BOXES

Inflation slowed markedly in 2013 both in Spain and in the euro area as a whole, with the respective year-on-year changes in the HICP in December standing at 0.3% and 0.8%. This trajectory has continued in 2014 to date. Projections by private analysts, official agencies and those implicit in financial market prices assume inflation will hold at very low levels for a prolonged period (see accompanying table 1). Specifically, for the euro area as a whole, the projections available point to a very slow return to rates close to 2% and to a negative Spain/euro area differential. However, longer-term inflation expectations remain anchored at levels slightly below the 2% reference (see Panel 1).

The recent downward course of inflation is due to the disappearance of certain temporary factors, linked to fiscal consolidation, and to the trend of energy prices and the exchange rate, although factors of a more permanent nature are also in play. The latter include most notably the moderation of unit labour costs and significant excess slack. The influence of these factors has been greater in Spain than in the euro area as a whole, owing to the adjustment under way here to regain the competitiveness lost during the expansionary phase.

Against this background of very low inflation, analysis of the scenarios in which price declines and, ultimately, deflationary processes – with across-the-board and sustained falls in prices – might arise has become important. In this respect, the diffusion indicators show that price declines are not overly widespread either in Spain or the euro area (see Panel 2)[1], though they have increased in 2013, albeit without yet reaching the highs observed in late 2009 and early 2010. Unlike that period, however, the recent slowdown in prices is proving especially significant in the case of services prices which, as they are particularly labour-intensive, have been more affected by wage moderation and productivity gains.

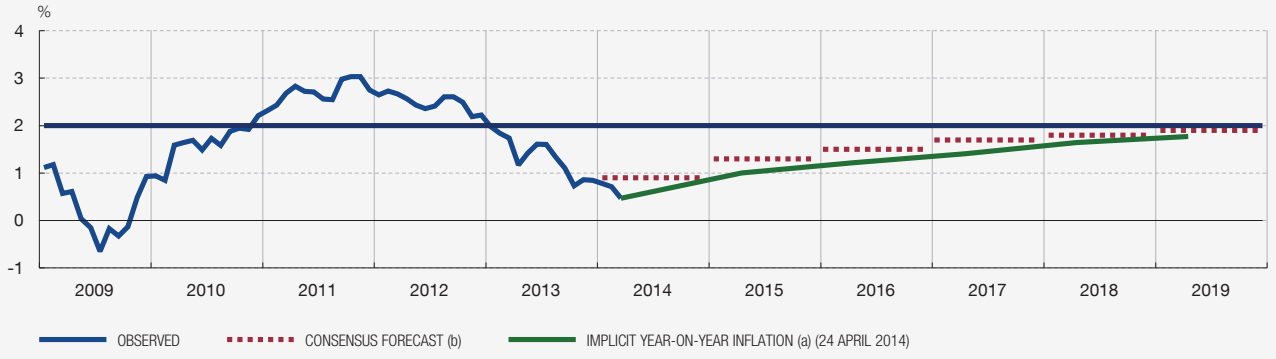
In any event, when evaluating scenarios of sustained price declines a distinction must be drawn between the consequences for the euro area as a whole and for Spain. A fall in a euro area member country's prices might reflect the adjustment of relative prices needed to correct some of its imbalances. In that respect,

1 These indicators measure the proportion of expenditure-weighted and seasonally adjusted HICP items that show month-on-month declines.

1 INFLATION FORECASTS

Spain	2014	2015	2016
Consensus Forecast (April 2014)	0.3	1.0	1.5
European Commission (February 2014)	0.3	0.9	—
IMF (April 2014)	0.3	0.8	0.9
Euro Area			
ECB (March 2014)	1.0	1.3	1.5
Consensus Forecast (April 2014)	0.9	1.3	1.5
European Commission (February 2014)	1.0	1.3	—
IMF (April 2014)	0.9	1.2	1.3
Inflation swap contracts (24 April 2014)	1.0	1.2	1.4

1 LONG-TERM INFLATION EXPECTATIONS



SOURCES: Eurostat.

a Obtained from inflation swap contracts.
b Consensus Forecast forecasts from the third year onwards are only updated in April and October each year.

shocks originating in positive developments on the supply side entail benign price declines, as they are accompanied by higher levels of output and employment. Notable among these are those linked to structural reforms that improve the economy's productivity or heighten competition in product and factor markets.[2] Conversely, contractionary demand-side shocks may be more harmful, bringing together declines in prices and output which, if they feed back into one another, may prompt a deflationary spiral.

A generalised and persistent situation of price declines may dampen activity through various channels. Firstly, expectations of sustained low inflation exerts upward pressure on the expected real interest rate, which leads to private spending being deferred. Moreover, if – as is currently the case – nominal interest rates are close to zero, the capacity of conventional monetary policy to correct this effect is very limited. Secondly, as debt contacts are specified in nominal terms, falls in prices increase the real-terms cost of servicing such debt. That is particularly significant in countries such as Spain, where the volume of household and corporate debt is still high. Lastly, and more generally, very low inflation across the euro area hampers an individual country achieving gains in competitiveness relative to the area as a whole.

In any event, a very moderate inflation scenario may trigger particularly adverse effects if it unanchors long-term inflation expectations, thereby reducing the effectiveness of monetary policy and increasing real interest rates. Nonetheless, at present European households do not seem to expect either that consumer prices will fall (see Panel 3) or that long-term inflation expectations will be far off 2%.

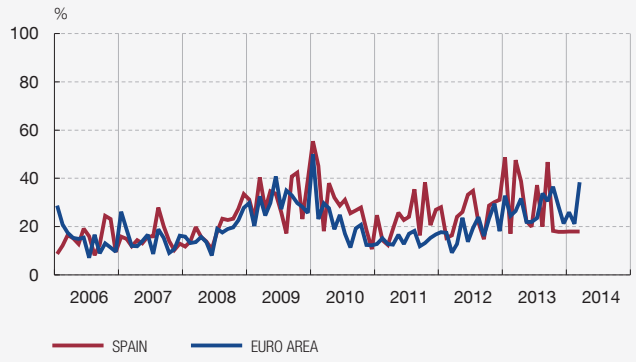
2 See J. Andrés, Ó. Arce and C. Thomas (2014), *Structural reforms in a debt overhang,* Documento de Trabajo del Banco de España (forthcoming), and Box 1.2 in this Chapter.

The Banco de España dynamic stochastic general equilibrium model BEMOD, estimated for Spain and the rest of the euro area, provides for the analysis of the probability of different price scenarios materialising in relation to Eurosystem predictions. In particular, an assessment can be made of the probability with which moderate inflation (lower than 1% on average in 2014) or price falls of some intensity (a rate of change below -1%) might be observed.[3] The estimations show that scenarios of inflation below 1% are highly likely, especially in Spain, while the scenarios of price declines of over 1% are fairly unlikely. In addition, to assess the extent to which a slightly higher level of inflation across the euro area may smooth the competitive adjustment needed in Spain, an alternative exercise has been conducted. In it, as the result of a more expansionary monetary policy, inflation in the euro area increases by 50 bp in 2014 and 2015, drawing closer to the 2% target in late 2015. Under this new scenario, there is an appreciably lower probability that Spanish inflation will be below -1%.

In short, the evidence available would indicate that inflation is going to remain at very low levels over a prolonged period, but that the probability of a costly deflation process arising at present is limited. In any event, the adjustment still required in terms of competitiveness in some economies in the area, such as Spain's, would be assisted if the euro area inflation rate were to converge towards its long-term target at a somewhat brisker rate pace than is currently anticipated.

3 In interpreting the results it should be borne in mind that the simulations performed incorporate the zero lower bound constraint whereby nominal interest rates cannot be negative, although they do not consider the possibility of implementing non-conventional monetary policy measures. In addition, the exercises presented hereafter do not take into account the debt deflation channel, meaning that the total cost of the generalised and sustained declines in prices might be being underestimated. Lastly, bootstrapping techniques are used to take into account the dependence of the structural shocks.

2 DIFFUSION INDICATORS. PERCENTAGE OF EXPENDITURE (a)



3 PRICE DECLINE EXPECTATIONS IN THE NEXT TWELVE MONTHS
European Commission surveys

SOURCES: Banco de España and European Commission.

a Calculated with seasonally adjusted series.

In the current setting, there is scant headroom to boost aggregate demand by means of conventional monetary policy (interest rate cuts) and fiscal policy (countercyclical balances) instruments. Accordingly, one of the main economic policy options for reinvigorating activity is the application of structural reforms that make product and factor markets more efficient and competitive.

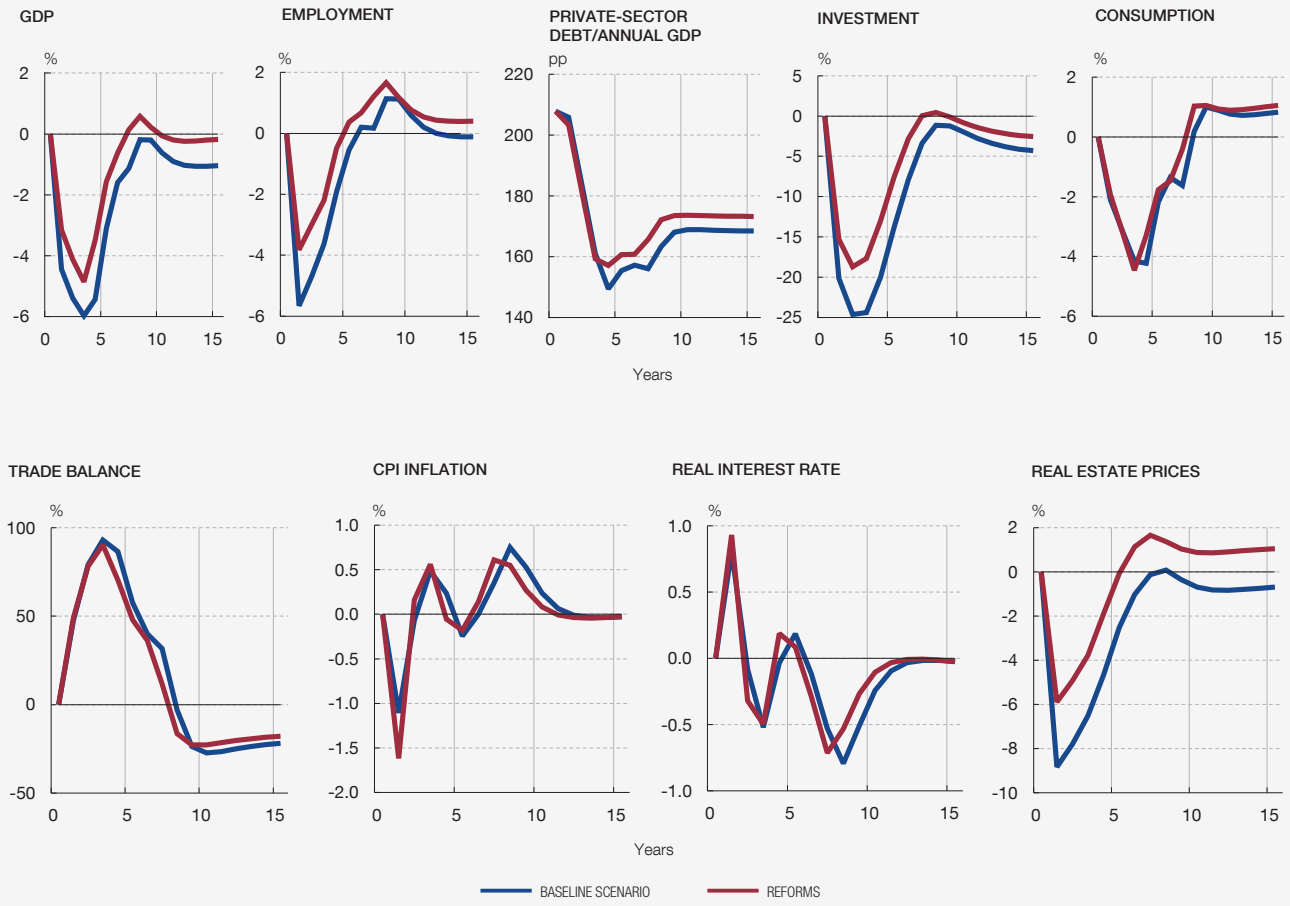
In the long run, there are few doubts over the positive effects of these reforms: insofar as a market becomes more competitive, the volume of activity grows, prices fall and the opportunities for improving economic agents' welfare increase. Through the expectations of the latter, who discount a greater future spending capacity, a portion of the durable benefits of the reforms normally materialise in the short run (the *expectations channel*). However, the moderation in prices typically prompted by structural reforms may give rise to increases in real interest rates and, therefore, to declines in household and corporate spending in the short run (the *interest rate channel*). Moreover, given debt whose nominal amount is predetermined, a moderation in prices prompts a higher real value of debt (the "Fisher effect" or the *debt deflation channel*[1]), with the subsequent restrictive effect on debtor agents' budgets.

