

## Private debt – *status quo*, need for adjustment and policy implications

*The debt crisis in some euro-area countries is not confined to the public sector. In the years running up to the financial and economic crisis, which were characterised by favourable financing conditions, some euro-area countries experienced unsustainable economic upturns driven by domestic demand, which were primarily financed via the domestic banking sector. The associated significant rise in non-financial private sector debt is a key cause of the crisis. Confidence in the sustainability of private debt was shaken after it became evident that the income available to service debts, and moreover realisable assets, were considerably and fundamentally lower than had previously been assumed. To overcome the crisis, a reliable outlook for dealing with and reducing excessive debt is required.*

*The euro area as a whole has seen debt ratios move sideways since the outbreak of the crisis. However, the underlying developments are heterogeneous in nature and vary both among countries and among sectors in the countries concerned. An analysis of euro-area debt developments, particularly a comparison with previous episodes of private debt overhang, shows that the related adjustment process has not yet been completed. The fact that it is not clear who will ultimately have to bear potential losses is particularly problematic. The national banking systems in question are still saddled with a large amount of non-performing loans, meaning that there might be further need for adjustment in this respect. This uncertainty and the possible need for government aid can, in turn, knock confidence in public finances.*

*Persistently high debt among households and non-financial corporations, as well as uncertainty about how to tackle the problem, can dampen economic developments in the longer run. It is therefore incumbent on national economic policymakers to ensure that, in the context of the adjustment processes, the reduction of sectoral debt overhang can be supported by vital restructuring and rigorous write-downs. This requires a realistic assessment of the quality of existing claims in the banking system and adequate capitalisation of the latter in a timely manner. The upcoming comprehensive assessment (CA) in those countries participating in the banking union should be a key milestone in this respect. It should shed light on how any financial burdens are distributed, thereby providing a reliable outlook for the banking systems and for public finances. This is all the more the case given that monetary policy can only assist in overcoming the crisis and is not itself the solution. A strongly accommodative monetary policy stance over an extended period of time can unintentionally even play a role in delaying the necessary adjustment processes, particularly the repair of unsustainable balance sheets.*

## Development and structure of debt

### Debt in the run-up to the crisis

*Macroeconomic imbalances in run-up to crisis accompanied by high levels of private non-financial sector debt in some countries*

The years leading up to the financial and economic crisis saw a build-up of macroeconomic imbalances within the euro area (see pages 19 to 37). In some euro-area countries,<sup>1</sup> favourable financing conditions and high income expectations fuelled the creation of an economic boom, financed via the domestic banking sector in particular.<sup>2</sup> The pronounced level of leveraged investment activity in the non-financial corporate sector focused primarily on less productive fixed capital formation in the real estate sector. Buoyed by rising property prices, households also had a greater propensity to run up debt in order to finance spending on real estate, as well as on consumption.

Since the mid-1990s, sectoral debt ratios<sup>3</sup> have increased significantly throughout the euro area, especially in Portugal, Ireland and Spain (see the chart on page 55). In particular, corporate debt in Portugal and household debt in Ireland were comparatively high even before the introduction of the euro. Although the debt ratios for Italy and Greece mostly recorded above-average growth, having started from a relatively low level, they nevertheless always remained below the euro-area aggregate ratio. However, debt ratios are based on actual sectoral income and are thus understated for the period prior to the crisis, owing to the unsustainably high level of economic output, as is the scale of the decline during the current downturn.

*Corporate debt primarily via long-term bank loans and household debt via long-term mortgage loans*

The increase in euro-area debt levels is primarily attributable to long-term bank loans and, in the case of non-financial corporations, additionally to intra-sector lending (particularly intra-group loans). The build-up of equity largely lagged behind growth in debt, thereby weakening enterprises' capital position. Against the backdrop of the investment boom, long-term mortgage loans dominated household debt

and gained momentum in Ireland and Spain in particular from 2003 onwards. A large proportion of mortgage loans were floating rate contracts, especially in Spain and Portugal.<sup>4</sup> Such contracts generally have a higher interest rate risk, but in periods of falling interest rates they can noticeably ease the debt servicing burden.

It should be noted, as a general point, that the accumulation and scale of private debt are not only influenced by (sectoral) income and expectations in this regard, but also by a country's institutional framework, and that the underlying factors must be borne in mind when analysing debt developments. A case in point is the Netherlands, where under the terms and conditions of most housing loan contracts only interest has to be paid during the term of the loan. The actual repayment is not due until the loan has reached maturity. During the lifetime of the loan, there is usually a commensurate formation of assets, which is reflected in the statistics in the form of higher financial assets. This results in systematically higher debt ratios which are, however, not accompanied by an increased debt servicing burden. Furthermore, in the Netherlands, as was the case in Spain until 2011, interest payments on housing loans are tax-deductible, reducing the debt servicing

*Institutional framework has significant impact on debt level*

<sup>1</sup> Owing to a lack of data on the debt and income of households and non-financial corporations, Cyprus is not examined in greater detail in this chapter.

<sup>2</sup> The significance of the external sector in the financing of the domestic banking sector is discussed on pp 67-78.

<sup>3</sup> Debt ratios show the debt of a sector in relation to a (sectoral or aggregate) flow of income. Debt is defined as total outstanding liabilities (unconsolidated) in the form of securities (excluding equity), loans and insurance technical reserves. The data are based on the results of the financial accounts, which are collected for all euro-area countries in accordance with uniform methodological requirements. The latter stipulate inter alia a market valuation of all balance sheet items. For a detailed description of conceptual issues, see Deutsche Bundesbank, Financial accounts for Germany, Special Statistical Publication 4, June 2013.

