
The Debt Challenge in Europe

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At the heart of the ongoing crisis in the euro area are market concerns about the sustainability of sovereign debt in some Economic and Monetary Union (EMU) countries. Standard equations of public debt dynamics show that if the interest rate on the debt exceeds the nominal growth rate of GDP, then stabilization of the debt-to-GDP ratio requires that the country run a sufficiently large primary (that is, noninterest) budget surplus. Based on this analysis, fiscal consolidation to reduce primary budget deficits is an important part of the prescription for EMU countries with sovereign debt difficulties. Fiscal consolidation is expected to increase investor confidence in the sustainability of public debt, thereby lowering interest rates on sovereign debt. Lower interest rates further improve the debt dynamics.

An issue that has not received the attention it deserves in the debate over sovereign debt sustainability is the interaction between public debt and private debt. Rising fiscal deficits can support aggregate demand and thereby facilitate private sector deleveraging in cases where businesses and households find themselves overindebted. It follows that as governments implement needed fiscal consolidation programs, the accompanying increases in taxes and cuts in spending may frustrate the efforts of the private sector to reduce the debt overhang (Eggertsson and Krugman 2010). This suggests a potential policy dilemma involving whether to emphasize public or private sector debt reduction. For that reason, it is important to understand how overindebted

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businesses and households might respond to planned fiscal policy actions in the current crisis.

A second potential policy dilemma relating to private sector debt results from the fact that the EMU countries with sovereign debt problems also often have overvalued real exchange rates. To pay down external debt, these countries require real exchange rate depreciation through cuts in prices and wages to boost net exports. However, it usually takes time for improvements in competitiveness to translate into faster export and income growth. In particular, empirical evidence suggests that declines in export prices relative to import prices may in the short run reduce net exports.¹ In heavily indebted countries, therefore, required depreciation of the real exchange rate may in the short term push up debt relative to net exports and income, thereby temporarily exacerbating the overindebtedness problem.

Against this background, this chapter discusses corporate and household debt and the related adjustment process. Our discussion relies particularly on flow of funds (or financial account) data that have recently become popular.² The remainder of the chapter is structured as follows. In the next section we provide a horizontal overview and discuss the interaction between the processes of debt reduction and real exchange rate adjustment. The following two sections discuss corporate debt and household debt, respectively. The last section develops policy recommendations.

Debt and Competitiveness: An Overview

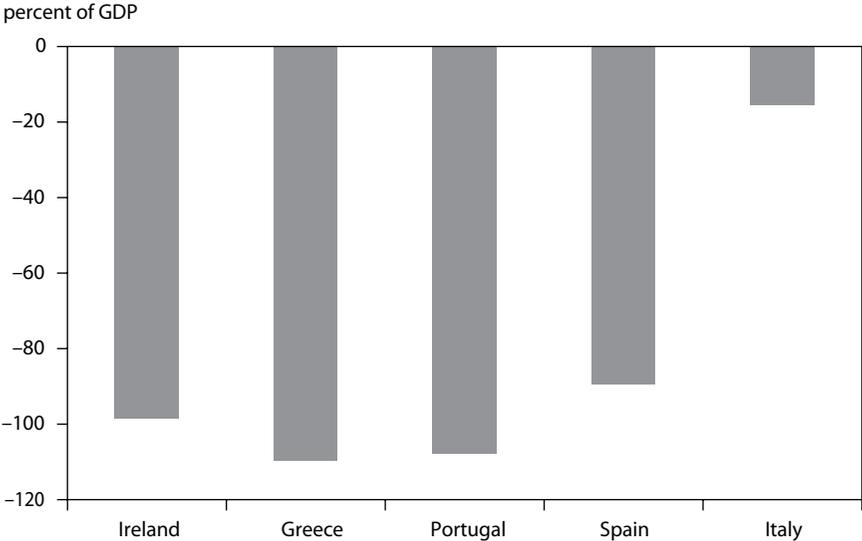
Figure 14.1 documents the net external financial assets (as a percentage of GDP) of Greece, Portugal, Ireland, Spain, and Italy. As can be seen, net external liabilities currently exceed 100 percent of GDP in Greece and Portugal. Ireland's net external liabilities are close to 100 percent, though some caution is required in interpreting the data for Ireland.³ In Spain, the figure is around 90 percent. Only in Italy are the net external liabilities relatively low, at less than 20 percent of GDP. Net external liabilities, of course, find their counterpart in net external assets in surplus countries, which have increased over the past decade, in particular in Germany.

1. Backus, Kehoe, and Kydland (1994) note that the negative effect of such a terms-of-trade deterioration usually reverses itself after two to eight quarters, giving rise to a J-shaped pattern.

2. Be Duc and Le Breton (2009); Castren and Kavonius (2009); Dirk Bezemer, "No One Saw This Coming—Or Did They?" *VoxEU*, September 30, 2009, www.voxeu.org (accessed on January 30, 2012).

3. Gros (2011) estimates that based on accumulated current account balances over the past 25 years, Ireland's external liabilities are about 20 percent of GDP, compared with the figure of nearly 100 percent reported by Eurostat. The differences in estimates may in part reflect distortions in the data associated with the presence of the large International Financial Services Center (IFSC) in Dublin. In addition, Lane (2011) argues that a substantial component of the increase in net external liabilities since 2008 reflects the internationally leveraged structure of the financial portfolios of domestic Irish residents.

Figure 14.1 Net external financial assets, 2009



Source: Eurostat database, <http://epp.eurostat.ec.europa.eu>.

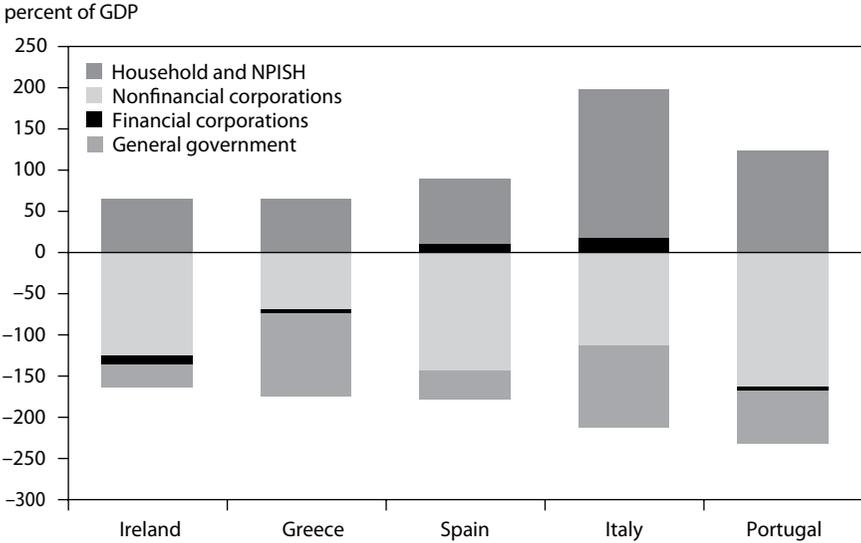
Large external liabilities reflect past increases in domestic net liabilities, which have increased differently in different sectors of the economies. Figure 14.2 provides data on net assets of the different sectors of the economy. Households are typically holders of net assets, while corporations and governments have a net debt position. The figure also reveals that in Greece the main driver of the large liability position is the government sector, while in Spain, Portugal, and Ireland the large accumulation of liabilities results from the corporate and household sectors. In Italy, large government debt is offset by large asset holdings of the household sector so that the net position of the economy is more balanced.

These net positions conceal very large gross financial asset and liability positions (figure 14.3). Ireland stands out with financial assets and financial liabilities of around 18 times GDP, though these figures are distorted by the inclusion of activities in the International Financial Services Center.⁴ But the gross positions for the other countries are also large, easily constituting stocks of assets and liabilities exceeding several years' worth of income.

Such large stocks can render countries' net external positions vulnerable to changes in the prices of assets and liabilities. Suppose that asset values react

4. According to the International Monetary Fund (IMF), Ireland's reported gross external liabilities are around 1,100 percent of GDP (end-2010), but most of these liabilities are related to IFSC activities and are largely offset by external assets. Excluding the IFSC, gross external liabilities are estimated to be about 330 percent of GDP. See IMF Country Report 11/276, September 2011, www.imf.org (accessed on January 30, 2012).

