



# IMF STAFF POSITION NOTE

December 22, 2009  
SPN/09/29

## Global Imbalances: In Midstream?

Olivier Blanchard and Gian Maria Milesi-Ferretti

INTERNATIONAL MONETARY FUND

Research Department

**Global Imbalances: In Midstream?**

Prepared by Olivier Blanchard and Gian Maria Milesi-Ferretti<sup>1</sup>

Authorized for Distribution by Olivier Blanchard

December 22, 2009

**Disclaimer: The views expressed herein are those of the author(s) and should not be attributed to the IMF, its Executive Board, or its management.**

Before the crisis, there were strong arguments for reducing global imbalances. As a result of the crisis, there have been significant changes in saving and investment patterns across the world and imbalances have narrowed considerably. Does this mean that imbalances are a problem of the past? Hardly. The paper argues that there is an urgent need to implement policy changes to address the remaining domestic and international distortions that are a key cause of imbalances. Failure to do so could result in the world economy being stuck in “midstream,” threatening the sustainability of the recovery.

JEL Classification Numbers: E21, E22, F32, F33, F36, F41

Keywords: Current account deficits, saving, investment, portfolio choice.

Authors' E-mail Addresses: [oblanchard@imf.org](mailto:oblanchard@imf.org) ; [gmilesiferretti@imf.org](mailto:gmilesiferretti@imf.org)

---

<sup>1</sup> One of the series of “Seoul papers” on current macro and financial issues. We are grateful to Caroline Atkinson, Nicoletta Batini, Tam Bayoumi, Christian Broda, Matthieu Bussière, Paul Cashin, Nigel Chalk, Menzie Chinn, Stijn Claessens, Charles Collins, Carlo Cottarelli, Irineu de Carvalho Filho, Uri Dadush, Jörg Decressin, Kemal Dervis, Nicolas Eyzaguirre, Stan Fischer, Charles Kramer, John Lipsky, Enrique Mendoza, Ashok Mody, Jonathan Ostry, Jean Pisani-Ferry, Hélène Rey, David Robinson, Antonio Spilimbergo, Ted Truman, and Kenichi Ueda for useful comments. The views expressed are ours and do not necessarily represent those of the IMF or IMF policy.

	Contents	Page
I.	Introduction .....	3
II.	Global Imbalances: Good or Bad? .....	3
	A. “Good” Imbalances .....	4
	B. Domestic Distortions.....	4
	C. Systemic Distortions .....	4
	D. Domestic Risks .....	5
	E. Systemic Risks .....	6
III.	So Good or Bad? An Interpretation of Recent History .....	7
	A. Differences in Perceived Profitability, 1996-2000 .....	8
	B. Declining U.S. Saving, 2001-04 .....	9
	C. Asset Booms and Busts, 2005-08 .....	10
	D. Summary .....	11
	E. Policy Advice Pre-Crisis .....	11
IV.	The Crisis and the Future .....	12
	A. Looking at 2009—A Reduction in Imbalances .....	12
	B. Lower Global Imbalances in the Future .....	13
	C. Scenarios .....	14
V.	Policy Implications .....	17
	References .....	22

## I. INTRODUCTION

Global imbalances are probably the most complex macroeconomic issue facing economists and policy makers. They reflect many factors, from saving to investment to portfolio decisions, in many countries. These cross-country differences in saving patterns, investment patterns, and portfolio choices are in part “good”—a natural reflection of differences in levels of development, demographic patterns, and other underlying economic fundamentals. But they are also in part “bad,” reflecting distortions, externalities, and risks, at the national and international level. So it is not a surprise that the topic is highly controversial, and that observers disagree on the diagnosis and thus on the policies to be adopted.

Our purpose in this paper is twofold. First, we aim at clarifying the issues, laying down the facts, interpreting past and current imbalances, and forecasting their future evolution. Second, we argue that there are good reasons to want to reduce imbalances further. As a result of the crisis, there have been significant changes in saving and investment patterns across the world, and imbalances have narrowed considerably. This notwithstanding, we argue that there is an urgent need to implement policy changes to address the remaining domestic and international distortions that are a key cause of imbalances. Failure to do so could result in the world economy being stuck “in midstream,” threatening the sustainability of the world recovery.

The paper is organized as follows. In section II we review the arguments for or against reducing imbalances. Section III takes a brief look back at the evolution of imbalances before the crisis (with the Appendix presenting a more comprehensive discussion), and attempts to gauge the extent to which imbalances before the crisis reflected the problems and distortions discussed in Section II. Section IV discusses where the crisis has left us. 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 take up the last question in Section V. 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 very strong.

## II. GLOBAL IMBALANCES: GOOD OR BAD?

Current account balances reflect a plethora of macroeconomic and financial mechanisms. And 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. It is therefore essential to be clear as to what factors are behind them, and then act, if justified, on the causes.

### **A. “Good” Imbalances**

Consider three familiar examples of “good imbalances.” First, saving behavior: it makes good sense for countries whose population is aging faster than their trading partners’ to save and run current account surpluses in anticipation of the dissaving that will occur once the workforce shrinks and the number of retirees rises. Second, investment behavior: A country with attractive investment opportunities may well want to finance part of its investment through foreign saving, and thus run a current account deficit. Third, portfolio behavior: A country that has deeper and more liquid financial markets may well attract investors, generating currency appreciation and a current account deficit. In all these cases, it would be unwise to want to reduce imbalances: They reflect the optimal allocation of capital across time and space.

But imbalances can be symptoms of underlying distortions, or be dangerous by themselves. Let us quickly go through the list.

### **B. Domestic Distortions**

The list of potential examples here is also familiar: High private saving is not necessarily good. It may reflect a lack of social insurance, which forces people to engage in high precautionary saving. Or it may reflect poor firm governance, which allows firms to retain and reinvest most of their earnings. Conversely, low private saving can clearly be bad, driven by bubble-driven asset booms, or excessively rosy expectations about future growth. Public borrowing is often too high, reflecting political factors. And factors such as poor protection of property rights or lack of competition in the financial system can lead to excessively low investment. In all these cases, the purpose of policies should not be to reduce the resulting current account imbalances per se, but to reduce the underlying distortions. Doing so will typically reduce imbalances, but this is not the goal.

### **C. Systemic Distortions**

Particularly following the Asian crisis, many emerging economies have run large current account surpluses and accumulated very substantial foreign exchange reserves. These reserves have been predominantly denominated in U.S. dollars, reflecting the role of the dollar in international transactions and the liquidity of the U.S. bond market.

One reason behind this strategy has been a reliance on export-led growth.<sup>2</sup> While this may be a reasonable growth strategy from the country's perspective, and especially so if it starts from a position of excessively high external indebtedness, it comes in effect at the expense of other countries. And the problem can become systemic if several countries representing a significant fraction of world trade adopt these strategies.

Another reason for the accumulation of reserves has been self-insurance.<sup>3</sup> While this may again be rational at the individual country level, it is globally inefficient relative to alternative arrangements, such as the establishment of credit lines, reserve-pooling arrangements, swap lines, or other forms of insurance.

To the extent that imbalances reflect such systemic distortions, the policy response should be to reduce these distortions at the systemic level. In the first case, the issue could in principle be addressed through some international mechanism to limit exchange rate undervaluation. In practice, however, designing and enforcing a mechanism that goes beyond international peer pressure is a daunting challenge. In the second case, the policy response should be to improve the global provision of liquidity and provide incentives for countries to decrease self insurance and reserve accumulation.

#### **D. Domestic Risks**

Even if the factors behind current account balances are “good,” they may interact with other distortions to create inefficient outcomes or increase risks.

For example, real appreciations driven by increases in capital flows can crowd out manufacturing activity and lead to Dutch Disease-type phenomena—particularly in the presence of externalities that make changes in manufacturing activity very costly to reverse. Large current account deficits and real exchange rate appreciations resulting from credit booms fueled by “over-optimism” can be difficult to unwind without a protracted real depreciation, which can be very painful when the exchange rate is fixed and partner-country inflation is low.

Capital flows—particularly for smaller economies—may be volatile, leave in a hurry, and be disruptive. Capital flow volatility can be driven by self-fulfilling factors, as well as by

---

<sup>2</sup> By export-led growth we mean a policy strategy that relies on an undervalued exchange rate coupled with measures to compress domestic demand, thus preventing “overheating” and real appreciation through inflation.

