

III. The risks of international imbalances: beyond current accounts

Globalisation provides large, measurable economic benefits. It expands trade flows and allows consumers to enjoy a range of goods and services vastly larger than that produced by their domestic economy. And the international financial flows associated with globalisation free firms' investment decisions from domestic financing constraints while allowing investors to reduce risks and optimise returns by globally diversifying their assets. International financial flows thus enhance the efficiency with which capital and know-how are allocated.

Yet, by widening the scope for economic activity, globalisation also widens the potential exposure to instability. The same international links that increased welfare and efficiency in recent decades served as a powerful propagation channel for financial and economic shocks during the 2007–09 crisis. In the early stages, rapidly falling asset prices wreaked havoc on the balance sheets of international investors; in the later stages, a collapse in world trade punished many export-oriented economies.

Before the financial crisis, the main risk to the global economy was thought to be the presence of large current account surpluses and deficits. Thereafter, at the height of the crisis, threats to the solvency of major financial institutions were the focus of attention. Now, with the waning of the crisis, the discussion is returning to the risks posed by current accounts; and indeed, though they declined during the crisis, global current account imbalances remain large.

Certainly, one risk of persistent current account imbalances is that they will drive policymakers towards protectionism. Furthermore, net financial flows, which necessarily run from economies with a current account surplus to those with a deficit, create risks. An economy with large net financial inflows may suffer a sharp and disorderly depreciation of its currency should those flows suddenly reverse. Also, the financial sector may be unable to efficiently absorb these inflows, which could lead to financial instability.

Current account imbalances are declining, but only slowly. Structural adjustment in terms of saving and investment is ongoing in major surplus and deficit countries, which will reduce imbalances in the long run. Real exchange rate adjustment is also helping to reduce current account imbalances. In the near term, accelerating the real exchange rate adjustment would require more flexibility in terms of domestic prices or nominal exchange rates or both. Because policymakers need to maintain price stability, the burden of adjustment in the real exchange rate should rest on the nominal exchange rate.

International coordination could help distribute the burden of adjustment across major surplus and deficit countries and break the current policy gridlock. For example, given that the costs of increased exchange rate flexibility would fall on China, the United States could share the burden by pursuing tighter fiscal and monetary policies. Furthermore, among surplus emerging economies,

the country that allows its currency to appreciate first loses competitiveness relative to its peers. Coordination would reduce this first-mover disadvantage.

The dangers posed by imbalances in current accounts and in net capital flows are important, but the financial crisis also highlighted the need to look beyond them. If we are to fully appreciate the growing risks of financial imbalances, we must also look to gross financial flows. Gross financial inflows and outflows are substantially larger than the net flows associated with the current account and are often large even where current account balances are negligible. It is these gross flows, not the net, that must be accommodated by the receiving financial sector; and a sudden stop of gross flows risks economic crisis in the receiving economy.

Gross flows also pose a threat to the extent that they contribute to vulnerabilities in the interconnected balance sheets of financial institutions, firms and households around the world. They can result in currency, liquidity and credit risk mismatches because the attributes of assets acquired through outflows are unlikely to exactly match those of the liabilities acquired through inflows – both at the level of individual market participants and in the aggregate. Furthermore, even if balance sheet positions are perfectly matched, they still give rise to counterparty risks. During the financial crisis, a sudden deterioration in balance sheets caused a large decline in economic activity, demonstrating that even seemingly small differences between the attributes of assets and liabilities – along with counterparty risks – can form a powerful propagation channel for shocks.

The first line of defence in managing the risks associated with gross financial flows and financial imbalances is the use of macroeconomic policies that maintain monetary stability and fiscal sustainability. Monetary policy can also be used to “lean against the wind” and resist outside increases in credit and asset prices. Policies that strengthen prudential frameworks and the financial infrastructure form a useful second line of defence that can limit financial imbalances and minimise the fallout in the event of a crisis. As a last resort, and in extraordinary circumstances, capital controls might be used as a stopgap measure to temporarily address some risks of large gross financial inflows. Furthermore, steps being taken to fill current data gaps will allow a better assessment of vulnerabilities that may develop in international balance sheets.

Finally, current account and financial imbalances are linked. The financial crisis showed that effectively managing the risks posed by both types of imbalance is crucial for sustainable global growth and financial stability. Further, some of the risks arising from current account imbalances are similar to those arising from gross flows. As noted, a sudden reversal of either can trigger domestic economic and financial crises. And some policy measures that would ameliorate one form of imbalance would also address the other. For instance, increased nominal exchange rate flexibility would not only accelerate adjustment in current account imbalances, but would also contribute to financial stability in surplus emerging economies by relieving inflationary pressures.

We first discuss today’s large current account imbalances and the potential for using policy coordination to reduce the risks they pose. We then analyse

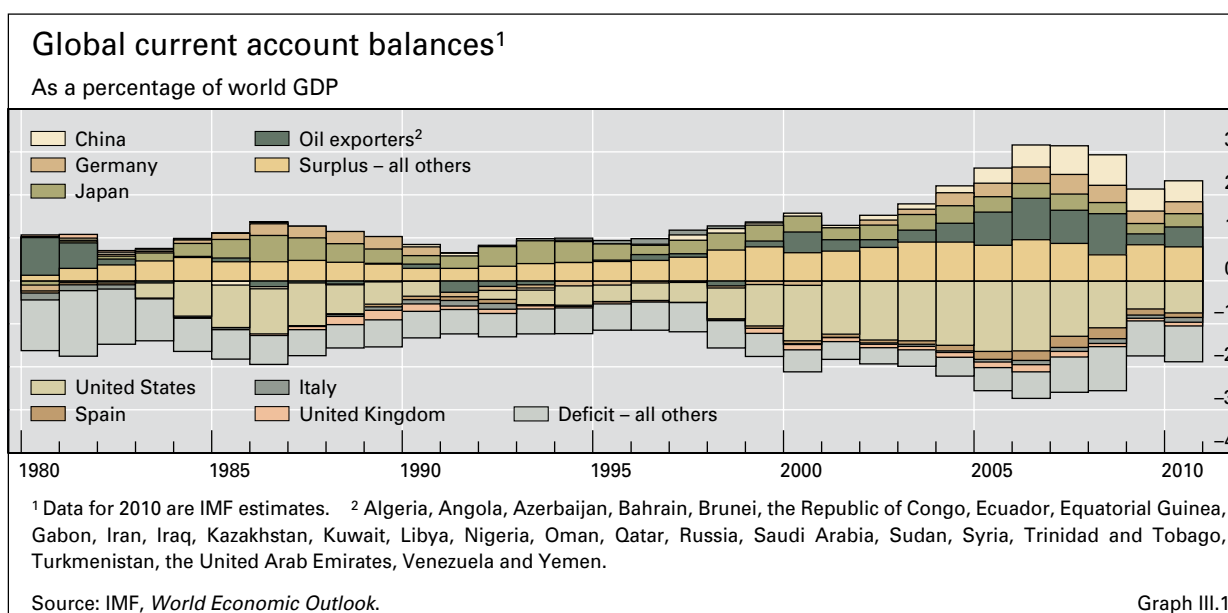
the risks associated with large gross financial flows and the most effective policy responses. We conclude by showing how current account and financial imbalances are related.

