

Situación Spain

April 2002

- Spain slowing down on its own
- Inflation: taking a transitory break
- Household indebtedness: a low-risk factor
- Spain is not converging on IT



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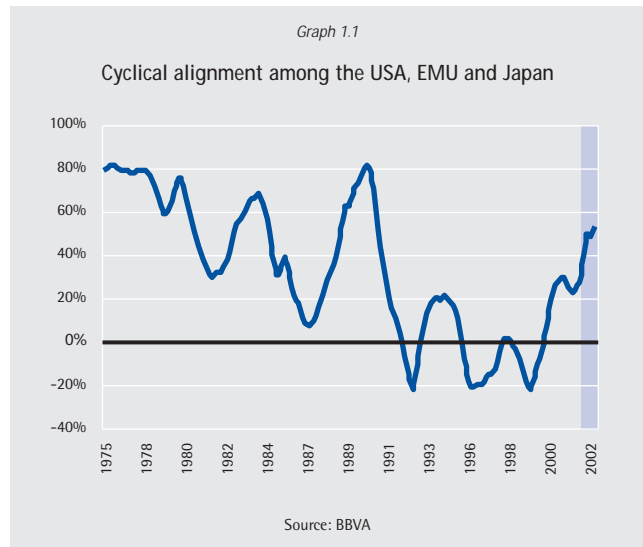
1. International environment

Global optimism?

The uncertainties in the international environment have been diminishing in the early part of 2002, in particular with respect to U.S. growth and hence the behaviour of world trade. In contrast to other decelerations, the relative strength of private consumption in the U.S. economy has led to a marked decline in inventories, which is boosting activity in the short term. A recovery in economic activity in the United States is showing up in all the indicators. The question now is its likely duration and intensity. In the medium term, strong productivity growth seems to be the most likely support variable for this recovery to become firmly established. As a result, after the previous downward revision of activity for the whole year, growth forecasts are now being sharply revised up. Business expectations, not only in the United States, but in the major world economies, are picking up from the lows reached at the end of 2001, reflecting the turnaround that may be taking place in world economic activity.

There are still some lingering uncertainties in the macroeconomic scenario, however. In fact, after the synchronized downturn, the main risk is that domestic factors will curtail growth. This could result in a desynchronization of the upturn among the major economic areas. A number of countries clearly stand to benefit from the recovery in world trade, and, in particular, from higher world demand for technological goods, as is happening in the Southeast Asian countries. Europe, too, appears to be in a position to capitalise on rising world trade, especially on the back of a weak currency, but doubts persist about its domestic demand performance. The situation in Japan is more complicated. In contrast to the United States and Europe, Japan has faced the deceleration in the midst of deep-seated problems in the financial system, forcing the authorities to adopt urgent measures such as liquidity injections by the Bank of Japan and asset purchases by the public sector. In the case of Latin America, while the limited extent of real or financial contagion from the Argentine crisis to the rest of the region is a positive development, the main uncertainty relates to the behaviour of the other transmission channel of the crisis: foreign direct investment. If these domestic risks were to materialise, the expansion would be weaker and less sustainable than envisaged at present.

Now, two recent global risk factors (although both with low probability) must be added to this scenario. The first is



the higher-than expected increase in the price of oil in the first few months of the year. Not only as a result of an improving growth outlook, but because of greater co-ordination among oil producers and the conflict in the Middle East. Although crude oil prices are not expected to rise much further, their evolution in the year to date is less positive for the importing countries than anticipated a few months ago. The second is the imposition of import tariffs on steel by the United States. This could constitute a risk factor in so far as it indicates a shift in the dominant favourable predisposition in recent years to the globalisation of trade exchanges. The latter scenario is an unlikely one, since the process of internationalisation of trade and financial flows of recent years has generated significant benefits.

The interest rate cycle is turning upwards

While there are clearly a number of lingering risks in the international scenario, on balance the past few months have seen a reduction in uncertainty, not only macroeconomic, but also microeconomic. Following Enron's suspension of payments, the Argentine crisis and market fears arising from the September 11 terrorist attacks, the solidity shown by the international financial system and growing optimism about the recovery in U.S. activity have permitted a reduction in investors' risk aversion. Thus, after a period of pronounced volatility, investors have returned to stock and corporate bond markets. The result has been a rise in yields along the entire yield curve for U.S. Treasuries.

In the first few months of 2002, the market is therefore pricing in a sharp recovery in activity and the prospect of

an end to the clearly relaxed monetary policy stance. This is particularly important in the United States, where nominal interest rates are at a 40-year low. While there would appear to be little doubt that, in a context of stronger growth, monetary policy will adopt a more neutral stance, the discussion is focussed on what the size and timing of the rate hikes will be. In a context of low inflation expectations, the Federal Reserve will probably wait until the second half of the year to begin the tightening cycle (by then some of the remaining uncertainties should have faded and the economic recovery should be more firmly on track). Interest rates are thus likely to end 2002 one percentage point higher than at present, and continue rising to around 4% by the middle of next year. That is, to a level that may be considered close to "neutral" for an economy growing at near potential growth and a trend inflation rate of around 2.5%.

Yields have also rebounded sharply in Europe. In this case, though, not on the back of an improving activity outlook, but rather as a result of deteriorating projections for inflation and public deficits. Early inflation data for 2002 have in fact come in higher than expected. This is not just the result of temporary factors such as an increase in fresh-food prices. Services inflation is expected to be 3% in 2002. The rounding-up of prices in the euro cash changeover and higher crude oil prices are exerting further upward pressure on prices. Consequently, the ECB is expected to miss its 2% inflation ceiling for the third consecutive year, and forecasts for 2003 point in the same direction. As for fiscal policy, the slippage evident in the consolidation of public sector accounts has not only reduced the scope for fiscal expansion at a time of weakening activity, but has seen a number of countries, like Germany, move very close to breaching the Stability and Growth Pact (SGP). In these circumstances, the fact that no country has been issued an "early warning" on its deficit, as envisaged in the SGP, reduces the credibility of European fiscal policies.

