

# Spain Watch

Economic Research Department

November 2009



Global recovery underway, but still with a high level of uncertainty

The adjustments underway in the Spanish economy condition the rate of recovery

In the medium term, potential growth will adjust but will continue to be above Europe's

Fiscal consolidation: necessary with different considerations in the short and long term



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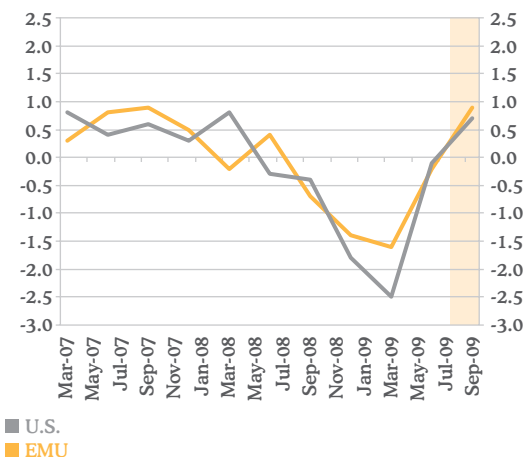
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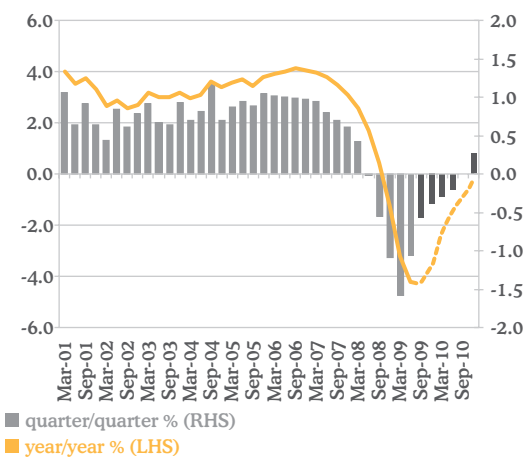
## U.S. and EMU: GDP growth

(quarterly % change)



Source: BBVA ERD

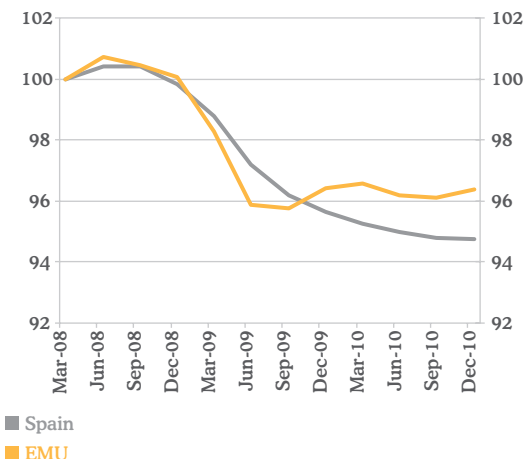
## Spain: GDP growth



Source: INE and BBVA ERD

## Spain and the EMU: GDP

(1Q08=100)



Source: BBVA ERD based on INE and Eurostat

# 1. Summary

**Global economic perspectives are improving, but there are continuing latent risks of a downturn in the short term, above all in advanced economies**

Since the publication of the last SpainWatch in March, the world economy has shown a significant improvement. The feeling of freefall into which most economies had entered since the end of 2008 has been replaced by a situation of relative stability and, in some cases, even moderate growth. The change in the trend since then is basically the result of the exceptional public stimulus measures adopted by most economies, on both the monetary and fiscal fronts. Nevertheless, the fundamentals of the world economy continue to be fragile and the risks of a downturn are fully present in the short term. The main risk for the global recovery is a premature withdrawal of the stimulus packages, above all in the most advanced economies, and uncertainty over whether private-sector spending can replace public spending as the main driving force of recovery once the stimulus packages are withdrawn.

The recovery in the world economy is uneven. In general terms, emerging economies are on a more solid path to recovery than developed ones. Meanwhile, the U.S. economy appears to be in better shape than Europe in terms of emerging from the crisis quicker. This is, first, because the fiscal boost in the U.S. is relatively greater than in Europe and will have a more significant impact on growth over the coming years. Second, because the greater rigidity of the labor market will make restructuring more difficult in Europe. Finally, because there are still unresolved problems in significant segments of the European financial system. All these reasons, combined with the relatively stronger resolve of the American authorities to overcome these problems, will favor the U.S. economy.

**In 2009, Spain and the EMU will experience similar levels of economic decline**

The contraction of economic activity in Spain has moderated significantly, as it has in other economies. In 2009 as a whole, Spanish GDP will decline by 3.8%, a similar figure to that in the EMU. Despite the elements that act as a drag on Spanish growth compared with the rest of Europe (particularly the processes of deleveraging and adjustment in the real estate industry), the fact is that the Spanish economy has been able to prevent the decline from being greater than that in the rest of Europe. This is basically for two reasons. First, the Spanish economy has made a more incisive use of a countercyclical fiscal policies. Second, the external sector has played a key role in moderating the degree of GDP decline. The positive net export performance has made a notable contribution towards compensating some of the decline in domestic demand.

**The adjustments underway in the Spanish economy condition the recovery**

Despite the levelling off in economic contraction, there are few elements to suggest that 2010 may see the start of a period of sound recovery. There are various reasons for this. First, the deleveraging process in the private sector and the reduction in the Spanish economy's financing needs have continued to speed up throughout 2009 and will continue into 2010. The process has been notably headed by households, as reflected by the intense adjustment in the saving rate and the corresponding fall in consumption. The reduction in financial and real estate wealth, greater uncertainty in the labor market, prospects for

lower future growth in income and expectations of fiscal consolidation starting in 2010 and continuing over the following years, are all factors that will maintain the rate of savings in 2010 at very high levels and prevent a sound recovery in consumption in the short term.

The second factor that conditions growth perspectives is the process of resizing of the real estate industry, which will continue into 2010. Activity in the sector is limited by excess supply, which may only begin to fall off at the start of 2010. Nonetheless, an improvement on house affordability as a result of historically low interest rates and probable falls in home prices may boost demand in 2010 and shorten somewhat the process of adjustment still pending.

The third factor is that the recovery is held back by the high level of structural unemployment in the labor market. The destruction of employment will probably bottom out gradually over 2010, but the recovery in activity at the end of next year will be insufficient to promote sustained job creation. Despite the fall in employment over 2010, there will be a moderate margin for recovery in the unemployment rate due to a new aspect of the labor market: the fall in the active population. In these circumstances, the unemployment rate will increase much more slowly than in recent quarters to just over 20% of the active population. Together with historically low levels of capacity utilization, this suggests that inflation rates will be low (0.9%) in 2010.

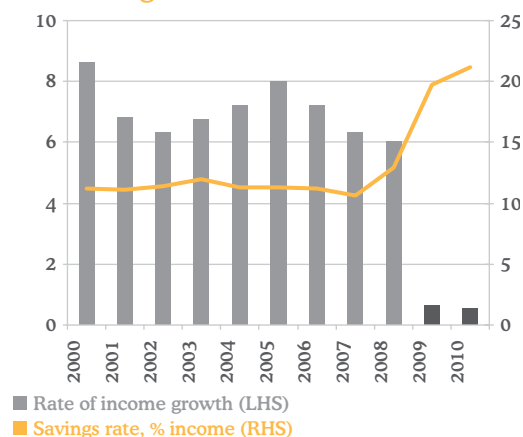
Finally, 2010 will see the start of an adjustment process in the public accounts, after the intensive use they were put in 2008 and 2009. The Spanish public debt forecast for 2009 (54% of GDP) is notably below the figure for the EMU (about 80%, which unlike the case of Spain has been affected by a substantial package of state aid for banks equivalent to 5.7% of GDP). Against this background the government has announced a major commitment to budget stability in order to achieve a deficit of 3% of GDP 2012. The only other similarly ambitious multi-year commitments have so far come from Germany and Holland. Undoubtedly, the long-term benefits of a fiscal consolidation process greatly exceed the short-term effects on economic growth in terms of contraction. However, particular attention should be paid to its composition (in terms of income and expenditure) and schedule for implementation, to ensure it does not have a negative effect on the recovery forecast for the end of 2010.

### From short-term to long-term policies: the need to speed up reforms that boost growth

Although there are still risks, it can be said that the economic stabilization policies have been fairly successful in their aim of smoothing over the cycle and reducing the degree of contraction in the economy. In any event, it should be pointed out that there are still uncertainties, some related to the adjustment process faced by the Spanish financial system. The Fund for Orderly Bank Restructuring (FROB) includes well designed strategies to facilitate the adjustment. These should be implemented rapidly, so that they can provide an incentive for an orderly adjustment of excess capacity in the sector and generate strong entities that can channel the resources available to the Spanish economy more efficiently.

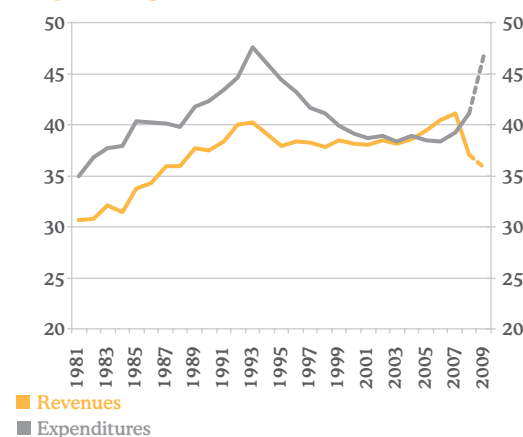
In the future, once the crisis is overcome, the economy's potential growth rate (2%) is still expected to be greater than that of the EMU (1.4%). However, it is possible to improve these potential growth prospects if the rate of implementation of the structural reforms underway (the Services Directive) is speeded up or a decision is made to adopt those reforms that form part of a broad consensus between national and international experts and institutions (the labor market). The speed at which the Spanish economy emerges from the crisis once the recovery starts will crucially depend on the priority assigned to these reforms.

### Households: gross disposable income and saving rate



Source: INE and BBVA ERD

### Non-financial public sector income and expenditure (as percentage of GDP)



Source: BBVA ERD, based on Finance Ministry, National Institute of Statistics and Institute for Fiscal Studies

Chart 2.1.  
U.S. and EMU: GDP growth  
(quarterly % change)



Chart 2.2.  
Fiscal stimulus packages: relative size  
(% of GDP)

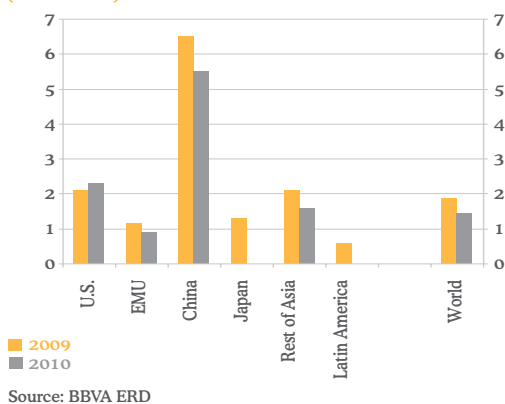


Chart 2.3.  
Central banks: total assets  
(% of GDP)

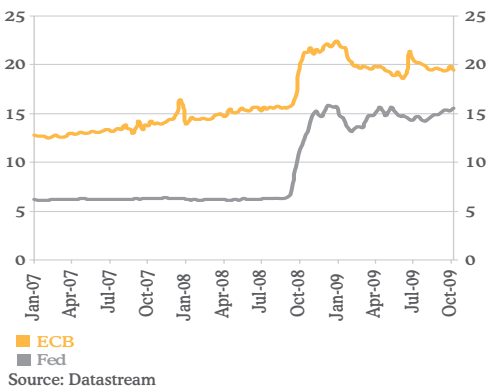
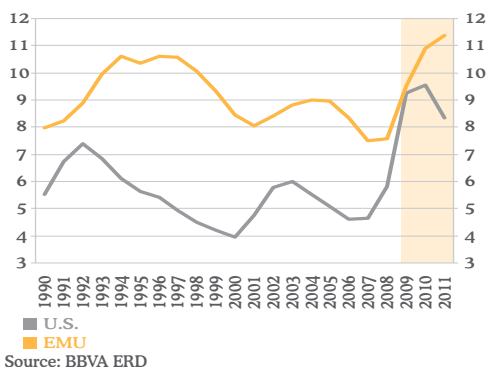


Chart 2.4.  
U.S. and EMU: unemployment rate  
(% working age population)



## 2. The global economy stabilizes, but risks remain

### Global economic prospects improve...

Since the publication of the last SpainWatch in March, the global economy has improved. The feeling of freefall into which most economies had entered since the end of 2008 has been replaced by a situation of relative stability and, in some cases, even moderate growth.

The change in the trend since then is basically the result of the exceptional public stimulus measures adopted by most economies, on both the monetary and fiscal and budget fronts. On the fiscal side there have been reductions in the intervention rates, massive injections of liquidity and unconventional operations with assets, whose implementation has led to a partial reestablishment of liquidity and credit. In terms of the budget, there have been ambitious public stimulus packages, which have provided a boost for certain specific sectors (automobile), and in general terms, temporary support for the income and spending of private agents.

### ... although short-term risks remain, particularly in advanced economies

Nevertheless, the fundamentals of the world economy continue to be fragile and there are real risks of a downturn in the short term. The main risk faced by the global recovery is the premature withdrawal of stimulus packages, above all in the most advanced economies, and uncertainty over whether private spending can replace public spending as the main vector of recovery once these stimulus packages are withdrawn. This is because, unlike what has happened in emerging economies, in some developed countries the growth pattern during the expansive phase was characterized by a strong boost for domestic demand, based mainly on excessive use of debt by private agents, which will not have the same leading role in the new phase of the cycle. The labor market figures will also not contribute to a swift emergence from the crisis, since the rate of destruction of employment continues to be very high in many economies.

For all these reasons, the biggest challenge for the political economy continues to be the decision on the right moment to withdraw public support programs. Thus the premature and uncoordinated withdrawal of stimuli, particularly monetary stimuli, could partially reactivate the circle of economic contraction that had already been observed at the end of 2008.

In Europe, the European Central Bank (ECB) refinancing rate is currently at 1% and will remain at these levels for an extended period of time, probably until well into 2011. This is partly because unused capacity in the economy of the euro zone is at very high levels, thus reducing inflationary pressures to a minimum. In addition, the high current euro exchange rate puts downward pressure on prices and exports, and also limits the margin for early rises in interest rates. Nevertheless, it is worth remembering that if the stimuli remain in

place over time they could have harmful effects on growth. First, they distort the incentives of agents to adopt measures that otherwise will probably be postponed; and second, they will seriously debilitate the public accounts of many economies, whose deficit and public debt levels could become difficult to sustain. For all these reasons, the monetary and fiscal authorities should take into account the current risk balance, given that a move in the opposite direction could seriously damage recovery. It therefore appears probable that central banks will gradually try out possible alternatives to bring their liquidity policies back to normal when the time comes. In this situation, it will be particularly important for communication by the monetary authorities to separate clearly the design of the strategies for emerging from the crisis and the period of their application, which should be postponed until the economy has returned to sound growth based on more robust measures.

Overall, the progress made in the financial markets has been substantial in recent months. Tensions have been reducing steadily from the highs after the collapse of Lehman Brothers. Nevertheless, the current situation is far from fully satisfactory, as the levels of tension in the markets remain a long way from their pre-crisis levels. The biggest progress so far has been in the interbank markets. Thus the three-month OIS spreads in the U.S. and the EMU are currently at the lowest levels for more than a year and a half. However, these markets continue to be extremely dependent on massive injections of liquidity by central banks, so a premature withdrawal of monetary stimuli could lead to part of the improvement being reversed.

The reduction in risk premiums has been extraordinarily swift over recent months. U.S. bank CDS<sup>1</sup> reached their minimum levels since the start of the crisis, and European CDS were at their lowest level for nearly a year. However, the downward correction has stabilized since the start of the summer. Caution appears to have taken hold in most markets (including the equity markets, where there has been relatively modest growth since July), in a context in which it is still difficult to gauge the extent to which economic recovery at a global level is sound and sustainable and risk aversion is at all-time high levels.

### Emerging economies have taken over as the new driving force of global growth...

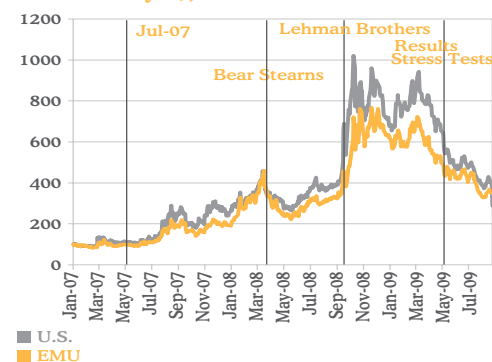
However, economic recovery is uneven. In general terms, emerging economies are on a more solid path to recovery than developed ones. This can be explained by a number of factors that set these economies apart and have allowed most of them (with the exception of many Emerging Europe countries) to handle better the increased expense of the financial markets and the contraction in activity and employment. Specifically, these factors include: their lower exposure to the financial crisis, above all in its initial stage; the success of the fiscal and monetary stimulus packages implemented after the start of the crisis; the growth in commodity prices in recent months; the modest recovery in world trade after its collapse at the end of 2008;

<sup>1</sup> Credit Default Swap, or a agreement to cover the risk of default on a financial asset.

Chart 2.5.

### Financial tensions indicator

100=January 07)



Source: BBVA ERD

The first standardized principal component of the OIS spread series, implicit U.S. stock market volatility, bank and corporate CDS

Chart 2.6.

### Interbank markets: 3-month OIS spread

(3M LIBOR – 3M OIS)

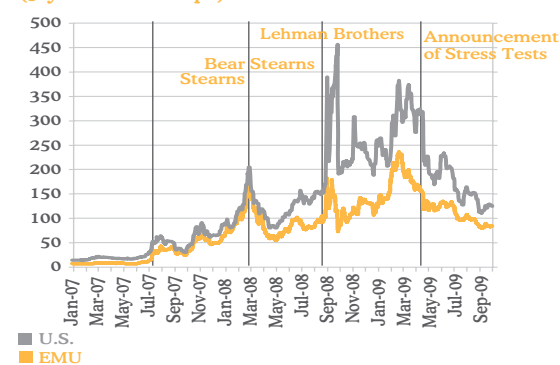


Source: Bloomberg

Chart 2.7.