<sup>3</sup> Caballero, Farhi, and Gourinchas (2008a, b) and Mendoza, Quadrini, and Rios-Rull (2009) provide theoretical models explaining emerging market demand for advanced economies' assets for liquidity and insurance purposes.

an underestimation of liquidity risk by borrowers. Having a large current account deficit has proven very costly in the current crisis—countries with larger initial deficits have experienced larger output declines.

In all these cases, underlying shocks are interacting either with distortions—for example, a tradable sector externality leading to Dutch Disease—or with the underestimation of foreign exchange or liquidity risk by domestic borrowers. In principle, the right policy is thus to correct the externalities through taxes or subsidies, and limit the risks taken by domestic borrowers through prudential regulation or controls on capital flows.

### **E. Systemic Risks**

In addition, if countries with external imbalances are large and capital flows liquid, imbalances may lead to systemic problems, namely 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 was 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.<sup>4</sup>

Two remarks are relevant here. The focus in that discussion is often on net asset positions, and on the large reserve positions of central banks. As a matter of logic, what matters more may not be net, but rather 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. And rapid changes in investor demand are probably less likely to occur when central banks rather than private investors are holding dollar assets.

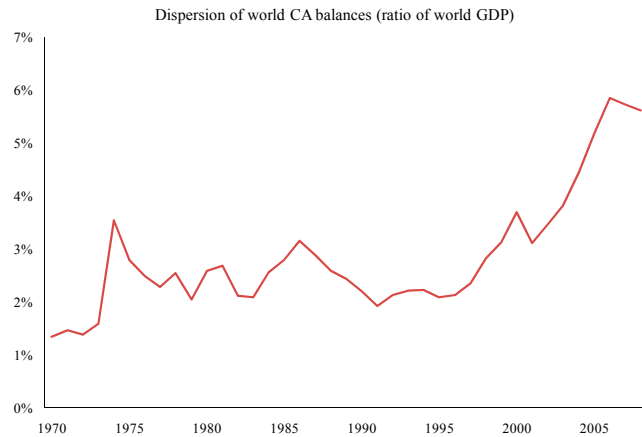
In the presence of such systemic risks, the best policy response is not obvious. It may be that just taking care of the other distortions, for example limiting the foreign currency exposure of domestic borrowers, reduces the size of the problem or the disruptions from exchange rate adjustments, and makes the problem less important. Otherwise, intervention ex-post to allow for more orderly adjustment (for example in the form of extensive liquidity provision) may be the best response.

---

<sup>4</sup> See, for example, IMF, 2005; Krugman, 2007; and Obstfeld and Rogoff, 2007.

### III. SO GOOD OR BAD? AN INTERPRETATION OF RECENT HISTORY

The chart to the right, which shows the absolute value of world current account balances scaled by world GDP, suggests a sustained increase in imbalances starting in 1996, with only a short dip at the time of the 2001-02 recession. We therefore start our analysis in 1996. The task of interpreting what happened during that period should in principle be straightforward: look at imbalances and identify distortions and risks. In practice, of course, the task turns out to be much harder, for two reasons:



First, the nature of imbalances has changed through time, with different factors and players playing an important role in different periods. A closer look at the evidence (see the Appendix) suggests dividing recent history into three main stages leading up to the crisis: 1996-2000, 2001-2004, and 2005-2008. The deficits and surpluses of the main countries or country groups are shown in the Table 1 to the right for each of the stages. (Figure 1 gives a year-by-year account.) It shows, for example, that among our country groups, Japan was the main counterpart to U.S. deficits during the 1990s, and that China's surpluses are large in absolute terms only during the period 2005-2008.

Table 1. Average current account balances  
(in percent of world GDP)

	1996-2000	2001-2004	2005-2008
United States	-0.8	-1.4	-1.4
Peripheral Europe 1/	-0.1	-0.4	-0.8
Rest of the world	-0.3	0.0	-0.3
China	0.1	0.1	0.6
Emerging Asia 1/	0.1	0.2	0.2
Japan	0.3	0.3	0.3
Oil exporters 1/	0.2	0.4	1.0
Core Europe 1/	0.2	0.4	0.7
Discrepancy	-0.3	-0.3	0.4

1/ See the footnote to figure 1 for a definition of country groups

Second, assessing whether imbalances were good or bad, and the role of distortions and risks, turns out to be far from obvious in practice, and thus a major source of disagreements. Take for example China today, with high saving, high growth, and a large current account surplus (see Yu, 2007 for a detailed discussion of factors underpinning the Chinese current account). Consider various interpretations, all of them found in the literature:



- One interpretation is that the high saving rate reflects cultural factors. Given this high saving rate, the argument goes, low internal demand must be compensated by high external demand, and an appropriately depreciated real exchange rate. Under this interpretation, there would be no need for a change in policies.<sup>5</sup>
- Another is that the saving rate is high because of the underprovision of social insurance to households, and poor governance of firms. Under this interpretation, the right policy for China is to provide better insurance, and improve governance. This will decrease saving and the current account.
- Yet another is that the Chinese surpluses reflect an intentional undervaluation of the exchange rate, together with an appropriately high saving rate to avoid overheating.<sup>6</sup> If there are externalities from fast growth of the export sector, such a combination makes sense from the point of view of China. Should then China “do nothing”? This raises a systemic issue: clearly not all countries can undervalue the exchange rate, and thus such a strategy may be seen as unfair competition. Other countries may insist on appreciation as the right course.

These examples highlight how the experience of individual countries can be interpreted quite differently, and lead observers to different conclusions regarding the need and scope for policy action. As we shall see, some of the same ambiguities affect more generally the interpretation of history. Here is our own attempt at an interpretation.

#### **A. Differences in Perceived Profitability, 1996-2000**

In the first part of our sample, imbalances were largely a relative profitability story. On one side, U.S. investment increased, linked to the high tech boom and expectations of higher productivity growth. And, on the other side, investment in East Asia decreased, with the decrease linked to the aftermath of the Asian crisis and Japan’s protracted recession. (Figures 2 and 3 at the end of the paper give the evolution of investment and saving by country group). These two forces were reflected in a U.S. current account deficit of 0.8% of world GDP, and a current account surplus of 0.4% of world GDP for emerging Asia and Japan. U.S. net inflows were heavily tilted to FDI and portfolio equity, as foreigners took a stake in strong domestic prospects.

---

<sup>5</sup> Our goal at this point is not to assess the relative validity of the different interpretations, just to show how the same facts can be interpreted differently.

<sup>6</sup> Dooley, Folkerts-Landau, and Garber (2005) view the undervaluation strategy as ensuring the absorption of surplus labor in the traded goods’ sector.

Were these early imbalances “good” or “bad”? While, in retrospect, optimistic expectations about U.S. productivity growth were not fully justified and stock market valuations turned out to be significantly inflated in the U.S. and elsewhere, productivity differentials clearly played an important role in explaining the dollar appreciation and the widening of the U.S. current account deficit. As for the decline in investment in emerging Asia, it was mostly the consequence of the balance sheet adjustment underway following the boom that preceded it and the depth of the crisis. Similarly, low investment in Japan reflected a deep recession, which in turn was related to longer-term failures of dealing with the aftermath of the real estate bubble earlier in the decade. In sum, while perceptions of a tech boom turned out to be optimistic, imbalances were largely “good,” reflecting the reallocation of capital in response to perceived differences in profitability.

### **B. Declining U.S. Saving, 2001-04**

The picture changed in the early 2000s. On the deficit side, the U.S. current account deficit averaged 1.4% of world GDP during 2001-2004. The dominant factor became the decline in U.S. saving, reflecting a very significant deterioration in public saving. (Private saving also declined during 1996-2000, but remained broadly stable thereafter, with increasing corporate saving offsetting declining household saving). The large structural deterioration in fiscal accounts was viewed as undesirable (by many economists as well as the IMF) in light of the looming increases in age- and health-related expenditures due to population aging. In addition, the steady decline in household saving, reflecting borrowing against increasing house values and rising asset prices more generally, was also considered a problem (and global rebalancing scenarios were typically based on an increase in household saving likely triggered by less buoyant asset prices).

On the surplus side, as Table 1 shows, more players were involved. The surpluses in Japan and emerging Asia continued. The surpluses of oil exporters increased in line with the increase in oil prices. And surpluses in a number of “core” European countries (see Figure 1 for a detailed list) increased sharply, reflecting for the most part declining investment.

The nature of capital flows also changed. (Figure 4 gives the levels of gross capital flows by country group. Figures 5a and 5b give the level and the composition of capital flows into the U.S.). The relative importance of debt flows in the financing of the U.S. current account deficit increased, despite low interest rates and a depreciating dollar. And there was an increase in the share of purchases by official investors, which accounted for some 20 percent of total inflows, and around 40 percent of the U.S. current account deficit.