In the context of strengthening world activity and deteriorating domestic inflation expectations, European monetary conditions may be judged to be relaxed. It is reasonable to assume, therefore, that the current easing cycle has come to an end and that, in the course of the year, interest rates will begin to rise. Economic uncertainty over the behaviour of domestic demand and political pressure resulting from the forthcoming electoral processes in France, the Netherlands and Germany may delay any upward adjustment until the end of the year (after a tightening move by the Federal Reserve) and limit the increase to 25 basis points in 2002. By the middle of next year, benchmark interest rates are expected to have risen to 4%, meaning that no differential with the United States is expected in the short term.

At the longer end of the yield curve, with the improved growth outlook in the United States, U.S. interest rates will be higher than European rates.

A narrow range for the euro and yen depreciation

At its current levels against the dollar, the euro appears, at least partly, to be factoring in stronger growth and higher long-term interest rates in the United States than in Europe in 2002. This will probably help to maintain capital flows towards the U.S. economy. The European economy's higher inflation is exerting downward pressure on the euro. In this context, the euro is expected to move in a narrow range over the months ahead, coming under downward pressure as the recovery unfolds in the United States.

After appreciating at the end of March because of Japan's fiscal year-end, the yen is expected to fall back again under pressure from the weak economy and the ailing financial sector.

Table 1.1. Growth forecasts

	2000	2001	2002	2003
OECD	3.9	1.1	1.4	2.6
US	4.1	1.2	2.0	3.2
EMU	3.4	1.5	1.3	2.3
UK	2.9	2.4	2.3	2.8
Japan	2.2	-0.4	-0.8	1.0
Developing countries	5.4	4.1	4.5	5.2
Latin America	4.2	0.4	0.4	4.1
Transition countries	6.3	4.9	3.9	4.2
WORLD	4.7	2.4	2.7	3.7

Sources: IMF and BBVA

Table 1.2. Inflation forecasts

	2000	2001	2002	2003
OECD	2.5	2.3	1.6	2.0
US	3.4	2.8	1.6	2.5
EMU	2.3	2.5	2.2	2.4
UK	2.1	2.2	2.6	2.5
Japan	-0.7	-0.7	-0.9	-0.3
Developing countries	5.4	5.6	5.2	5.1
Latin America	6.8	6.3	8.3	8.0
Transition countries	22.0	18.1	10.7	10.1
WORLD	4.2	3.9	3.0	3.2

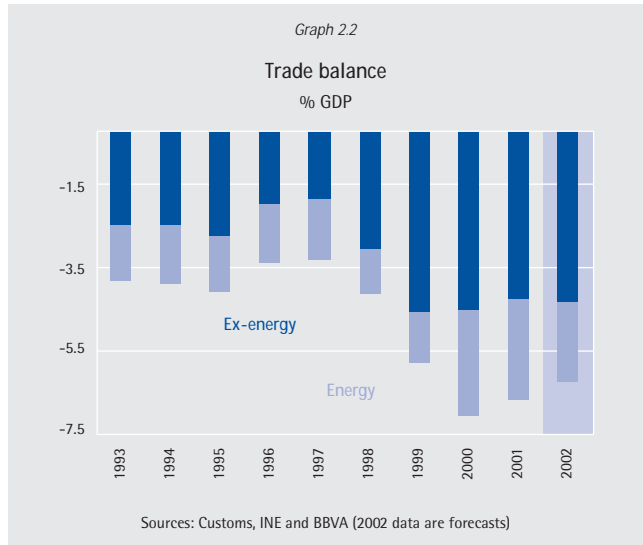
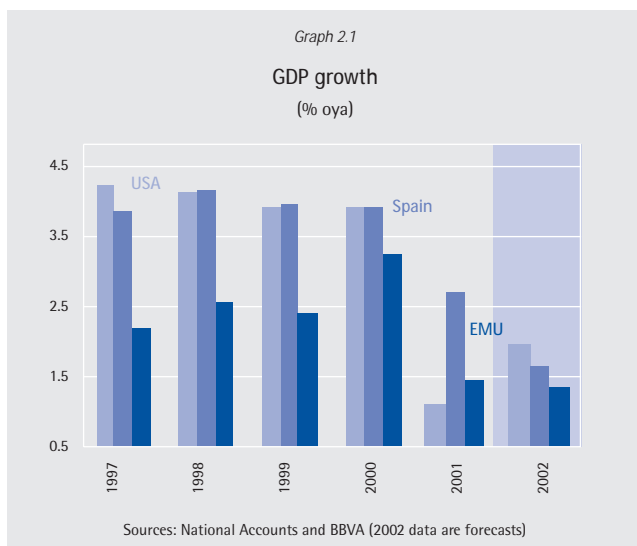
Sources: IMF and BBVA

2. The real economy

The Spanish economy experienced a sharp deceleration during the past two years, with GDP growth falling from 4.5% in the first quarter of 2000 to 2.4% in the fourth quarter of 2001. Over the same period, however, the world economy in general, and EMU, in particular, suffered an even more pronounced slowdown, thereby making it possible for the process of real convergence of the Spanish economy to continue. Indeed, the growth differential with the United States and EMU widened in 2001, from virtually zero with the United States and 0.7 points with EMU to 1.6 and 1.3 points, respectively. In addition, in fiscal terms, in 2001 the Maastricht public debt requirement (below 60% of GDP) was strictly complied with for the first time and the public accounts closed with a balanced budget.

In this context, the economic performance in 2001 can be considered as positive. The Spanish economy was able to sustain above-potential growth even in a highly unfavourable international environment¹. However, the simultaneous global slowdowns mask the fact that the deceleration in the Spanish economy, though accentuated by the international environment, is due to internal factors. The Spanish economy has been experiencing above potential growth (estimated at around 2.6%) since 1997 as a result of a series of transitory demand and supply factors that fuelled economic activity. A further stimulus was provided by the bringing-forward of spending decisions in the run-up to the introduction of the Euro in January 2002, the so-called "Euro effect", which helped

¹ The output gap of the Spanish economy remained positive throughout 2001, but is expected to turn negative in 2002.



to moderate the pace of the slowdown in the second half of 2000 and in 2001.

Deceleration caused by internal factors...