### Banks: risk premium

(5-year CDS in bps)

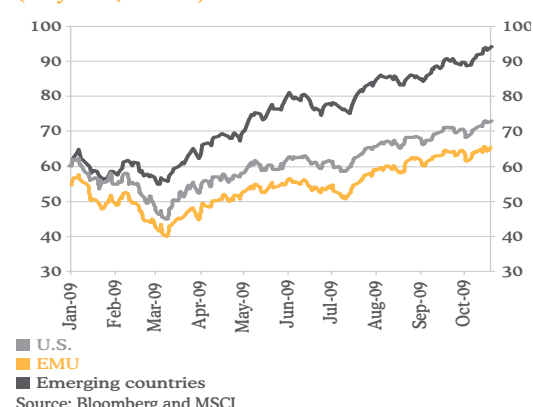


Source: Bloomberg

Chart 2.8.

### Equity markets

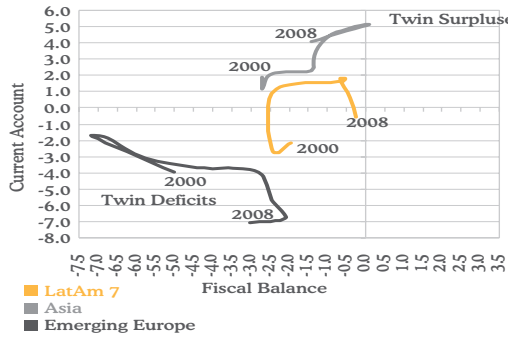
(July 2007 = 100)



Source: Bloomberg and MSCI

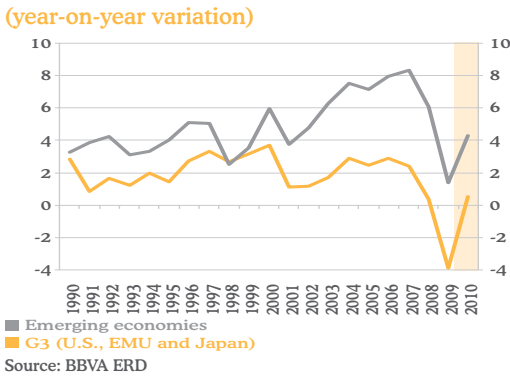


**Chart 2.9.**  
**Current account and fiscal result**  
**2000-2008 (% of GDP)**

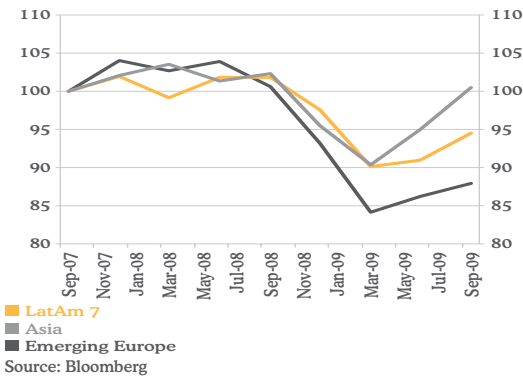


Source: WEO, IIF, BBVA LatAm 7: Argentina, Brazil, Chile, Colombia, Peru, Mexico and Venezuela. Emerging Europe: Poland, Hungary, Czech Republic, Slovakia, Estonia, Latvia, Lithuania, Bulgaria, Romania, Turkey and the Ukraine. Asia: China, Hong Kong, India, Indonesia, Korea, the Philippines, Singapore, Taiwan and Thailand.

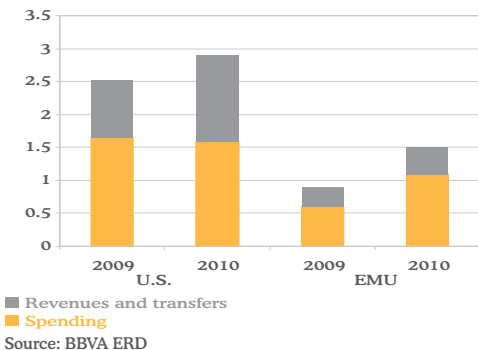
**Chart 2.10.**  
**Emerging economies and G3:**  
**GDP**  
**(year-on-year variation)**



**Chart 2.11.**  
**Industrial output**  
**(index, 2007:3= 100)**



**Chart 2.12.**  
**U.S. and EMU: contribution of the fiscal stimulus packages to GDP growth (pp)**



and, perhaps most important for stable long-term growth, the earlier efforts made in many of the countries to promote and practice a policy of macroeconomic stability and accelerated development. For all these reasons, it is expected that from now on the gap between growth in the emerging economies and the most developed countries will increase in favor of the former.

Meanwhile, the U.S. economy appears to be in better shape than Europe in terms of emerging from the crisis quicker. In particular, the fiscal stimulus in the U.S. will be relatively greater than in Europe and will have a more significant impact on growth over the coming years. In 2010 it is forecast to reach 3 percentage points (pp) compared with 1.5 pp in Europe. In all, the most probable scenario for the U.S. economy is of moderate growth in the future, as there is no certainty that once the public stimulus ends the private sector will return to sustained growth; and because there are still risks of a renewed downturn, questions such as unemployment and the public accounts remain an obvious concern.

In Europe, the fiscal stimulus will be comparatively lower in 2010, and vary among the different countries. The recovery in activity will also be delayed by greater rigidity in the European labor market (which means longer-lasting impacts on employment), by the restructuring of the banking system in all the economies (requiring substantial state aid), and by a lower growth potential than the U.S.

The signs of recovery in activity are already clear in emerging countries, although the growth pattern still presents some notable variation. China, for example, returned to high growth rates in the last quarter (7.9% year-on-year), partly as a result of a rapid increase in credit and other stimulus measures. Most economies within Latin America also showed signs of positive growth in the third quarter. But these positive trends will have to strengthen in 2010 if the recovery is to become consolidated. The situation of emerging European economies presents more risks. Here there are cases of countries extremely affected by the crisis and its impact on the mortgage sector adopting heterodox financial policies.

**... but the challenge posed by global current imbalances and fiscal consolidation remains to be solved**

In general terms, the maintenance of a sustainable growth pattern in the long term will to a large extent depend on a return to an equilibrium of forces at a global level. This will change the current pattern of savings and investment in advanced and emerging economies that has led to major macroeconomic imbalances at a world level.

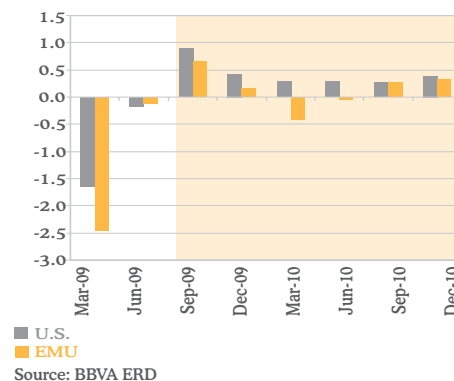
This would necessarily imply more consumption in those economies with current account surpluses (mainly Asian). Their growth in recent years has been based partly on a model directed by a depreciated exchange rate, which stimulates exports and the accumulation of foreign currency for precautionary reasons; and partly on a high rate of savings, which reduces domestic demand. Given the difficulty for consumption in advanced economies to once more become the driving force of global growth, and the need for the U.S. to readjust its growth towards greater savings as a proportion of GDP, the rebalancing of



global demand will have to aim almost entirely at more balanced growth in the world economy in the long term. This represents a number of challenges for different economies. Among them is to avoid the sudden mismatch of currencies in a context of high exchange-rate volatility.

At the same time, in the medium term credible fiscal consolidation plans will have to be set up to prevent public spending from easing out private demand. Once more, the design of these plans does not necessarily have to coincide with the time of their application.

**Graph 2.13.**  
**U.S. and EMU: GDP growth**  
 (quarterly change)



**Chart 2.14.**  
**G3 and emerging countries:**  
 variations in demand\*

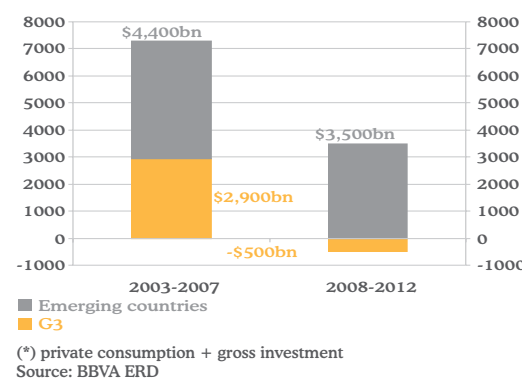


Chart 3.1.  
Spain: GDP growth

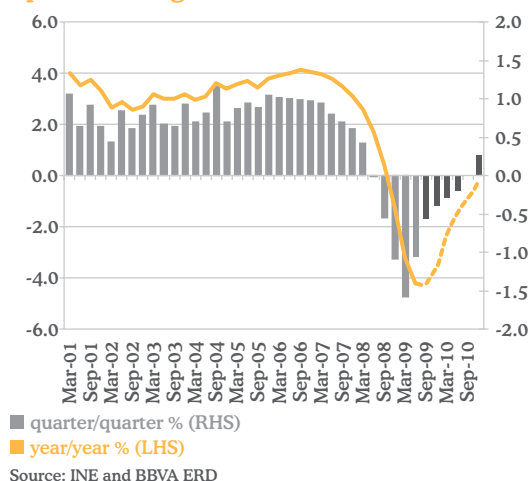


Chart 3.2.  
Developed countries:  
GDP growth in 2Q09

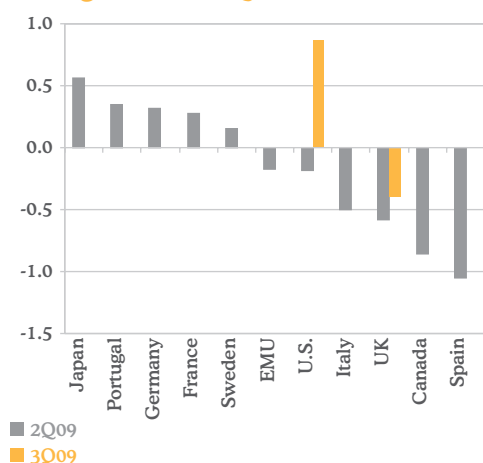


Table 2.1. Spain: macroeconomic scenario

(% year-on-year growth)	1Q09	2Q09	3Q09	4Q09	2006	2007	2008	2009	2010
Private consumption	-5.1	-5.9	-5.7	-5.0	3.8	3.6	-0.6	-5.4	-1.7
Public sector consumption	6.4	5.1	3.3	1.7	4.6	5.5	5.5	4.1	1.1
GFCF	-15.2	-17.0	-15.8	-13.3	7.2	4.6	-4.4	-15.3	-7.5
Capital goods and other products	-20.0	-23.6	-22.5	-20.0	8.9	6.8	-2.7	-21.5	-10.6
Construction	-11.5	-12.0	-10.7	-8.4	6.0	3.2	-5.5	-10.6	-5.2
Housing	-24.3	-25.5	-23.9	-20.8	6.2	3.0	-10.3	-23.6	-10.8
Non-residential	1.7	1.2	1.5	2.5	5.8	3.3	-0.4	1.7	0.2
Inventory changes (*)	0.1	-0.1	0.0	0.0	0.4	-0.07	0.1	0.0	0.0
<b>Domestic demand (*)</b>	<b>-6.1</b>	<b>-7.3</b>	<b>-7.2</b>	<b>-6.4</b>	<b>5.5</b>	<b>4.4</b>	<b>-0.5</b>	<b>-6.8</b>	<b>-2.9</b>
Exports	-17.6	-15.7	-13.2	-9.2	6.7	6.6	-1.0	-13.9	0.5
Imports	-22.9	-22.3	-20.0	-16.2	10.2	8.0	-4.9	-20.4	-4.9
<b>External balance (*)</b>	<b>2.9</b>	<b>3.1</b>	<b>3.0</b>	<b>2.8</b>	<b>-1.4</b>	<b>-0.9</b>	<b>1.4</b>	<b>3.0</b>	<b>1.7</b>
<b>GDP (% y/y)</b>	<b>-3.2</b>	<b>-4.2</b>	<b>-4.2</b>	<b>-3.6</b>	<b>4.0</b>	<b>3.6</b>	<b>0.9</b>	<b>-3.8</b>	<b>-1.2</b>
<b>GDP (% q/q)</b>	<b>-1.6</b>	<b>-1.1</b>	<b>-0.6</b>	<b>-0.4</b>					
<b>Memo item</b>									
GDP excluding investment in housing	-1.3	-2.3	-2.5	-2.0	3.8	3.6	2.0	-2.1	-0.4
GDP excluding construction	-1.6	-2.7	-2.9	-2.6	3.6	3.7	2.3	-2.4	-0.4
Total employment (LFS)	-6.4	-7.2	-7.3	-6.6	4.1	3.1	-0.5	-6.9	-3.5
Unemployment rate (% active populat.)	17.4	17.9	17.9	19.0	8.5	8.3	11.3	18.1	20.1
Total employment (f.t.e.)	-6.3	-7.1	-7.0	-6.3	3.3	2.8	-0.6	-6.7	-3.3

(\*) contribution to growth  
Source: INE and BBVA forecasts

### 3. The adjustments underway in the Spanish economy condition the rate of recovery

As in other economies, the rate of contraction is moderating in Spain ...

Throughout the second and third quarter of the year, the Spanish economy has shown a pattern of slowing deterioration in its economic activity. The figures showing a major decline in GDP and employment at the start of 2009 have been overcome. In the second quarter of the year GDP declined by 1.1%, compared with -1.6% between January and March, while employment fell 1.2% from -3.1% in the first quarter (seasonally adjusted full-time equivalent employment). Thus the Spanish economy moved towards less negative rates, in line with the other economies in the area. However, the reduction in the rate of decline in Spain has been less steep compared with the more vigorous rate in other European countries, some of which have even posted positive GDP growth. This is despite the positive effect on the Spanish economy of the State Fund for Local Investment (FEIL) and the positive contribution of net exports, which in Spain made a notable contribution by compensating part of the fall in domestic demand.

Pending official data, the Spanish economy appears to have continued this trend of reduced deterioration in the third quarter of the year. The partial indicators overall show a continued improvement on those observed in the second quarter. As a result, we can forecast that the decline of the GDP will not be as sharp as that registered between April and June. Despite the above, two points have to be made: first, that not all the segments of the economy present a similar pattern of behavior, as some are stronger in their recovery; second, the rate of gradual improvement in the indicators, which has been observed since the spring, appears in general to have slowed according to the most recent data.

This feature is particularly characteristic of consumption. The indicators of consumer confidence have clearly improved, as the deterioration in the labor market has slowed, but this has not been accompanied to the same extent by a recovery in the indicators of household spending, except for those affected by the fiscal stimuli (as in the case of automobiles and the Plan 2000E). The chart opposite that includes retail sales shows how the third quarter of the year has not brought a substantial reduction in the rates of decline. This sluggish improvement in consumption so far contrasts with the intense positive income shocks on households throughout 2008 and 2009. They include a reduction in income tax (income tax rebate and the abolition of wealth tax), the reduction in financial burden (in line with the fall in interest rates) and reduced inflation (thus increasing purchasing power). This is evidence that consumption is extremely conditioned by two particularly strong factors: in the short term, precautionary savings resulting from the situation of high uncertainty; and a more medium-term trend, the process of deleveraging in the private sector (which we will analyze below).

Second, corporate investment will show a slightly less negative trend than in previous quarters, although it will still be conditioned by both uncertainty and the capacity of companies to finance new investment projects. Boosted by a somewhat more favorable international situation, industrial output of equipment goods is beginning to recover, while imports of capital goods have experienced a strong upturn in the summer and will show monthly growth (seasonally adjusted). In terms of investment in housing, over recent quarters demand has slowed its fall significantly as a result of improved accessibility, while the adjustment of supply is gathering pace. Nevertheless, investment in housing is highly limited due to the slump in demand and the excess housing on the market. The FEIL program has limited the fall in gross capital formation in non-residential construction.

Finally, the external sector is more dynamic than expected even a few months ago. The indicators are still incomplete, but from the information in trade balance, data on sales abroad by major companies and order books, we can conclude that in the third quarter Spanish exports have continued to perform well, as in the second quarter. There would therefore have been a return to quarterly growth after the intense falls at the start of the year.

The labor market is worth a special mention. Its has been impacted by progress in the FEIL program, so that following sharp increases in job destruction and unemployment at the start of the year, the rates have eased off up to the summer. The labor force survey for 3Q09 shows stabilization of what are still high rates of destruction of jobs (over 200,000 jobs), while registered unemployment maintains its rising trend. The gradual end to the works carried out under the FEIL program suggest that the figures for the rest of the year will worsen.

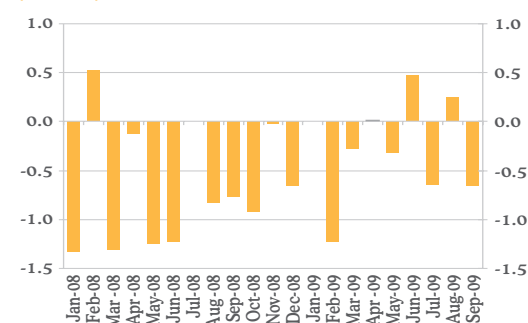
### .... and will continue to do so, but less sharply

In all, therefore, the signals are mixed. It appears clear that in aggregate terms there are signs of slowing contraction. However, models of indicators of activity such as the MICA-BBVA model lead us to conclude that the rate of improvement is slowing (see Box 1: A Model of Current Indicators of Activity: MICA-BBVA). Based on the

Chart 3.3.

### Spain: calendar and seasonally-adjusted retail sales

(% m/m)



Source: BBVA ERD, based on National Institute of Statistics

Chart 3.4.

### Spain: investment indicators

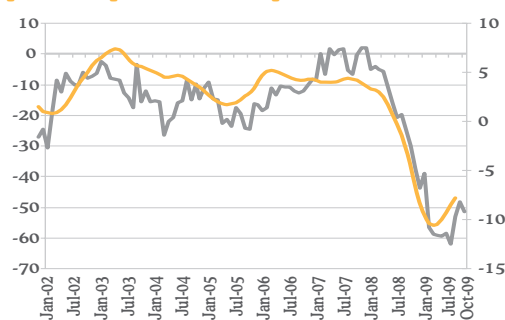
(monthly seasonally adjusted growth rate)



Source: BBVA ERD, based on National Institute of Statistics and Ministry of Industry

Chart 3.5.