<sup>4</sup> For the euro area, see Eurosystem Task Force (2009), Structural Issues Report 2009: Housing Finance in the Euro Area, Occasional Paper No 101; and, for examples for Spain, see J Malo de Molina and F Restoy (2004), Recent Trends in Corporate and Household Balance Sheets in Spain: Macroeconomic Implications, Occasional Paper No 0402, Banco de España.

burden for any debt and providing greater incentives to borrow.<sup>5</sup>

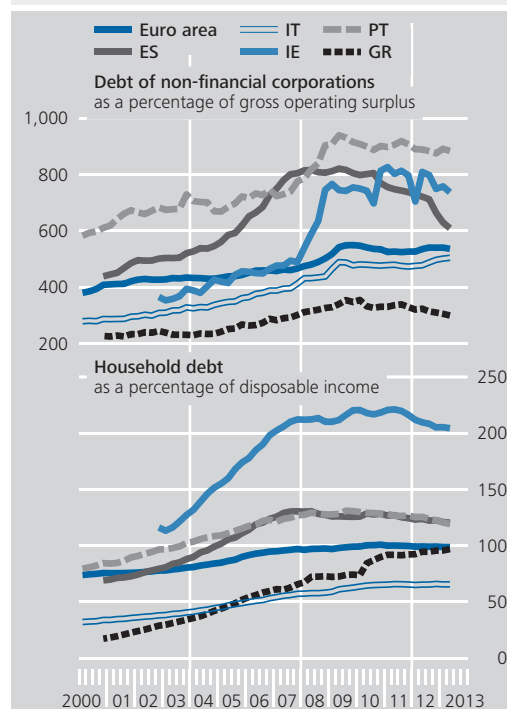
## Debt ratio developments: breakdown into redemption, valuation and growth contributions

The onset of the financial and economic crisis saw a re-evaluation of income prospects and asset prices and the repricing of risk, compelling the private sector to make large-scale balance sheet adjustments. These were particularly necessary in those countries whose non-financial private sectors had especially high debt servicing burdens (interest and redemption payments).

*In euro area as a whole, sideways movement in debt ratios since start of crisis, with great heterogeneity at country level*

In the euro area as a whole, non-financial private sector debt ratios have moved sideways or edged higher since the start of the crisis. When interpreting this development, a distinction must be made between the contribution of debt, which has increased in the euro area as a whole, and that of (nominal) income. While households saw their disposable income pick up, the gross operating surplus of non-financial corporations decreased (see the chart on page 56). However, developments differed across the euro area. For example, Italy and households in Greece recorded a rise in debt ratios. While in Italy this increase was due to both positive transactions, ie a build-up of debt, as well as to dwindling income, for Greek households, transaction-based deleveraging, ie the redemption of liabilities, was overshadowed by weak macroeconomic developments. Only the Spanish non-financial private sector and households in Ireland and Portugal have consistently seen a significant transaction-based decline in debt ratios since 2010, in some cases despite weak income developments. The interest burden faced by the non-financial private sector has diminished markedly since the outbreak of the crisis in an environment of low interest rates, effectively increasing the loan repayment capacity.

### Debt ratios\*



Source: ECB. \* The chart starts in 2000 owing to a lack of data for the 1990s or the available data not being conceptually comparable.

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## Need for adjustment in euro-area private sector balance sheets

### Euro-area private debt overhang in a historical context

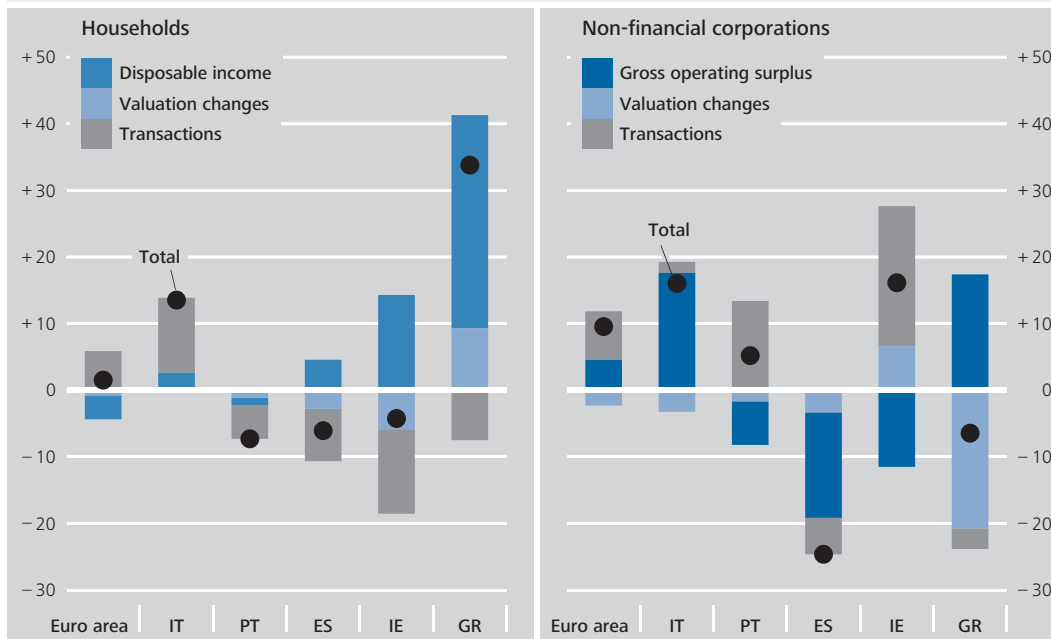
Previous episodes of private debt overhang show that the adjustment processes for reducing the overhang generally go hand in hand with weak economic growth and heavy job losses (see the chart on page 57).<sup>6</sup> Although

*Previous private sector debt crises were mostly followed by periods of weak economic output, ...*

<sup>5</sup> See Eurosystem Household Finance and Consumption Network (2013), The Eurosystem Household Finance and Consumption Survey: Results from the First Wave, Statistics Paper No 2, April 2013; and IMF (2011), Spain: Selected Issues, IMF Country Report, No 11/216.

<sup>6</sup> Empirical studies show that increased unemployment in balance sheet recessions can be explained to a significant extent by the level of private debt. See A Mian and A Sufi (2013), What Explains High Unemployment? The Aggregate Demand Channel, *Econometrica*, forthcoming; and S Jauch and S Watzka (2013), The Effects of Household Debt on Aggregate Demand – The Case of Spain, CESifo Working Paper No 3924.

