BBVA | RESEARCH

Global Economic Outlook

First Quarter 2014
Economic Analysis

- **Global expansion to continue in 2014-15,** this time with a greater contribution from developed economies.
- **In emerging economies, heterogeneity** in growth and risk exposure.
- **Is there a risk of deflation?** Yes, but it is unlikely.

Index

Closing date: February 7, 2014

1. Economic expansion at different paces and with different risks

In the fourth quarter of 2013, global economic growth reached c.3.5% YoY, confirming the improvement in the previous quarter. In the second half of last year, the recession in the eurozone came to an end, GDP growth accelerated in the US, growth in Japan started to show the positive impact of an ultra-expansive monetary policy and some emerging economies recovered from the bad patch in the summer, although with an increasing differentiation between the various geographies. **In short, an overall positive scenario that increases the probability of our forecast of global recovery in 2014-15, with the now habitual caveat of the vulnerability to risk factors**. This prudence is now modulated by the not insignificant possibility that the global recovery could be even more intense than our forecast, driven by the developed countries and in particular by the US. However, there is also the possibility that the recent financial volatility and uncertainty in some emerging economies could upset our forecast scenario.

The Fed's decision to start withdrawing the extraordinary liquidity made available since 2008 is in itself a sign of the strength of the US cycle. There has been an upturn in employment and private spending which has not required additional monetary measures. In addition, the agreement reached on the 2014-15 budget, a positive surprise vs. our expectations, could stimulate investment and lead to growth of more than the 2.5% we are presently forecasting for 2014. Altogether, given its novelty, the beginning of the end of quantitative easing is a process full of uncertainty which will also have an impact on global financial conditions. **Our base scenario reflects the Fed's success in first braking and then withdrawing liquidity and anchoring interest rates**, thus preventing an early uptick in rates that could abort the recovery.

We also assume that progress will continue to be made in the policies that strengthen the EMU. Growth of c.1% and 2% in 2014 and 2015 respectively require an on-going improvement in funding access for governments, corporates and banks, and also for households in peripheral economies in the region. 2014 will be crucial for ending the fragmentation caused by the absence of common and effective bank regulation and supervision and resolution mechanisms, beyond national boundaries and regulatory niches. So, we cannot rule out periods of instability as we approach events that could alter the outlook, such as the European Parliamentary elections, or the publication of the results of the EBA stress test and the ECB asset quality review of the European banking sector.

A second element of risk in Europe is the possibility getting too close to a situation in which deflation is a real risk given how difficult it is to get out of a spiral of deflation and lack of growth. Although deflation is unlikely, in our opinion, the scope for response in the region as a whole is restricted, given the current configuration of the EMU. This makes prompt and appropriate action advisable in the event of risk, and we believe the ECB is aware of this. The central bank would be prepared to go further depending on its evaluation of the risk, from making available new cheap fixed-cost funding for the banking system to considering a quantitative easing.

In summary, **the global economic outlook would be clearer were it not for the complications that the end of monetary stimuli in the US is causing in emerging economies**, highlighting the disparity in their economic growth and financial vulnerability. This is the result of their differing degrees of global financial integration and their different individual economic policies. Those economies with greater external imbalances and that tend to rely on short-term finance are the ones that are at the greatest risk of capital inflows coming to a sudden stop and thus of an adjustment with the potential for cross-border contagion. Thus these countries could need more restrictive monetary policies to tackle these scenarios (or in some more extreme cases, fiscal consolidation). **China** is a special case, with a trade surplus and barriers that prevent financial contagion beyond its borders. Nonetheless, **it could be a source of global instability if the measures to restrict the growth of credit result in a sharp economic deceleration** that reduces demand in some of the most financially vulnerable economies. That would be a quite different scenario.

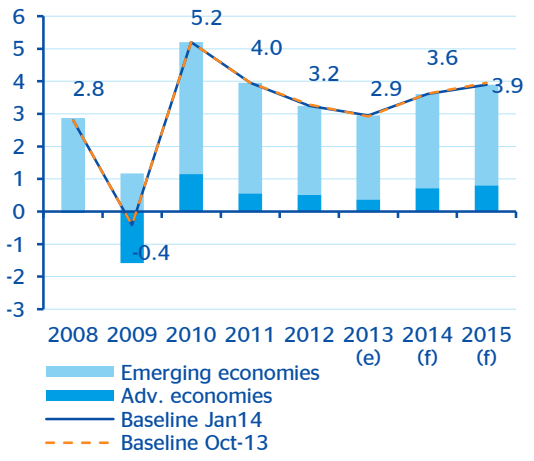
2. More growth in sight and with more balanced risks

The global economic cycle is improving and we now have clarity on some economic policy uncertainties

The global economic cycle strengthened during the latter months of 2013. According to our estimates, during the second half of 2013, global GDP accelerated to c.1% QoQ, leaving behind the moderation with its roots in 2012 and its low at the beginning of 2013, when growth was barely 0.5%. This improvement was driven by the acceleration of the developed economies – particularly the US, but also the eurozone, which started to see moderate growth after the recession ended in mid-2013. In the EMs, the situation is more diverse, but some of them (e.g. China) are posting relatively stable rates of growth.

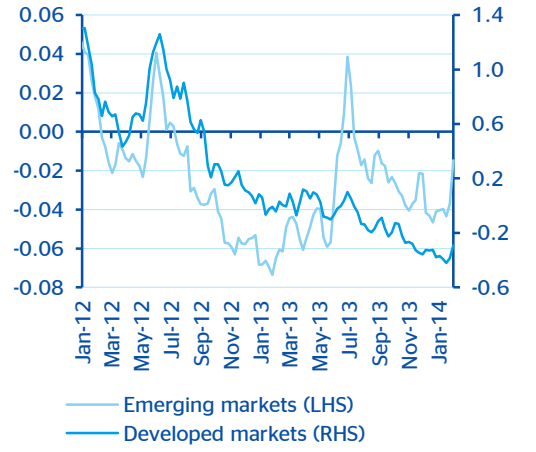
Our improved valuation of the global scenario is also the result of economic policy news flow, inasmuch as this helps to reduce uncertainty. First, the US reached a more far-reaching agreement on fiscal policy than we expected. Meanwhile, the improvement in activity allowed the Fed to start tapering its expansive monetary policy at the beginning of 2014. In Europe, further steps have been taken towards the construction of banking union, which together with the ECB's determination to keep risks under control, should eliminate the hobble represented by financial fragmentation. The global outlook would be clearer if it were not for the effect that the tapering is having on financial markets in the EMs, and which could eventually affect economic growth in some of the countries included in this category.

Chart 2.1
Global economic growth (%)



Source: BBVA Research and FMI

Chart 2.2
BBVA Research Financial Tensions Index



Source: BBVA Research

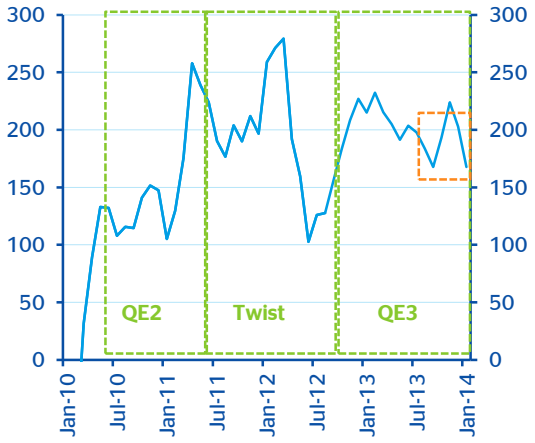
Altogether, our assessment of the global scenario is better than it was three months ago, and this is reflected in the adjustments to our forecasts. Our projections now indicate that global GDP growth, which in 2013 had decelerated to 2.9%, will increase to 3.6% and 3.9% in 2014e and 2015e, respectively (Chart 2.1), practically the same as our forecasts three months ago, due to the offset between our growth expectations in the different areas: to the upside in the US, to the downside in some emerging economies and with no significant change in our forecasts for the eurozone in 2014**. In spite of the expected acceleration in growth, we still see some downside risks to our forecasts**. Although these risks are a long way from having the systemic nature that they had in the past, some recent events such as the fall in asset prices and currency depreciation in EMs have made themselves felt.

The US has reached sufficient cruising speed to start unwinding monetary stimulus

US GDP growth has been accelerating through 2013, and by year-end had already reached cruising speed, allowing the Fed to take the first steps towards withdrawing monetary stimulus. In fact, growth in the third quarter accelerated to 1% QoQ, and the preliminary estimation pointed out that growth in the fourth quarter remained robust, although slightly below the third quarter.

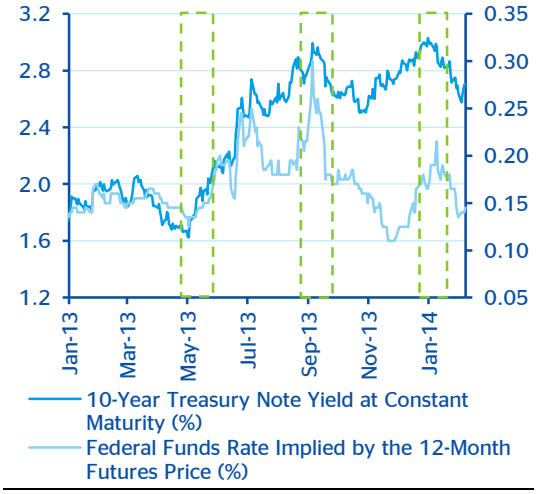
There is now more certainty regarding the tone of fiscal policy, which for 2014 implies less of a drain on economic growth. The lack of agreement between the parties on the fiscal consolidation process in the US led to a partial and temporary interruption of the federal government's activity, which actually had little impact on GDP. Subsequently, in December, an agreement was reached that represents an important step forwards in eliminating the uncertainty regarding the funding of the government's activity in 2014-15, as well as reducing the fiscal adjustment initially forecast for that period. The direct effect of this reduction in the intensity of the fiscal consolidation alone raises our forecast growth for 2014 by a couple of tenths. Then there are also the potential effects, via confidence, that this reduced uncertainty could have on household consumption and corporate decisions regarding investment and hiring. Nonetheless, there are still issues outstanding that affect the long-term sustainability of the public accounts, such as healthcare spending and pensions.