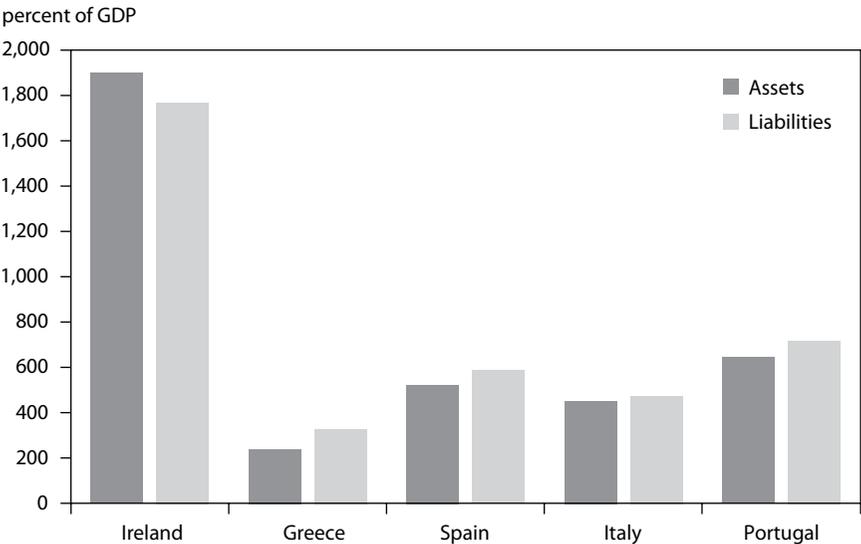
Figure 14.2 Net financial assets in domestic sectors, 2009



NPISH = Nonprofit institutions serving households

Source: Eurostat database, <http://epp.eurostat.ec.europa.eu>.

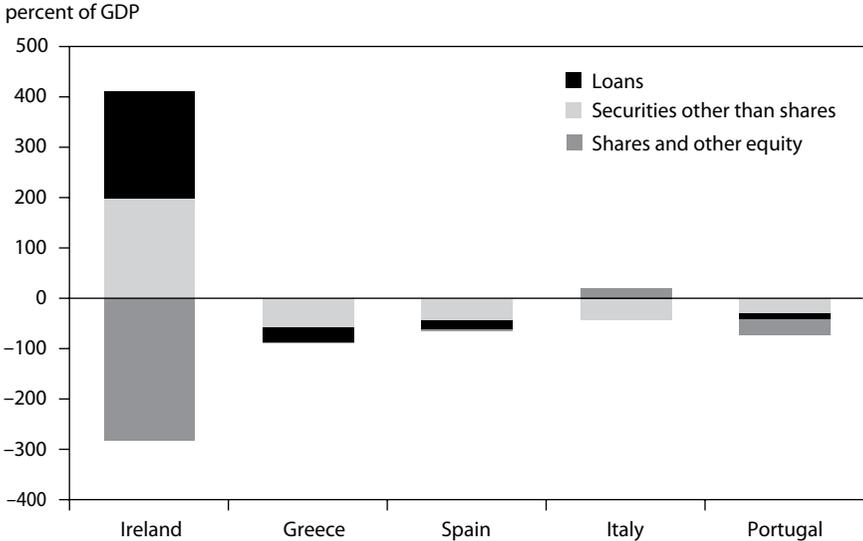
Figure 14.3 Gross assets and liabilities, 2009



Note: Assets and liabilities obtained as the sum of three categories—securities other than shares, loans, and shares and other equity.

Source: Eurostat database, <http://epp.eurostat.ec.europa.eu>.

Figure 14.4 Net assets and liabilities across categories, 2009



Source: Eurostat database, <http://epp.eurostat.ec.europa.eu>.

differently to changes in economic circumstances than liabilities. In that case, an economic or financial shock has the potential to change markedly the net asset position of a country.⁵

A large part of the increase in net liabilities is in the form of debt—that is, securities other than shares (bonds) and loans (figure 14.4).⁶ This may put a heavy burden on the economies concerned in a recession as the value of the debt remains unchanged while income and the values of nonfinancial assets can fall markedly.

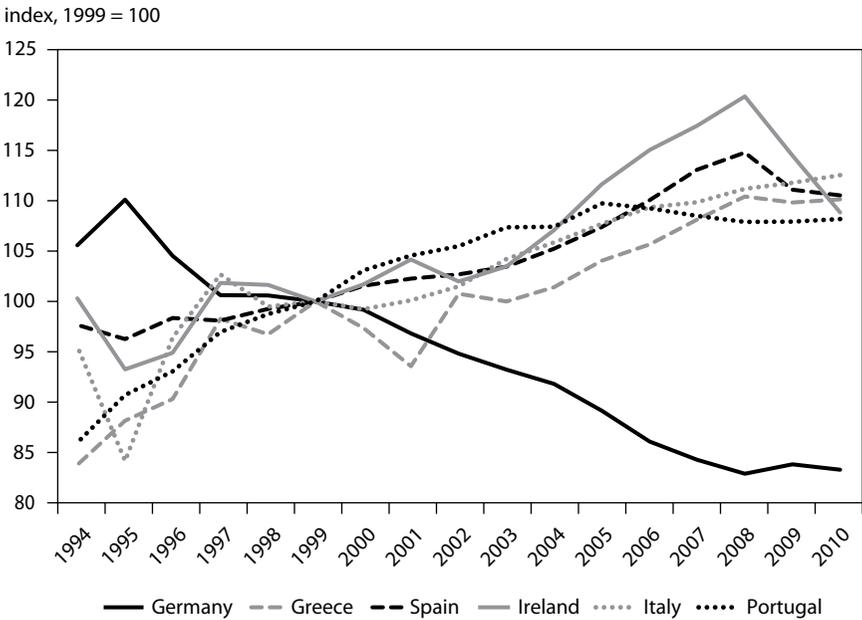
These high external and internal debt burdens must be seen in the light of the significant competitiveness adjustments that are required in these economies. Figure 14.5 summarizes the divergence in competitiveness based on unit labor costs for these economies. It shows that there has been a continuous divergence in relative unit labor costs since 1999. This divergence in competitiveness has not been corrected to any great extent during the crisis, except for the case of Ireland and to a lesser degree Spain.

The loss in price competitiveness has gone hand in hand with a significant decline in the share of the manufacturing sector in total value added (see figure 14.6). The value-added share has fallen by as much as 25 percent,

5. An extensive discussion of valuation effects can be found in European Commission (2008).

6. Again, the data for Ireland are distorted by Ireland's role as an international financial center. In particular, the breakdown between equity, loans, and bonds in large part reflects Ireland's relatively large mutual funds industry.

Figure 14.5 Divergence in competitiveness, 1994–2010
(unit labor cost–adjusted real effective exchange rate)



Source: European Commission, Directorate General for Economic and Financial Affairs, Price/Competitiveness Database.

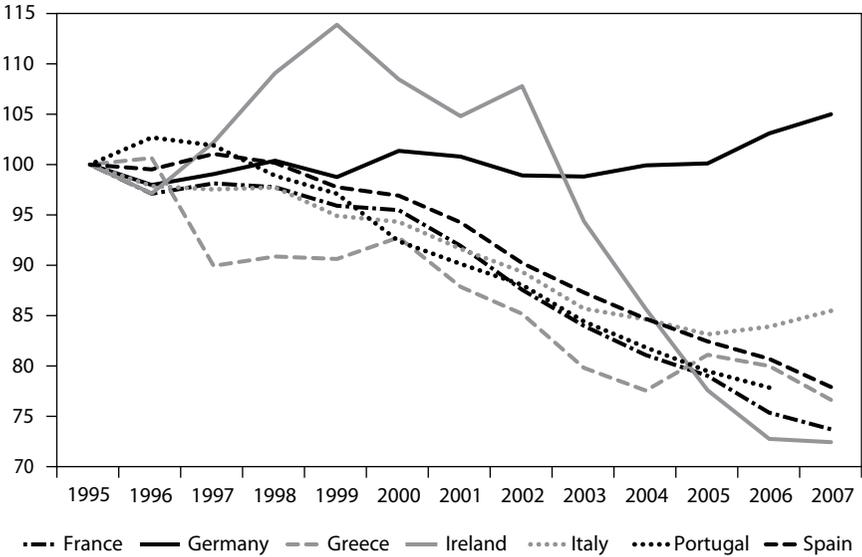
highlighting a tendency of deindustrialization of the euro area periphery. To pay back external debt, these economies will have to grow their exports. This probably means that the peripheral economies will have to strengthen their manufacturing export base, although in the case of Ireland strong export growth over recent years has been driven by exports of services.