The relative intensity of the foregoing channels – expectations, on one hand, and the interest rate and debt deflation, on the other – determines the sign of the short-term impact of the structural reforms. Some recent research has emphasised the fact that the lack of headroom to make nominal interest rate cuts may be pivotal in inclining the balance in favour of contractionary channels.[2] This type of analysis would appear to point to the

1 See I. Fisher (1933), "The debt-deflation theory of great depressions», *Econometrica* vol. 1, pp. 337-357.

2 See, for example, G. Eggertsson, A. Ferrero and A. Raffo (2014), "Can structural reforms help Europe?", *Journal of Monetary Economics*, vol. 61, pp. 2-22.

1 EFFECT OF STRUCTURAL REFORMS IN A DELEVERAGING PROCESS (a)



SOURCE: Banco de España.

a All variables expressed as deviations from their initial state, except private-sector debt/GDP, which is in percentage points.

advisability of postponing the reforms until their contractionary effects may be countered by expansionary macroeconomic policies.[3]

Nonetheless, most of the macroeconomic models used in the foregoing research are designed to analyse the fluctuations proper to a traditional economic cycle, rather than those arising from a deep-seated macrofinancial crisis such as the present one. In a recent paper, Andrés, Arce and Thomas (2014)[4] develop a specially designed model to analyse the effect of structural reforms on an environment similar to that currently characterising the Spanish economy, namely one of slow leverage, owing to the presence of a high volume of long-dated debt, and of restricted access to financing. Further, the model considers that the domestic economy is part of a monetary union that has no leeway to lower interest rates. Businesses and a portion of households take on debt using the value of their real estate assets as collateral; however, when the value of their assets falls below a specific threshold, the extension of fresh credit is interrupted and, in that case, debtors restrict themselves to repaying their outstanding debt according to the maturities stipulated in their debt contracts.

The starting point is a *baseline scenario* that includes a persistent tightening of loan access conditions for households and firms, and that entails, in particular, a reduction in the loan-to-value ratios of the new loans granted to these agents. The blue lines in Panel 1 show the response of the economy to this financial shock (the magnitudes of the simulations are merely illustrative of the qualitative behaviour of the model and should not be interpreted as realistic quantitative approximations). The slump in real estate prices and, therefore, in the value of the collateral means the flow of new credit shrinks sharply, which gives rise to a long and slow process of private deleveraging. The need for households and firms to generate saving to repay their debts and clean up their balance sheets leads them to reduce consumption and investment levels. In parallel, the trade balance improves thanks to the gains in competitiveness to which the disinflationary effect of the shock and the subsequent contraction in domestic demand gives rise. Yet this improvement does not suffice to prevent a prolonged decline in GDP. When the value of the assets of the households and firms applying for funds reaches the minimum threshold for satisfying loan access conditions, the flow of fresh credit re-starts. Thereafter, a virtuous circle takes hold, with a vigorous pick-up in asset prices, in credit and in agents' spending capacity. As a result, consumption and investment, and GDP too, begin to recover.

The unbroken red lines in Panel 1 show the responses of the main variables when *structural reforms* are adopted that involve increases in the degree of competition in the product and labour markets. These reforms induce a lasting reduction in business mark-ups and give rise to more moderate wages.[5] In the long run, these measures have a clearly positive effect on GDP and employment; but they also relieve the adverse effects of deleveraging in the short and medium term. This is chiefly due to

3 Some theoretical developments pointing along these lines can be found in the following papers: G. Eggertsson, G. (2012), "Was the New Deal contractionary?", *American Economic Review*, vol. 102, pp. 524-555; G. Eggertsson, and P. Krugman (2012), "Debt, deleveraging, and the liquidity trap: a Fisher-Minsky-Koo approach", *Quarterly Journal of Economics*, vol. 127, pp. 1469-1513; and J. Galí, and T. Monacelli (2014), "Understanding the gains from wage flexibility: The exchange rate connection", CEPR discussion paper 9806.

4 See J. Andrés, Ó. Arce and C. Thomas (2014), "Structural reforms in a debt overhang", Documento de Trabajo del Banco de España (forthcoming).

5 Specifically, there is a reduction in price mark-ups (i.e. the difference between production prices and marginal production costs) and wage mark-ups (that between wages paid to workers and their reserve wages).

2 ROLE OF THE EXTERNAL SECTOR IN THE TRANSMISSION OF THE EFFECTS OF THE REFORMS (a)

SOURCE: Banco de España.

a The panels show the differential effect of the structural reforms on GDP, i.e. the difference between the two lines in the top-left hand graphic in Panel 1, for different values of the elasticities of exports and imports to relative prices.

the better performance of investment. Specifically, anticipation of the beneficial effects of the reforms in the long run means that, in the short run already, households and firms increase their investment demand relative to the baseline scenario. This greater demand entails a lesser decline in real estate asset prices. That contributes to curtailing the severity of the decline in debtors' financial worth and, therefore, helps them regain earlier the minimum threshold at which new credit may be granted. Combining with this positive effect on firms' financial capacity is a contraction in these agents' consumption which, in the context of this model, may be assimilated to smaller dividend payouts (and, therefore, a greater accumulation of retained earnings).

In this way, the reforms *bring forward* the end of the deleveraging process and, therefore, of the recession, thus reinforcing the *expectations channel.* At the same time, since the flow of new credit slows substantially during the deleveraging phase, private spending decisions at the aggregate level are relatively insensitive to the increase in the real interest rate induced by the deflationary effect of the reforms. This leads to a loss of intensity in the *interest rate channel*. The combination of both effects – the reinforcement of the expectations channel and the weakening of the interest rate channel – results in a net positive effect of the reforms on activity and employment in the short run already, which prevails over the negative Fisher effect arising from a path of lower prices. In this respect, the presence of a high proportion of long-term debt – which is an essential factor in the current crisis, especially in the case of household mortgage debt – operates by substantially cushioning the short-term contractionary effect of the debt deflation channel.

One significant channel for the transmission of the effects of the reforms is that of foreign trade. As can be seen in Panel 1, the reforms do not bring about a significant effect on the trade balance in the short term. This apparent lack of effect encompasses two opposing forces: although the reforms bring about an additional lowering of the prices of domestic products, they also prompt an improvement in domestic demand. This behaviour of the external balance depends largely on the sensitivity of trade flows to the relative prices of domestic and foreign goods. The left-hand graphic of Panel 2 shows the differential effect of the reforms on GDP[6] for two different calibrations of the elasticity of exports to relative prices: unit elasticity (the baseline value[7]), and a very low elasticity of 0.2. In this latter case, the effects of the reforms in the short run turn negative, owing to the insufficient positive contribution of exports. In the case of imports (right-hand graphic), reducing their price-elasticity also reduces the positive effect of the reforms, though not to the extent of changing the sign of this effect. This example illustrates, therefore, that a key condition if the reforms are to have beneficial effects in the short term is that the resulting gain in competitiveness should pass through with sufficient intensity to trade flows.

6 The differential effect of the reforms on GD Pis equivalent to the vertical distance between the two lines in the upper left-hand graphic of Panel 1.

7 The calibration of the unit elasticity of exports is based on estimates for Spain by C. García, E. Gordo, J. Martínez-Martín and P. Tello (2009), "*Una actualización de las funciones de exportación e importación de la economía española",* Documentos Ocasionales, no. 0905, Banco de España.

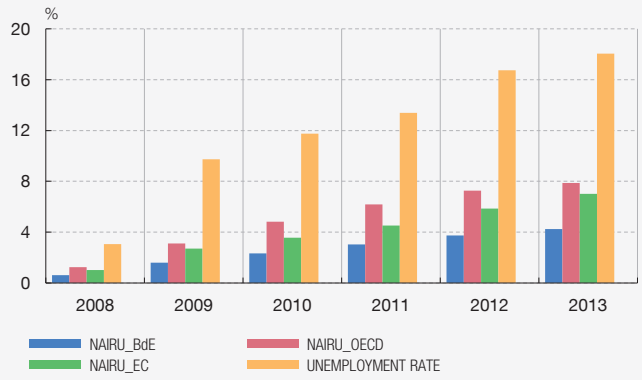
The unemployment rate in the Spanish economy peaked in 2013 Q1 (at 26.9% of the labour force), marking an increase of close to 20 pp on the low recorded in 2007 Q3. Since then, unemployment has moved on a progressively declining path, dipping to 25.9% in 2014 Q1. The latest macroeconomic projections of the Banco de España, released in March, point to the continuation of this trajectory over the remainder of 2014 and in 2015 in a setting in which the gradual recovery in activity is forecast to pass through intensely to job creation, assisted by ongoing wage moderation and its extension over the projection horizon. Notwithstanding, the unemployment rate in the Spanish economy is expected to hold at very high levels in comparative terms.

There are different reasons why an initially cyclical increase in unemployment may become persistent, generating an increase in the structural component of unemployment through what is usually known as a hysteresis effect that hampers subsequent reductions in the unemployment rate, even in an economic upturn. Such hysteresis can be caused by various factors. Thus, enduring unemployment status over a prolonged period may ultimately exert permanent effects on the human capital of the unemployed, on their intensity of job search and on firms' perception of their skills or background. These effects may be more significant in a context of sectoral reallocation of employment in which the skills demanded by firms differ from what the unemployed have to offer.