Chart 2.3
US: Private-sector non-farm payroll (MoM '000, 3-month moving average)



Source: BBVA Research and Bureau of Labour Statistics

Chart 2.4
US: Fed fund futures vs. long-term interest rates (%)



Source: Bloomberg

The outlook for monetary policy has also clarified recently, in line with our expectations. The Fed had linked the end of its monetary stimulus programme to economic growth. As noted above, activity has tended to accelerate, a rather contained acceleration in the case of the labour market, but nonetheless notable given the lack of additional stimulus (see Chart 2.3). Meanwhile, the unemployment rate fell to 6.7%, although this was partly a reflection of the contraction in activity. The above were in the context of an outlook for inflation well-anchored within the range determined by the Fed itself[1]. As a consequence, the Fed decided to start to taper its monthly purchases of financial securities, public debt and mortgage-backed securities. All in all, in the fourth quarter of 2014, the central bank will have stopped expanding its balance sheet. Our base scenario also assumes that the first increase in interest rates will take place in the second half of 2015, although the FED will continue to use its forward guidance to anchor interest-rate expectations. In fact, the Fed's efforts to explain its

1: Inflation expectations on a one- to two-year horizon of no more than 0.5pp above the long-term target of 2%.

exit strategy have been relatively successful in avoiding episodes of volatility like we saw last summer. Both long-term interest rates and expectations regarding Fed funds remain at levels no higher than the beginning of the summer (Chart 2.4). This is significant because part of the US recovery was due to interest-rate sensitive sectors such as real estate.

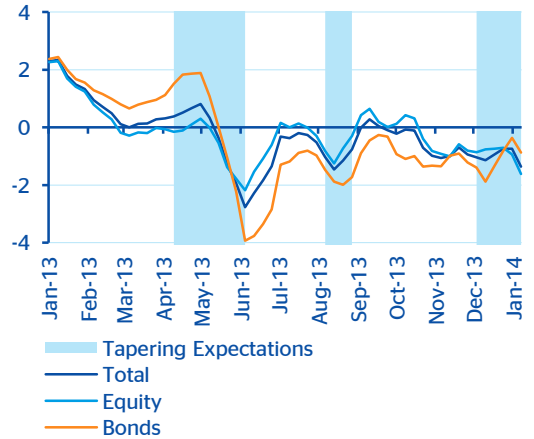
Altogether, we have revised upwards our forecast for US growth in 2014 to 2.5%, the same as our estimate for 2015. This adjustment reflects both the strength of the US economy in the second half of 2013 and the additional momentum contributed by the reduced fiscal drain thanks to the agreement reached at the end of last year. Note that there are also upside risks to our forecast if the improvement in confidence results in additional corporate investment and hiring.

Tapering could cloud the outlook for some emerging economies

The change of direction in US monetary policy has, as usual, had a global impact. The emerging economies are being subjected to capital outflows and currency depreciation, intensified in some cases by domestic events that have increased uncertainty regarding the management of their respective local economic policies. Even so, to date and from an aggregate perspective, the intensity of the non-resident capital outflows is no worse than on previous occasions when expectations have changed regarding the start of Fed tapering (Chart 2. 5). In addition, there continues to be a differentiation between economies depending on their fundamentals: higher external deficits and more dependence on short-term and foreign-currency funding are associated with greater vulnerability to capital outflows and currency depreciation (Chart 2.6).

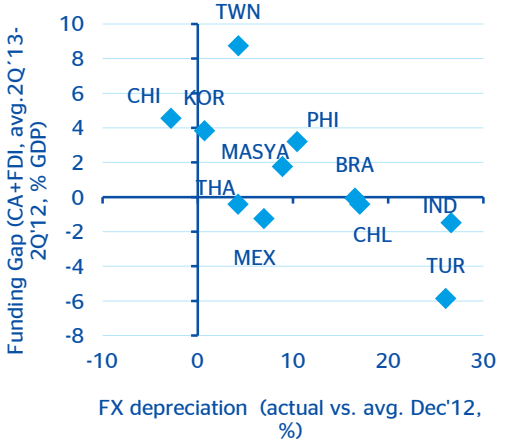
The recent tensions have not changed our growth forecasts for the EMs as a whole in our most likely scenario, but they do represent a significant downside risk. This risk is higher in the economies that are financially more integrated in global portfolio indexes and that have the above-mentioned vulnerabilities: Turkey, Brazil, Indonesia and India in particular. The monetary tightening being introduced by some of these countries to control currency depreciation and inflation expectations will inevitably have a negative impact on growth. All in all, the diversity within the EM group means that our outlook remains favourable for some parts of South America, such as the Andean economies, emerging Asia and Mexico. In the case of the latter, we have even improved our outlook for growth in 2014 (to 3.4%), driven by the cyclical momentum of the US economy (Chart 2.7).

Chart 2.5
EM: flows into funds in bonds and equities (4 weeks cumulative, dedicated EM funds, flows over total assets)



Source: BBVA Research based on EPFR data

Chart 2.6
Exchange-rate depreciation (%) and external funding gap (CA + FDI, % GDP)



Source: BBVA Research and Haver Analytics

Growth in China remains at around 7.5%, but the vulnerabilities are more evident

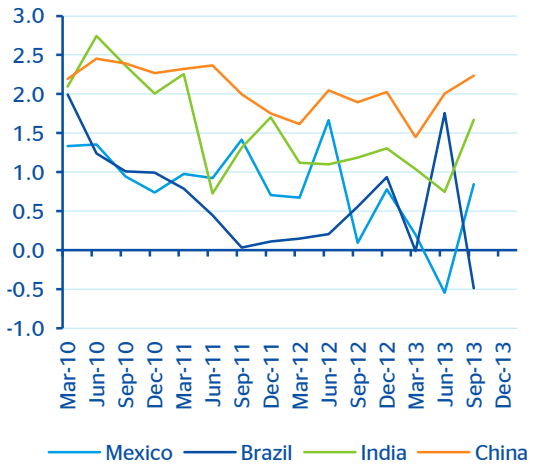
The fourth quarter was a clear example of the duality of China's economy as both a support for the global economy and a potential risk factor. The uncertainty at the beginning of the year regarding the sustainability of its growth and the possibility of a hard landing dissipated in the short term. The economy recovered in the second half of 2013 (Chart 2. 7) and maintains a good tone, although some of the more recent data on confidence and expectations of manufacturing activity are once again below market expectations.

Fundamental changes in economic policy have also been announced. At the Third Plenum of the Chinese Communist Party, the authorities reiterated their commitment to maintaining high rates of growth, while at the same time as proposing measures that will strengthen the role of the market in allocating resources and a rebalancing from a model of investment and exports towards increasing household consumption. These announcements should be valued as steps in the right direction, but their effectiveness will depend on their execution, and they are not without risk.

For example, as regards the financial sector, the authorities are continuing to demonstrate their commitment to tackle the current vulnerabilities, fundamentally linked to the rapid growth of credit. This is being reflected in liquidity tensions in the interbank market which are above all affecting the so-called shadow banking sector[2]. However, the authorities have not managed to moderate the rate of growth in credit (Chart 2.8), but a continuation of these tensions could have unwelcome effects on the stability of the system.

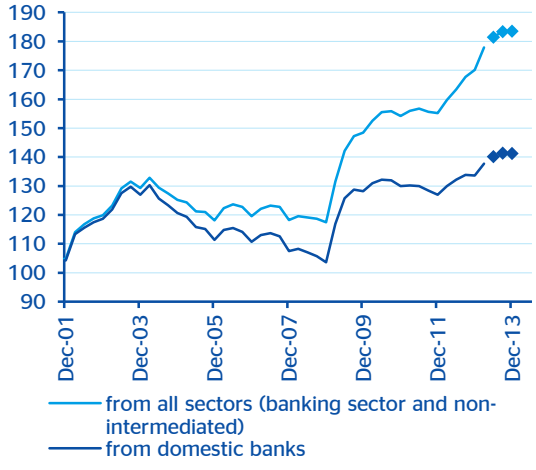
In any case, our 2014 and 2015 forecasts for China's economy remain unchanged, based on our confidence in the authorities' scope and ability to take action. All in all, the risk of a hard landing would be particularly damaging given the size of the economy and its importance for world trade.

Chart 2.7
EM GDP growth (% QoQ, sa)



Source: BBVA Research

Chart 2.8
China: credit to the non-financial private sector (% GDP)



Source: BIS, Haver Analytics and BBVA Research

2: The group of financial institutions and vehicles that fall outside the regulation of the banking system, but that carry out the same intermediary functions between the economic agents with surplus liquidity and those with insufficient savings to take consumption or investment decisions.

The gradual recovery in the eurozone continues, with the support of the ECB and with banking union in its sights

After starting the year in recession, the eurozone managed to sustain moderate expansion throughout the second half of the year, in line with our forecast. Thus if our expectations are confirmed, the fourth quarter data will indicate YoY growth of 0.4%, which although only slight, is its best since the end of 2011. The driver of this slight improvement was the prospect of an increasing role played by domestic demand, although the engine of European growth in 2013 and 2014 was, and will continue to be, the export sector.