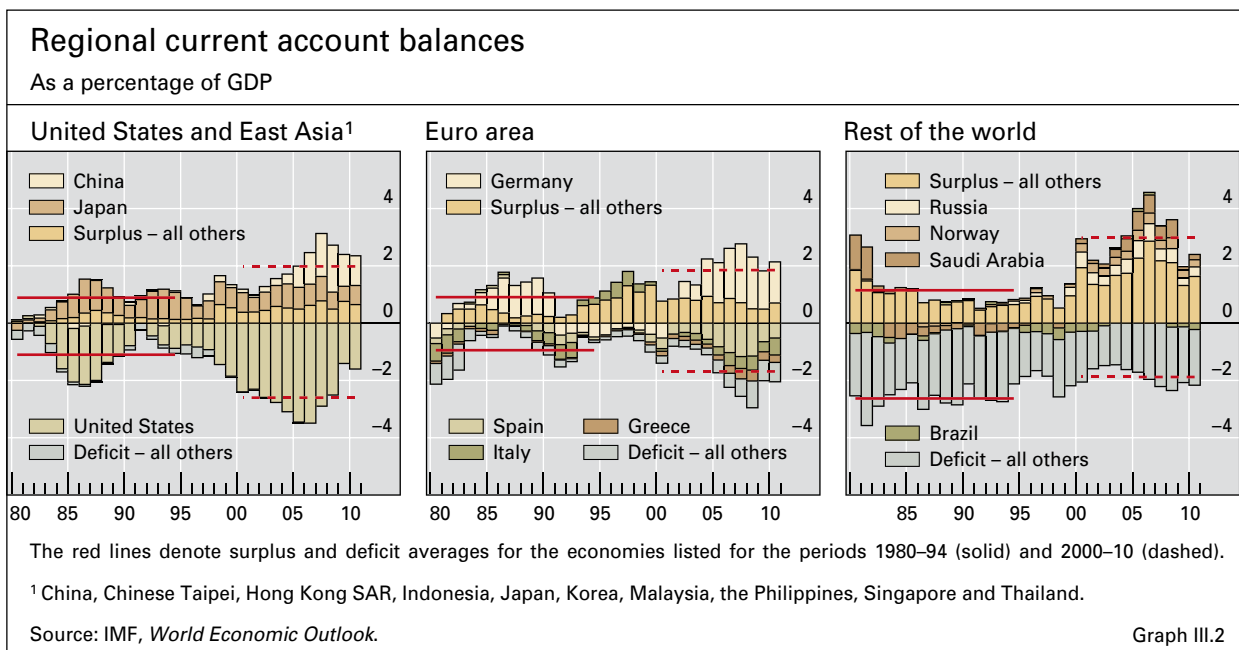
Current account balances: risks and responses

Current account balances remain substantial (Graph III.1). The United States, Italy, Spain and the United Kingdom run large, persistent deficits while China, Japan and Germany run large, persistent surpluses. Summed together as positive quantities, current account surpluses and deficits remained around 2% of global GDP during the 1980s and early 1990s and then rose steadily in the lead-up to the financial crisis, to around 6%. Although it has since decreased to 4%, the aggregate sum remains high by historical standards.

Current account balances are concentrated. Most of the growth in the balances since 1994 has occurred in the United States and East Asia (Graph III.2, left-hand panel) and in the euro area (centre panel). Comparing the 1980–94 period with 2000–10, the average regional balance as a share of regional GDP rose about 2.6 percentage points for the United States and East Asia and 1.7 percentage points in the euro area, but only about 1.1 percentage points in the rest of the world. This concentration explains why policy discussion often focuses on a few countries with the largest balances, including China and the United States.

Because much of the reduction in current account balances during the crisis was a cyclical phenomenon, rather than structural, future increases are likely. For example, many advanced economies with current account deficits, including the United States, experienced sharp contractions in private domestic demand; as these economies recover and private consumption and investment grow again, domestic demand is likely to increase. Without substantial fiscal consolidation, the increased demand is likely to further widen current account





deficits. Conversely, macroeconomic stimulus spurred economic growth in emerging economies with current account surpluses, notably China; the phase-out of the stimulus is likely to reduce domestic demand and may boost current account surpluses.

Risks

Persistently large current account deficits are unsustainable and so must eventually come to an end. The question, therefore, is not whether, but how, these imbalances will be corrected. The main risk is that the adjustment will be disorderly and detrimental to global macroeconomic and financial stability.

Current account imbalances risk disorderly exchange rate adjustment ...

Should the financial flows complementing current account deficits suddenly reverse course, economies with large deficits will suffer disorderly currency depreciations. Before the financial crisis, the large US current account deficit was regarded as a major threat to global stability because of the risk it posed of a disorderly decline in the value of the US dollar. The current ability of the United States to easily finance its deficit cannot be taken for granted. Past examples of a number of smaller economies in deficit suggest that market confidence can evaporate quickly, forcing sudden and costly adjustment. An abrupt rebalancing of global demand following a precipitous depreciation of the US dollar would have far-reaching ramifications for the global economy.

The domestic financial sector might also struggle to efficiently absorb the financial inflows that are the counterpart to the current account deficit. A failure to allocate these inflows to productive uses is especially likely if financial institutions are not well regulated. The resulting capital misallocation – to real estate lending, for example – might lead to boom-bust cycles and eventually to financial instability. In fact, some economists attribute the pre-crisis housing boom in the United States partly to large capital inflows, which are the

counterpart of current account deficits. Continuing global imbalances mean that similar financial stability risks will also continue.

... and protectionism

Last but not least, current account imbalances might prompt deficit countries to turn to protectionist measures. The risk is especially large if the policies of the surplus countries are seen as putting deficit countries at a competitive disadvantage. Escalating protectionism could eventually lead to trade wars. Policymakers are currently showing some resistance to such an approach, but the risk of a turn in that direction seems to be growing.

