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Caveat creditor

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Abstract

One area where international monetary cooperation has failed is in the role of surplus or creditor countries in limiting or in correcting external imbalances. The stock dimensions of such imbalances – net external positions, leverage in national balance sheets, currency/maturity mismatches, the structure of ownership of assets and liabilities and over-reliance on debt – can threaten financial stability in creditor as in debtor countries. Creditor countries therefore have a responsibility both for avoiding “overlending” and for devising cooperative solutions to excessive or prolonged imbalances.

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1. Introduction

This paper addresses one area where international monetary cooperation has failed – the role of surplus or creditor countries in limiting external imbalances. This applies not only to post-crisis situations (when restrictive policies in deficit or indebted countries require some offset from strong external demand), but also to the pre-crisis lending policies of creditors. Hence my title: caveat creditor.

Current account imbalances have grown, and the accumulated stocks of international assets and liabilities have become huge. Many have argued that there is a strong link between imbalances and financial stability.¹ One quotation suffices:

“The financial markets have now given two very strong signals of the existence of an underlying disequilibrium in the world economy. [...] The central problem is the existence of massive international imbalances. The United States, primarily because of the sharp increase in the federal budget deficit, has been spending considerably more than it can produce ... but the surplus countries [Japan, Germany and the newly industrialised countries of Asia] ... have relied excessively on export-led growth. If these imbalances are not now [addressed], a third crash of the markets could be greater than either predecessor.”

With the exception of the reference to Japan, these words could have been penned yesterday. The two shocks might be the Lehman failure at end-2008 and the euro area crisis from mid-2010. But they were written by a distinguished international group of economists in December 1987. The two shocks were the 30% decline in US bond prices early in the year and the equity market plunge of 1987.²

At a conference convened by the Banque de France in 2010, several leading central bank governors voiced very similar worries. They underlined the strong links between global imbalances and financial stability (Banque de France, 2011). Several echoed the warning of Carstens that “[without] agreed upon solutions to the underlying disequilibria, we could be sowing the seeds for a new, potentially more devastating crisis”.

2. Global imbalances: real economy versus finance

Global imbalances widened considerably in the decade that preceded the recent crisis. Graph 1 shows 5-year moving averages of the current account positions of six countries or group of countries. The greater divergence since the mid-1990s is unmistakable, and much larger than the late-1980s imbalances which caused so much worry at that time. The cross-country pattern of imbalances today is not so different from the pattern in the 1980s.

¹ See notably the papers prepared for the Palais Royal Initiative in Boorman and Icard (2011).

² Institute for International Economics “Resolving the global economic crisis”. A statement by 28 economists from 14 countries. December 1987. A somewhat revised version was published as IIE Special Report 6.

On macroeconomic grounds, the persistence of imbalances is surprising. Simple macroeconomic models suggest that imbalances should be self-stabilising and contain the seeds of their own correction. Monetarist models assume that current account surpluses expand the money supply and thus stimulate demand: this was clearly true under the Gold Standard. Keynesian models (with fixed exchange rates) view a current account surplus as an injection of aggregate demand, which ultimately stimulates imports and so leads towards a correction.

In both models, real exchange rate appreciation in surplus countries (depreciation in deficit countries) should contribute to international rebalancing. Moreover, flexibility in the nominal exchange rate can reinforce or accelerate these re-equilibrating mechanisms. Many economists, drawing on one or other of these models (often counting in addition on flexible exchange rates), have therefore dismissed worries about imbalances.

Yet the reality is very different from these simple theories. Why? The answer is finance: the nature of the external financing of imbalances creates its own dynamics. Imbalances are often corrected not because macroeconomic adjustments run their course, but because of a sudden stop in financing.³ At some point, creditors become worried that they may not be paid back. So they begin to refuse to finance debtors, and often do so in unison (“herding”). How easily the often-indiscriminate optimism in global financial markets which stimulates cross-border investment can turn to near-universal pessimism! As lenders face the prospect of capital losses, there is a “flight to quality”. Equally important is the “flight home” effect: home bias in financial portfolio allocation tends to reappear, sometimes abruptly, during periods of financial stress.⁴

In recent decades, the scale of external financing has become enormous. Countries incur external liabilities not only to finance current account deficits but also to acquire external assets. This phenomenon of increased “two-way” capital movements, which developed between the advanced economies in the 1980s, has become increasingly evident in the emerging economies. More open capital accounts, domestic financial liberalisation and the development of new financial instruments made the financial diversification and intermediation functions of international capital markets – and not the classical allocation of capital function – pre-eminent.⁵ For example, investors in a low-inflation country could enjoy the short-term gains of high nominal interest rates in inflation-prone countries whilst investors in inflation-prone countries would invest in the low-inflation country to hedge their inflation risks. Each could thus diversify his portfolio even in the absence of any net flow of capital from one country to the other (the classical function). As

³ Many cross-country studies have shown that higher current account deficits increase the risk of financial crisis. See Bush et al (2011). Gros (2013) has shown that there is a strong non-linear correlation between cumulative current account deficits in the euro area and the spread of government bond yields over German government bonds.

⁴ Giannetti and Laevan (2011).

⁵ The “need” for financial diversification itself arose from the nature of the international monetary system. Floating exchange rates, sizeable differences in interest rates in different countries and volatile markets created risks that had to be hedged. Under the classical 19th century financial system, such risks were hardly present: exchange rates were fixed, interest rates much less dispersed and variable over time and underlying inflation non-existent. Gross capital flows were therefore much smaller even though net capital flows were very substantial. See Turner (1991) pp 27–30 and Obstfeld and Taylor (1997).

will be discussed in Section 4, this “two-way” nature of external finance has made more complex, and in some ways more intractable, the vulnerabilities created.

Agents in countries with large current account deficits are often surprised by the sheer suddenness of reversals in external financing. Lenders expect repayment of their earlier loans, but extend no new finance (or do so only for very short terms or at high rates of interest). Without new finance, deficit countries have to sell assets to foreigners or they have to generate current account surpluses to meet repayments of foreign loans falling due.

The ability or willingness of surplus countries to sustain their domestic demand – and accept a swing towards current account deficit – will determine the consequences for global growth. In most major international adjustments, few deficit countries have escaped recession. In many cases, the financial system in deficit countries is disrupted and destabilised, with long-lasting consequences for the real economy (Cerra and Saxena, 2008). Latin America’s experience in the 1980s is familiar to the participants at this conference. In the 1990s, dynamic Asian economies learnt all about it. And now the advanced European countries that had relied on foreign funding to grow rapidly confront sharp reversals in external financing.

