The authors of this article are Daniel Garrote, Jimena Llopis and Javier Vallés of the Associate Directorate General International Affairs.  

Introduction

The increase in private-sector debt in the run-up to the Great Recession of 2008 was on a global scale but was particularly acute in the advanced countries. The debt process developed over a prolonged period of macroeconomic stability and intense financial innovation, in which highly favourable monetary conditions and funding availability prevailed. The lengthy period of expansion and leverage ultimately gave rise to an inefficient allocation of resources and the emergence of both domestic and external macrofinancial imbalances (in particular the excessive indebtedness of households and non-financial corporations), whose correction is a necessary condition for resuming a sustained growth path.

Foreseeably, the correction of corporate and household balance sheets will run for a long period. First, because in the phase prior to the crisis, the pace of expansion of lending far exceeded the growth in activity, meaning that the level of debt obtained by the private sector was far higher than that recorded in other expansionary periods. And second, because the financial system in many countries was seriously impaired, and experience shows that bank restructuring processes also need a long time.

In any event, analysis of past episodes of private debt reduction, such as those in Japan and Sweden, show that the scope and speed of such processes is influenced by various factors such as the support of public policies, developments in the external environment and the ability to bring about gains in competitiveness. That explains why the current non-financial private-sector debt reduction process evidences notable differences from country to country, owing both to its intensity and the channels through which it is being routed. This article offers an analysis of how this process is progressing in a selected group of advanced countries – the United States, the United Kingdom, Ireland and Spain – that experienced a marked real estate boom in the previous upturn.

The article is structured as follows. Section 2 describes debt reduction dynamics in the 2009-2013 period in the four countries under analysis, highlighting the differences in the intensity of the process and its sectoral pattern. The third section breaks down the reduction in the debt ratio, in each country, in terms of the contributions of growth, inflation, net financing and restructuring, distinguishing between households and firms, and drawing on the information from the financial accounts. The fourth section analyses in greater detail the ongoing re-composition of corporate-sector debt, in terms of company size and productive sectors. A discussion follows of the role of macroeconomic policies and of the degree of correction of external imbalances when explaining the differences in deleveraging channels from one country to another. Finally, conclusions are drawn.

A salient feature in the developed economies during the run-up to the crisis was the notable debt built up by households and non-financial corporations, which rose to historically high levels in terms of GDP. This increase came about against a background of macroeconomic stability and highly favourable conditions of access to financing, with

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1 This article is a summary of Documento Ocasional no. 1302 by the same authors. Currently, Daniel Garrote is affiliated to the Harvard Kennedy School of Government, and Jimena Llopis is at the Inter-American Development Bank.
low real interest rates and an increase in global saving, in particular that accumulated by the emerging economies.

The increase in non-financial private-sector debt was likewise sharper in the countries that witnessed real estate booms, while in the economies where real estate asset prices remained contained, debt increased much more mildly. This relationship is illustrated in the left-hand panel of Chart 1 for a group of 20 OECD countries over the period 2002-2007. Owing to the rise in the prices of real estate and also stock market assets held by households, the proportion of debt to wealth held stable for much of the upturn, masking growing vulnerability.

As Chart 2 shows, non-financial private-sector debt grew continuously from 2002 in the four economies analysed, peaking between 2009 and 2010. Growth was particularly marked in the case of Ireland, where it rose 165 pp to 330% of GDP and, to a lesser extent, in Spain (up 95 pp to 225% of GDP). Although UK and US debt grew somewhat more moderately, in the former it attained a level similar to Spain’s, given its higher starting level. In the four countries analysed there was a notable increase in household debt, chiefly that earmarked for financing house purchases. Moreover, in the case of the three European countries, and especially in Ireland and Spain, an additional factor of vulnerability developed, associated with the levels reached by corporate debt, in particular that incurred by companies related to the real estate sector.

