could thus be redirected to public investment in social and economic infrastructure.

Policy interest rates may need to increase further in order to dampen consumption expenditures and raise domestic savings. However, this would likely exert upward pressure on the exchange rate (given the experience of 2005). In response, policymakers could encourage a more substantial depreciation of the nominal exchange rate. A depreciation of 30 per cent or more is probably required to reduce a persistently high trade deficit, particularly because rising oil prices are now fattening the U.S. import bill.

In general, expenditure switching policies should be implemented in order to overhaul the composition of aggregate demand: raising productive investment relative to consumption and real estate spending, boosting exports relative to imports and restraining government deficits (which are negative savings) while augmenting domestic private savings as a basis to finance investment. However, the main underlying problem is excessive household spending, not deficit spending by the government.

Large and continuous capital inflows into the United States have neither boosted domestic savings nor stimulated productive investment. On the contrary, they have fueled a consumption boom and depressed domestic savings. Such a detrimental impact, known as the 'Griffin effect', is not uncommon.²³

If U.S. policymakers can carry out a comprehensive package of expenditure-switching policies, they can hope to avert a large and painful recession, which would necessitate, not merely switching expenditures but substantially reducing them. The success of these policy reforms will depend, however, on the concomitant success of capital-exporting rich countries, such as Japan and Germany, in stimulating domestic demand, i.e., moving in the opposite direction. This implies that such countries would run larger fiscal deficits and loosen monetary policy in order to expand domestic investment and consumption. A rise in imports and a corresponding decline in current account surpluses would be likely to follow.

The large oil exporting countries are generating levels of domestic savings that far exceed, in many cases, their levels of domestic investment. In the middle-income oil exporters in which poverty remains substantial, such as Algeria, Russia and Venezuela, concerted measures are needed to expand public investment and stimulate private investment. However, since oil prices are likely to remain high for the foreseeable future, the domestic savings of all oil exporters, particularly in the Middle East, will continue to outpace domestic investment. New global redistributive mechanisms should be constructed to recycle these surplus savings to low-income countries, which are the least able, on their own, to finance an acceleration of growth.

7.2 CHINA'S DEVELOPMENT STRATEGY

What should capital-exporting middle-income countries, such as China, do to adjust their development strategies? After all, such countries account for a predominant share of the capital exports from developing countries. Some analysts have argued that China should abandon its export-led model of development and shift to a strategy driven principally by domestic demand (Palley, 2004).

Such an analysis maintains that China should begin—in conjunction with Japan and other Asian exporters—to revalue its currency. The Chinese government has indeed recently abandoned an exchange rate rigidly pegged to the U.S. dollar but it continues to maintain its currency within a very tight band. The principal reason: an undervalued exchange rate is essential to the success of its export-led, FDI-supported development strategy. In order to maintain the competitiveness of its exchange rate, China must dampen inflationary pressures (including the inflationary pressure exerted by an undervalued exchange rate itself). China tries to achieve this objective by systematically sterilizing the monetary impact of its large and growing foreign-exchange reserves.²⁴

There are clearly disadvantages to such a strategy. First, it relies on containing increases in real wages in export industries, and in industry in general.²⁵ This is the corollary of its undervalued exchange rate. China relies on relatively low wages (combined with relatively higher productivity) in order to produce competitive exports. Extensive foreign direct investment helps deliver productivity that is high relative to the Chinese wage level.

Thus, China's development policies are based on constraining domestic demand—consumption demand in particular. Also, low import demand follows suit. Low real wages require, in turn, inexpensive wage goods. This implies a priority on keeping food prices low. Such policies also help explain why the distribution of income has become markedly more unequal during China's transition to a more market-based economy. Containing increases in income among workers and farmers helps dampen domestic demand for goods and services. While rapid economic growth has substantially reduced extreme poverty, the rise in inequality has partially neutralized growth's potential impact on poverty. New forms of poverty are on the rise, such as in urban areas.