### Contributory factors in the percentage change of sectoral debt ratios after the crisis\*



Source: ECB and Bundesbank calculations. \* Between 2008 Q3 and 2013 Q2. Transactions comprise changes in debt ratios resulting from debt capital being taken up or repaid. Valuation changes comprise inter alia write-downs on outstanding claims and price changes. As the corresponding data are not directly available for the most part, they are calculated from the difference between the change in the total debt ratio on the one hand and the transaction and denominator effect on the other. The figures thus also include reclassifications.

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the individual episodes bear different hallmarks, such as the percentage of debt denominated in foreign currency or the creditor structure, which complicate any comparison, the intensity of the preceding debt accumulation nonetheless typically appears to influence the scale of the ensuing downturn.<sup>7</sup>

*... but euro-area developments were more pronounced than in the past*

In principle, a similar pattern emerges for the euro-area countries in question. However, a comparison reveals that both the debt dynamics prior to the crisis and the subsequent recession were at times more marked than in previous private sector debt crises. Much like in earlier crises, the euro area, too, saw a decline in consumption and investment after the onset of the crisis owing to a shift in framework conditions and significant changes in behaviour. Unsustainable current account balances shrank and saving ratios rose. Households and non-financial corporations curbed their spending so that they could service their debts and ease the financial burdens associated with high debt

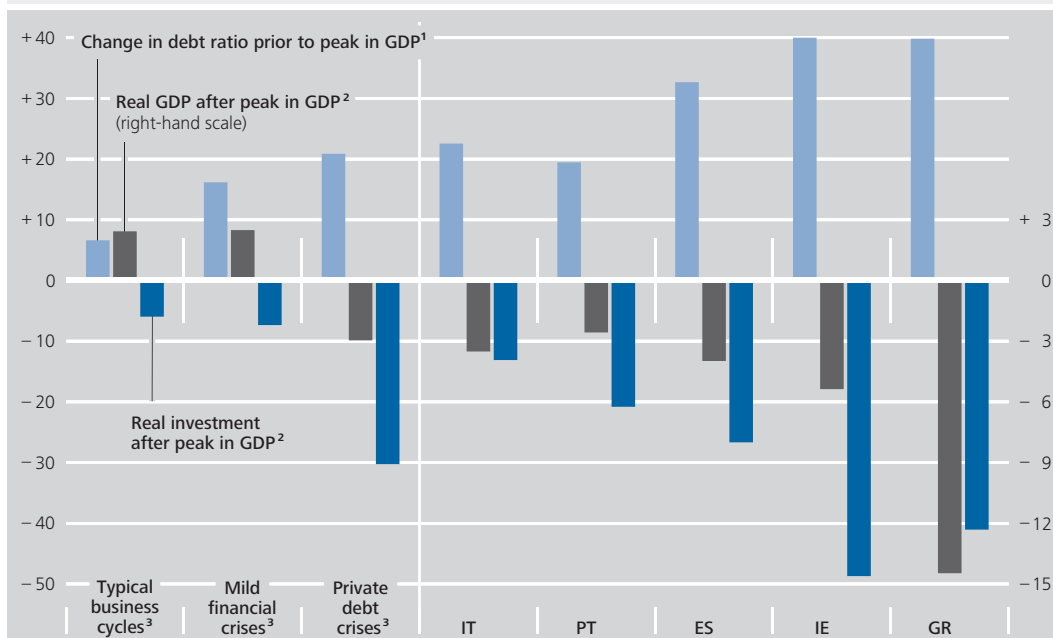
levels.<sup>8</sup> When analysing the nature of the adjustment to the new framework conditions, it must also be taken into account that the option of adjusting nominal exchange rates in order to improve price competitiveness, support economic growth and reduce the real debt burden in the country's own currency is not available (see pages 67 to 78). In debt crises with flexible exchange rates, this constituted an important stabilisation instrument.<sup>9</sup>

<sup>7</sup> See O Jordà, M Schularick and A M Taylor (2013), *When Credit Bites Back*, *Journal of Money, Credit & Banking*, forthcoming; and G Dell'Ariccia et al (2012), *Policies for Macro-Financial Policies: How to Deal with Credit Booms*, IMF Staff Discussion Note, No 12.

<sup>8</sup> Furthermore, a high debt level combined with an increased threat of insolvency reduces the incentives for enterprises to profitably expand their investment activities because creditors will receive more of the associated proceeds than equity investors. See C Hennessy (2004), *Tobin's Q, Debt Overhang and Investment*, *Journal of Finance*, 59, 4, pp 1717-1742; and O Lamont (1995), *Corporate-Debt Overhang and Macroeconomic Expectations*, *American Economic Review*, 85, 5, pp 1106-1117.

<sup>9</sup> See E Takáts and C Uppér (2013), *Credit and growth after financial crises*, BIS Working Paper, No 416.

### Private debt accumulation and subsequent real economic activity by historical standards (since 1970)



Source: Data are based on figures from the BIS, ECB and M Schularick and A M Taylor (2012), Credit booms gone bust: Monetary policy, leverage cycles and financial crises, 1870-2008, American Economic Review, 102, 2, pp 1029-1061. <sup>1</sup> Absolute change during the five years prior to the peak in real GDP in percentage points. <sup>2</sup> Percentage change during the three years after the peak in real GDP. <sup>3</sup> For country selection and classification of historical cycles, see Eurosystem task force (2013), Structural Issues Report, Corporate finance and economic activity, Occasional Paper ECB No 151. Average value of the countries under review.  
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*Downturn always particularly pronounced if economic boom excessively debt-financed*

By contrast, in typical economic downturns without a financial or debt crisis, the real economic contraction is significantly milder. Debt dynamics also resemble earlier patterns in most cases (see the chart on page 58). However, if investment and consumption during the period of expansion were excessively financed by debt, this typically led to a correction in the form of deleveraging, and the “bursting” of the debt bubble brought a sharper real economic contraction in its wake.