After the crisis broke, there was a decline in asset prices (house prices in particular), with the subsequent worsening of balance sheets in the non-financial private sector. Owing to the strong contraction in activity in the first half of 2009 and to the inertia of financing flows, the more indebted countries did not begin to correct their debt/GDP ratios until the second half of 2009, with the exception of the United States, which did so in the first half.

While the debt of the non-financial private sector has fallen in the four countries analysed, it has done so at a different pace and degree of intensity in each case, depending on the situation of each economy. Ireland has seen a sharper correction in its debt ratio, both for

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2 Debt is understood as the volume of enforceable liabilities held by each sector, which in the case of the non-financial private sector comprises loans and fixed-income securities. The data analysed are from each country’s financial accounts and are presented in seasonally adjusted terms.
households and firms, departing from very high levels. In the United States, the reduction has been centred on households; in the United Kingdom and Ireland, the reduction in the case of households and firms has been on a similar scale; and in Spain it has been greater at firms.

If a broader group of developed countries is analysed it can be seen that, on average, it is in these economies that a sharper decline in house prices has been observed in which the adjustment of household debt is proving most acute (see right-hand panel of Chart 1).

The pace and pattern of deleveraging are determined by the intensity with which the different deleveraging channels operate, and these may differ from country to country. The change in the debt ratio can be broken down into the contribution of three factors: the change in the stock of debt, GDP growth and inflation. In turn, the change in the stock of debt is the sum of net financing (lending minus repayments), the changes in the valuation of liabilities and the adjustments of amounts or write-offs. As data availability differs from one country to another, this breakdown of the stock of debt cannot always be obtained. Write-offs are all adjustments of amounts that are not due to net financing flows, and include both restructurings and defaults. Although these two items cannot be separated, their impact on agents’ economic decisions can vary greatly.

Table 1 shows the contributions of these factors to the reduction in the debt ratio in the four countries analysed, both for households and for firms. The exercise covers developments from the peak, reached in 2009/2010, to 2012 Q4.

In the United States the debt/GDP ratio fell by 20 pp to end-2012, essentially reflecting the decline in household debt. In turn, two factors have contributed notably to household deleveraging: the pick-up in activity, which has been more buoyant than in the advanced economies on average, and the high volume of write-offs. GDP growth contributed 6.4 pp

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3 See Garrote, Llopis and Vallés (2013) for a more detailed description of this breakdown. In the case of Spain and Ireland, this breakdown is obtained from the financial accounts (although in Ireland no distinction can be drawn between valuation effects and other changes in the stock). In the United States and in the United Kingdom, while both the volume and flows of debt are obtained from the financial accounts (Flow of Funds), it is the Federal Reserve and the Bank of England that offer data on write-offs or charge-offs. In the case of the United States it is not possible to break down the contributions of net financing and of the valuation effects.