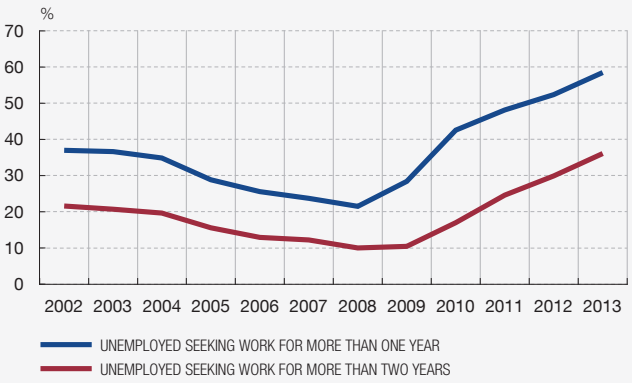
One way of analysing the degree of persistence of unemployment consists of estimating the structural rate of joblessness, a concept that can be interpreted as the unemployment rate of the economy in the medium term, once the impact of cyclical factors is stripped

THE IMPACT OF THE CRISIS ON THE STRUCTURAL COMPONENT OF UNEMPLOYMENT

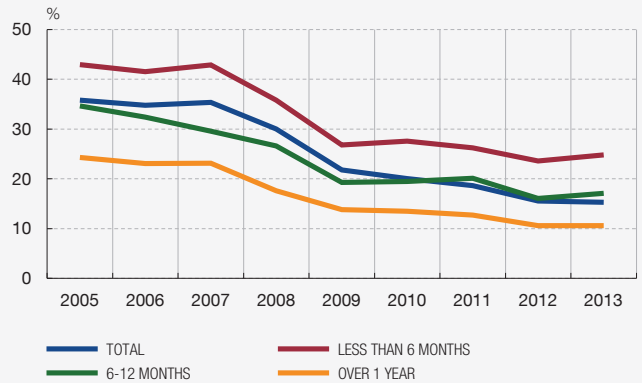
1 CUMULATIVE INCREASE IN THE UNEMPLOYMENT RATE AND IN THE ESTIMATED NAIRU



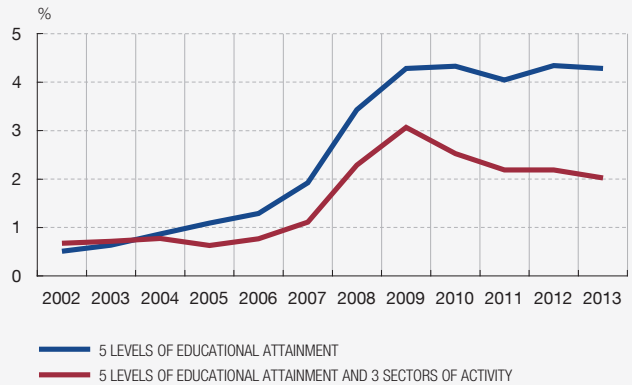
2 INCIDENCE OF LONG-TERM UNEMPLOYMENT (a)



3 UNEMPLOYMENT EXIT RATES IN RESPECT OF TIME SEEKING WORK (b)



4 SKILLS MISMATCH INDEX (c)



SOURCES: EPA (INE) microdata and Banco de España.

a Percentage of total unemployed.
b Percentage of unemployed who find work in the following quarter.
c Mismatch between the distribution by educational attainment level (primary studies or less, first-phase secondary studies, higher secondary studies, vocational training and university studies) of the employed and the unemployed. Having regard to the sectoral dimension, three major sectors of activity are used (manufacturing, construction and services) and both the unemployed seeking their first job and the long-term unemployed, on whom no information on the sector of activity is available, are excluded.

out. This structural component is, however, non-observable and estimating it is subject to high uncertainty as there are different methodological approaches that provide different results. Presented below are the results of the application of a methodology that involves estimating the disaggregation between the structural and cyclical components of unemployment using the Phillips curve approach.[1] Specifically, a relationship is assumed between wage growth and deviations of unemployment from its structural component, i.e. the cyclical component of unemployment. Hence, if unemployment is below (above) its equilibrium or structural level, higher (lower) wage growth will tend to be observed, meaning that the structural unemployment rate, which under this approach is usually called the NAIRU, could be interpreted as that level of the rate that were compatible with stable inflation.

The top left-hand hand graphic of Panel 1 shows the cumulative increase in the NAIRU since 2008 following the above-mentioned methodology. The high uncertainty constantly surrounding these estimates usually advises analysing medium-term trends rather than the discrete levels estimated.[2] The results show that the Spanish economy's structural unemployment rate would have increased by around 4 pp since the onset of the crisis.[3] the estimates available for Spain by the OECD and the EC tend to offer a somewhat higher increase, with the NAIRU showing a more procyclical profile.

This result would reflect the impact of hysteresis effects on the NAIRU. Thus, the average duration of unemployment episodes has risen from around 2.8 quarters to over 6.5 quarters in 2013, raising to 60.7% the proportion of the unemployed experiencing this status for more than a year. There has also been a most substantial increase in the percentage of those unemployed for a very long period, of over two years, to 38.9% of total unemployed (see the top right-hand graphic of Panel 1). This phenomenon is concentrated, moreover, in certain groups, such as employees over 50 years of age or the more unskilled unemployed, for which this percentage stood at around 50% at end-2013.

Unemployment exit rates, which have fallen appreciably for all unemployment durations, have begun to rise slightly in 2013, at least for the unemployed with less duration in this situation (see the bottom left-hand graphic of Panel 1). Foreseeably, the incipient recovery will help entrench this improvement which, nonetheless, will probably be slower among the group with longer durations.[4] This diminished cyclicality of exits from unemployment once a large amount of time has been accumulated experiencing this status might limit the aggregate recovery of the unemployment exit rate in the face of a cyclical upturn.

Unemployment persistence might also be related to the increase in the skills mismatch between labour supply and demand observed since the start of the crisis. In this connection, the bottom right-hand graphic of Panel 1 shows the changes in a skills mismatch index that seeks to measure the discrepancy between the breakdown by level of educational attainment of the employed and unemployed populations.[5] In principle, it is expected that the bigger this mismatch is, the more difficult it will prove to reabsorb unemployment. The clear increase in the level of skills mismatch is observed during the crisis, caused by the concentration of job destruction among the lesser-skilled. If the sectoral dimension is taken into account, the pattern is similar and highlights how the acute job destruction in the construction industry, especially at the start of the crisis, prompted a considerable increase in the relative weight of the low-skilled unemployed. These results indicate that a reduction in unemployment will require the adaptation of unemployed workers' skills to job requirements.

In short, although a significant portion of the increase in unemployment since the start of the crisis is closely associated with the cyclical downturn, it cannot be ruled out that there has in parallel been an increase in the structural component of unemployment, which might hamper any reduction in unemployment in the near future. These difficulties appear to be particularly marked for specific groups, among whom very high unemployment durations are observed. The overall design of active and passive policies of support for the unemployed should focus on increasing the employability of these groups, analysing the links with the various social protection mechanisms and facilitating wage flexibility.

1 See J. Gali (2011), "The Return of the Wage Phillips Curve", Journal of European Economic Association, June, 9 (3), pp. 436-461.

2 See, for example, Estrada, Hernando and López Salido (2000), *Measuring the NAIRU in the Spanish Economy,* Documentos de Trabajo, no. 0009, Banco de España; or ECB (2012), *Euro Area Labour Markets and the Crisis,* Occasional Paper no. 138.

3 This increase is also similar to that estimated by Doménech (2013), "Potential Growth and Structural Unemployment in Spain, EMU and the US", BBVA Research, mimeo, using an alternative methodology drawing on Okun's Law.

4 In particular, an analysis of the likelihood of exiting unemployment conducted for the 2005-2013 period, drawing on microdata on EPA flows, shows that this likelihood increases by 2.1 pp given a 1% improvement in GDP for the short-term unemployed, while for the longer-term unemployed the impact of an improvement in activity is only 1.3 pp.

5 In particular, the distribution of the employed and unemployed population is used following five levels of educational attainment drawn from Spanish Labour Force Survey data. For further details see M. Izquierdo, S. Puente and P. Font (2013), "Evolución del desajuste educativo entre la oferta y la demanda de trabajo en España", *Boletín Económico*, June, Banco de España.

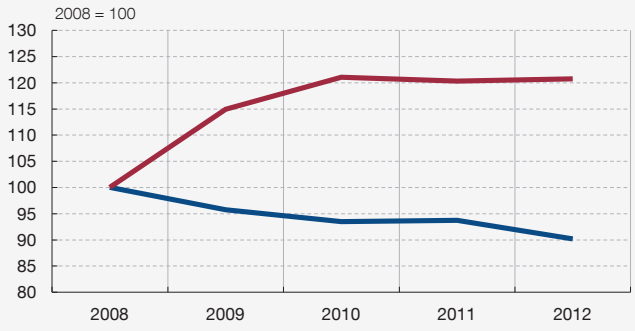
Before the crisis, the debt of non-financial corporations increased very quickly. Afterwards, it has decreased slowly and progressively against a background characterised by a macroeconomic recession in which employment and productive investment have deteriorated notably. This Box analyses to what extent the employment and tangible fixed-asset investment behaviour of non-financial corporations differs depending on their level of debt. To do this, use if made of the merged CBSO and Mercantile Register database (CBI)[1], which contains microeconomic data from a sample of around 600,000 firms per year, for the period from 2008 to 2012 (latest year available). The firms are separated into two groups according to whether at the beginning of each year their ratio of debt to net assets is above or below the average for their industry.

1 This database is obtained by merging the CBA and CBB databases. The CBA database contains information on some 10,000 firms reporting annually to the Central Balance Sheet Data Office and is somewhat biased towards larger firms. The CBB database is constructed from financial statements lodged by firms in the mercantile registers and contains information on small and medium-sized enterprises.

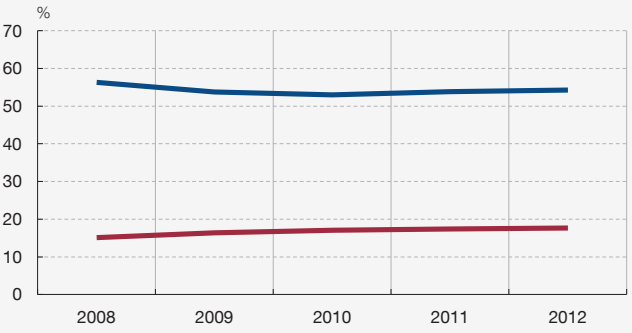
Chart 1 shows the financial debt of the two groups of companies. It can be seen that, whereas the most indebted firms progressively reduced their borrowed funds from 2008, the debt of other firms followed an upward path until 2010 and then remained steady for the following two years. A more detailed analysis by industry and firm size confirms the existence of similar behaviour patterns in all industries, and in both SMEs and larger firms. As a result of this behaviour the ratio of debt to net assets of both aggregates became slightly more similar (see Chart 2). This convergence is more evident if construction is excluded, since this industry's debt ratio was pushed upward by the high losses in the period analysed, which reduced the denominator of this indicator.