The factors supporting the moderate recovery in the eurozone are: i) the recovery of external demand; ii) the sustained improvement in financial conditions, favoured by the ECB's determination of, and commitment to, an expansive monetary policy; and finally and linked to that, iii) the steps taken towards banking union, which should reduce the financial fragmentation that is hampering the role of monetary policy in the region as a whole. In any case, we cannot rule out periods of instability as we approach events that could alter the panorama of progress in banking union and of strengthening the monetary union in Europe in general. The events to watch in this context include the European Parliamentary elections, and news flow on the conditions and results of the stress test and asset quality review of the banking sector.

All in all, we reiterate our forecast for eurozone GDP growth at 1.1% for 2014. For 2015 we estimate 1.9%. However, given our projection of continued cyclical weakness, we are also maintaining as a risk event to our forecast horizon a scenario of significant deflation, although we assign a low probability to this risk (see Chapter 3).

Box 1. Uneven financial tensions in a volatile environment

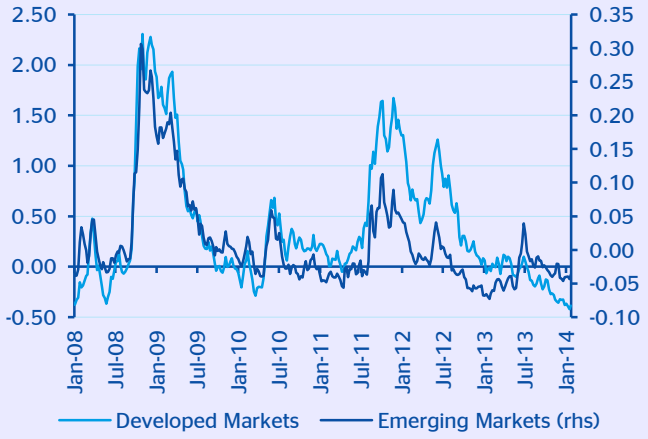
Since the start of the global crisis, the way the "tensions"[3] have developed in the financial markets in different regions have been similar, independent of their origin. This co-movement is perfectly reasonable, not only in times of crisis, given: i) the instantaneous transmission of information; ii) the freedom of movement of capital flows; and iii) that there is no measurement of the price of the financial asset concerned – certainly more closely linked to the idiosyncratic conditions of each economy – but rather of the risk and the uncertainty – volatility – concerning the valuations. Nonetheless, **since the second quarter of last year we started to observe differences between the financial tensions in emerging and developed markets,** and this decoupling is the subject of this box.

We use as a proxy for the non-observed variable "tensions" the indices constructed by BBVA Research. The Financial Tensions Index (FTI) combines in a single indicator the dynamic of a number of variables in the financial markets that approximate risk and uncertainty[4]. For the purposes of this study we compare the FTI of developed economies (the US and Europe) with the FTI of emerging economies (the aggregate FTI of LatAm, emerging Asia and emerging Europe).

One of the distinctive features of the present crisis is that it originates in some of the most developed economies, while the EMs are in general better equipped than in the past in terms of defining and managing their macroeconomic policies as a result of their own crises in previous decades. However, the tensions in the emerging markets have "one by one" reflected the instability derived from developed markets, and this is manifested in the way the financial tensions in emerging markets imitated those in the developed markets. Thus the collapse of Lehman Brothers had a high level of contagion to all the EMs, although more markedly to Latin America. On the other hand, the European debt crisis and the turbulence generated by the Arab Spring also had an impact on emerging markets, although as was to be expected, they had the most effect on European EMs.

However, since May 2013 there has been a decoupling of the financial tensions in these regions. While the tensions in the developed markets have continued the downward trend observed since mid-2012, in the emerging markets this favourable trend reversed, giving rise to an increase in tensions in the second quarter of 2013. At present, the tensions in EMs are at similar levels to June 2013.

Chart B.1.1
Financial Tensions Index BBVA Research[5]



Source: BBVA Research

This divergence is fundamentally explained by the different impact on the two areas of the change in expectations last May regarding global liquidity. The monetary expansion programmes introduced by the developed countries to support their economies (fundamentally in the US and the UK and more recently in Japan) generated a record volume of liquidity at a global level. Some of this liquidity made its way to the EMs in a fairly indiscriminate search for yield, without consideration for the differences in the outlooks for the economies or in the valuation of the assets, and thus moderating the measurements of risk and volatility.

In May 2013, given indications that activity was improving, the Federal Reserve (Fed) announced the possibility of starting[6] to withdraw the monetary stimulus programme earlier than expected. The Fed's announcement generated global uncertainty, but the worst impact was on the EMs as a consequence of the great underlying diversity of the financial assets that had received the flood of liquidity derived from the previous expansion. In this context, given the expectations of reduced global liquidity, according to our indicators the wave of capital outflows from the EMs gave rise to a substantial increase in financial tensions. Once this fact had been absorbed by the markets, there was a gradual decline in tensions, although at present they are above their levels prior to the Fed's announcement.

3: The financial tensions cannot be observed directly, but rather than looking at asset prices, attempt to capture the risks in terms of the spreads over risk-free assets – and uncertainty – through measuring volatility.
4: In the construction of each index we include information on credit risk: on the one hand sovereign, banking and corporate (the two latter do not apply in the case of EMs due to the lack of information) and on the other capital markets volatility, interest rates and exchange rates. In addition, in the case of developed markets we add measurements of tensions and liquidity.
5: The methods used in the construction of the FTIs enable the comparison of the development of tensions, but given that the indicators are standardised no conclusions can be drawn regarding their levels.
6: The market had been assuming September 2013.

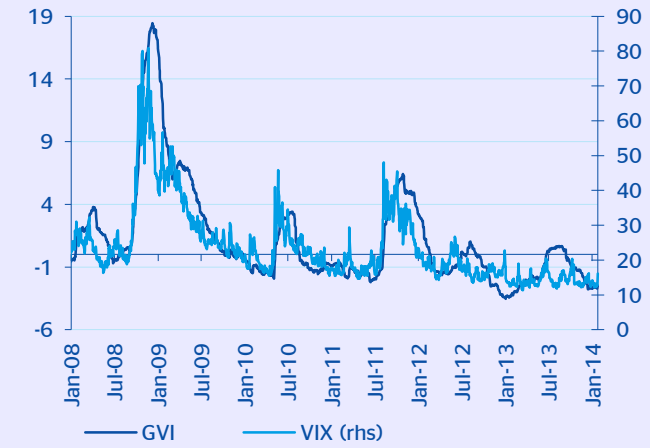
Volatility is a key element in this new global scenario

On a longer-term perspective, note that altogether we are in an environment of moderate financial tensions that tend to converge to pre-crisis levels. However, this is happening simultaneously with a period of high volatility in the financial markets that is not fully reflected either by our FTIs or by the VIX, the commonly used indicator for global volatility. In the case of the FTI, being an indicator that includes risk and volatility components, the gradual decline in the former as we gain distance from the crisis and move towards recovery eclipses what has happened in terms of volatility. In the case of the VIX, its reach is limited in this context, as the indicator measures the implicit volatility of the S&P 500 index. What would a global volatility index tell us?

Our global volatility index (GVI) attempts to synthesise in a single variable the volatility dynamic of the financial markets in a more global way than with the indicators available to date. In this sense the indicator is more global, as it covers different economies[7] and also different markets: fixed-income, equities and FX.

Since the start of the crisis, the dynamic of the GVI has been similar to those of the various FTIs, and as is to be expected, to the VIX as well. However, since the beginning of 2013 there has been a significant increase in global volatility that is only partly reflected in financial tensions and in the VIX[8]. This increase in the GVI, which started in the early months of 2013, has been associated with the uncertainty regarding the actions of the principal central banks, and their impact on markets: i) the launch of a massive quantitative easing by the central bank of Japan; and ii) subsequently, and most importantly, the above-mentioned change in the Fed's communication regarding the possibility of starting to reduce its third round of stimulus earlier than expected. Thus the uncertainty regarding the possibility of a reduction in global liquidity, as well of the effects on financial tensions already noted above, generated an increase in global volatility in a scenario of moderate financial tensions.

Chart B.1.2
GVI vs. VIX



Source: BBVA Research

Over the course of 2014, a year when the central banks of the principal developed countries will continue to be the protagonists, it will be particularly interesting to monitor this global volatility indicator, as periods of high volatility could indicate potential channels of financial fragility.

7: The countries included are: Japan, China, the US, Germany, Spain, Italy, Mexico, Brazil, Turkey and Poland.
8: The correlation between the GVI and the VIX between 2004 and 2009 is 90%, while between 2010 and January 2014 it is 70%. The correlation falls to 30% when we look at just 2013 and January 2014.

3. Risk of deflation: low, but not negligible

Inflation has dropped very significantly over the last two years, especially in the advanced economies and, within these, particularly rapidly in the eurozone. Low levels of inflation increase the risk of negative inflation rates: the greater the spare capacity or the slower the growth of monetary aggregates, the higher the risk. The inclusion of falling prices in economic agents' expectations poses the risk of falling into a deflationary spiral, as Japan did at the end of the 1990s or the United States in the 1930s, within a context of deleveraging and near-zero nominal interest rates.

The economic area with the most significant risk of falling inflation is the eurozone, given the limited capacity for response policies and, in particular, the difficulty that the fragile banking channel entails for the efficacy of monetary policy.

