GLOBAL IMBALANCES: PAST, PRESENT, AND FUTURE

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Executive summary

For over a decade, global imbalances—large current account deficits in some countries, large current account surpluses in others—have been a dominant feature of the world economy. While they will be substantially smaller in 2009, we predict that, absent major changes in policies, they will increase again, although not to pre-crisis levels.

This raises again the question of whether measures should be taken to reduce them. We argue that the answer is yes. Large imbalances can be the symptom of distortions at home, or can lead to potentially painful adjustment problems over time. They can also reflect problems with the international monetary and financial system, or lead to potential systemic problems later on. We believe that, indeed, a large part of the imbalances before the crisis reflected such problems and distortions, and thus the policy recommendations made at the time were largely right. And, we argue, a new argument has to be added to the list: reducing imbalances, and rebalancing world demand, may actually be key to achieve a sustained recovery.

I. INTRODUCTION

For over a decade, global imbalances—large current account deficits in some countries, large current account surpluses in others—have been a dominant feature of the world economy. The potential risks these imbalances presented, and the policy measures to be adopted, were the focus of much discussion, culminating in “multilateral consultations” held by the Fund in 2006-07.²

In the event, the current crisis was not primarily caused by these imbalances. But the imbalances are still with us, and the question remains of what should be done about them. How many of the conclusions and policy recommendations reached before the crisis still

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hold? How has the crisis itself modified the economic environment and introduced new elements to the discussion? These are the questions we take up in this note.

The note is organized in three parts.

The first reviews the evolution of global imbalances up to 2008. While imbalances are often characterized as a “U.S. versus China” issue, the reality is more complex. While one constant has indeed been a high U.S. current account deficit, the nature of the other players involved and the driving forces of the process have evolved over time. Understanding these evolutions is essential when it comes to policy recommendations.

The second reviews the arguments for or against reducing imbalances. Prima facie, there is nothing wrong with even large current account surpluses and deficits. It is important for capital to flow where it is the most useful, and important for investors to find the right mix of return, risk, and liquidity. But there are limits to this general argument. Large imbalances can be the symptom of distortions at home, or can lead to potentially painful adjustment problems over time. They can also reflect problems with the international monetary and financial system, or lead to potential systemic problems later on. We believe that, indeed, a large part of the imbalances before the crisis reflected such problems and distortions, and thus the policy recommendations made at the time were largely right.

The third reviews the effects of the crisis on imbalances. Imbalances have decreased since the beginning of the crisis. The questions are: (i) why this is, (ii) whether these changes are permanent or transitory, and (iii) how this affects the conclusions and policy recommendations reached before the crisis. We conclude that imbalances are likely to remain lower than they were before the crisis, but that the case for reducing some of them further is still strong. Indeed, we argue, a new and important argument should be added to the list. Reducing imbalances may actually be key to sustaining the recovery.

II. A brief history of global imbalances

There are many factors behind global imbalances, from shifts in private or public saving behavior, to changes in current or expected productivity growth, to the accumulation of foreign exchange reserves, to movements in commodity prices, to shifts in investors’ attitudes towards risk or liquidity. Figure 1 provides a visual summary of the main countries and regions with current deficits and surpluses since 1996. It suggests dividing recent history into three main stages leading up to the crisis:

Global imbalances emerged during 1996-2000. They were largely driven by buoyant prospects in the U.S., especially relative to Japan and emerging Asia, which attracted significant FDI and portfolio equity flows.

The period 1996-2000 was characterized by fast world growth—despite the Asian crisis, the Russian crisis, and the financial turbulence following the collapse of LTCM—an expansion in global capital flows (Figure 2).

Between 1996 and 2000 the U.S. current account deficit gradually widened from 1.5 percent to 4.3 percent (Figure 3). The widening of the deficit reflected a sharp increase in U.S. investment during a period of buoyant U.S. economic growth, which exceeded the increase in domestic saving driven by fiscal consolidation (Figures 4-5). FDI and portfolio equity flows linked to the productivity boom and dot-com bubble accounted for 40 percent of U.S. capital inflows and were larger than the current account deficit itself. Sustained by high demand for U.S. assets, the dollar appreciated by 18 percent throughout the period (Figure 6).