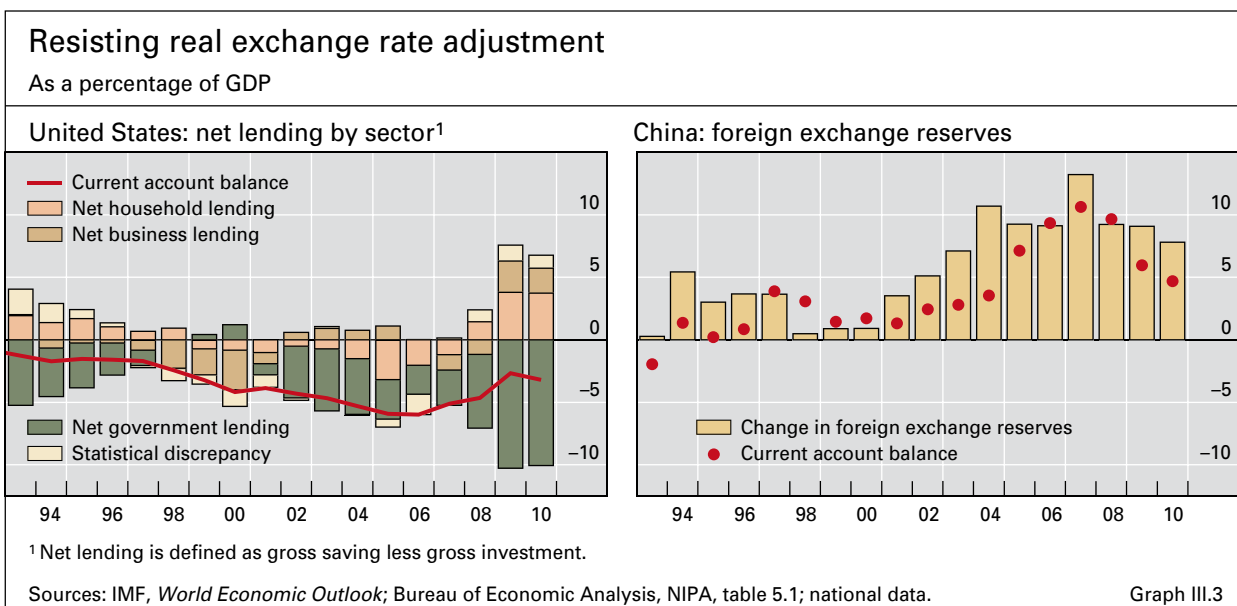
The policy impasse

Reducing current account imbalances requires a rebalancing of global demand. Deficit countries need to shift from domestic to external sources of demand, and surplus countries need to shift in the opposite direction. Viewing the required change in terms of quantities, deficit countries require some combination of increased domestic saving and reduced consumption or investment; and surplus economies require the opposite. In terms of prices, a real depreciation of deficit country currencies would increase international competitiveness and help bring about the desired changes in quantities. Real appreciation of the currencies of surplus countries would work towards the same end. Achieving those adjustments in the real exchange rate requires flexibility of domestic prices and wages or of nominal exchange rates or both.

However, adjustment is slow ...

Although current account imbalances have declined somewhat from the levels immediately preceding the crisis (see Box III.A), the current rate of adjustment appears sluggish, and further deliberate adjustment on a significant scale does not seem likely under current conditions. A major surplus or deficit country will probably continue to resist price or nominal exchange rate adjustments if it must take on all the adjustment costs.

In particular, fearing the large costs of monetary instability, deficit countries resist the deflationary pressures generated by their current account



Box III.A: Some evidence of adjustment

A correction of global imbalances in the current account requires offsetting adjustments in saving and investment – that is, in quantities – supported by complementary shifts in real exchange rates that adjust relative prices. Some tentative signs of an adjustment in saving and investment have emerged. In the United States, private saving has increased since the peak of the financial crisis. In China, the government plans to increase domestic consumption, and ongoing reforms in the governance structure of major corporations may reduce their currently high level of saving.

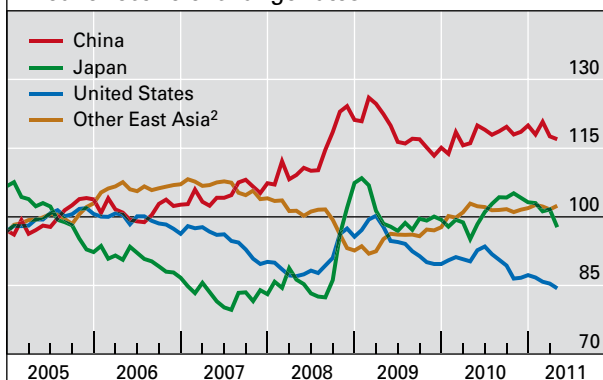
Relative price adjustment, via changes in real exchange rates, is supporting the reduction in current account imbalances. That is, prices in deficit countries, expressed in the currency of surplus countries, are tending to rise more slowly than prices in surplus countries. One measure of international competitiveness is the real effective exchange rate based on unit labour costs. For the US dollar, this rate fell by around 10% between 2004 and 2009, which should assist in reducing the current account deficit. While official unit labour cost data are not available for China, recent rapid wage growth suggests that adjustment is taking place there too. This partly results from a policy of raising minimum wages; but it may also indicate that China is approaching an end to its supply of surplus labour, which in turn would imply even faster wage increases in the future.[ⓐ]

The available measures of the real effective exchange rate based on consumer price inflation also point to an ongoing adjustment. The real effective exchange rate of the renminbi has risen by around 15% in the past five years (Graph III.A, left-hand panel). Meanwhile, the US dollar rate, despite strong gains during the financial crisis, has declined by around 15% over the same period. The real appreciation of the renminbi in dollar terms has been due to a combination of inflation in China exceeding that in the United States and nominal dollar appreciation of the renminbi (Graph III.A, right-hand panel). These measures may understate the degree of adjustment in China. Recent wage increases are likely to pass through to higher prices for services, which are systematically underweighted in China's consumer price index, which is used to calculate the inflation-based real exchange rate.

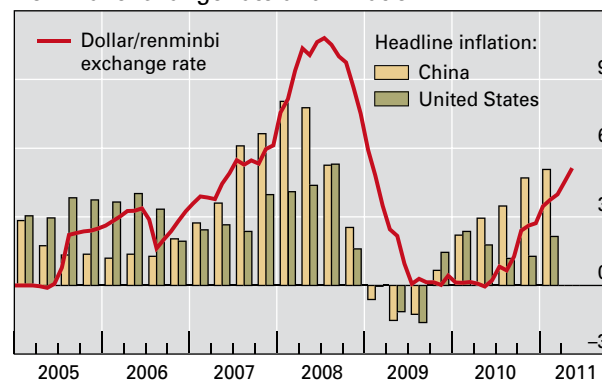
[ⓐ] According to the labour supply argument, increases in the demand for labour in China did not previously increase real wages there substantially because the demand was met from a surplus supply of agricultural workers. As the surplus supply becomes depleted, further increases in labour demand will imply real wage gains that are likely to drive faster real appreciation of the renminbi.

Real exchange rate adjustment

Real effective exchange rates¹



Nominal exchange rate and inflation³



¹ In terms of relative consumer prices; increase = appreciation; BIS broad index, 2005 average = 100. ² Weighted average of Chinese Taipei, Hong Kong SAR, Indonesia, Korea, Malaysia, the Philippines, Singapore and Thailand based on 2005 GDP and PPP exchange rates. ³ Annual changes in bilateral exchange rate and consumer prices, in per cent.

Sources: National data; BIS.

Graph III.A

positions, and surplus countries resist the corresponding inflationary pressures. This resistance on both sides of the current account divide is consistent with domestic policy objectives, especially taking the resistance on the other side as given. The result is gridlock.

... due to countries' domestic policy objectives ...

For example, low policy rates and aggressive fiscal stimulus in the United States substituted for sharply declining private household and business demand (Graph III.3, left-hand panel). Net household lending, defined as gross saving less gross investment, increased from about –3.2% of GDP in 2005 to +3.7% in 2010, while net government lending dropped from about –3.2% to –10.1% in the same period. For a time there was a clear danger of deflation, which the stimulus helped to counter.

... and surplus emerging economies resisting exchange rate flexibility

Likewise, many surplus economies work to limit the speed of nominal currency appreciation. Rapid appreciation would mark an end to their successful export-led growth strategy and probably lead to short-run losses in employment and output. The resistance to rapid appreciation in those economies is thus consistent with their domestic policy objectives.

The resistance can be seen in the foreign exchange reserves they have accumulated in the past decade (Table III.1). In China, large current account surpluses are matched by high rates of reserve accumulation (Graph III.3, right-hand panel). In fact, since 1994, China's reserve accumulation of \$2.4 trillion has exceeded its accumulated current account surpluses by around 30%. As a result of reserve accumulation, increases in the nominal exchange rate are smaller than they would otherwise have been.

The accumulation of foreign exchange reserves complicates monetary policy. Without additional measures, an increase in reserves would put downward pressure on interest rates. To maintain monetary stability, and resist inflationary pressures from foreign exchange intervention, China sterilises the impact of its large accumulation of reserves. For the same reason, it has steadily increased required reserve ratios and tightened policy rates.