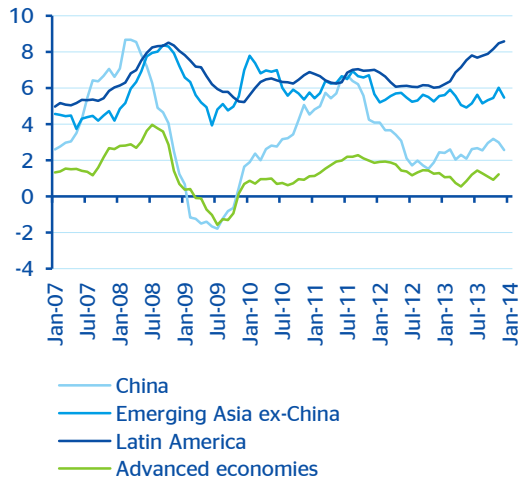
Under the assumptions of our baseline scenario, inflation will remain positive in Europe and will pick up toward the end of the year, with a probability below 10% of negative average annual inflation in 2014. That said, the risk of falling prices increases considerably when certain alternative assumptions, which are less probable but nevertheless possible, are taken into account. For example, the probability rises to 14% if we assume limited growth of monetary aggregates (stemming, for instance, from a lack of expansion in the banking system's lending capacity). It increases to 23% if we also envisage a relapse into recession. In the most extreme case considered, in which a very severe economic shock (with a fall of over 1% in GDP) causes an unanchoring of price expectations (loss of credibility in monetary policy), the probability of an annual fall in prices approaches 50%.

In our view, given the major impact that a deflationary spiral would have on the European economy (extended economic stagnation, a loss of the ground gained by the peripheral countries in financial solvency, competitiveness, etc.), the ECB is doing the right thing in treating the current and still fledgling economic recovery with caution and, even more so, in reasserting its commitment to price stability and to taking all necessary measures to mitigate the risk of deflation.

The fear of deflation grows with disinflation, which is more intense in the eurozone

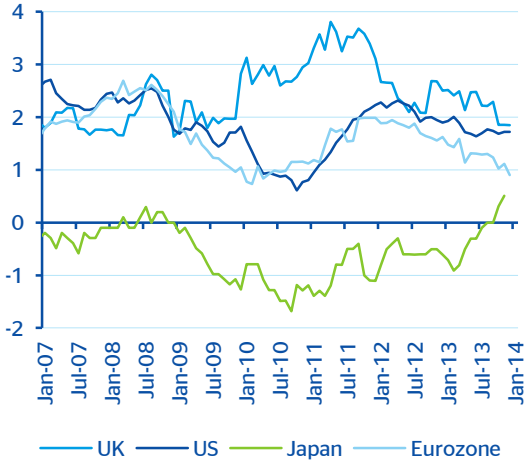
As was the case in 2008 and 2009, the fall in inflation rates that is occurring in some economies has revived fears of the possibility of being on the brink of deflation - that is, a sustained and widespread fall in prices - or even of a deflationary spiral, in the event that falling price levels feed through the price expectations of economic agents, feeding back into the process. The fact is that **the data observed is consistent with disinflation (that is, a deceleration in price growth) that is more intense in some of the most advanced economies**, but falls short of reaching the extremely low inflation rates recorded over those years (Chart 3.1).

Chart 3.1
Headline inflation in main economic areas (% YoY)



Source: Haver and BBVA Research

Chart 3.2
Core inflation in advanced economies (% YoY)



Source: Haver and BBVA Research

Certain conclusions may be drawn by merely reviewing the most recent data (see the Tables in the Appendix of this report for further details):

1. **The disinflation process since mid-2011 is limited to some advanced economies** and, to a lesser extent, China. The inflation rates of the emerging economies of Asia remain highly stable, while those of Latin America have been on the rise since mid-2013.
2. **Disinflation occurs regardless of the cyclical position.** It affects economies with sustained high growth rates (e.g., China), as well as swiftly recovering economies (US and UK) and those with more subdued rates of growth (as in the case of the eurozone).
3. **The current disinflation is comparable to that of 2008-09, when core price indexes are considered.** The drop in prices in 2008-09 was partly due to the collapse of energy prices in the wake of the Lehman Brothers bankruptcy. Chart 3.2 shows the core inflation rates (excluding the volatile components: energy and fresh food) of the advanced economies. As shown on the chart, and setting aside the case of Japan, which we will discuss below, the course of core inflation rates is broadly replicating what happened in 2008-09 (although unsupported by falling energy prices). In 2013 on average, core inflation in both the eurozone and the US was six-tenths lower than the average recorded between 2005 and 2008.
4. **Within the advanced economies, the most intense disinflation occurred in the eurozone.** Based on the most recent data available at the time of drafting this report, core inflation in the eurozone (0.9% in December) lies practically at the low reached during the post-Lehman Brothers disinflation (0.7%), and our short-term forecasts point to a low being reached in the first half of 2014. On the other hand, core inflation in the US still lies almost one point above its post-Lehman low, notwithstanding a half-point drop from its recent high.

The rising vulnerability of the European economy

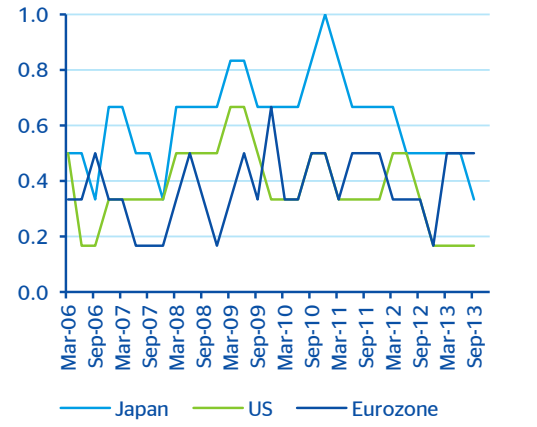
In general, there are two major conceptual approaches in the analysis of price fluctuations in an economy. The first, known as the "Phillips curve," posits a positive relationship between inflation and demand pressure (which is usually likened to the unemployment or output gap; that is, the difference between the actual unemployment or GDP and its potential level, which corresponds to the full capacity, without price tensions). The second is the "monetarist"

approach, based on the long-term positive relationship between the growth of monetary aggregates (especially M3) and inflation.

Different deflation vulnerability indexes have been built using the empirical evidence supported by these two approaches, such as the one proposed by the International Monetary Fund (IMF).[9] The IMF uses four groups of indicators: the first group includes indicators of the current level of inflation (general, core and measured with the GDP deflator); the second refers to the cyclical state of the economy and its trend (output gap, level and change, and recent GDP growth); the third uses monetary indicators (aggregate M3 growth compared to the monetary base, but also the course of private credit and stock market indexes); the last group uses the real effective exchange rate to account for imported inflation (disinflation) in cases of currency depreciation (appreciation). Our own (simpler) version[10] of this type of synthetic indicator is shown in Chart 3.3. **According to this indicator, deflation vulnerability in the eurozone is currently greater than in Japan.**

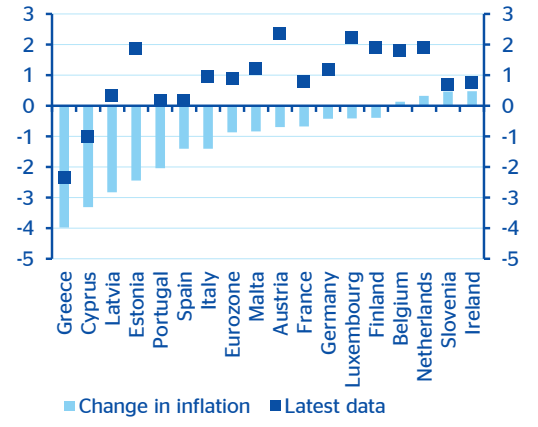
It is important to note that, even within the eurozone, the situation is nevertheless quite heterogeneous. The current situation is consistent with negative rates in peripheral countries such as Greece and flirtations with zero inflation in Portugal and Spain, while rates in the core countries fluctuate around the 1% (Germany, France) or even 2% (Benelux, Finland) level. In terms of core inflation (Chart 3.4), rates have fallen in virtually all eurozone countries since the recent June 2011 high. At the end of 2013, only Netherlands, Belgium, Slovenia and Ireland[11] had higher core inflation than in 2011. At any rate, the intensity of the declines has clearly varied.[12]

Chart 3.3
BBVA Deflation Vulnerability Indicator



Source: BBVA Research based on Haver

Chart 3.4
Disinflation in the eurozone
(change in core rate from June 2011 and the latest data, % YoY)



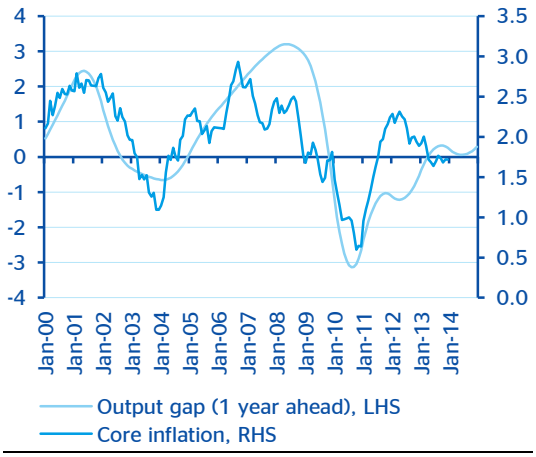
Source: BBVA Research based on Eurostat

9: For further details, see "Gauging Risks for Deflation," Decressin J. and Laxton D., IMF staff position note, (2009) and "Deflation: Determinants, Risks, and Policy Options," Kumar et al., IMF Occasional Paper 221 (2003).
10: Our indicator is built by aggregating six binary variables resulting from the application of certain thresholds to different factors. Thus, values that are lower or higher than said thresholds are assigned zero or one, respectively, and are subsequently aggregated and renormalised to obtain the index value for each country. The factors considered are the level of inflation (headline and core), the cyclical position (current and past output gap, in addition to the GDP growth for the last three years with respect to the average growth of the last decade) and the appreciation of the real effective exchange rate over the last year.
11: The case of Ireland is truly particular. One of the European countries most affected by the banking and debt crisis, featuring a highly flexible economy, it recorded severe drops in prices (in their underlying component) from the beginning of 2009 until 2011. Although the last core inflation data is higher than the one taken as the 2011 baseline, the fact is that it lies one percentage point below its 2012 high (1.8%).
12: The intensity in the fall in inflation since 2011 in each country also depends on the tax changes made. Even so, seasonally-adjusted and tax-constant data show that the intense deceleration of inflation begins at the outset of the second recession.