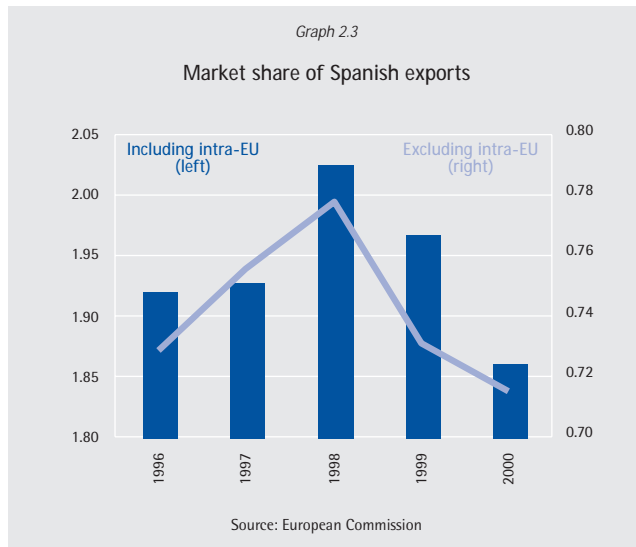
Continuous above-potential growth is unsustainable, however, since it generates a series of imbalances that limit the economy's growth possibilities. First, the trade and current account deficits are too high: 6.6% and 2.8% of GDP in 2001, respectively, in spite of the depreciation of the exchange rate. Further, the continuing inflation differential with EMU is eroding the economy's ability to compete.

The unwinding of the factors underpinning the expansion in the second half of the 1990s is therefore leading to a slowdown in the pace of economic growth. In addition, in 2002, the "Euro effect" will have a negative impact on the growth rates of consumption and construction and hence on GDP growth.

...and strengthened by the global downturn

The deterioration in the external environment is not the main factor underlying the growth slowdown, although it did have a significant effect on the performance of the external sector. In fact, the lag with which external shocks are transmitted to the Spanish economy means that the global slowdown in the latter part of 2001 will contribute to a loss of momentum in 2002. Economic activity is nonetheless expected to expand by 1.7% in 2002.

The latest cyclical expansion of the Spanish economy was underpinned by a series of factors which, as they unwind, are shaping the current deceleration.



End of monetary stimulus

On the demand side, the monetary stimulus of the second half of the 1990s is unlikely to be repeated. The stimulus provided by the positive impact on economic agents' confidence of Spain's participation in EMU and the resulting decline in real interest rates of over 4 percentage points between 1995 and 1999 is a one-off event. The depreciation of the exchange rate, by 30% since 1995 (15% since the introduction of the Euro in 1999), which represented a further monetary easing, is also unlikely to occur again with the same intensity. This depreciation permitted the Spanish economy to gain competitiveness internationally up to the year 2000, masking the loss due to the continuing inflation differential with Europe. This "hidden" loss of competitiveness became visible in 2001, however, when the depreciation of the Euro was insufficient to compensate for the inflation differential. The ongoing inflation differential with EMU means that in 2002 the Spanish economy will again lose

competitiveness. A loss reflected in a fall in the market share of Spanish products in international markets. Thus, Spanish exports as a percentage of world exports have shrunk from 2.03% in 1998 to 1.86% in 2000.

Moreover, in a context of weakening activity, the pro-cyclical nature of fiscal policy in Spain will have a negative impact on growth in 2002. The goal of a balanced budget in 2002 means that, given the cyclical situation of the economy, fiscal policy will be restrictive. The slowdown in economic growth would warrant a relaxation of the goal of budgetary balance, thus allowing the automatic stabilisers to operate. However, the transfer of monetary autonomy to the European Central Bank and the fact that the ECB's monetary policy stance is expansionary for the cyclical conditions of the Spanish economy imply that, in order to achieve an appropriate policy-mix, a relatively contractionary fiscal policy is needed to offset the monetary stimulus.

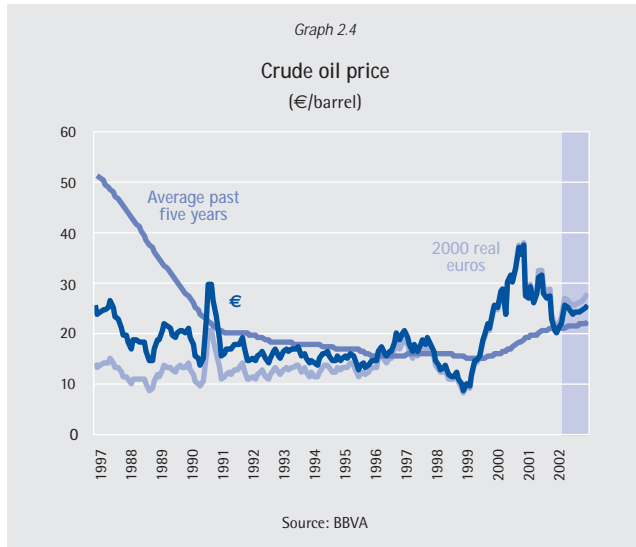
Reversal of cost moderation

On the supply side, the reduction in costs that contributed to the latest expansion is no longer driving growth, and costs are now acting as a brake on activity. As far as energy costs are concerned, after rocketing in 1999 and 2000 (from \$12.7 per barrel in 1998 to \$28.3 in 2000), the price of oil fell sharply in the latter part of 2001, to \$24.6 per barrel in December. In the early part of 2002, the decline has been less pronounced, with the price stabilising at above \$23 per barrel. The price of crude oil in real terms is nonetheless still much higher than in the period 1997-1999 or than the average price of the last 15 years. In addition, the recovery in world demand in 2002, coupled with the strength shown by OPEC and the political