Charts 3 and 4 show investment in tangible fixed assets (measured as the ratio of the flow of gross fixed capital formation to its balance a year earlier) and unemployment for each of the two groups of firms analysed (more indebted and less indebted). Both aggregates show declining investment and job destruction, but the falls are sharper for more indebted firms. This pattern is observed in all industries, in both SMEs and large firms.

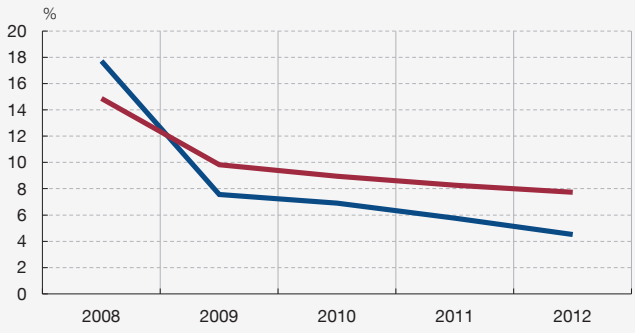
1 INTEREST-BEARING DEBT



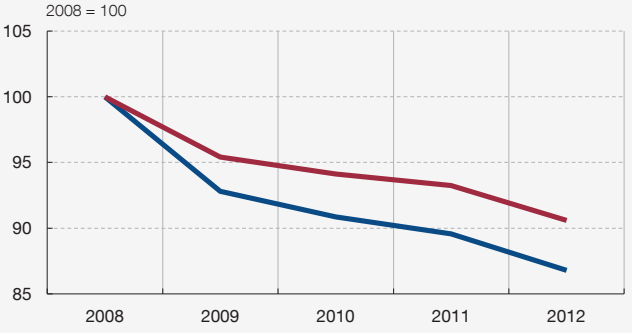
2 DEBT/NET ASSETS

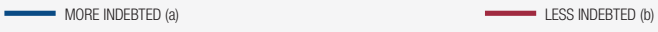


3 GFCF (c)/TANGIBLE FIXED ASSETS AT t-1



4 EMPLOYMENT





SOURCE: Banco de España.

a Firms whose debt ratio is greater than the average debt in their industry at t-1.
b Firms whose debt ratio is equal to or less than the average debt in their industry at t-1.
c Gross fixed capital formation. In CBB firms this flow is approximated by the difference between the balance-sheet amounts of tangible fixed assets less depreciation expense.

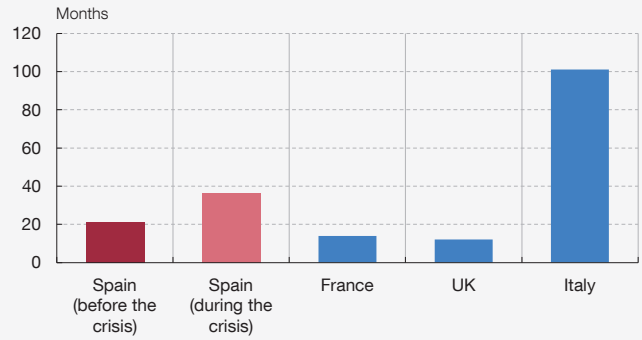
In short, the results reported in this Box indicate that the level of firms' indebtedness influenced their investment and employment decisions during the crisis. In particular, more indebted firms were comparatively more strongly affected by the crisis, since they were more vulnerable to the contraction of their income. That obliged them to adjust their balance sheet and to reduce employment and investment more sharply compared with financially sounder firms.

Corporate insolvency proceedings are a legal proceeding which aims to address the situation of a borrower's insolvency either through an agreement (accord) between the creditors and the debtor firm or through the winding-up of the latter. In the first case, a reduction in the nominal value of the debt is agreed (partial acquittance) and/or in the schedule of payments (payment period). In the second case, the creditors are paid by selling the company's assets in accordance with the legally stipulated order of priority of creditors. These proceedings exist in all developed countries and most emerging economies. In Spain, they are currently governed by the Insolvency Law,[1] which was approved in 2003 and came into force on 1 September 2004. The economic crisis underlined some of the shortfalls in the Law and, consequently, it has been subject to four major reforms through Royal Decree-Law 3/2009,[2] Law 38/2011,[3] the Entrepreneurs' Law[4] and Royal Decree-Law 4/2014[5].

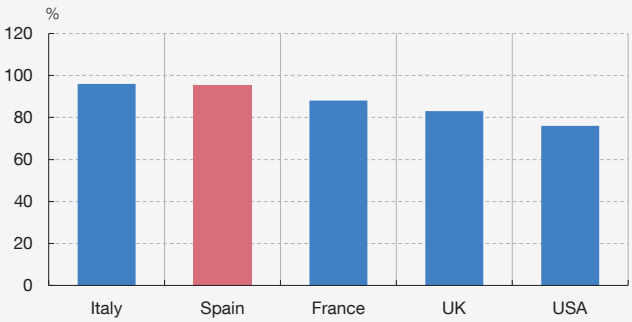
The main function of insolvency proceedings is to overcome problems of coordination and asymmetrical information which make it difficult to renegotiate debt privately and for debts to be recovered individually and may lead to suboptimal results for lenders and borrowers. Coordination problems arise where there is a high number of creditors with diverging interests, whereas the asymmetrical information problems are particularly important in the case of small creditors, with little information and a short commercial relationship with the debtor, and in the case of small borrowers. Individual recoveries of the debts of a firm whose

1 This proceeding may also be used by individuals without a business activity (consumers), although this box focuses on firms.
2 Royal Decree-Law 3/2009 of 27 March 2009 on urgent tax, financial and insolvency measures in the face of economic developments.
3 Law 38/2011 of 10 October 2011 reforming Insolvency Law 22/2003 of 9 July 2003.
4 Law 14/2013 of 27 September 2013 to support entrepreneurs and their internationalisation.
5 Royal Decree-Law 4/2014 of 7 March 2014, adopting urgent measures on corporate debt refinancing and restructuring.

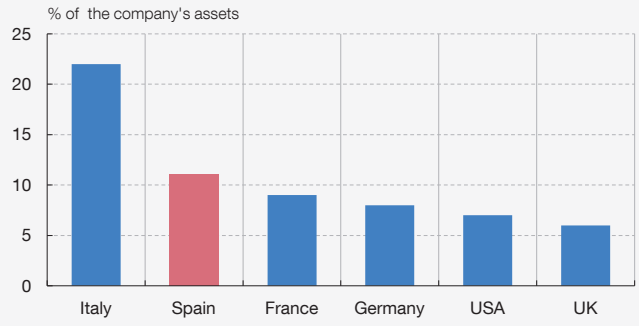
1 DURATION OF INSOLVENCY PROCEEDINGS (a)



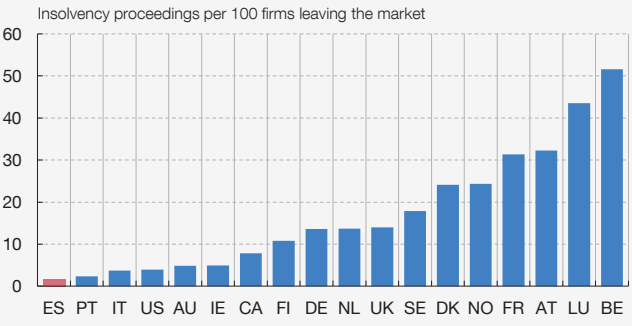
2 PERCENTAGE OF FIRMS SUBJECT TO INSOLVENCY PROCEEDINGS THAT ARE WOUND UP (b)



3 DIRECT COSTS OF INSOLVENCY PROCEEDINGS (c)



4 BUSINESS INSOLVENCY RATES (d)



a Data for Spain are for 2007 (before the crisis) and 2012 (during the crisis), data for France and Italy are for 2007 and data for the United Kingdom are for 2006. Sources: Consejo General del Poder Judicial (2012 and subsequent years), "La Justicia Dato a Dato. Año 2012", Estadística Judicial; Ministère de la Justice (2010), "Annuarie statistique de la Justice", Édition 2009-2010 and S. Frisby (2006), "Report on Insolvency Outcomes, The Insolvency Service Report, U.K." Istat.
b The data for Spain, the United Kingdom and the United States are for 2004-2012, the data for Italy are for 2004-2007 and the data for France are for 2004-2008. Sources: M. Celentani, M. García-Posada and F. Gómez (2010), "The Spanish Business Bankruptcy Puzzle and the Crisis", Working Paper 2010-2011, FEDEA; Consejo General del Poder Judicial and E. van Hemmen (2013 and subsequent years), "Estadística concursal. Anuario 2012", Colegio de Registradores de la Propiedad y Mercantiles de España, Madrid; The Insolvency Service, United States Courts. The data on insolvencies in the United Kingdom also include the sale of the whole business to third parties and, consequently, they overestimate the percentage of companies which are dismantled.
c Year 2013. Source: Doing Business (World Bank).
d Year 2010. Sources: Eurostat, OECD, national sources and Euler Hermes (2011); "Economic Outlook 2011", No. 4, Business Insolvency Worldwide, Evreux.

assets do not cover its liabilities usually result in a creditors' race for the available funds. This may lead to the dismantling of a firm which is solvent but has liquidity problems and to losses for all creditors.

Insolvency proceedings in Spain attempt to overcome these problems through several arrangements. Generally, the beginning of the insolvency proceedings halts all enforcement proceedings against the firm. Additionally, a list is drawn up of all the company's assets and the claims against it, so that all creditors have the same information about the company's net worth position. Finally, for a creditors' agreement to be approved the favourable vote of creditors representing at least 50% of the firm's liabilities, which are not collateralised, is required.

However, in practice, several factors have prevented insolvency proceedings in Spain from carrying out their function satisfactorily. First, they last a very long time compared with similar proceedings in other developed countries, except for Italy, and have increased significantly since the beginning of the crisis (see Panel 1). Second, a very high proportion of firms which are subject to insolvency proceedings (95%) are ultimately wound up. Since it is unlikely that practically all the firms entering insolvency proceedings are non-viable, the system would seem to be incapable of restructuring the debt of solvent companies with liquidity problems. As for other developed countries, only Italy has a similar percentage, whereas the figures for France, the United Kingdom and the United States are substantially lower (see Panel 2). Finally, as shown by Panel 3, insolvency proceedings in Spain have high direct costs which consume a large share of the firm's assets. These costs are higher than in the United Kingdom, the United States, Germany and France, and only lower than those in Italy. These factors contribute to insolvency proceedings being used much less in Spain by firms under financial pressure than in most developed countries as shown by the insolvency rates (the number of companies commencing insolvency proceedings divided by those leaving the market), shown in Panel 4.

The need to have rapid and flexible proceedings in place is particularly important in the case of large and medium-sized firms where coordination problems can reduce the success of private negotiations owing to the large number of creditors involved. By contrast, private restructurings are more likely to work at small companies in view of the small number of lenders (35% of Spanish SMEs with bank debt use only one bank and 60% use one or more banks)[6].

The reforms of the Insolvency Law implemented recently by the Entrepreneurs' Law and Royal Decree-Law 4/2014, develop the alternatives to insolvency proceedings. The former creates a specific procedure – the out-of-court agreement for payment – for the self-employed and small businesses, which habitually used insolvency proceedings least due to their high fixed costs. The latter introduces changes into how pre-insolvency refinancing works to make it more appealing and effective so that firms can restructure their debt more flexibly without having to apply for insolvency proceedings.