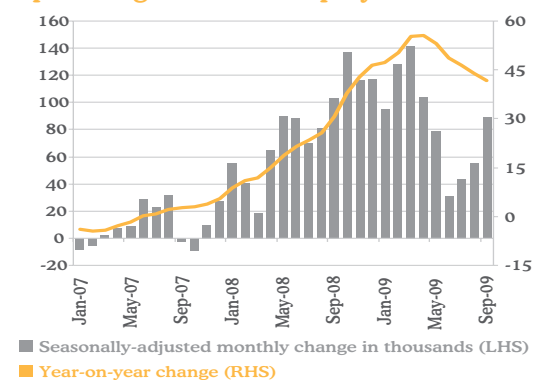
### Spain: exports and export order books



Source: BBVA ERD, based on Ministry of Industry and the European Commission

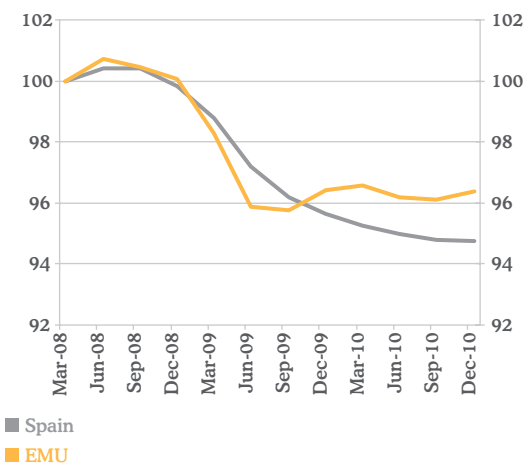
Chart 3.6.

### Spain: registered unemployment



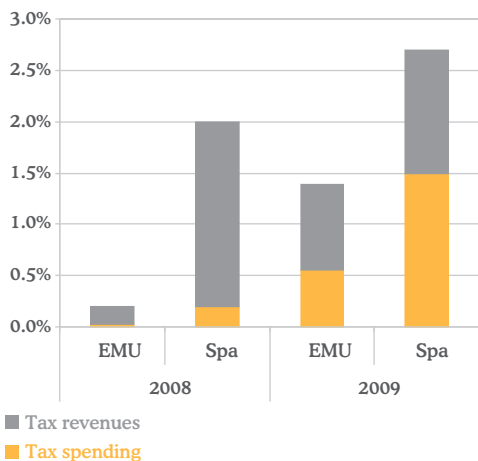
Source: BBVA ERD, using data from the National Employment Institute INEM.

Chart 3.7.  
Spain and EMU: GDP  
(1Q08=100)



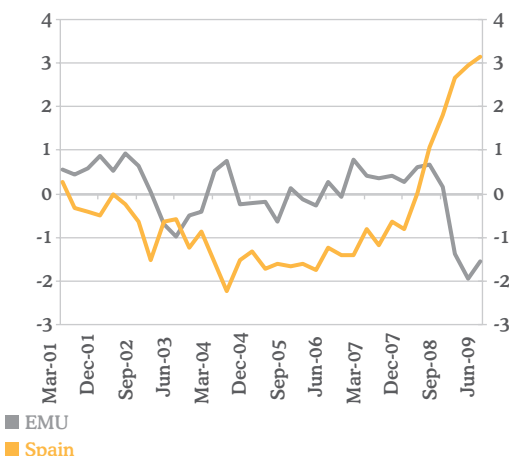
Source: BBVA ERD based on INE and Eurostat

Chart 3.8.  
Fiscal stimulus  
(% of GDP)



Source: BBVA ERD

Chart 3.9.  
Contribution of external sector to annual  
GDP growth  
(percentage points)



Source: BBVA ERD based on INE and Eurostat

figures available at the closing date of this report, we estimate that the Spanish economy will have fallen by a quarterly 0.6% in 3Q09,<sup>1</sup> from a figure of -1.1% in 2Q09. The contraction in GDP will continue to slow down in 4Q09, when we forecast a fall of 0.4%, so that for 2009 as a whole the GDP of the Spanish economy will contract by 3.8%.

**In 2009 the rate of economic decline in Spain and the EMU will be similar...**

The Spanish and European economies will thus register similar falls in GDP. It is true that in Europe the peak of contraction was greater, but Spain may be comparatively weaker in the second half of 2009, although in general, and as can be seen in the chart opposite, the rate at which Spain will emerge is not substantially different. Despite the elements that drag back Spanish growth compared with the rest of Europe (particularly the major process of deleveraging and adjustment in the real estate industry), the fact is that the Spanish economy has been able to restrict the most acute phase of the recession and prevent decline from being greater than that in the rest of Europe. This is basically for two reasons. First, the Spanish economy has made a more incisive use of a countercyclical fiscal policy. In fact, the process of fiscal consolidation in the previous expansion phase gave the Spanish economy a better starting point. Thus, the level of public debt as a proportion of GDP in Spain in 2008 was around 40%, 30 points under the EMU average for that year. As a result, as can be seen in the chart opposite, there was room for much greater effort in terms of expansive fiscal measures in 2008 and 2009 than in the EMU. In addition, the external sector has played an essential role in moderating the rate of GDP decline. As can be seen from the chart opposite, in general the external sector contracts the GDP in Spain to a greater extent than in Europe in expansive phases, but has a positive contribution in recessions. This recession is no exception, and the external sector has gradually increased its contribution to GDP growth, first as a result of the major fall in imports, and more recently by the surprisingly high level of exports.

**... but in Spain the contraction will continue into 2010**

There are few elements to suggest that the recession will not extend into 2010, and still fewer that it may turn into a period of sound recovery. Demand will continue weak throughout the year and only slight growth in GDP can be expected towards the end of 2010. In addition, progress towards recovery will depend on the capacity of the private sector to replace public stimuli. On average, GDP contraction in 2010 will be -1.2%.

There are various reasons for these forecasts. First, the moderate growth prospects for our main trading partners will lead to very low levels of export growth. However, it will be domestic demand that will determine the rate of GDP, as all its components will be negative, except for public consumption. The weak domestic demand in 2010

<sup>1</sup> The National Institute of Statistics will publish advance GDP data for 3Q09 on 12 November. The Bank of Spain has estimated a fall of 0.4% q/q, which is in line with our forecast, except in the component of household consumption.

is justified by a series of factors pending adjustment. First, the process of deleveraging in the private sector and the reduction of the Spanish economy's financing needs. Second, the process of resizing in the real-estate sector. Third, the inefficient labor market and high level of structural unemployment. Finally, the adjustment process in the public accounts that will begin in Spain in 2010, after the intensive countercyclical use they were put to in 2008 and 2009.<sup>2</sup>

Some of these adjustment factors have been dealt with in depth on other occasions.<sup>3</sup> The process of deterioration in public finances is analyzed in detail in the third section of this report, while the effects that the fiscal consolidation process in 2010 will have on activity are analyzed in Box 2, «Changes in Fiscal Policy and their Impact on the Spanish Economy». However, in recent months there has been an intense and evident process of deleveraging and reduction in financing needs. This has had an obvious effect on variables such as household consumption and corporate investment.

### The forced reduction in debt and financing needs obliges increased savings...

The process of reducing the financing needs of the Spanish economy and its debt level has continued to gather intensity throughout 2009. This process began at the start of 2008, when the financing needs increased to 10% GDP as an accumulated average. The data from 2Q09 reduce this accumulated annual figure to 7%. The leading players in the process have been households, as reflected in the major increase in the saving rate and corresponding falls in consumption. The saving rate of households in 2Q09 was 17.5% of available income, 7 points more than the figure in 1Q08. As a result, real household consumption has contracted to a similar extent. The expected fall in 3Q09 will be the seventh consecutive quarterly fall in consumption, despite significant fiscal and financial stimuli for household income in the last two years. The chart opposite compares the importance of this fall with the most similar adjustment, which occurred in 1992-1993.

Both the intensity of the reduction in consumption and the increase in the saving rate may be explained by the special circumstances accompanying the cyclical change. In fact, households took advantage of the expansive phase to increase their investment and consumption levels through recourse to leveraging - in other words, debt. At the start of 2008, the total financial liabilities of households amounted to 137% of their income (30 points more than in 2005), while their gross financial and real estate wealth amounted to 270% and 900% of their disposable income, respectively (170 points more as a whole than in 2004). Thus their net balance sheet position at that time was relatively comfortable, particularly if we take into account that household income grew above 5% per year.

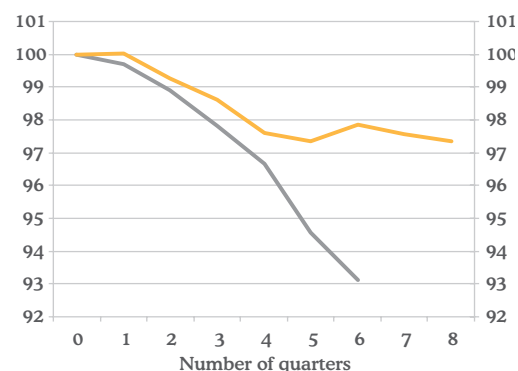
<sup>2</sup> As well as characterizing the different perspectives of the Spanish economy and the rest of the EMU, these factors will also determine that the adjustment process will differ among regions in Spain, where those most exposed by their debt level, or by the weight of the real estate industry in their economies, will take longest to generate a sustained recovery (see Box 4: Regional Differences in the Economic Crisis).

<sup>3</sup> For the details of our analysis and recommendations on the labor market, see SpainWatch, March 2009. For more details on the adjustment process in the real estate industry, see the latest issues of Real Estate Watch.

Chart 3.10.

### Spain: consumption

(quarter 0=100)



■ 2008 recession (0=Dec-07)

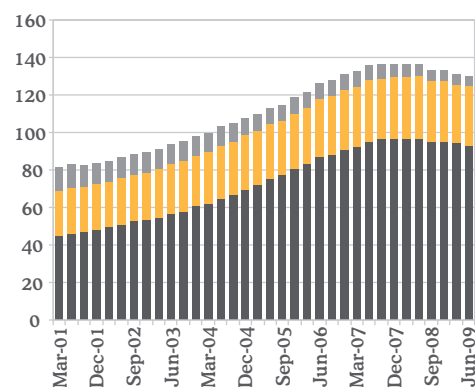
■ 1993 recession (0=Mar-92)

Source: BBVA ERD, based on National Institute of Statistics

Chart 3.11.

### Spain: household financial liabilities

(percentage of household disposable income, annual)



■ Other accounts pending payment

■ Other loans

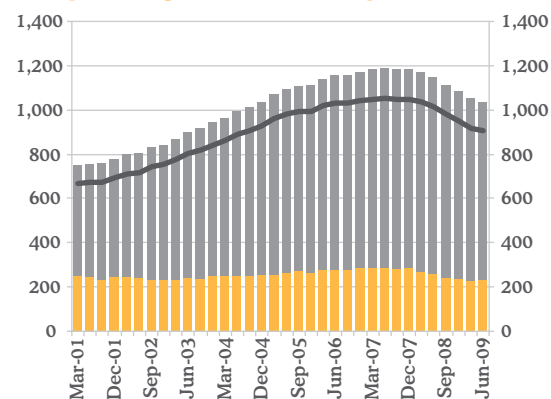
■ Housing loans

Source: BBVA ERD, based on Bank of Spain and National Institute of Statistics

Chart 3.12.

### Spain: gross and net household wealth

(as a percentage of household disposable income)



■ Gross real estate wealth

■ Gross financial assets

■ Wealth net of financial liabilities

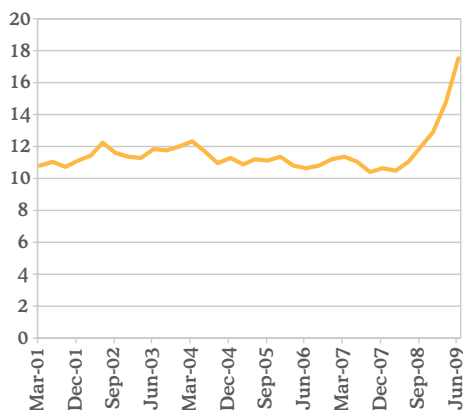
Source: BBVA ERD, based on Bank of Spain and National Institute of Statistics



Chart 3.13.

**Spain: household saving rate**

(% annual accumulated household disposable income)



Source: BBVA ERD, based on National Institute of Statistics

However, as can be seen in the charts opposite, since then households have seen this position deteriorate significantly. The slowdown in household credit has been moderate. In 2Q09 financial liabilities still represented 130.2% of gross disposable income (GDI), barely 7 points less than at the start of 2008. Together with the tougher financial conditions, this provoked a greater drain on income through interest payments, which increased from under 2% of household GDI in 2005 to 4% in 2008. With data from 2Q09 the figure is still at 3.3% of annual income, despite the intense correction in market interest rates in the last year and a half. On the other hand, the fall in wealth has been much more intense. Real estate, affected by the fall in housing prices, amounts to 805% of GDI, in other words it has fallen since the process began at the start of 2008 by a complete year's income. Financial wealth, affected among other factors by adverse financial markets, fell by a further 40 points of GDI to 2Q09, despite the upturn of 5 points between April and June resulting from the improvement in the stock market in the quarter. Thus, according to data from 2Q09, the household balance sheet is still weakening, and had already fallen from 1Q08 by 1.3 times annual household income.

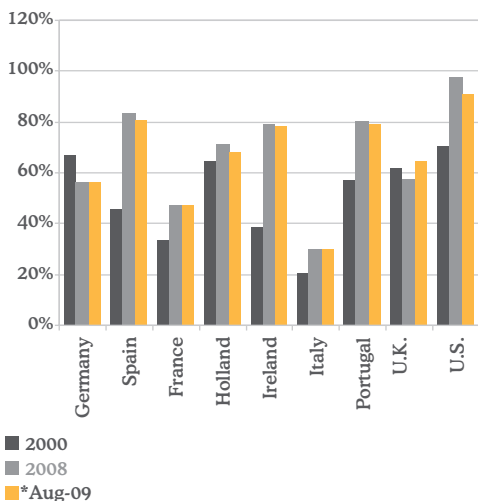
Given the intensity of the deterioration in their net wealth, resulting from the gradual moderation of financial liabilities and the intense fall in financial and real estate wealth, that *ceteris paribus*, is caused by the fall in housing and stock market prices, households have tried to halt their worsening balance sheets by increasing savings and reducing consumption. Thus, as we have mentioned before, households have increased their savings from 10.5% of income to 17.5% (accumulated average to 2Q09). Although it is not possible directly to determine how much the (slower) deterioration of net wealth may be the result of increased savings, it is true that in the same period deposits and cash have increased by 4 points of income.

Together with the deleveraging process, which conditions savings and consumption as a long-term or structural phenomenon, it is important to point out that savings may also have been boosted by a shorter-term phenomenon such as so-called precautionary savings. In fact, the virulence of the recession, and in particular its impact on employment, may have provoked a negative overreaction on consumption given the much more uncertain economic environment. Our forecasts for the coming quarters, particularly in terms of the labor market (as we have mentioned earlier), do not suggest that this factor may essentially reduce and contribute to significant improvements in consumption.

### ... and prevent recovery in consumption, which will once more contract in 2010

As the savings rate will probably close 2009 at around 20%, it may appear that part of this recomposition process has been completed and that from now on reduced savings will boost consumption. Although this is plausible, it is not the most probable scenario for two reasons. First, the level of household debt as a percentage of GDP is still close to 30 points above the average in the euro zone. This is

Chart 3.14.

**Household credit / GDP**Source: BBVA ERD  
\* Data as of June 2009



simply a reflection of the high rate of growth of household credit in the expansive phase, which has been far greater than in Europe as a whole. In addition, the negative inflation in 2009 and the low inflation forecast for 2010 (as mentioned above) demand a greater nominal adjustment if we are to return to an equilibrium in real terms. Second, any change in the value of the financial wealth is extremely limited because of the likely continued falls in housing prices and the uncertain future of equity markets, following significant stock market rises in spring and summer.

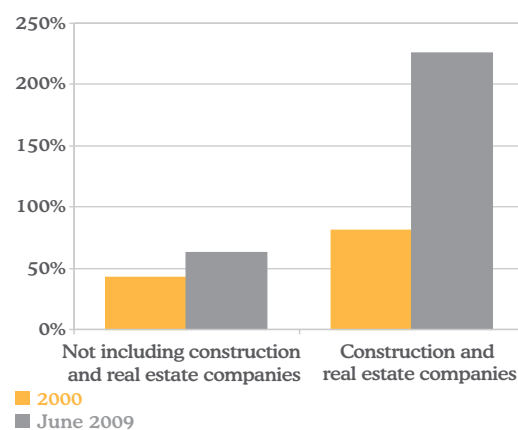
What is more, consumption will not be boosted by the rest of its fundamental factors. First, the growth perspectives for household income are not positive. In 2010 income will grow by a nominal 0.5% and its real growth will be zero, unlike in 2009, when expected real income will grow by nearly 2%. The slump in household income is partly caused by a virtual stagnation in wage income, derived both from the fall in employment (3.5%, as pointed out below) and the lower expected growth in wages, given the combination of high unemployment and low inflation at the close of 2009. In addition, the non-wage component in 2010 will no longer be additionally boosted by expansive fiscal measures as was the case in 2009 with the elimination of wealth tax and the 400 euro income tax rebate, which injected around 7 billion euros. On the contrary, the national budget eliminates this latter rebate and increases VAT (see Box 2: Changes in Fiscal Policy and their Impact on the Spanish Economy). As a result, the non-wage component will grow by under 1% compared with the 8% with which it will close 2009. In addition, as pointed out above, wealth will also not boost consumption to a significant extent. Finally, interest rates have little additional margin to stimulate consumption, as pointed out in the first section. The financial burden, which in 2009 allowed income of over 15 billion euros to be freed, will fall in 2010 by barely 1.1 billion.

To sum up, the deleveraging process, greater uncertainty in the labor market, expectations of lower growth in income (a perception that potential growth may have reduced) and expectations of fiscal consolidation starting in 2010 and continuing over the following years, are all factors that will maintain the rate of savings in 2010 at very high levels. For all these reasons, we forecast a sustained period of deleveraging until there is a return to more sustainable levels of debt and household balance sheets are at least partially restored. This would mean a savings rate in 2010 of around 21% of household GDI, and that real consumption will contract once more, this time by 1.7%, down from the -5.4% figure forecast for 2009.

In addition to greater household financial capacity, corporate financial capacity will increase as a result of falling investment. As can be seen in the chart opposite, the investment rate will gradually return to its levels before the expansive phase, at around 21% of GDP. Increased private savings will compensate the increased financing requirements of the public sector, so that for the economy as a whole the financing requirements will continue to fall steeply, and in terms of the current account deficit it may have fallen in barely two years by half, to 4% of GDP in 2010, with prospects a continued reduction in the coming years.

Chart 3.15.