The ability of these economies to adjust through growth in exports also depends on the size of the export base in each country. In this regard Ireland is in a potentially strong position, since gross exports exceed GDP (table 14.1) and net exports account for more than 20 percent of GDP. In contrast, the export sectors are considerably smaller in the other peripheral countries relative to GDP, so a given increase in exports has less effect on overall economic activity.

The discussion above suggests that most of the economies that are the focus of this chapter face a double challenge. On the one hand, they have to deal with large debt burdens. These debt burdens can be difficult to cope with when interest rates on public and private debt are rising and when incomes are falling because of the recession. Needed fiscal consolidation further depresses incomes, both directly through budgetary measures such as tax hikes and indirectly by aggravating the recession.

Figure 14.6 Manufacturing share of value added, 1995–2007

index, 1995 = 100



Source: Organization for Economic Cooperation and Development.

Table 14.1 Size of the export sector, 2007 and 2011 (gross exports as percent of GDP)

Country	2007	2011
Ireland	80.5	110.0
Portugal	32.2	34.6
Italy	29.0	29.1
Spain	26.9	28.4
Greece	22.7	24.0

Source: European Commission, Directorate General for Economic and Financial Affairs, Annual Macroeconomic (AMECO) Database, http://ec.europa.eu/economy_finance/db_indicators/ameco/index_en.htm.

On the other hand, the economies in question need to increase their competitiveness in order to grow and in order to service their foreign debt. This is particularly relevant for those economies that hold large external debt positions. Repaying external debt means that a country needs to run current account surpluses. The combination of the two factors—the need for a competitiveness adjustment and the debt overhang—makes the current situation delicate. While downward wage adjustments help on the competitiveness and

export side in the long term, in the short term an effect similar to the J-curve effect may worsen the trade balance. In addition, the wage cuts may also reduce the overall income in the near term (depending on the time profile of job creation), making debt repayment more difficult.

The evidence for Italy (and possibly for Ireland) reveals a somewhat better picture. Italy's export performance and price competitiveness indicators are poor. However, this is less of an issue in Italy as the external debt problem is more limited and the large public sector debt is matched by large household assets. In principle, the Italian public debt problem could therefore be solved by taxing Italian households and corporations that hold large financial assets. In fact, many of those assets are government bonds issued by the Italian government. Overall, a large part of the solution to Italy's problems thus appears to be in the control of the Italian government.

Corporate Debt

As was shown earlier, corporate debt has been an important contributor to the overall increase in debt in a number of countries. At some stage, corporations will wish to correct their debt levels. In this section, we document this process of balance sheet adjustment and its economic causes and consequences. We start by showing a simple measure of balance sheet adjustment for the five peripheral euro area economies. We then reference previous research (Ruscher and Wolff 2010, 2012), which analyzed the typical economic consequences of such adjustment.

A simple measure of balance sheet adjustment is the net lending of the nonfinancial corporate sector.⁷ Corporate net lending measures corporations' net financial investments (if positive) or, alternatively, their net needs in terms of external finance (if negative). When corporate net lending increases, savings increase relative to investment in the corporate sector, leading to a reduction in domestic demand. Indeed, corporate net lending is negatively associated with the business cycle and positively associated with the current account balance, showing that large increases in corporate net lending are not fully offset by other domestic sectors' net lending.

7. An important literature investigates the determinants of corporate balance sheet adjustment. The finance literature offers two competing models of financing decisions and balance sheet structure. In the tradeoff model, firms identify their optimal leverage ratio by weighing the costs and benefits of additional debt. The benefits of debt include, for example, the tax deductibility of interest and the disciplining effect of debt in case of agency problems between managers and shareholders (Jensen 1986). The costs of debt include potential bankruptcy costs and others. In the pecking order model (Myers and Majluf 1984), equity issuance and, to a lesser degree, debt issuance come with a cost due to asymmetric information between managers and investors. In this model, companies prioritize their sources of financing, using internal funds first before resorting to debt and ultimately equity. The pecking order model predicts that a firm's debt issuance is an inverted function of its net cash flows (cash earnings minus investment layouts). Fama and French (2002) test both models with firm-level data and find supporting and contradicting evidence for both models, suggesting that both models partially hold.

Table 14.2 Net lending of nonfinancial corporations and government
(percent of of GDP)

Country/economy	Corporate sector	Government sector	Start year
Euro area 17	2.7	-3.9	2008
Ireland	3.0	-11.9 ^a	2007
Greece	4.0	-3.7	2007
Spain	8.9	-11.2	2007
Italy	1.9	-3.0	2007
Portugal	5.4	-5.6	2008

a. Excludes banking-sector support.

Note: Adjustment in net lending since the year in which corporate borrowing was largest.

Source: Eurostat database, <http://epp.eurostat.ec.europa.eu>.

Table 14.2 shows the percentage adjustment in corporate net lending for the euro area as a whole and for the five peripheral euro area economies since the beginning of the recent adjustment processes. Spain has seen by far the largest adjustment of corporate net lending with an adjustment of close to 9 percent of GDP, but adjustments in Portugal, Greece, Ireland and even Italy have also been sizeable. This strong balance sheet adjustment will be accompanied by a significant recession unless the shortfall in domestic demand is offset by an increase in demand in other sectors of the economy, typically the public or external sector.

To address these large drops in corporate net borrowing and make up for the fall in aggregate demand, several governments have significantly increased their public deficits. Obviously, the increase in public borrowing has been most pronounced in Spain, as is shown in table 14.2. The adjustment in corporate borrowing has thus come at the expense of an increase in government borrowing.

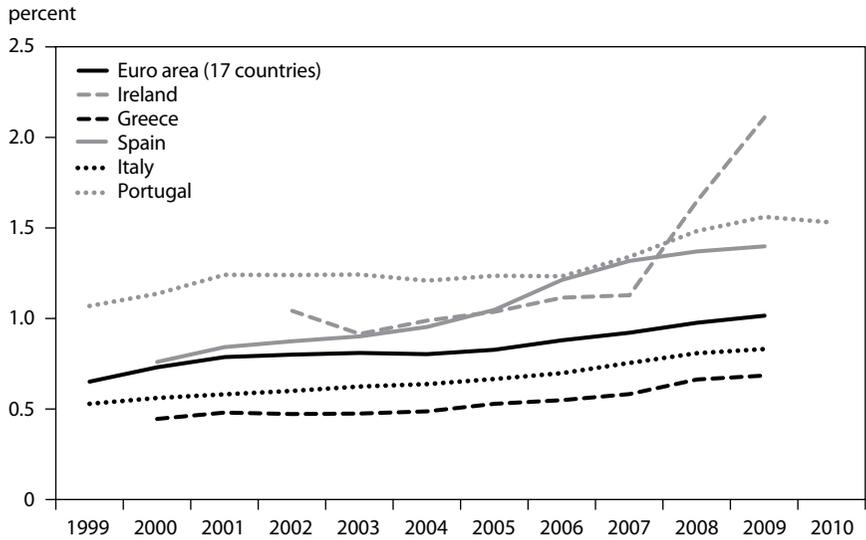
How much have corporate debt and leverage adjusted? Figure 14.7 plots the debt-to-GDP ratio and reveals that corporate debt levels have barely started to decline.⁸ Similarly, corporate leverage ratios continue to remain high and have not adjusted much (figure 14.8).

How long will the corporate deleveraging process last? This is one of the central questions for policymakers today, as the deleveraging process goes hand in hand with depressed domestic demand and weak economic activity. It becomes particularly relevant when the international growth prospects are weak and export opportunities are subdued.