Ample spare capacity and low growth of monetary aggregates: reasons for the downward price pressures

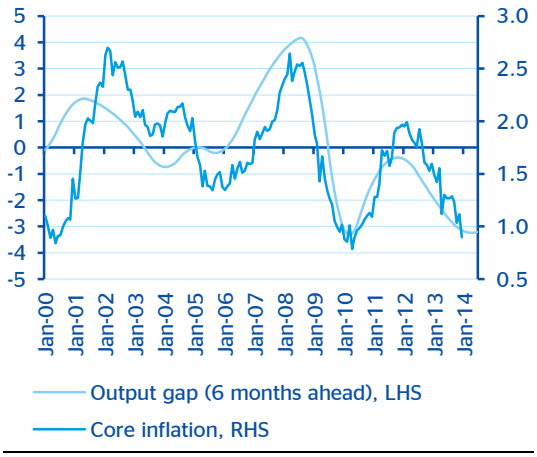
Both the "monetary" and the "Phillips curve" approaches explain the current disinflation and associated risk of deflation. Charts 3.5 and 3.6 show the shared movement of core inflation and demand pressure (based on our estimates of US and European output gaps). The cyclical phase of each of these economies differs greatly, and is consistent with the respective changes in their consumer prices.

Chart 3.5
Core inflation and output gap in the US



Source: BBVA Research based on Haver

Chart 3.6
Core inflation and output gap in the eurozone



Source: BBVA Research based on Haver

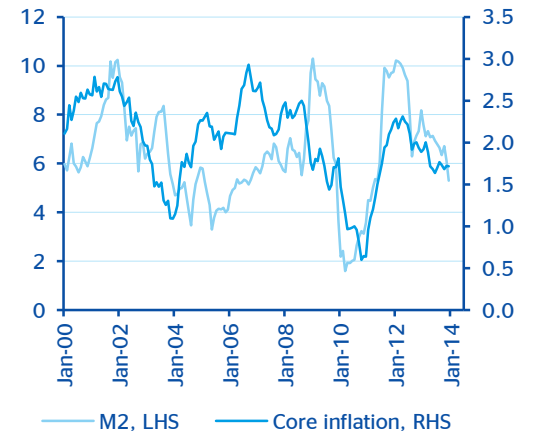
The monetarist approach also provides sound reasons to justify the weak price growth. The shared movement of both variables is also noteworthy (Charts 3.7 and 3.8). The expansion of US and eurozone central-bank balance sheets has not provided the same results for monetary aggregates, especially in the eurozone. **The difference is partially explained by the variety of policies implemented,** with respect not only to the size of the balance-sheet expansion but also to the specific assets which are used to conduct it. Furthermore, the Fed swiftly intervened during the onset of the 2008 banking crisis to recapitalise distressed institutions, the result being that the US financial system is currently strengthened. This has allowed the economic recovery to be supported now not only by an environment of low interest rates on a historical basis (as a result of the deft management of the quantitative-easing and forward-guidance programmes), but also by a rise in private sector lending.

Conversely, the European case is quite different. The ECB also expanded its balance sheet as a response to the crisis, but it was done through programmes that, fundamentally, have attempted to provide the financial system with liquidity under favourable terms. European domestic authorities certainly did not display the same alacrity as the US in tackling the solvency issues of the financial systems most affected by the severity of the financial crisis or by domestic real estate bubbles. In a context of high debt (of both the financial sector and the non-financial private sector), and with a large part of the financial system still mired in the process of rebuilding their balance sheets, **it is reasonable to consider that the pending restructuring[13] of parts of the European financial system weakens the effectiveness of monetary policy transmission.** This fragility of the banking channel is clearly a distinguishing and essential element in the modelling we conduct to quantify the risk of deflation, as shown in the following section.

13: The restructuring of the most fragile parts of the European financial system (the nationalised banks in Ireland and the Spanish savings banks) is now at a very advanced stage, but it is clear that the situation is far from being normalised. Thus, events will take place in 2014 (such as the ECB's asset quality review and the stress tests to be conducted by the EBA) which should contribute to normalisation, but which also have the potential to turn into risk factors should there be a failure to achieve the expected results. It should be borne in mind that the most recent monetary aggregate data is affected by the measures the banking sector is taking for the asset quality review.

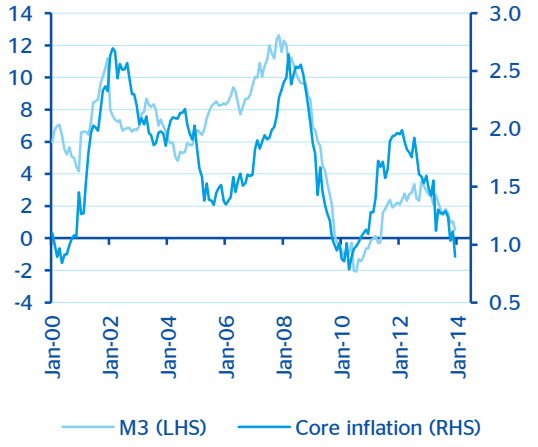
The latter notwithstanding, **the list of factors behind the low eurozone inflation is not limited to a sluggish money supply and ample spare capacity**. Other factors also have a role in the eurozone's disinflationary pressures. First of all, energy prices have not been experiencing significant rises over the last years. Their ability to influence the other index components is thus limited. Second, the euro continues overvalued, thus importing disinflationary pressure. Finally, the process of structural reforms recently conducted in different European countries, especially on the periphery, must be highlighted. These economies had some protected sectors and mechanisms which had helped withstand price adjustments in the markets for both products (services that are regulated or protected by unions) and factors, particularly in the labour market (such as wage indexing). Many of those mechanisms have been eliminated to enhance competitiveness, but that also entails the loss of an additional "barrier" against deflation.

Chart 3.7
Core inflation and money supply growth (M2) in the US



Source: BBVA Research

Chart 3.8
Core inflation and money supply growth (M3) in the eurozone



Source: BBVA Research

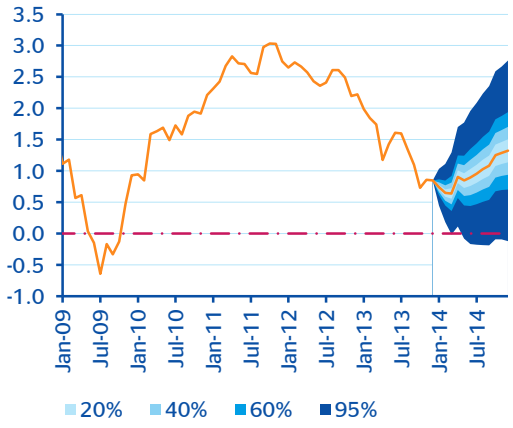
In our baseline scenario, inflation remains comfortably in positive territory

Europe's current situation warrants both downward and upward price pressures. On the one hand, after the deep and extended recession, European output and employment are well below their full-capacity levels. However, given the aforementioned signs of economic activity and prospects for recovery, the disinflationary process can be expected to revert shortly or, at least, to slow down. Consequently, this would allow us to assign a probability of almost zero to any deflationary risk.

On the other hand, the weakness of part of the European financial system can weigh down the recovery of monetary aggregates, entailing a greater probability for the continuation of disinflationary forces.

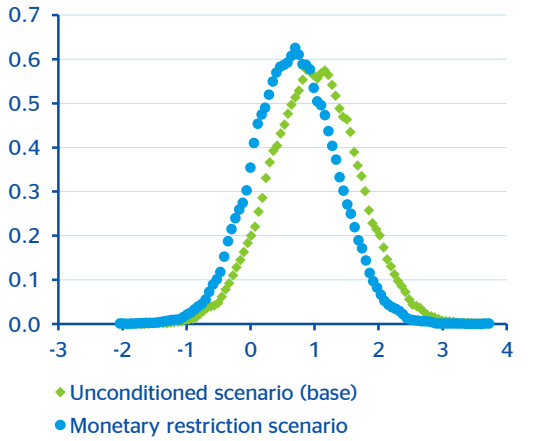
In our baseline scenario, this results in a forecast of a period of very low inflation in the eurozone within the forecasting horizon. In accordance with BBVA Research forecasts, European inflation will trend to the downside for an additional period, reaching a low toward the end of the first quarter, and recovering from that point forward (as shown in Chart 3.9). Overall, our scenario expects average inflation for 2014 to reach 1%, and 1.3% in 2015. However, a forecast is always associated with a confidence interval. As shown in Chart 3.9, **wide confidence intervals include the possibility of inflation dipping into negative territory, albeit with a very low probability in our baseline scenario.**

Chart 3.9
Baseline scenario for inflation (% YoY)



Source: BBVA Research

Chart 3.10
Probability distribution function for inflation in a scenario with monetary restrictions



Source: BBVA Research

Our baseline scenario, however, is built on the basis of some mutually consistent assumptions. In our case, the main forecasts are the result of time-series models for the shorter horizons, while the longer-term perspectives are consistent with the forecasts for economic growth through Phillips curve modelling. As noted in Section Two of this report and reviewed in further detail in the Tables Appendix, our baseline scenario for the eurozone is an economic recovery after the decline of 2013 (growth of 1.1% in 2014 and 1.9% in 2015). The specification of standard Phillips curves also requires assumptions about the potential growth of the economy (a subject over which there is controversy, among other reasons, due to the difficulty of estimating the effects of the last economic crisis on potential GDP). **At any rate, with a forecast GDP growth of 1%, it could be acceptable to say that the output gap (potentially still in negative territory) will not widen further, reducing the downward pressure on prices.**

The probability of an economic shock leading to falling prices increases significantly in an environment of financial fragility

Now then, although the baseline scenario (1.1% growth in GDP and 1% in inflation) is built on the most likely assumptions, there is no absolute certainty. Given the low level of inflation and the persistence and intensity of the previous double-dip recession, the key aspect is that any shock involving an impact on GDP could increase the downward pressure on prices, pushing inflation into negative territory with a risk of triggering a deflationary spiral.