*Deleveraging in euro area fairly subdued so far*

Compared with previous episodes of private debt overhang, it is clear that the adjustment process in the euro area following the acute phase of the financial crisis has so far taken place at a fairly gradual pace. This is especially true given the exceptionally sharp increase in debt ratios in the run-up to the crisis. Although progress has recently been made in deleveraging, debt ratios in the non-financial private sectors of the countries under review have, with the exception of Spain, remained stubbornly

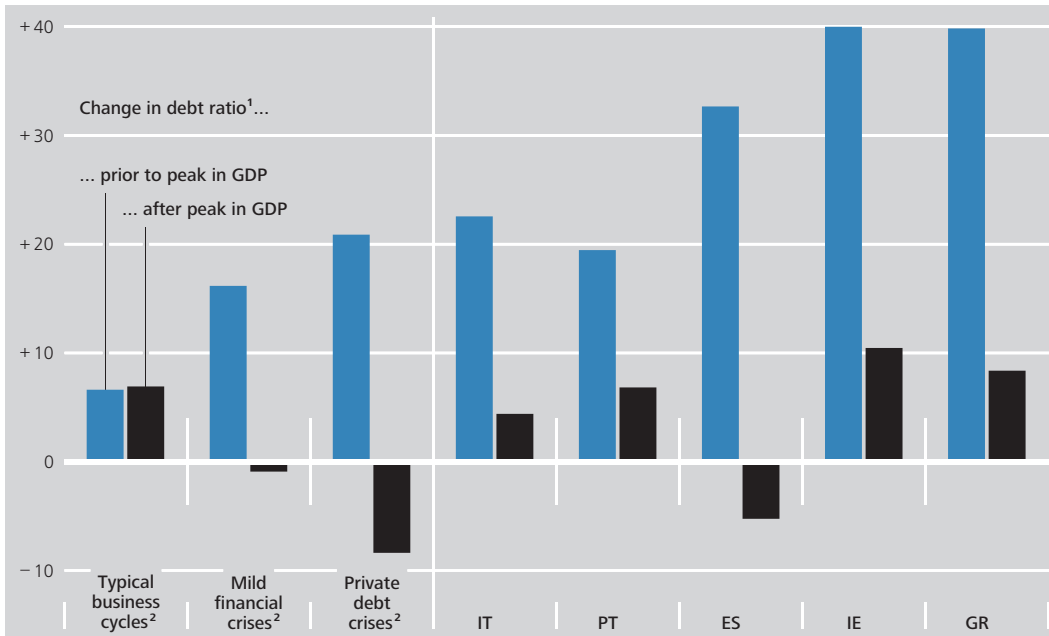
above their 2008 levels. In previous private sector debt crises, however, deleveraging over the same period of time proceeded at a much brisker pace on average, reflecting *inter alia* the rapid and extensive restructuring of the debtor and creditor sectors and the associated stabilisation of sectoral income. Overall, this indicates that there remains a marked need for adjustment in the euro-area countries in question.

### Quantifying the need for private sector deleveraging in the euro area

In principle, it is possible to try to calculate the potential deleveraging needs in the individual sectors using debt ratios that are consistent with the respective fundamentally justified macroeconomic and institutional developments in the long term. However, determining reference values for appropriate debt ratios poses a considerable challenge. As they are not directly

*Equilibrium debt ratios cannot be observed and have to be estimated*

### Debt accumulation and subsequent adjustments in the balance sheets of the non-financial private sector by historical standards (since 1970)



Source: Data are based on figures from the BIS, ECB and M Schularick and A M Taylor (2012), Credit booms gone bust: Monetary policy, leverage cycles and financial crises, 1870-2008, American Economic Review, 102, 2, pp 1029-1061. **1** Absolute change during the five years prior to and after the peak in real GDP in percentage points. **2** For country selection and classification of historical cycles, see Eurosystem task force (2013), Structural Issues Report, Corporate finance and economic activity, Occasional Paper ECB No 151. Average value of the countries under review.

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observable, such reference values have to be at least approximately estimated. One option is to derive threshold values from the development of debt ratios in the past, using statistical filter techniques and (long-term) averages. Based on the concept of the sustainability of sectoral balance sheets, it is furthermore possible to determine the level of debt ratios beyond which debt is a significant drag on economic growth.<sup>10</sup>

*Econometric modelling of equilibrium debt entails problems*

Another way of quantifying deleveraging needs is to calculate the debt overhang or underhang as a measure of the extent to which actual debt deviates from empirically estimated hypothetical equilibrium levels. Equilibrium debt developments are obtained by means of an econometric estimate of the long-term relationship between debt and a range of explanatory variables which in empirical terms have a stable correlation with debt developments either within a country over time or across several countries. However, in practice, estimating equilibrium debt levels and the resulting debt

overhangs entails a host of conceptual problems. Therefore, the results are considered to be of limited informative value.

Although all means of quantifying the need for adjustment are fraught with considerable uncertainty, the various approaches and the historical comparison in particular indicate that households and non-financial corporations in the countries concerned still need to significantly reduce their debt in many cases. This directs attention to the creditors and thus in particular to domestic banks, whose balance sheets reflect the predominantly bank-based build-up of debt in the non-financial private sector.

*High deleveraging needs place spotlight on banks as creditors of non-financial private sector*

<sup>10</sup> See S Cecchetti, M Mohanty and F Zampolli (2011), The real effects of debt, BIS Working Paper, No 352; R Bouis, A K Christensen and B Cournède (2013), Deleveraging: Challenges, Progress and Policies, OECD Working Paper, No 1077; and C Cuerdo, I Drumond, J Lendvai, P Pontuch and R Raciborski (2013), Indebtedness, Deleveraging Dynamics and Macroeconomic Adjustment, Working Paper from the series Economic Papers of the European Commission, No 477.