Previous research in Ruscher and Wolff (2010) shows that past balance sheet adjustment episodes may have lasted between five and ten years. The recent corporate balance sheet adjustment in Germany has lasted seven years. In

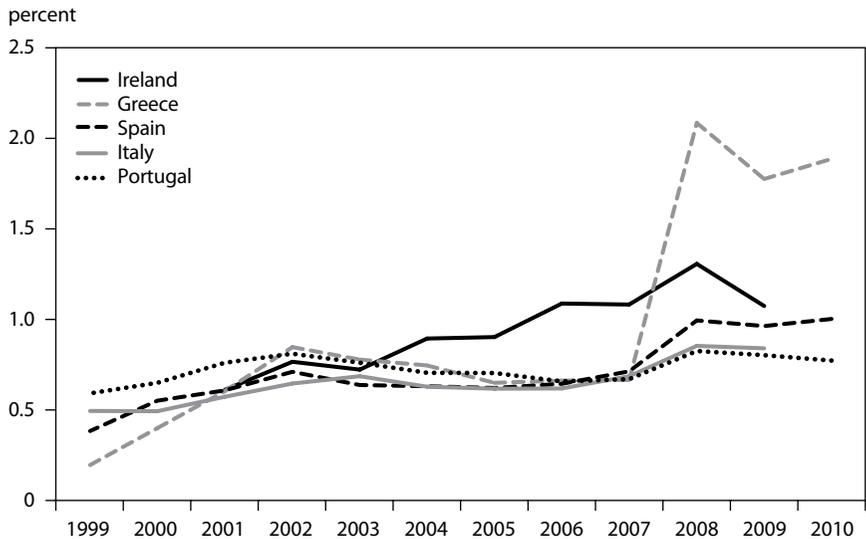
8. The jump in Ireland's corporate debt in 2007 may reflect the move of one or more multinational companies' corporate headquarters to Ireland.

Figure 14.7 Debt-to-GDP ratio in the nonfinancial corporate sector, 1999–2010



Source: Eurostat database, <http://epp.eurostat.ec.europa.eu>.

Figure 14.8 Leverage in the nonfinancial corporate sector, 1999–2010



Note: Leverage is measured by the ratio of debt to equity.

Source: Eurostat database, <http://epp.eurostat.ec.europa.eu>.

Table 14.3 Consequences of corporate balance sheet adjustment

	$t = 0^a$ (A)	$t = 4$ (B)	Actual change ^b (C) = (B) – (A)	Average change in entire sample (D)	Effect of balance sheet adjustment (E) = (C) – (D)	Number of episodes (F)
Debt/GDP	60.3	58.4	-1.9	5.2	-7.1	12
Leverage ^c	101.2	85.3	-15.9	-1.2	-14.7	12
Liquidity/value added ^d	30.0	33.4	3.4	0.9	2.5	10
Investment/value added	26.1	23.2	-2.9	-0.2	-2.8	16
Savings/value added	17.2	22.3	5.0	0.4	4.6	16
Compensation of employees/value added	60.2	55.6	-4.6	-0.9	-3.7	20
Real growth			6.6	9.9	-3.3	24

a. Period $t = 0$ is the year prior to the balance sheet adjustment.

b. In the case of “real growth,” the actual change is the difference between the cumulated growth during the four-year adjustment period and the cumulated growth in the broader sample during an average four-year period.

c. Leverage is measured by the ratio of debt to equity (data are from the balance sheet section of national accounts).

d. Liquidity is measured by corporations’ holdings of currency and deposits (data are from the balance sheet section of national accounts).

Note: To ensure a constant size of the sample for every year, the table covers only events that lasted more than four years and for which data are available. The number of observations per variable differs depending on data availability.

Source: Ruscher and Wolff (2010).

a larger sample of Organization for Economic Cooperation and Development (OECD) countries analyzed in Ruscher and Wolff (2010), the average balance sheet adjustment period lasted 8.3 years.

This long balance sheet adjustment is typically accompanied by large changes in macroeconomic variables. Table 14.3 is taken from Ruscher and Wolff (2010) and provides the statistics related to the adjustment of corporate balance sheets. The authors show the development in time of a number of central variables, starting from the year prior to the balance sheet adjustment episode ($t = 0$) to the year $t = 4$.⁹

A number of key features of corporate balance sheet adjustment can be discerned from table 14.3 and are highlighted in Ruscher and Wolff (2012):

1. Debt-to-GDP ratios are significantly reduced, in particular when compared with the overall sample in which debt increases on average. Similarly, corporate leverage (i.e., the ratio of debt to equity) is reduced significantly, by almost 16 percentage points.

9. The set of countries is kept constant during this period so that changes in the values are not driven by changing samples. For different variables, the data availability is different and this explains the different number of observations per variable considered.

2. Corporate balance sheet adjustments are associated with significant increases in the holdings of liquid funds. The increase in the sample averages 3.4 percent of corporate value added.
3. Compensation of employees as a share of corporate value added falls by almost 5 percentage points and is therefore much more significant than the fall in the overall sample.
4. At the same time, corporate savings as percent of corporate value added increases substantially, by 5 percentage points. The increase in savings thus corresponds very much to the decrease in labor compensation.
5. Investment as percent of corporate value added falls substantially, by around 3 percentage points.

The descriptive evidence from a large sample of corporate balance sheet adjustment episodes thus confirms that corporate balance sheet adjustments have very large and significant effects on wages, investment, savings, and corporate balance sheets themselves. Indeed, the descriptive evidence supports the notion that corporate balance sheet adjustments have strong income effects as they are associated with persistent periods of wage moderation. Increased corporate gross savings are therefore partly achieved by weakening labor remunerations. Moreover, the results highlight that investment is subdued during episodes of corporate balance sheet adjustment. Corporate balance sheets are thus adjusted by reducing investment and increasing savings on the back of falling labor cost. The corporate balance sheet adjustment is found to be associated with significant decreases in leverage and debt as well as sizeable increases in liquidity held by the corporations.

Ruscher and Wolff (2012) also analyze the drivers of this corporate balance sheet adjustment. They find that large debt levels, a weak liquidity situation, and negative stock market shocks can trigger adjustment. Christoffer Sorensen, David Marques Ibanez, and Carlotta Rossi (2009) estimated that by end-2006, the debt overhang in the euro area corporate sector was as much as 15 percent (that is, corporate debt was as much as 15 percent above its estimated equilibrium level). Judging by intra-euro area differences in the pace of debt accumulation over the past decade, the overhang could have been considerably larger in some member states. This large overhang may explain the rapid increase in corporate net lending.

Household Debt

Large-scale fiscal consolidation in crisis countries requires measures to raise taxation revenues and cut spending. Other things being equal, such policies reduce household disposable income and could result in financial distress when households are highly indebted. Widespread financial distress would not only weigh on consumer spending in crisis countries, thereby hurting prospects for growth, but could also threaten the stability of the banking

system. In turn, banking problems could dampen confidence and restrict the supply of credit to viable businesses, further depressing economic growth and exacerbating the crisis (Fisher 1933).

As discussed earlier, there is also an interaction between needed improvements in competitiveness and high levels of indebtedness. Depreciation of the real exchange rate through cuts in nominal wage rate should eventually boost net exports and employment as the country gains global market share. As such, falling wage rates do not necessarily mean lower aggregate disposable incomes, and in time should boost disposable incomes as employment rises in export sectors. However, there may be a timing issue here. Economic theory suggests that this so-called competitiveness channel of adjustment in a currency union operates gradually and with a lag (European Commission 2008). Therefore, in the near term, the capacity of households to absorb large wage cuts may be limited by high levels of indebtedness. Moreover, as discussed in the previous section, the empirical evidence shows that corporate balance sheet adjustment also puts downward pressure on wages.

For these reasons, it is important to look at the facts on household debt in EMU countries, especially in the crisis countries where many households may find themselves overindebted and where large-scale budgetary and competitiveness adjustments are required. As in our study of corporate deleveraging earlier, we examine the process of household deleveraging in crisis countries. In particular, we explore previous episodes of household deleveraging and what lessons these past experiences might offer about what EMU membership implies for the process of deleveraging.