At the same time, although our baseline scenario forecasts a gradual improvement of financial conditions in the eurozone, it seems sensible to consider an alternative scenario in which the fragility of the financial system persists, hindering the appropriate exercise of monetary policy[14]. In our case, we considered an alternative scenario to our baseline, in which we assume that the persistent problems in the European financial system entail money-supply growth remaining at the levels of the last years (specifically, we assume the M3 growing at a 0.9% rate within the forecasting horizon, the same rate registered in 2013Q4), instead of accelerating to return to a situation of normality (Chart 3.8 again).

14: Past experience suggests that any of the events scheduled for 2014, such as the AQR, stress tests and breakthroughs in banking union, could give rise to tensions.

The results of this modelling[15] are shown on Chart 3.10 and in Table 1, under the heading "Scenario with monetary restriction." As can be seen, a restriction in monetary-aggregate growth allows us to forecast lower inflation. Specifically, the model predicts an average 2014 inflation rate of 0.8%. We also used this model to compute the probabilities of deflation. For our purposes (and in line with the usual definition of deflation a widespread, sustained and significant decline in prices), we qualified a drop in average annual prices for 2014 as deflation. One must take into account that the current inflation level as of January 2014 is 0.7% and, therefore, that given a reasonable deceleration trend toward zero over the first half of the year, a negative annual average for 2014 would require a steep fall in prices throughout the entire second half. Consequently, **given that monetary restriction, we estimate the probability of a deflationary event, as defined, to be 14%, which is practically twice the 7.5% probability of a scenario under BBVA Research's baseline scenario** (the probability distribution functions in both scenarios are shown in Chart 3.10). Furthermore, it is important to note that the model forecasts that a restriction of this type would have an effect on 2014 GDP growth, which drops to 0.2%.

Table 3.1
Inflation and GDP estimates under different scenarios

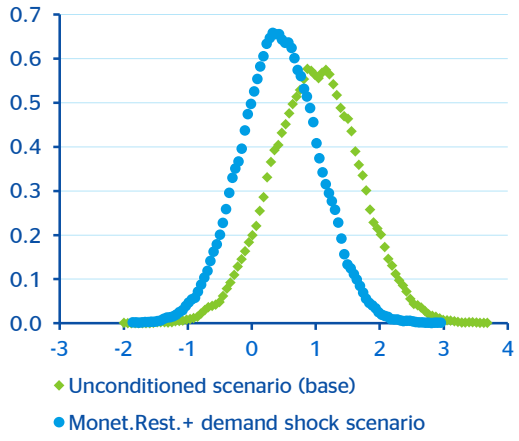
Scenario	Inflation point estimation	Deflation probability estimation	GDP growth point estimation
BBVA Research baseline Scenario	1.0%	7.5%	1.1%
Scenario 1: monetary restriction	0.8%	14%	0.2%
Scenario 2: Scenario 1+ negative demand shock	0.4%	34%	< -1%
Scenario 3: Scenario 2 + unanchored inflation expectations	0.3%	47%	< -1%

Source: BBVA Research

The monetary-restriction assumption would lead to an inflation level closer to zero, leaving a very limited buffer to absorb shocks. If we assume a negative economic shock, the probability of inflation rises significantly. As noted above, this is not the most probable case, given the onset of the recovery after the 2013 recession. However, the European economy already saw its recovery thwarted after the 2009 recession and, to date, that recovery is still modest and vulnerable. In our modelling, we assume that the European economy will be impacted by a demand shock that will cause a fall in GDP of 1%, instead of 1% growth. Chart 3.11 and Table 3.1 show the result.[16] As can be observed, **in an environment of such low inflation and with an impaired banking channel that would continue to hamper the growth of monetary aggregates, a new recession would push the average annual inflation rate down to 0.4%** (which de facto means inflation entering into negative territory at some point during the year), **and the probability of negative average annual inflation climbing to 34%.**

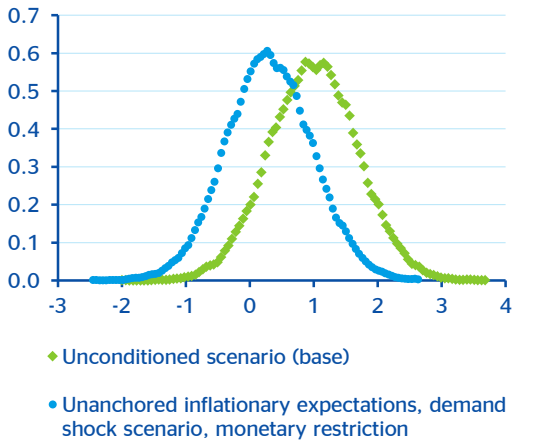
15: Charts 3.10, 3.11 and 3.12 and Table 3.1 were all obtained by simulating two vector auto-regressive models, estimated with eurozone data for the Q1 1979 - Q3 2013 period: the first (VAR1), for inflation and GDP growth and M3; the second (VAR2), replacing inflation and M3 growth with their first differences (that is, acceleration of price levels and M3). Due to its construction and in line with conventional economic perspective, the first model always projects a swift reversion of its variables to their historical long-term mean. The second model, however, provides the ability to break away from that reversion in the case of inflation and M3 growth, and is useful to approach a scenario of "unanchored inflation expectations" (that is, one of volatility in the expected inflation rate over the mid-term), which is discussed below.
16: It is important to note that it seems reasonable to believe that if the European economy were to relapse into recession, there would be some kind of economic-policy reaction, in particular on the part of the ECB. Our estimate does not assume that reaction will not take place, but rather that it fails to counteract completely the effect of the initial shock to the degree required to enable the economy to continue to grow.

Chart 3.11
Probability distribution function for inflation in a scenario with monetary restrictions and negative demand shock



Source: BBVA Research

Chart 3.12
Probability distribution function for inflation in a scenario with unanchored expectations



Source: BBVA Research

Anchoring of expectations is key: falling into a deflationary spiral hinges on the credibility of monetary policy

There is an additional scenario that bears consideration. **A one-off dip in prices does not equate to deflation. Deflationary processes are highly linked to agents' expectations about the future course of prices.** Among other factors, these expectations are influenced by the recent course of inflation and the central banks' credibility in their pursuit of price stability. Thus, agents can watch (and wait for) short-term price movements, but if central-bank credibility is high, they assume that prices will revert to the central bank's target level. When an economy falls into a deflationary process, the central bank may witness a loss of its credibility in controlling inflation which, in turn, may lead to economic agents losing sight of price targets and expecting not a gradual return to the target, but rather the continuation of the process of falling prices – the dreaded deflationary spiral (as occurred in Japan, and as we illustrate below).

The analysis of a more extreme case would therefore include recession, an impaired banking channel and a loss of anchored inflation expectations. In our opinion, an econometric model estimated in second differences can capture this phenomenon of a loss of inflation expectations (for further details, see Footnote 15). Chart 3.12 shows the probability distribution for inflation under that scenario of unanchored inflation expectations, and its comparison with the baseline-scenario distribution. The results are also shown in Table 1. Average inflation expected for 2014 is now 0.28% (which, bearing in mind the inflation rate at the beginning of the year, would entail a moderate fall in prices for a large part of the year), with a probability of deflation of 47% (defined above as an average annual rate below zero).

The high impact of these alternative, though less probable, scenarios makes a watchful stance advisable for the ECB

The main conclusion derived from the above analysis is that, although in the most feasible scenario the probability of deflation on average for 2014 is very low (7.5%), under certain less probable but not impossible conditions the risk increases very significantly.[17]

17: One must bear in mind that, given the heterogeneity among countries, the scenarios of very low inflation (and even more so those of deflation) would be consistent with several countries facing falling prices, those on the periphery being the most likely, given their current low levels of inflation (see Chart 3.4). At the same time, it must be considered that exports from those countries can become relatively more competitive.

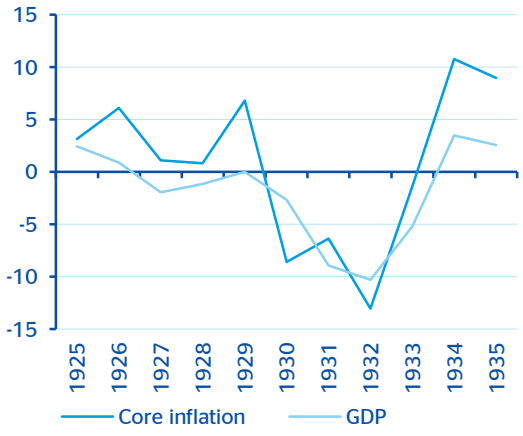
Therefore, in our judgment, the ECB's cautious stance is appropriate, as it displays its commitment to the implementation of new monetary stimulus measures, should they be necessary. A deflationary spiral must be avoided, due to the serious problems it would cause:

1. An environment of low European inflation **hinders the recovery of competitiveness in the peripheral economies.** Higher levels of inflation in the most competitive economies would allow faster closing of price-competitiveness gaps.
2. **Truly deflationary dynamics can lead to shrinking GDP.** This is due to the fact that economic agents who expect prices to fall in the future would delay their spending and investment decisions, given the expectations of lower future prices of goods and inputs.
3. **Deflation causes a rise in real debt which thus makes debt servicing more burdensome,** and also puts downward pressure on economic agents' spending capacity. This is of particular importance, given the eurozone's high levels of public and private debt.