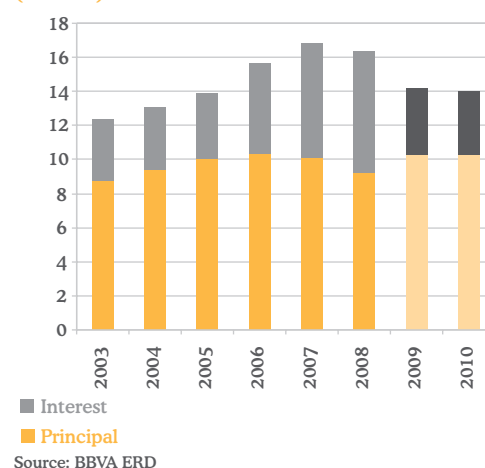
## Spain: corporate credit / GDP\*



\* Corresponding to the GVA of the sector  
Source: BBVA ERD

Chart 3.16.

## Spain: debt burden on households (% GDP)



Source: BBVA ERD

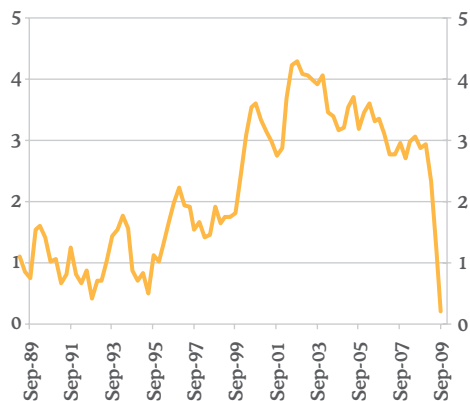
Chart 3.17.

## Spain: investment rate (% GDP)



Source: BBVA ERD, based on National Institute of Statistics

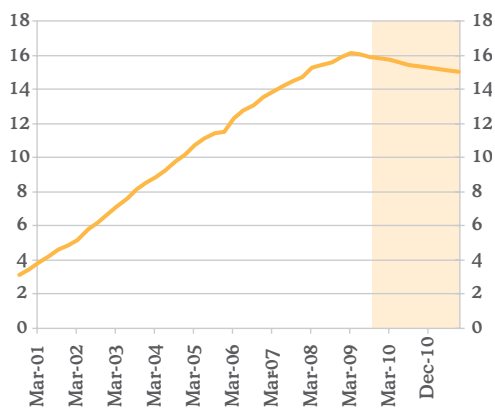
Chart 3.18.  
Spain: active population  
(Year-on-year growth rate)



■ Correction for change in definition of employee in 2001

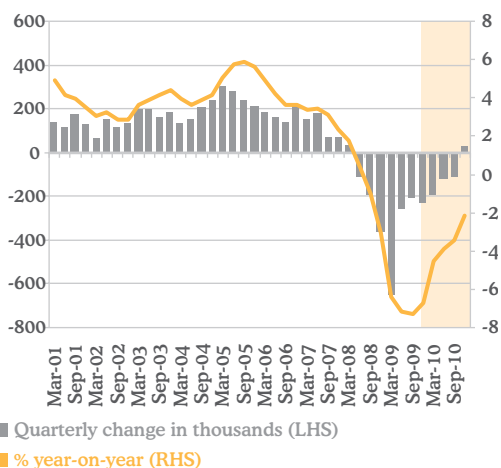
Source: BBVA ERD, based on Bank of Spain and National Institute of Statistics

Chart 3.19.  
Spain: participation of foreigners in the  
active population (%)



Source: BBVA ERD, based on National Institute of Statistics

Chart 3.20.  
Spain: seasonally-adjusted employment  
(LFS)



■ Quarterly change in thousands (LHS)

■ % year-on-year (RHS)

Source: BBVA ERD, based on National Institute of Statistics

## In the labor market, the fall in the active population leaves little margin for major upturns in the rate of unemployment

In line with the forecast fall in GDP, in 2010 employment measured by the Labor Force Survey may fall by 3.5%. In seasonally adjusted terms, the reduction in employment will gradually ease off over the year, and employment could be stagnant by the end of 2010. Despite this fall in employment, there is a moderate margin for an upturn in the unemployment rate, given our forecast of a major fall in the active population. In fact, the Spanish economy is now confronting a new feature of its labor market: the fall in the labor force. Although the international empirical debate continues, in general it is assumed that the active population is (moderately) procyclical. This means that in recessive periods growth in the unemployment rate is more limited, because of the lower rate at which workers are incorporated into the labor market. In the last decade in Spain there have been two positive shocks for the labor market: the phenomenon of immigration and the increasing incorporation of women. Both these phenomena are behind the fact that the active population maintained rates of growth that were more in line with the expansive phase until the start of 2009. They also led to the major upturn in the unemployment rate up to that time. However, as can be seen in the chart opposite, since then the rise in the active population has slowed significantly to a rate of 0.2% year-on-year in 3Q09, from 2.8% in the same period last year, with three consecutive quarterly falls.

In 2010 the change in the active population will depend on immigrant outflows from the labor market, as employment opportunities have fallen notably in Spain. A good example of this is that the unemployment rate among immigrants stood at nearly 28% throughout 2009, while in the expansive phase it reached a low of under 11%. The resident active population will fall gradually in 2010, while the foreign population will do so more sharply, so that at the end of 2010 the participation of immigrants in the total will be at the same levels as at the start of 2008. The expected fall in the active population of just over 1% will mean that the unemployment rate will barely reach 20% in 2010. Nevertheless, it should be pointed out that although the reduction in the labor force will restrict the upturn in unemployment in the short term as a result of falling employment, the lower levels of activity of the active population will negatively affect the economy's growth potential (see Box 3: Spain's Growth Potential: the Effects of the Crisis).

## The negative rates of inflation enable a recovery of some of the lost price competitiveness

Inflation in Spain has first slowed, then fallen slightly. Although some of the current negative inflation rate responds to a base effect of oil prices, weak demand has led to a major decline in inflation in its core components as well. Thus headline inflation reached its lowest level in July (at -1.4%) and since then has begun a gradual upturn, while core inflation continued to fall to a year-on-year rate of 0.1% according to the latest data. The forecasts suggest that total inflation in December will show positive growth figures, supported by the return of the base effect of energy prices, while the 2009 average will be -0.4%. Core inflation will remain stable at current levels.

The scenario is particularly favorable for a continued downward

pressure on prices in 2010. Thus extended weak demand in 2010 will lead to extremely negative output gap figures. The current historically low use of productive capacity, combined with high unemployment rates, which together with the low inflation rate at the close of 2009 will limit wage increases, are factors that suggest low inflation rates across the whole prediction horizon. This has to be added to the pressure that may result in 2010 from the recent appreciation in the euro. These elements will only be partly countered by the increase in VAT in the national budget for 2010 (applicable from July). In all, our average forecast for 2010 is a rate of 0.9% for headline inflation, and even a few decimal places below this for core inflation.

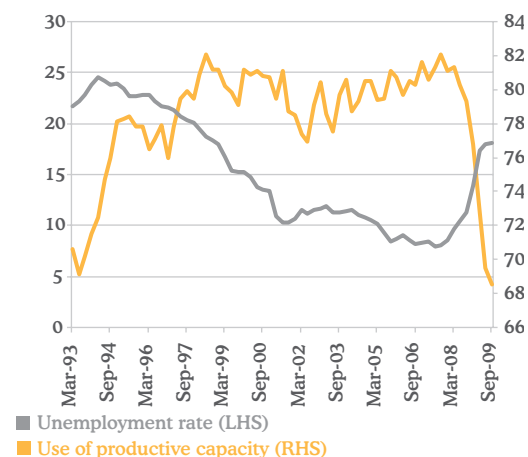
Thus, persistent deflation is not among the most probable scenarios. There are still no signs in the economy of the interaction between expectations of falling prices and postponement of spending decisions that is a feature of deflationary periods. On the contrary, the existence of negative inflation rates is helping to compensate part of the loss in price competitiveness accumulated in the expansive phase before the economic crisis. Throughout 2009 the headline inflation differential has been favorable to Spain by 0.6 percentage points on average (the historical average differential is unfavorable to Spain by nearly a point). What is even more important in terms of the recovery of price competitiveness is that the core inflation differential has increased throughout 2009 in favor of the Spanish economy, and on the latest available data stands at -0.9 percentage points (the historical average is +0.9 pp). Although negative inflation rates also involve harmful aspects (for example, as the real debt level increases), the fact is that they can contribute to improving the export figures by the drop in the real effective exchange rate. The maintenance of low inflation rates in the core component and of a negative price differential in the medium term will be an essential factor if the Spanish economy is to take advantage of the recovery in the world economy, and in particular the European economy, and find a new driving force for growth in the external sector.

### From short-term to long-term policies: the need to speed up reforms that boost growth

The most critical phase of the recession appears to be over. Although there are still risks, it can be said that the economic stabilization policies have been fairly successful in their aim of smoothing over the cycle and reducing the degree of contraction in the economy. However, the current situation and the most immediate perspectives are far from satisfactory. It is now time to implement structural policies. Until now, the agenda containing measures to recover the path of sustained job-creating growth is progressing slower than would be desirable. The biggest risk is thus that once the recession has ended (at some point in 2010), there will be a period of low growth and slow reduction in unemployment. According to our estimates, if there are no key structural reforms to the factor, goods and services markets, there will be a significant fall in the potential growth of the Spanish economy, which will limit the strength of subsequent recovery, although it will still be above the estimate for the euro zone (see the box below: Spain's Growth Potential: the Effects of the Crisis).

Chart 3.21.

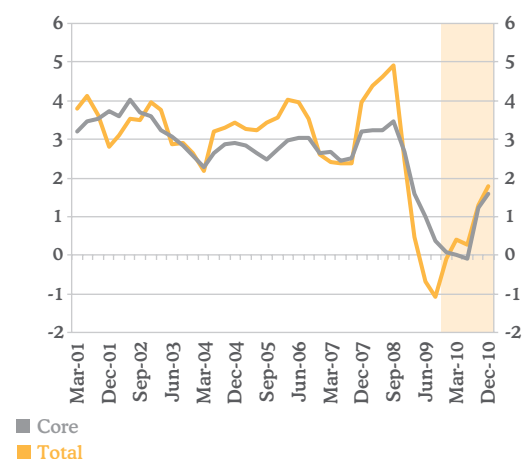
### Spain: unemployment rate and productive capacity



Source: National Institute of Statistics and Ministry of Industry

Chart 3.22.

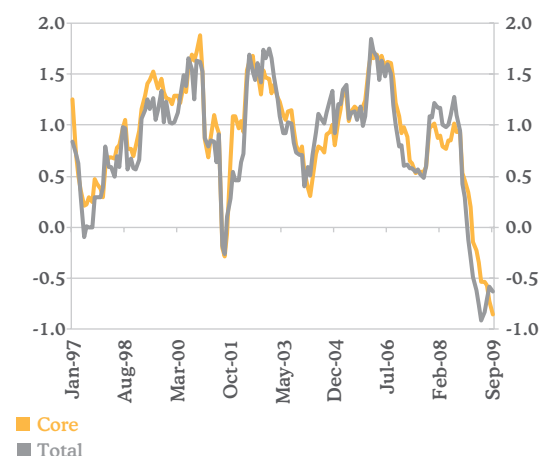
### Spain: quarterly inflation profile (year-on-year rate)



Source: INE and BBVA ERD

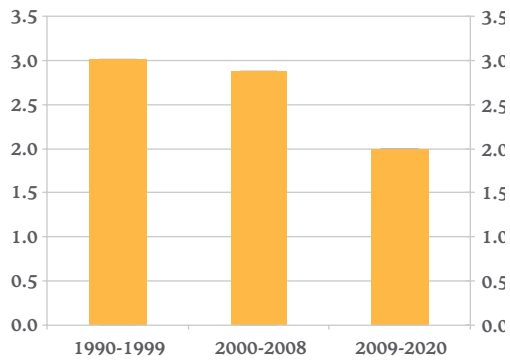
Chart 3.23.

### Spain-EMU inflation differential (year-on-year rate, percentage points)



Source: Eurostat

Chart 3.26.

**Spain: potential GDP growth**

Source: BBVA ERD, based on National Institute of Statistics

Until now, the foundations have been laid for the process of restructuring the financial system and the objectives for fiscal consolidation in the coming years have been proposed. However, the current crisis urgently requires the implementation of measures designed to tackle the two major challenges for the Spanish economy: a reduction in its external financing requirements through an increase in competitiveness and a reduction in the high unemployment rate, through reforms in the labor market to improve its deficient operation. Until now, public sector activity has been able to avoid dramatic damage to the economy in the short term. But reforms are needed to advance recovery, reduce the unemployment rate, increase long-term growth and, probably, help prevent a return of the kind of deep recession that we are experiencing now. This can be done by reducing the structural vulnerabilities of the Spanish economy.

## Box 1: A Model of Indicators of Current Economic Activity: MICA-BBVA<sup>1</sup>

Most industrialized economies, among them Spain, have faced an abrupt deterioration in economic activity over the last year. It is therefore even more necessary to place an emphasis on the short-term analysis of the economy. However, this work becomes difficult due to the delay with which macroeconomic data are made available. For example, at the closing date of this report (with the economy in the fourth quarter of 2009) only data for second quarter GDP growth were available, while the advance estimate of the third quarter will only be published on November 12th and the complete data will not be public until November 18th. At times of great uncertainty such as the present, in which precise and swift economic policy responses are required, the lack of availability of updated information involves a high cost in terms of analysis.

To cover this deficit, the BBVA Economic Research Department has used the methodology described by Camacho and Pérez Quirós (2009a) to build a new model by which we can construct a real time indicator of the economic activity in Spain.<sup>2</sup> The model uses the monthly information from some partial economic indicators to create short-term predictions of GDP growth. In particular, the predictions refer to the current quarter (nowcast), the following quarter (forecast) and the previous quarter (backcast), when the official estimate is still not available.

This model offers an advantage over others used traditionally, such as that proposed by Stock and Watson (1991), as it combines information from indicators with different frequencies that are published with different delays with respect to the period they refer to. It also presents two different features with respect to the proposal by Camacho and Pérez Quirós (2009b). The first is that in the GDP estimate, it uses financial indicators that anticipate the economic cycle, as well as indicators of real activity and confidence. This is a notable contribution, as not many applications with Spanish data combine both dimensions. The second feature is that this model uses GDP data from 1980, which allows the sample to include various recessionary periods.

### Methodological description

The dynamic factor model used is based on the idea that economic indicators are strongly correlated with each other and with the GDP. Thus the evolution of each of the indicators  $i$  for the period  $t$ ,  $z_t^i$  can be decomposed into the sum of its components. The first component,  $x_t$ , usually called the

«common factor», includes the combined dynamics of all the indicators and can be identified with the Spanish economic cycle. The second component,  $u_t^i$  known as the idiosyncratic component, includes the particular dynamics of indicator  $i$  during period  $t$ .

$$z_t^i = \beta_i x_t + u_t^i.$$

The movement of the common and idiosyncratic components is established by autoregressive models of order  $p$  and  $q$ .

$$x_t = \rho_1 x_{t-1} + \dots + \rho_p x_{t-p} + e_t,$$

$$u_t^i = d_1^i u_{t-1}^i + \dots + d_q^i u_{t-q}^i + \varepsilon_t^i.$$

In this case,  $e_t$  and  $\varepsilon_t^i$  are non-observable error terms that are assumed independent and not serially correlated.

Mariano and Murasawa (2003) propose that if we consider the quarterly series as the weighted sum of its monthly expressions, the above model could be represented in state-space form and estimated by maximum likelihood using the Kalman filter. These filters are ideal for dealing with the problem of lack of data. When an indicator is not available for a particular month, either because it is published every three months or because it is published late, it is inferred using the Kalman filter.

### Results

The indicators used include variables of consumption, labor market, confidence and financial indicators, and are described in Table 1 on the next page. If we apply the model described to data from the Spanish economy as known on October 15th, we can see, in Chart 1, that the estimate of the common factor is in concordance with the economic cycles established for the Spanish economy.

Thus during the initial period of estimation and until 1985, the indicator presents negative values, coinciding with a period in which the Spanish economy was characterized by reduced GDP growth and a considerable loss of jobs. In 1986, on the other hand, coinciding with the accession to the European Union, the Spanish economy underwent an expansion that the indicator reflects with positive values. At the same time, the year 1990 saw the start of a slowdown and loss of jobs that became a severe recession in 1993, with low growth until 1995. This is well illustrated by decreases in the value of the indicator. From 1995 the indicator showed positive values, coinciding with the extended period of expansion in the Spanish economy, up until 2007. Finally, coinciding with the international recession starting in 2008, the indicator presents the lowest values in the sample. However, it appears that, from the second quarter of 2009, there has been a gradual recovery, though the indicator still remains at relatively reduced levels.

<sup>1</sup> This box sums up the main conclusions of the Working Paper 0914 issued by the BBVA Economic Research Department: Camacho *et al.* (2009), soon available on <http://serviciodeestudios.bbva.com/>.

<sup>2</sup> The MICA-BBVA model is complementary to other methods already used at the BBVA Economic Research Department, such as the BBVA Synthetic Activity Indicator, described in SpainWatch, July 2006.