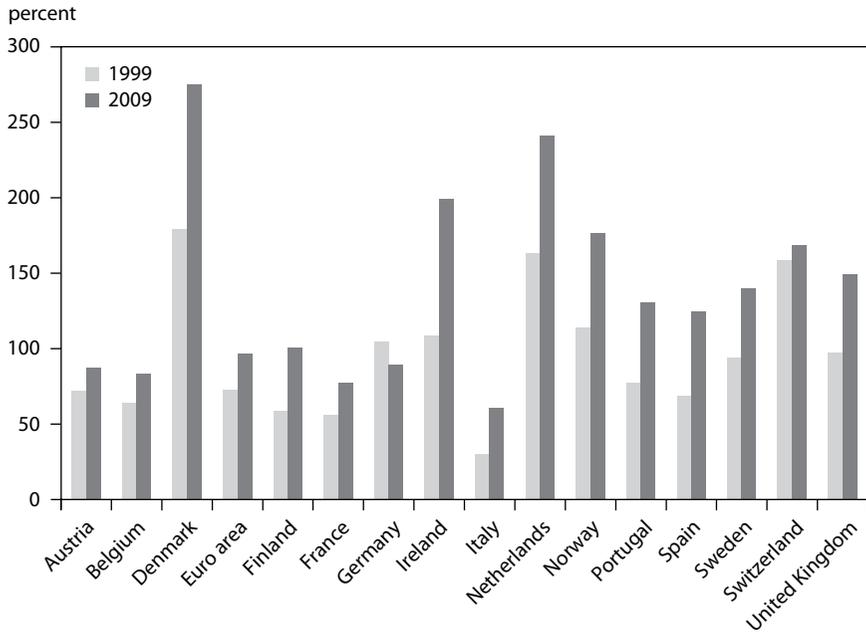
How Much Debt Did Households Take on During EMU?

In most European economies, household indebtedness has risen sharply since the late 1990s. As shown in figure 14.9, the ratio of household debt to disposable income in the euro area on average increased from 73 percent in 1999 to 97 percent in 2009. The rise in household indebtedness during EMU marks the continuation of a broader trend across advanced countries in which average household debt as a percentage of GDP in the OECD as a whole has doubled from about 40 to 80 percent over the period 1985–2005.

The largest increases in household indebtedness in the euro area were recorded in Ireland (where household debt jumped roughly 90 percentage points of disposable income during 2002–09), the Netherlands, Spain, and Portugal. The most muted increases were registered in Austria, Belgium, and France. Household indebtedness fell in only one country, Germany, bringing German household debt to nearly 10 percentage points of disposable income below the euro area average in 2009, from more than 30 percentage points above average in 1999.

Outside the euro area, the increases in household debt in Sweden and the United Kingdom matched those in Spain and Portugal, while indebtedness of the household sector in Denmark managed to outpace even Ireland.

Figure 14.9 Household debt as a percent of disposable income, 1999 and 2009



Note: For Ireland and the Netherlands, earlier data are from 2002; for Spain, earlier data are from 2000; and for Norway and Switzerland, later data are from 2008.

Source: Eurostat database, <http://epp.eurostat.ec.europa.eu>.

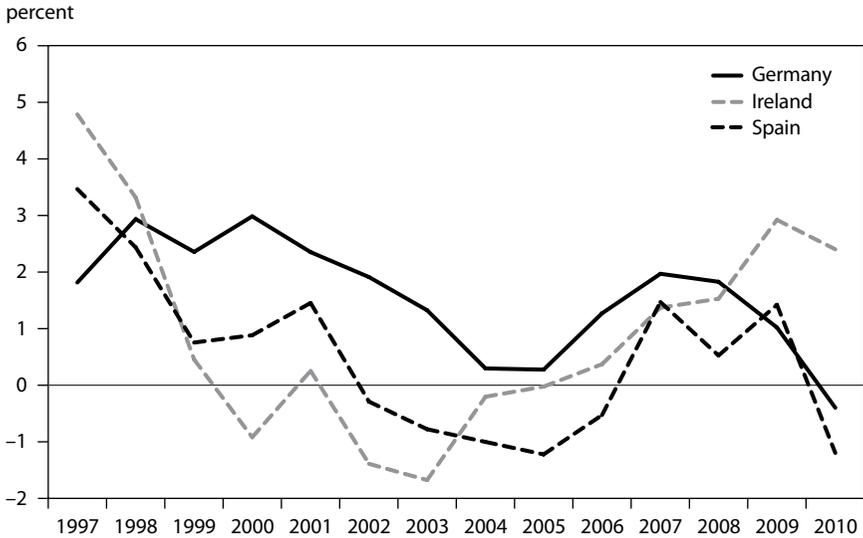
Why Has Household Indebtedness Risen?

Economic theory provides a useful starting point for understanding the rise in indebtedness over the past couple of decades. The well-known permanent income (or life cycle) model of consumption and saving relates decisions on savings and borrowings to life cycle factors.¹⁰ Savings are typically low or negative during an individual’s early working years and during retirement when income is low. Households save at a higher rate during late working years when income is highest. Standard economic theory suggests several factors that might account for the rise in household indebtedness across countries during EMU and for differences in indebtedness across countries.

- **Real interest rates.** For many EMU countries, real interest rates fell after 1999. This is especially true for Ireland and Spain (figure 14.10), which recorded some of the largest increases in indebtedness after the creation of the single

10. The life cycle model was developed in the 1950s and is closely associated with Franco Modigliani, Albert Ando, and Milton Friedman. Modigliani (1986) provides a useful summary.

Figure 14.10 Real short-term interest rates, 1997–2010



Note: Figure shows nominal three-month interbank interest rates deflated by harmonized index of consumer price inflation.

Source: Eurostat database, <http://epp.eurostat.ec.europa.eu>.

currency. Negative real interest rates in Ireland and Spain contributed to housing bubbles and rapid increases in household indebtedness.

- *Future income expectations.* Prolonged periods of relatively fast economic growth like those experienced by several EMU economies during the so-called Great Moderation can lead households to believe that disposable incomes are likely to continue to rise at a strong pace well into the future. Permanent income considerations would then encourage households to borrow against these expected future income gains.
- *Demographics.* Ireland and Spain have a relatively large proportion of the population in their early working years, which could explain some of the high indebtedness in these countries. Moreover, the young workforce in Ireland is highly educated and well qualified, so expectations of future real income growth were high during the boom.¹¹ In addition, the young workforce in Ireland and Spain was boosted by large inward migration during the boom years.

A major driver of the rise in indebtedness has been the growth in mortgage debt. The marked expansion of mortgage credit reflects rapid increases

11. According to Eurostat data, more than 80 percent of the population aged 20–24 years are educated to at least upper secondary level, marking the highest proportion in the EU-15. On the other end of the scale are Portugal (55 percent) and Spain (60 percent).

in house prices in many countries since the mid-1990s, increased household formation and home ownership rates in some countries, and deregulation in the mortgage markets (which boosted borrowing by previously credit-constrained households). Indeed, rising house prices themselves help to ease credit constraints, since these constraints are related to collateral values, and housing acts as collateral for mortgage debt. Mortgage debt now accounts for over 70 percent of household indebtedness across the OECD on average, up more than 5 percentage points over the past decade.

Housing is typically the largest asset owned by a household. So although rapidly rising house prices have been accompanied by large increases in gross household indebtedness, the net wealth of households has generally increased. However, in countries that experienced house price booms and busts over the past decade or so (Ireland and Spain), net wealth is now deteriorating because of the ongoing declines in housing values.

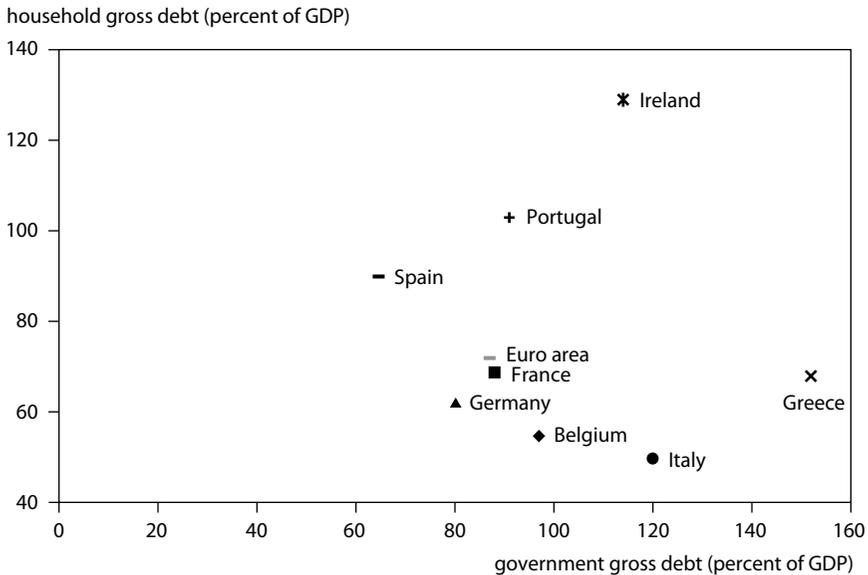
Though debt-to-income ratios have increased sharply, the household debt service burden—that is, households' debt service payments relative to their disposable income—has been relatively stable. This suggests that the rise in indebtedness has been roughly offset by the decline in interest rates on household loans. Of course, lower interest rates were a factor in boosting asset prices during the last decade, including the price of housing. Higher house prices, in turn, required households to take on increased mortgage debt.