Overall, the policies in the United States, China and elsewhere to maintain monetary stability and limit nominal exchange rate movement have slowed the rate of adjustment in the real exchange rate.

Resistance makes unilateral adjustment more costly for other countries

Furthermore, policies in the countries on one side of the current account divide make unilateral adjustment more difficult for countries on the other side. For example, the large current account surplus of China increases the incentive to implement macroeconomic policies that stimulate demand in the United States. Conversely, macroeconomic stimulus and, more generally, excess demand in the United States increase the size and cost of the exchange rate adjustment necessary in China to reduce its surplus. Countries on each side may wish to adjust, but neither finds unilateral adjustment to be in its interest. The costs of adjusting are borne disproportionately by the adjusting country and appear to outweigh the domestic benefits in the form of increased financial stability and lower inflation (if the adjuster is a surplus emerging economy) or more sustainable external positions (if the adjuster is a deficit advanced economy). However, adjustment provides a positive externality to all other countries as well, because of increased global macroeconomic stability.

Role for policy coordination

Coordination is needed to overcome the current gridlock

Coordination could overcome this gridlock. The large costs of monetary instability mean that adjustment should principally work through more flexible nominal exchange rates. In the case of the United States and China,

Annual changes in official foreign exchange reserves					
	2006	2007	2008	2009	2010
	In billions of US dollars, at current exchange rates				
World	915.9	1,445.2	654.6	1,131.7	1,102.5
Industrial countries	164.7	177.2	71.6	483.9	320.0
United States	0.8	4.7	7.1	53.1	1.7
Euro area	12.3	18.3	3.4	64.1	17.4
Japan	45.4	73.1	56.6	12.9	39.3
Asia ¹	395.2	694.5	412.0	747.4	653.7
China	247.0	461.8	419.0	466.8	450.0
Chinese Taipei	12.9	4.2	21.4	56.5	33.8
Hong Kong SAR	8.9	19.5	29.8	73.3	12.9
India	38.8	96.3	-19.6	17.8	10.1
Indonesia	8.0	13.9	-5.4	14.0	29.3
Korea	28.6	23.3	-61.0	68.8	21.6
Malaysia	12.3	18.9	-9.9	4.3	9.5
Philippines	4.1	10.2	3.0	5.6	16.6
Singapore	20.1	26.7	11.2	13.6	37.9
Thailand	14.6	19.9	23.4	26.8	32.0
Latin America ²	49.5	126.7	42.9	44.0	81.6
Argentina	3.7	13.8	0.2	1.2	3.6
Brazil	31.9	94.3	13.4	44.5	49.7
Chile	2.5	-2.6	6.2	2.2	2.5
Mexico	2.2	10.8	8.0	4.5	20.7
Venezuela	5.5	-5.2	8.9	-11.4	-8.6
CEE ³	28.2	42.4	5.7	39.3	15.3
Middle East ⁴	27.1	63.9	53.4	7.8	19.7
Russia	119.7	171.2	-55.0	4.9	26.9
<i>Memo:</i>					
<i>Net oil exporters⁵</i>	<i>285.3</i>	<i>330.5</i>	<i>145.8</i>	<i>-22.2</i>	<i>106.4</i>

¹ Countries detailed. ² Countries detailed plus Colombia and Peru. ³ Central and eastern Europe: Bulgaria, Croatia, the Czech Republic, Hungary, Latvia, Lithuania, Poland and Romania. ⁴ Kuwait, Libya, Qatar and Saudi Arabia. For Saudi Arabia, excluding investment in foreign securities. ⁵ Algeria, Angola, Kazakhstan, Mexico, Nigeria, Norway, Russia, Venezuela and the Middle East.

Sources: IMF; Datastream; national data. Table III.1

the costs of that adjustment would probably fall mostly on China. The United States, however, could share the burden by pursuing tighter fiscal and monetary policies in order to reduce domestic demand. Tighter macroeconomic policies in the deficit country could also allay concerns that the value of foreign exchange reserves accumulated by surplus economies will be inflated away.

Implementing coordination is likely to depend on the arrival of more supportive domestic conditions on each side. The principal need in deficit countries is an economic recovery strong enough to allow for tighter macroeconomic policies. In surplus countries, enhancing the financial market infrastructure by developing a foreign exchange derivatives market, for instance, would reduce the real costs of greater nominal exchange rate flexibility.

Coordination could also address the first-mover problem affecting surplus economies. In a surplus country that unilaterally opts to allow nominal currency appreciation, exporters will be at a disadvantage vis-à-vis exporters in surplus

Coordination among surplus economies would allow more flexible exchange rates

countries that do not simultaneously adjust their exchange rates. Coordination among surplus economies, especially in emerging Asia, may help overcome this hurdle.

Apart from coordination, structural policies in both surplus and deficit countries could also advance the global adjustment of current account imbalances. For example, the existing tax regime in the United States subsidises debt and penalises saving. Removing these distortions could contribute to global rebalancing. Conversely, in China, further developing sustainable social security programmes – including public health care and pension plans – would reduce the need for household saving and encourage consumption.

Nonetheless, the size of the problem suggests that, without coordinated action, gridlock and growing imbalances may last for many years. Surplus economies can resist nominal currency appreciation as long as they are willing to continue accumulating – and bearing the cost of carrying – foreign exchange reserves. Thus, in general, deficit countries are the ones that are eventually forced to adjust. The longer the gridlock lasts, the larger the eventual adjustment will need to be and the greater the risk of a disorderly adjustment.¹

Gross financial flows and financial imbalances

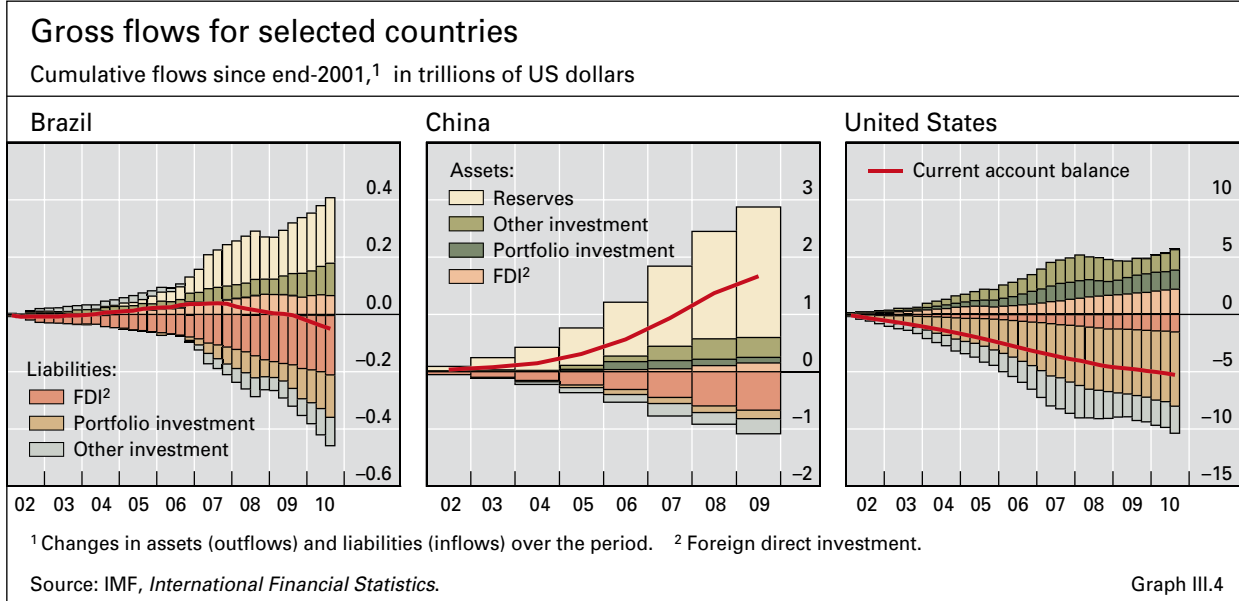
The financial crisis has demonstrated that the international risks posed by gross financial flows are as important as those of current account balances. Financial flows result in the accumulation of large positions on interconnected balance sheets of financial institutions, firms and households around the world. Differences between the attributes of these inflows and outflows accumulate in the form of mismatches between assets and liabilities on these balance sheets. The mismatches, for instance in currency or maturity, can potentially lead to financial imbalances. Understanding and managing the risks associated with these mismatches is important for sustainable global economic growth and for financial stability.