4 See IMF (2012).
### Table 1: Determinants of the Debt Ratio in Terms of GDP (2009-2012)

<table>
<thead>
<tr>
<th>Country</th>
<th>Sector</th>
<th>2008 Q1</th>
<th>2012 Q4</th>
<th>Peak Maximum Value Ratio</th>
<th>Change from the Peak</th>
<th>Contributions GDP</th>
<th>Inflation</th>
<th>Net Financing</th>
<th>Valuation Effects</th>
<th>Write-offs</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States (a)</td>
<td>TOTAL</td>
<td>175.3</td>
<td>161.0</td>
<td>2009 Q1 180.3</td>
<td>-19.9</td>
<td>-12.0</td>
<td>-9.6</td>
<td>10.7</td>
<td>-9.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Households</td>
<td>97.5</td>
<td>80.9</td>
<td>2009 Q1 97.5</td>
<td>-16.6</td>
<td>-6.4</td>
<td>-5.1</td>
<td>1.4</td>
<td>-6.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-financial corporations</td>
<td>77.8</td>
<td>80.1</td>
<td>2009 Q1 82.8</td>
<td>-3.3</td>
<td>-5.6</td>
<td>-4.5</td>
<td>9.3</td>
<td>-2.5</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>TOTAL</td>
<td>204.5</td>
<td>202.1</td>
<td>2009 Q3 220.2</td>
<td>-17.1</td>
<td>-6.9</td>
<td>-15.4</td>
<td>3.7</td>
<td>5.0</td>
<td>-6.1</td>
</tr>
<tr>
<td></td>
<td>Households</td>
<td>97.9</td>
<td>94.5</td>
<td>2009 Q2 104.4</td>
<td>-9.9</td>
<td>-3.5</td>
<td>-7.9</td>
<td>6.6</td>
<td>-2.9</td>
<td>-2.2</td>
</tr>
<tr>
<td></td>
<td>Non-financial corporations</td>
<td>106.6</td>
<td>107.6</td>
<td>2009 Q3 117.4</td>
<td>-9.8</td>
<td>-3.5</td>
<td>-7.6</td>
<td>-2.2</td>
<td>7.7</td>
<td>-4.1</td>
</tr>
<tr>
<td>Spain</td>
<td>TOTAL</td>
<td>209.1</td>
<td>213.4</td>
<td>2010 Q2 227.0</td>
<td>-13.6</td>
<td>8.9</td>
<td>-3.4</td>
<td>-10.4</td>
<td>-1.9</td>
<td>-6.8</td>
</tr>
<tr>
<td></td>
<td>Households</td>
<td>81.8</td>
<td>81.6</td>
<td>2009 Q3 86.9</td>
<td>-5.3</td>
<td>3.3</td>
<td>-1.5</td>
<td>-5.2</td>
<td>0.0</td>
<td>-1.8</td>
</tr>
<tr>
<td></td>
<td>Non-financial corporations</td>
<td>127.2</td>
<td>131.8</td>
<td>2010 Q2 140.4</td>
<td>-8.6</td>
<td>5.5</td>
<td>-2.1</td>
<td>-4.8</td>
<td>-1.8</td>
<td>-5.5</td>
</tr>
<tr>
<td>Ireland (b)</td>
<td>TOTAL</td>
<td>245.2</td>
<td>289.2</td>
<td>2010 Q4 328.6</td>
<td>-39.4</td>
<td>-9.0</td>
<td>-11.7</td>
<td>2.8</td>
<td>-16.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Households</td>
<td>108.2</td>
<td>106.1</td>
<td>2009 Q4 127.5</td>
<td>-21.4</td>
<td>-4.0</td>
<td>-1.3</td>
<td>-14.8</td>
<td>-1.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-financial corporations</td>
<td>136.9</td>
<td>183.2</td>
<td>2010 Q4 204.0</td>
<td>-20.8</td>
<td>-5.6</td>
<td>-10.4</td>
<td>12.2</td>
<td>-17.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bank financing, non-financial corporations</td>
<td>91.2</td>
<td>58.6</td>
<td>2009 Q1 102.0</td>
<td>-45.2</td>
<td>1.5</td>
<td>1.8</td>
<td>-11.5</td>
<td>-37.0</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** National financial accounts, Eurostat and Banco de España.

*a* In the case of the United States, the information available does not allow the contributions of net financing and of the valuation effects to be broken down.

*b* In the case of Ireland, it is not possible to separate the contribution of the valuation effects and of write-offs.

Despite their slowing pace, net lending flows to households – excluding write-offs – have continued to grow, overall, at marginally positive rates. Behind these figures lies a more to debt reduction in the period analysed, while the related contribution of write-offs was 6.6 pp. Most of the write-offs were defaulted loans – mainly mortgage loans but also consumer finance loans – derecognised from lenders’ balance sheets as they were considered difficult to collect. The prevalence of mortgage foreclosures in the United States is associated both with the high proportion of low-quality mortgages extended during the years prior to the crisis and to institutional factors that tend to increase the number of bad loans in adverse situations such as the present. Restructurings have also been encouraged by public programmes that support changes in insolvent or delayed-payment mortgages. However, these policies geared to lessening the adverse consequences of mortgage foreclosures, by renegotiating their conditions, have had a limited success. Indeed, the factor that has enabled the mortgage default rate (which rose to 5% in early 2010 and fell to 3% in 2012) to be corrected has been the pick-up in employment and in wages. Nonetheless, mortgage defaults will foreseeably continue to be significant in the near future given that, despite the recovery in house prices, in close to 20% of mortgages the debt outstanding still exceeds the value of the house, a situation habitually known as “underwater” mortgages.