More specifically, Royal Decree-Law 4/2014 simplifies the proceedings required for undertaking such operations and for halting individual debt enforcement proceedings while negotiations take place. It extends the list of conditions of these agreements which can be imposed on dissident creditors. Thus, in addition to partial acquittances, provision is also made for the possibility of reductions in the payment period, the conversion of debt into equity and other financial instruments, and the transfer in payment of debt of the assets or claims of the company in difficulties. The mere capitalisation of debt by creditors does not make them persons specially related to the insolvent legal person. Consequently, they avoid the detrimental treatment (subordination of their loans) generally received by the claims of shareholders or partners of a firm subject to insolvency proceedings. The Royal Decree-Law also stipulates that temporarily during a period of two years from the entry into force of the law, any fresh financing (previously 50%) which has been extended in the framework of a refinancing agreement will be considered as a claim on the debtor's assets, thus giving it a higher priority in the ranking of claims. Insofar as the agreements reached respond to a feasible plan permitting the continuity of the firm, the liabilities arising from the negotiations will, logically, have a lower risk of non-payment. In the particular case of bank creditors, restructured debts, providing that they comply with the strict criteria established, would be classified as standard exposure, as was clarified by the Banco de España's communication to banks in March 2014. This would reduce the need to record provisions for them and would thus increase the capacity of banks to meet new solvent demand for lending.

6 Source: Central Credit Register, May 2013.

In recent years, the central banks of the main advanced economies have made increasingly frequent use of forward guidance, in order to steer agents' expectations, against a background of official interest rates close to the zero lower bound and doubts over the marginal effectiveness and risks of non-standard quantitative measures.[1]

Although the use of this instrument has been increasing generally among these central banks, there are significant differences in the objectives pursued in each case. The European Central Bank (ECB) has insisted that the new tool does not involve any change in its monetary policy strategy; rather, the aim is to anchor interest rate expectations more effectively and, by reducing uncertainty, to increase the effectiveness of monetary policy[2] (see main text). Meanwhile, the Federal Reserve System (the Fed) has used forward guidance to indicate its intention to provide a prolonged stimulus to the economy and, more recently, to communicate the way in which it expects to normalise its policy in future. Some academics have argued for the use of this instrument to prompt a change in the central bank's reaction function and to maintain a more expansionary monetary policy stance than would be consistent with a conventional Taylor rule, assigning greater relative weight to activity.[3]

These diverse objectives have translated into differences in the design and evolution of forward guidance measures (see Panel 1). Some central banks have decided to offer qualitative guidance with no specific time limit, indicating the maintenance of a particular monetary policy for a prolonged period (this is what the Fed did initially and what the ECB is currently doing). Other forms of forward guidance are more complex. For example, specific time periods may be set (as the Fed has done in recent years) or the guidance may be contingent, i.e. conditional upon quantitative thresholds for certain economic variables, such as the rate of unemployment (the Fed and the Bank of England), provided that this does not entail risks to price stability or financial stability. Finally, the Bank of Japan uses a special case of forward guidance that is contingent upon the achievement of an inflation target of 2%, that refers to the monetary base (which has replaced the official interest rate as the main instrument of monetary policy) and that has an open-ended time horizon.

As regards the effectiveness of forward guidance measures, the analyses carried out to date conclude that their impact has been positive, reducing the volatility of money market interest rates and the uncertainty regarding the future monetary policy stance and improving general financial conditions (see Panel 2), albeit with weaker effects at longer time horizons. These findings should be treated with some caution, however, since it is generally difficult to separate the different factors and the anticipated effects. Moreover, forward guidance measures have not always succeeded in aligning market expectations with the central bank's signalled intentions. Thus, while there seems to be evidence that the Fed's announcements indicating a specific period managed to transmit to the markets a switch towards a more accommodating monetary policy, the experience with forms of forward guidance subject to numerical thresholds has been less favourable. In the case of the Bank of England, following the announcement of its strategy in August 2013, the markets expected the first official rate rise more than a year before the central bank's own forecasts. The difficulties of designing and communicating contingent forward guidance have also been apparent in recent months in the abandonment of numerical thresholds by both the Fed and the Bank of England. This was a consequence of a much more rapid reduction in unemployment rates in these economies than was initially anticipated, without a similarly favourable evolution of the fundamentals of the economy (see Panel 3),[4] which forced the central banks concerned to reintroduce qualitative elements, indicating that official rates would be held at current levels for a more or less prolonged period.

These communication problems illustrate the significant challenges facing forward guidance measures. The main issue is how to ensure the credibility of instruments that, by their very nature, pose more severe time-inconsistency problems than other tools. Additional effort is needed, when designing these measures, to ensure that the need to recalibrate or redefine them subsequently is minimised, and also when explaining them, since their effectiveness depends on correct interpretation by the public of the monetary authority's message. A balance thus needs to be struck between transparency and clarity, since agents may be confused as much by a lack of information as by an excess of technical detail. These difficulties have been highlighted by recent experience with quantitative thresholds; they are especially severe when the measures are complicated to explain to the public or the projection of the reference variables is surrounded by a high degree of uncertainty or hinges on controversial factors.

Finally, although forward guidance measures have been useful in the context of the monetary policy response to the crisis, a relevant question for the future is whether they have a role to play in the

1 The use of forward guidance is not new. For a review of the most recent experience of forward guidance, see for example, S. López and P. del Río (2013), "El uso de la orientación de expectativas o *forward guidance* como instrumento de política monetaria", *Boletín Económico,* December, Banco de España; or A. Filardo and B. Hofmann (2014), "Forward guidance at the zero lower bound", *BIS Quarterly Review,* March.

2 See P. Praet (2013), "Forward guidance and the ECB", in W. den Haan (ed.), *Forward guidance: Perspectives from central bankers, scholars and market participants,* a voxEU.org eBook, CEPR; and B. Coeré (2013), "The usefulness of forward guidance", speech delivered at the Money Marketeers Club of New York, New York, 26 September; and ECB (2014), *Annual Report 2013.*

3 See, for example, the recommendations in P. Krugman (1998) "It's baaaack! Japan's slump and the return of the liquidity trap", *Brookings Papers on Economic Activity,* No 2; and M. Woodford (2012), "Methods of policy accommodation at the interest-rate lower bound", *Jackson Hole Economic Symposium Conference Proceedings,* Federal Reserve Bank of Kansas City, pp. 185-288.

4 An analysis of the difficulty inherent in this type of tools, in the context of the recent problems that the Federal Reserve System and the Bank of England have had, can be found in the article "The world economy faced with a change in scenario. Developments, outlook and risks", *Economic Bulletin,* March 2014, Banco de España.

process of withdrawal of monetary stimuli. In general, it might be considered that, as the economy recovers, they should play a key role in the communication of exit strategies, by steering agents' expectations. However, when the situation returns to normal, the question of whether these measures should form part of the standard set of monetary policy instruments will need to be analysed.

1 FORWARD GUIDANCE BY THE MAIN CENTRAL BANKS FOLLOWING THE FINANCIAL CRISIS

Central bank	Type of forward guidance	Date of decision	Announcement
Bank of Japan	Contingent	February 2012	"Until the 1% inflation goal is in sight"
	Contingent	April 2013	"The Bank will continue with the quantitative and qualitative monetary easing, aiming to achieve the price stability target of 2 percent, as long as it is necessary for maintaining that target in a stable manner, with a time horizon of about two years"
Federal Reserve System	Open-ended	December 2008	"For some time"
	Open-ended	March 2009	"For an extended period"
	Fixed period	August 2011	"At least through mid-2013"
	Fixed period	January 2012	"At least through late 2014"
	Fixed period	September 2012	"At least through mid-2015"
	Contingent	December 2012	"As long as the unemployment rate remains above 6.5%, inflation between one and two years ahead is projected to be no more than 2.5% and longer-term inflation expectations continue to be well anchored"
	Contingent, with greater qualitative assessment	December 2013	"Additional measures of labour market conditions will be considered and it likely will be appropiate to maintain the current target range for the federal funds rate well past the time that the unemployment rate declines below 6.5%, especially if projected inflation continues to run below the 2% goal"
	Contingent, with qualitative assessment	March 2014	"In determining how long to maintain the current 0% - 0.25% target range for the federal funds rate, measures of labour market conditions, indicators of inflation pressures and inflation expectations and financial developments will be taken in to account"
Bank of England	Contingent	August 2013	"At least until the unemployment rate has fallen to a threshold of 7%, subject to three 'knockouts' related to inflation and financial stability"
	Contingent, with greater qualitative assessment	February 2014	"There remains scope to absorb spare capacity further before raising Bank Rate. The path of Bank Rate over the next few years will depend on economic developments, although the rise in Bank Rate is expected to be gradual and the appropriate level is likely to be materially below 5%"
European Central Bank	Open-ended	July 2013	"For an extended period of time. This expectation is based on the overall subdued outlook for inflation extending into the medium term, given the broad-based weakness in the real economy and subdued monetary dynamics"
Bank of Canada	Fixed period	April 2009	"Until the end of the second quarter of 2010, conditional on the inflation outlook"
Sveriges Riksbank	Fixed period	April 2009	"Until the beginning of 2011"

SOURCE: Federal Reserve System, ECB, Bank of England, Bank of Japan, Bank of Canada and Sveriges Riksbank.
NOTE: Conditingent: conditional upon economic variables.

2 FINANCIAL MARKET RESPONSE TO FORWARD GUIDANCE ANNOUNCEMENTS

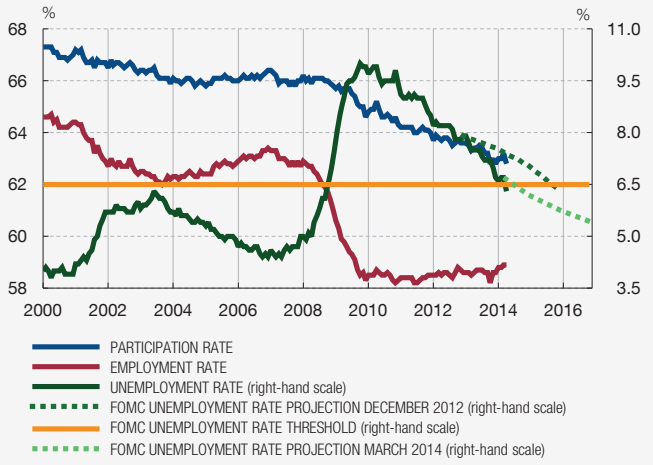
	Types of forward guidance						
	Qualitative	Calendar			Conditional on economic variables		
	European Central Bank	Federal Reserve System	Federal Reserve System	Federal Reserve System	Federal Reserve System	Bank of Japan	Bank of England
	4.7.2013	9.8.2011	25.1.2012	13.9.2012	12.12.2012	4.4.2013	7.8.2013
Treasury bond (a)							
Two-year	-6	-7	-1	-1	0	0	1
Ten-year	-3	-16	-6	-1	5	-11	0
Volatility (VIX) (a)							
VIX	0.0	-12.9	-0.6	-1.8	0.4	-0.3	0.3
Market index (b) (%)							
S&P 500	0.0	4.7	0.9	1.6	0.0	0.4	-0.4
EUROSTOXX	2.9	0.3	-0.5	-0.8	0.2	-0.7	0.1
FTSE	3.1	1.9	-0.5	0.7	0.4	-1.2	-1.4
NIKKEI	-0.3	-1.7	1.1	0.4	0.6	2.2	-4.0
MSCI - Global	0.6	2.1	0.5	0.9	0.2	-0.3	-0.6
Exchange rates (b) (c) (%)							
Dollar-euro	0.2	0.3	-0.5	0.1	0.4	-0.1	0.2
Yen-dollar	0.0	-0.6	0.1	-0.3	0.7	3.5	-1.1
Sterling-dollar	1.4	0.0	-0.3	-0.3	-0.2	-0.7	-0.9

SOURCES: Bloomberg and Datastream-Thomsom Reuters.