The main surplus counterparts of the widening U.S. deficit were Japan and—after the Asian crisis—emerging Asia. Japan was in recession in 1997-98, and the lingering effects of the crisis of the early 1990s implied low perceived profitability and a sharp decline in investment (Figures 3-4), thus widening the current account surplus. In Emerging Asia, investment collapsed following the Asian crisis and the region’s external balance swung into a large surplus, with sharply lower real effective exchange rates (Figure 6).


During 2001-2004, the U.S. deficit increasingly reflected declining saving. The set of major surplus countries expanded to include in particular Germany and oil exporters. Foreign purchases of U.S. bonds became dominant, with official investors playing an increasing role.

With the unwinding of the dot-com bubble and a recession in advanced economies imbalances narrowed in 2001, but expanded again from 2002 onwards. While the U.S. remained the dominant deficit country, the factors driving the deficit were now different. U.S. investment declined relative to the earlier period, but domestic saving fell even more, as the fiscal balance worsened—public saving fell by over 5 percentage points of GDP between 2000 and 2004.

In terms of U.S. external financing, portfolio equity and FDI flows fell in importance and foreign purchases of U.S. bonds became dominant—particularly Treasury securities and corporate bonds. The share of these purchases undertaken by official investors was over 20
percent of total inflows and over 40 percent of the U.S. current account deficit. And after peaking in early 2002, the dollar depreciated throughout the period.

In several surplus countries (Japan, emerging Asia, but also Central and Northern European countries—particularly Germany) current account imbalances reflected declining investment rates, while the increase in oil prices since 2003 boosted saving and surpluses in oil exporters. The currencies of China and oil exporters, closely tied to the U.S. dollar, depreciated during the period, as did the Japanese yen. Conversely, European currencies appreciated.

C. Asset price booms, oil prices, and reserve accumulation (2005-2008)

During 2005-2008, the U.S. was joined on the deficit side by a number of other countries, in particular in South and Central Europe, with deficits often associated with asset booms. Germany and especially China and oil exporters accounted for most of the surplus, with reserve accumulation and commodity prices playing an important role.

From 2005 until the crisis, the global economy was characterized by a boom in economic activity and international capital flows, particularly among advanced economies, with a further significant widening in the dispersion of current account balances around the world.

The U.S. current account deficit remained large: an adjustment in real trade flows, spurred by a significant weakening of the dollar, was offset by deteriorating terms of trade, driven by the sharp increase in oil prices. With a global boom in capital flows, both outflows from and inflows in the United States increased significantly, with foreign purchases of U.S. Treasury, agency, and corporate bonds accounting for the lion’s share of U.S. external financing.

At the same time, Southern Europe, Ireland, the United Kingdom, as well as countries in Central and Eastern Europe (“peripheral Europe”) accounted for an increasing fraction of global current account deficits and experienced significant real exchange rate appreciations. The widening deficits were primarily driven by an investment boom, with construction playing a particularly important role. Declining private saving rates were offset by higher public saving, helped by the upswing in the cycle. And large capital flows and a sharp compression of spreads implied easy external financing even for countries running very large deficits.

Counterparts to these deficits were China (with a 5-fold increase in its surplus between 2004 and 2007, and an accumulation of foreign exchange reserves of over $1.5 trillion between 2004 and 2008) and oil exporters, as well as Germany and a few other countries in Northern and Central Europe (the euro area remained in broad balance). While investment increased in all these regions, the increase in national saving was much higher. In China, the real effective exchange rate appreciated throughout the period, as did the currencies of oil exporters, after depreciating steadily alongside the dollar since 2002, while in European surplus countries real exchange rates were broadly stable.
The financial crisis became more and more severe throughout 2008. Cross-border capital flows declined dramatically in the second half of the year, and by the end of the year the world economy was in recession. Yet for the year 2008 as a whole, global imbalances did not decline, primarily because of the spike in oil prices. In the U.S., imports declined in real terms and the non-oil trade balance improved by ¾ percent of GDP—but the larger oil bill implied that the US current account deficit only stabilized. Elsewhere, current account balances worsened in oil importers, with the exception of China where the surplus remained high, while the surplus in oil exporters exceeded $800bn.