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favourable behaviour of consumer credit, while flows of house loans fell over the period analysed. The microeconomic evidence\(^6\) confirms the significance of the lower volume of new lending, mainly to purchasers of first dwellings, in explaining the decline in the stock of mortgage debt, given the difficulties that sizable household income segments have in gaining access to lending and the tightening of standards by banks.

The deleveraging of US companies has been more moderate, with a cumulative adjustment of 3.3 pp, having stabilised since end-2010 at values of around 80% of GDP. With respect to determinants, the reduction in the corporate debt ratio was assisted by the recovery in activity and, to a lesser extent, by inflation, while the volume of corporate debt continued to grow, albeit at a very low pace. The trend in the volume of debt masks a dichotomy by instrument, namely the contraction in loan flows as opposed to the increase in the issuance of fixed-income securities, which suggests some degree of substitution of financing sources by bigger firms and difficulties in gaining access to credit by the other firms.

In the United Kingdom, the correction of debt to end-2012 totalled 17 pp of GDP, and was similar for households and firms. The adjustment of UK private-sector balance sheets was underpinned chiefly by inflation, which has eroded the real value of the debt, though it has meant at the same time a worsening of real incomes.

In the case of households, the contribution of write-offs to the reduction in debt was 2.2 pp of GDP, lower than in the United States. This was due both to the lower percentage of problem mortgage loans and, above all, to financial institutions’ renegotiation of conditions for loans at risk of default. Slightly more than 11% of loans to households\(^7\) have been subject to renegotiation, which has enabled the impact of impaired real incomes to be accommodated. Overall, net flows of loans, mainly those earmarked for financing house purchases, have held at slightly positive rates meaning that, unlike in other countries, the deleveraging of households has not come about through debt repayment.

In the case of firms, the adjustment was more marked to mid-2011, residing not only on the nominal growth of the economy but also on the decline in net credit flows. By instrument, the notable correction in net loan flows – owing to the lesser demand by firms and the tightening of supply – was partly offset by an increase in fixed-income issues. Write-offs in this sector (which reduced the debt ratio by 4.1 pp) were more significant than in the case of households and were concentrated at real estate firms, which have a higher doubtful loans ratio, a factor that may be restricting the sectoral reallocation of credit.\(^8\)

In Spain, the adjustment in the period to 2012 Q4 was on a somewhat lower scale than that in the United States and the United Kingdom (13.6 pp), and it was based on a strong contraction in credit flows.\(^9\) This reduction in debt has come about in a setting of declining domestic demand and activity, which has checked the fall in the debt ratio, while the contribution of inflation has been modest. Compared with developments in the United States and the United Kingdom, deleveraging in Spain has been more pronounced at companies, which posted a 8.6 pp reduction in the ratio from 2010 Q2 to end-2012. The adjustment has come about owing to the reduction in the stock of debt, both via write-offs

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\(^6\) See Bhutta (2012).

\(^7\) See Kamath, Nielsen and Raynold (2011).

\(^8\) See BIS (2012).

\(^9\) The breakdown of deleveraging in Spain has changed slightly in relation to the details published in Garrote, Llopis and Vallés (2013) owing to the INE revision of GDP in August 2013.
and the decline in net financing flows. Among the write-offs are those arising from the
transfer of banks’ real estate sector-related assets to Sareb (the asset management
company for assets arising from bank restructuring), which has entailed a reduction of
around 4 pp of GDP in non-financial corporate-sector debt.\textsuperscript{10} The decline in net financing
essentially reflects the weakness of demand, in a context of tighter supply-side conditions.\textsuperscript{11}
Moreover, as in the United Kingdom, positive flows of fixed-income securities have
contributed to offsetting in part the contraction in bank financing over recent quarters.