The aggregate impact in growth terms is potentially very high, which is the reason why authorities have historically attempted to prevent economies from falling into deflation. In fact, **there are few historical experiences of truly deflationary processes,** but the two most commonly cited (the US in 1921-1939 and Japan in 1998-2013) offer some useful conclusions for current times.

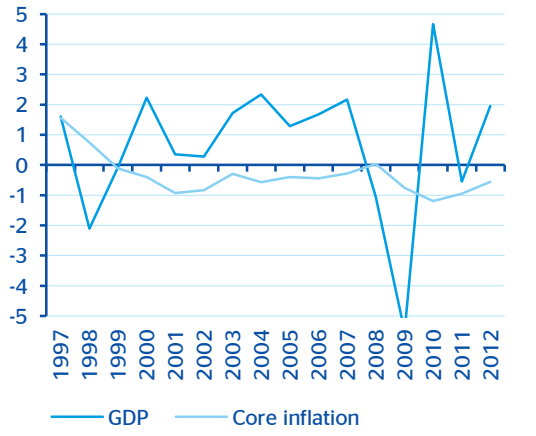
1. **Deflation, once started, is a highly persistent phenomenon; that is, economic policy has limited efficacy in restoring the economy to positive rates.** As shown in Charts 3.13 and 3.14, the two episodes of deflation in the US and Japan lasted seven and 14 years. Japan and its endless plans to emerge from deflation is a good example of these difficulties. Its last monetary expansion, fiscal and structural reforms programme is proving successful in restoring inflation, but whether this is sustainable remains to be seen.
2. **Deflation is associated with an equally lengthy period of recession or stagnation.** As shown on the charts, the aggregate loss of GDP over the seven-year US deflation was 21%. For its part, Japan was able to combine falling prices with positive, although weak, growth figures (given the monetary and fiscal stimuli in place): average annual growth over the 14 years of deflation was barely 0.7% (average growth in the US for the same period was 2.4%), giving rise to what is known as the "lost decade."

Chart 3.13
Deflation in the US



Source: BBVA Research based on Haver

Chart 3.14
Deflation in Japan



Source: BBVA Research based on Haver

Consequently, avoiding a "mere" deflation is of critical importance. In this regard, it can be said that the events of 2008-09 are a good example of successful avoidance. In the midst of the great recession of 2009, with sharp drops in core inflation (recall Chart 3.1), an intense response from economic policy was followed. To begin with, several fiscal stimulus programs

were put into action, not only in advanced economies but also in some emerging economies. For example, according to the IMF, between 2007 and 2009 cyclically-adjusted deficits rose by 2.6 percentage points of GDP in the eurozone and by 3.6 points in China. Likewise, strong monetary stimulus was put into operation: interest rates quickly dropped to zero and central banks started expanding their balance sheets. **Today the situation is quite different, particularly in Europe. The fiscal margin is highly limited, after six years of recession and stagnation.** European public debt was barely at 66% of GDP in 2007, but had reached 96% by 2013. Furthermore, the countries most vulnerable to deflation are precisely those with the highest fiscal imbalances. It thus seems clear that in Europe the scope is very limited for the use of fiscal policy to deal with the risk of deflation.

However, **the ECB does have instruments to address this risk.** Over the last months, particularly after the interest rate cut in November, which the ECB itself justified with perspectives of very low inflation for an extended period, different possibilities have arisen in this regard: further cuts (by now marginal) in refinancing interest rates, the imposition of negative rates on the deposit facility, strengthening forward guidance, new long-term (fixed rate) liquidity auctions or, in the least probable case given the institutional restrictions, a genuine quantitative easing programme such as those successfully implemented in the UK and US.

Experience reveals that those plans could be sufficient to ward off the risks of deflation. That said, **Japan's "lost decade" also has similarities with the situation in Europe.** Deflation in Japan occurred in a context of (1) high debt levels and a broken banking channel for monetary policy transmission, given the fragility of its financial system; (2) perspectives of low growth in demand (self-fulfilling expectations), among other factors, due to structural problems (fundamentally demographic in the case of Japan); and (3) an economic policy response that was hesitant, insufficiently aggressive or excessively brief. **In our view, on the empirical evidence available, the facts gleaned from the usual case studies and the current state of the European economy make advisable the application of decisive and sufficiently preventive measures to fend off the risk of deflation on the first signs of its appearance.**

Box 2: A comparison of the CPI between two monetary unions

When considering a monetary area to compare with CPI in the eurozone, the best choice is the US. Both are very large economies with a diversified industrial base, high income and, as a consequence, similar levels of household consumption. However, a number of differences also exist between the two regions, which have a significant bearing on any conclusions we might draw from this comparison. To begin with, the integration of markets in the factors of production, and in particular labour markets, varies markedly, mainly because of barriers to mobility and the maturity of each monetary union.

Our analysis focuses on the existence or otherwise of common patterns in the evolution of the CPI, by the items included in the basket of consumer goods and by geographical area (metropolitan areas in the US and eurozone countries), especially in periods of low inflation or deflation. To observe the differing evolutions of the series, we have made the comparison in terms of the ratio of deflationary items and geographical areas in each of the two regions.

Table B.2.1
Comparison between the areas

	USA.	Eurozone
Share of world economy (GDP/World GDP, %)	26	20
Services/GDP, %	78	73
PPP per capita income in USD	51,700	37,100
Share of household consumer spending in GDP, %	69	57
CPI basket: food and energy, %	23	23
CPI basket: manufactured goods, %	21	16
CPI basket: services, %	56	61

Source: BEA, Eurostat, IMF and WB (2012, CPI 2013)

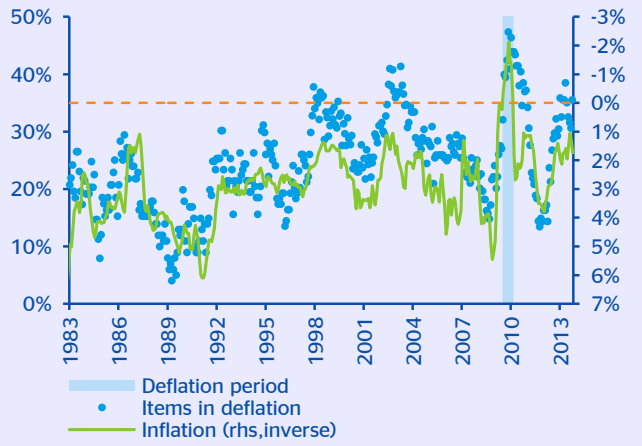
1. Analysis of CPI by items

To ensure the consistency of the analysis by items, we begin by examining the series for the USA as from 1983[18]. For reasons of data availability, the starting date taken for the eurozone was 1997[19]. The sample analysed contains one deflationary event, which occurred in both regions in the second half of 2009.

As shown in Charts B.2.1 and B.2.2, **the likelihood of finding a larger number of deflationary items is greater in the presence of low inflation rates in both areas**, although the deflationary event in fact arose as a result of falling prices in only a small number of items.

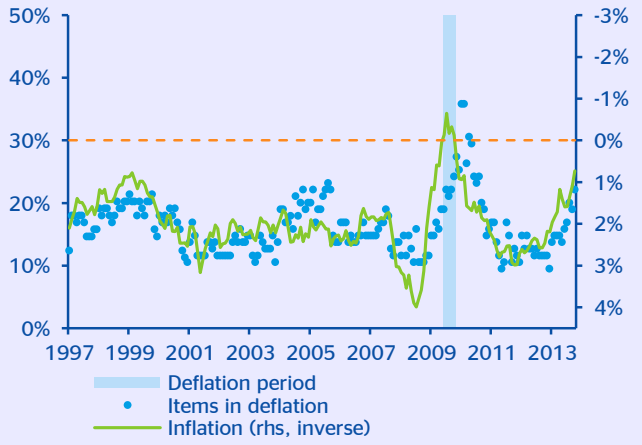
Comparison of the two areas reveals that the ratio is more volatile in the USA. Furthermore, prices fell in a smaller number of items in the deflationary event occurring in the eurozone. In the USA, falling prices affected a maximum of 47% of items (32% in the first month of the deflationary event), compared to falling prices in a maximum of 35% of items (and just 19% in the first month of deflation) in the eurozone[20]. **Both results appear to show greater price rigidity in the eurozone than in the United States.** However, the greater volatility in the US ratio might also be explained by the larger number of items available in the United States than in the eurozone. It seems reasonable to suppose that the behaviour of items will be more similar the smaller their number.

Chart B.2.1
USA: Inflation and % of deflationary items



Source: BBVA Research

Chart B.2.2
USA: Inflation and % of deflationary items



Source: BBVA Research

18: In 1983, the US CPI was made up of 89 items. This number was increased to 200 in 1997. The smaller number of items available before 1983 would prevent adequate analysis.
19: As of 1997, the eurozone CPI can be broken down into 89 items, rising to 95 in 2000.
20: These percentages were obtained by dividing the number of deflationary items by the total items, and they therefore do not take into account their weight in the general index. This is important, because the items affected by falling prices must account for a significant share of the general index if just 19% of items produce deflation in the general index.

Given the significant (inverse) correlation between the ratio of deflationary items and inflation mentioned above, this could be taken as an indicator of deflationary risk. However, two limitations exist which make this indicator inappropriate. In the first place, the proportion of deflationary items in periods of general deflation is only slightly higher than in periods of inflation.