Other things equal, declines in disposable incomes push up households' debt burdens. In countries with large public debt levels, necessary fiscal consolidation will reduce disposable incomes through higher taxation burdens and lower social transfer payments. Therefore EMU countries with higher levels of both public and household debt would appear to be most vulnerable. Figure 14.11 presents gross household and general government debt for euro area economies in 2011.¹² Both Ireland and Portugal have levels above the euro area average for both household and public debt, strikingly so in the case of Ireland. Spain has above average levels of household debt, but below average public debt, while in Italy, the opposite is true.

Another perspective on the interaction of public debt and household debt is offered by Stephen Cecchetti, M. S. Mohanty, and Fabrizio Zampolli (2011). They find that beyond a certain level, debt is bad for economic growth. They estimate the threshold is in the range of 80 to 100 percent of GDP for public debt and around 85 percent of GDP for household debt, though they caution that their estimate of the effect on growth of household debt is very imprecise. Relating these estimates to the data presented in figure 14.11, it can be seen that Ireland and Portugal exceed both thresholds; Spain exceeds the threshold for housing indebtedness but not for public debt, while Italy and Greece exceed the threshold for public debt but not for housing indebtedness. This approach might suggest a need for household deleveraging in Ireland, Portugal, and Spain to better position these countries for sustained economic recovery.

12. Latest IMF (2011) projections for public debt and most recent data for household debt.

Figure 14.11 Government and household gross debt, 2011



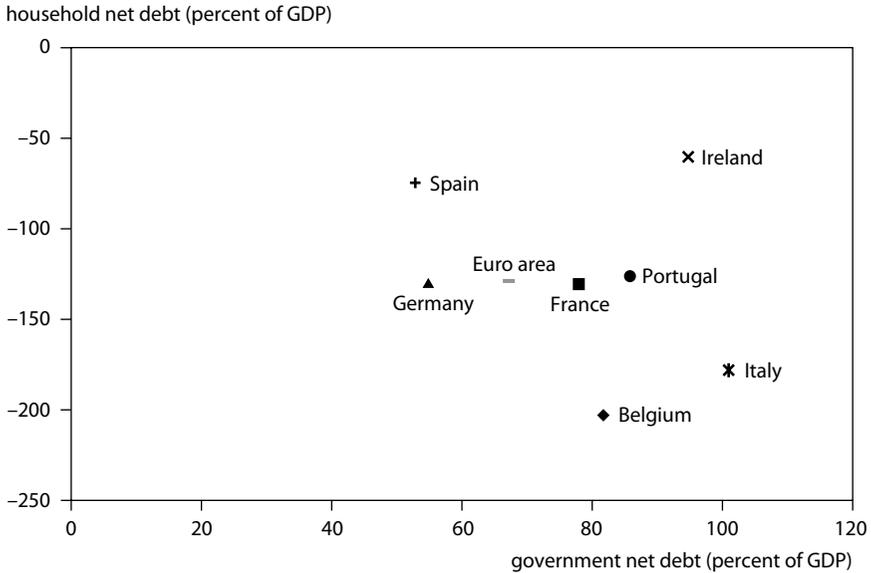
Source: IMF, *World Economic Outlook*.

So far we have considered only gross measures of indebtedness. Of course households and governments also hold stocks of financial assets, so net indebtedness can be considerably lower than gross measures. In fact, gross financial assets for the household sector exceed gross liabilities in all countries, so that net financial assets are positive (or net debt is negative), as shown in figure 14.12. Moreover, our measure of assets excludes the value of housing, meaning that the true net worth of the household sector is even greater. The ranking of countries when the net debt measure is used is similar to the pattern for gross debt, though one striking change is that Portugal's household sector has markedly higher gross indebtedness than the euro area average but is close to the euro area average for net indebtedness.

It should be noted that in the discussion of a country's household debt, households are treated as an aggregate. Even where, on average, net household financial assets for a country are positive, a large cohort of households may have substantial net indebtedness and find it difficult to meet debt obligations. In other words, the distribution of financial assets and liabilities across households in a country is important for the degree of financial distress that households may experience. Unfortunately, reliable data on financial conditions at the individual household level are not yet available for the euro area crisis countries.¹³

13. The Eurosystem of Central Banks recently launched an initiative to produce and publish surveys of consumer finances across euro area countries, similar to the Survey of Consumer Finances in the United States sponsored by the Federal Reserve Board.

Figure 14.12 Government and household net debt, 2011



Source: IMF, *World Economic Outlook*.

Recognizing the heterogeneous features of household indebtedness is also important in examining what constitutes a sustainable level of indebtedness. Many older workers have little or no debt, so indebtedness tends to be concentrated in younger workers, consistent with the life cycle model. Moreover, younger workers tend to have lower disposable incomes than older workers. So although aggregate indebtedness may look manageable, ongoing declines in disposable income may cause significant financial distress for many younger highly indebted workers.

Household Deleveraging During the Current Crisis

Table 14.4 shows the evolution of household indebtedness during the current economic and financial crisis. In most countries, indebtedness continued to move up, possibly reflecting consumption-smoothing motives during the recession. In Spain and the United Kingdom, household indebtedness was lower in 2009 than at the start of the crisis in 2007, as rising disposable income outpaced household debt. The trend of declining indebtedness continued in Germany.

Our data end in 2009, but other sources of data can help to update the picture. In Ireland, banking data show that loans outstanding to households were down 3.3 percent in the first quarter of 2011 compared with the same period a year earlier. Indeed, annual credit growth to the household sector in Ireland has been negative since late 2009. Irish households are now paying down debt. However, although data for 2010 are not yet available, it is

Table 14.4 Household debt, 2007–09 (percent of disposable income)

Country	2007	2008	2009
Austria	86	87	87
Belgium	77	79	83
Denmark	255	262	275
Euro area	94	95	97
Finland	97	98	101
France	73	76	77
Germany	93	89	89
Ireland	194	198	199
Italy	57	57	61
Netherlands	222	230	241
Norway	177	177	n.a.
Portugal	128	129	131
Spain	130	127	125
Sweden	131	133	140
Switzerland	170	168	n.a.
United Kingdom	152	153	149

n.a. = not available

Source: Eurostat database, <http://epp.eurostat.ec.europa.eu>.

expected that household disposable income in Ireland dropped sharply in both 2009 and 2010. As a result, it is not clear that the paying down of nominal debt has actually reduced indebtedness (that is, the level of debt relative to disposable income). But it does appear that households are trying to reduce indebtedness or at least attempting to stem its rise, even though these efforts are being frustrated by continuing declines in disposable income.

In Spain, data from the National Financial Accounts show that total loans outstanding to households peaked in 2008 at €913 billion, up from €450 billion in 2003. Loans outstanding to households subsequently edged down to €907 billion in 2009 and €902 billion in 2010. In Portugal, the National Financial Accounts show that loans to households rose from €161 billion in 2009 to €164 billion in 2010. In both countries, it will turn out that household indebtedness will have risen in 2010 if disposable income fell, even though households are paying down loans.

Other Countries' Experiences with Household Deleveraging

Unlike nonfinancial corporate debt, episodes in which household indebtedness shows annual declines have been rare in Europe over the past few decades. This means that we do not have a broad sample of episodes of household deleveraging to study.