The difference between a country's gross inflows and outflows is equal to its current account balance: gross inflows exceed outflows for countries with a current account deficit, and gross outflows exceed inflows for countries with a surplus.² Taken separately, however, the magnitudes of gross inflows and outflows may bear little relationship to the size of the current account. Investors diversify their investment portfolio internationally on the basis of expected returns and risks rather than on the underlying saving and investment balances of national economies. Transactions by pension funds building internationally

Gross inflows and outflows are large and not necessarily related to net flows ...

¹ For the United States, the pressure to adjust is somewhat weaker than for other deficit countries. Because the dollar is the world's main reserve currency, the United States might sustain a small current account deficit even in the long run because non-residents are likely to wish to hold dollar-denominated assets. Nevertheless, the current size of the US deficit is clearly beyond such a level, implying that its eventual adjustment is inevitable.

² Gross flows are themselves consolidated measures. Gross inflows refer to non-residents' purchases minus sales of domestic assets. Similarly, gross outflows measure residents' net purchases of foreign assets. In each case, gross flows will be negative if sales exceed purchases.



diversified portfolios involve large outflows from both surplus and deficit countries. Similarly, large firms that expand production by investing beyond their domestic boundaries tend to do so without regard to their home country's current account.

Brazil, for example, has experienced large gross inflows and outflows despite small current account balances (Graph III.4, left-hand panel). Current account surplus countries can have large financial inflows. In China (centre panel), gross inflows exceeded \$1 trillion between 2002 and 2009 in spite of cumulative current account surpluses of \$1.7 trillion. Conversely, financial outflows from deficit countries can be sizeable, as in the case of the United States (right-hand panel). Although US current account deficits cumulated to about \$5 trillion over the past eight years, US gross outflows were even greater, financed by inflows of around \$10 trillion.

Furthermore, the balance sheets resulting from gross financial flows are connected to one another in complex patterns. The BIS banking statistics allow an exploration of the subset of these bilateral linkages in which at least one of the parties to the transaction is a BIS reporting bank. In Graph III.5, the circles, or nodes, depict countries or regions, and the size of each is proportional to the quantity of cross-border bank assets and liabilities booked by banks located in that country or region. The thickness of the lines between nodes is proportional to the size of financial claims or the financial linkages between them. The nodes and the linkages are shown for dollar-denominated stocks (left-hand panel) and euro-denominated stocks (right-hand panel).

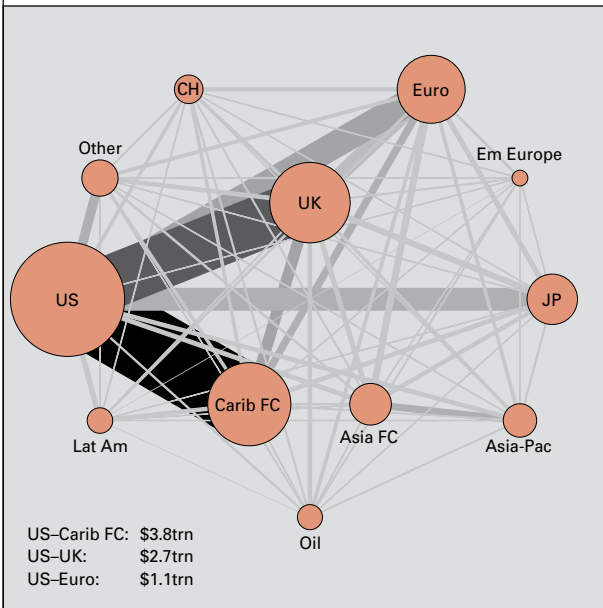
In some cases, financial linkages are closely related to current accounts, as is the case of flows between the euro area and emerging Europe. But the large linkages shown between the United States and the United Kingdom (\$2.7 trillion in dollar stocks; Graph III.5, left-hand panel) and between the United Kingdom and the euro area (\$3.6 trillion in euro stocks; right-hand panel) bear little relation to underlying current account balances.

... and accumulate on interconnected balance sheets ...

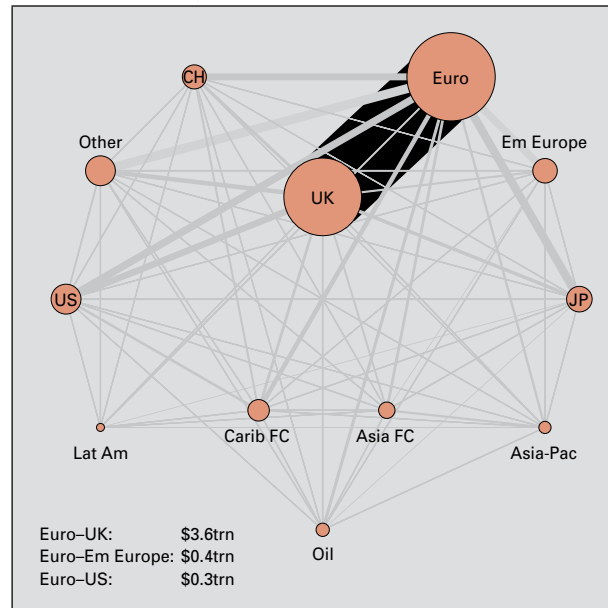
... creating complex patterns of interdependence

Linkages in the international banking system at end-2010¹

US dollar linkages



Euro stock linkages



Asia FC = Asian financial centres (Hong Kong SAR, Macao SAR and Singapore); Asia-Pac = China, Chinese Taipei, India, Indonesia, Korea, Malaysia, Pakistan, Philippines and Thailand; Carib FC = Caribbean financial centres (Aruba, Bahamas, Bermuda, Cayman Islands, Curaçao and Panama); CH = Switzerland; Em Europe = emerging Europe (Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, Turkey and Ukraine); Euro = euro area member states excluding Cyprus, Malta, Slovakia and Slovenia; JP = Japan; Lat Am = Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela; Oil = OPEC member states plus Russia; Other = Australia, Canada, Denmark, New Zealand, Norway and Sweden; UK = United Kingdom; US = United States.

See I Fender and P McGuire, "Bank structure, funding risk and the transmission of shocks across countries: concepts and measurement", *BIS Quarterly Review*, September 2010, pp 63–79.

¹ The size of each circle is proportional to the stock of cross-border claims and liabilities of reporting banks located in that geographical region. Some regions include non-reporting countries. The thickness of a line between regions A and B is proportional to the sum of claims of banks in A on all residents of B, liabilities of banks in A to non-banks in B, claims of banks in B on all residents of A, and liabilities of banks in B to non-banks in A.