After the dramatic changes in growth, exchange rates, asset prices, and commodity prices in late 2008, the full-blown effects of the crisis on imbalances are being felt in 2009, a year that is seeing a sharp narrowing in current accounts across the world (Figure 7). Has the financial crisis marked the “beginning of the end” for global imbalances? Should the world stop worrying about them, or is policy action warranted? To address these questions we first step back and revisit the arguments on whether imbalances should be a source of concern in the first place and their policy implications, so as to assess their relevance in the aftermath of the crisis.

III. IMBALANCES: GOOD OR BAD?

In a global world, there is no reason for current accounts to be balanced. Indeed, it is desirable for saving to go where it is most productive, and imbalances can therefore emerge naturally from differences in saving behavior, in the rate of return on capital, or in the degree of risk or liquidity of different assets. So, imbalances, even large ones, are surely not prima facie bad. But they can be, for at least four reasons:

- **Imbalances may reflect domestic problems or distortions.** For example, high private saving may reflect a lack of social insurance, or poor firm governance coupled with financial repression (as is largely the case in China). Conversely, low private saving can be driven by bubble-driven booms in asset prices (as was the case in the United States, Ireland, and the United Kingdom before the crisis), or excessively rosy expectations about future growth (as was the case in Portugal in the late 1990s). Sizable current account deficits may also be driven by high public sector borrowing (as has been the case for example in Hungary), reflecting political factors.

- **Imbalances may reflect problems with the international monetary system and exchange rate regimes.** Particularly following the Asian crisis, many emerging economies have chosen to accumulate foreign-exchange reserves in the absence of other forms of insurance (although how much of reserve accumulation comes from insurance...
motives, and how much as a by-product of export-led growth strategies is not always clear). These reserves have been predominantly denominated in U.S. dollars, reflecting the role of the dollar in transactions, and the liquidity of the U.S. bond market. But large accumulation of reserves for self-insurance purposes is globally very inefficient relative to alternative arrangements, such as the establishment of credit lines, reserve-pooling arrangements, swap lines, or other forms of insurance.

- **Imbalances may themselves lead to domestic problems.** Large current account deficits and real exchange rate appreciations driven by credit booms are difficult to unwind without a protracted real depreciation, and this can generate significant problems when the exchange rate is fixed (as has been the case in Portugal, or more recently in Latvia) and partner-country inflation is low. On the financial account side, capital flows—particularly for smaller economies—may be quite volatile, leave in a hurry, and be disruptive. Capital flow volatility can be driven by self-fulfilling factors, as well as by an underestimation of liquidity risk by borrowers. Empirical evidence suggests that having a large current account deficit has proven very costly in the current crisis—countries with larger initial deficits have experienced larger output declines.

- **If countries with external imbalances are large and capital flows liquid, imbalances may lead to systemic problems: the risk of “disruptive adjustments”**. A case in point is the United States, where the risk that investor demand for U.S. assets would fall short of what needed to finance a rapidly growing stock of external liabilities was often considered, before the crisis, to be one of the main risks facing the world economy. 4 Changes in investor demand are more likely to happen if investors are private and if liabilities are liquid and short term, but more generally may have large effects even if they happen “at the margin” with a decline in the propensity to finance large and persisting current account deficits. It is important to note that these concerns may arise even in the absence of “net” imbalances, but with large gross external positions. Indeed, the cross-border effects of the financial crisis were initially transmitted through the large holdings of U.S. corporate securities by European banks, rather than through the “net” holdings of U.S. securities by emerging markets.