The remainder of the section focuses on the three cases we can identify from our data in which household debt (as a percentage of disposable income) recorded negative annual growth in one or more years. These cases are Finland

Table 14.5 Real GDP growth during the previous and current crises
(percent)

Country	1989	1990	1991	1992	1993	1994
Finland	5.4	0.1	-6.0	-3.6	-0.9	3.7
Sweden	2.8	1.0	-1.1	-1.2	-2.1	3.9
United Kingdom	2.3	0.8	-1.4	0.1	2.2	4.3
	2007	2008	2009	2010	2011f	2012f
Greece	4.3	1.0	-2.3	-4.4	-5.0	-2.0
Ireland	5.2	-3.0	-7.0	-0.4	0.4	1.5
Italy	1.5	-1.3	-5.2	1.3	0.6	0.3
Portugal	2.4	0.0	-2.5	1.3	-2.2	-1.8
Spain	3.6	0.9	-3.7	-0.1	0.8	1.1

f = forecast

Source: Organization for Economic Cooperation and Development (for Finland, Sweden, and the United Kingdom); IMF, *World Economic Outlook*, September 2011 (for the rest).

(1990–97), the United Kingdom (1991–97), and Sweden (1993–95).¹⁴ Each of these episodes was associated with the bursting of large housing and credit bubbles as well as with recessions, currency crises, and (in the case of Finland and Sweden) severe banking crises.

As shown in table 14.5, Finland, Sweden, and the United Kingdom suffered recessions in the early 1990s. The recession was especially deep in Finland, where real GDP dropped more than 10 percent over the period 1991–93.

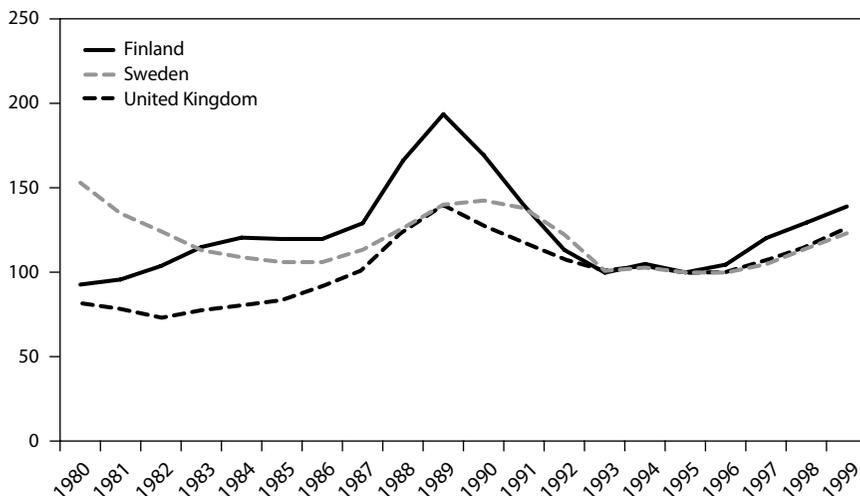
For comparison with the current crisis, the recent economic performance of the five most stressed countries are also presented in table 14.5. The data are arranged so that the table is centered on the most acute year of the recession, which is 1991 in the previous crisis and 2009 in the current one. The cumulative loss in real GDP in Ireland is expected to be similar to Finland’s experience in the early 1990s. Spain and Italy look much closer to Sweden on this score. The striking difference between the current and previous episodes is that Finland, Sweden, and the United Kingdom rebounded strongly in 1994—three years after the worst year of growth—while projected growth rates for the troubled EMU countries for 2012 are very weak. These projections underscore how much more difficult it is to adjust balance sheets in the current crisis compared with the Nordic-UK crisis in the 1990s.

As in Spain and Ireland today, the large rise in household indebtedness in the episode countries in the previous crises was associated with booms in house prices (figure 14.13). In the Nordic-UK crisis, real house prices stabilized about four to five years after their peak and began to rise again about three to four years later.

14. Data for household indebtedness in Sweden are available only from 1993. It is likely that household deleveraging began a few years earlier, along the lines of what happened in Finland.

Figure 14.13 Real house prices, 1980–99

index, 1995 = 100



Source: Bank for International Settlements, www.bis.org.

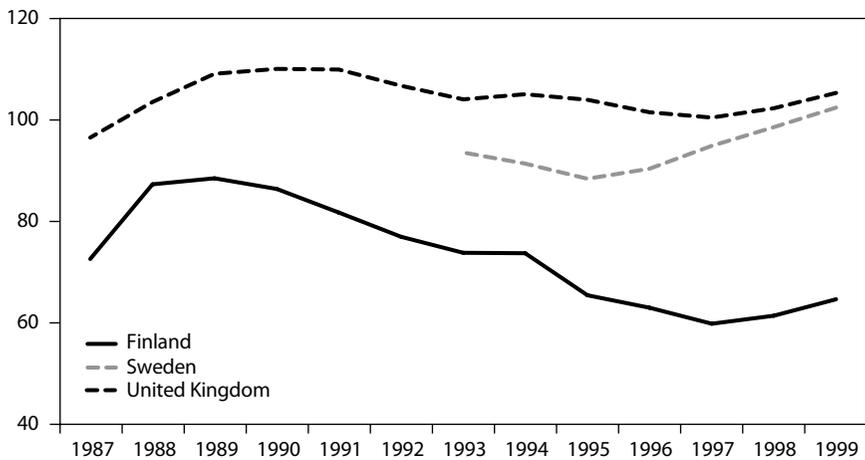
During the housing market booms in the late 1980s, household indebtedness rose sharply in Finland, Sweden, and the United Kingdom (figure 14.14). Following the bursting of the bubbles, the household sector in each of these countries began to deleverage. The reduction in indebtedness was most pronounced in Finland, which had suffered the most severe crisis and where debt relative to disposable income dropped from a peak of 88.5 percent in 1989 to a low of 60 percent in 1997. Indebtedness peaked in the United Kingdom at 110 percent in 1990 and drifted down to 100 percent by 1997, before edging back up. Data for Sweden are incomplete, but deleveraging ended two years earlier than in Finland and the United Kingdom.

How did households in these countries deleverage? Table 14.6 decomposes the drop in indebtedness in the three episodes into changes in nominal household debt and nominal disposable income. It shows the change in the indebtedness ratio, measured as the change in the natural log of the ratio over the indicated period. This change is then decomposed into the change in the (natural log of the) stock of debt and the change in the (natural log of) disposable income. For example, the Finnish indebtedness ratio fell by approximately 39 percent between 1989 and 1997, of which about one-third resulted from a fall in debt and two-thirds from a rise in disposable income. Tables 14A.1 to 14A.3 in appendix 14A provide detailed data on debt, disposable income, and the indebtedness ratio.

Several aspects of the Finnish experience are worthy of comment. First, household debt continued to rise through 1991, even though real economic

Figure 14.14 Household debt, 1987–99

percent of disposable income



Note: Data for Sweden are not available for all the years shown in this figure.

Sources: Statistics Finland, www.stat.fi/index_en.html; Statistics Sweden, www.scb.se; UK Office for National Statistics, www.ons.gov.uk/ons/index.html.

Table 14.6 Decomposition of changes in indebtedness ratio

Country	Period	Change in debt (A)	Change in disposable income (B)	Change in indebtedness ratio (C) = (A) – (B)
Finland	1989–97	-0.13	0.26	-0.39
Sweden	1993–97	0.07	0.08	-0.01
United Kingdom	1991–97	0.27	0.36	-0.10

Source: Authors' calculations based on data from Statistics Finland, UK Office for National Statistics, and Statistics Sweden.

activity slumped that year. This suggests that it may take a while for households to realize that the boom is over. Second, households managed to pay down about 7.5 billion markka of debt between 1992 and 1996, equivalent to about 20 percent of the stock of debt in 1991. Third, disposable incomes rose in most years of the adjustment, with the exception of 1993 and 1994. By 1995, disposable income was markedly higher than at the height of the boom in the late 1980s.

What is most striking about the UK experience is that in no year did UK households pay down nominal debt. In fact, debt levels were markedly higher in 1997 than in 1991, when the indebtedness ratio peaked. The reduction in indebtedness after 1991 was achieved by continuous increases in disposable incomes. The role of rising disposable income in helping overindebted households to deleverage in all three countries is an important feature of the earlier experiences.