Sources: BIS locational banking statistics by residence; authors' calculations.

Graph III.5

Risks

Some risks of gross flows are similar to net flows: sudden stops and inefficient absorption

Large mismatches on international balance sheets also create risks

Gross financial flows give rise to some risks that are very similar to those posed by net flows. Large gross inflows can stop – or even reverse – quickly, leading to a crisis. They might also overwhelm weak or weakly regulated financial sectors – after all, the financial sector intermediates gross, rather than net, flows.

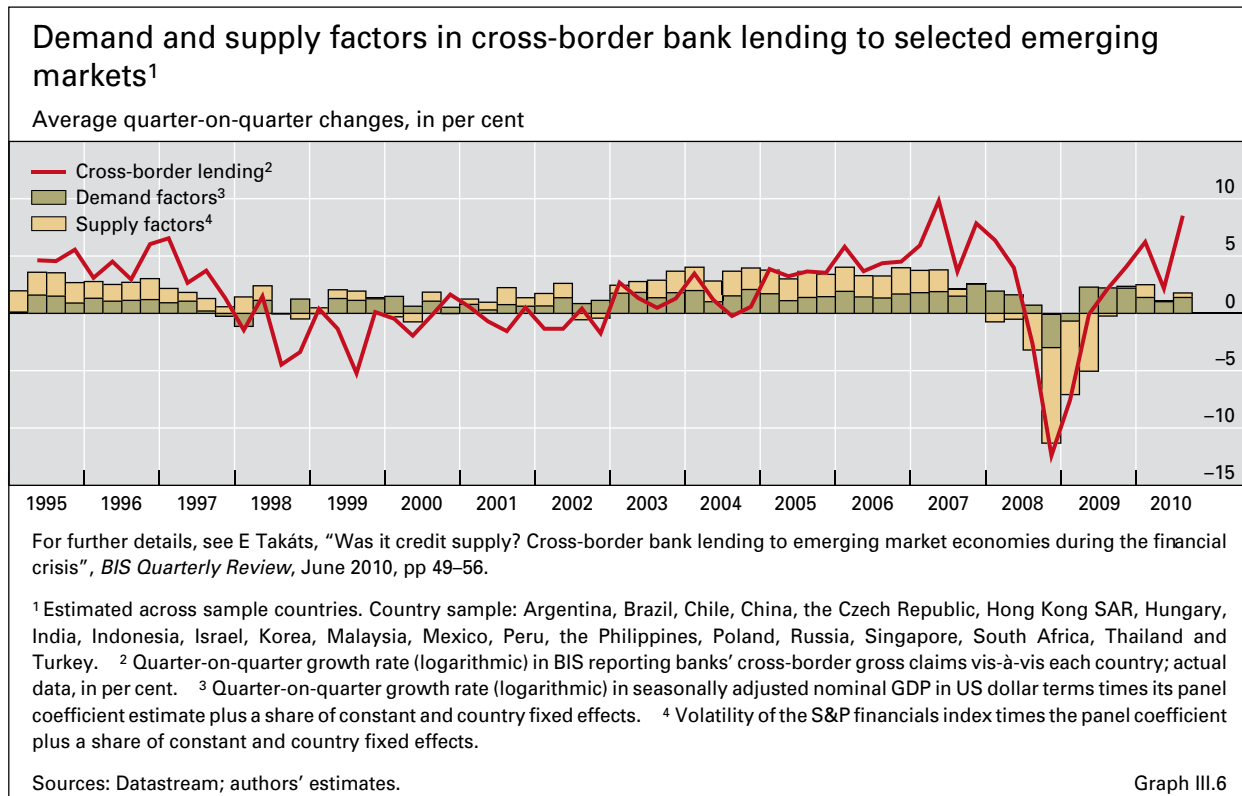
Most importantly, the large balance sheet positions that emerge as a consequence of gross flows can entail risks because the assets (accumulated outflows) and the liabilities (accumulated inflows) are not interchangeable. Foreign assets held by some residents, for instance pension funds, cannot generally be used to repay the cross-border debts owed by some other residents, such as real estate developers. And the currency, liquidity and credit risks of assets and liabilities are also likely to vary considerably: the risk characteristics of the pension fund's equity portfolio are very different from those of the real estate developer's loans.

Of course, the risks associated with gross flows (transactions between residents and non-residents) cannot be considered in isolation; they must be seen in the broader context of domestic balance sheets (transactions among residents). For example, international flows can facilitate rapid domestic credit growth because they represent an additional source of financing beyond what can be obtained from residents alone. Indeed, during credit booms, the external component often increases faster than the domestic one (see Box III.B).

A breakdown of the data on gross flows by major category – reserves, portfolio investment and foreign direct investment (FDI) – reveals the distinctions between assets and liabilities described in the above example. The mismatches on country balance sheets are visibly large even between these highly aggregated major categories (Graph III.4). In Brazil, for example, incoming FDI is far larger than outgoing FDI. Its current account is balanced by the accumulation of reserves plus a smaller amount of other investment. In China, outflows are mostly reserves, and inflows consist mostly of FDI. For the United States, outgoing FDI is slightly larger than incoming FDI. Large portfolio inflows, partly from the reserve accumulation of other countries, finance the current account deficit and also provide low interest funding for the purchase of foreign assets yielding higher returns. The mismatches are even larger at the level of individual economic agents.

Large financial linkages among globally dispersed balance sheets can transmit shocks quickly to hard-to-predict locations in unexpected ways. For example, the severe stress experienced during the financial crisis limited the ability of internationally active banks to supply credit. One result was that cross-border bank lending to various emerging market economies declined

Financial linkages can transmit shocks rapidly



much more sharply than could be explained by demand factors alone (Graph III.6). During the same crisis, some continental European banks were unexpectedly found to have large exposures to the US subprime market that threatened their liquidity and solvency. The challenges of those exposures were particularly severe in economies in which balance sheets were also highly leveraged in terms of domestic assets and liabilities, leaving limited scope for absorbing losses on international positions.

Addressing financial risks

The financial crisis has shown that neglecting financial imbalances can be extremely costly. Without proper regulation to provide the right incentives, large balance sheet linkages and mismatches expose the financial sector, and ultimately the wider economy, to substantial risks.

First line of defence: sound macroeconomic policies, including monetary stability

Sound macroeconomic policies – ensuring monetary stability and sustainable fiscal policies – are the first and best line of defence against the risks of financial imbalances (see Chapter IV on the challenges facing monetary policy). If markets perceive that inflation is becoming unanchored or that fiscal authorities are failing to adequately protect against the risk of sovereign default, investors could trigger forced deleveraging. Such deleveraging could translate mismatched balance sheet positions into a severe domestic macroeconomic contraction with international spillovers. Furthermore, monetary policy can play a role beyond the pursuit of price stability by “leaning against the wind” to moderate outside increases in credit and asset prices.

Second line of defence: improved financial regulation ...

Improved financial sector regulation would complement sound macroeconomic policies by helping prevent crises or limit the fallout from them (see Chapter V). Adjusting capital requirements according to the risk posed by specific balance sheet exposures would strengthen the financial system. Such adjustments would also play a secondary role in reducing the incentives to accumulate large unmatched positions in the first place. Current regulatory reforms under Basel III represent an important step in this regard.