Table 2.1. Macroeconomic data

(% oya)	2001				2002				Annual average		
	1tr	2tr	3tr	4tr	1tr	2tr	3tr	4tr	2000	2001	2002
Trend-cycle											
Private consumption	2.9	2.8	2.6	2.6	2.2	1.8	1.7	1.7	4.0	2.7	1.8
Public consumption	3.1	3.0	3.1	3.4	3.2	3.2	3.2	3.2	4.0	3.1	3.2
Gross fixed capital formation	3.5	2.7	2.0	1.7	0.3	-0.6	-0.6	0.0	5.7	2.5	-0.2
Capital goods and other products	0.7	-1.0	-2.1	-2.4	-3.7	-4.0	-3.2	-1.5	5.1	-1.2	-3.1
Construction	6.0	5.9	5.6	5.3	3.7	2.1	1.5	1.2	6.2	5.7	2.2
Inventories (*)	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	-0.1	0.1	0.0
Domestic demand (*)	3.2	3.0	2.8	2.7	2.0	1.5	1.4	1.6	4.2	2.8	1.6
Exports	6.8	4.0	1.8	1.3	0.8	0.7	0.8	1.5	9.6	3.4	1.0
Imports	6.4	4.1	2.2	2.1	1.1	0.8	0.6	1.1	9.8	3.7	0.9
Net exports (*)	0.0	-0.1	-0.2	-0.3	-0.1	0.0	0.0	0.1	-0.2	-0.1	0.0
GDP at market prices	3.2	2.9	2.6	2.4	1.9	1.5	1.5	1.7	4.1	2.8	1.7

(*) Contribution to GDP growth
Sources: INE and BBVA forecasts



uncertainty in the Middle East, suggests that oil prices are in fact more likely to rise in the period ahead than to fall.

The real cost of capital, which declined by 2.9 points between 1996 and 2001, is expected to rise in 2002 for the first time since 1992. Consequently, the rate of business investment, already negatively affected by the deterioration in the outlook for demand, is not expected to pick up any further. However, the cost of capital should not be an impediment to an increase in investment in the medium term (the increase in 2002 would only rise the cost to around 1998 levels).

Real labour costs, the key factor behind the expansion since 1995, are expected to continue to register moderate increases (a 0.7% rise is forecast for 2002, after 0.8% in 2001). However, the wage moderation of recent years is the result of much higher-than-expected rates of inflation rather than a reduction in wage aggressiveness; that is, wage demands above expected inflation. In fact, salaried employee compensation has been increasing at rates above 3% since 2000 (3.4%), accelerating to 4.3% in 2001, in line with the upward trend in inflation rates. In this sense, wage-setting on the basis of past, rather than expected, inflation – wage indexation – may lead to the transitory shocks affecting the cost structure becoming permanent. The negative inflation surprises (inflation has been more than 1 percentage point higher than expected) lie behind the real wage moderation seen in 2000 and 2001, since

wage aggressiveness was 1.4 and 2.4 points, respectively. This constitutes an additional risk for the economy, since, if inflation falls below expectations, real wages would increase automatically, even if wage aggressiveness remains unchanged. To the extent, therefore, that there is a backward looking component to the process of formation of expectations by the economic agents, increasing wage aggressiveness and interrupting wage moderation, the current nominal problem could become a real one.

“Euro effect”: weaker activity in 2002

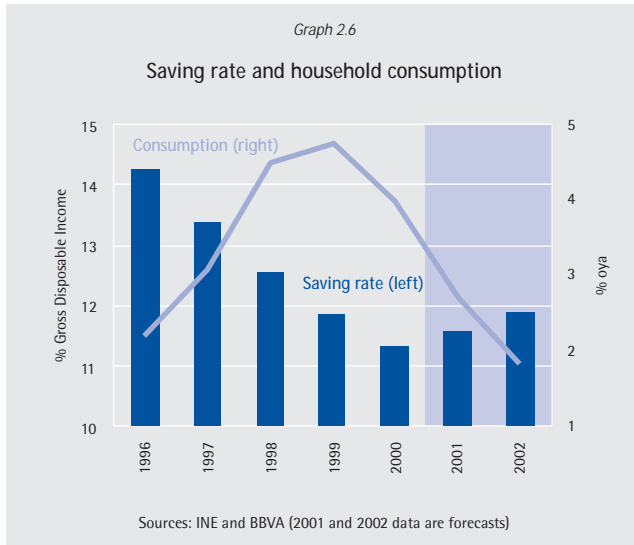
In addition to the impact of these factors, the “Euro effect” provided a further stimulus to output growth and, in particular, to private consumption and residential investment in 2000 and 2001. Specifically, the “Euro effect” may have contributed 0.3 points to consumption growth in 2001. Consumption growth will therefore slow in 2002, probably to between 1.5% and 1.9%, depending on the amount of spending brought forward². The impact on construction, together with the weakening of the expansion in the sector, is expected to lead to a contraction in residential investment of around 2%.

² It is assumed that only 25% of the cash re-entering the economy (17.2 million Euros in 2000-2001) is the “Euro effect” and that 1/3 of this is dedicated to extra consumption and the rest to residential investment. If the “Euro effect” represents a bigger percentage, or more is dedicated to consumption, then the growth rate in 2002 would be lower.

Table 2.2. Real cost of capital

	1996	1997	1998	1999	2000	2001	2002
Level (%)	6.3	5.1	4.1	3.9	3.4	3.4	4.0
Change (p.p.)	-0.9	-1.2	-1.0	-0.2	-0.4	-0.1	0.6

Source: BBVA



This combination of factors will probably reduce domestic demand growth to 1.6% in 2002. The deceleration in private consumption should help to check the decline in the rate of household saving, which may register a slight improvement from the record lows reached in 2000 (to around 12% of gross disposable household income in 2002, from 11.3% in 2000). The significant increase – although to levels similar to those of our European neighbours – in household indebtedness is a further risk. Moreover, deteriorating business expectations and higher costs, both operating costs (greater wage risks and a rise, albeit modest, in the real cost of capital) and financial costs (indebtedness is high, despite the moderate increase in interest rates) will have a negative impact on capital goods investment. The latter is expected to continue to fall throughout the year. Construction, the most dynamic component in recent years, will only be underpinned by civil engineering works, given the recession in residential investment.

The increase in the household saving rate and the slowdown in residential and private-sector productive investment have improved the accounts of the household and corporate sectors in 2001. The lower borrowing needs

of the private sector, together with the adjustment of the public sector deficit, helped to reduce the borrowing needs of the Spanish economy as a whole to 1.9% of GDP in 2001, down 0.7 points from the previous year. In 2002, a strengthening of these trends (slowing domestic consumption and lower residential investment) should make room for a further decline in the economy's borrowing needs.