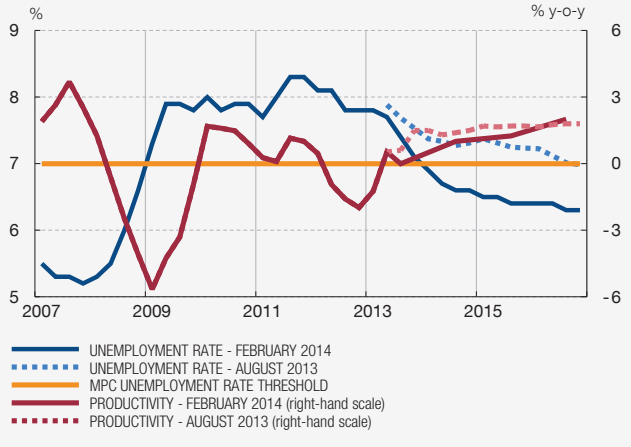
a One-day change, in basis points.
b One-day percentage change.
c Minus sign denotes depreciation of the second currency.

3 LABOUR MARKET INDICATORS AND FORWARD GUIDANCE IN THE UNITED STATES AND THE UNITED KINGDOM

UNITED STATES. PARTICIPATION, UNEMPLOYMENT AND EMPLOYMENT RATES



UNITED KINGDOM. UNEMPLOYMENT RATE AND PRODUCTIVITY (a)



SOURCES: Bureau of Labor Statistics, Federal Reserve System, Bank of England, national statistics, Bloomberg and Datastream-Thomsom Reuters.

a Data from the Bank of England's Inflation Reports published in August 2013 and February 2014.

Bank loans are the main source of private-sector financing in the euro area and, consequently, their availability is pivotal in supporting economic recovery. The markedly cyclical nature of loans is determined by the combination of demand and supply factors which operate in the same direction over the economic cycle and, consequently, are difficult to separate. For non-financial corporations this cyclical pattern has shown historically a slight lag with respect to GDP.

Even taking into account these regularities, loans have been weak since mid-2012, out of kilter with the more stable economic activity. This suggests the presence of additional factors that would seem to be restraining their growth (see Panels 1 and 2).

On the demand side, a prime candidate for explaining this behaviour is the high private-sector debt in certain countries and the need to decrease it. As shown by Panels 3 and 4, this situation is evident in the highly negative net flows of bank loans in countries where private debt rose substantially before the crisis – mainly in Ireland, Cyprus, Portugal and Spain. The debt levels are being addressed in a setting of low economic growth and moderate inflation, which means that deleveraging has to take place essentially through net negative financing flows. In the Spanish case there is empirical evidence that corroborates the negative effect of debt levels on bank loans to non-financial corporations (see, for example, Box 4.1 of this report).

On the supply side, the capital and liquidity position of banks essentially determines the strength with which the cyclical position feeds through to credit [Jiménez *et al.* (2012)][1]. Although the solvency of banks is not isolated from the economic situation, which has had a negative impact on the quality of the assets in their portfolios, the effects on lending may be intensified on this occasion by the fact that, as a result of the global financial crisis, both markets and new regulatory frameworks demand more stringent prudential standards. There is also empirical evidence which supports the importance of supply factors for credit during the last crisis both for the area as a whole [Darracq Paries *et al.* (2014)][2] and for core countries such as Germany [Blaes (2011)][3].

During the most recent period, the indirect information of the Bank Lending Survey indicates that during 2013 both demand and supply factors have been important. Within supply factors, the perception of credit risk has been the main determining factor of the restrictive bias in supply conditions, although the banks have also stated that the regulatory changes have affected credit standards and prompted an adjustment of their loan portfolios – particularly those with the highest risk – (see Panel 5).

It is also interesting to note that among the larger corporations there is some substitution of external sources of financing as a result of the expansionary monetary policy stance which seems to have passed through more strongly into the debt markets than into the cost of new loans. Since 2009 fixed-income issues have represented more than 4% of GDP in cumulative terms, compared with a fall in bank loans of almost 2% of GDP. Issuance was more vigorous in countries where firms started from a more market-oriented structure of liabilities (see Panel 6). In the economies subject to greater stress during the crisis, the problems of financial fragmentation within the area raised the funding costs of the banks themselves and, consequently, the costs of the loans that they could extend.

In short, the recent sluggishness of bank loans is a reason for concern insofar as it seems to respond, aside from cyclical factors, to the presence of factors restricting both demand and supply. The effect of such factors is quite mixed from country to country. In a setting in which banks are immersed in a process of adapting to the new regulatory and market standards, successfully completing this adaptation may be crucial so that credit supply does not limit investment or the economic recovery. From a different standpoint, the crisis has also underlined the risks which arise from companies limiting the diversification of their sources of financing. The risks are more pronounced for SMEs, it is particularly complex for them to gain access to markets because of restrictions due to their size and ability to produce relevant information for investors. Such risks justify the study of initiatives specifically targeted at this sector.

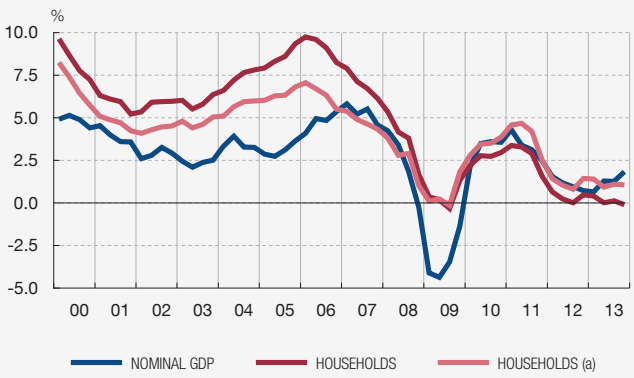
1 G. Jiménez, S. Ongena, J.L. Peydró and J. Saurina (2012), "Credit supply and Monetary Policy: Identifying the Bank Balance-Sheet Channel with Loan Applications", *American Economic Review,* 102 (5), pp. 2301-2326.

2 M. Darracq Paries, L. Maurín and D. Moccero (2014), *Financial Condition Index and Credit Supply Shocks for the Euro Area,* Working Paper No. 1644, March, European Central bank.

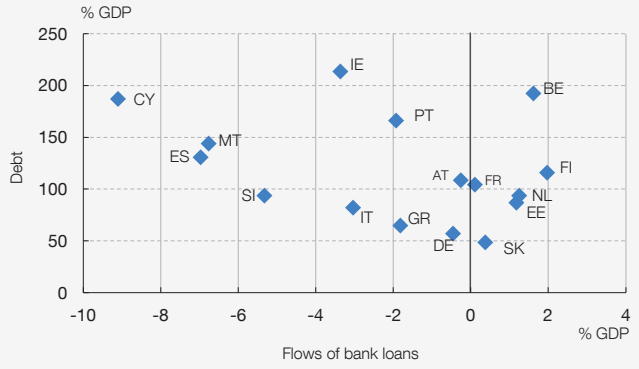
3 B. Blaes (2011), *Bank-related loan supply factors during the crisis: an analysis based on the German bank lending survey,* Discussion Paper, No. 31/2011, Deutsche Bundesbank.

1 GDP AND BANK LOANS TO NON-FINANCIAL CORPORATIONS IN THE EURO AREA
(y-o-y growth)

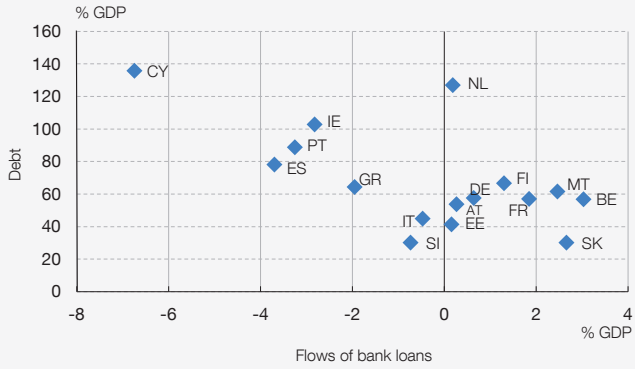
2 GDP AND BANK LOANS TO HOUSEHOLDS IN THE EURO AREA
(y-o-y growth)



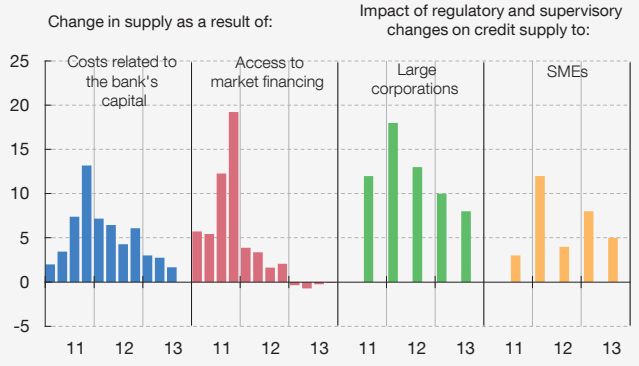
3 DEBT OF NON-FINANCIAL CORPORATIONS
2013



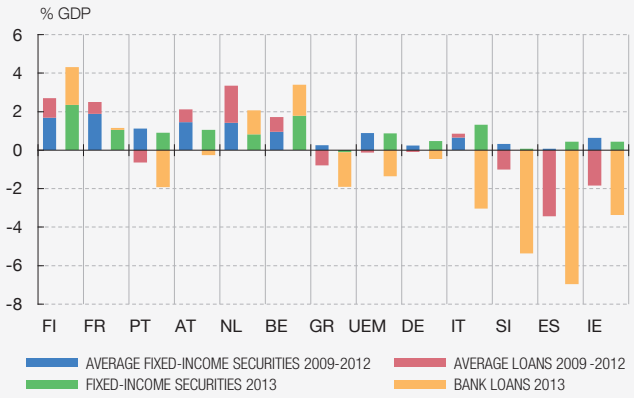
4 DEBT OF HOUSEHOLDS
2013



5 BANK LENDING SURVEY



6 BANK LOANS AND CORPORATE BOND ISSUES (b)
(Flows as % of GDP)

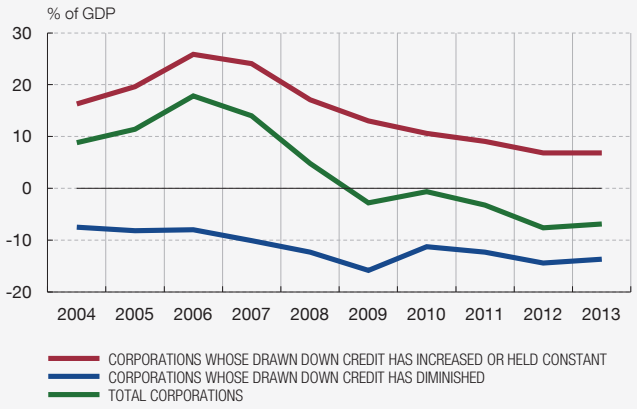


SOURCES: Eurostat, ECB and Banco de España.