In 2006, worried that global imbalances reflected to a significant extent such problems and distortions, thus presenting serious risks both for individual countries and for the world economy, the IMF launched the “multilateral consultations on global imbalances” with China, the euro area, Japan, Saudi Arabia, and the United States. The purpose of the consultations was to encourage a joint approach to reducing global imbalances while sustaining world growth. Each participant put forward its own set of proposed policy adjustments, which were also discussed by their peers. These plans, presented the Spring of

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4 See, for example, IMF, 2005; Krugman, 2007; and Obstfeld and Rogoff, 2007.
2007, included measures to raise private consumption and increase exchange rate flexibility in China, increase private and public saving in the United States, increase domestic demand and growth in Saudi Arabia, and implement structural reforms to spur productivity growth, particularly in the non-traded goods sector, in the euro area and Japan. The IMF’s role was to moderate and coordinate the discussions, and to provide an assessment of the consistency and effectiveness of the proposed policy plans. Its view was that while these plans fell short of its recommendations, they went “in the right direction” and, if fully implemented, could lead to narrower imbalances and more balanced world growth. (In 2007 and 2008, thus after the multilateral consultations, the staff also expressed concerns about the investment and asset booms in a number of European countries, notably Spain and the Baltics).

As we mentioned earlier, the trigger for the crisis did not come from a disorderly unwinding of global imbalances, one of the scenarios that had worried the Fund, but from failures within the financial system. Still, these failures also reflected some of the distortions and ‘financial excesses’ that contributed to imbalances in the first place. Looking forward, key questions are: Will imbalances unwind on their own without further disruptions, or should policymakers still try to reduce them? If the latter, how much of the previous advice remains relevant? How should it be modified in the light of the crisis, and the change in the economic environment? We turn to these questions in the next section.

IV. CONSEQUENCES OF THE CRISIS AND IMPLICATIONS FOR IMBALANCES

A. Lower global imbalances in 2009

In 2009 global imbalances are forecast to contract to a significant extent (Figure 7). This contraction reflects a number of factors:

- A substantial decline in oil prices from their average 2008 levels, implying a very large contraction in the surplus of oil exporters and a corresponding improvement in the current account balance of oil-importing countries. For example, based on current forecasts of the price of oil for the rest of 2009, the direct effect of lower oil prices is forecast to reduce the U.S. current account deficit in 2009 by over 1 percent of GDP in 2009 relative to 2008, and the surplus of oil exporters by some 8 percent of their GDP.

- Asset busts, leading to a sharp contraction in domestic demand and thus a notable improvement in the current account of a number of deficit countries severely affected by the crisis (including the United States, Ireland, Spain, United Kingdom, and some countries in Central and Eastern Europe).

- As the crisis has had a particularly strong impact on investment, a sharp contraction in exports of investment goods, affecting a number of surplus countries, in particular Germany and Japan, and leading to a sharp reduction in their current account surplus.
B. Lower global imbalances in the future

What will happen in the future depends on how long the factors we just listed will be in play. Clearly, some of them are likely to be transitory. The large output gaps in most countries will eventually disappear, at a rate determined by the strength of the recovery. And in most countries, the sharp increase in private saving is likely to unwind as uncertainty is reduced, and income and asset prices increase; so are, in the opposite direction, the various fiscal stimuli, which will have to phased out over time. But some of the changes are likely to be long lasting, if not permanent:

- While uncertainty on the longer-term consequences of the crisis is still pervasive, potential output is projected to be generally lower than was expected before the crisis. To the extent that their financial system has been more seriously disrupted, the U.S. and some other deficit countries may experience a larger relative decrease in potential output (Figure 8). This would imply, ceteris paribus, a larger decrease in these countries’ imports, and thus a reduction in global imbalances.