In order to address these problems, public investment needs to be redirected. Helping raise agricultural productivity would be a priority. Re-channeling credit to boost the growth of employment-intensive domestic private firms would also help.

China's development strategy also has, no doubt, some noteworthy advantages. It has been a remarkably successful strategy for rapid capital accumulation. On this score, China's development during the last two decades has been unprecedented. Not only has China been able to mobilize substantial domestic savings (e.g., 47 per cent of GDP in 2003) but also it has attracted an unparalleled inflow of foreign direct investment. In 2003, for instance, 35 per cent of all net inward FDI into developing countries flowed into China alone.

Without such a ready source of external financing for its industrialization, China would have been forced to extract a resource surplus from agriculture. Such a strategy would have had an immiserizing impact on the rural population and likely precipitated a much higher increase in inequality.

FDI has been attracted to China not only because of its export orientation but also because of its potentially huge domestic market. China's domestic savings is used to reinforce and subsidize foreign direct investment. Such subsidies take various forms, including keeping real wages low in industry and ensuring the requisite public investment in social and economic infrastructure. Channeled into state-controlled domestic banks, China's huge pool of savings helps provide relatively inexpensive credit for state-owned industrial enterprises and for widespread public investment.

Capital controls are also essential to ensure that domestic savings does not leak out of the economy. Since domestic interest rates are kept low, they have little influence on allocating capital. High interest rates are not needed, in fact, to attract and hold capital inflows. A sizeable proportion of domestic savings is absorbed by public securities offered at low interest rates. Through such means, the state ensures that domestic savings is mobilized, and deployed effectively for development purposes.

But if China is so successful in attracting FDI, why does it still insist on accumulating a large stockpile of foreign-exchange reserves—far larger than that of any other developing country? In 2003, for instance, China increased its foreign-exchange reserves by about US\$ 117 billion and had accumulated total gross reserves of over US\$ 416 billion. By 2004, its total gross reserves had jumped to US\$ 616 billion.

There are several reasons for this policy. First, if China sold these reserves in the domestic market, they would cause an increased purchase of imports, and thus a reduction of its current account surplus. Since China is successful in attracting FDI, it does not need to finance the import of capital goods. Instead of selling foreign exchange, China's central bank sells government securities in order to mop up excess liquidity. This helps hold down inflation and real appreciation of its quasi-fixed exchange rate.

Another reason for sterilization is that although China's gross domestic investment is lower than its gross domestic savings, both are relatively high by international standards (Table 6). Expanding investment even more rapidly could over-heat the economy and drive up the price level, particularly the prices of inputs vital for industrialization. China's economy is driven mostly by public investment and FDI, less so by domestic private investment.

An additional reason for China's stockpiling of reserves is that since Japan and the European Union are not dynamic markets for China's exports, China has relied heavily on the huge U.S. market. By holding large stocks of U.S. dollar-denominated reserves, China helps the U.S. finance its large current-account deficits (Dooley, Folkerts-Landau and Garber, 2004). Through its attraction of foreign investors and its holdings of U.S. dollar-denominated reserves, China exerts considerable influence in blunting a protectionist backlash against its access to the huge U.S. market.

TABLE 6

Capital Flows, Savings and Investment for Selected Countries 2003

Country	China	India	Indonesia	Brazil	S. Africa
Current Account Balance (\$ Billion)	45.9	8.2	7.5	4.0	-1.5
Net Private Capital Inflows (\$ Billion)	59.5	10.7	-3.7	13.4	4.1
Change in Gross Reserves (\$ Billion)	116.8	30.6	4.0	11.7	0.6
Gross Domestic Savings (% of GDP)	47	22	22	22	19
Gross Capital Formation (% of GDP)	44	24	16	19	17

Source: World Bank, *World Development Indicators 2005*.