For these reasons, it is essential to better understand external imbalances and the financial vulnerabilities they can create. This is hard because debtor-creditor relationships become much more complex in the case of cross-border contracts written in many different jurisdictions (Tirole, 2002).⁶

In a financial crisis, exchange rate movements – which are often essential for macroeconomic stabilisation – can become destabilising because debtors find it much harder to service their foreign currency debts. Default of the sovereign, of large banks or of major corporations reduces the value of assets held by viable entities, tightens borrowing constraints and disrupts economic activity (Mendoza, 2010). In short, the introduction of finance can destroy the self-equilibrating properties of simple macroeconomic models.

3. Three current account imbalances

Three imbalances are of most interest at present. The first is the oil-producers’ surplus. The second is the imbalance across the Pacific. And the third is the imbalances within Europe.

Graph 2 shows the substantial rise in the current account surplus of oil-producing countries. The surplus is currently around \$600 billion – almost 1% of world GDP. If the present level of oil prices represents a temporary high, it makes sense for exporters to have a surplus and accumulate foreign assets. When oil prices fall, this position should reverse. Similarly, the surpluses of some exporters which run out of oil, which is a finite resource, will reverse. A current account surplus that helps such smoothing over time is therefore desirable. A balanced current account

⁶ Tirole (2002) argued that, in the case of foreign debts incurred by private firms, the debtor’s government can in a crisis decide whether the debts incurred in its jurisdiction are repaid or not. There is no “delegated monitor” to protect lenders in such cross-border contracts (a role Tirole suggests for the IMF).

cannot be an objective in itself. Nevertheless, a current account position that is desirable for one group of countries will have implications for the others. In this case, oil importers in aggregate must have a current account deficit.

Graph 1a depicts the imbalances across the Pacific – China and Japan (the surplus countries) and of the United States. These imbalances widened in a major way before the crisis. Since then, however, they have narrowed. One major factor has been strong domestic demand in China and recession in the United States. A second factor was the real effective appreciation of the Chinese currency and depreciation of the dollar. But part of this may also reflect reduced US dependence on imported energy.

In contrast, the European imbalances (shown in Graph 1b) have been more persistent. In many ways, the euro area's crisis is a balance-of-payments crisis caused by a misalignment of internal real exchange rates (Mayer, 2012). In many deficit countries, wages grew faster than productivity and reduced competitiveness vis-à-vis the major surplus countries in Europe. But in Germany declining real wages held back private consumption and led to a sizeable real effective depreciation in its exchange rate. Combined with strong export growth (helped by the infrastructure and investment boom in the Middle East and Asia), this led to a German current account surplus that exceeded 6% of GDP each year from 2006 to 2012.⁷

Germany is not alone. The average surplus of the Netherlands (a euro area country), Sweden and Switzerland exceeded 9% of GDP last year (Table 1). These surpluses are larger relative to GDP than the aggregate deficit of France, Italy and Spain. The euro area's current account surplus has thus risen, reaching a record 1.8% of GDP in 2012 (IMF, 2013).

The creation of a common currency removed the nominal exchange rate as an adjustment mechanism.⁸ Greater respect for the Maastricht convergence criteria might have reduced these imbalances but would not have prevented them. Some economists argued in the late 1990s that the adoption of the euro would itself trigger mechanisms that would automatically favour economic convergence. An optimal currency area was, on this view, endogenous. As Eijffinger and Hoogduin (2012) have laconically observed, "the endogenous optimal currency area theory has been convincingly falsified".⁹

All these developments, which have different specific roots, suggest that current account imbalances were a general problem (perhaps a symptom of different underlying causes) before the crisis and remain a key issue today.

⁷ According to Sinn et al (2011), Germany exported two-thirds of its aggregate savings between 2002 and 2010. Only one-third was invested at home in equipment, construction and so on.

⁸ Non-euro currencies also did not adjust. The Swiss franc remained close to the euro for much of this period. The real value of the Swedish krona did not rise in line with larger current account surpluses.

⁹ See also Giavazzi and Spaventa (2010). They explain that models which sought to establish the optimality of current account deficits (as euro area countries with lower initial per capita income caught up with richer countries) depend on the *assumption* that the foreign liabilities incurred are paid back by future current account surpluses. They thus ignore the financing constraints discussed in Section 2.

Role of surplus countries

The main adjustment effort to correct imbalances usually falls on deficit countries because external financing constraints force them to act.¹⁰ The threat to current account surplus countries comes from the risk that debtors will default; but this typically happens only later in the process, if at all. Yet countries with persistent current account surpluses (not matched by sustained or long-term capital outflows) also have a role to play. Whether adjustment should rely on macroeconomic policies in surplus countries or on policies in deficit countries depends on at least two elements.

The first element is the global output gap. If there is excessive aggregate demand at the global level, and inflation is rising, adjustment should rely largely on deficit countries curbing demand. Conversely, a situation of global deflation would call for expansion by surplus countries because deficit countries often face financing constraints. Deflation in deficit countries is better avoided not only because of the waste of resources, but also because it would make it harder for borrowers in deficit countries to repay their foreign debts. Widespread defaults would hurt lenders in surplus countries.

A consideration of the incentives affecting exchange rate policy reinforce this logic. Global deflation gives countries an incentive to undervalue their currencies in order to increase demand for their tradables. And, in a deflationary world, they are much less concerned about the price rises that would normally follow currency depreciation.

The second element is the initial stance of macroeconomic policies. Additional macroeconomic stimulus is less justified when fiscal and monetary policies are already very expansionary or when the prolonged use of such policies has undesired side-effects.

The problems of course come from difficulties in measuring the global output gap and in judging how expansionary macroeconomic policies should be. The 1930s was clearly a deflationary period and macroeconomic policies much too restrictive. Prices, including commodity prices, were falling and there was massive unemployment. The present situation is rather different. Monetary policies are now expansionary. A very strong rise in global commodity prices has taken place. Yet unemployment in the advanced economies is very high. So the inflation versus deflation risk at present is more ambiguous, and the risks of expansionary policies greater, than in the 1930s (BIS, 2012). As Paolo Vieira da Cunha pointed out in this session, macroeconomic policy frameworks in the EMEs have been put under some stress by these policies. Nonetheless, the global deflation scenario mentioned by John Murray at the conclusion of this conference – with more-aggressive fiscal consolidation in most advanced economies but without structural reforms or other policies to stimulate demand in surplus countries – would be worrying.¹¹

¹⁰ The United States is an exception given the status of the dollar as the international currency.

¹¹ See de Resende et al (2012) for details of this simulation.

4. Stock of international imbalances

The problem of international equilibrium goes deeper than current account imbalances, which is just a measure of flows. Stocks are the crucial factor. Five dimensions of the “stock” aspect of imbalances are important.

(i) Net external debt

Many years of current account deficits have a snowball effect as large external debts build up, generating heavier debt service payments abroad. As higher net debt undermines creditworthiness, credit spreads rise. In the limit, external finance from private sources dries up.