- Private saving is projected to be generally higher than before the crisis. This is because, even as output returns to its potential level, asset prices, and thus wealth, may not return to pre-crisis levels any time soon. The increase in saving is expected to be larger in the United States, where private saving was unusually low before the crisis, and where the crisis has probably durably increased risk perceptions. To the extent that U.S. saving is indeed more affected than in other countries, this implies a reduction in the U.S. current account deficit, and lower global imbalances.

- Investment rates are likely to be significantly lower in a number of countries than they were before the crisis. To the extent that tighter financial regulation increases the cost of intermediation, the cost of capital will increase. In the countries that experienced housing booms pre crisis, housing investment is likely to be low for some time. To the extent that housing price booms were associated, in many countries, with large current account deficits (from the U.S. to Spain and Ireland), this also implies lower deficits in those countries, and lower global imbalances.

- Risk premia on cross border flows to many debtor countries have risen, implying a higher cost of capital. While these premia are lower now than at the peak of the crisis, they are likely to remain higher than pre-crisis levels, and lead to a more modest recourse to external finance. This is also likely to limit the scope for running large current account deficits, and thus, again reduce global imbalances.
While there is (surprisingly) little evidence so far that higher foreign exchange reserves helped shelter emerging market countries from the crisis, it may well be that the crisis leads many of these countries to further increase their reserves. To the extent that the incentive to accumulate reserves is stronger for deficit countries (one may, however, question whether this will actually be the case), this should again reduce global imbalances.

All these suggest that it is reasonable to expect a lasting reduction of global imbalances, and this is what is reflected in the WEO forecasts for 2010 to 2014 (Figure 7). In turn, this will imply a slower pace of net asset accumulation in surplus countries and net liability accumulation in deficit countries. Does this make earlier policy recommendations irrelevant? No:

Go through the earlier list: A number of domestic distortions still keep the saving rate in China too high. In many emerging market countries, the crisis has shown the risks of the export-led growth model. Problems with the international monetary system still persist: high reserve accumulation is still a very inefficient way to insure against volatile capital flows. Net creditor and debtor positions are still expanding. And risks of disruptive adjustment could materialize again in a different guise, in light of the large fiscal deterioration in several advanced economies, leading financial markets to worry about the riskiness of government bonds. For all these reasons, earlier recommendations for policy action to reduce imbalances still hold. But the new configuration of saving and investment raise a new and important issue, namely the sustainability of the world recovery itself. To this we now turn.

C. Global imbalances and the recovery

With weak demand in advanced countries, and especially in the U.S., sustaining the recovery requires a rebalancing of demand. Under normal circumstances (with positive interest rates) the policy advice to sustain the recovery would be relatively straightforward—central banks should decrease interest rates as needed to allow aggregate demand to increase and output to return to its potential level in each country. As a result of central bank policies, the world real interest rate would end up lower. To the extent that the output gap was larger in a particular country, the central bank would decrease interest rates more than the average, likely triggering an exchange rate depreciation. To the extent that the output gap was smaller, interest rates would decrease less, and the exchange rate would likely appreciate.

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5 Based on preliminary results, there appears to be no significant relation, across emerging market countries, between reserves (as a ratio to GDP, or as a ratio to short term debt, or as a ratio to M2) and the decline in GDP (over the last quarter of 2008 and the first quarter of 2009). This remains true, when controlling for other factors which appear to explain some of the fall of GDP, such as the initial current account deficit, the degree of openness, and the nature of exports.
But circumstances are not normal. As is now painfully understood, nominal interest rates cannot go below zero. With low inflation (or even deflation), this implies that real interest rates cannot go below the floor given by the negative of inflation. And yet this may be what is needed—after the crisis, and looking forward, most of the changes we have listed above suggest that, at a given interest rate, world saving will be higher, and world investment may be lower, than before the crisis. This implies in turn that the equilibrium rate of interest is likely to be lower than it was pre-crisis, and may indeed be negative. Or perhaps more accurately, the world equilibrium riskless real rate of interest may be negative; as perceptions of risk are higher, and risk appetite lower than before the crisis, risky rates, that is those rates faced by borrowers, are likely to remain positive.