Policy Options and Conclusions

The indebtedness of the corporate and household sectors in the peripheral euro area economies rose markedly over the first decade of EMU. Recent data suggest that these sectors have responded to the financial crisis, deterioration in access to finance, and weakening growth prospects by beginning a process of balance sheet adjustment. These efforts to deleverage have contributed to a large drop in domestic demand in these economies. Large fiscal deficits and low or negative GDP growth rates have led to a sharp increase in the ratios of public debt to GDP. Financial markets in turn have grown increasingly worried about the underlying solvency of governments, and risk premia have risen. These high risk premia are now forcing governments into fiscal adjustments that are further depressing economic growth.

These efforts to reduce indebtedness are likely to continue, but progress will be slow because weak GDP growth will hinder the deleveraging process. Of course, GDP growth is weak in part because the private sector is attempting to deleverage. That is the catch-22 situation facing the euro area. Peripheral euro area economies are encumbered with high private and public sector debt, intense market pressure, and a need for significant adjustments in competitiveness. We have argued that the situation in Italy appears to be less problematic as external debt is small and structural problems can in principle be solved. However, determined policy action is required in Italy to reverse the weak growth prospects and the structural difficulties in the economy.

The EU policy response to this dilemma has so far focused on supporting the public sector by alleviating market pressure and providing rescue programs at concessionary interest rates to Greece, Portugal, and Ireland. Markets, however, remain unconvinced. A number of further policy options therefore need to be discussed, some relating to domestic policies and others to policies for the euro area as a whole.

Domestic Policies

1. Ongoing fiscal consolidation is necessary in countries with large fiscal deficits, especially in countries with sizeable structural deficits.¹⁵ However, fiscal adjustments should be done in a way that minimizes negative effects on growth. Zsolt Darvas and Jean Pisani-Ferry (2011) have shown that this approach has often not been used in recent years. A policy rethink on the composition of fiscal adjustment is necessary. In addition, in making budgetary adjustments policymakers should be cognizant of the unequal distribution of assets and liabilities across households. To facilitate private sector deleveraging, the burden of fiscal consolidation in countries with

15. According to IMF estimates, the general government structural deficit (as a percentage of potential GDP) in 2011 stood at 6.9 percent in Greece, 6.8 percent in Ireland, 4.4 percent in Spain, 4 percent in Portugal, and 2.6 percent in Italy (IMF 2011).

overindebted household sectors should, where possible, weigh more heavily on households with little or no debt than on the highly indebted cohorts.

2. Reducing external debt burdens requires improvements in external balances in the peripheral economies. These economies therefore must improve competitiveness to increase market share. Indeed, given the expected slowing of growth in Europe in 2012, increasing market share is increasingly important. However, internal devaluation to restore competitiveness takes time. Importantly, there are policy measures that can accelerate this process without increasing the indebtedness of the private sector. Benedicita Marzinotto, Pisani-Ferry, and Wolff (2011) argued that unused structural funds could be spent on targeted wage subsidies in the tradable sector to promote the creation of jobs in the export sector. Increased competition in goods and services markets to boost productivity and bring down prices in the nontraded sector would also contribute to improved competitiveness. More generally, policymakers could usefully focus on structural reforms that facilitate the reallocation of the workforce to the tradable sector. Similarly, in surplus countries, policymakers should not resist freely set wage increases resulting from tight labor market conditions.
3. Structural factors that impede domestic investment and consumption should be removed in countries with large current account surpluses. The tax and regulatory system should avoid discouraging investment in the corporate sector.

Euro Area Policies

The past experiences of corporate and household deleveraging studied in this chapter highlight the key role of overall economic growth in facilitating private sector deleveraging. But there is a policy dilemma because domestic fiscal adjustments, although necessary to reduce structural deficits, drag economic growth in the short term and therefore hinder the deleveraging. Necessary real exchange rate depreciation may in the short term even lead to a deterioration of the current account balance due to the usual delayed pickup of export volumes. As a result, the deleveraging process will likely be prolonged, and this in turn will delay economic recovery. The key point is this: Along with fiscal consolidation and competitiveness improvements at home, the countries concerned need favorable external conditions. Strong growth in the euro area as a whole will help the peripheral countries to increase their exports in a more robust manner. An important lesson we draw from the analysis in this chapter is that policymakers must ensure that the euro area as a whole does not enter a deep or prolonged recession and that the overall euro area macroeconomic stance is appropriate.

Room for fiscal expansion by other members of the euro area is limited because budget deficits are sizeable and market pressures could increase rapidly. Germany has more room than most to support growth using fiscal policy, but

large-scale fiscal expansion by Germany is not a realistic proposition, not least because of concerns about unfavorable demographics. The European Central Bank has reduced policy interest rates over recent months and could cut rates further given recent declines in inflation expectations. Additional monetary policy support to the euro area economy would probably need to rely on more unconventional monetary policy tools, which have so far been ruled out.

Given the current constraints on traditional fiscal and monetary policy in the euro area, what can policymakers in the euro area do to address the dilemma facing the overindebted countries?

1. A targeted euro area-wide strategy centered on European investment should be envisaged. A natural area for common public expenditure is where clear European spillovers and externalities exist. The ongoing energy transition is such an area where an ambitious European strategy would be beneficial. Raising tax revenues at the European level—for example by taxing the financial services industry—to help leverage borrowing for a European energy network could be an efficient way of supporting the euro area economy. While it takes time to define such a program and begin actual spending, it should be recognized that debt adjustment will take many years. Moreover, simply announcing such a strategy may give a boost to the euro area economy even in the short term via positive expectation effects.
2. Overindebtedness in the (nonfinancial) corporate sector and in the household sector puts severe strains on the banking system. Bad assets in the banking system should be recognized and dealt with promptly so that credit provision to growing sectors of the economy is not curtailed. Banks should be rigorously stress tested to detect such bank balance sheet problems and recapitalized if necessary. The current arrangement allows European funds (via the European Financial Stability Facility, EFSF) to be loaned to countries for bank recapitalization. Governments should request European funds where necessary rather than delay bank restructuring. EFSF loans for bank recapitalization should be given at no extra charge, that is, at EFSF borrowing costs, so that the banking-sovereign feedback loop that is contributing to financial fragility does not get aggravated. Better still, the rules of the EFSF could be changed to allow the EFSF to inject capital directly (not via loans to governments) into European banks in exchange for ordinary equity in the banks and increased supervisory powers at the euro area level.
3. Debt relief may be required in some cases. If public and/or private debt levels cannot be managed by the debtors, creditors will have to accept losses. This is not the place to review how such debt reduction can be achieved in a way that results in the lowest damage to the euro area as a whole and the individual country. What is clear, however, is that if the euro area suffers a deep and prolonged recession in 2012 and 2013, debt relief for private and public creditors may be needed in some member countries.

Appendix 14A

Data on Household Indebtedness in Finland, Sweden, and the United Kingdom

Table 14A.1 Household indebtedness in Finland, 1989–97

Year	Debt (billions of Finnish markka)	Disposable income (billions of Finnish markka)	Indebtedness ratio (percent)
1989	36.6	41.4	88.5
1990	38.5	44.6	86.4
1991	39.2	47.9	81.7
1992	37.7	49.0	77.0
1993	35.5	48.0	73.8
1994	34.0	46.2	73.7
1995	32.7	50.0	65.4
1996	31.6	50.2	63.0
1997	32.1	53.6	59.8

Source: Statistics Finland, www.stat.fi/index_en.html.

Table 14A.2 Household indebtedness in the United Kingdom, 1989–97

Year	Debt (billions of pounds)	Disposable income (billions of pounds)	Indebtedness ratio (percent)
1989	353	324	109
1990	402	365	110
1991	439	400	110
1992	459	431	107
1993	478	460	104
1994	499	475	105
1995	523	503	104
1996	545	537	101
1997	575	573	100

Source: UK Office for National Statistics, www.ons.gov.uk/ons/index.html.

Table 14A.3 Household indebtedness in Sweden, 1993–97

Year	Debt (billions of Swedish kronor)	Disposable income (billions of Swedish kronor)	Indebtedness ratio (percent)
1993	889	832	93.6
1994	910	831	91.4
1995	939	830	88.4
1996	942	851	90.3
1997	950	901	94.9

Source: Statistics Sweden, www.scb.se.

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