The reduction in the debt of the household sector has been somewhat less (5.3 pp) than in
the corporate sector. The debt ratio stood at 81.6% of GDP at end-2012, mainly as a result
of the contraction in net financing earmarked both for house purchases and for
consumption. Conversely, write-offs have played a lesser role than in other economies.

Owing to its particular circumstances, Ireland has undergone a faster adjustment process
than the other three countries analysed. According to the financial accounts, the debt ratio
was reduced by almost 40 pp, but when figures for bank lending are used this reduction
rises to 65 pp. The difference is primarily due to the number of multinationals that, against
a background of domestic credit restriction, increased their access to external financing,
principally from group subsidiaries. This financing is included in the financial accounts, but
not in the figures reported by banks. Table 1 shows, in addition to the total debt ratio of
households and firms, a breakdown of the ratio of firms’ bank debt. Another special feature
in the case of Ireland is that the information available does not allow the contributions of
valuation changes and write-offs to be distinguished.

The total debt ratio of Irish households fell by 21 pp to end-2012, basically owing to the
contraction of credit flows (which contributed 14.8 pp to this decline). The contraction in
activity involved a sharp decline in employment and wages and, although the fall in interest
rates has reduced the financial effort required of households, the mortgage default rate
increased to 11.9% in mid-2012. However, despite the high volume of loans in arrears,
write-offs do not appear to have contributed significantly to the deleveraging (although the
lack of a breakdown means that this is not entirely clear).

The reduction in the debt of non-financial corporations is affected, as indicated above, by
the behaviour of multinational firms established in Ireland, which have different dynamics
from domestic firms. Bank balance sheet statistics indicate an ongoing contraction in
lending, which is more severe in the case of lending to firms than to households. Thus,
Table 1 shows a reduction of 45 pp when only the bank liabilities of firms are analysed
(two-thirds of the total), attributable to the fall in financing (11.5 pp) and, in particular, write-
offs (37 pp).\textsuperscript{12}

Table 2 summarises the above analysis of the main factors to have contributed to the
reduction in the debt of firms and households between 2009 and 2012, in the four economies

\textsuperscript{10} The transfer of banking system loans to Sareb was part of the sector’s clean-up, recapitalisation and
restructuring programme. Overall, the amount of assets transferred by banks to Sareb – including not only loans
but also foreclosures – from December 2012 to February 2013 was €106.1 billion (the amount by which the
banking sector’s assets were reduced); an average haircut of somewhat over 50% was applied to the book
value of these assets, meaning that they are recorded in Sareb’s balance sheet with a value of €50.7 billion (see
Banco de España, 2013).

\textsuperscript{11} See Ayuso (2013).

\textsuperscript{12} The National Asset Management Agency (NAMA), which was specifically set up to manage the assets arising
from bank restructuring following the bursting of the property bubble in Ireland, acquired non-performing assets
from banks with a value equal to 45% of GDP in 2009, which involved the recognition of a loss of 57% of the
value of the portfolio. NAMA is part of the non-bank financial system.
selected. The channels through which deleveraging has taken place have differed, especially when Ireland and Spain, where the main factor of debt reduction has been the fall in net lending (and write-offs in the case of firms), are compared with the United States and the United Kingdom.

The experiences of Japan and Sweden in the 1990s also highlighted different deleveraging channels. In the case of Japan, the crisis commenced at the beginning of the 1990s, but the process of debt reduction did not begin until 1998 and was channelled through contracting credit flows; the recovery in activity only contributed from 2003. In Sweden, by contrast, rapid bank deleveraging led to a sharp contraction in credit and recovery arrived after three years, underpinned by currency depreciation and the favourable behaviour of external demand. 13

The process of deleveraging of non-financial firms varies, depending on the size of the firm and its sector. The analysis of this process is especially relevant in the case of the three European countries, which have a much higher level of corporate debt than the United States.