Thus, it may well be that, after the crisis, the floor on the real interest rate may be higher than the equilibrium interest rate. In this case, at the floor, and at a level of output equal to potential output, saving would exceed investment. Put another and more conventional way, aggregate demand would be less than aggregate supply.

What happens then? If aggregate demand is weak, output will remain below its potential level. Or, put in the current context, the recovery will be weaker than it could be, and output may take a long time to get back to potential. For a while, this can be avoided through a fiscal stimulus, which increases aggregate demand. But, as has been discussed elsewhere (IMF, 2009), the fiscal stimulus must eventually be phased out.

If, however, the world economy remains in the liquidity trap, and real interest rates in most countries are already at the floor, this policy advice becomes irrelevant, as interest rates cannot be decreased to boost aggregate demand. Can something still be done? Yes, to the extent that demand can be increased in some countries and not in others, demand can be reallocated to the countries that need it.

Reallocating world demand to sustain the recovery may sound exotic (and indeed it is, but so is the liquidity trap, and yet it happened). But it can be thought of in more intuitive terms. Think of the United States. If the U.S. recovery is to take place, if the fiscal stimulus must be phased out, and if private domestic demand is weak, then U.S. net exports must increase. Equivalently, the U.S. current account deficit must decrease. This means that the rest of the world, now in substantial surplus, must reduce that current account surplus. Where should this reduction come from?

Natural candidates are countries running large current account surpluses. China ran a very large current account surplus in 2007 and 2008. Higher domestic demand—and a correspondingly lower surplus—would contribute to sustaining the world recovery, and help external adjustment in deficit countries. And this adjustment would be in China’s own interest. Reforms to strengthen social insurance and improve household access to credit, and to improve firms’ governance would lead both to lower saving and higher internal demand.
To the extent that an expansion of demand ran into supply-side constraints, it would have to be accompanied by an appreciation of the renminbi (RMB) in real effective terms, that would lower external demand. Both higher Chinese import demand and a more appreciated RMB would increase U.S. net exports.

A number of other emerging market Asian countries also run large current account surpluses. In several of these countries there may also be scope to reduce precautionary saving and raise private consumption, and in some there is scope to undertake reforms to encourage higher investment rates—which have declined dramatically since the Asian crisis. Appreciating real exchange rates would contribute to this (gradual) shift from external to internal demand as a source of growth and reduce current account surpluses. Achieving these goals would ideally require a combination of domestic and international reforms. With regard to the latter, reforms of the international financial architecture to reduce incentives for foreign reserve accumulation would be highly desirable in the long run, and help sustain the recovery in the short and medium run.

How much can higher domestic demand in emerging Asia help? The region’s GDP, currently around 50 percent of U.S. GDP at market exchange rates, is projected to increase to 70 percent of U.S. GDP in 2014. Therefore even a substantial reduction in the region’s surplus would not by itself imply a large reduction in the current account deficit of the United States and other deficit countries in Europe, all the more so since emerging Asia’s trade is not entirely with these regions. To what extent can (and should) other countries play a role?

Other advanced countries, including Japan, Germany, and other central and northern European countries also have large current account surpluses. With unfavorable demographics and, in Japan, very high public debt, there is limited scope for fiscal policy to boost demand, and arguably relatively little scope for policies to reduce private saving. But there is scope for reforms to improve productivity, particularly in the non-traded goods sector. These reforms would have a clear domestic payoff, and also help over time increase investment and rebalance demand. However, such structural reforms are politically difficult and their effects are likely to take place slowly, perhaps too slowly to substantially affect the recovery over the next few years.