## Deleveraging in the banking sector

*Banking business in the periphery countries hit hard by the crisis*

In the autumn of 2008, the repricing of risk in the wake of the financial crisis put a sudden brake on balance sheet growth among banks in the euro area. The prospect of a tightening of regulatory capital and liquidity requirements – a necessary step to safeguard financial stability – likewise had a general dampening effect on banking business. In the countries on the periphery of the euro area, where the build-up of leverage in the non-financial private sector had led to above-average growth in bank balance sheets, the crisis revealed problems stemming from this overly risky business model. In addition, the major macroeconomic adjustment process in the periphery countries – along with the resulting decline in borrowers' creditworthiness – and the "doom loop" brought about by the financial ties between the banking and public sectors considerably weakened the resilience of the banking industry.<sup>11</sup>

*Varying intensity and speed of adjustment process across different countries, but common underlying patterns*

The resulting adjustment process in the banking sectors of the euro-area periphery countries has reduced the total assets on their aggregated balance sheets. However, the intensity and speed of this fall have varied across the different countries and are closely connected with the conditions attached to the support they have received from the international community. While Irish banks have been cutting their balance sheets steadfastly since early 2009, Portuguese and Spanish banks did not begin this process until 2011 and 2012, respectively, and problematic assets have also been channelled out of the Irish and Spanish banking sectors. The amount of non-performing loans in the Irish, Spanish and Portuguese banking sectors is still on the rise, and this will probably make a swift return to higher profits more difficult and take up more and more capital cover even among banks which have just been recapitalised. The Greek banking sector was recapitalised via the adjustment programme, but its domestic bank balance sheets have not yet undergone a similar process of re-

pair to those in the aforementioned countries, which has notably involved a sweeping reduction in problematic assets.

The process of restructuring bank balance sheets has entailed a reduction of claims on the non-financial private sector, a shift in the risk structure of assets – also extending to other balance sheet items – and a strengthening of the capital position (see chart on page 60). The decline in assets on bank balance sheets in the periphery countries (apart from Ireland and Cyprus) has largely affected loans to the domestic non-financial private sector and, unlike in the case of globally interconnected German banks, has had less of an impact on derivatives, inter-bank loans and foreign assets. This is due to the domestic focus of those banking sectors<sup>12</sup> and the prior build-up of leverage in the non-financial private sector.

As deleveraging in the non-financial private sector is still ongoing and economic activity is weak in some countries, a major part of the fall in loans is due to demand-side factors.<sup>13</sup> An additional factor is that, for enterprises in some of the countries discussed in this article, including Spain and Italy, the relative importance of bank loans has diminished, with firms turning to alternative funding options such as equity and bond issuance (see pages 67 to 78). The results of the Bank Lending Survey (BLS) indicate that, particularly in the second half of 2011 and thus shortly before the Eurosystem substantially increased the liquidity supply by performing three-year longer-term refinancing operations (LTROs), bank-side factors also played their part in the tightening of credit

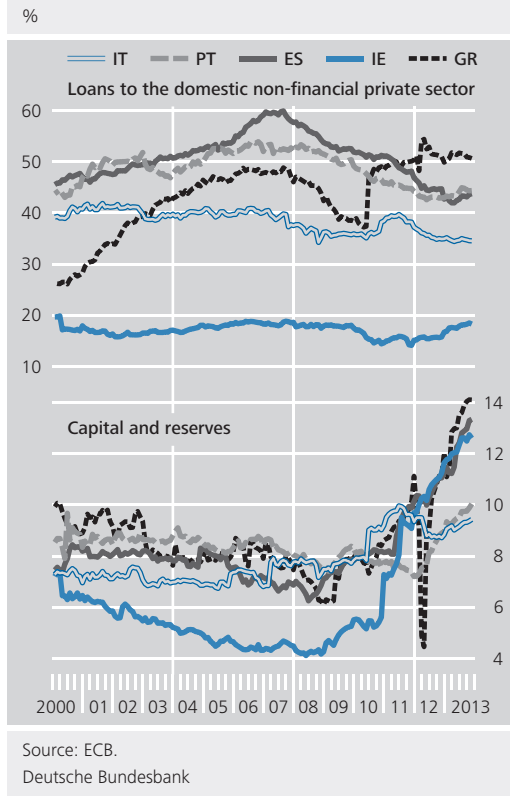
*Restructuring of bank balance sheets: reduction of claims on the non-financial private sector, ...*

<sup>11</sup> Although these factors are intertwined and mutually reinforcing, the main problem in the Irish, Spanish and Portuguese banking sectors was high private sector debt, coupled with burst real estate bubbles in Ireland and Spain, while the woes of the Greek banking sector were mainly due to the country's spiralling sovereign debt problems.

<sup>12</sup> See also pp 67-78 for more information on banks' reduction of claims on non-residents.

<sup>13</sup> For an in-depth discussion of this issue, see Deutsche Bundesbank, Differences in money and credit growth in the euro area and in individual euro-area countries, Monthly Report, July 2013, pp 47-64.

**Banks in peripheral countries: shares of selected balance sheet items in aggregate total assets**



Source: ECB.  
 Deutsche Bundesbank

standards in the periphery countries and, viewed in isolation, had a dampening effect on loan dynamics. All in all, the supply side has been a significant but by no means dominant factor in the considerable reduction of loans.

The restructuring of bank balance sheets has also involved adjustments in banks' other business areas, a process crucially influenced by the risk weighting of assets in line with the regulatory capital requirements and by the special regulatory treatment afforded to domestic government bonds, against which banks do not have to hold any capital. Particularly in Ireland, Italy, Portugal and Spain, banks have distinctly increased the proportion of domestic government bonds in their total assets over the past few years,<sup>14</sup> aided, not least, by the central bank liquidity they have obtained through the three-year LTROs. Viewed in isolation, this has made the ties between the public and banking sectors – which proved to be a major factor in the escalation of the crisis – even tighter.

... shift in risk structure of assets ...