In terms of firm size, financing to SMEs is generally observed to have worsened more in the advanced economies. Bank lending surveys show that credit conditions became more restrictive from 2008, this pattern being especially pronounced in the case of smaller firms. This evidence is corroborated by business surveys [see, for example, ECB (2013) for the euro area], which show that the access to financing is one of the biggest problems facing SMEs. These firms are more dependent on bank financing and have been those most seriously affected during the crisis, while the large firms have tried to replace it by issuing fixed-income securities.

The evolution of corporate debt by productive sector shows that before the crisis it was loans to the real-estate sector that increased most sharply, in terms of GDP, in the countries analysed. By country, it was Irish real-estate firms and, to a lesser extent Spanish ones, which became most indebted (with increases of 55 pp and 30 pp to 70% and 45% of GDP, respectively, by early 2009), while in the United Kingdom the increase was less than 25 pp (Chart 3, left-hand panel). Following the crisis, it was the lending to this sector that was corrected most, and the sharpest adjustment was in Ireland (for the reasons mentioned above), where the debt of real-estate firms returned to levels of less than 40% of GDP within three years. However, despite the adjustment, debt levels in Ireland and Spain are still well above the euro area average.

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13 See Garrote, Llopis and Vallés (2013), who quantify the deleveraging channels in Japan and Sweden in the 1990s.
The counterpart of the sharper correction of indebtedness in construction-related sectors in the economies that suffered a “property boom” is the sharp deterioration in residential investment since the start of the crisis. Ireland and Spain are the two economies in which the correction has been greatest. In Ireland, residential investment fell from 13% of GDP in 2007 to 1.5% in 2013, while in Spain it fell from 12% to 4.6% over this period. In the United Kingdom, by contrast, the reduction has been smaller, from 6% to 3.5%.

In the other productive sectors the reduction of credit flows has been broadly based, although less pronounced than in the real-estate sector (Chart 3, right-hand panel), except in the United Kingdom (where the adjustment in other sectors, from 26% to 17%, was greater than in construction and real-estate services, in which it barely amounted to 5 pp of GDP).

The response of macroeconomic policies (monetary and fiscal) to the financial crisis in each country has influenced the rate of private deleveraging. Since 2008, monetary policies have been markedly expansionary in the advanced economies, albeit with certain differences between the United States, the United Kingdom and the euro area, since they are adapted in each case to the characteristics of the financial system and institutional framework. The actions of central banks, apart from providing liquidity to the financial system and facilitating deleveraging, have involved a reduction in real interest rates and in the debt burden of firms and households. The decline in the interest burden has been significant in the United States and in the United Kingdom, and has served to support demand. In the euro area, the financial fragmentation caused by the sovereign crisis has hampered the transmission of expansionary monetary conditions in Ireland and Spain.

As for fiscal policies, at the start of the crisis both automatic stabilisers and the discretionary measures adopted allowed the fall in activity to be contained, the purchasing power of households and firms to be sustained and, in some cases, the restructuring of the debt of the most vulnerable private-sector groups to be promoted. In line with past experience, public debt has increased notably, in tandem with the consolidation of private balance sheets, partly owing to the public support for the restructuring of the financial sector, and it can only be expected to stabilise and start to fall when activity recovers.

Chart 4 shows how the public debt-to-GDP ratio has been increasing since 2008 in the four countries analysed, while private debt has begun to fall. The increase in public indebtedness
has been very pronounced, more than offsetting the reduction in private indebtedness in all the countries, so that the total indebtedness of the economy has increased. Moreover, the sharp increase in public debt has involved a notable reduction in the fiscal space available to these countries. Against this background, the four countries analysed initiated public finance consolidation processes in 2009, albeit at different rates, the most intense being in Ireland and Spain, the two euro area countries.