Thus, stated simply, sustained recovery may require a further decrease in global imbalances. What happens if the ‘demand rebalancing act’ does not play out, or if it does not play out enough? The WEO forecasts suggest that limited rebalancing (Figure 7) may be consistent with a positive but low rate of growth over the next few years. But even these forecasts may be somewhat optimistic: the individual desk projections imply a substantial world current
account surplus, suggesting excessively optimistic assumptions about export growth in a number of country forecasts. One can think of a number of less appealing scenarios.\textsuperscript{6}

If, for example, U.S. net exports do not substantially improve, weak U.S. private demand may lead to an anemic U.S. recovery. This would increase the political pressure to extend the fiscal stimulus until private demand has recovered. Were this to happen, one can imagine various outcomes: Political pressure may be resisted, the fiscal stimulus phased out, and the U.S. recovery may falter. Adverse interactions between low growth, the health of the financial sector, and government debt dynamics, may then come back into play. Or political pressure may not be resisted, with persistently high fiscal deficits then leading to concerns about debt sustainability, falling demand for U.S. government bonds, a sharply weaker dollar, and sharp flows of capital out of the U.S. While exchange rates may then move in the right direction, this may come with substantial financial and exchange rate instability, and derail the world economy.

V. **Concluding Remarks**

In the aftermath of the global financial crisis, imbalances are narrowing. While this is partly cyclical, more persistent factors—particularly in private sector adjustment after the unwinding of the “financial excesses” reflected in credit and asset price booms—are also at play. For example, the crisis is likely to lead to a significant increase in private saving in the United States and several other deficit countries. While desirable, this adjustment may result however in weak global demand, threatening economic recovery. To sustain recovery, it may be necessary to go further, and shift from external demand to domestic demand in current account surplus countries, and from domestic demand to external demand in deficit countries.

\textsuperscript{6} Examining such scenarios is one of the tasks of the “early warning exercises”, the first of which will be presented at the Istanbul meetings.
References


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Figure 1. Global Imbalances, 1996-2008

Note: Current account balances (in percent of world GDP). Source: World Economic Outlook. The composition of country groups is as follows:

EUR surplus: Austria, Belgium, Denmark, Finland, Germany, Luxembourg, Netherlands, Sweden, Switzerland.
EUR deficit: Greece, Ireland, Italy, Portugal, Spain, United Kingdom, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, Turkey, Ukraine.
Emerging Asia: Hong Kong S.A.R. of China, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan province of China, Thailand.
Oil exporters: Algeria, Angola, Azerbaijan, Bahrain, Republic of Congo, Ecuador, Equatorial Guinea, Gabon, Iran, Kazakhstan, Kuwait, Libya, Nigeria, Norway, Oman, Qatar, Russia, Saudi Arabia, Sudan, Syria, Trinidad and Tobago, United Arab Emirates, Venezuela, Yemen.
Rest of the world: remaining countries.
Figure 2: World capital flows, 1996-2008

Capital Inflows (ratio of world GDP)

Capital Outflows (ratio of world GDP)
Figure 3a. United States Current Account Deficit and Capital Inflows (ratio of GDP)

Notes: The bar “other” captures primarily flows of banks and other financial institutions that are not in the form of securities. The line “official assets” measures net purchases of U.S. assets by foreign official institutions (primarily central banks) as ratio of U.S. GDP. Source: Bureau of Economic Analysis.

Figure 3b. Composition of US portfolio debt inflows (billions US$)

Source: Bureau of Economic Analysis.
Figure 4. Saving and Investment Trends (in percent of world GDP)

Source: Authors’ calculations based on IMF, World Economic Outlook.
Figure 5. Saving and Investment Trends (in percent of domestic GDP)

Source: Authors’ calculations based on IMF, World Economic Outlook.
Figure 6. Real effective exchange rates, 1996M1-2009M7

Source: authors’ calculations based on IMF data.
Figure 7. Current account projections (in percent of world GDP)

Source: authors’ calculations based on IMF, World Economic Outlook.
Figure 8. Growth projections (Fall 2009 WEO vs Spring 2007 WEO)*