Global economic growth will not support growth until the end of 2002

The slowdown in Spanish output growth, as outlined above, is determined by a series of factors intrinsic to the Spanish economy. The international environment will nonetheless have an important bearing on the economy's growth performance. In a globalised world, a deterioration in the external environment affects, first of all, the expectations of domestic economic agents, both businesses and consumers. In this sense, the improvement expected in the second half of the year should help to change the economic outlook. Despite the improvement, however, after slowing from over 12% in 2000, to 1% in 2001, growth in world trade is only expected to be around 2% in 2002, the slowest growth (except for 2001) since the early 1980s. World trade will therefore be only a modest support for domestic activity. Additionally, the cyclical lag with which external shocks impacts the Spanish economy suggests that, even if Spanish economic growth were affected by the global economic performance, the present deceleration would still not have touched bottom. The cyclical low point would in fact occur between the second and third quarters of this year.

In sum, the same stimuli as made possible the latest expansion in the Spanish economy are responsible for the current deceleration. The temporary nature of these stimuli means that new supports would be necessary to sustain growth rates above potential or to raise potential growth. In this sense, only structural reforms or productivity gains associated with technological advances can support long-term growth. Structural reform in the Spanish economy is still in its infancy and productivity growth is very low (0.3% in 2001). A bigger push in these areas is needed, especially in the light of how flexible markets and technological advances have enabled the United States to cope swiftly and effectively with the latest downturn.

Table 2.3. Spain: income account

	1998	1999	2000	2001	2002
Gross disposable income (% oya)	6.7	6.8	7.4	6.5	4.8
Gross saving (% GDP)	22.6	22.2	22.2	22.5	22.7
Net lending (+) or borrowing (-) (% GDP)	0.6	-1.1	-2.6	-1.9	-1.2

Sources: Bank of Spain, INE and BBVA

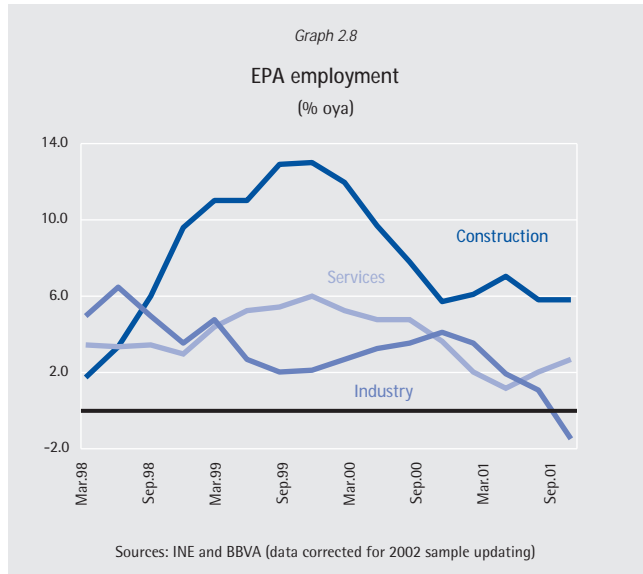
Slow deterioration in employment in 2001

Employment growth in the Spanish economy has been slowing gradually since 1999³, whatever the measure of employment considered⁴. This trend intensified in the latter part of 2001, with the result that in the fourth quarter of the year Social Security registrations and EPA employment recorded their worst performances since 1997 and 1994, respectively. Moreover, the unemployment data in the first two months of 2002 have been worse than expected, confirming the prospect of an average increase in INEM registered unemployment of around 7% in 2002, the first rise since 1994.

By sector, there was a notable acceleration in employment growth in service activities, and in real estate and business services, in particular, with an annual growth rate of 10% at the end of 2001. This performance contrasts with the behaviour of employment in industry, which bore the brunt of rapidly weakening external conditions throughout the year. After rising at a 4.1% annual rate in the fourth quarter of 2000, employment growth in industry fell by 1.5% in the fourth quarter of 2001. Employment in construction, meanwhile, sustained stable growth rates of around 6% year-on-year throughout 2001.

The outlook for 2002 is for employment growth to fall further, to 1%, from a rate of 2% in 2001. This would nonetheless be a positive performance, in a scenario of economic deceleration with a GDP growth rate of under 2%. By sector, employment is expected to fall in industry and agriculture and expand in services and construction.

³ The acceleration in EPA employment in 1999, in contrast to developments in other measures of employment, was linked to a number of survey changes, including a new timetable for interviews, the use of telephones to carry out the survey and a sample widening.
⁴ EPA Labour Survey, National Accounts, Social Security registrations.



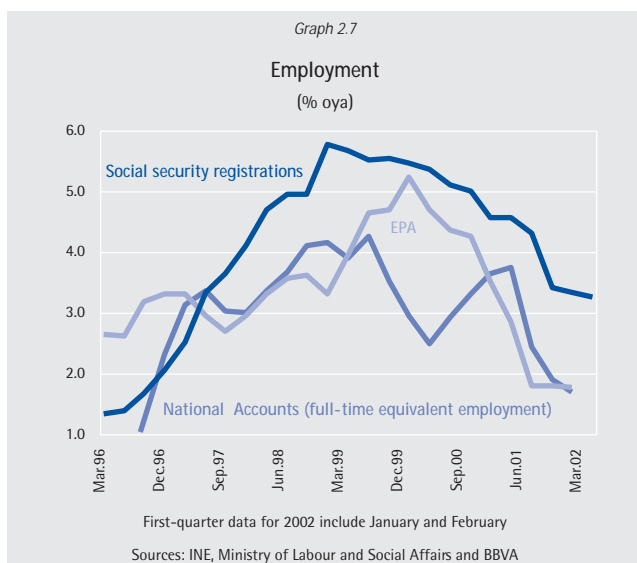
The deterioration in the process of job creation in the Spanish economy has coincided not only with a fall-off in demand, but with the end of a period of nominal wage moderation⁵ (though not in real terms because of the upward surprises registered in inflation). This period began in the mid-1990s after the 1994 labour market reform and the sharp fall in employment in the two previous years. It has been one of the key factors supporting the recent economic expansion in Spain. Wage moderation and the reforms undertaken in the labour market⁶ have enabled the expansion in employment resulting from the upturn in activity to be proportionately greater in the 1990s than in earlier periods, a trend also seen in other European countries⁷.