Finally, the restructuring of bank balance sheets has also required a notable increase in regulatory capital; the pressure exerted by the Basel III requirements and the international community has prompted banks in the periphery countries to begin strengthening their capital positions, with government funds contributing substantially to this process.<sup>15</sup> This has distinctly increased the ratio of capital and reserves to total assets on aggregated bank balance sheets (with the exception of Italy).

... and strengthening of capital positions

Although bank restructuring measures and recapitalisations have already significantly changed the banking landscape in the euro-area periphery countries, the high level of non-performing loans and the losses still being posted in most of these countries' banking sectors indicate that more adjustments are still needed. Ensuring the soundness of individual banks' finances via the CA, which is being performed prior to the launch of the Single Supervisory Mechanism (SSM), will be of vital importance.<sup>16</sup>

Restructuring of the banking industry not yet complete, however

**Possible adjustment approaches and their policy implications**

**Dealing with debt overhang; interplay of macroeconomic effects**

The analysis above indicates that private sector debt needs to be reduced still further in several countries. Viewed in isolation, this is likely to go hand in hand with muted activity in the real economy. However, the extent and duration of the repercussions, particularly on potential output, will hinge on the way in which private sector debt is reduced and on the overall setting

<sup>14</sup> See also Deutsche Bundesbank, Changes in bank holdings of domestic government bonds in the euro area, Monthly Report, November 2013, pp 31-32.  
<sup>15</sup> See pp 39-52 for information on the resulting burdens for the public sector.  
<sup>16</sup> See Deutsche Bundesbank, European Single Supervisory Mechanism for banks – a first step on the road to a banking union, Monthly Report, July 2013, pp 13-32.



– dictated by economic policy – in which this adjustment takes place. To lessen the general uncertainty associated with this process, it will be particularly important to ensure that the banking system is in robust form and to map out reliably how deleveraging in the sectors will proceed.

*Adjustment via flows through gradual amortisation of debt ...*

In essence, there are two different types of adjustment approach. The first entails adjustment via flow variables, a process which should, in fact, be standard practice. Borrowers in the non-financial private sector amortise their debt gradually over an extended period of time by drawing on their current income, while asset shedding can additionally support this income-based form of debt redemption.<sup>17</sup> A drawn-out adjustment process of this kind can create lasting uncertainty over which assets will retain their value and who will face what write-downs in the future, although banks can make provisions for these risks.

*... or deleveraging via stock adjustments in the form of restructuring and write-downs*

The second approach to repairing unsustainable balance sheets is to make stock adjustments to debt. This may entail a restructuring of liabilities, eg by renegotiating loan contracts and taking a haircut on the debt,<sup>18</sup> or insolvencies involving, among other measures, swift write-offs of non-performing loans and loss recognition by creditors, ie by banks in particular. Unlike flow adjustments, this approach invariably has a direct impact on balance sheets. The capacity for write-downs would largely depend on the state of creditors' balance sheets, especially their capital position.

*Adjustment processes may have negative impact on the real economy: danger of disorderly deleveraging in short term, ...*

History has shown that managing debt crises generally affects overall economic activity for an extended period of time because of the need to correct the imbalances that have previously built up in the financial sector, and usually also in the real economy. This adjustment process holds various risks. The first is the danger of disorderly deleveraging in the short term, which creates great uncertainty about whether assets will retain their value and whether write-downs will be needed. This can affect house-

holds, private sector enterprises, the banking system and the public sector. As a result, many enterprises and households become distinctly reluctant to spend, and assets are sold off, which can ultimately lead to a sharp economic downturn – particularly if, in parallel, financial intermediaries cut back the supply of credit because of their own balance sheet problems, heightened borrower risks and receding market liquidity.<sup>19</sup> Ultimately, the concern reflected in this scenario is that reducing debt in various sectors at the same time – not just in the private but also in the public sector – could destabilise the economy.

In the medium to long term, there is also a danger that deleveraging could obstruct the creation of new productive capital stock. The longer non-financial corporations and banks have to cope with weak balance sheets, and the longer major uncertainty lingers over how any losses associated with the deleveraging will be dealt with, the greater this effect is likely to be. Another risk is that the low-interest-rate environment could tempt banks to put off the restructuring process and prolong non-performing loans instead of insisting that they be repaid on schedule or carrying out write-downs which would worsen their already strained capital positions. This could delay the necessary restructuring in the banking sector, weaken its profitability still further and prevent new loans from being granted to productive businesses, thus leading to a lasting misallocation of resources. In this scenario, a more restrictive monetary policy stance – which will become necessary at some point in the future – would then make banks increasingly fra-

*... negative impact on potential output in medium term*

<sup>17</sup> The ability to shed assets depends on their level of liquidity and can change rapidly following a shift in market conditions. See Y Amihud, H Mendelson and L H Pedersen (2005), Liquidity and Asset Prices, Foundations and Trends in Finance, 1, 4, pp 269-364.

<sup>18</sup> Restructuring via an interest rate cut and deferred repayment does not necessarily change the debt ratio because bank loans are usually recorded at their nominal value in the financial accounts. However, it does make the debt more sustainable.

<sup>19</sup> See I Fisher (1933), The Debt-Deflation Theory of Great Depressions, Econometrica, 1, pp 337-357.

gile. It is also important to be aware that, depending on the precise form it takes, short-term debt relief can create new wrong incentives. It will be crucial to apply a rules-based approach which creates a sense of certainty for present and future lending. Otherwise, new imbalances might emerge, or higher risk premiums which would place a drag on investment and growth potential.

## The role of economic policymakers, especially of monetary policy, and implications for the euro area

*Suitable economic policy measures needed to support the adjustment process*

From an economic policy perspective, it is vital to make it clear that the adjustments needed to overcome a debt crisis take time and inevitably place a considerable drag on the economy. Nonetheless, the deleveraging process will need to be supported with measures which are compatible with the framework of the euro area and put the real economy back on a self-sustaining growth path as quickly as possible. The measures must help to prevent destabilising dynamics in the financial and product markets in the short term and, at the same time, ensure that a sustainable growth path is swiftly established.