Were imbalances good or bad? The main driver (U.S. fiscal deficits, with continuing low private saving) was “bad.” Again, the picture on the surplus side is more complex: the widening of surpluses by oil exporters was reasonable, in light of the uncertainty about future price dynamics, the exhaustible nature of oil, and adjustment costs in increasing

investment. Some of the surplus in “core Europe” reflected a reallocation of investment to “peripheral Europe” where current account deficits started to rise, spurred by convergence prospects. Emerging Asian investment remained weak, with depreciated real effective exchange rates.

### **C. Asset Booms and Busts, 2005-08**

In the years just preceding the crisis, asset booms, associated with lower saving and higher investment, became an increasingly important factor. On the deficit side, the U.S., with continued low saving, was now joined by countries such as Ireland, Spain, the United Kingdom, and CEE countries (“peripheral Europe”), with asset price booms and high investment. On the surplus side, the surplus in China increased dramatically as saving rose even faster than domestic investment, and rising oil prices implied ballooning surpluses for oil producers. Surpluses continued in Germany and other Central and Northern European countries (“core Europe”), while the surpluses in the rest of emerging Asia and Japan moderated relative to world GDP, reflecting the increase in oil prices.

Capital flows increased dramatically during this period, with debt flows playing again a key role. Official investors continued to buy significant amounts of U.S. treasury and agency bonds, but foreign purchases of U.S. corporate bonds—particularly from European financial institutions—also rose sharply.

Once again, we have to ask: Were those imbalances good or bad? To a large extent, developments during this period reflected the “financial excesses” that eventually led to the current financial crisis. On the deficit side, U.S. deficits were largely bad, even ex-ante and surely ex-post, reflecting fiscal deficits, and, it turned out, overoptimistic expectations and the housing boom (Some current account adjustment was underway during the period, spurred by the depreciation of the dollar, but this was offset by higher oil and commodity prices.) Current account deficits in emerging Europe were an example of an initially good thing later turning bad, particularly in those countries where current account deficits as a ratio of GDP were in double digits, driven by credit and asset price booms.

On the surplus side, the widening surpluses of oil producers were largely the natural response to higher oil prices, notwithstanding very rapid growth in imports. At the same time, these surpluses may have been further boosted by a depreciated exchange rate (since most oil producers’ currencies are pegged to the U.S. dollar, which had been depreciating since 2002). For China and some other emerging Asian countries, were current account surpluses good or bad? As we discussed earlier for the case of China, there is little agreement on this point. Even if systemically inefficient, some accumulation of reserves by emerging market countries was individually rational, although the overall amount of reserve accumulation is difficult to justify on the basis of insurance motives (see Jeanne, 2007). The preference of official investors for liquid assets (particularly U.S. Treasury

bonds) was probably largely justified, since the U.S. government bond market is indeed deep and liquid, and several oil exporters peg to the U.S. dollar.<sup>7</sup> Still, the “premium on liquidity” came at the expense of the benefits of a more diversified asset portfolio—particularly if one considers the size of the overall asset accumulation by these players.

#### **D. Summary**

Our brief characterization of imbalances highlights a number of themes. First, the case that imbalances reflected primarily distortions, both at the domestic and international level, is particularly strong from 2001 onwards. Second, a variety of factors are needed to explain the evolution of imbalances over time. Constants are the large current account deficit in the United States and external demand for U.S. assets, with the latter taking different forms in different time periods, as discussed earlier. Other factors—high oil prices and the large savings of oil exporters, high and rising saving rates in China, the investment boom driven by asset prices in peripheral Europe, the collapse in investment in emerging Asia excluding China and in Japan—played roles of varying importance at different periods in time.

There are clearly interrelations among these factors. For example, the sharp rise in oil prices is related to the very rapid growth in China and other emerging markets, and global growth more generally. And, in turn, the large transfer to oil exporters, that have a high propensity to save, helped widen imbalances, drive down world interest rates, and fuel the boom. But “one-size-fits-all” explanations (U.S. fiscal profligacy, U.S. consumer profligacy, the saving glut in emerging Asia, undervaluation of the RMB, Bretton Woods II) just miss the essential complexity of what has happened since the mid 1990s.

#### **E. Policy Advice Pre-Crisis**

The IMF had long worried about global imbalances. In its “multilateral consultations on global imbalances” (conducted in 2006 with China, the Euro area, Japan, Saudi Arabia, and the United States) it promoted 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 2007, centered on an increase in U.S. private saving, a decrease in U.S. fiscal deficits, and an increase in private consumption and an exchange rate adjustment in China. Other recommendations were for an increase in domestic demand

---

<sup>7</sup> Also, their willingness to hold substantial amounts of GSE assets on the basis of an implicit U.S. government guarantee was validated ex post. Privately-issued U.S. asset-backed securities were held almost exclusively by investors in advanced economies, particularly large European financial institutions. In contrast, emerging market investors held U.S. treasury and agency bonds.

and growth in Saudi Arabia, and the implementation of 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).

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. And the unraveling of these financial excesses is causing a sharp decline in global imbalances. So will imbalances unwind on their own without further disruptions, or should policy makers 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. THE CRISIS AND THE FUTURE

##### A. Looking at 2009—A Reduction in Imbalances

In 2009 global imbalances are forecast to contract to a significant extent (Table 2 and 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, the direct effect of lower oil prices is forecast to reduce the U.S. current account deficit in 2009 by over

	Average current account balances (in percent of world GDP)		
	2005-2008	2009	2010-14
United States	-1.4	-0.6	-0.6
Peripheral Europe	-0.8	-0.5	-0.5
Rest of the world	-0.3	-0.4	-0.4
China	0.6	0.6	0.9
Emerging Asia	0.2	0.3	0.2
Japan	0.3	0.2	0.2
Oil exporters	1.0	0.3	0.7
Core Europe	0.7	0.4	0.5
Discrepancy	0.4	0.2	0.9

1 percent of GDP in 2009 relative to 2008, and the surplus of oil exporters by some 8 percent of their GDP (over 0.5 percent of world GDP).

- Asset price busts, leading to a sharp contraction in domestic demand and thus a substantial improvement in the current account of a number of deficit countries severely affected by the crisis (including the United States, Ireland, Spain, the United Kingdom, and some countries in Central and Eastern Europe).
- On the financial account side, a global increase in home bias, implying a diminished willingness of foreign investors to finance large net external imbalances.
- As the crisis has had a particularly strong impact on demand for durable consumption and investment goods, a sharp contraction in exports of investment goods, affecting a number of surplus countries, in particular Germany and Japan, and leading to a large 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 recover; so are, in the opposite direction, the various fiscal stimuli, which will have to be phased out over time.

But some of the changes are likely to be long lasting, if not permanent:

- 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 affected saving behavior. 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.
- A factor that has not played out much during the crisis but is likely to be important in the near future is the reserve behavior of emerging market countries. There are two reasons for this. We are seeing the first now: the worry about large capital inflows is leading emerging economies, especially in Asia, to limit exchange rate appreciation and accumulate further reserves. And more generally, the crisis can be read by many countries as suggesting that more rather than less reserves are desirable.

So what do these factors imply for the unwinding of global imbalances? If we go back to past policy advice and the main conclusions of the multilateral consultations, one important adjustment—the increase in U.S. private saving—is under way. However, other parts of the global external adjustment process are not in place yet: In response to the crisis, US fiscal deficits have increased significantly, and will need to decline substantially in the future; current account adjustment in China, while significant in 2009, may turn out to be largely temporary, particularly if the renminbi is not allowed to appreciate; and a number of other emerging market countries are still running surpluses and accumulating foreign reserves.

So how will global imbalances evolve? It is useful to go through a number of scenarios.

### C. Scenarios

**Scenario 1.** In this “ideal” scenario there is a gradual adjustment in the U.S. fiscal position; China’s saving rate declines, the renminbi appreciates, and China’s current account surplus declines. Also, a number of other emerging markets allow a rebalancing of growth towards domestic demand and some current account deterioration, with better international assurances of global liquidity provision leading to a decline in reserve accumulation and precautionary saving.<sup>8</sup> As a result, some of the major distortions are reduced, global imbalances are smaller, and world growth is sustained and balanced.