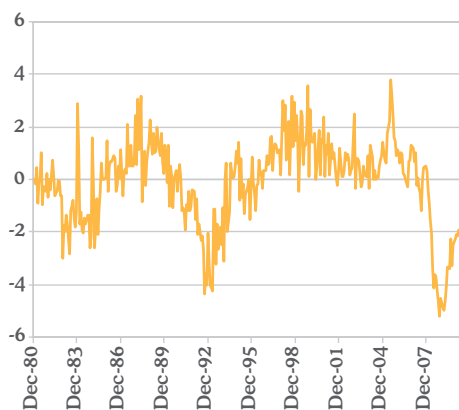


**Table 1**  
**Indicators used in the model**

	Indicators	Sample	Source	Transformation
1	Real GDP (seasonally-adjusted)	2Q80-2Q09	National Institute of Statistics	AGR
2	Credit card spending (Deflated and seasonally-adjusted)	Feb01-Oct09	BBVA ERD based on Servired and INE	AGR
3	Consumer confidence (seasonally-adjusted)	Jun86-Sep09	European Commission	L
4	Real wage income (seasonally-adjusted)	Jan81-Aug09	BBVA ERD, based on Economy Ministry	AGR
5	Electricity consumption (Temperature-adjusted and seasonally-adjusted)	Jan81-Sep09	BBVA ERD, based on Economy Ministry	AGR
6	Industrial confidence (seasonally-adjusted)	Jan87-Sep09	European Commission	L
7	Registered unemployment (seasonally-adjusted)	Jan81-Sep09	BBVA ERD, based on INEM	AGR
8	Social Security affiliation (seasonally-adjusted)	Jan83-Sep09	BBVA ERD, based on Labor Ministry	AGR
9	Private sector credit (Deflated and seasonally-adjusted)	Jan81-Aug09	BBVA ERD based on Bank of Spain and INE	AGR
10	Differential finance rate (Mortgage loan rate minus 12M Euribor)	Jan89-Aug09	BBVA ERD, based on Bank of Spain and Thomson Financial	L
11	Slope of curve (10-year Spanish bond rate minus 3M Euribor)	Nov87-Sep09	Thomson Financial	L
12	Financial market tension (Mortgage loan rate) minus 12M Treasury bill rate)	Jan81-Aug09	BBVA ERD, based on Bank of Spain and Thomson Financial	L

Transformation: L, levels; AGR, annual growth rate

**Chart 1**  
**MICA model indicator Dec 1980 – Mar 2010**

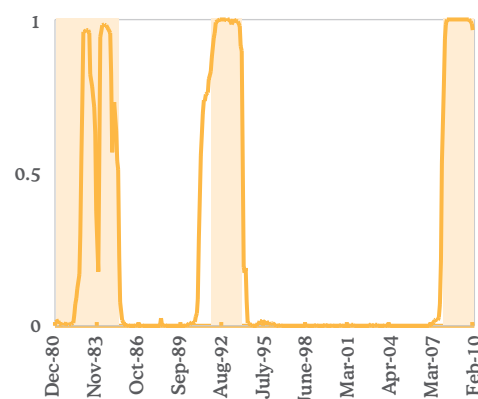


Source: BBVA ERD, based on sources cited in Table 1

An interesting application for analyzing the economic cycle is to translate the values of the indicator into probabilities that the economy is in recession in a particular quarter. This can be done by using the so-called Markov chain models. Chart 2 shows how the probabilities of recession extracted from the indicator present a high correlation with the recessions as dated for the Spanish economy by the Economic Cycle Research Institute (ECRI). These appear as shaded areas in the chart. As we can see, the last recession is clearly identified by the model, and although the indicator shows a minimal recovery at the end of the sample, the chances of recession indicate that it is still early

to consider that the Spanish economy is about to emerge from the recession.

**Chart 2**  
**Probabilities of recession and observed recessions (shaded areas) by ECRI**



Source: BBVA ERD, based on sources cited in Table 1

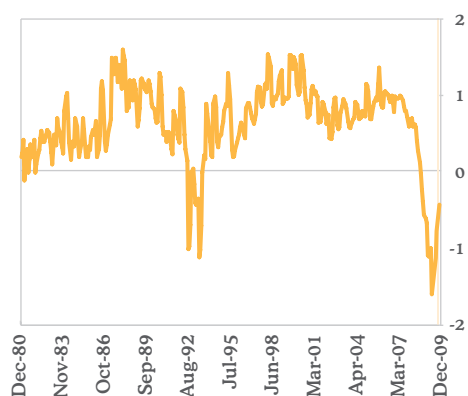
Since the monthly indicator replicates the cyclical state of the Spanish economy reasonably well, the model may be used to infer quarterly GDP growth rates, but on a monthly basis. Obviously, it also enables GDP growth estimates to be made in a quarter, which by construction will be the GDP forecasts for the third month of the quarter.

Thus Chart 3 shows the official data on growth rates in the last month for each quarter, together with the rates



interpolated by the model for the first two months. The model predicts a fall in GDP for the third quarter close to a half point, and for the fourth quarter a quarterly growth rate of just under zero. Thus the Spanish economy appears to have bottomed out in the summer of 2009. However, pending the appearance of new economic data, the model reflects a slow correction in the rate of deterioration for the fourth quarter, although positive rates of growth cannot be forecasted for the immediate future.

Chart 3  
GDP growth and forecasts (quarterly rate)



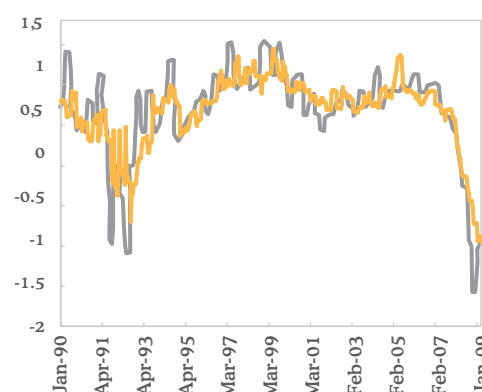
Source: BBVA ERD, based on sources cited in Table 1

### Predictive power

Although the results obtained from the estimates for the first and second quarter of 2009 are sufficiently satisfactory, an in-sample prediction exercise has been carried out to examine the predictive power of the model. The first step consists of using the latest database to create artificial databases for days one and fifteen of each month since 1990. This is done by gradually eliminating the unavailable data for each day on which predictions would have been carried out. This process gives rise to 478 different databases. The second step consists in reestimating the model and making predictions for each of these databases, comparing the forecasted GDP value with the value that was finally published by the INE.

Chart 4 shows the forecasts of the first unavailable GDP figure for each database (orange line) and the data subsequently published (grey line). As can be seen in the chart, the GDP forecasts that the model would have made in the last 20 years would have been very close to the data subsequently published by the INE. Obviously, the predictions made each quarter are adjusted better as the publication day of the GDP data arrives, as they are made with increasingly large sets of information.

Chart 4  
GDP forecasts and data Jan 1990 – Mar 2009



Source: BBVA ERD, based on sources cited in Table 1

Finally, these forecasts have been compared against the two typical predictive models for GDP growth rates, using the databases generated. The first is a random walk and the second is an autoregressive model of order two. The relative mean square errors of the model forecasts compared to both of these alternatives are below 60% in both cases. This indicates that MICA-BBVA has a stronger predictive power.

### References

- Camacho, M., and R., Doménech (2009) «MICA-BBVA: a factor model of economic and financial indicators for short-term GDP forecasting», BBVA Economic Research Working papers, 0914.
- Camacho, M., and Pérez Quirós, G. (2009a) «Introducing the Euro-STING: Short Term Indicator of euro area Growth», *Journal of Applied Econometrics*, pending publication.
- Camacho, M., and Pérez Quirós, G. (2009b) «Ñ-STING: España Short term indicator of growth», *The Manchester School*, pending publication.
- Mariano, R., and Murasawa, Y. (2003) «A new coincident index of business cycles based on monthly and quarterly series», *Journal of Applied Econometrics* 18: 427-443.
- Stock, J., and Watson, M. (1991) «A probability model of the coincident economic indicators», in Kajal Lahiri y Geoffrey Moore editors, *Leading economic indicators, new approaches and forecasting records*. Cambridge University Press, Cambridge.

## Box 2: Fiscal changes and their impact on the Spanish economy

The ambitious exercise in fiscal consolidation that the government aims to carry out in 2010 will have different impacts in the short and long term. This box sums up some of the effects that the proposed increases in the value added tax (VAT) and on the tax on capital gains may have. It uses the Dynamic General Equilibrium model of Boscá *et al.* (2007). The results suggest that the impact on economic activity of the increase in the tax burden will be relatively significant. However, the exercise proposed here does not take into account some of the potential medium-term and long-term benefits that the process of fiscal consolidation may have. In particular, factors such as a lower risk premium could partially counter the negative effects on private spending resulting from the increased tax burden. What is more, given that the process of fiscal consolidation is inevitable, and increases in other taxes would have had a greater negative effect on the economy.

### The REMS

The REMS model (*Rational Expectations Model for the Spanish Economy*) is described in detail in Boscá *et al.* (2007). Here we would just like to mention that the model includes a number of assumptions that make it particularly useful for the study of the Spanish economy. In particular, REMS is within the tradition of the Dynamic General Equilibrium models designed for small and open economies that include nominal and real rigidities in the spirit of Erceg *et al.* (2005). Thus it allows for a greater impact of public policies than those found in the Real Business Cycle literature. For example, one of the key assumptions is the presence of consumers with no access to capital markets, or non-Ricardian consumers. REMS also includes a public sector that spends on consumption, investment and transfers for dependent homes in the economic cycle, but that follows a rule of debt sustainability that prevents it from committing itself to explosive increases in public leveraging.

REMS is unlike the previous literature in that it includes two features inherent to the Spanish economy: first, it presents an economy within a monetary union; and second, the labor market is characterized in a much richer way than in related models, but distinguishing between intensive and extensive margins in labor.

Finally, the model's parameters have been estimated or calibrated by using long-term relations valid for the Spanish economy.

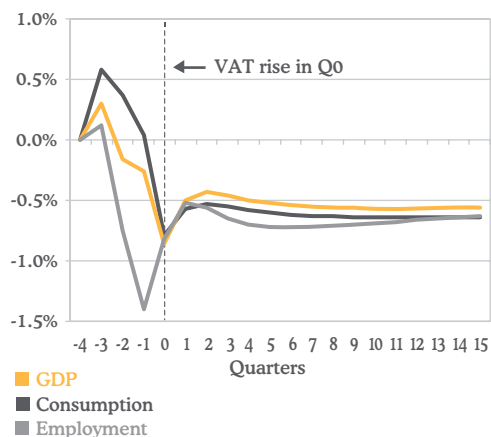
### A VAT increase in the REMS model

Next, we present the results of increasing the VAT by two points. At the closing date of this publication, this was the proposal submitted by the government to parliament in the

national budget for 2010. One of the advantages of having rational expectations in the model is that agents anticipate the impact of the change in taxes. In this case, and consistent with the data to date, the exercise forecasts the rise in taxes within three quarters. The results are given in Chart 1.

Chart 1

Spain: effect of an increase of two pp in VAT (percentage deviation from the trend)



Source: BBVA ERD

First, it can be seen that the increase in the tax burden has both temporary and permanent effects on economic activity. Thus, household private spending on consumer goods increases at first, anticipating the rise in prices resulting from higher taxes. It has to be said here that the positive impact on household spending is limited because there are households with liquidity restrictions, which are not able to take advantage of the intertemporal price change. Once the tax is increased, households respond by significantly reducing spending by more than the previous increase. This finally results in GDP being 0.5% below the trend observed had the measure not been taken. This permanent fall in output is the result of the distorting effect of taxes on consumption decisions that now includes all households: as the cost of consumption increases, returns from work decrease, so households prefer to have more free time. This fall in the supply of work is behind the reduction in production. What is more, the model assumes that, as a result of the fiscal rule implicit in the model (debt sustainability), the level of debt is maintained within a stable trend.

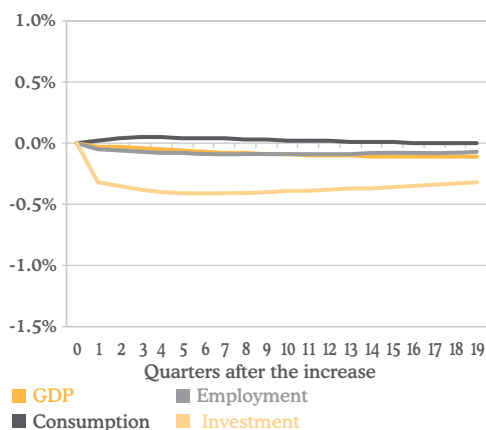
### Higher taxes on capital income

In a similar exercise to the one performed above, we will now present the simulation results of an increase on capital

income taxes from 18% to 19% for the first 6,000 euros of income, and to 21% for the rest.

Chart 2

**Spain: results of proposed changes in capital tax**  
(percentage deviation from the trend)



Source: BBVA ERD

First, it can be seen that while the effects of this policy are also negative, they are significantly smaller than those obtained in the case of the VAT increase. This is reasonable, given that the revenue capacity of this measure is also very much smaller than the two point VAT rise. The transmission mechanism for the tax on spending begins with a disincentive to savings that leads to a fall in investment. As Spain is a small and open economy, the returns on savings abroad will result more attractive.

### The question therefore is, why now?

In both cases the impact on the economy of increasing taxes is negative in the short term. However, as is explained here, the process of fiscal consolidation does not appear to be one that the Spanish economy can postpone, above all given the permanent loss of some revenues and the need for the government to continue financing some items of spending.

Despite the complexity of the model used here it does not include some of the factors that justify more strongly the process of fiscal consolidation adopted. First, because it does not include the effects that this consolidation will have on the credibility of the public accounts, and thus on the risk premiums that will be paid by the agents linked to the Spanish economy. Second, because if this consolidation is postponed and the current spending levels are maintained, the increase in the debt lead to a greater tax burden in the future. Third, because once it has been decided to undertake part of the fiscal consolidation through an increase in taxes, perhaps

the relevant analysis is not in terms of a scenario in which the tax burden does not increase, but in terms of the alternative policy instruments that could be used to obtain debt stability. In this sense, the use of VAT as a main source of revenue is preferable to alternatives that could have an even bigger negative effect on the economy (for example, an increase in personal income tax).

Another related fact has to do with the need to maintain flexibility and margin in the public debt so that similar shocks to those currently experienced can be absorbed if necessary. What is more, it is a fact that some obligations related to the ageing population will represent a major challenge for the Spanish economy in the medium term. Tackling these challenges within manageable debt levels will permit greater flexibility for public policies and social agreements.

Finally, public spending has made a decisive contribution in compensating the fall in private spending over recent months. However, we should not forget that much of the adjustment in the Spanish economy is due to a correction of excesses that would have to be absorbed sooner or later. The loss in productivity and growth due to the gradual reallocation of resources to more competitive sectors may be an unwanted result of maintaining public aid. This is another reason for implementing a swift fiscal stabilization.

### References

- J.E. Boscá, A. Díaz, R. Doménech, J. Ferri, E. Pérez and L. Puch, 2007. «A Rational Expectations Model for Simulation and Policy Evaluation of the Spanish Economy,» Working Papers 0706, International Economics Institute, University of Valencia.
- Christopher J. Erceg, Luca Guerrieri, Christopher Gust, 2005. "SIGMA: A New Open Economy Model for Policy Analysis," International Journal of Central Banking, International Journal of Central Banking, vol. 2(1), March.

## Box 3: Spain's potential growth: the effects of the crisis

The aim of this box is to estimate some of the effects that the current crisis has had on the potential growth rate of the Spanish economy. The main conclusion in this respect is that like most developed economies, the productive capacity of the Spanish economy has been reduced. If major structural reforms are not implemented, the economy may begin to grow again at a rate lower than in the years before the crisis. In any event, the potential growth will converge to 2%, above what is expected to be the case in the rest of the EMU.

### The main sources of growth in Spain

A number of studies have documented the historical sources of growth in Spain. Here, we will only show some results as a benchmark for evaluating the possible prospects of these sources of growth.<sup>1</sup> In particular, it is well known that the Spanish economy has relied on capital accumulation and labor utilization as the main engines for sustaining growth in recent years (see Chart 1).

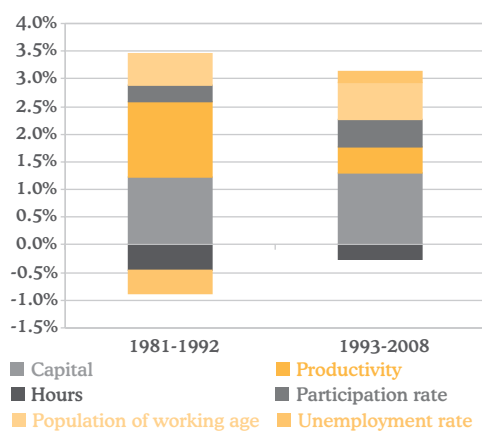
However, recent developments (both domestic and

international) are having a negative impact on investment prospects and job creation. It is therefore necessary to revise the main assumptions behind labor market projections, taking these developments into account. For example, as can be seen in Chart 1, the factors linked to demographics and the labor market have recently contributed to more than a third of the total trend growth of the economy. In particular, both the increase in working age population and the increase in the participation rate represented important gains for the Spanish economy, and significantly increased the supply of labor. Therefore, looking forward, it is essential to know whether the conditions allowing these increases will be maintained. To

carry out this analysis, it is enough to examine the forecasts made by the National Institute of Statistics (INE) on demographic variables. In its core scenario, the INE forecasts a significant reduction in the growth rate of the working age population. Although it is expected to continue increasing, it will do so at rates that are significantly below those observed at the start of the decade. The main reason is the expected decline in migratory flows. As the adjustment in some sectors of the Spanish economy continues, it will be difficult for them to attract migrant workers. Furthermore, one of the most surprising factors during this crisis has been the relative strength shown by many of the countries of origin. As long as a favorable growth differential remains, the incentives for a flexible immigration with a swift adaptation to the Spanish economy will be reduced.

Thus, using a similar scenario to the core INE scenario, it can be shown that the contribution of the working age population to economic growth will be considerably reduced over the coming years (from 0.7 to 0.4 points). In any event, it is important to point out that, as can be seen in Chart 2, the demographic inertia is such that this contribution will continue to be a positive factor compared with the rest of the EMU.

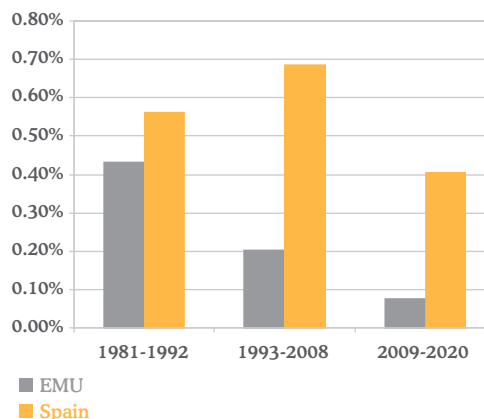
**Chart 1**  
Spain: contribution to potential growth  
(Change y/y)



Source: BBVA ERD, based on National Institute of Statistics

international) are having a negative impact on investment prospects and job creation. It is therefore necessary to revise the main assumptions behind labor market projections, taking these developments into account. For example, as can be seen in Chart 1, the factors linked to demographics and the labor market have recently contributed to more than a third of the total trend growth of the economy. In particular, both the increase in working age population and the increase in the participation rate represented important gains for the Spanish economy, and significantly increased the supply of labor. Therefore, looking forward, it is essential to know whether the conditions allowing these increases will be maintained. To

**Chart 2**  
Spain and EMU: working age population  
(contribution to GDP growth)



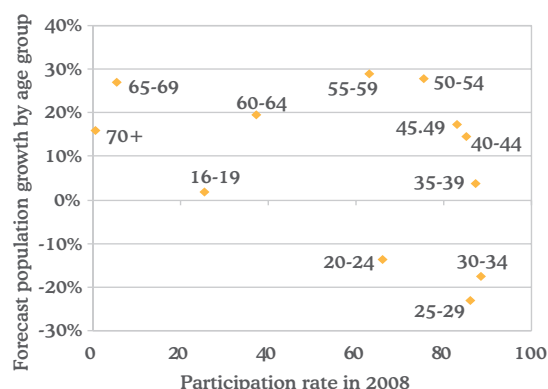
Source: BBVA ERD, based on National Institute of Statistics

With regard to the above point, it is also likely that over the coming years there will be a leveling in the growth of the participation rate in the Spanish economy. For example, using the demographic scenario proposed by the INE, it can be seen that the growth projections for some segments of the population with high participation rates are negative. As can be seen in Chart 3, the INE expects the population aged 16-35 to decline considerably. What is more, the segments with relatively low participation rates are also expected to increase significantly.