... in particular, the use of macroprudential tools

In particular, macroprudential tools have an important role to play in limiting the build-up of large, mismatched positions on balance sheets. Some emerging market economies have had a good deal of experience recently with macroprudential tools. In central and eastern Europe, loan-to-value or debt servicing ratios were used even before the financial crisis. Some Latin American emerging economies gained experience with the dynamic provisioning pioneered in Spain. And some emerging Asian economies have introduced various macroprudential measures to protect their domestic banking systems from overheated property markets and to limit credit growth. Such tools can safeguard bank balance sheets and reduce the harm that a financial shock can inflict on the wider economy.

Capital controls should be used only in extraordinary circumstances

Capital controls remain the last line of defence against financial imbalances in extraordinary circumstances. They could act as a stopgap measure to slow capital inflows in the short term. Over longer horizons, experience has shown that capital controls mostly change the composition of gross flows rather than their size, but the experience to date is insufficient to show whether the

Box III.B: Global liquidity

Low interest rates for key international currencies have raised concerns about credit conditions globally. This box uses BIS international financial statistics, which track offshore, cross-border credit patterns, to cast light on international aspects of credit growth. Credit conditions are one element of what has come to be known as “global liquidity”.

Towards global credit aggregates

Some currencies are used widely outside their issuing jurisdiction. The decisions of the corresponding monetary authorities have a direct influence on monetary and financial conditions in the rest of the world. The external use of the US dollar, for example, is sizeable and has been increasing. In mid-2010, dollar credit to non-US residents (Graph III.B.1, left-hand panel, “Debt securities booked outside the US” and “International loans”) reached 17% of dollar credit to the non-financial sector worldwide, from 12% in 2000. Excluding the series “liabilities of US government”, the proportion that is the external component is even higher, 23% (up from 15% in 2000).

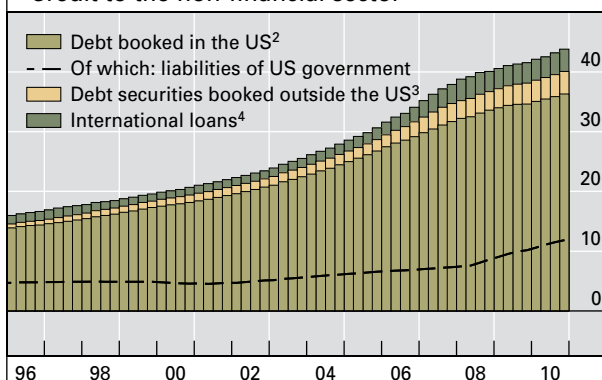
US dollar credit to the rest of the world has tended to grow much faster than credit to US residents, a gap that widened substantially after the crisis (Graph III.B.1, right-hand panel). Dollar credit to households and non-financial businesses in the United States grew at roughly 9% year on year between 2000 and 2007, to reach \$23 trillion, or 166% of GDP, on the eve of the crisis. Over the same period, the growth of dollar credit to borrowers outside the United States was faster, peaking at 30% year on year by mid-2007 to reach \$5.8 trillion, or 15% of the GDP of the rest of the world. In the aftermath of the crisis, credit to private sector US residents declined by \$580 billion between Q3 2008 and Q4 2010. In contrast, after a short-lived dip, credit to non-US borrowers actually rose, by \$749 billion. The expansion has been especially rapid in countries experiencing domestic currency credit booms, such as China.

The international element in domestic credit booms

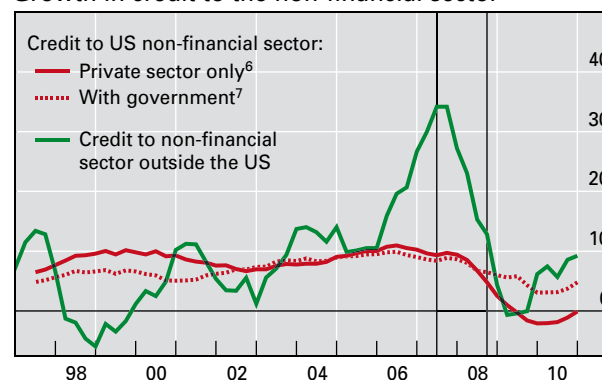
During domestic credit booms, the growth of credit to the private sector tends to outpace monetary growth. Non-bank credit channels tend to be especially active, as the experience with the shadow banking system in the United States shows. Moreover, international sources of finance – direct cross-

Global US dollar liquidity

Credit to the non-financial sector¹



Growth in credit to the non-financial sector⁵



¹ In trillions of US dollars. ² Non-financial sector debt of residents of the United States, which consists of debt securities, mortgages, bank loans, commercial paper, consumer credit, government loans, and other loans and advances; it excludes trade debt, loans for the purpose of carrying securities, and funds raised from equity sources. ³ Outstanding US dollar debt securities issued by non-US entities outside the United States. ⁴ Cross-border and local US dollar loans to non-banks outside the United States. For China, local US dollar loans data are derived from national data on total local lending in foreign currencies and assume that 80% are denominated in US dollars. For other non-BIS reporting countries, local US dollar loans to non-banks are proxied by all BIS reporting banks' cross-border US dollar loans to banks in the country. ⁵ Year-on-year growth, in per cent. The vertical lines represent end-Q2 2007 and end-Q3 2008. ⁶ Total credit to the non-financial sector in the United States minus credit to the US government. ⁷ Total credit to the non-financial sector in the United States.

Sources: People's Bank of China; Board of Governors of the Federal Reserve System; BIS international debt statistics and locational banking statistics by residence. Graph III.B.1

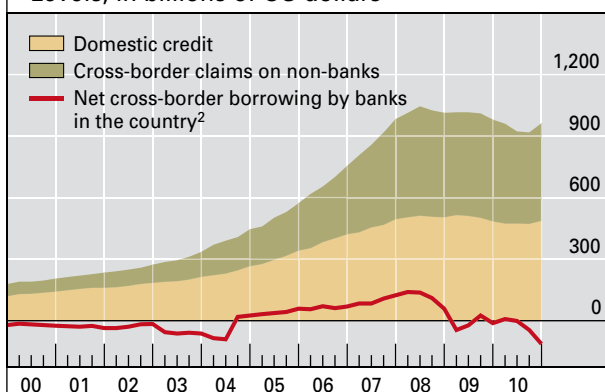
border (“offshore”) lending to non-banks and the cross-border component channelled by resident banks – become more important. That is, during booms these two international components tend to grow faster than the credit granted by banks located in the country.

The case of Ireland is but one example of this regularity. Cross-border claims on non-banks in the country grew at roughly 40% year on year in the three years preceding the crisis (2005–07), a full 10 percentage points higher than the rate of growth of domestic credit (Graph III.B.2, right-hand panel). Moreover, since domestic bank credit grew faster than domestic (non-bank) deposits, banks in Ireland drew on cross-border sources of funds to finance credit growth at home (left-hand panel). Combined, cross-border claims on non-banks and net cross-border borrowing by banks accounted for more than half of total bank credit to non-banks in the country in 2008.