(ii) Leverage and currency/maturity mismatches

The second set of risks comes from the expansion of both sides of the national balance sheet. Countries incur foreign liabilities not only to finance current external deficits, but also to finance investment in foreign assets. A country with a positive net external asset balance may have incurred sizable foreign debts in order to finance a large portfolio of foreign assets. Obstfeld (2012), in discussing current account balances, has rightly drawn attention to the fact that the pyramiding of debt claims between counterparties can entail financial stability risks even to surplus countries. Indeed, a striking characteristic of the decade preceding the crisis was an extraordinary explosion of both foreign assets and foreign liabilities. From around 50% of world GDP in the mid-1990s, aggregate foreign assets have grown to over 180% of world GDP by 2007 (Graph 3).

The external balance sheets of countries became more leveraged, at least as measured by gross external assets relative to the country’s net asset position. Debt-to-income ratios are another measure of leverage: Graph 4 shows that external financial liabilities have also risen much more sharply than export values (a proxy for foreign income). It is an open question whether cross-border investment on the scale reached in 2007 was sustainable: did it just reflect reckless banks and cyclical excesses? In any event, there has been a decline over the past five years. “Flight home” effects have been strong. Even so, cross-border investment positions are still very high by the standards of the 1990s and earlier decades.

Risk exposures arise because a country’s foreign liabilities usually take a form that is quite different from its foreign assets. Currency and maturity mismatches can create vulnerabilities even in a country with little or no net debt. Indeed, the common element of virtually all financial crises in the emerging markets in earlier decades was some form of currency or maturity mismatch. This also applies to the recent advanced economy crisis. For instance, Europe had a balanced current account before the crisis. But Europeans borrowed on a very large scale to buy US assets. The fact that European banks financed the acquisition of (illiquid and longer-term) dollar assets by short-term dollar borrowing aggravated the recent crisis.

(iii) Ownership of assets and liabilities

The ownership of assets matters because the sectors with foreign debts are not usually the sectors which own the foreign assets. Hence private sector borrowers with heavy external debts are a default risk even when the sovereign (with large holdings of foreign assets but few debts) is not a default risk. Equally banks that

have large foreign debts are a default risk even if institutional investors in the same country have large foreign assets.

A further complication is that, when the default risk of the sovereign rises, even viable private agents find it harder to secure external finance. This is because a sovereign can take many actions that make it harder for private companies to meet their foreign debts. It can impose capital controls, it can increase taxes on companies, it can force households or companies to finance the government and so on. This means that foreign creditors must worry not only about their (private) counterparty, but also about what a government under pressure from foreign creditors might do (Tirole's "dual agency" problem). For such reasons, solvent banks find it more difficult to refinance their external liabilities when their country's creditworthiness comes under question.

The absence of agreed international bankruptcy laws and procedures (and the related rules on collateral) means that debt default (or some other form of market suspension) will depend on local political decisions and on the views of foreign official lenders. As neither are predictable, uncertainty is increased.

(iv) Debt versus equity

The choice between debt and equity forms of liability is also important. Debt-financed investment leaves the borrower exposed to investment risk. But equity forms of foreign assets ensure the lender bears some of the underlying investment risk and so usually offer higher returns. Different countries have made very different choices about this. Many advanced economies are long equity but short debt. Emerging market countries with a positive net external asset position, in contrast, typically hold the bulk of their assets in debt instruments rather than foreign equity. Debtor countries whose cross-border liabilities take the form of debt contracts (bank loans, bonds held by non-residents) rather than of foreign holdings of local equities are in effect more leveraged and thus more vulnerable. Those with short-term debts in foreign currency are particularly exposed.¹²

The United States is a special case because the central role of the dollar in international payments gives dollar debt issued or guaranteed by the US government a unique status. This makes it easier for the United States to finance a long position in foreign equity. The United States can run large current account deficits for many years without any deterioration in its net international investment position (Lane and Milesi-Ferretti, 2007). It is the tendency of the dollar to appreciate in global economic crises – not any attractiveness as a medium-term investment vehicle – that gives the currency its unique safe haven status.

(v) Fuel for domestic bank credit

Finally, foreign borrowing by domestic banks can allow credit growth to outstrip domestic deposits. This can fuel an expansion of bank credit. Many studies – including by the BIS and the IMF – have demonstrated a significant positive

¹² This is why some developing countries such as India discourage debt inflows: see Reddy (2013) for a review of India's policies in a wide macroeconomic and financial stability context. The analysis of this by a BIS group chaired by Rakesh Mohan is reported in CGFS (2009). It concluded that there is a "financial stability hierarchy" of capital inflows: equity safer than debt; long-term debt safer than short-term debt; and domestic currency debt safer than foreign currency debt.

correlation between foreign borrowing by banks and changes in domestic credit/GDP ratios.¹³

The role of creditors

The recent financial crisis was brought about by major policy failures in debtor countries. Nevertheless, the actions of creditors also contributed. Several econometric models have shown that different economic policies in creditor as well as debtor countries in the years before 2007 would have limited both internal and global imbalances.¹⁴

Bernanke's Global Saving Glut thesis – strong foreign official demand for US government and agency debt – is well-known. It has much empirical support (see, for example, the evidence marshalled in Box 1 of Bush et al, 2011). Less well-known is the role played by European banks. Bertaut et al (2011) have shown just how large aggregate foreign demand for US assets was before the crisis. They estimate that from 2003 to mid-2007, OPEC, China and other Asian emerging economies bought about \$1 trillion of Treasury and mortgage agency debt. European acquisition of US corporate debt amounted to \$1.25 trillion, of which nearly \$800 billion was private-label ABS. They estimate that this increased foreign demand lowered US Treasury yields by 130 basis points and ABS yields by 160 basis points.

Sinn et al (2011) describe similar developments before the crisis within the euro area. Large-scale intra-European capital flows were fuelled by the common currency and expectations of a bail-out “by the community of states should a particular European state run into trouble”.¹⁵ Non-resident holdings of Italian and Spanish bonds rose from around 25% of the outstanding stock in 1998 to around 50% just before the crisis, well above the percentage for German bonds.¹⁶ The international banking system up until 2009 smoothly financed large current account imbalances within the euro area – essentially borrowing euros in Germany for lending to other euro area countries.

In the early stages of the recent crisis, the market value of international banks with large subprime exposures fell sharply. European banks heavily dependent on short-term dollar funding were particularly hard hit. Similarly, with the deepening of the euro area crisis, the exposure of banks to borrowers in the peripheral European states came under strong scrutiny, and there were renewed falls in the equity valuations of banks. Non-resident holdings of debtor country bonds (notably Italy and Spain) fell, and that of German bonds rose (to 60% by 2012). At the same time

¹³ See the chapter “Banks and capital flows”, pp 81–99 of CGFS (2009). But note that several large countries have had a credit boom without any net inflow of foreign capital.