Less well known is that China's holding of US dollar-denominated reserves also indirectly finances the inflow of U.S. capital into China. This also helps build a powerful lobby in the U.S. for maintaining extensive trade relations with China. China's reserves are huge because they result from surpluses on both the current and capital accounts. The surplus on both accounts in 2003 was about US\$ 105 billion while the addition to China's gross reserves was about the same, namely, US\$ 117 billion (Table 6).

Until China has succeeded in building a large-scale, modern and internationally competitive industry—which is able to absorb its vast underemployed workforce (totaling about 200 million workers by some estimates)—it does not have a strong motivation to alter its development strategy. Its current mix of structural policies, including aggressive promotion of exports and inducements to FDI, closely regulated credit, a tightly managed exchange rate, capital controls and a large precautionary build-up of foreign-exchange reserves, has helped deliver a rapid and sustained process of capital accumulation and industrialization. As industrialization continues to absorb its underemployed workers (some of whom are being shed by the restructuring of state-owned enterprises), real wages in China are likely to rise over time. The drawback of such a strategy, however, is the persistence of high domestic inequality.

While exceedingly successful, China's strategy is not likely to be immediately replicated by many other developing countries. Countries that have export potential as well as a large domestic-market potential, such as Brazil, India, Indonesia and South Africa, could conceivably follow a similar pattern. But most other developing countries—especially those that are smaller—would have difficulty in doing so.

Even compared to such other large developing countries as the four just mentioned, China is doing exceedingly well (Table 6). Both its gross domestic savings and investment are far higher. It also runs much higher current account surpluses and attracts much larger net inflows of private capital. But it also accumulates much larger foreign-exchange reserves. Only India and Brazil are comparable in both running sizeable current account surpluses and attracting considerable net private capital inflows.

7.3 POLICY OPTIONS FOR LOW-INCOME COUNTRIES

Under current conditions, low-income developing countries are unlikely to succeed in replicating the Chinese model of development. Indeed, significant numbers of them are now generating current-account surpluses. Prominent examples include India, Indonesia, Pakistan, Angola, Ghana and Nigeria. But in most of these cases, such a capital-exporting stance is probably ill-advised. Most low-income countries, especially in sub-Saharan Africa, are running current-account deficits, i.e., importing capital rather than exporting it.

In order to jumpstart development, they need a substantially higher injection of real external resources. Most of this injection will have to come from Official Development Assistance. This will allow them to widen their current-account deficits. However, the global challenge is much larger than increasing ODA: additional means have to be found to re-direct global excess savings from rich countries, such as the United States, the United Kingdom, Spain and Australia, to low-income, resource-starved developing countries.

The Millennium Development Goals campaign has been building public support for a doubling of Official Development Assistance. But compared to the absolute sums of financing involved in the global transfer of resources to rich countries, ODA can play only a limited redistributive role. Its main role will be to finance more extensive public-investment programmes in poor countries. Such an injection of public savings will help re-establish a new higher balance between domestic savings and investment in these countries. However, within the context of the severe imbalances in resource flows distorting the world economy, additional efforts will need to be undertaken, such as building new global mechanisms that can channel international liquidity to poorer countries.

Moreover, adequately addressing global imbalances will require many countries to undergo substantial structural adjustment, namely, fundamentally redirecting their economic policies. The initial locus of such changes should be rich countries. The United States will have to bring its mammoth fiscal and trade deficits under control. Other rich countries that are running large current-account surpluses will have to employ more expansionary fiscal and monetary policies in order to stimulate aggregate domestic demand and provide a broader basis for global growth. This will be essential for absorbing increased exports from low-income developing countries.

Low-income countries should also be allowed to pursue more expansionary, growth-oriented economic policies. Relative to their pressing needs for rapid growth and poverty reduction, they have been 'over-stabilized'—namely, required to adopt excessively restrictive macroeconomic policies. Donor conditionalities need to be re-aligned with objectives of growth and human development rather than restricted to achieving macroeconomic stability. Expenditure-switching policies are certainly not relevant for these countries: they badly need policies to promote dramatic demand *expansion*.