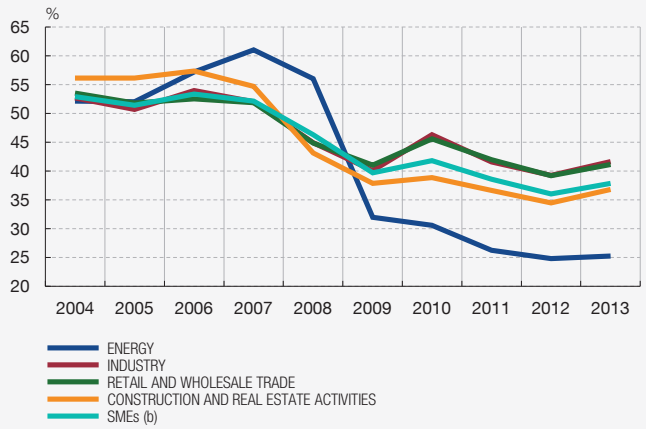
a Excluding countries with high debt that are undergoing adjustment (Spain, Portugal, Ireland and Cyprus).
b Ranked according to the weight of fixed-income securities in total debt. The importance of the financing of non-financial corporations via securities is undervalued in countries like Germany or Spain where, on occasions, financing is raised by subsidiaries abroad or by financial subsidiaries and subsequently distributed through inter-company loans.

Since its mid-2009 peak, aggregate debt in the corporate sector has progressively declined. However, this aggregate contraction encompasses very mixed individual behaviours. As can be seen in Panel 1, the decline in the aggregate outstanding balance of corporations' bank lending (which is their main source of financing, especially in the case of the smaller firms) has occurred alongside sizeable positive financing flows towards certain corporations. The increase in loans extended to the latter has

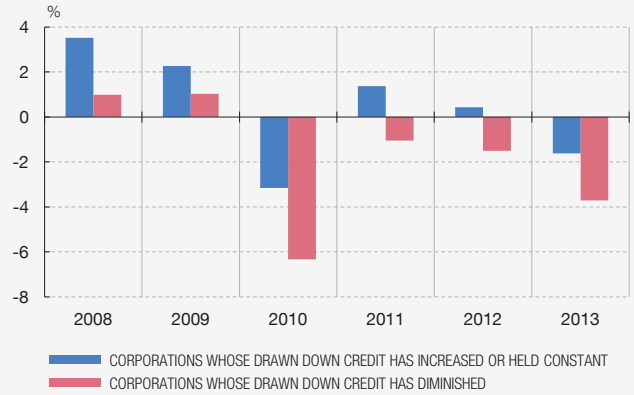
1 GROWTH IN CREDIT DRAWN DOWN: FLOW AS A PERCENTAGE OF GDP (a)



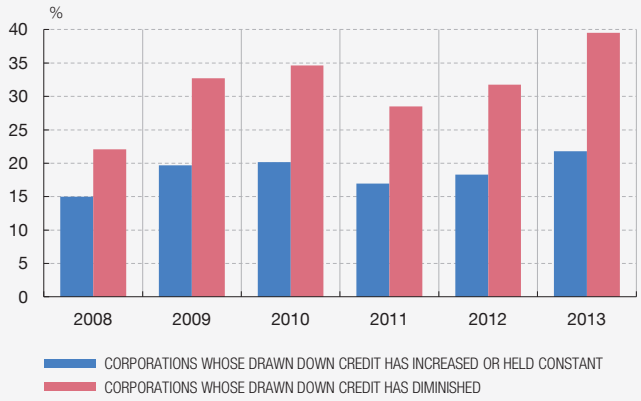
2 PERCENTAGE OF CORPORATIONS WHOSE DRAWN DOWN CREDIT HAS INCREASED OR HELD CONSTANT. BREAKDOWN BY SECTOR (a)



3 YEAR-ON-YEAR GROWTH RATE IN EMPLOYMENT AT t-1 (b) (c) (d)



4 MEDIAN OF THE DEBT BURDEN AT t-1 (b) (c) (e)



5 MARGINAL IMPACT ON THE PROBABILITY OF A CORPORATION INCREASING OR MAINTAINING ITS LEVEL OF CREDIT (f)
Sample period covered in the estimate: 2008-2013

	Coefficient	P-value
Profitability (t-1)	0.0238	0.000
Debt burden (t-1) (e)	-0.0080	0.000
Indebtedness (t-1)	-0.1529	0.000
Growth rate of employment (t-1)	0.0043	0.004
Growth rate of sectoral employment (t-1)	0.0034	0.064
Level of dependence on banks undergoing restructuring (t-1) (g)	-0.0293	0.000

SOURCE: Banco de España.

a Calculations made with information from the Central Credit Register.
b Average of the related sectoral results.
c Calculations made with cross-checked information from the Central Credit Register and the Central Balance Sheet Data Office.
d Average of the year-on-year growth rate of employment in each sector.
e Debt burden defined as financial charges/(Gross Operating Profit + Financial Revenue).
f Results obtained on estimating a linear probability model with fixed effects.
g Ratio of credit received from banks undergoing restructuring to the corporation's total volume of loans.

logically been lower than that recorded pre-crisis (in line with the more unfavourable economic setting and the stricter credit standards in force), but it has held at considerable volumes (between 6.8% and 13% of GDP over this period). As a counterpoint to this, for companies with negative credit flows, deleveraging has come about at an appreciably greater pace than what the aggregate figure suggests.

In terms of the number of firms, from 2008 to 2012 the percentage of companies recording an increase (or stability) in their bank financing fell progressively, but held constantly at significant levels for almost all the sectors of activity and for both SMEs and bigger corporations (see Panel 2).[1] This declining trend was interrupted in 2013, with the proportion of companies with a net positive or zero credit flow rising slightly (up by 1 pp to 39%). The change affected all sectors of activity and both large corporations and, especially, SMEs.[2] This was accompanied by a stabilisation of credit flows, following the declining trend in train since 2006.

Panels 3 and 4 compare the one-period-lagged[3] average values of two characteristics of significance from an economic and financial standpoint, distinguishing between companies on the basis of whether they received more bank credit or not: the debt burden (which combines information on the level of debt, interest rates paid and income generated) and employment. These panels infer that companies at which outstanding loan balances fell showed, on average, in the previous year, lower debt servicing ratios and a more lacklustre performance in terms of staffing[4].

For a more in-depth analysis of the variables that are most significant when it comes to explaining whether a company increases its level of credit or not, a simple model has been estimated in which this binary variable is related to a series of potential determinants. These include both the sector in which the company is operating and the dynamism of this productive sector as individual characteristics of the companies such as its debt, debt burden and profitability (measured as a proportion of assets), or the growth rate of its staff (which proxies the dynamism of its activity). Also included is a variable that captures the degree of dependence on banks undergoing restructuring, defined as the ratio of credit received from these banks and the total volume of the company's bank loans.

As is seen in the accompanying table, the results show that the relevant variables (i.e. those that are statistically significant) when it comes to determining whether a company increases its level of credit are its profitability, its indebtedness level and debt burden, the rate at which its staff numbers are increasing and that of the sector in which it is operating, and its dependence on banks undergoing restructuring.[5] Results are as expected: the greater dynamism of the company's activity or of the sector in which it operates translates into a higher probability of the company increasing its volume of loans. Conversely, greater financial pressure (whether that resulting from higher debt, from lower profitability or from a higher proportion of income generated being absorbed by financial expenses) lessens this probability.[6] The degree of dependence on banks subject to restructuring plans also has a contractionary influence on this probability, showing that companies linked to these banks would not have been able to fully replace the funds they ceased to receive from their habitual lenders with financing from other sounder banks.[7]

1 These proportions have been lower in the case of smaller firms, where the impact of the economic crisis has been greater, than for large corporations, where the figure stood at 46%, on average, between 2008 and 2013.

2 The smaller rise in the first case is probably linked to the replacement of financing from resident banks with other sources, such as securities issuance or foreign loans .

3 The one-period-lagged values are offered to correct the potential problems of endogeneity. In the case of employment, the average is given, and in that of the debt burden, the median.

4 Although not shown in the panels, they were also less profitable and had higher debt ratios.

5 All the variables are one-period-lagged in order to correct the potential problems of endogeneity. The ratios are all significant with a confidence level of 95%, except that associated with the growth rate of sectoral employment, which is significant with a confidence level of 90%.

6 When the non-performing loans ratio is introduced into the model, it proves significant, although its quantitative impact is very low: a 10 pp increase in this variable translates into a 0.008 pp rise in the probability that the company will increase its credit.

7 It was estimated in Box 6.1 in the 2012 *Annual Report* that, on average, dependent companies might replace around 65% of the financing they ceased to receive from these banks. Subsequent updates confirm the validity of the estimate in the case of the so-called Group 1 banks (those in which the FROB already had a stake at the time of the stress test). The contractionary impact of the restructuring plans on the growth rate of the dependent companies' financing is estimated at somewhat less than 2 pp in 2013. Given that the Group 1 banks were channelling 12% of non-financial corporations' total credit at the start of this year, the influence of these plans on the rate of decline of the overall sector's credit would be around 0.2 pp.

The economic and financial crisis has led to a substantial increase in the general government debt of the OECD countries, to levels that represent 25-year highs, well above those in the period immediately preceding 2008 (see Panel 1). This growth in debt, and the difficulty of bringing it to a halt, has placed the sustainability of public finances at the centre of the economic policy debate in Europe. In the particular case of Spain, despite the fiscal adjustment implemented since 2010, the public debt-to-GDP ratio has carried on rising, since the start of the crisis, reaching 93.9% of GDP in 2013. According to the latest government forecasts (2014-2017 Stability Programme), in a scenario of compliance with deficit commitments and moderate economic growth (average real GDP growth of 2.1% over the period 2014-2017) the public debt-to-GDP ratio will stabilise in 2015 at slightly above 100% (see Chart 1), a level without precedent in Spain's recent past, and well above the peak reached in the crisis of the 1990s, when it remained below 70% of GDP.