The expansion in the labour force in 2002, at a rate of 1.5%, is expected to push up the unemployment rate by 0.5 percentage points, to 13.5%, according to data based on the current EPA Labour Survey.

A new EPA in 2002 and new forecasts

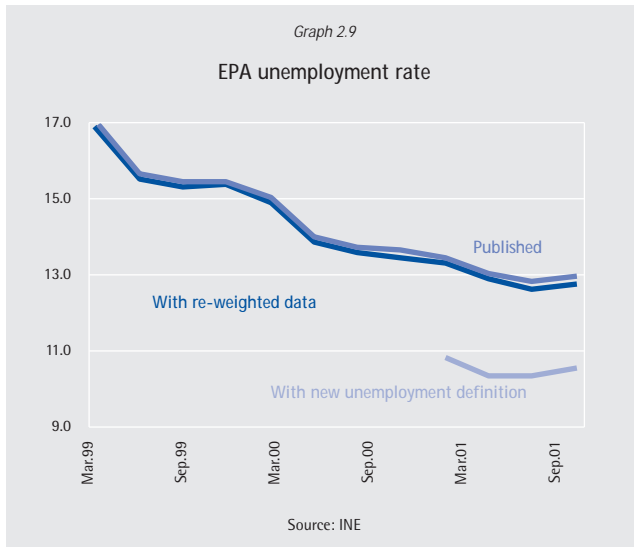
These forecasts for 2002 do not take account of the effects of the changes the INE is going to make in the first quarter of 2002 to the EPA Labour Survey (to be published on May 16)⁸. Incorporating the increase in levels of employment and

⁵ The increase in salaried employee compensation was 4.3% in 2001, the highest since 1996.
⁶ Legal changes have mainly affected types of hiring, with the promotion of permanent employment through the reduction of severance costs and subsidies for social security contributions.
⁷ See IMF, "Job-Rich Growth" in Spain: Staff Report for the 2001 Article IV Consultation, January, 2002.
⁸ A summary of the changes and their effects on the actual EPA data is presented in the Box "More Employment, Less Unemployment and More Activity" in this issue of Situación Spain.



the labour force resulting from the sample re-weighting and new population projections, the observed unemployment rate data are found to be practically identical to those already

published⁹. Also applying the new definition of unemployment in 2001 would result in a fall in the unemployment rate to 10.5%, 2.5 points below the official rate.



Nonetheless, the unemployment rate would rise, from 10.5% in 2001 (the new unemployment rate after the changes in the definition of unemployment), to around 11% of the labour force in 2002. This rate would be consistent with an increase in the active population of 2.1% (0.6 percentage points more than the "original" forecast) and a 1.5% expansion in employment, 0.5 points more than the original estimate, but less than half the increase in employment in 2001 (3.7%) on the basis of the new criteria.

The increase in the unemployment rate in 2002 will nonetheless be relatively small compared with earlier cyclical phases as a consequence of a smaller increase in the potentially active population: the population aged 16-64 fell by 0.4% in 2001, as against an average rise of 0.5% in the period 1990-2000.

⁹ The average difference in the period 1997-2001 between the published unemployment rate and that resulting from the sample re-weighting is 0.1 of a percentage point.

The "euro effect" outstrips forecasts

In 2001, cash in circulation fell by 18.5%. The intensification of the decline in cash as the year progressed suggests that the behaviour of this variable was closely linked to the impending introduction of the euro in January 2002. Nonetheless, the decline in the stock of banknotes and coins does not seem to be result of a substitution of cash by other alternative means of payment. In fact, in 2001 the penetration of card payments registered its slowest growth since 1995. The coincidence of rising economic transactions (6.8% if measured in terms of nominal GDP) and falling demand for cash on the part of Spanish households and companies seems, therefore, to suggest that some proportion of purchases is being made using previously hoarded cash (cash held as a store of value, rather than as a means of payment for habitual transactions). This is what we refer to as an influx of cash.

If the cash influx at agents' disposal has no effect on projected or actual spending volumes, the direct macroeconomic impact of this process is nil. However, economic agents may have opted to bring forward consumption and investment decisions to avoid or facilitate the necessary conversion of peseta cash hoards into euros. This second phenomenon is the so-called "euro effect", which does have implications for Spanish economic growth in that it entails a strengthening of domestic demand in 2001. This, in turn, has its negative counterpart in subsequent years, and especially in 2002.

In the article "Is there a *euro effect* in the Spanish economy?", published in *Situación Spain*, December 2001, we presented estimates of the cash influx and the "euro effect" in the Spanish economy. These projections were based on the extrapolation of the trend shown by the stock of banknotes in circulation up to October of last year and incorporated a 12% fall in this variable. However, Christmas shopping and the euro's impending entry into circulation led to a bigger-than-expected fall in cash in the final quarter of 2001. For this reason, we are presenting an update of our forecasts for the cash influx.

In order to carry out this calculation, we began by using the simulations derived from a banknote demand equation for the Spanish economy¹. As can be seen in the graph, the stock of banknotes generated by the model begins to gradually move away from the actual evolution of this variable from the end of 2000 onwards. The magnitude of the cash influx is obtained as the difference between the evolution of both series. At the end of 2001, the specified cash demand model would seem to suggest that the volume of banknotes in circulation should have increased to 63,400 million euros (some 10,500 billion pesetas), compared with an actual volume of 46,228 million (some 7,700 billion). The difference of 17,172 million euros (2,860 billion pesetas) between the two variables constitutes the volume of the cash influx. The second graph presents the estimated cash influx accumulated per quarter. As noted above, this phenomenon gathered momentum as the year progressed, with a surge in the final quarter of the year, the period that saw half of the total cash influx observed between the fourth quarter of 2000 and the end of 2001.