<sup>1</sup> See, for example, our publication SpainWatch, November 2008.

Chart 3

### The participation rate and expected population growth (2008-2018)

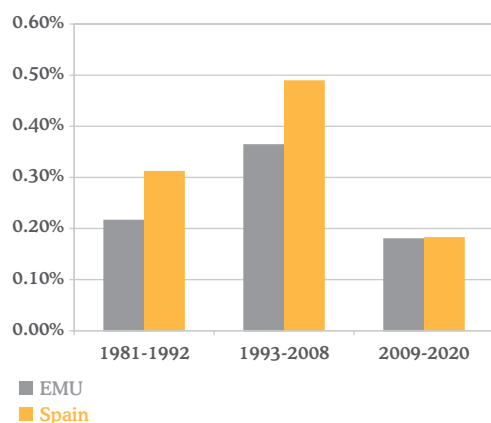


Source: BBVA ERD, based on National Institute of Statistics

Obviously, the analysis shown in Chart 3 is static and does not take into account generational changes that will mean that the participation rates will not be maintained at the current levels for each of the segments of the Spanish population. However, taking this scenario as a starting point, maintaining the current participation rates and calculating their movement according to the INE's demographic projections, the contribution of the participation rate to growth will fall significantly with respect to the recent past (see Chart 4). Thus, in plausible scenarios, a reduction in growth of around 0.6 points is expected solely as the consequence of the slowdown in these two factors (working age population and participation rate).

Chart 4

### Spain and EMU: participation rate (average contribution to GDP growth)



Source: BBVA ERD, based on National Institute of Statistics

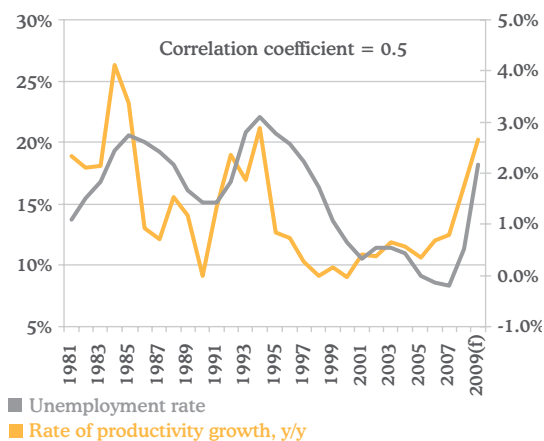
Another fundamental factor to explain growth in Spain has been the major increase in investment. However, from now on, it can be expected that a number of factors that favored capital accumulation in the Spanish economy in recent years will not be present. For example, the benefit from investing

in non-tradable goods sectors, with high returns, will be lower. In particular, the process of resizing in the real estate sector will mean a significant reduction in investment in housing over the coming years. At the same time, the expected fall in the trend growth rates of Spain's main trading partners will negatively affect the growth perspectives of the export sector. In addition, not only is the demand for capital expected to be lower than in the past, but it is possible that over the coming years the supply will also be reduced, the latter as a result of an international environment that will be less prone to risk taking and a more regulated financial sector. Thus it is unlikely that investment rates close to 30% of GDP will be observed. They will probably stabilize up to 2 points below the average of previous periods. This will involve a reduction of about 0.6 to 0.7 points in the contribution of capital accumulation to growth.

Finally, the only two remaining sources of growth for the Spanish economy are the unemployment rate and productivity. Yet, it has to be stressed that historically both factors are positively correlated, so that any improvement in one of the variables is partially compensated by a deterioration in the other.

Chart 5

### Spain: productivity and unemployment



Source: BBVA ERD, based on National Institute of Statistics

In summary, it can be argued if the adoption of structural reforms to reverse certain trends is not speeded up, some factors related to the supply of labor and capital accumulation will significantly reduce their contribution to potential growth. As a result, potential growth will converge to levels of around a point below what has been seen over the last 15 years. However, certain factors (e.g. the increase in the working age population) will continue to make a positive difference with respect to the rest of Europe. As a result, the potential growth forecast of the Spanish economy for the coming years (around 2%) will be notably greater than that for the rest of the EMU (1.4%).

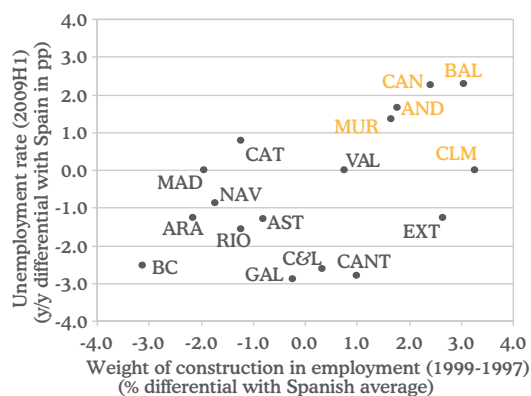


## Box 4: Regional differences during the crisis

The Spanish economy is characterized by large structural differences across the country's regions. These differences have led to a pronounced growth differential during the last period of sustained growth in Spain, and are also expected to have a significant differential effect on regional performance during the current economic crisis. It is expected that some of the factors that had stimulated a relatively greater growth in some Spanish regions until 2007, such as the relatively large weight of construction and the private agents' financial leveraging, will also place a much greater downward growth pressure in these regions, both in the short and medium term. Furthermore, it is likely that the adverse international economic environment in 2009 may have an additional negative impact on the short term growth rates of Spanish regions with a productive structure biased towards external demand and tourism.

(except Extremadura) than in Spain as a whole (7.5 pp y-o-y). Thus the unemployment rate in all these regions is at higher levels than the national average. As a result, a greater downward bias in private consumption and GDP is to be expected in these regions in 2009 and 2010.

**Chart 1**  
The resizing of the construction sector

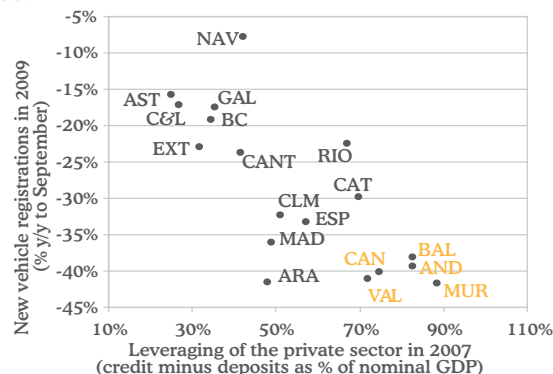


Source: INE and BBVA ERD

### The resizing of the construction sector and the financial deleveraging process

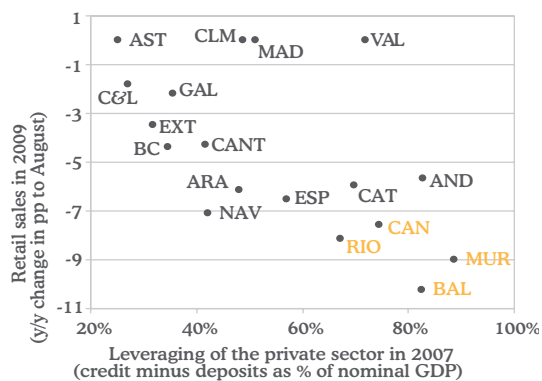
Apart from the persistence and intensity of the international financial crisis, two of the factors that are contributing greatly to the deterioration of the Spanish economy in the last period are the resizing of the construction sector and the private sector's financial deleveraging process. Despite the fact that both elements are common to most regional economies in Spain, there are clear signs that suggest that some Spanish regions are more exposed to these factors and, thereby, to a greater downward risk upon their growth rates in the short and medium term. During the real estate boom the weight of construction over total employment in regions such as the Balearic Islands, Extremadura, Castile-La Mancha, Murcia, the Canary Island and Andalusia was much greater than in Spain as a whole. Due in part to this greater exposure to construction activities, the employment destruction showed up to the second quarter of 2009 was greater in these regions

**Chart 2**  
The financial deleveraging process in the private sector



Source: Bank of Spain, Directorate General for Labor and BBVA ERD

**Chart 3**  
The financial deleveraging process in the private sector



Source: Bank of Spain, INE and BBVA ERD

With regard to the private sector's financial deleveraging, significant differences can also be seen across the Spanish regions. Between 1999 and 2007, the net balance of private sector credit, i.e. credit minus deposits, increased to reach 57.1% of GDP in Spain. In the cases of Andalusia, the Balearic Islands, the Canary Islands, Catalonia, Valencia, Murcia, Navarre and La Rioja, the figure is substantially greater than the Spanish average. As a result, a more pronounced and/or extended deleveraging process is to be expected in these regions if compared to the rest of the Spanish economy. This implies a potentially more severe downward pressure on consumption growth, and particularly on private investment, that could finally postpone the recovery process in these regions. The economic activity



and spending indicators so far this year show a more unfavourable trend in most of these regions than in Spain as a whole, providing evidence about a stronger adjustment of consumption and investment decisions made by private agents in these economies. The contraction in retail sales up to August has been more pronounced in these regions (except for Catalonia and Andalusia) than in Spain as a whole (-7.0 pp on average until August 2009 from the same period in 2008). In addition, in Andalusia, the Balearic Islands, the Canary Islands, Valencia and Murcia, new car registrations, including both passenger cars and industrial vehicles, fell more than in the Spanish economy as a whole (33.3% on average to September 2009 from the same period in 2008).

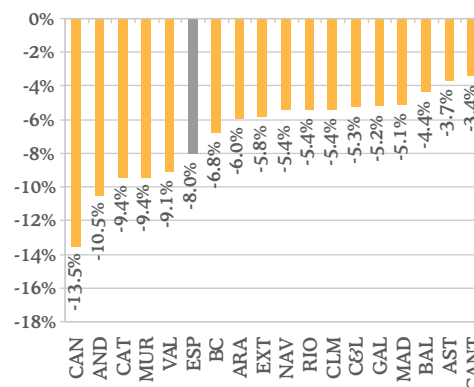
### The international environment: downward growth bias in 2009

The international financial crisis has led to a global recession which has caused a sharp contraction in external demand. This will probably affect both export activity and tourism in Spain very negatively during 2009. As can be expected, the level of exposure to the international economic environment varies greatly across Spanish regions, thus being a relevant factor in the different way the regional economies react to the current economic crisis. Regarding tourism activity, it is important to note that 91.9% of the total foreign tourist's expenditure is concentrated in the Balearic Islands, the Canary Islands, Andalusia, Catalonia, Valencia and Madrid. Taking into account the share of this expenditure component in the nominal GDP, the Balearic Islands, the Canary Islands and Andalusia are particularly sensitive to the tourism cycle (see table 1). With regard to international trade, Catalonia,

Chart 4

### Seasonally-adjusted employment

(percentage change between 2Q07 and 3Q09)



Source: INE and BBVA ERD

the Basque Country, Galicia, Navarre and Aragon are relatively more exposed to the international economic environment, as these regions have a higher level of trade openness than the rest of Spain.

Overall, it is expected that the adverse international environment in 2009 has exercised a greater downward pressure on growth rates in these regions relative to Spain as a whole. However, the international environment is expected to perform better in 2010, both for Spain and, in particular, for the European economy as a whole. If this is so, the contribution to growth from both the export and tourism sectors can be expected to be less negative next year. This would reduce, to a certain extent, the downward pressure in regions with greater exposure to the external sector.

To sum up, the greater exposure to the construction sector and the higher level of financial leveraging are two factors that may make it significantly more difficult for regional economies to grow in 2009 and 2010. Nevertheless, although there is an additional risk of downward bias in 2009, the regions in which the external sector has a greater weight through goods or tourism, may find a way towards a less negative growth differential, or even a positive differential in 2010, through the improvements of the European economy. The five Spanish regions in which there has been the sharpest economic contraction since the start of the crisis until the third quarter of 2009, have had a higher level of private sector financial leveraging than the observed for the Spanish economy as a whole until 2007. In addition, the Canary Islands, Andalusia and Murcia have been more exposed to construction activities and the first two are more dependent on tourism. At the same time, Catalonia is more exposed to foreign trade than Spain as a whole.

Table 1

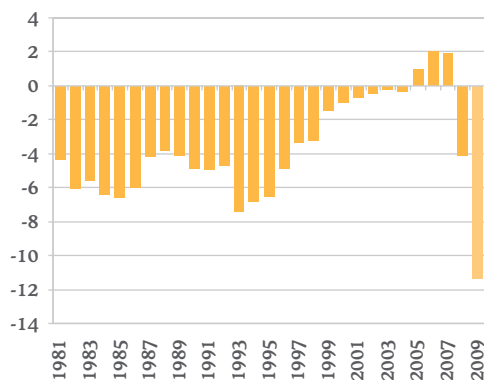
### Level of exposure to the external environment

	Trade openness to to the outside world (1999-2007)	Spending by foreign tourists (2004-2008)
	(X+M, % of nominal GDP)	(% of nominal GDP)
<b>Spain</b>	<b>43,4%</b>	<b>5,0%</b>
Andalusia	24,6%	5,5%
Aragon	51,9%	1,0%
Asturias	27,7%	0,9%
Balearic Islands	15,0%	36,5%
Canary Islands	15,4%	26,4%
Cantabria	34,9%	2,2%
Castile-Leon	40,3%	1,5%
Castile-La Mancha	25,5%	0,7%
Catalonia	64,9%	5,0%
Valencia region	42,4%	4,6%
Extremadura	11,6%	0,8%
Galicia	52,8%	1,5%
Madrid	44,8%	2,5%
Murcia	47,0%	2,1%
Navarra	68,2%	0,7%
Basque Country	51,3%	0,9%
La Rioja	28,2%	0,8%

Source: BBVA ERD based on data from INE and the Ministry of Industry, Tourism and Commerce

Chart 4.1.  
Deficit (-) or surplus (+) of General Government  
(as percentage of GDP)

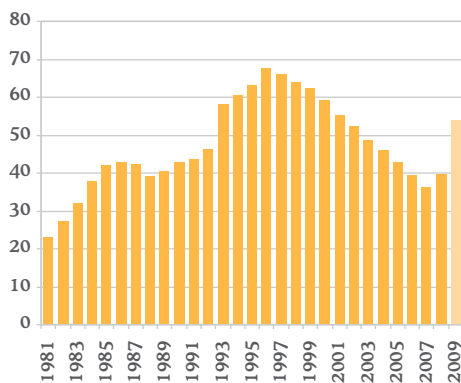
(as percentage of GDP)



Source: BBVA ERD, based on Finance Ministry, National Institute of Statistics and Institute for Fiscal Studies

Chart 4.2.  
Public debt  
(as percentage of GDP)

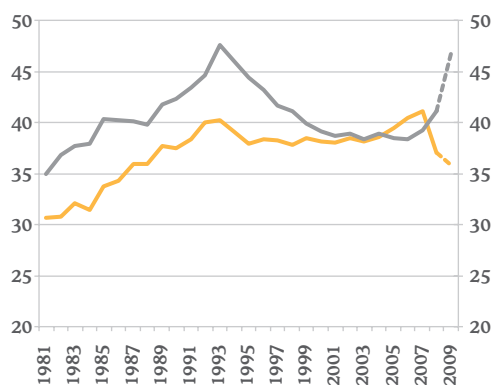
(as percentage of GDP)



Source: BBVA ERD based on Bank of Spain and Finance Ministry

Chart 4.3.  
General Government revenues  
(as percentage of GDP)

(as percentage of GDP)



■ Revenues  
■ Expenditures

Source: BBVA ERD, based on Finance Ministry, National Institute of Statistics and Institute for Fiscal Studies

## 4. Structural changes in the Spanish public accounts

The economic crisis has put an end to the period of greatest budget stability in recent decades. Between 2007 and 2009 there was a significant deterioration in the public accounts, equivalent of 13% of GDP. Most of this deterioration is structural, as a result of the fiscal stimulus packages implemented and the disappearance of a number of extraordinary public revenue items. In this context, the simple operation of the automatic stabilizers will not be enough to reduce the deficit to the required extent over the coming years. If this objective of stability is to be achieved without new tax increases the Central, Regional and Local governments will have to reduce and rationalize public expenditures to a significant extent.

### The economic and financial crisis has resulted in a major deterioration of the public accounts and put an end to five years of balance.

The profound economic crisis experienced by the Spanish economy is significantly affecting the deterioration of public finances. This has put an end to the intense process of fiscal consolidation initiated at the start of the 1990s that culminated with the period of greatest budget stability of the last forty years. Despite the fact that the Spanish public administrations have faced the crisis in a much favorable situation than the average of the EU Member States in terms of the public deficit and debt levels, the deterioration has also been much swifter. Thus, the public administrations will probably close 2009 with a deficit of around 11%, from a surplus of 1.9% of GDP in 2007. This deterioration of 13 percentage points over two years is far greater than the 7 points expected by the European Commission (EC) for the EMU<sup>1</sup> countries as a whole (2007: -0.9%, 2009: -6.0%).

This deterioration in the public accounts has also resulted in a major increase in the level of public debt, who will see their outstanding balance increase by more than 17 percentage points of GDP from the end of 2008. This compares with the increase of 12 pp in public debt in the EMU, despite the fact that financial aid to the banking sector (4.7% of GDP) has been much greater than in Spain. However, it is also true that the better starting position of the Spanish public sector will mean that its debt in 2009 will be 54% of GDP, well below the level expected by the Commission for the EMU (77.7%).

The Spanish budget balance reduction is due to a combination of a fall in public revenues, mainly in 2008, and a major increase in expenditures, above all in 2009. With regard to the latter, it is worth mentioning the impact of the fiscal stimulus measures introduced by the Central government, which in 2009 have represented an additional spending of approximately one percentage point of GDP. This, together with the increased payment of social benefits linked to the increased unemployment rate, will increase public expenditures this year to over 45% of GDP. This is the highest data since the start of the 1990s, when the intense process of fiscal consolidation began.