---

<sup>8</sup> How much can higher domestic demand in emerging Asia help global rebalancing? 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. This suggests that sustained U.S. and

(continued)

**Scenario 2.** China increases internal demand, but is reluctant to let the real exchange rate appreciate. In turn, several other emerging markets are reluctant to allow for an appreciation of their currencies vis-à-vis the renminbi.<sup>9</sup> Faced with little improvement on net exports, and given its inability to ease monetary policy because of the zero bound on the policy interest rate, the United States is reluctant to decrease its fiscal stimulus, and continues to run large deficits. Under this scenario, underlying distortions are not reduced and global imbalances widen again. This poses serious risks of a disruptive adjustment in light of the unbalanced nature of the recovery and the fact that imbalances would be associated with rapidly rising public debt, an asset class where external holdings are very large, and hence foreign investors' sentiment particularly important.

**Scenario 3.** The behavior of China and other emerging markets is similar to the one in scenario 2, but the United States phases out its fiscal stimulus. As a result, growth stalls in the United States, and this affects the rest of the world. While countries that have the room to increase internal demand do so and are able to sustain growth, the result is again unbalanced growth, with the risk of global slowdown. For example, the euro area could be facing an appreciated real effective exchange rate at the same time as a demand slowdown in countries experiencing large adjustment in house prices, such as Ireland and Spain.

Of course one can think of many other scenarios. All three scenarios rely heavily on a continuing “world liquidity trap” assumption, namely that, in most advanced countries, interest rates will remain low, so there is little room to stimulate demand through monetary policy. If this were not the case, for example, the adverse effects of fiscal consolidation on growth could be offset through lower interest rates. In this case, there would be less need for continuing fiscal stimulus under Scenario 2, and more room under Scenario 3 for the U.S. and other advanced countries to reduce fiscal deficits while maintaining growth.<sup>10</sup>

And one can think of other outcomes, better or worse. For example, while forecasts are for a long-lasting increase in the U.S. personal saving rate, they are associated with substantial uncertainty. It may be that US consumers will in fact return to low saving, a scenario which would lead to an outcome similar to Scenario 2, but this time with low private saving rather than large public dissaving: distortions would remain, and so would global imbalances. Or U.S. investment could turn out stronger than currently forecast, leading to stronger demand

---

world growth would require a more general “demand rebalancing” involving other countries with room to expand domestic demand.

<sup>9</sup> Ito (2007) discusses the influence of the RMB on exchange rate policy in other Asian countries.

<sup>10</sup> For a presentation of the argument, see Blanchard, 2009. For a nice formalization of the “world liquidity trap” argument, see Jeanne, 2009.



and growth in the U.S. At the same time, emerging market investment could be stronger, leading these countries to fight overheating by accepting a real appreciation, with an improvement in U.S. exports.

So what will actually happen? WEO forecasts have elements in common with Scenario 3. They project a lasting reduction of global imbalances relative to their pre-crisis levels (Figure 7), with the U.S. current account deficit remaining moderate, reflecting a relatively sluggish recovery. At the same time, however, the Chinese surplus is projected to remain large and, with oil prices remaining elevated, surpluses in oil exporters are projected to widen again, despite rising domestic consumption and investment. Overall, these projections imply that net asset positions in surplus countries will continue to increase and so will net liability positions in deficit countries (Figure 8).<sup>11</sup>

In short: One of the three central adjustments emphasized in the earlier multilateral consultations has taken place, namely the increase in U.S. private saving. Two remain to be implemented, lower fiscal deficits in the U.S., and lower current account surpluses in China and a number of other emerging market countries. If these do not take place, there is a high risk that the recovery will be weak and unbalanced. Staying in midstream is dangerous. The challenge is to get closer to scenario 1.

---

<sup>11</sup> These forecasts have their own limitations. They are constructed on the basis of constant real exchange rates, and feature a widening “global current account surplus”, implying a tension between the projections of narrowing deficits and widening surpluses. Hence the accumulation of assets by creditor countries may be somewhat slower than depicted in Figure 8, or the accumulation of net liabilities by debtor countries somewhat faster.

## V. POLICY IMPLICATIONS

Our overall assessment is that the pre-crisis policy advice and the conclusions from the Multilateral Consultations still largely hold. Namely, it is important to address domestic and systemic distortions:

### **Attacking domestic distortions**

- Increase private and public U.S. saving. The private part has largely taken place. The public part will have to take place over time. This will be good for the US, and help global rebalancing.
- Increase social insurance, strengthen corporate governance, and implement reforms to increase access to credit for households and SMEs in China. This will be good for the Chinese economy, and help global rebalancing.
- Move from export-led towards more domestic-demand led growth in a number of emerging market countries. This change in the policy mix will likely require exchange rate adjustments to maintain internal and external balance. More generally, a current account surplus is not necessarily a sign of virtue. A number of emerging market economies that have strengthened their external position and macroeconomic policy framework and whose growth prospects are good can afford to rely more on domestic demand and let the current account balance decrease, in line with their higher growth prospects.
- If oil prices remain high, as currently forecast, some oil-exporting countries have room for higher domestic demand, and more spending on social infrastructure needs. This gradual demand rebalancing would be eased by an adjustment of the real exchange rate to reflect their much-improved terms of trade.

### **Attacking systemic distortions**

The crisis has again brought to the fore the need to improve global liquidity provision. Providing such liquidity would decrease the need for reserve accumulation, and could have larger benefits. Many emerging market countries have come a long way in recent years—they have improved external positions, better macro policy, reduced vulnerabilities and mismatches. All these improvements have helped them cope well with the global financial crisis. With stronger external balance sheets and domestic fundamentals more generally, these countries have at least some room to capitalize on that progress by relying more on domestic demand as a source of growth. But many of these countries are reluctant to have negative current account balances. Better liquidity position, perhaps by building on the new facility (FCL) introduced by the IMF during the crisis, would alleviate their worry about current account deficits and external debt.

**In sum**

In the fallout from the financial crisis, the adjustment process of global imbalances has started. But stopping in midstream is dangerous—while imbalances are smaller than they used to be, the world economy is fragile. Failure to act on the remaining domestic and systemic distortions that caused imbalances would threaten the nascent recovery.

## **Appendix. The Evolution of Imbalances**

As discussed in the text, 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 (see Obstfeld and Rogoff, 2009, for a comprehensive discussion). 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:

### **A. Productivity Booms and Relative Investment Prospects in the United States and Asia (1996-2000)**

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 4).

Between 1996 and 2000 the U.S. current account deficit gradually widened from 1.5 percent to 4.3 percent (Figure 5). 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 2-3). 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).

### **B. Declining U.S. Saving, Declining Investment in Surplus Countries (2001-04)**

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 (2005-08)**

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 Central and Northern 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  $\frac{3}{4}$  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). We elaborate on medium-term prospects for global imbalances in Section IV of the main text.

## REFERENCES

- Bernanke, Ben S., 2005, "Remarks by Governor Ben S. Bernanke: The Global Saving Glut and the U.S. Current Account Deficit," The Sandridge Lecture, Virginia Association of Economists, Richmond, VA (March 10).
- Blanchard, Olivier, 2009, "Sustaining a Global Recovery," *Finance & Development*, Vol. 46 (September).
- Caballero, Ricardo, Emmanuel Farhi, and Pierre-Olivier Gourinchas (2008a). "An Equilibrium Model of 'Global Imbalances' and Low Interest Rates," *American Economic Review*, Vol. 98 (March), pp. 358-93.
- Caballero, Ricardo, Emmanuel Farhi, and Pierre-Olivier Gourinchas (2008b). "Financial Crash, Commodity Prices, and Global Imbalances," *Brookings Papers on Economic Activity* (Fall), pp. 1-55.
- Cooper, Richard N. , 2007, "Living with Global Imbalances," *Brookings Papers on Economic Activity* 2, pp. 91-110.
- Cottarelli, Carlo, and José Viñals, 2009, "A Strategy for Renormalizing Fiscal and Monetary Policies in Advanced Economies," IMF Staff Position Note 09/22 (Washington: International Monetary Fund), September.
- Dooley, Michael, David Folkerts-Landau, and Peter Garber, 2005, "International Financial Stability: Asia, Interest Rates, and the Dollar" (New York: Deutsche Bank Global Research).
- International Monetary Fund, 2005, *World Economic Outlook*, Appendix 1.2, September.
- Ito, Takatoshi, 2007, "Influence of the Renminbi on Exchange Rate Policies of Other Asian Countries," in *Debating China's Exchange Rate Policy*, ed. by Morris Goldstein and Nicholas S. Lardy (Washington: Peterson Institute for International Economics).
- Jeanne, Olivier, 2007, "International Reserves in Emerging Market Countries: Too Much of a Good Thing?" *Brookings Papers on Economic Activity* 1, pp. 1-55.
- Jeanne, Olivier, 2009, "The Global Liquidity Trap." (unpublished; Baltimore: John Hopkins University).