When moving from analysing stocks (indebtedness) to analysing flows of financing, the size of the changes in the patterns of financing of the economies analysed is apparent. As seen in Chart 5, during the years leading up to the crisis in 2008, the non-financial private sector ran a persistent deficit in the economies analysed (except the United Kingdom), which was especially large in the cases of Ireland and Spain (10% and 13.5% of GDP respectively). However, following the outbreak of the crisis in 2008 there was a rapid adjustment which resulted in firms and households recording surpluses. In all the economies this improvement was based on a correction of investment and a rise in private saving, except in Ireland, where the adjustment was concentrated in investment decisions.

In consequence, and despite the increase in public sector net borrowing, the net borrowing of the economy as a whole is declining. The left-hand panel of Chart 6 shows that the reduction in the current account deficit is much more pronounced in the two euro area countries. This greater adjustment of the net external borrowing of Spain and Ireland, relative to the United States and the United Kingdom, is matched by a substantial improvement of net external demand in these countries, given the rise in exports stemming

SOURCES: National financial accounts and Eurostat.
from competitiveness gains due to cost reductions and the fall in imports caused by the contraction of domestic demand.

This correction has enabled the net international investment position to stabilise in both countries (Chart 6, right-hand panel) at a negative level of around 100% of GDP. This position entails a persistent element of vulnerability and leads to a negative income balance, which means that, to keep the current account in positive territory, the other balances, in particular the trade balance, need to be in surplus.

Conclusions

This article has documented the process of reduction in the debt ratios of the non-financial private sector, and the channels through which this has taken place, in four of the economies that have experienced major asset value corrections following the global financial crisis: Spain, the United States, Ireland and the United Kingdom.

In the United States and the United Kingdom, the debt ratio of the non-financial private sector was reduced by around 20 pp of GDP between 2009 and 2012, while in Ireland the correction was 40 pp. In Spain the correction to end-2012 was somewhat smaller (14 pp) but it increased in the first half of 2013 to reach a total of 23 pp, similar to its magnitude in the United States and the United Kingdom. Analysis in terms of agents shows that in the United States the reduction in debt has been more intense in the case of households, while...
in Spain it has been greater in the corporate sector, and in the United Kingdom it has been evenly distributed between households and firms. Meanwhile, in Ireland the unwinding has been very intense in both cases, and has reached even more significant levels when only the bank debt of non-financial firms is taken into account.

Deleveraging is taking place through different channels in different countries. In the United States, the factors that have contributed most have been the improvement in economic activity and household debt write-offs. In the United Kingdom inflation has predominated as a way of eroding the value of debt. In Spain, the reduction in net flows of financing is more important; and in Ireland, the fall in financing, along with write-offs, predominates in the case of firms. At the same time, in the three European countries considered there has been a change in the composition of corporate debt, characterised by a sharper contraction in financing to construction and real-estate services sectors.

The patterns of adjustment observed to date have been driven by the macroeconomic policies adopted in each case and by the developments in external financing. At the beginning of the crisis, the introduction of different non-standard monetary policy measures and of expansionary fiscal programmes facilitated deleveraging in the private sector, with varying intensity in each case. However, the rapid rise in public debt forced governments to launch fiscal consolidation processes, with the result that fiscal policy stances have become highly contractionary in recent years. Also, the sharp contraction in net external financing in Ireland and Spain has led to a more pronounced adjustment of domestic demand and disposable income in these countries.

To sum up, although significant progress has been made correcting the excessive indebtedness of the non-financial private sector that built up during the final phase of the upswing in the advanced economies (and, in particular, in those that experienced a property boom), attaining debt ratios that are sustainable in the medium term requires further progress. In a context of low growth, these advances are slower and more difficult, so it is vital that this necessary process of deleveraging at the aggregate level is compatible with the channelling of funds towards the financing of new investment projects that enable the recovery to be put on a more sustainable footing.

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