Sensitivity of private consumption to the "euro effect"

% of total cash influx	Billions of euros		Consumption growth in 2001
	"Euro effect"	Consumption (1/3)	
0	0	0	2.7%
25	4.3	1.4	2.4%
50	8.6	2.9	2.1%
75	12.9	4.3	1.7%
100	17.2	5.7	1.4%

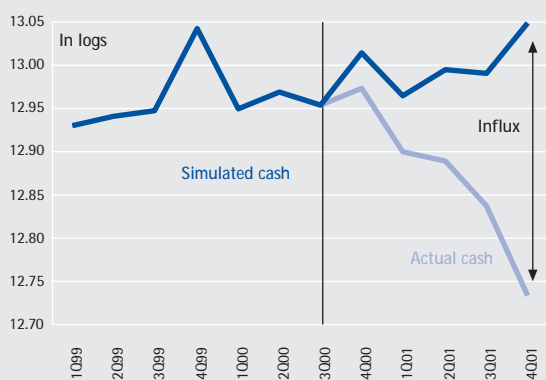
Source: BBVA

The impact of the "euro effect" on activity depends on the proportion of the cash influx that is allocated to habitual spending relative to extra spending. The adjoining table displays the impact of different scenarios calculated for the "euro effect" and their impact on consumption growth in 2001².

¹ The model can be consulted in the above-mentioned article. The estimated equation is specified as an error correction mechanism, the stock of banknotes in real terms is the dependent variable, real GDP and some seasonal variables are the explanatory variables and a series of effects (bill amortisation and Y2K effect) are corrected.

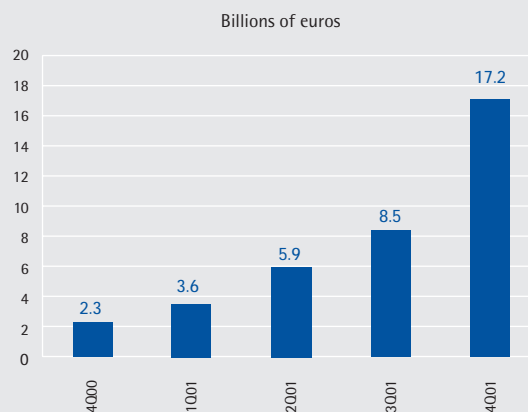
² Of the total "euro effect", we assume that 1/3 is devoted to consumption and 2/3 to residential investment.

Stock of banknotes in real terms



Sources: Bank of Spain and BBVA

Estimated cumulative cash influx



Source: BBVA

More employment, less unemployment and more activity

The Labour Force Survey (EPA, Encuesta de Población Activa), conducted by the National Statistics Institute (INE), is the source of reference information for labour market analysis. The size of the sample, with 65,000 interviews each quarter, the large quantity of information compiled on the labour circumstances of household members and standardised statistics with other countries, especially those of the European Union (EU), gives the EPA Labour Survey a prominent role in monitoring the economic climate and the description of the structural characteristics of the labour market.

The EPA Labour Survey is a quarterly survey of almost 65,000 households, which respond to over 80 questions concerning the economic activity, employment (or the search for employment), experience and training of the people living in each dwelling. The sample is selected in keeping with the information provided by the Population Census, so that visits are made to around 3,500 of the more than 30,000 census sections into which Spain is divided. The results of the interviews in each section are "increased" in order to estimate the results for the total population by applying temporary increase factors. These "increase factors" depend on the population information of each province, exogenous information to the survey which is also elaborated by INE.

More restrictive application of the definition of unemployment

With the first-quarter results for 2002, due out in May, INE will make changes to its estimation of the EPA Labour Survey relating to the level and age and sex structure of the population. In addition, the harmonisation of EU statistics makes it necessary to change the specific application of the definition of unemployment.

First, INE will apply, as of 1996, new population projections based on the 1991 Census (see graph) to correct the underestimation of immigration that exists at present. In 2000, immigration was 10 times higher than initially projected: instead of a net increase of 35,000 immigrants, the revised data point to a figure over 360,000. The new population projections should increase the absolute levels of the variables considered (population older than 16 years, active persons and inactive persons) but the participation rate and unemployment rates should be virtually unchanged (see table).

Second, a re-weighting of the "increase factors" of the sample will be applied to correct the under-recording of the 25-44 year-old age groups in the population, which are precisely those with the highest participation and employment rates and which, moreover, are more difficult to interview¹. This representative bias of the EPA Labour Survey should be resolved thanks to the improved information on the territorial distribution of the population provided by the "padrón continuo" (a continuous census at municipal level). The re-weighting of factors entails an increase in participation and employment rates and a slight fall in the unemployment rate (from 13% to 12.9% in 2001).

Third, the practical application of the definition of unemployed (a person aged 16 and over available for work and actively looking for a job) will be changed owing to a stricter specification of active methods of looking for a job. Specifically, people only looking for a job through INEM labour exchanges are required to have been in contact with the unemployment office within the four weeks prior to the interview and, moreover, with the intention of finding a job². This change reduces the unemployment rate in 2001 relative to the observed rate by 2.54 percentage points and also lowers the participation rate, from 51.6% to 50.1% of the over-16 population. Following this step down in level, the unemployment rate's time trend, which is linked to the economic performance, should nonetheless be unaffected.

¹ This fact must also be borne in mind when re-weighting the factors, as highlighted in Toharia, L. (2001), "La influencia de la estructura demográfica en las estimaciones del empleo y el paro en la Encuesta de Población Activa", Revista El Campo (BBVA), forthcoming.

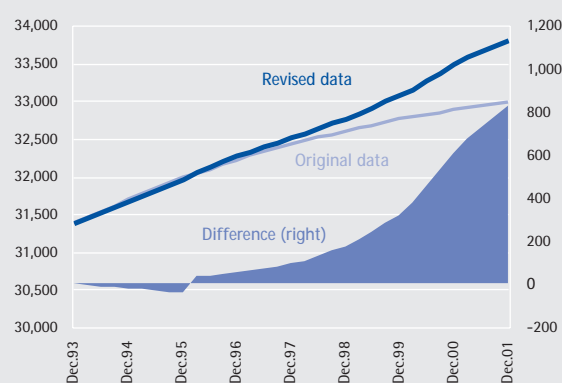
² People studying for public examinations or awaiting results will no longer be considered to be unemployed.