Krugman, Paul, 2007, "Will There Be a Dollar Crisis?," *Economic Policy*, Vol. 51 (July), pp. 435-67.

Mateos y Lago, Isabelle, Rupa Duttagupta, and Rishi Goyal, 2009, "The Debate on the International Monetary System," IMF Staff Position Note 09/26 (Washington: International Monetary Fund), November.

Mendoza, Enrique G., Vincenzo Quadrini, and José-Victor Rios-Rull (2009). "Financial Integration, Financial Development, and Global Imbalances," *Journal of Political Economy*, Vol. 117 (June), pp. 371-416.

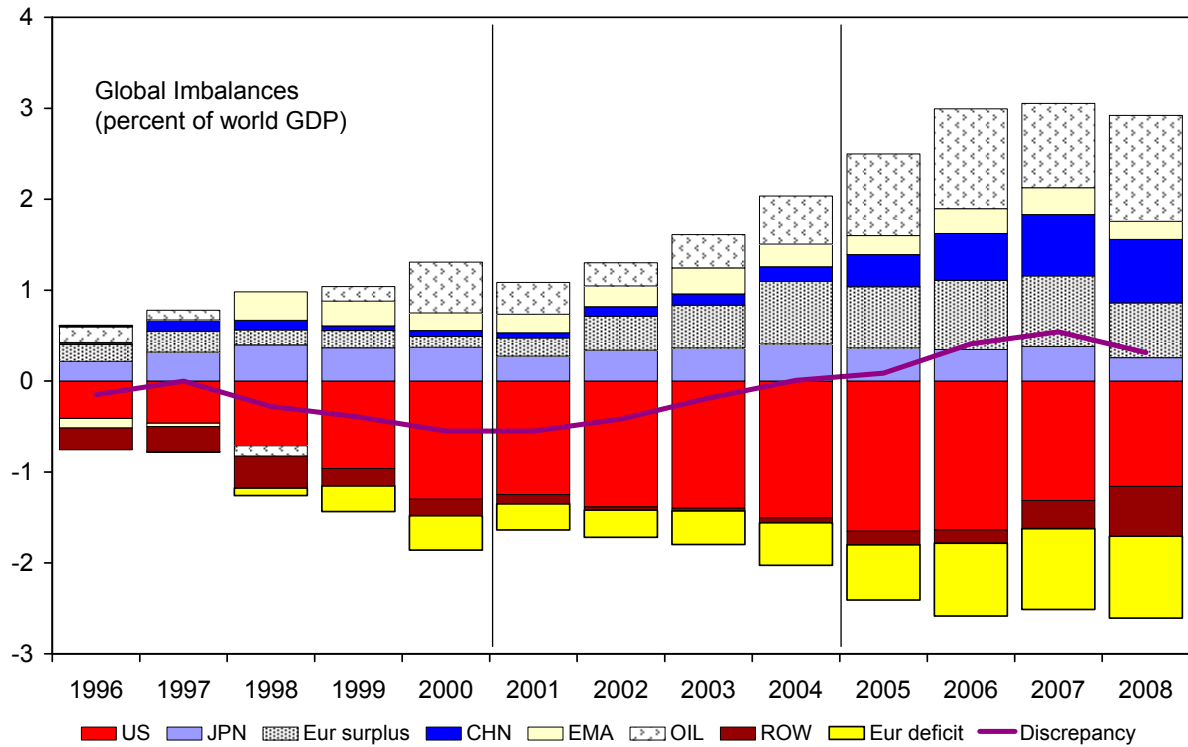
Obstfeld, Maurice and Kenneth Rogoff, 2007, "The Unsustainable U.S. Current Account Deficit Revisited," in *G7 Current Account Imbalances: Sustainability and Adjustment*, ed. by Richard H. Clarida (Chicago: University of Chicago Press/National Bureau of Economic Research), February.

———, 2009, "Global Imbalances and the Financial Crisis: Products of Common Causes" (paper prepared for the Federal Reserve Bank of San Francisco Asia Economic Policy Conference, Santa Barbara, CA, October 18-20, 2009).

Yu, Yongding, 2007, "Global Imbalances and China," *The Australian Economic Review*, Vol. 40, No. 1, pp. 3-23



Figure 1. Global Imbalances, 1996-2008



Note: Current account balances (in percent of world GDP). Source: World Economic Outlook, October 2009. The composition of country groups is as follows:

EUR surplus: Austria, Belgium, Denmark, Finland, Germany, Luxembourg, Netherlands, Sweden, Switzerland.

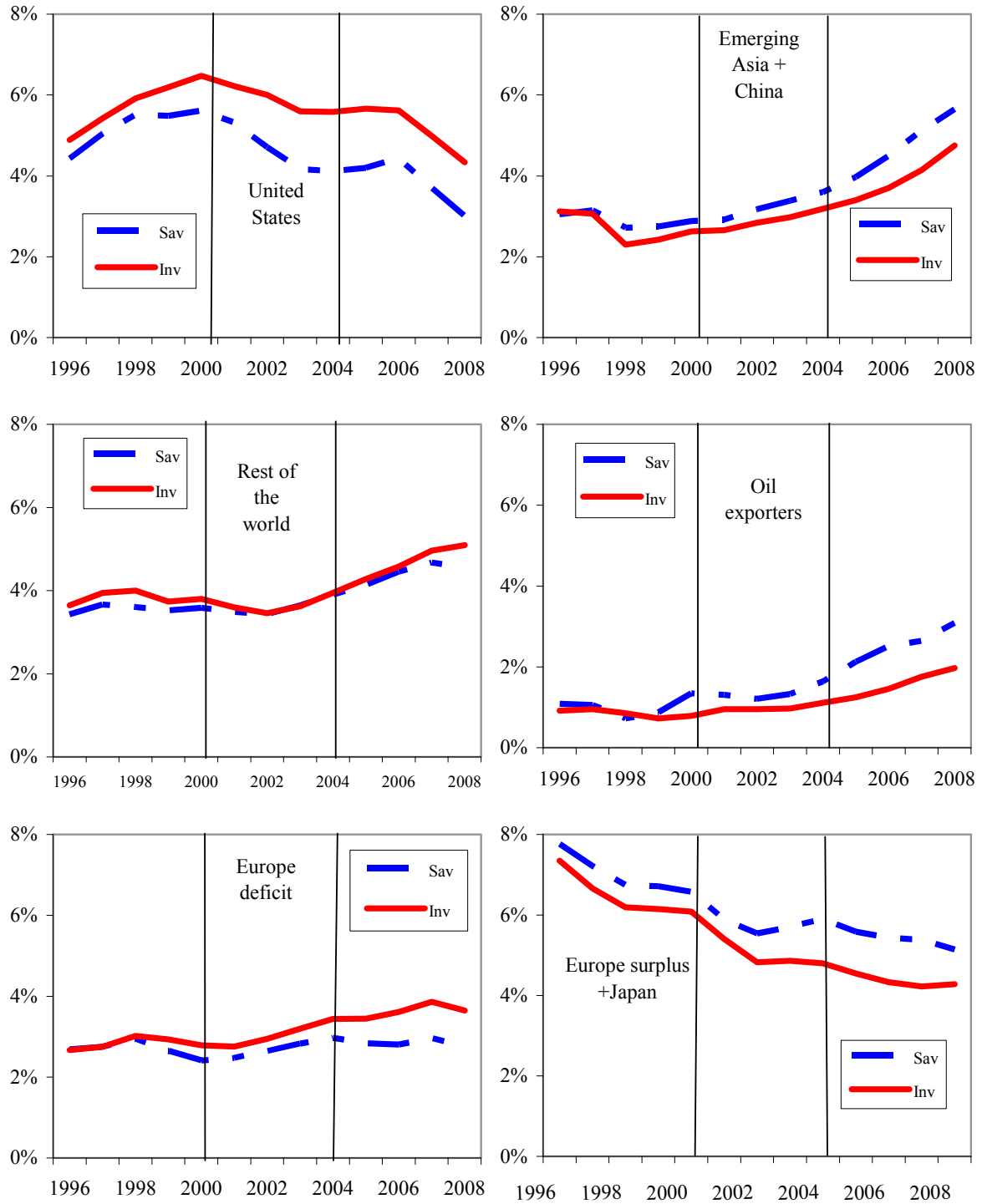
EUR deficit: Greece, Ireland, Italy, Portugal, Spain, United Kingdom, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, Turkey, Ukraine.

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.