¹⁴ For instance, Catte et al (2010) used the Bank of Italy's global macroeconomic model to simulate more expansionary policies in surplus countries and less expansionary policies in deficit countries. Not only would current account imbalances over the 2002–07 period have remained almost unchanged, but the housing price increases in the United States would have been much smaller and closer to historical experience.

¹⁵ They argue that such flows could have been limited “had German banks shown more prudent investment behaviour”. In fact, it was major international banks – not just German banks – who, before the crisis, borrowed euros on a large scale in Germany to lend to borrowers in other euro area countries.

¹⁶ See Gros (2013).

banks became less willing to intermediate cross-border claims in euros. This left central banks of the euro area to plug the gap.¹⁷ As this was reflected in a great widening in cross-border inter-central-bank positions in the Eurosystem (Graph 5), official financing in effect replaced private financing. The explanation of this by Cecchetti et al (2012) puts emphasis on positioning against redenomination risk. Although the liability positions of the major TARGET2 debtors (and the corresponding credit positions) have narrowed from their August 2012 peak, they remain large.

In retrospect, lenders (and the rating agencies!) should have exercised greater prudence. European banks were negligent in assuming – and their regulators in allowing – such exposures. (The nationalisation of the US mortgage agencies saved official investors from the EMEs).

This failure of lenders is not a new phenomenon. A key lesson from a succession of emerging market crises in the 1980s and 1990s was that lenders – particularly banks in the advanced economies – had been reckless. This was quite clear even at the time. It is useful to recall this history. The oil-producing countries placed the surpluses generated by the 1973/74 oil shock on short-term deposit with international banks. With deep recession, there was little demand for investment funds in the industrial world, so the international banks eagerly courted borrowers in the developing world. A major underpricing of risk developed. The central banks supervising the major banks were fully aware of this risk but were unable to curb the growth of international bank lending.¹⁸ The banks took little or no notice of repeated warnings (including the publication of country-by-country bank exposures in the BIS's international banking statistics).

The conclusion from this history and from the recent crisis is the same: “overlending” was as responsible for the ensuing crises as was “overborrowing”. Foreign investors, who had sought higher yields in riskier capital markets, often pulled back sharply when a crisis threatened. Lending banks suffered losses and stopped lending. Such sudden reversals badly hurt borrowers, who would have been better served by more moderate lending restraint applied earlier.

5. Conclusion

The financing of large and persistent external deficits often takes dangerous forms. Capital flow reversals, always difficult to predict, can have devastating consequences for debtors. The stock dimensions of external imbalances – net external positions, leverage in national balance sheets, currency/maturity mismatches, the structure of

¹⁷ As Allen and Moessner (2012) explain, euro area banks with surplus funds began to place them on deposit in the Eurosystem, and banks which were short of funds borrowed from the Eurosystem. For example, the German bank would place its surplus funds on deposit with the Eurosystem, in the form of the Deutsche Bundesbank, and the Greek bank would borrow from the Eurosystem, in the form of the Bank of Greece.

¹⁸ See Lamfalussy's (2000, pp 9–13) description of how the Governors of the G10 central banks struggled to contain this expansion of international bank lending. They worried that publication by the BIS of very large country exposures could spook banks and the markets. In the event, the publication of these data was virtually ignored by the markets, and expansion continued.

ownership of assets and liabilities, over-reliance on debt and the impact on bank credit – can threaten financial stability in creditor as in debtor countries.

For these reasons, creditor countries have a responsibility both for avoiding “overlending” and for devising cooperative solutions to excessive or prolonged imbalances. The need for some symmetry in adjustment between creditors and debtors is hardly novel. It was central to Keynes’s proposals for international monetary arrangements in the post-war world. It is within the IMF’s mandate (although creditor countries, which do not need IMF money, are less susceptible to their influence).¹⁹ The contributions of Mateos y Lago (and other IMF economists), Truman, Reddy and Aglietta all put emphasis on this in their contributions to the Palais Royal Initiative. It has been on the agenda for international monetary reform since the Committee of Twenty in 1974. It is now on the agenda of the G20. It remains an important but unresolved issue of international monetary reform.

¹⁹ The Articles of Agreement on the IMF did incorporate a scarce currency clause which permits tariffs and export restrictions on countries with persistent current account surpluses. But this clause, which was the only one referring to the responsibilities of surplus countries, has never been invoked.

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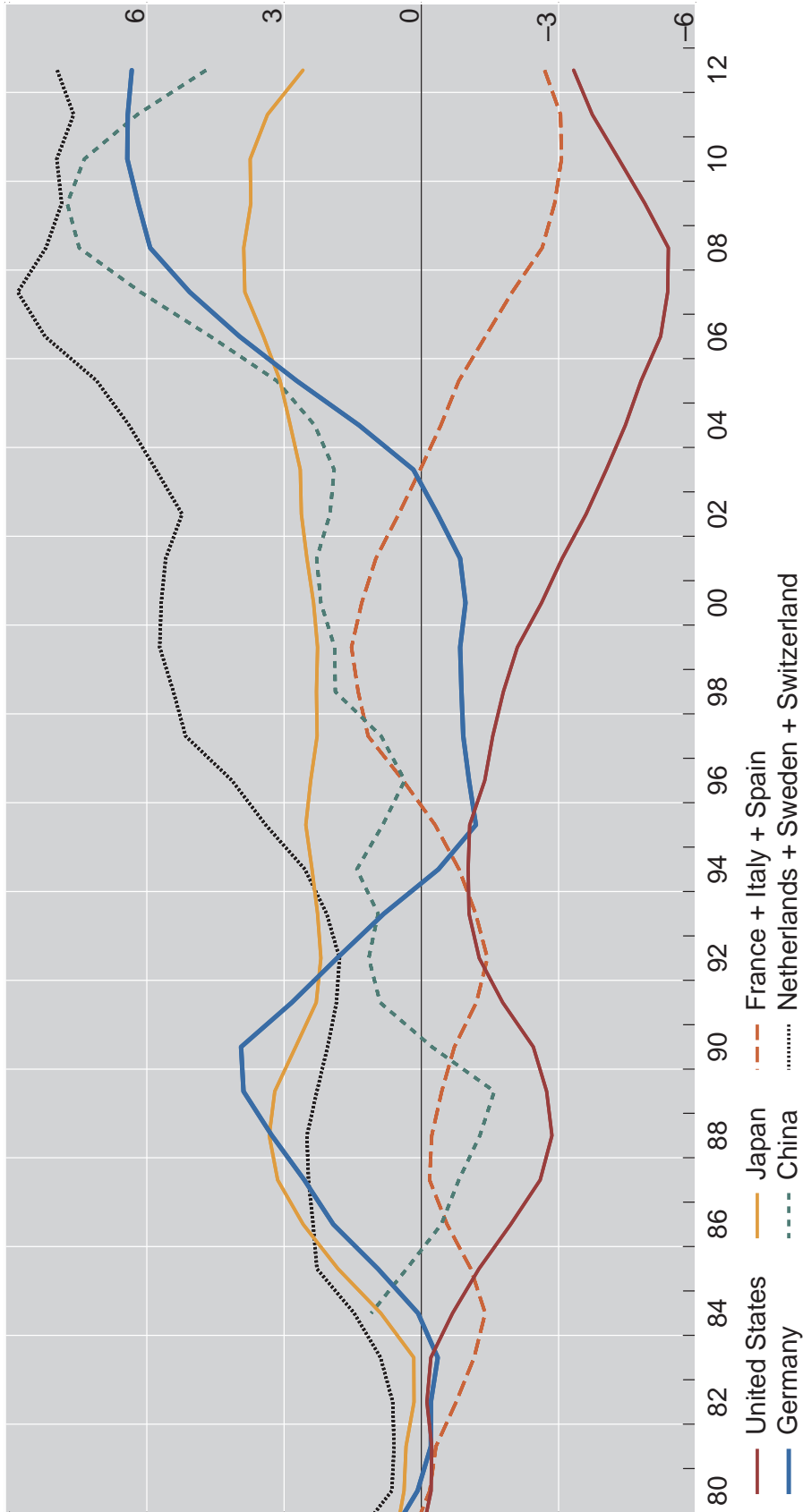
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Graph 1