Such expansion will be contingent not only on their domestic economic policies but also on improvements in the global environment. Greater prosperity in Japan, Germany and other countries in the European Union will be critical to broadening the base for global growth and increasing demand for exports from low-income countries. Dynamic middle-income countries, such as China, Malaysia and Thailand, will also be important in augmenting such demand.

Lastly, global mechanisms for the redistribution of international liquidity should be developed. Poor countries need greater protection from the instabilities inevitably arising from the extreme imbalances in global resource flows. Issuing a global pool of reserves each year (such as Special Drawing Rights) that could be distributed disproportionately to poor countries would help overcome the deflationary bias of the current international reserve system (Stiglitz and Charlton, 2005).

If poor developing countries were able to draw on such entitlements when confronting crisis, they could avoid having to amass a large precautionary stockpile of reserves. Thus, they could avoid the steep opportunity costs involved in redirecting resources away from productive domestic investment for growth and development towards an accumulation of idle foreign-exchange reserves. A more equitable injection of liquidity is becoming increasingly important as low-income countries struggle to contain the impact of rising oil prices on their current-account deficits.

8 CONCLUDING REMARKS

The U.S. economy is monopolizing global excess savings. It currently absorbs about two-thirds of the total flow. Rich countries, such as Japan and Germany, export capital that accounts for about half of the U.S. capital imports. A significant share of the rest comes from middle-income countries. Oil exporters loom large in this grouping. However, other rapidly growing developing countries, such as China, also export a significant amount of capital. Even a sizeable number of low-income countries, such as India, Indonesia and Nigeria, are capital exporters.

The resulting global imbalances in resources flows are not only unsustainable but also inequitable. The U.S. is piling up increasing liabilities to the rest of the world by running

mammoth current-account deficits. In the process, both the U.S. household sector and the government are sinking deeper into debt. Either U.S. policymakers have to dramatically restructure expenditures or risk triggering a severe recession that will force a much quicker, more painful adjustment. Such an outcome will also, lamentably, impose huge costs on the rest of the world since the U.S. is the most prominent global consumer of exports.

Current resource flows are inequitable because the world's largest rich country is consuming significantly beyond its domestic income. In order to do so, it is cornering the lion's share of global excess savings. Instead, these resources could be re-cycled to poorer countries badly in need of development finance. Even an MDG-inspired doubling of ODA to poor countries could only modestly redress this massive imbalance.

New mechanisms, such as a global fund for pooling liquidity, need to be found to create more space for expansionary fiscal and monetary policies in low-income countries. Removing onerous conditionalities that compel policymakers in these countries to restrict government spending and contain credit to the private sector would also be critical. But rich countries will have to take the lead in dramatically restructuring their expenditures in order to adequately correct global imbalances. They cannot blame middle-income countries that are implementing successful strategies of development, such as China, for their own maladjustment.