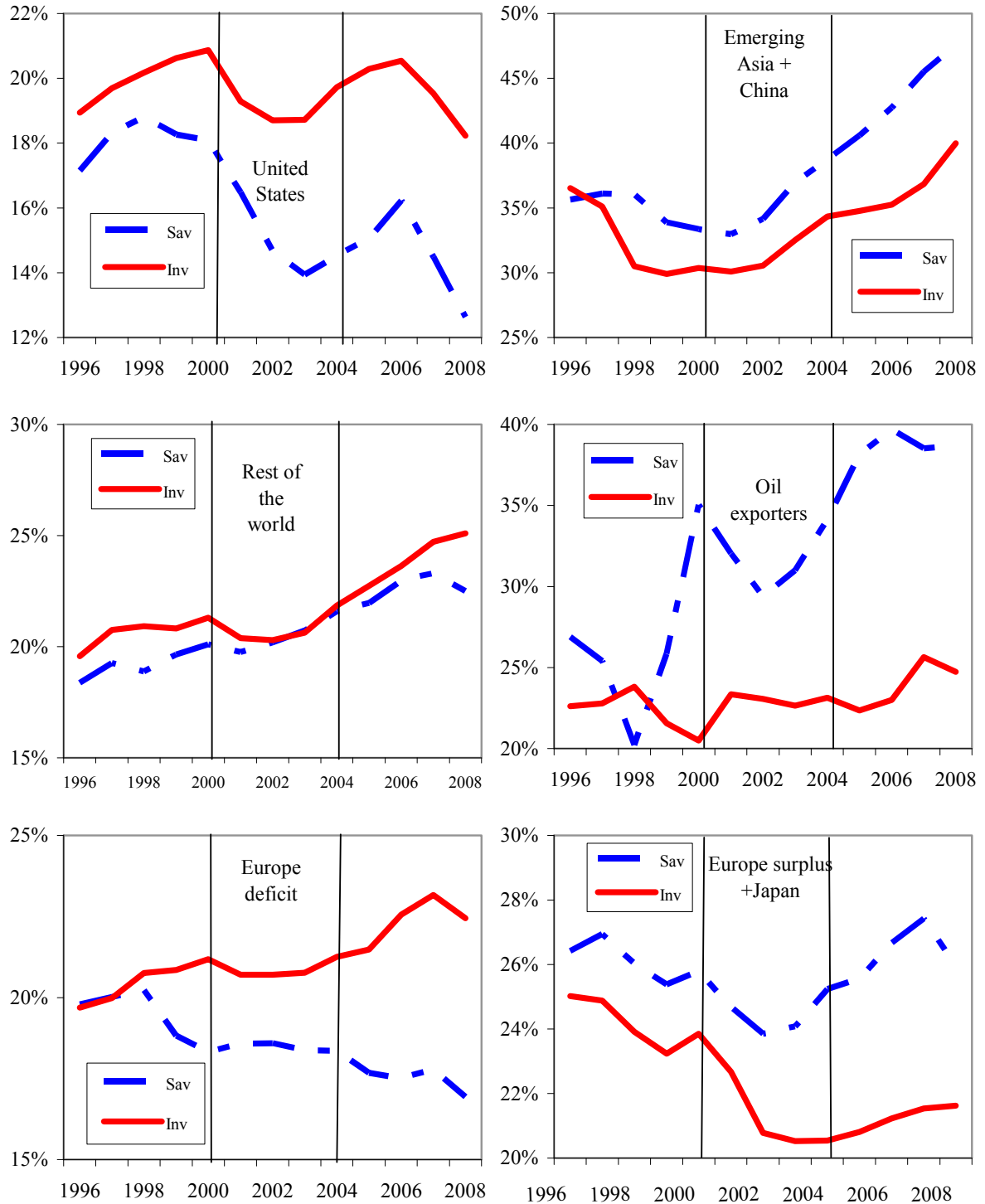
Rest of the world: remaining countries.

Figure 2. Saving and Investment Trends (in percent of world GDP)



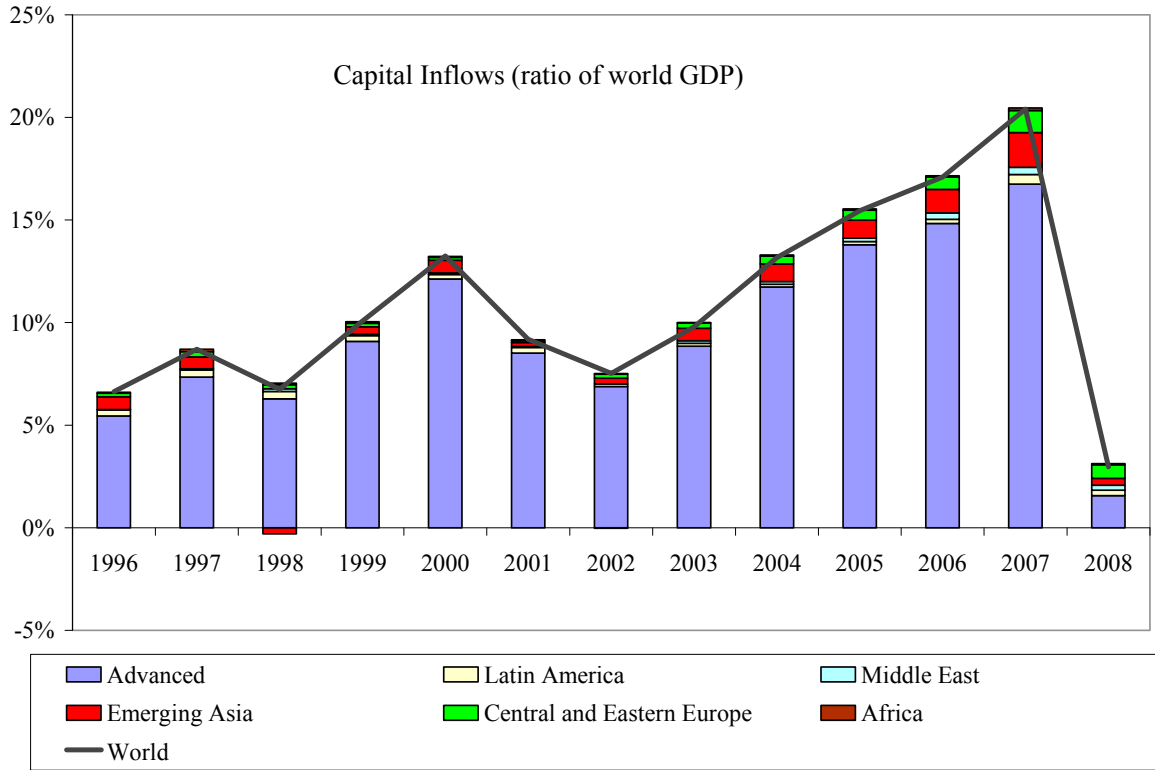
Source: Authors' calculations based on IMF, World Economic Outlook, October 2009.

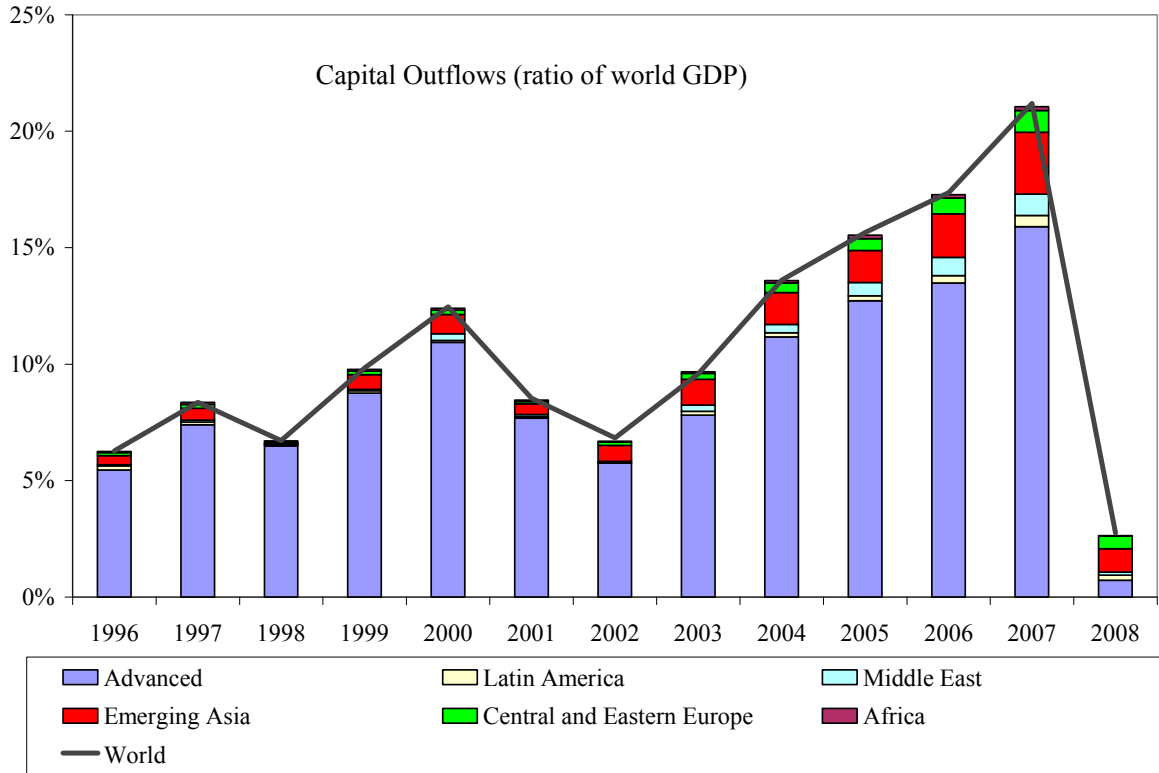
Figure 3. Saving and Investment Trends (in percent of domestic GDP)