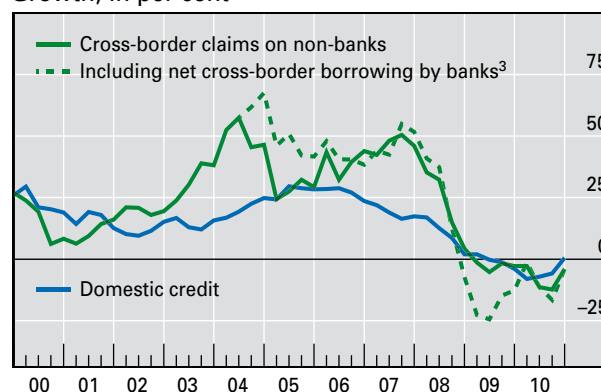
Compared with the external bank financing component, direct cross-border lending to non-banks poses particular challenges to the authorities. First, it can circumvent measures put in place to restrain lending, such as higher reserve requirements, prudential and macroprudential tools (eg tighter loan-to-value ratios) or quantitative credit limits. Indeed, the operation of the countercyclical capital buffer of Basel III envisages an explicit coordinating mechanism between home and host supervisors based on reciprocity agreements in order to prevent circumvention. Second, direct cross-border loans are harder to track than domestic credit. They are excluded from the monetary statistics, which are the typical source of information for credit growth; and the sources of the raw data, such as balance of payments statistics, tend to be comparatively less reliable in this area.

Bank credit to non-banks in Ireland

Levels, in billions of US dollars¹



Growth, in per cent



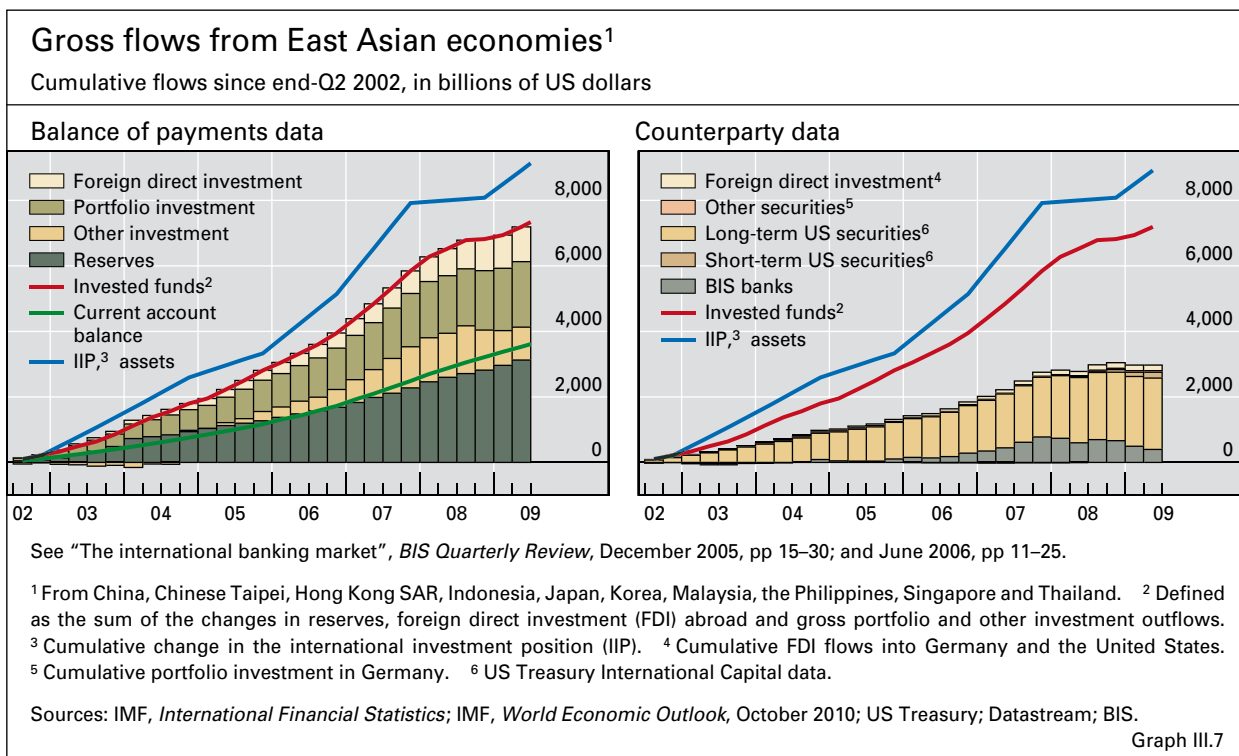
¹ Expressed at constant end-2010 exchange rates. ² Net cross-border borrowing (liabilities minus claims) from all sectors. ³ Includes net cross-border borrowing (if positive) by banks in the country (left-hand panel), under the assumption that this cross-border credit is ultimately passed on to non-banks in the country.

Sources: IMF, *International Financial Statistics*; BIS locational banking statistics by residence.

Graph III.B.2

composition effect helps lower the risks of balance sheet mismatches. Furthermore, capital controls affect only cross-border capital flows (transactions between residents and non-residents) and cannot address domestic transactions and monetary conditions, which are often a much larger component of the build-up of financial imbalances.

The most serious difficulty with capital controls is that, over time, they may distort capital allocation and harm long-run growth prospects. And a risk in the short run is that they may lead to a “race to the bottom”. That is, capital controls in one country might shift capital inflows to other countries, which would in turn face increased pressure to also adopt capital controls. International coordination may be necessary to avoid the overuse of capital controls due to such externalities.



Currently available information about gross flows and balance sheet positions needs to be improved if it is to allow for more than a rudimentary risk analysis (see Chapter VI). Consider the asset accumulations in East Asian economies (Graph III.7). Between 2002 and 2009, these economies together accumulated \$3.5 trillion in current account surpluses (left-hand panel). Over the same period, they experienced gross financial outflows of more than \$7 trillion while the effect of capital gains and other valuation changes pushed up the value of asset positions even further, by almost \$9 trillion (right-hand panel). But currently, only around \$3 trillion of this \$9 trillion can be tracked using available counterparty data. These and similar data gaps must be filled to better assess the risks that may arise from interconnected international balance sheets.

Improved information is also necessary to fully understand the risks

Summing up

Globalisation has greatly improved living standards in both advanced and emerging economies. The enlarged flow of goods and services across borders has allowed wider choices for consumers and greater specialisation along the lines of comparative advantage for producers. Financial globalisation has contributed to more efficient capital allocation across countries and enabled the international diversification of investment portfolios. These benefits, however, have come with risks.

Managing the risks posed by current account imbalances requires structural adjustment to rebalance demand in the long term. In the near term, international coordination to increase exchange rate flexibility could accelerate the ongoing adjustment.

Effectively managing the risks posed by financial imbalances due to gross financial flows requires sound macroeconomic policies supported by policies that strengthen prudential frameworks and the financial infrastructure. Capital controls are best reserved as a stopgap last resort.

A policy that affects one imbalance tends to work in the same direction on the other. For example, a monetary tightening in deficit countries can reduce both types of imbalance by simultaneously shrinking excess domestic demand and reducing incentives for financial sector risk-taking. Conversely, excessively loose (“too low for too long”) monetary policies can exacerbate both imbalances. Furthermore, regulatory and macroprudential measures can limit the size of financial imbalances as well as help the financial system efficiently absorb the inflows associated with current account imbalances. Likewise, fiscal tightening in advanced economies with unsustainable current account deficits will help reduce both their current account deficits and the financial risks stemming from debt sustainability concerns. Finally, increased flexibility of the nominal exchange rate not only assists the adjustment of the real exchange rate that is central to reducing current account imbalances but also reduces inflationary pressures in surplus emerging economies, which is fundamental to managing the risks associated with financial imbalances.

Taking steps such as these to appropriately manage the vulnerabilities created by globalisation is necessary to ensure that it continues to improve economic welfare and living standards across the globe.