The international evidence available suggests that the existence of high levels of public debt for prolonged periods may have significant macroeconomic repercussions.[1] First, high levels of debt are usually associated with higher interest rates (see Panel 2) and, potentially, owing to the impact of these on investment and the crowding-out of funding for the private sector, lower medium-term GDP growth rates. However, the latest evidence suggests that it is not possible to associate these negative effects on growth with a particular threshold of public debt, which may vary from country to country, and that the dynamics of debt may be as important as the level when explaining the effects on growth.[2] Second, high public debt reduces the leeway for a counter-cyclical fiscal policy, which may be very necessary in countries that belong to a monetary union. Indeed, there is evidence associating high levels of public debt with greater volatility of economic growth, which could be a consequence of this lack of fiscal policy leeway. In addition, the sustainability of a high level of public debt, in an environment of weak or moderate growth, requires large and sustained primary surpluses, which may affect the composition of public finances and, ultimately, the potential growth of the economy if, for example, fiscal policy involves levels of taxation that are less conducive to growth or lower levels of productive spending. Finally, a high public debt ratio generates larger borrowing requirements in the short term, which increase the economy's vulnerability to adverse financial market reactions.

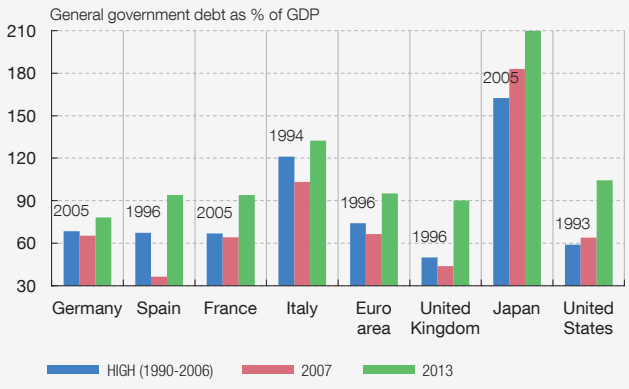
The international evidence available on episodes of reduction of high levels of debt in advanced economies since the 1980s shows that the most effective were those associated with high GDP growth rates and large and sustained primary surpluses (see Panel 3). In comparison, other determinants of the dynamics of public debt, such as inflation, the fall in interest rates and deficit/debt adjustments (reflected, for example, in aggressive privatisation processes or financial asset sales), played a secondary role. On the other hand, the slowest debt reduction processes have usually been constrained by the need for very large fiscal adjustments and

1 See, for example, S. A. Abbas, B. Akitoby, J. Andritzky, H. Berger, T. Komatsuzaki and J. Tyson (2013), "Dealing with high debt in an era of low growth", *IMF Staff Discussion Note,* SDN/13/07; C. Checherita-Westphal and P. Rother (2012), "The impact of high government debt on economic growth and its channels: An empirical investigation for the euro area", *European Economic Review,* 56, pp. 1392-1405.

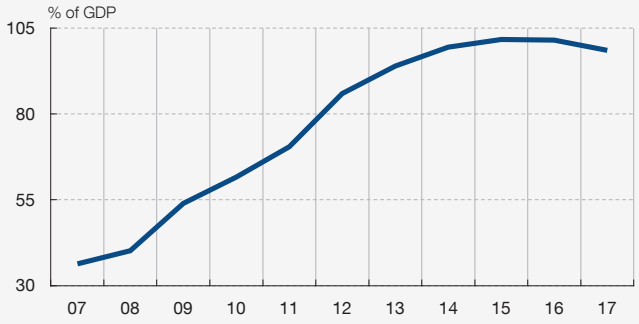
2 See A. Pescatori, D. Sandri and J. Simon (2014), "Debt and Growth: Is There a Magic Threshold?", *IMF Working Paper,* No 14/34.

1 INTERNATIONAL COMPARISON OF CURRENT SITUATION AND PUBLIC DEBT OUTLOOK IN SPAIN

INTERNATIONAL COMPARISON (a)



GENERAL GOVERNMENT DEBT IN SPAIN ACCORDING TO THE 2014-2017 STABILITY PROGRAMME (b)



SOURCES: IMF, INE and Ministerio de Hacienda y Administraciones Públicas.

a The year of the highest level of the general government debt-to-GDP ratio over the period 1990-2006 is shown for each country.
b The values for 2014-2017 are the official forecasts of the Kingdom of Spain's Stability Programme 2014-2017, submitted in April 2014.

macroeconomic environments characterised by low economic growth and high interest rates.

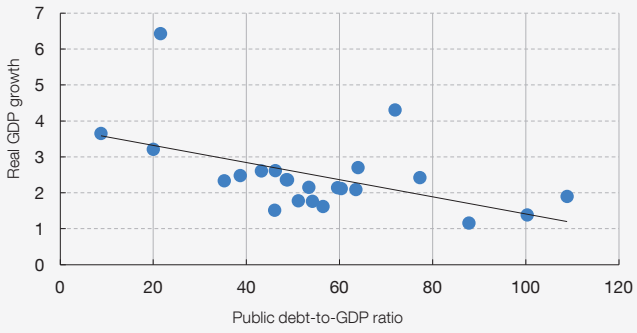
In the case of Spain, the process of public debt reduction is constrained, in the short term, by the need for private-sector deleveraging and by the process of fiscal consolidation itself and, in the medium term, by the effect of an ageing population. The medium-term outlook of moderate economic growth and inflation will make the task of reducing public debt difficult and will require significant fiscal surpluses to be achieved and sustained. The importance of these constraints can be seen from the following simulation: in a scenario with real GDP growth of 1%, inflation of 1.5% and an implied nominal interest rate of 3.5% (similar to the level observed in 2013), the primary surplus necessary to stabilise public debt at 100% of GDP would be 1% of GDP,[3] as compared with an actual primary deficit in 2013 of 3.2% of GDP.

The current macroeconomic situation is very different from that which prevailed when public debt was reduced between 1996 and 2007. Comparing the determinants of the change in the public debt-to-GDP ratio during the current fiscal consolidation process that began in 2009, when the budget deficit reached 11.1% of GDP, with

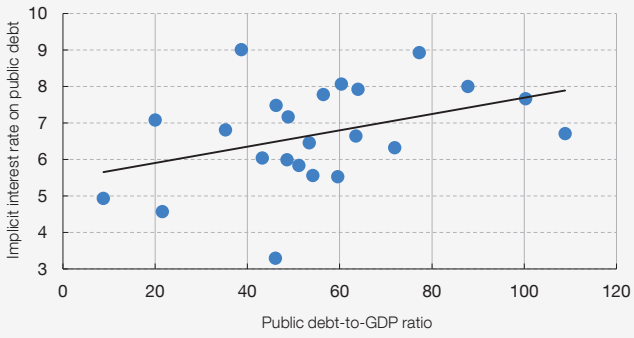
3 In the case of Spain, since the 1980s consecutive primary surpluses have only been recorded between 1987 and 1990 (on average 0.5% of GDP) and between 1997 and 2007 (on average 2.4% of GDP), in the latter case against a background of strong economic growth and easing financial conditions.

2 PUBLIC DEBT, ECONOMIC GROWTH AND INTEREST RATES (a)

PUBLIC DEBT AND GDP GROWTH
(OECD COUNTRIES: 1980-2012 AVERAGES)



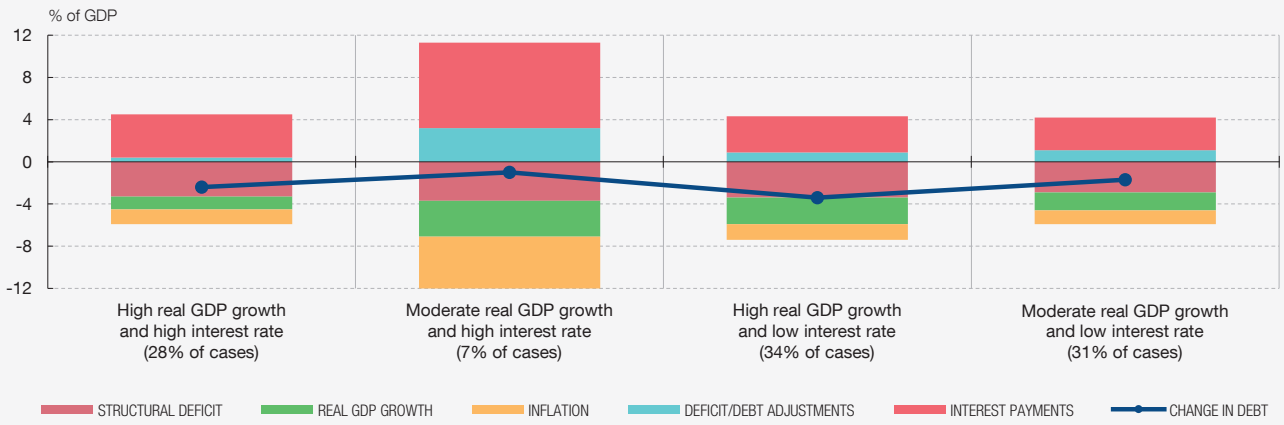
PUBLIC DEBT AND IMPLIED INTEREST RATE ON DEBT
(OECD COUNTRIES: 1980-2012 AVERAGES)



SOURCES: OECD and IMF.

a Including: Germany, Australia (1989-2012), Austria, Belgium, Canada, South Korea, Denmark, Spain, United States, Finland, France, Greece, Ireland, Iceland, Italy, Luxembourg (1990-2012), New Zealand (1986-2012), Norway, the Netherlands, Portugal, United Kingdom, Sweden and Switzerland (1990-2012).

3 INTERNATIONAL EVIDENCE ON EPISODES OF PUBLIC DEBT REDUCTION (OVER A FOUR-YEAR PERIOD) FOR A SAMPLE OF 30 COUNTRIES DURING THE PERIOD 1980-2011 (a)



SOURCE: Abbas, S. A., B. Akitoby, J. Andritzky, H. Berger, T. Komatsuzaki and J. Tyson (2013), "Dealing with high debt in an era of low growth", *IMF Staff Discussion Note,* SDN/13/07 (September).

a High (moderate) growth: real GDP growth of over 2% (between 0% and 2%) over four consecutive years (allowing a single year's exception). High (low) interest rate: rate above (below) the median for each country (sample 1980-2011).

those lying behind the last fiscal consolidation process, between 1998, when the budget deficit resulting from the 1990s crisis peaked (at 7.5% of GDP), and the end of the decade, reveals a fundamental difference. Although the reduction in the deficit over the first four years of each episode was similar – some four percentage points of GDP – during the last fiscal consolidation process this adjustment was sufficient to stabilise and slightly reduce the debt ratio, while in the current situation debt has continued to grow.

The main explanation for this significant difference is the contribution of nominal GDP growth. Between 1994 and 1997 GDP growth enabled the public debt ratio to be reduced by some 17 percentage points, while between 2010 and 2013 the negative behaviour of GDP increased the public debt ratio by some two GDP percentage points.

In short, high levels of public debt have significant adverse effects, which mean that the first priority of fiscal policy must be stabilisation, and thereafter a gradual reduction in the public debt-to-GDP ratio towards low levels. The Spanish economy's medium-term macroeconomic scenario suggests that debt reduction will require a prolonged sizeable fiscal adjustment. This must be anchored in a credible medium-term strategy that enables agents' expectations to be stabilised and long-term interest rates to be kept low. Strict compliance with the current framework of national and European fiscal rules is fundamental for this purpose. It is also important that this process be accompanied by further structural reforms that make an improvement in the medium-term economic growth outlook possible, permitting the latter to make a greater contribution to the process of public-sector deleveraging.