*Distribution of possible losses must be clarified*

One key element of such a policy must be to minimise uncertainty surrounding the distribution of any possible losses, ensuring that the national banking systems are in robust form and clarifying whether and how any government support will be provided. This is the best way of making sure that the identified problem does not feed through to the medium-term growth path.<sup>20</sup> The action taken must be compatible with the framework of the euro area, the key factors in this context being the fact that the member states are market economies, which means applying the no-bail-out principle, their individual responsibility for national fiscal and economic policy and the primacy of a stability-focused single monetary policy. More specifically, this means that private creditors of

enterprises, households or banks should be first in line to bear the losses arising from necessary write-downs and balance sheet repair in the private sector. The government of the country facing such problems should only provide financial support on an auxiliary basis, and the other euro-area countries should only ever be involved as a last resort, via the established rescue mechanisms.

The Eurosystem has the task of ensuring price stability in the euro area and, where necessary, taking suitable measures to resolutely combat a downward spiral on the product and financial markets triggered by a systemic liquidity crisis in the euro area. An expansionary monetary policy stance stabilises weak developments in the real economy. Leaving aside the risks and problems that they have entailed in some respects, the Eurosystem's interest rate cuts and its use of non-standard liquidity-providing measures have proven effective.<sup>21</sup> In particular, they have prevented a sudden credit crunch due to liquidity and funding shortages.

Yet monetary policy is not responsible for providing a fundamental solution to the crisis, nor should it be expected to take on the loss risks of households, enterprises, banks or governments facing the threat of insolvency. While the stock problem on private sector balance sheets still exists, monetary policy will also be less effective, as overly indebted entities and individuals are less inclined to borrow and (high-risk) borrowers have to pay high interest on their debt.<sup>22</sup> The empirical evidence suggests that the faster private sector deleveraging takes place after a financial crisis, the stronger a sus-

*Eurosystem is working to prevent liquidity and funding shortages through crisis management, ...*

*... but is not responsible for solving the crisis and could even delay adjustment processes*

<sup>20</sup> See C Borio (2012), The financial cycle and macroeconomics: What have we learnt? BIS Working Paper, No 395.

<sup>21</sup> The main measures taken by the Eurosystem to combat the financial crisis are discussed in Deutsche Bundesbank, The implications of the financial crisis for monetary policy, Monthly Report, March 2011, pp 53-68.

<sup>22</sup> See R Koo (2011), The World in Balance Sheet Recession: Causes, Cure and Politics, real-world economics review, 58, pp 19-37; as well as G B Eggertsson and P Krugman (2012), Debt, Deleveraging, and the Liquidity Trap: A Fisher-Minsky-Koo Approach, Quarterly Journal of Economics, 127, 3, pp 1469-1513.

## Selected historical adjustment processes: the Nordic countries and Japan

A look at adjustment processes in the wake of previous predominantly leveraged and unsustainable economic upturns sheds light on the implications of various adjustment strategies. Despite all the differences in the baseline situations and underlying conditions of the cases considered, some of the findings may also be of relevance for overcoming the euro-area debt crisis. The examples of historical private sector debt crises chosen are those of Norway, Finland, Sweden and Japan, who pursued different strategies in dealing with the crises that started between the end of the 1980s and the early 1990s.

At the end of the 1980s, the aforementioned countries experienced both credit bubbles and asset price bubbles, unleashed, in particular, by the financial market deregulation ongoing since the 1970s and comparatively favourable financing conditions. Private sector debt, which was no longer sustainable in the end, eventually helped to cause the respective bubbles to burst. The result was a debt crisis in each case, sometimes with severe consequences for the real economy.<sup>1</sup>

In Japan, indebtedness in connection with the real estate and share price boom was particularly high among non-financial corporations while, in the Nordic countries, households were also hit hard owing to the bubble in the real estate market. Sectoral debt ratios in the Nordic economies began to decline at the latest one year after the onset of the crisis and continued to decrease over a number of years. By contrast, the corporate debt ratio in Japan did not start to fall discernibly until five years after the crisis broke out and, even then, only relatively slowly.

The debt crises set in when a number of banks (including savings banks, especially in Norway and Finland) became insolvent. The Nordic central banks managed to prevent the interbank markets from drying up by using emergency liquidity assistance and the banking system from collapsing with the help of foreign currency deposits (or, in Finland's case, also capital aid). The Norwegian central bank, in particular, had already been providing some banks with increased liquidity support since the mid-1980s. Moreover, the banks' own collective guarantee funds, which were superseded by the Government Bank Insurance Fund in 1991, also helped to rescue Norway's banks. In Finland and Sweden, the government issued blanket guarantees for banks' liabilities (excluding equity).

Once the immediate threat to the financial system had been warded off in this way, the Nordic states swiftly (in the case of Finland and Sweden, only one year after the outbreak of the crisis) proceeded to provide ailing financial institutions with extensive capital and loans so as to enable them to repair their balance sheets. A key element in this respect was the conditionality attached to the government assistance provided, including the replacement of the management and board of directors, write-downs of shareholders' stakes (only partially in Sweden and Finland), mergers with

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<sup>1</sup> The crisis in Norway began in 1987, followed by crises in Finland and Sweden starting in 1991 and in Japan in 1992. For more information on developments in these countries, see L Jonung, J Kiander and P Vartia (2008), *The great financial crisis in Finland and Sweden – The dynamics of boom, bust and recovery, 1985-2000*, European Economy, Economic Papers, No 350, European Commission, as well as K Ueda (2012), *Deleveraging and Monetary Policy: Japan since the 1990s and the United States since 2007*, *Journal of Economic Perspectives*, Vol 26, No 3, pp 177-202.

other banks and the removal of distressed assets from banks' balance sheets. In Sweden and Finland, government-owned "bad banks" or asset management companies were set up for this purpose. These measures, combined with improved price competitiveness (*inter alia* in connection with exchange rate adjustments), significant nominal interest rate cuts and productivity-enhancing structural reforms, helped to provide the economy with growth stimuli – principally via exports – and, at the same time, enabled the banks to generate profits again. The private sector was thus able to reduce its debt ratios without plunging the real economy into a protracted crisis.