Source: Authors' calculations based on IMF, World Economic Outlook, October 2009.

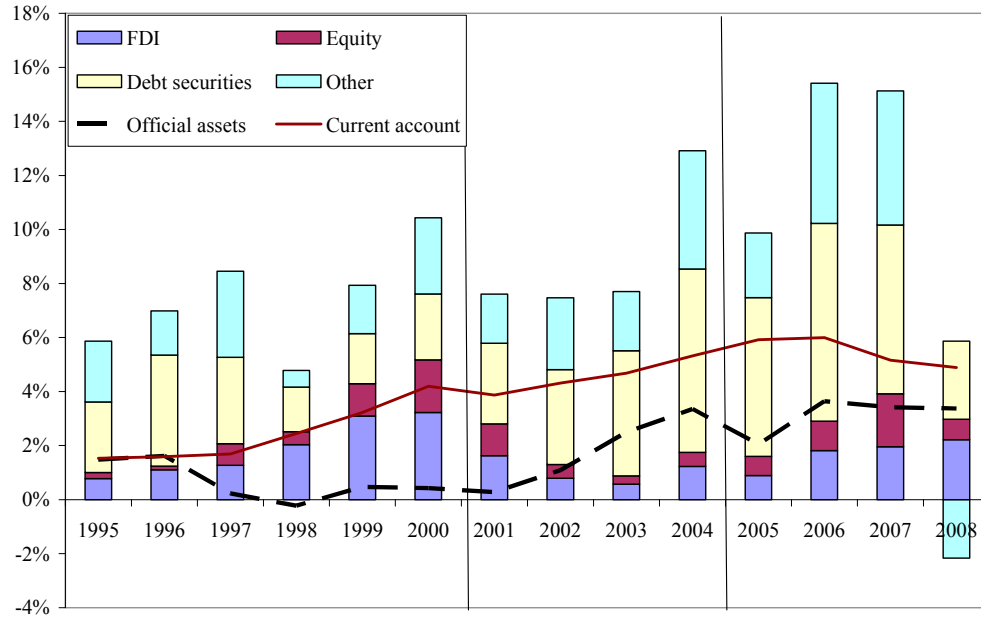
Figure 4: World capital flows, 1996-2008





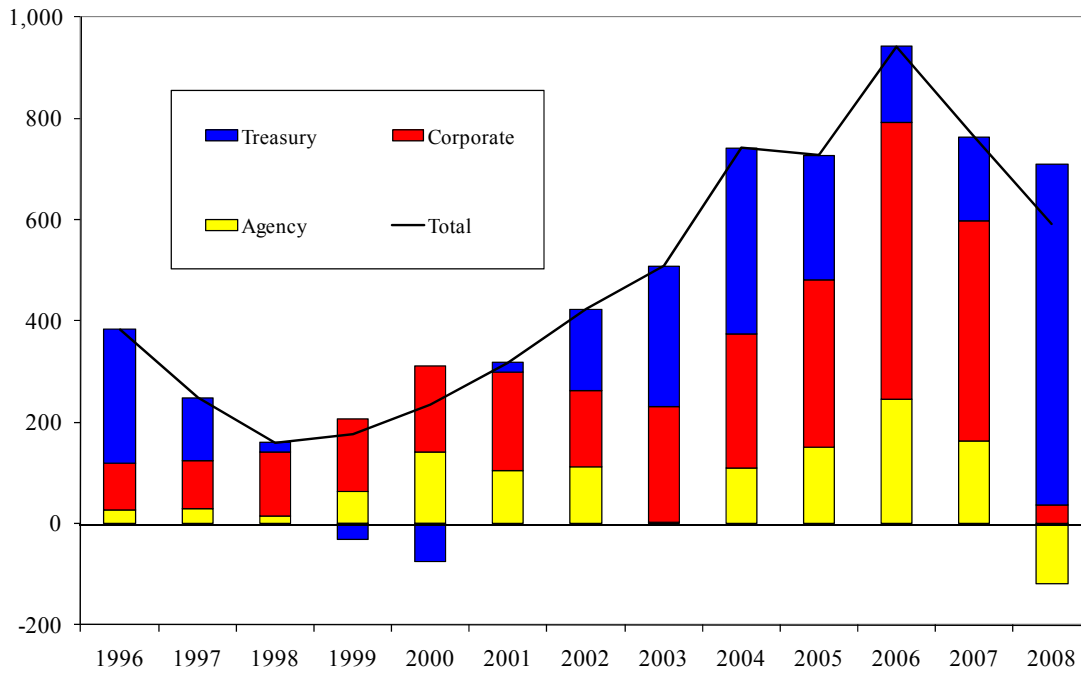
Source: IMF, Balance of Payments Statistics.

Figure 5a. United States Current Account Deficit and Capital Inflows (ratio of GDP)