<sup>1</sup> Spring 2009 forecasts from ECOFIN (AMECO)

But the fall in public revenues has been much greater than can be explained either by the automatic stabilizers or some of the elements of the Government's fiscal stimulus program aimed at freeing income for contributors. Measures such as the 400 euro deduction from personal income tax, the bringing forward of VAT refunds and the reduction in corporate income tax rates (the second stage of which was applied in 2008) have drained public sector revenues by more than one and a half percentage points of GDP.

Table 4.1: Main government fiscal stimulus measures

Millions of euros	2008	2009	2010
<b>Revenues</b>	<b>19,825</b>	<b>16,195</b>	<b>-1,984</b>
Income tax reforms	8,525	11,045	716
Corporate income Tax reforms	5,300	-3,000	350
Corporate income tax reforms	6,000	6,000	-2,550
Abolition of wealth tax		1,800	
Updating excise duties		-850	-1,700
Discount in social security contributions		1,200	1,200
<b>Expenditures</b>	<b>181</b>	<b>10,690</b>	<b>4,661</b>
<b>• Permanent impact</b>			
Cut in government spending budget	-20	-2,500	-542
Reduction in public job offers			-300
Public tender offer for land and others	201	430	113
<b>• Temporary impact</b>			
Local Investment Fund		7,700	5,300
Economy and Employment Stimulus Fund		3,000	
PlanE for automation		60	90
Comprehensive automotive plan (includes VIVE Plan)		2,000	
<b>Total impact on public accounts</b>	<b>20,006</b>	<b>26,885</b>	<b>2,677</b>
% of GDP	1.8	2.6	0.3

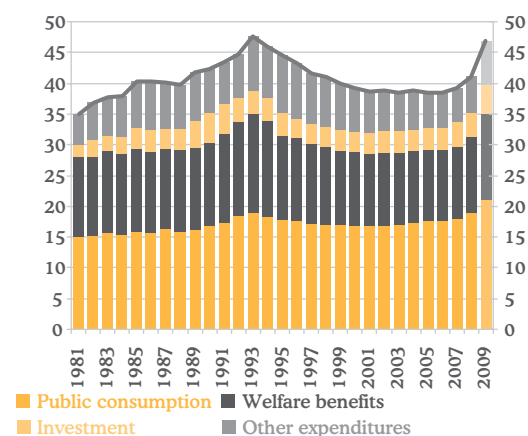
Source: BBVA ERD based on Finance Ministry

### The increase in public expenditure has mainly focused on welfare benefits and public consumption

As mentioned above, part of the unprecedented growth in public spending (8 percentage points of GDP more in 2009 than in 2007) has been caused by countercyclical and discretionary fiscal stimulus measures. One of the main efforts made by the public administrations to boost economic activity has been to increase public investment, so that at the end of this year, it is expected to be at all-time high levels close to 5% of GDP.

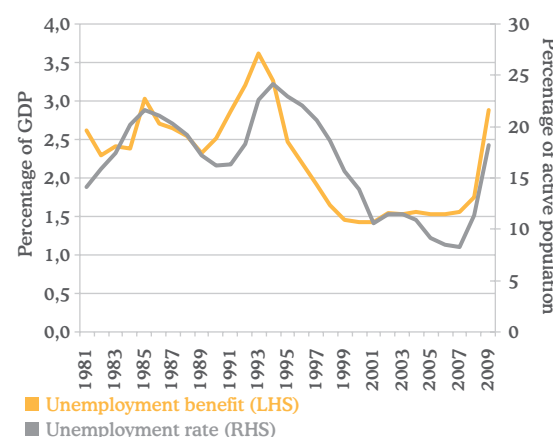
However, this major increase of spending on investment does not explain all the current growth in public expenditure. Breaking down expenditure into its main components, it can be seen that the items that have contributed most to this growth have been social welfare benefits and public consumption. Social welfare benefits have increased their share of GDP by 2.2 percentage points from 2007 to 14% at the end of 2009. Among them is the growth of unemployment benefit, which in 2009 alone increased by 1.1 percentage points, greater than the figure in the period of greatest crisis at the start of the 1990s in 1992-1993.

Chart 4.4.  
General Government expenditure  
(as percentage of GDP)



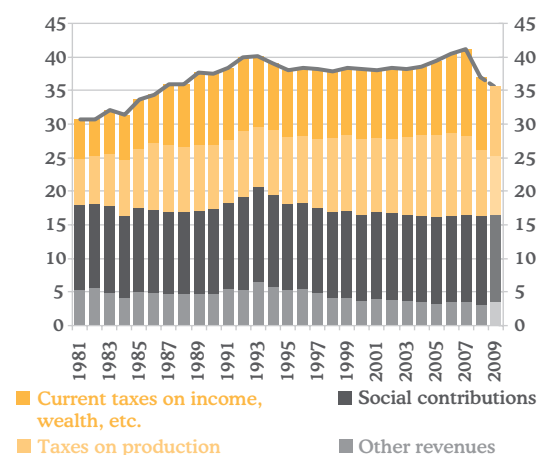
Source: BBVA ERD, based on Finance Ministry, Ministry of Labor, OECD and INE

Chart 4.5.  
Unemployment benefits and  
unemployment rate



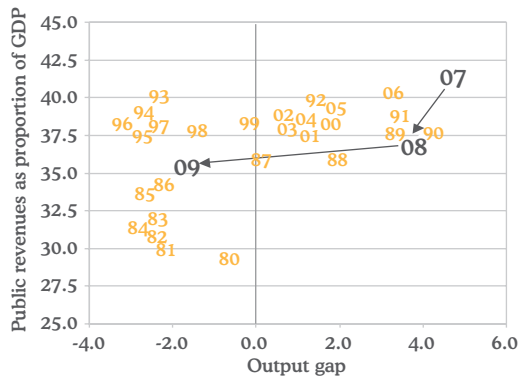
Source: BBVA ERD, based on Finance Ministry, OECD and INE

Chart 4.6.  
Central Government revenues  
(as percentage of GDP)



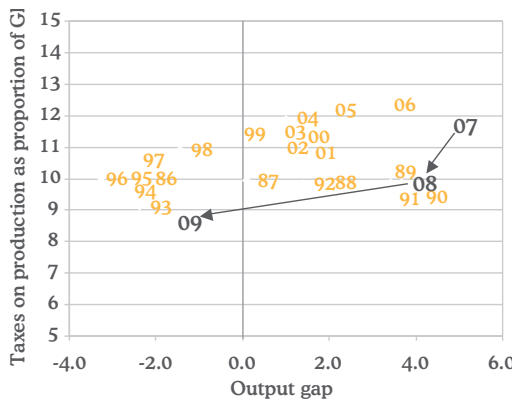
Source: BBVA ERD based on Finance Ministry and INE

Chart 4.7.  
Public revenues and output gap



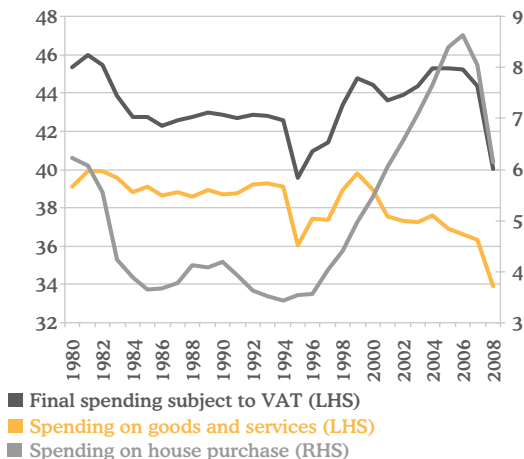
Source: BBVA ERD based on Finance Ministry and INE

Chart 4.8.  
Taxes on production and output gap



Source: BBVA ERD based on Finance Ministry and INE

Chart 4.9.  
VAT tax bases  
(as percentage of GDP)



Source: BBVA ERD based on Finance Ministry and INE

Public consumption has increased since 2007 by around three percentage points of GDP to over 21%, more than two points above the all-time high of 1993.

**The reduction in public revenues is greater than can be explained by the strong cyclical fall in GDP**

The size of the reduction in public revenues has been much greater than the deterioration in nominal GDP, so that the revenues/GDP ratio will fall from 41.1% in 2007 to 35.6% at the end of 2009. This returns the resources of the public administrations in Spain to levels at the end of 1980. The fall of nearly 5.5 percentage points cannot be fully explained by the tax rebates in recent years, which as we have mentioned have taken around 1.5 percentage points from tax revenues.

If we break down the resources of the public administrations by components, we can see a general fall in all the revenue items, except for social contributions, which have remained stable at around 13% of GDP. Three percentage points of the fall in non-financial revenues have been concentrated in resources from taxes on production, basically VAT, whose collection in relation to GDP has fallen by around 2 percentage points since 2007. Current income taxes (in particular, corporation tax) have contributed to a reduction in public revenues of 2.5 points of GDP, largely because of the tax rebates that were mainly in these items, and reduced gains.

**The crisis in the real estate market and the end of the stock market boom have permanently reduced a large proportion of the taxable bases of the main taxes**

Part of this decrease in income is due to the normal behavior of automatic stabilizers over the course of the business cycle. In other words, when economic activity slows, so does the tax base, and tax collection falls as a result. However, as public revenues as a whole is practically proportional to GDP, the operation of the automatic stabilizers in Spain should hardly alter the ratio of public sector revenue to GDP over the course of the cycle, as can be seen from chart 4.7. This (*quasi*) proportionality of public revenues is due to the progressive nature of some taxes such as income tax. This means that the collection of this tax as a proportion of GDP is procyclical and is compensated by the countercyclical behavior of other income such as that from social contributions.

However, in the current crisis the cyclical slowdown has been accompanied by a reduction in revenues between 2007 and 2009 amounting to 5.5 points of GDP. This cannot be fully explained by the normal operation of automatic stabilizers. This fact is thus evidence of a significant fall in some of the taxable bases that lead to a potential for revenue collection that is notably lower than in the previous period.

On analyzing the main tax items (Table 4.2) it can be seen that the taxes on production, which include VAT, excise duties or regional taxes on capital transfer and documented legal acts, have grown from the mid-1990s at far higher rates than nominal GDP. In the last period before the current crisis (between 1996 and 2007) they registered rates of close to 9%, with an average GDP elasticity of 1.1. These data contrast with the fall of more than 14% in these revenues in 2008 and 2009, mainly as a result of the fall in VAT revenues (which fell from a nominal increase of 9.3% in 2008 to a nominal fall of 19% in 2009).

Much of this fall in VAT revenues may be explained by investment in housing and household consumption, which in 2008 registered an average fall in real terms of 10.3% and 0.6% respectively. This fall has continued for much of 2009. The trend resulted in a major fall in the taxable base of the tax, as can be seen in Chart 4.9, in 2008 it fell by 4.3 percentage points compared with 2007, of which 2.4 points correspond to the fall in household and public administrations spending on goods and services, and thus consumption; while the rest is a result of lower household spending on housing.

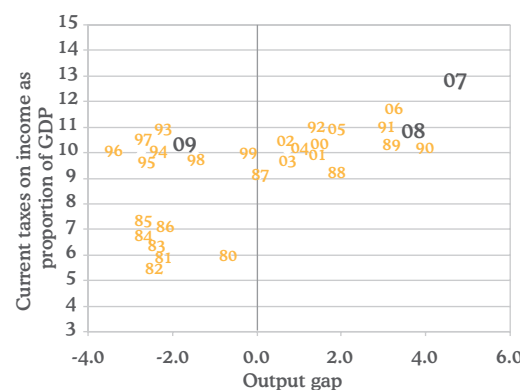
If we look at the resources from current taxes on income and assets, we can see that, as is the case with indirect taxes, their growth rates have been greater than nominal GDP since the mid-1990s to the start of the crisis, while in 2008 and 2009 the revenues from these taxes fell on average by 10.5%, mainly as a result of the fall in corporation tax revenues.

Revenues from direct taxes as a whole show an average elasticity to GDP slightly above 1.0, at around 10.5% of GDP since 1995. This stability of direct taxation is due to the significant weight of income tax revenues as a proportion of the whole (over 65% on average since 1990) and their progressive nature. This means that the revenues are procyclical, growing when activity increases and reducing when it falls. In this way, income tax revenues remain at around 7% of GDP in 2008-2009 (Table 4.2), slightly above the average for the 1996-2007 period, but below the level in 2007 (7.5% of GDP) as a result of the significant tax rebates in recent tax reforms.

Revenues from corporation tax have increased their weight out of GDP to a maximum average of 3.2% over the period 1996-2007 (Table 4.2), coinciding with the period of greater economic expansion. The high growth registered by this tax in the last expansive phase (above all in 2006) more than doubles average nominal GDP growth and largely responds to the strong increase in stock market prices, which gave rise to significant capital gains. As a result, the tax base showed an average sustained growth of 13.2% since 2000 to 2007 and increased its ratio as a proportion of GDP to nearly 17%. This extraordinary growth in the corporation income tax base in recent years largely explains the current fall in revenues from the tax, as company profits have been squeezed by the slump in activity and the disappearance in the capital gains mentioned above.

Chart 4.10.

### Current taxes on income and output gap

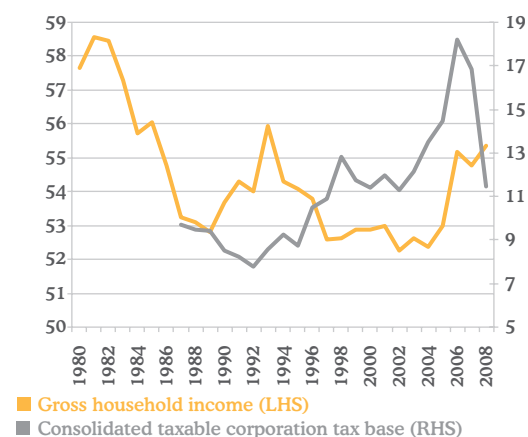


Source: BBVA ERD based on Finance Ministry and INE

Chart 4.11.

### Tax bases of personal and corporate income tax

(as percentage of GDP)

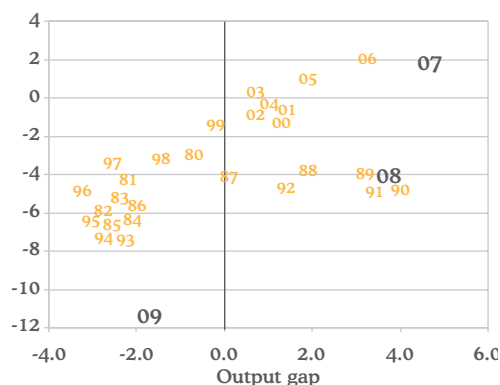


Source: BBVA ERD based on Tax Office (AEAT), Finance Ministry, INE and Datastream



Chart 4.12.

## Budget balance vs Output gap



Source: BBVA ERD, based on Finance Ministry, National Institute of Statistics and Institute for Fiscal Studies

Table 4.2. Non-financial revenues 1970-2009

As percentage of GDP and year-on-year change

	1970-2009	1971-1989	1990-1995	1996-2007	2008-2009
Non-financial revenues	33.61	28.68	38.85	38.75	38.42
average growth rate	12.9	19.3	8.0	8.1	-7.0
Elasticity to GDP	1.1	1.2	0.9	1.2	0.3
Tax revenues	29.45	24.38	33.74	35.19	33.33
average growth rate	13.2	19.7	7.7	8.7	-7.9
Elasticity to GDP	1.1	1.3	0.9	1.2	0.2
Taxes on production	9.06	7.54	9.56	11.32	11.17
average growth rate	12.1	17.9	8.1	8.9	-14.1
Elasticity to GDP	1.1	1.2	0.9	1.2	0.3
Value added type taxes (VAT)	3.13	0.97	4.85	5.63	4.50
average growth rate (*)	7.6	-	6.7	9.3	-19.0
Elasticity to GDP	1.2	-	0.6	1.3	2.2
Other taxes on production	5.05	4.88	4.47	5.68	4.77
average growth rate	11.5	14.8	12.8	8.6	-8.9
Elasticity to GDP	1.0	1.0	1.7	1.2	-1.7
Current taxes on income, wealth	7.99	5.46	10.45	10.55	10.57
average growth rate	15.9	25.0	6.5	9.9	-10.5
Elasticity to GDP	1.3	1.6	0.7	1.3	-0.9
Personal income tax	5.35	3.62	7.66	6.80	7.10
average growth rate	17.7	28.8	8.1	7.5	-3.8
Elasticity to GDP	1.4	1.8	1.0	1.0	0.9
Corporate income tax	2.16	1.44	2.23	3.23	2.75
average growth rate	14.7	21.7	0.5	16.6	-23.8
Elasticity to GDP	1.2	1.5	-0.4	2.3	-4.1
Social contributions	12.12	11.17	13.35	12.91	13.14
average growth rate	13.0	18.8	8.4	7.6	0.6
Elasticity to GDP	1.1	1.2	1.1	1.0	1.2
Nominal GDP (y/y)	11.3	15.9	7.8	7.4	-0.1

Source: BBVA ERD, based on Finance Ministry, National Institute of Statistics and Institute for Fiscal Studies

## Budget balance and the economic cycle

As we have mentioned throughout this article, the deterioration in Spanish public accounts in the last two years has been much higher than can be explained by the cyclical position of the economy, and is also the result of discretionary economic policy decisions. As can be seen in Chart 4.12, the automatic stabilizers give rise to a positive relationship between the output gap and the budget balance as a percentage of GDP. Thus, in 1992 and 1993 there was a fall in the output gap of nearly 3.8 percentage points of GDP and the public deficit increased by 2.7 points. However, in 2007-2008 the output gap fell by about one percentage point, while the budget balance did so by nearly six percentage points of GDP. This shows how most of the deterioration in the public accounts has been the result of discretionary policies.

If we are to assess the fiscal policy of the public administrations we have to differentiate between the budget balance associated with discretionary decisions (structural balance) and the part associated with cyclical changes (cyclical balance). The part of the budget balance that results if the activity is within the trend level is classified as structural, and the part that depends on the cyclical position of the economy, i.e. the output gap, is cyclical ( $y$ )<sup>2</sup>.

Thus the budget balance expressed as a percentage of GDP ( $sp$ ) may be written as the sum of its cyclical and structural components ( $\overline{sp}$ ),

$$sp_t = \beta_t y_t^c + \overline{sp}_t \quad (1)$$

where,  $\beta$  determines the sensitivity of the budget balance to the economic cycle.

<sup>2</sup> For the purposes of this exercise the output gap has been approximated by a decomposition following the function of production method, as in Box 3 «Potential growth in Spain: the effects of the crisis».