Policymakers in Japan, by contrast, at first did not consider the initial liquidity bottlenecks suffered by individual banks after the bubble burst to be a threat to the financial system or the real economy, especially as economic growth – although subdued – remained positive. They consequently adopted a "wait-and-see" attitude and initially took no measures to resolve the crisis. There were many cases of solvent banks shoring up insolvent institutions and sometimes taking them over in a bid to avert a risk to the banking system and, thus, to ensure their own survival. However, a sustained recovery of the real economy failed to materialise and the situation in the financial market eventually became acute once more, leading not only to the insolvency of several securities houses active in the inter-bank market but also the collapse of some large banks. In 1997, these developments finally resulted in a real economic contraction. The Bank of Japan responded by making liquidity available on a large scale. In addition, the government provided capital support, but non-performing loans were still written off rather slowly, as in previous years. The survival of many banks, therefore, hinged solely on the liquidity and

capital assistance extended by the government.

Eight years after the share price bubble burst, a government-owned "bad bank" was set up and several banks were finally comprehensively recapitalised, enabling them to write off losses (also through bailing in private investors) and repair their balance sheets. However, holdings of distressed assets had already become so substantial that these write-downs eroded banks' capital and placed a renewed considerable strain on their balance sheets. As a result, the banks reduced their credit supply which, together with the high deleveraging needs of non-financial corporations, dampened aggregate demand. Despite successive nominal interest rate cuts and various economic stimulus programmes, the Japanese economy slipped into a balance sheet recession,<sup>2</sup> which counteracted the debt ratio reductions achieved.

The experiences of these countries are comparable with the situation in the euro area only to a limited extent: in particular, membership of a monetary union with a single stability-oriented monetary policy already implies important differences in the economic policy and general economic framework. Nevertheless, the examples considered show that essential balance sheet corrections in the private sector and, in particular, in the banking system, ie the restructuring or revaluation of impaired loans and an adequate capitalisation of banks, can give key support to the adjustment process towards a sustainable economic recovery and should, therefore, not be dragged out.

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<sup>2</sup> For more information on balance sheet recessions, see in particular R C Koo (2011), The world in balance sheet recession: causes, cure, and politics, real-world economics review, issue no 58, pp 19-37; or J Caruana (2013), Central Banking in a Balance Sheet Recession, International Journal of Central Banking, Vol 9, No S1, pp 367-372.

tainable recovery will be (see the box on pages 63 and 64).<sup>23</sup> On the one hand, a highly accommodative monetary policy stance can help to avoid downside risks affecting product prices, which is consistent with the mandate of safeguarding price stability, although the single monetary policy has to be geared to the euro area as a whole rather than to individual countries. On the other hand, there is always a danger that, in the medium term, accommodative monetary policy will delay the necessary adjustment process by papering over the underlying balance sheet problems in the non-financial and financial private sectors and reducing the incentives to tackle them consistently. All in all, the economy would then be left more vulnerable to future macroeconomic shocks.<sup>24</sup>

*Need for structural reforms and legal framework which allow swift and sweeping restructuring process*

Monetary policy cannot, therefore, solve the debt crisis. That is the responsibility of other policy spheres – especially national economic policy, which should not only entail structural reforms to improve supply conditions in general and thus boost growth (see pages 19 to 37) but must also ensure that risks stemming from sectoral debt overhang are tackled quickly. Action is needed, for example, in cases where the existing legal framework causes unnecessary delays in the restructuring or liquidation of businesses or in household bankruptcy proceedings, or makes it difficult to achieve high asset recovery ratios. Some euro-area countries have already pressed ahead with measures to that effect since the financial crisis broke out.<sup>25</sup>

*Adequate capitalisation of the banking sector, avoiding government aid wherever possible, will be key*

Above all, creditors – especially banks – must be robust enough to withstand any necessary value adjustments or write-downs on their assets, the key prerequisite for this being adequate capitalisation of the banking sector.<sup>26</sup> To bolster confidence in the stability of the various banking systems, it will be vital to ensure

that the CA ahead of the SSM's launch gives a conservative assessment of the value of existing claims, to rapidly cover any deficits detected at institutions with a sustainable business model and to have adequate buffers in place for existing risks. This should be achieved without government aid wherever possible, ie by tapping the capital markets and, if necessary, bailing in current creditors and shareholders. This will reinforce the market economy principle of prohibiting bail-outs, thus increasing an awareness of risk in future investment decisions and reducing the danger of future imbalances. In addition, it is important to avoid burdening government budgets any further given that they are already strained in many countries. Even in tough macroeconomic conditions, consolidating public finances is key in order to rapidly reduce the uncertainty surrounding national public finances and to regain some leeway for stabilising national financial markets (see pages 39 to 52). As a last resort, member states with any unmet recapitalisation needs will be able to obtain additional funds from the European Stability Mechanism through a financial assistance programme. This option will ensure that, in cases where government support is also needed, insufficient fiscal policy leeway is not cited as a justification for avoiding necessary balance sheet repair and structural adjustments in the banking system.

<sup>23</sup> See M L Bech, L Gambarcorta and E Kharroubi (2012), Monetary policy in a downturn: Are financial crises special?, BIS working paper, No 388.

<sup>24</sup> See W R White (2012), Ultra Easy Monetary Policy and the Law of Unintended Consequences, working paper of the Federal Reserve Bank of Kansas City, No 126.

<sup>25</sup> See M Goretti and M Souto (2012), Macro-Financial Implications of Corporate (De)Leveraging in the Euro Area Periphery, IMF working paper No 154.

<sup>26</sup> See L Laeven and F Valencia (2013), The Real Effects of Financial Sector Interventions During Crises, Journal of Money, Credit and Banking, 45,1, pp 147-177.