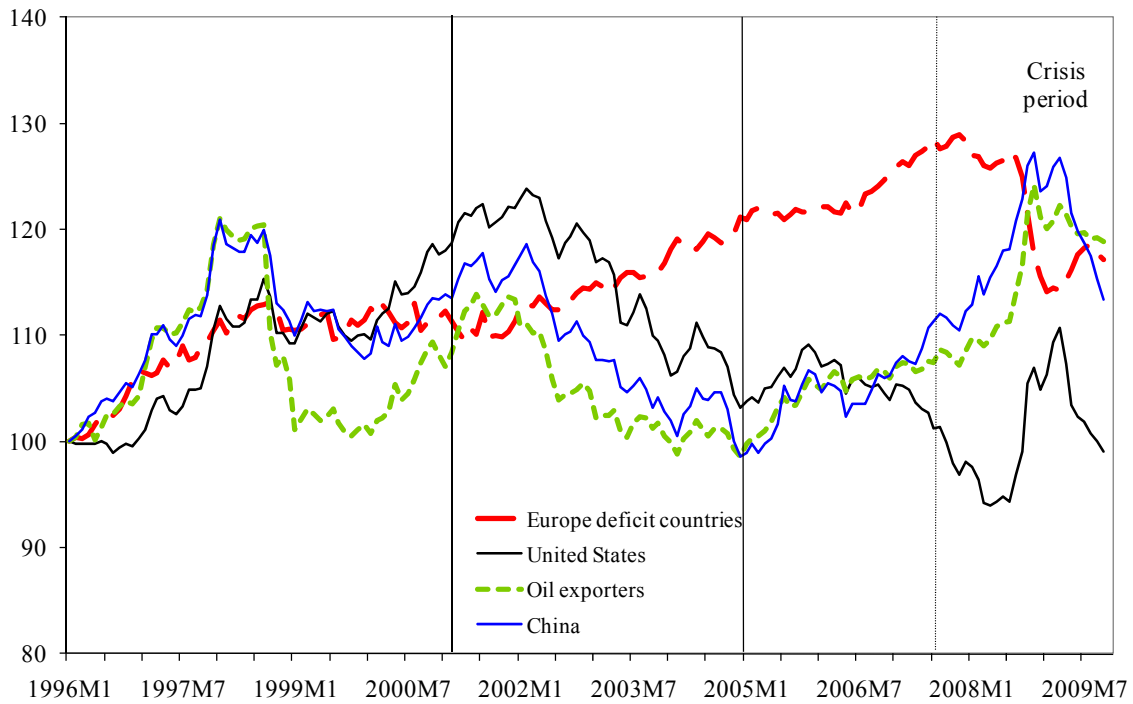
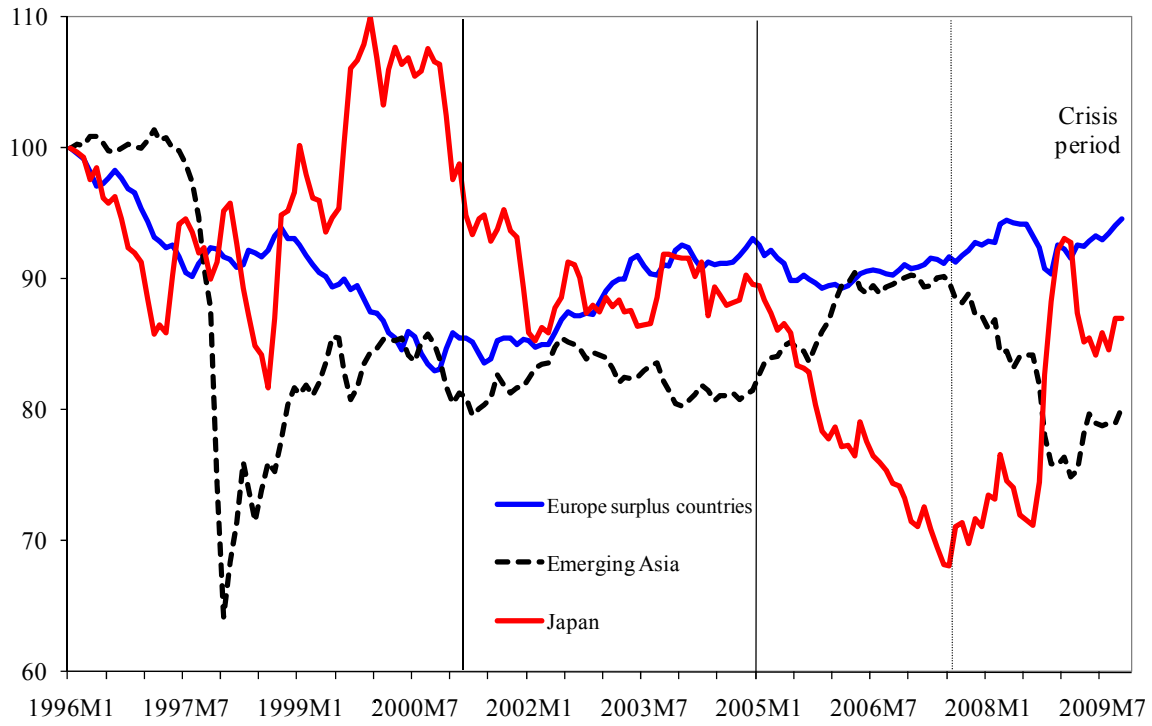
Notes: The bar “other” captures primarily flows of banks and other financial institutions that are not in the form of securities. The line “official assets” measures net purchases of U.S. assets by foreign official institutions (primarily central banks) as ratio of U.S. GDP. Source: Bureau of Economic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

Figure 5b. Composition of US portfolio debt inflows (billions US\$)



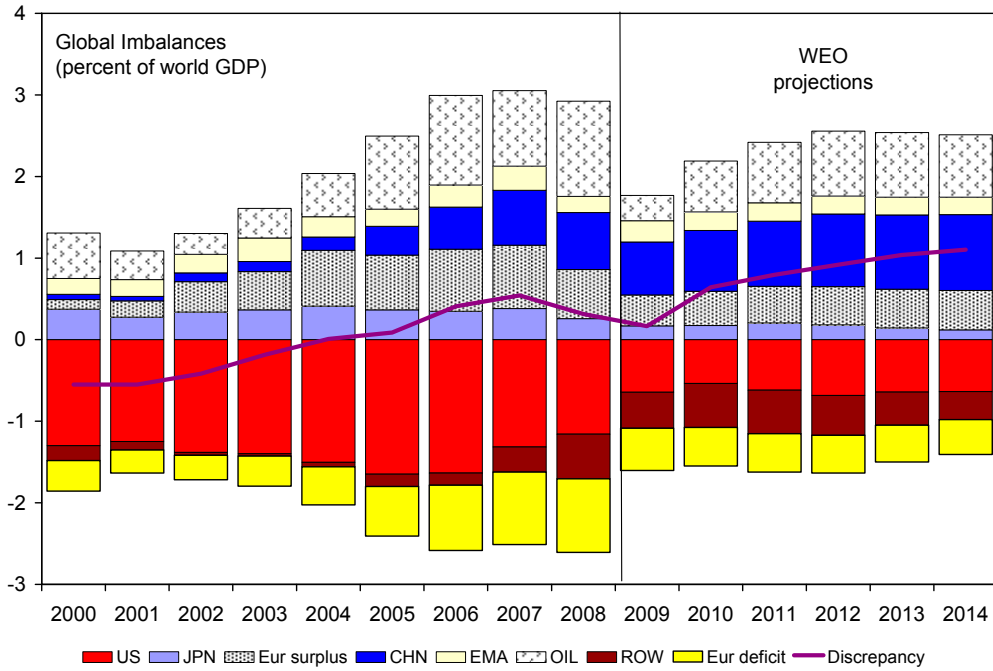
Source: Bureau of Economic Analysis.

Figure 6. Real effective exchange rates, 1996M1-2009M10



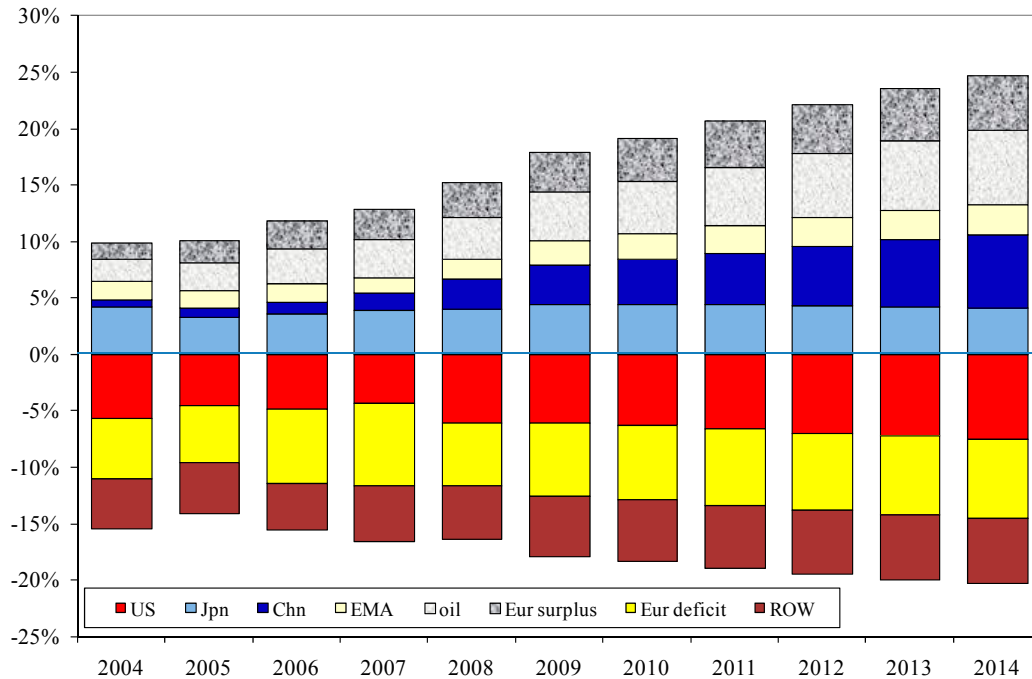
Source: authors' calculations based on IMF data.

Figure 7. Current account projections (in percent of world GDP)



Source: authors' calculations based on IMF, World Economic Outlook, October 2009.

Figure 8. NFA Projections (in percent of world GDP)



Note: the chart reports the net foreign asset (NFA) position of each country/region, scaled by world GDP. NFA positions for 2009-onwards are estimated as  $NFA(t+1) = NFA(t) + CA(t+1)$  where  $CA(t+1)$  is the projected current account balance according to the Fall 2009 World Economic Outlook (see chart 7). For the U.S., NFA in 2009 is estimated on the basis of end-September data. Source: Lane and Milesi-Ferretti, External Wealth of Nations database, and authors' calculations.