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NOTES

1. The first section of this Working Paper draws heavily on the draft paper "Can the Growth Patterns of the U.S. Economy Be Sustained by the Rest of the World?" by Alex Izurieta, the Cambridge Endowment for Research in Finance, University of Cambridge. This paper, completed in June 2005, was commissioned by the Poverty Group of the Bureau for Development Policy, UNDP [Izurieta, 2005a]. The rest of the paper draws on recent work by Cripps, Eatwell and Izurieta (2005a and 2005b), which has also been supported by UNDP.
2. By accounting logic, private sector savings has to equal the government deficit plus the current account surplus. Thus, in most industrial countries, private-sector savings are used to buy government securities to finance government deficits. See also Alex Izurieta. 2005b. "Hazardous Inertia of Imbalances in the US and World Economy." Special Article, *Economic and Political Weekly*, August 20.
3. Alex Izurieta. "Slow Recovery Fable in Growth-Recession Times?—An Appraisal of U.S. Main Imbalances and Implications for the World Economy." Paper prepared for the XXVII Technical Group Meeting of the G-24, September, 2003.
4. Wynne Godley. "Seven Unsustainable Processes: Medium-Term Prospects and Policies for the United States and the World." Special Report, Annandale-on-the-Hudson, New York: The Levy Economics Institute of Bard College, 1999.
5. Capital inflows of 11 per cent of U.S. income cover the U.S. current account deficit of six per cent and U.S. investments abroad of five per cent. The net U.S. external debt of 28 per cent of GDP is made up, in fact, of 108 per cent of GDP in liabilities counterbalanced by 80 per cent of GDP in foreign assets.
6. As U.S. interest rates on domestic assets rise, payments abroad on assets purchased by foreign citizens are likely to rise. Until recently, payments to U.S. citizens on foreign assets approximated payments to foreign citizens owning U.S. assets. However, payments on U.S. liabilities are likely to exceed income inflows from U.S.-owned assets abroad (see Godley and Izurieta, 2005).
7. International Monetary Fund. *World Economic Outlook 2005*. Washington D.C.: IMF, Table 17 of the Statistical Appendix, p. 226.
8. U.S. imports of petroleum goods increased by almost 40 per cent in both 2004 and 2005.
9. Cripps, Francis, John Eatwell and Alex Izurieta. 2005a. "Financial Imbalances in the World Economy." Paper and presentation prepared for the Annual Meetings of the World Bank and IMF, Washington D.C., September.
10. Responding to international pressure, China began in late 2005 to manage its exchange rate, but within a very narrow band. Its currency appreciated less than three per cent against the U.S. dollar.
11. Wynne Godley, Alex Izurieta, Gennaro Zezza. "Prospects and Policies for the U.S. Economy: Why Net Exports Must Now Be the Motor for U.S. Growth." Working Paper for the Levy Economics Institute (Bard College, New York) and the Cambridge Endowment for Research in Finance (University of Cambridge). July 2004.
12. This scenario assumes that the private sector will return to its historic position of contributing net savings of two per cent of GDP.
13. Savings depicted in Table 1 is calculated as income minus current consumption. However, for gauging international capital flows, this paper uses the concept of 'net savings' (which is income minus both current and capital spending). It is equivalent to gross domestic savings minus gross domestic investment. For the same purpose, the paper often uses the terms 'excess savings' or 'surplus savings'. 'Net savings' is also equivalent, by definition, to net lending (or the acquisition of foreign financial assets).
14. Martin Wolf. "The Paradox of Thrift: Excess Savings Are Storing Up Trouble for the World Economy." Comment and Analysis section, *Financial Times*, June 13, 2005, p. 11. [Wolf, 2005a].
15. World output is the denominator for the world.
16. The statistics are based on the World Bank designation and rely on 2003 data from the *World Development Indicators 2005*, Table 4.9.
17. See Martin Wolf. "Flowing Uphill: Why Capital from Poorer Countries Must One Day Reverse Its Course." Comment and Analysis Section, *Financial Times*, June 27, 2005, p. 17. [Wolf, 2005b].
18. At the global level (based on proper accounting), all the surpluses of current-account surplus countries should be balanced by the corresponding deficits of current-account deficit countries.
19. In contrast to the general trend, Central and Eastern Europe increased its aggregate deficit to about US\$ – 51 billion.
20. These holdings increased to US\$ 616 billion in 2004 and are projected to reach US\$ 826 billion in 2005, according to IMF statistics (*World Economic Outlook 2005*, Table 35, p. 259).
21. See World Bank 2005a for a detailed discussion.
22. Adjustment should also occur in some of the richer oil-exporting countries.
23. See Keith Griffin (1970), "Foreign Capital, Domestic Savings and Economic Development," *Bulletin of the Oxford University Institute of Economics and Statistics*, May.
24. Recently, the Chinese government has been shrewdly starting to use foreign-exchange reserves in order to recapitalize state-owned banks with a large stock of non-performing loans.
25. The basic argument in this section on China is similar, in part, to that in Dooley, Folkerts-Landau and Garber, 2004.



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