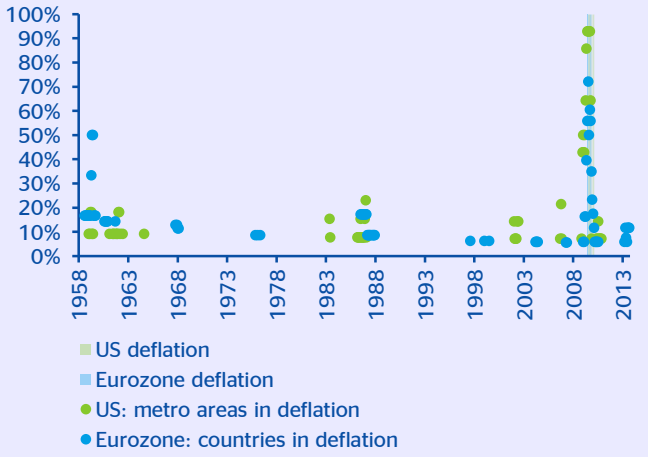
A second limitation making this correlation an inappropriate gauge of the risk of deflation is that it cannot be used as a forward indicator. The maximum correlation between general inflation in the USA and the indicator is obtained contemporaneously. In the case of the eurozone, meanwhile, the maximum correlation is obtained when the indicator is delayed by (approximately) two months. Given its volatility, this means that no clear leading indicator of falling prices is available.

2. CPI analysis by countries and metropolitan areas

As explained above, we constructed a series representing the proportion of regions (countries and metropolitan areas) undergoing deflation compared to the total regions in the monetary union concerned. Once again, we limited the available sample to arrive at the necessary level of disaggregation and ensure a consistent analysis, beginning in 1958 for both areas[21].

As shown in Chart B.2.3, more than 90% of the metropolitan areas displayed falling prices in the deflationary event affecting the United States. Meanwhile, deflationary metropolitan areas did not exceed 20% of the total in periods of general inflation. In the eurozone, the number of deflationary countries observed is slightly higher, even in the absence of deflation in the general index. Finally, the general index reflects deflation despite the fact that prices were falling in only 70%[22] of the eurozone countries, in contrast to the USA. **This is consistent with the lower level of monetary and economic integration among the eurozone countries than between the metropolitan areas of the United States.**

Chart B.2.3
Percentage of eurozone countries and US metropolitan areas undergoing deflation



Source: BBVA Research

Based on the above two points, we can conclude that neither indicator provides an adequate signal of deflationary risk, given the lack of predictive capacity. Furthermore, the CPI, when disaggregated by items and by regions, appears not to display any common behaviour pattern between the two monetary unions. As mentioned above, this may be because the USA constitutes a more integrated and considerably more mature monetary area.

21: There were 11 metropolitan areas in the USA in 1958. Dallas was included in 1963, followed by Miami in 1996, and the inclusion of Washington in 1996 brought the number up to the current 14 metropolitan areas. The eurozone consisted of six countries in 1958. By the end of the 1960s there were nine, and by the end of the 1970s there were 11. The number rose to 15 in the early 1990s and to 17 countries in 2006.
22: This percentage would be even lower if countries were not counted equally but were weighted by their relative size in terms of GDP, or by consumer spending in the area concerned.

4. Tables

Table 4.1
Macroeconomic Forecasts: Gross Domestic Product

(YoY growth rate)	2011	2012	2013	2014	2015
United States	1.8	2.8	1.8	2.5	2.5
EMU	1.6	-0.6	-0.4	1.1	1.9
Germany	3.4	0.9	0.5	1.8	2.0
France	2.0	0.0	0.2	1.1	1.6
Italy	0.6	-2.6	-1.8	0.8	1.5
Spain	0.1	-1.6	-1.2	0.9	1.9
UK	1.1	0.3	1.9	2.6	2.4
Latin America *	4.0	2.6	2.2	2.5	2.6
Mexico	4.0	3.7	1.2	3.4	3.0
Brazil	2.7	1.0	2.2	2.5	1.9
EAGLES **	6.7	5.0	4.8	5.2	5.4
Turkey	8.5	2.4	3.9	1.5	5.2
Asia Pacific	6.0	5.3	5.2	5.3	5.4
Japan	-0.4	1.4	1.7	1.5	1.3
China	9.3	7.7	7.7	7.6	7.5
Asia (exc. China)	3.7	3.5	3.4	3.7	4.0
World	4.0	3.2	2.9	3.6	3.9

* Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela.
** Brazil, China, India, Indonesia, Korea, Mexico, Russia, Taiwan, Turkey.
Forecast closing date: February 7, 2014.
Source: BBVA Research

Table 4.2
Macroeconomic Forecasts: Inflation (Avg.)

(YoY growth rate)	2011	2012	2013	2014	2015
United States	3.1	2.1	1.5	2.3	2.4
Eurozone	2.7	2.5	1.4	1.0	1.4
Germany	2.5	2.1	1.6	1.5	1.7
France	2.3	2.2	1.0	1.0	1.2
Italy	2.9	3.3	1.3	0.8	1.2
Spain	3.2	2.4	1.4	0.5	1.0
UK	4.5	2.8	2.6	1.9	2.0
Latin America *	8.0	7.5	8.9	11.6	10.7
Mexico	3.4	4.1	3.8	4.3	3.4
Brazil	6.6	5.4	6.2	6.1	5.6
EAGLES **	6.0	4.2	4.2	4.4	4.2
Turkey	6.2	8.7	7.6	8.2	5.3
Asia Pacific	4.9	3.1	2.9	3.5	3.5
Japan	-0.3	0.0	0.3	2.1	1.5
China	5.4	2.6	2.6	3.3	3.5
Asia (exc. China)	4.5	3.4	3.1	3.7	3.6
World	5.1	4.1	3.8	4.1	4.0

* Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela.
** Brazil, China, India, Indonesia, Korea, Mexico, Russia, Taiwan, Turkey.
Forecast closing date: February 7, 2014.
Source: BBVA Research

Table 4.3
Macroeconomic Forecasts: Current Account (% GDP)

	2011	2012	2013	2014	2015
United States	-3.0	-2.7	-2.5	-2.5	-2.1
Eurozone	0.1	1.2	2.1	2.1	2.0
Germany	5.7	7.0	7.0	6.1	6.5
France	-2.0	-2.3	-1.7	-1.8	-1.7
Italy	-3.1	-0.7	0.7	1.0	0.8
Spain	-3.8	-1.1	0.9	1.6	1.7
UK	-1.6	-4.6	-3.6	-2.8	-2.3
Latin America *	-0.9	-1.5	-2.2	-2.1	-2.0
Mexico	-0.9	-1.0	-1.3	-1.5	-1.6
Brazil	-2.1	-2.4	-3.6	-3.4	-3.2
EAGLES **	0.5	0.2	0.3	0.4	0.6
Turkey	-9.9	-6.9	-7.4	-5.8	-6.3
Asia Pacific	1.5	0.9	1.2	1.4	1.7
Japan	2.0	1.0	1.2	1.5	2.0
China	1.9	2.3	2.3	2.5	3.0
Asia (exc. China)	1.3	0.0	0.5	0.6	0.8

* Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela.
** Brazil, China, India, Indonesia, Korea, Mexico, Russia, Taiwan, Turkey.
Forecast closing date: February 7, 2014.
Source: BBVA Research

Table 4.4
Macroeconomic Forecasts: Government Deficit (% GDP)

	2011	2012	2013	2014	2015
United States	-8.7	-6.8	-4.2	-3.4	-2.2
EMU	-4.1	-3.7	-2.8	-2.4	-2.1
Germany	-0.8	0.2	0.1	0.2	0.3
France	-5.3	-4.8	-4.1	-3.6	-2.9
Italy	-3.8	-2.8	-3.3	-2.5	-1.9
Spain *	-9.1	-6.8	-7.0	-5.8	-5.1
UK **	-7.8	-6.3	-5.7	-5.8	-4.5
Latin America ***	-2.3	-2.5	-2.7	-3.8	-2.9
Mexico	-2.7	-3.2	-2.9	-4.1	-3.6
Brasil	-2.6	-2.5	-3.2	-3.9	-3.2
EAGLES ****	-1.9	-2.3	-2.2	-2.4	-2.3
Turkey	-1.4	-2.1	-1.2	-2.2	-1.6
Asia Pacific	-3.7	-3.7	-3.7	-3.4	-3.2
Japan	-10.0	-9.5	-10.0	-8.5	-8.0
China	-1.1	-2.1	-1.9	-2.5	-2.5
Asia (exc. China)	-5.4	-4.8	-4.8	-4.0	-3.7

* Excluding aid to financial sector.
** Fiscal year from 1 April to 31 March.
*** Argentina, Brazil, Chile, Colombia, Mexico, Peru, Venezuela.
**** Brazil, China, India, Indonesia, Korea, Mexico, Russia, Taiwan, Turkey.
Forecast closing date: February 7, 2014.
Source: BBVA Research

Table 4.5
Macroeconomic Forecasts: 10-year Interest Rates (Avg.)

	2011	2012	2013	2014	2015
United States	2.8	1.8	2.3	3.2	3.7
Eurozone	2.6	1.6	1.6	2.0	2.5

Forecast closing date: February 7, 2014.
Source: BBVA Research

Table 4.6
Macroeconomic Forecasts: Exchange Rates (Avg.)

US Dollar per national currency	2011	2012	2013	2014	2015
United States (EUR per USD)	0.72	0.78	0.75	0.77	0.75
Eurozone	1.39	1.29	1.33	1.30	1.33
UK	1.60	1.59	1.56	1.57	1.62
Japan (JPY per USD)	79.70	79.81	97.56	109.98	117.08
China (RMB per USD)	6.46	6.31	6.20	5.97	5.85

Forecast closing date: February 7, 2014.
Source: BBVA Research

Table 4.7
Macroeconomic Forecasts: Official Interest Rates (End period)

	2011	2012	2013	2014	2015
United States	0.25	0.25	0.25	0.25	0.50
Eurozone	1.00	0.75	0.25	0.25	0.50
China	6.56	5.75	6.00	6.00	6.50

Forecast closing date: February 7, 2014.
Source: BBVA Research

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