Current account imbalances (5-year moving average, as a percentage of GDP)

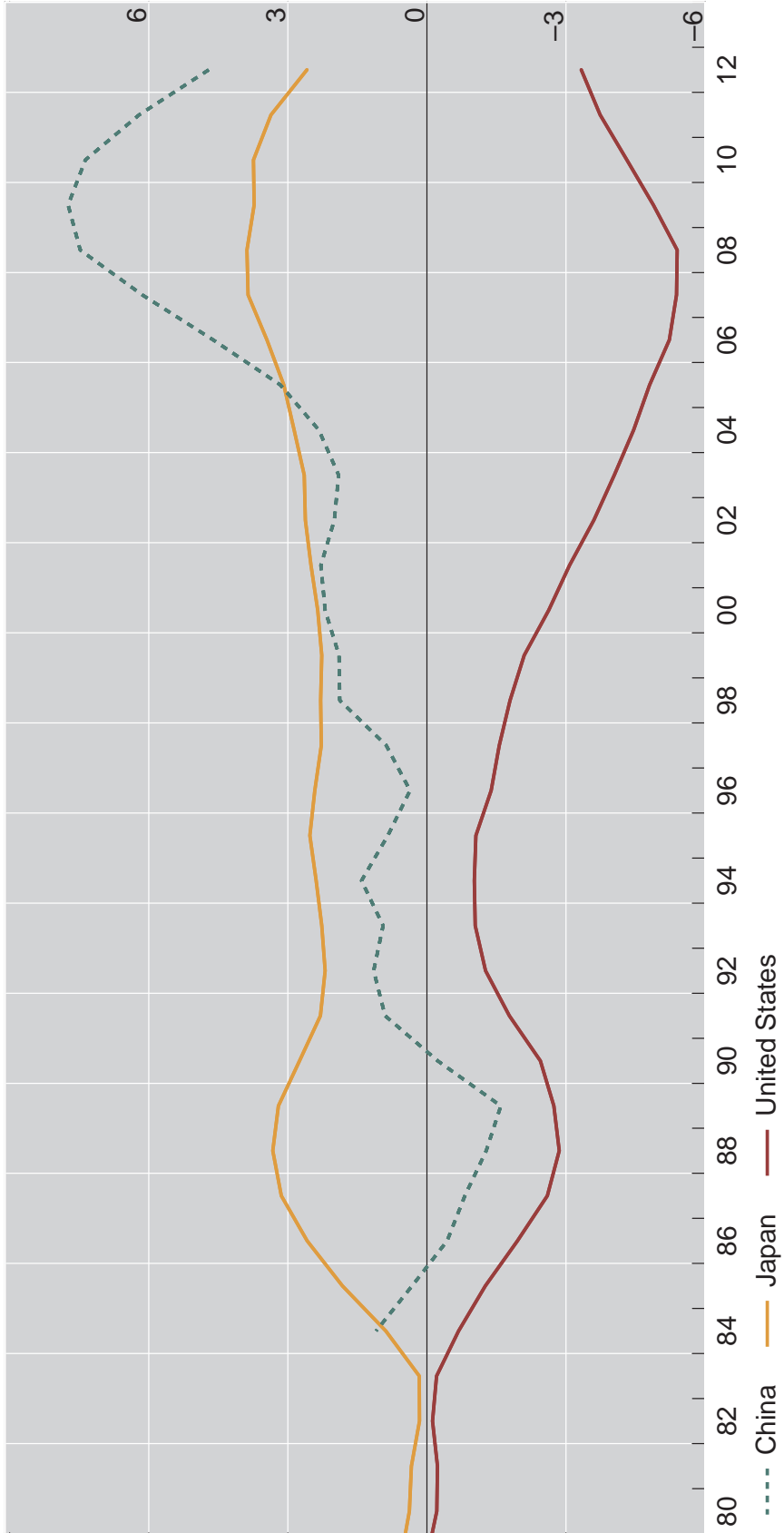


Sources: OECD, *Economic Outlook*; IMF, *World Economic Outlook*; BIS calculations.