There are different methods for estimating parameter  $\beta$  defined in equation (1). One of those most often used is to make an estimate based on the elasticity of revenues and expenditures to the output gap, as this allows an analysis of what budget items are behind the cyclical behavior of the budget balance<sup>3</sup>.

Thus the elasticity of the different categories of revenues may be estimated as follows:

$$t_{it} = t_{it}^* (1 + \beta_i y_t^c) \quad (2)$$

where,  $t_i$  is defined as the ratio of each tax category to GDP, and  $t_i^*$ , its long-term level.

In accordance with the elasticity estimated using a model of non-observable components, as a result of the economic crisis, the cyclical component of public revenues, as a percentage of GDP, has fallen by 1.5 percentage points since 2007, while in the period of greatest economic expansion (2003-2007) the cyclical component increased by 1 percentage point of GDP (Chart 4.13).

Thus, the operation of the automatic stabilizers explains under 30% of the total fall of 5.5 percentage points in public revenues. If we take into account that the discretionary policies of central government on revenues could have drained a further 1.5 points from public revenues, we can deduce that 2.5 percentage points of GDP (some 26 billion euros) correspond to a structural fall in the tax bases resulting from the dependence of tax resources on the real estate market and the strong growth of business profits, as has been mentioned earlier.

In terms of public expenditure, only unemployment benefits are related to the cycle, so that about 90% of total spending does not depend on variations in the output gap. This does not imply that there cannot be any relationship between public spending, not including unemployment benefits, and the output gap, as the fiscal authorities may vary the discretionary components of public spending in response to the economic cycle.

Based on the definitions of the structural components of revenues ( $t_i^*$ ) and public spending ( $g_i^*$ ) we can obtain the structural and cyclical components of the budget balance with respect to GDP.

$$sp_t^* = t_t^* - g_t^* \quad (3)$$

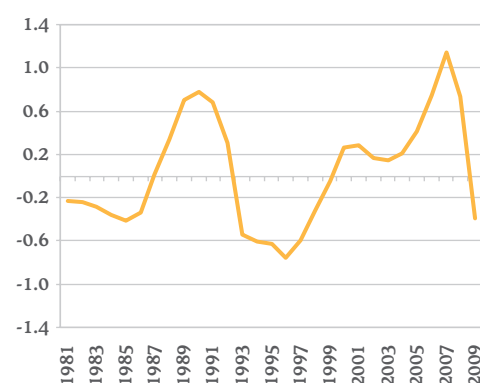
$$sp_t^c = sp_t - sp_t^* \quad (4)$$

According to these results, Chart 4.14 shows that the significant current deterioration in the public accounts has not only been the result of the economic contraction, which between 2007 and 2009 amounted to an additional accumulated deficit of 4.2 percentage points of GDP. If the public administrations close 2009 with a deficit of 11.4%, the discretionary policies and structural adjustment will have increased the structural balance to -10% (with the cyclical component of the budget balance being -1.4% of GDP), so that the deterioration of the structural deficit between 2007 and 2009 will be slightly greater than 9 percentage points.

In this context, with our forecasts of the output gap for the coming years, the objective of budget stability set by central government last June, in order to achieve a budget deficit of 3% in 2012, would entail a structural

Chart 4.13.

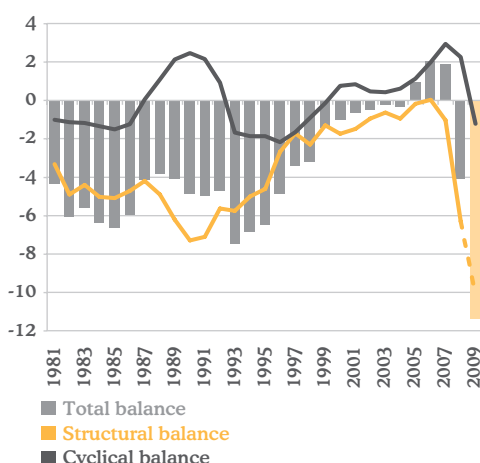
### Cyclical component of government revenues (as percentage of GDP)



Source: BBVA ERD

Chart 4.14.

### Budget balance (as percentage of GDP)



Source: BBVA ERD

<sup>3</sup> See the Appendix for the methodological development of the estimate

deficit of around 1%, similar to that in 2007, just before the start of the economic crisis. Without doubt this objective would represent a success for active fiscal policy, as it could only be achieved through a major fiscal consolidation, because the simple operation of automatic stabilizers will not be sufficient to reduce the deficit to such an extent.

Given that the structural deterioration in the tax bases of some taxes make it difficult to think that the recovery in revenues over the next three years, including the tax increases included in the proposed Central government budget for 2010, will increase their levels to much more than 38% of GDP, the achievement of the budget stability objective will represent a major effort in restricting public spending. Thus, to achieve a 3% deficit in 2012 without including new tax increases, public spending will have to be reduced by nearly 6 percentage points of GDP. Compliance with this budget stability objective would be a major economic policy achievement, since as the results of extensive economic literature show<sup>4</sup>, nearly all the fiscal consolidation programs that have been successful have been mainly based on a reduction of public spending.

### References:

- Alesina, A. and R. Perotti (1997), «Fiscal Adjustments in OECD Countries: Compositions and Macroeconomic Effects», *IMF Staff Papers* 44, 210-48.
- Corrales, F., Doménech, R and Varela, J. (2002): «Los saldos presupuestario cíclico y estructural de la economía española». IEF. *Hacienda Pública Española*, nº 162- (3/2002)
- European Commission (2009): « Public Finance in EMU – 2009». (Commision Staff working document) *European Economy* 5/2009
- McDermott, C.J. and R.F. Wescott (1996), «An Empirical Analysis of Fiscal Adjustments», *IMF Staff Papers* 43 (December), 725-753.
- Perotti, R., R. Strauch and J. von Hagen (1998), *Sustainable Public Finances*, London: CEPR.
- von Hagen, J., A. Hughes-Hallett and R. Strauch (2001), «Budgetary Consolidation in EMU». Brussels: European Commission, *Economic Papers No. 148*.

## Appendix:

### The measurement of the cyclical component of the public deficit: estimate based on elasticities of revenues and expenditures

Disaggregating public revenues and expenditures allows us to analyze what budget items are behind the cyclical behavior of the budget balance.

Two types of criteria have been used to establish a relationship between public expenditure and revenues over time with the economic cycle. The first has to do with the idea that public expenditure items are discretionary, except for unemployment benefits and to a lesser extent interest on debt. The second criterion used has been the analysis of the empirical relationship between the output gap and the ratio to GDP of each of the public revenues and public expenditures that can vary automatically with the cycle.

Specifically, the elasticity of the different categories of public revenues considered have been estimated using the following specification:

$$\frac{t_{it} - t_{it}^*}{t_{it}^*} = \beta_i \frac{GDP_t - GDP_t^*}{GDP_t^*} = \beta_i y_t^c \quad (1)$$

<sup>4</sup> Alesina y Perotti (1997), McDermott y Wescott (1996), Perotti, Strauch and von Hagen (1998) or von Hagen, Hughes-Hallett and Strauch (2001)

where,  $t_i$  is defined as the ratio to GDP of total public revenues ( $T$ ), direct taxes ( $T_d$ ), indirect taxes ( $T_p$ ) and social contributions ( $T_{es}$ ), in other words

$$t_{it} = \frac{T_{it}}{GDP_t} \quad (2)$$

Equation (1) indicates the percentage variation of income over GDP, expressed with respect to its long-term level ( $t_i^*$ ), in response to the cyclical deviation of GDP with respect to its trend ( $GDP^*$ ).

When the output gap is zero ( $GDP_t = GDP_t^*$ ) the ratio of revenues with respect to GDP is the same as the long-term level ( $t_{it} = t_{it}^*$ ). In addition, if public revenues were proportional to GDP,  $\beta_i$  would be equal to zero, so the cyclical variations in GDP would not affect the ratio of revenues to GDP.

Equation (1) can be written as

$$t_{it} = t_{it}^* (1 + \beta_i y_t^c) \quad (3)$$

so it is possible to estimate  $\beta_i$  using the Kalman filter under the hypothesis that<sup>5</sup>

$$t_{it}^* = t_{it-1}^* + w_{it} \quad (4)$$

The table opposite presents the estimated elasticities for the 1980-2007 period. As can be seen, total revenues are proportional with respect to the GDP (column [1]), as the estimated coefficient is not statistically different from zero. The proportionality of total revenues to GDP is a result of the participation of direct taxes, and to a lesser extent indirect taxes, in GDP being procyclical (columns [2] and [3] respectively). The coefficient of direct taxes is significant, while the participation of social insurance contributions (column [4] is countercyclical, so that these effects cancel each other out when aggregating the different participations of public revenues.

Elasticidades estimadas para el periodo 1980-2007

Variable dependiente	t [1]	t <sub>d</sub> [2]	t <sub>p</sub> [3]	t <sub>cs</sub> [4]
$\beta$	0,173 (0,46)	2,502 (2,97)	0,299 (0,41)	-0,568 (-1,47)

This proportionality of total public revenues to GDP implies the following:

$$t_{hp,t}^* \equiv \frac{T_t^*}{GDP_t^*} = \frac{T_t}{GDP_t} \quad (5)$$

With regard to public expenditure, the cyclical variations of the economy may give rise to the following: in expansive periods unemployment benefit payments reduce and in contractions they increase. Given this, the structural component of public expenditure may be defined as

$$g_t^* \circ \frac{G_t^*}{GDP_t^*} = \frac{1}{GDP_T^*} G_{r,t} + \frac{1}{GDP_T^*} G_{u,t} \frac{u_T^*}{u_T} \quad (6)$$

where,  $G_r$  is defined as the sum of all the spending components, less the spending on unemployment benefits ( $G_u$ ).

<sup>5</sup> Using an augmented Dickey-Fuller test it has been proved that the hypothesis that  $T_t/PIB_t$  is  $\lambda(1)$  cannot be rejected, in line with the results of De Castro and Hernández de Cos (2002). Given that by construction the output gap is stationary, so the only component that can explain why the participation of revenues in the GDP is random is the state variable  $f$ .

## 5. Summary of forecasts

EMU (Year-on-year rate as %, unless otherwise indicated)

	2003	2004	2005	2006	2007	2008	2009	2010
<b>GDP at constant prices</b>	<b>0.8</b>	<b>1.9</b>	<b>1.8</b>	<b>3.1</b>	<b>2.7</b>	<b>0.6</b>	<b>-3.8</b>	<b>0.2</b>
Consumer spending	1.2	1.5	1.9	2.1	1.6	0.3	-0.8	0.2
Public spending	1.7	1.6	1.5	2.0	2.1	2.2	2.3	1.8
Gross fixed capital formation	1.2	1.9	3.5	5.8	4.8	-0.7	-9.9	-1.4
Variation in inventories (*)	0.2	0.2	-0.1	0.1	0.0	0.1	-0.7	0.1
<b>Internal demand (*)</b>	<b>1.5</b>	<b>1.7</b>	<b>2.0</b>	<b>2.9</b>	<b>2.4</b>	<b>0.6</b>	<b>-2.8</b>	<b>0.3</b>
Exports (goods and services)	1.4	6.8	5.3	8.6	5.9	1.0	-14.0	2.1
Imports (goods and services)	3.2	6.5	6.0	8.4	5.2	1.0	-12.4	2.4
<b>External demand (*)</b>	<b>-0.6</b>	<b>0.2</b>	<b>-0.2</b>	<b>0.2</b>	<b>0.4</b>	<b>0.0</b>	<b>-0.9</b>	<b>-0.1</b>
<b>Prices</b>								
CPI	2.1	2.1	2.2	2.2	2.1	3.3	0.3	0.8
Core CPI	2.0	2.1	1.5	1.5	2.0	2.4	1.3	0.7
<b>Labor market</b>								
Employment	1.1	0.9	1.9	2.0	2.0	1.1	-1.7	-1.0
Unemployment rate (% of working age popul.)	8.8	9.0	9.0	8.4	7.5	7.5	9.5	10.9
<b>Public sector</b>								
Deficit (% GDP)	-3.1	-2.9	-2.5	-1.3	-0.6	-2.0	-6.6	-7.2
<b>Foreign sector</b>								
Current-account deficit (% GDP)	0.3	0.8	0.1	-0.1	0.1	-1.1	-0.8	-0.3

\* Contribution to growth

### International background (% year on year)

	Real GDP growth (%)				Inflation** (%)			
	2007	2008	2009	2010	2007	2008	2009	2010
U.S.	2.1	0.4	-2.5	1.5	2.9	3.8	-0.6	1.1
Japan	2.3	-0.7	-5.3	1.1	0.5	1.0	-1.5	-0.3
Latin America (*)	5.7	4.0	-2.5	3.5	7.1	9.4	6.6	7.8

\*Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay and Venezuela  
\*\* For Latin America, the forecast is for the end of the period

### Financial variables

	Official rate (%) at the end of the period				10-year interest rate (%), quarterly average*			
	30/10/09	4Q09	Q210	4Q10	30/10/09	4Q09	Q210	4Q10
EMU	1.00	1.00	1.00	1.00	3.2	3.3	3.1	3.3
U.S.	0.00	0.00	0.00	0.00	3.4	3.4	3.3	3.6

\* 10-year interest rates refer to German bonds

	Exchange rate (vs euro)*				Brent oil (dollars per barrel)*			
	30/10/09	4Q09	Q210	4Q10	30/10/09	4Q09	Q210	4Q10
US Dollar	1.48	1.45	1.38	1.32	75.3	64	66	68

\* Average for period

## Summary of forecasts for the Spanish economy

(Annual variation as %, unless otherwise indicated)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
<b>GDP at market prices</b>	<b>2.7</b>	<b>3.1</b>	<b>3.3</b>	<b>3.6</b>	<b>4.0</b>	<b>3.6</b>	<b>0.9</b>	<b>-3.8</b>	<b>-1.2</b>
Private Consumption	2.8	2.9	4.2	4.2	3.8	3.6	-0.6	-5.4	-1.7
Public spending	4.5	4.8	6.3	5.5	4.6	5.5	5.5	4.1	1.1
Gross fixed capital formation	3.4	5.9	5.1	7.0	7.2	4.6	-4.4	-15.3	-7.5
Capital goods	-2.9	4.1	5.1	9.2	9.9	9.0	-1.8	-26.7	-12.2
Construction	6.3	6.2	5.4	6.1	6.0	3.2	-5.5	-10.6	-5.2
Housing	7.0	9.3	5.9	6.1	6.2	3.0	-10.3	-23.6	-10.8
Other	5.6	3.5	5.0	6.2	5.8	3.3	-0.4	1.7	0.2
Other Products	5.0	7.2	3.8	7.1	7.5	3.6	-4.3	-14.0	-8.4
Variation in inventories (*)	0.0	-0.1	0.0	-0.1	0.4	-0.1	0.1	0.0	0.0
<b>Domestic demand (*)</b>	<b>3.3</b>	<b>3.9</b>	<b>4.9</b>	<b>5.3</b>	<b>5.5</b>	<b>4.4</b>	<b>-0.5</b>	<b>-6.8</b>	<b>-2.9</b>
Exports of goods and services	2.0	3.7	4.2	2.5	6.7	6.6	-1.0	-13.9	0.5
Imports of goods and services	3.7	6.2	9.6	7.7	10.2	8.0	-4.9	-20.4	-4.9
<b>Net external balance (*)</b>	<b>-0.6</b>	<b>-0.8</b>	<b>-1.7</b>	<b>-1.7</b>	<b>-1.4</b>	<b>-0.9</b>	<b>1.4</b>	<b>3.0</b>	<b>1.7</b>
<b>GDP at current prices</b>	<b>7.1</b>	<b>7.4</b>	<b>7.4</b>	<b>8.1</b>	<b>8.3</b>	<b>7.0</b>	<b>3.4</b>	<b>-3.5</b>	<b>-0.3</b>
Million euros	729,206	782,929	841,042	908,792	984,284	1,052,730	1,088,502	1,050,223	1,047,546
<b>Prices and costs</b>									
GDP deflator	4.3	4.1	4.0	4.3	4.1	3.3	2.5	0.3	1.0
Household consumption deflator	2.8	3.1	3.6	3.4	3.6	3.2	3.7	-1.1	0.5
CPI	3.5	2.9	3.0	3.4	3.5	2.8	4.1	-0.4	0.9
Inflation differential with EMU (pp)	1.3	0.9	0.9	1.2	1.3	0.6	0.8	-0.7	0.1
Wages per employee	3.3	3.6	3.0	3.7	4.0	4.5	6.1	3.9	1.8
Unit labor cost (ULC)	2.9	2.9	2.4	3.3	3.3	3.8	4.7	1.0	-0.3
<b>Labor market</b>									
Working age population. LFS	4.1	4.0	3.3	3.5	3.3	2.8	3.0	0.7	-1.1
Employment. LFS	3.0	4.0	3.9	5.6	4.1	3.1	-0.5	-6.9	-3.5
Variation in thousands of people	484	666	675	1002	774	608	-98	-1395	-668
Full-time employm., quarterly nat. acc. (CNTR)	2.3	2.4	2.7	3.2	3.3	2.8	-0.6	-6.7	-3.3
Unemployment rate	11.5	11.5	11.0	9.2	8.5	8.3	11.3	18.1	20.1
Productivity	0.4	0.7	0.6	0.4	0.7	0.7	1.5	2.9	2.1
<b>Public sector</b>									
Debt (% GDP)	52.5	48.7	46.2	43.0	39.6	36.2	39.7	54.0	64.0
Public sector balance (% GDP)	-0.5	-0.2	-0.4	1.0	2.0	1.9	-4.1	-11.4	-10.3
<b>External sector</b>									
Trade balance (% GDP)	-5.8	-5.9	-7.2	-8.6	-9.1	-9.4	-8.6	-3.9	-2.6
Current account balance (% GDP)	-3.3	-3.5	-5.3	-7.4	-9.0	-10.0	-9.6	-5.6	-4.0
<b>Households</b>									
Real disposable income	3.4	3.5	3.5	4.5	3.5	3.0	2.2	1.8	0.0
Nominal disposable income	6.3	6.7	7.2	8.0	7.2	6.3	6.0	0.6	0.5
Savings rate (% nominal income)	11.4	12.0	11.3	11.3	11.2	10.7	12.9	19.7	21.2

Source: official bodies and BBVA-ERD

(\*) Contribution to GDP growth







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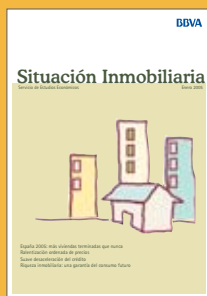
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