Graph 1a

Current account imbalances: China, Japan and the United States

5-year moving average, as a percentage of GDP

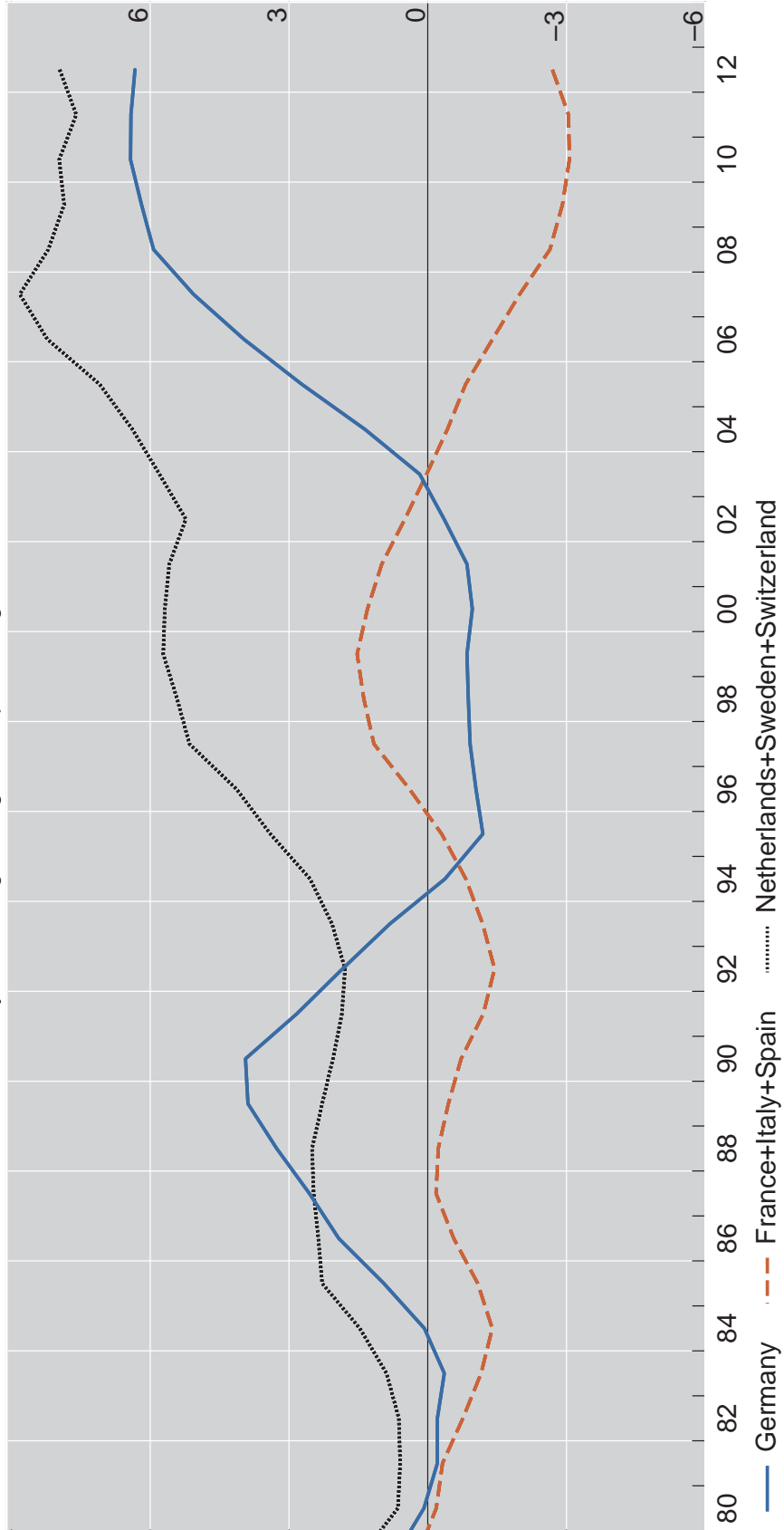


Sources: OECD, *Economic Outlook*; IMF, *World Economic Outlook*; BIS calculations.

Graph 1b

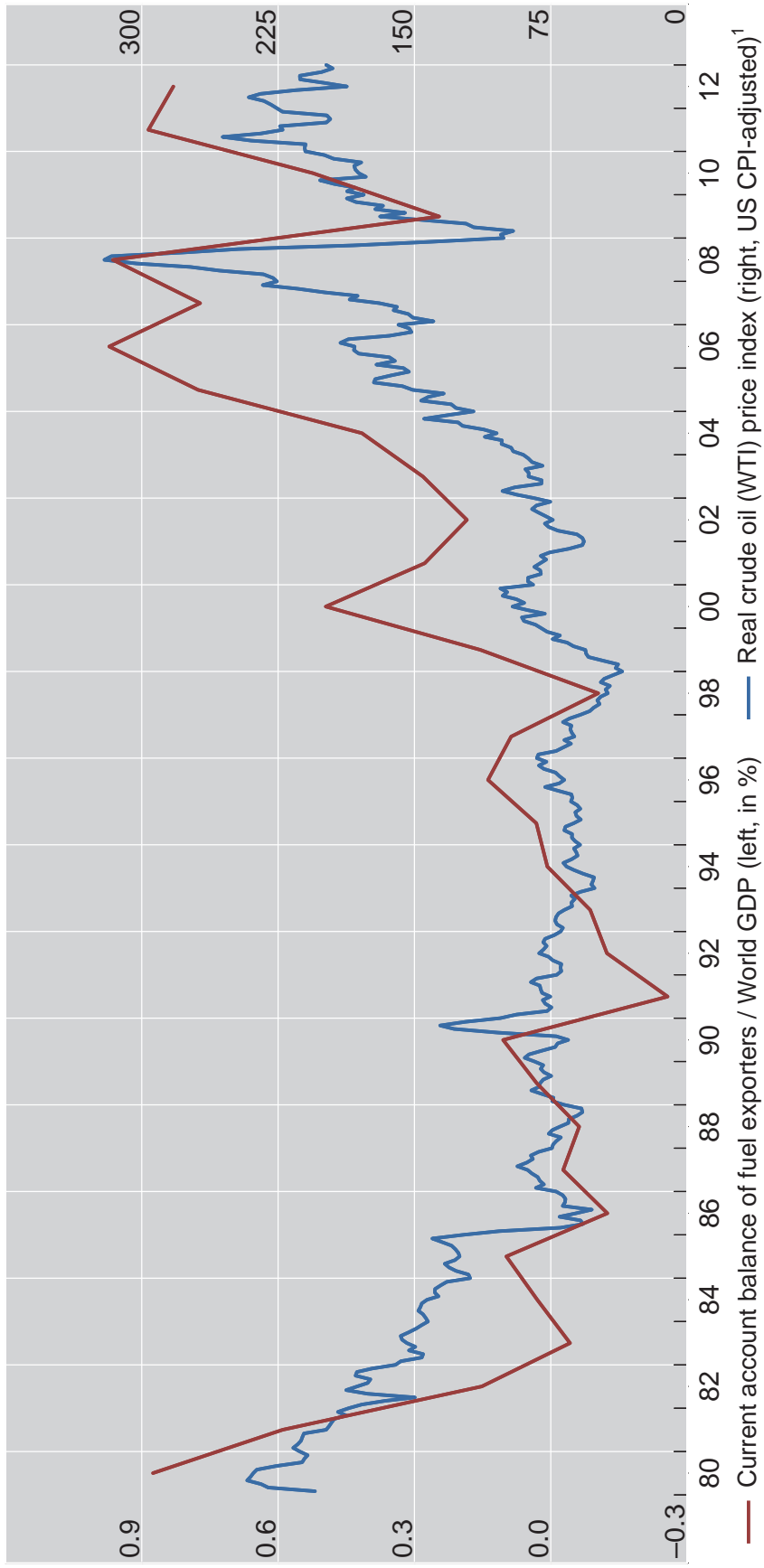
Current account imbalances in Europe

5-year moving average, as a percentage of GDP



Sources: OECD, *Economic Outlook*; IMF, *World Economic Outlook*; BIS calculations.

Graph 2
Fuel exporters: oil price and current account balance

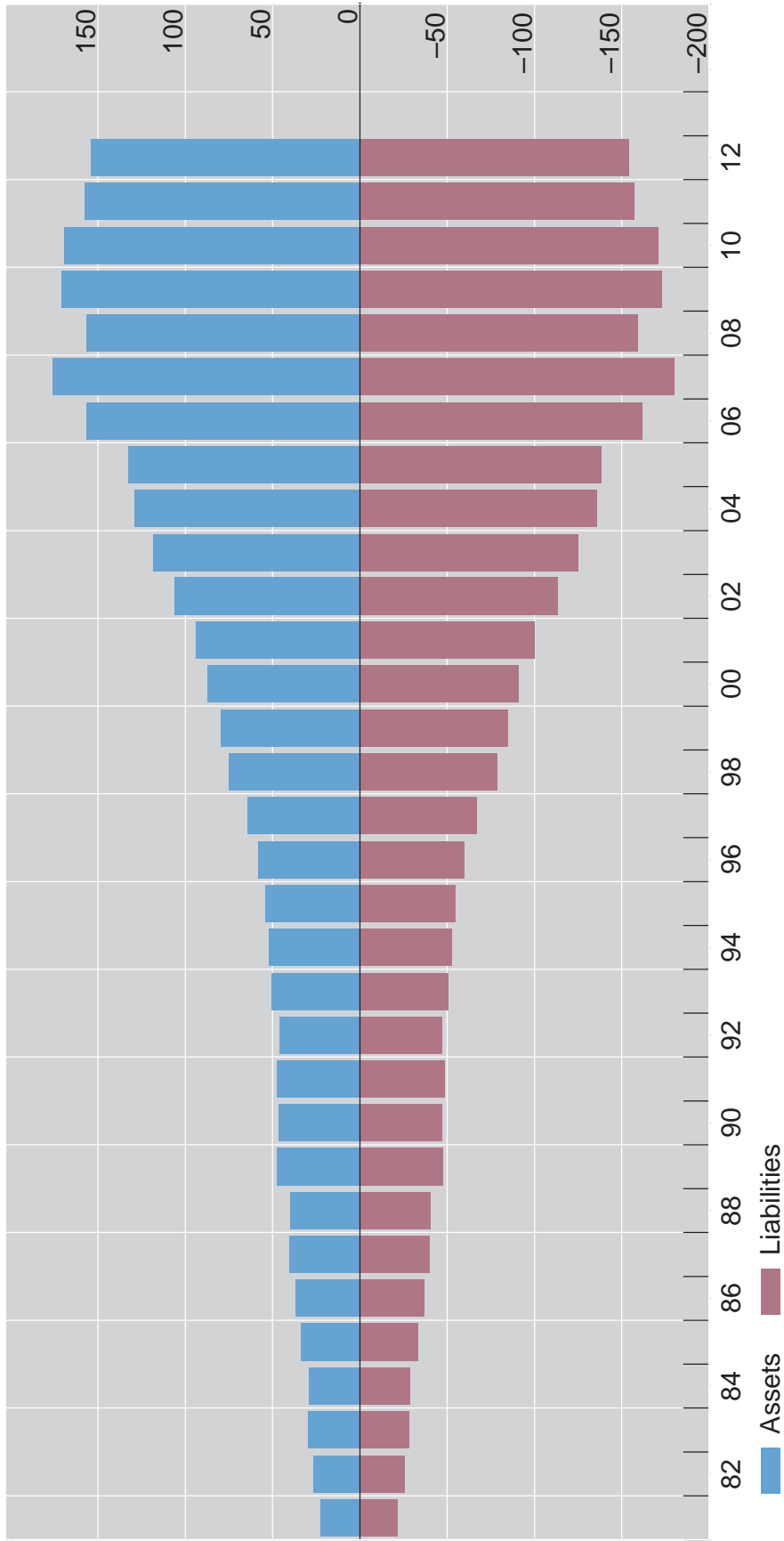


¹ 1980-1999 = 100.

Sources: Bloomberg; IMF, *International Financial Statistics*; IMF, *World Economic Outlook*; BIS calculations.

Graph 3

International investment positions of all countries (as a percentage of World GDP)¹

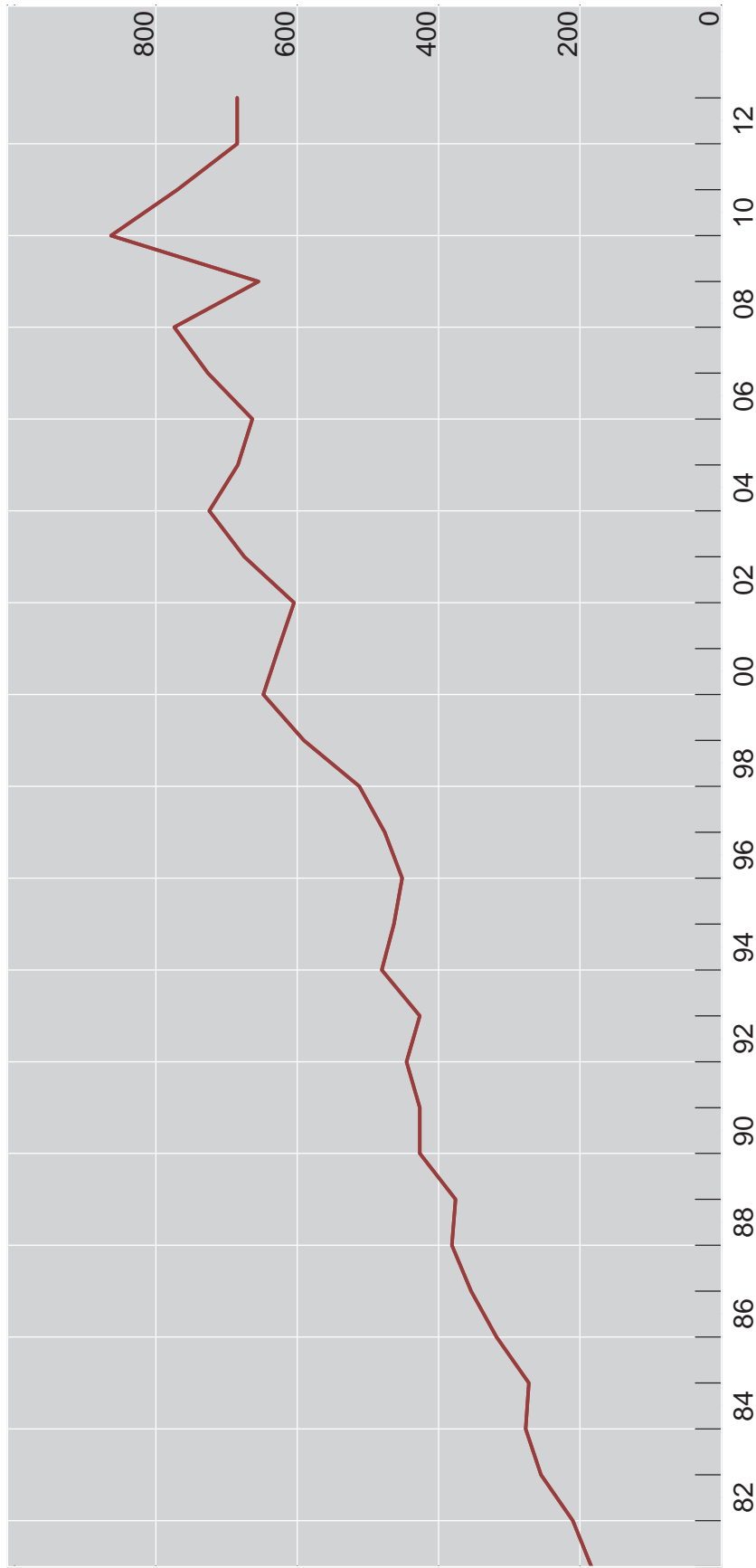


¹ Sum of 127 economies.

Sources: IMF, *International Financial Statistics*; IMF, *World Economic Outlook*; BIS calculations.

Graph 4

International investment liabilities (as a percentage of total exports of all countries)¹

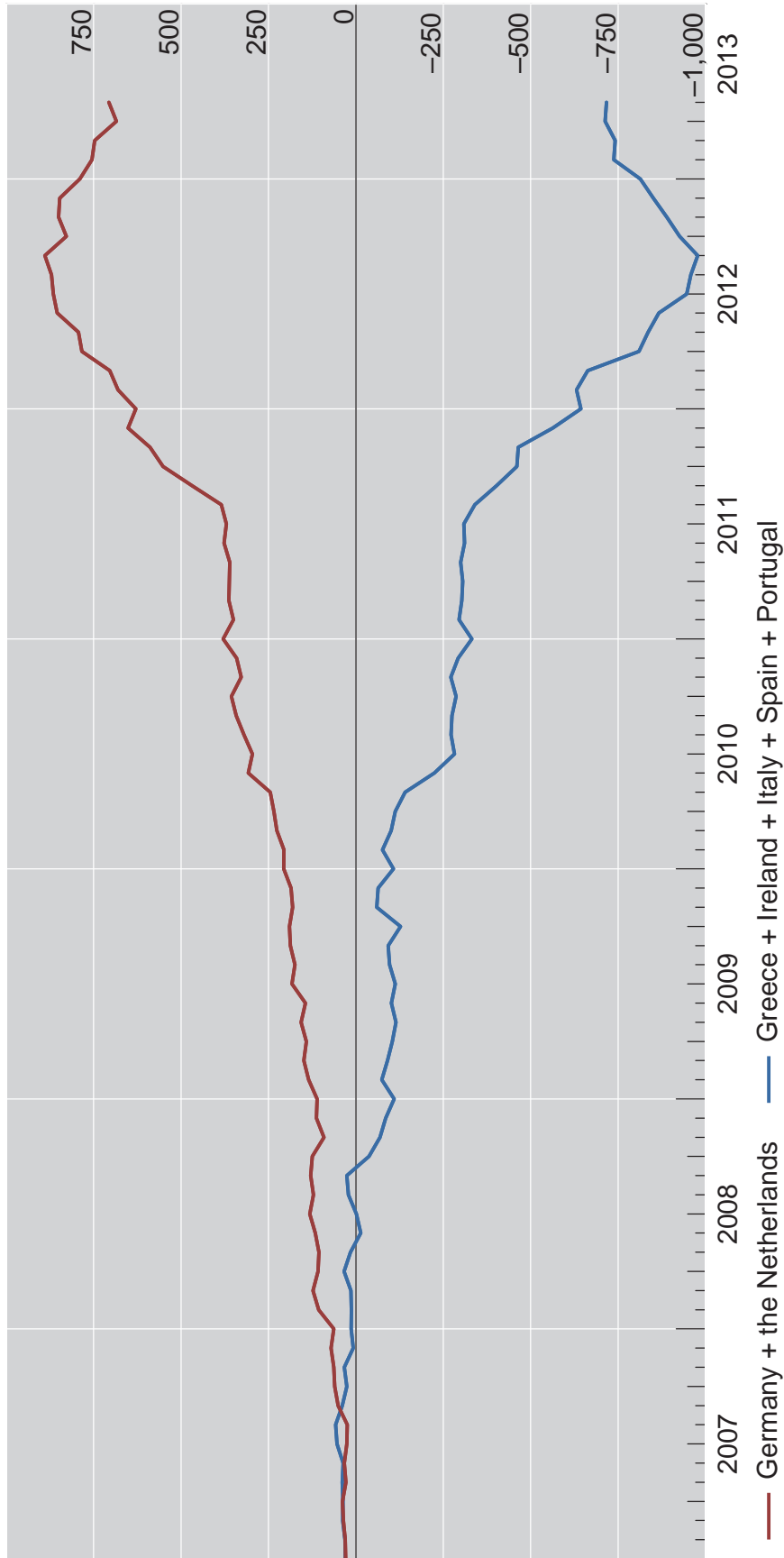


¹ Sum of 127 economies.

Sources: IMF, *International Financial Statistics*; BIS calculations.

Graph 5

Target2 balances (in billions of euros)¹



¹ The data are calculated as “net claims on the Eurosystem” minus the difference between “currency issued” (which represents an NCB’s share in banknote based on its share in the ECB’s capital) and “currency put in circulation” (which is the actual amount of banknotes issued by an NCB).
Sources: IMF, *International Financial Statistics*; BIS calculations.

Table 1

Current account balances

As a percentage of GDP

	1980-00	2005	2006	2007	2008	2009	2010	2011	2012
United States	-2.0	-5.9	-6.0	-5.1	-4.7	-2.7	-3.0	-3.1	-3.0
Germany	0.1	5.1	6.3	7.4	6.2	6.0	6.2	6.2	7.0
Japan	2.4	3.6	3.9	4.9	3.3	2.9	3.7	2.0	1.0
China	1.1	5.9	8.5	10.1	9.3	4.9	4.0	2.8	2.6
France/Italy/Spain	0.0	-2.2	-2.8	-3.2	-4.0	-2.4	-2.9	-2.7	-1.5
Netherlands/Sweden/ Switzerland	3.6	9.0	10.4	7.9	4.9	7.1	9.5	8.6	9.7

Sources: IMF, World Economic Outlook; BIS calculations.