EPA Labour Survey in 2001

	Published data (annual averages)	Cambios					Revised data (annual averages)
		New pop. proj.	Sample re-weight.	New definition of unempl.	Total	%	
Over-16 pop.	32,938.8	749.9	0.0	0.0	749.9	2.3	33,688.6
Employed	14,768.4	358.8	818.4	0.0	1,177.1	8.0	15,945.6
Unemployed	2,213.1	41.6	97.8	-483.5	-344.1	-15.5	1,869.1
Unempl. rate	13.0	13.0	12.9	10.5			10.5
Active persons	16,981.5	400.4	916.2	-483.5	833.1	4.9	17,814.6
Participation rate	51.6	51.6	54.3	50.1			52.9
Inactive persons	15,918.6	348.6	-916.2	483.4	-84.2	-0.5	15,834.4

Source: INE

Over-16 population ('000s)



Source: INE

eEurope 2002: Spain is advancing but not converging with the European Union

The Extraordinary European Council held in Lisbon in March 2000 set the ambitious objective for the European Union (EU) to become the "most dynamic knowledge-based economy in the world by 2010". The *eEurope 2002 Action Plan*¹ is a key element of this strategy since it represented the adoption by the EU of a political commitment to accelerate the development of the Information Society.

To achieve its overall objective of bringing Europe online, the Action Plan targeted three areas: i) cheaper, faster and secure Internet; ii) investing in human resources and skills; iii) promoting the use of the Internet. A series of specific qualitative and quantitative objectives based on 23 indicators of the development of the Information Society was set for each area, to be met by 2002. The European Commission recently published the *eEurope 2002 Benchmarking Report* presenting a review of these indicators in the EU. This report was debated at the European Council held in Barcelona in March 2002.

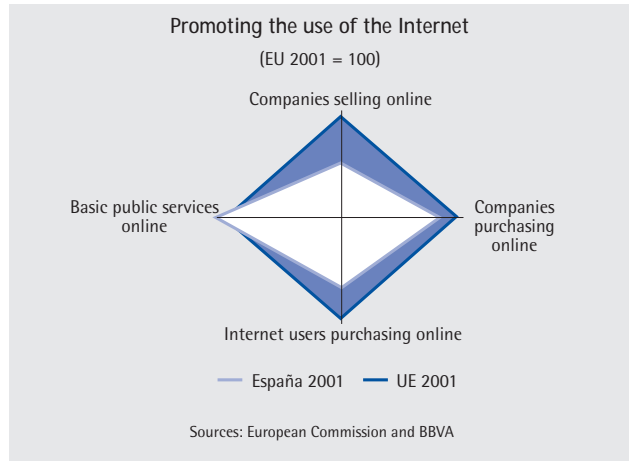
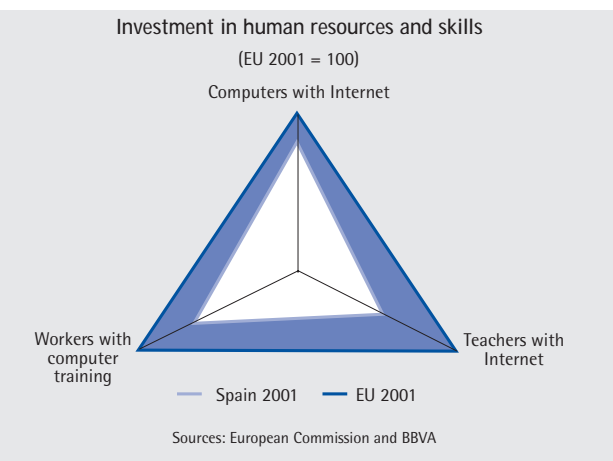
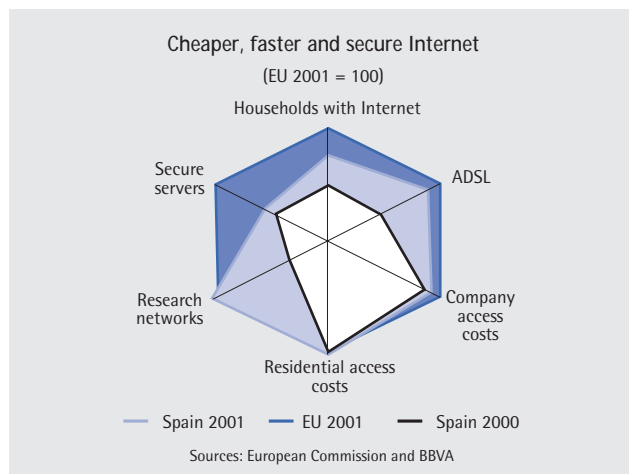
The results presented in the report are far from encouraging. Even though significant advances have been made, generally speaking these are judged to be insufficient in comparison with the United States. The report also highlighted the persistence of considerable internal differences within the EU, in which the Nordic, Anglo-Saxon and Central European countries have a considerable lead over the Mediterranean countries. Spain is no exception to this north-south pattern, lagging behind the EU average right across the three areas targeted for action. As the graphs show, Spain is building up a negative differential in ten of the 13 indicators represented².

Spain has a comparative advantage over the EU in essentially two areas: the roll out of high-capacity Internet networks in universities and research centres (key to the development of an European Research Area) and the availability of basic public services online (over 50%, as against 46% in the EU).

Nonetheless, Spain has seen little advance in convergence in the other dimensions of the Information Society. While growth in these indicators has been significant, in percentage terms higher even than the EU average, it has not been enough to eliminate the negative differential to start with. Thus in the area of *Cheaper, faster and secure Internet*, the penetration of Internet in Spanish households increased 2.5-fold between April 2000 and December 2001 (up to 24.7%), whereas in the EU there was a twofold increase (to 37.7%). The EU-Spain differential widened from 8% in 2000 to 13% in 2001, however, in addition to there being a more limited roll-out of wide band connections (ADSL and cable). The increase in the number of computers connected to the Internet in schools – *Investing in human resources and skills* – has been considerable, up to over 3 computers per 100 pupils, but still below the EU average. Finally the growth of e-commerce – *Promoting the use of the Internet* – between companies and, especially, with consumers is lagging far behind. In sum, the advances in the Information Society in Spain in the past two years have been notable, but insufficient to achieve technological convergence with European standards.

The development of the Information Society in the EU not only requires a greater global effort to narrow the gap with the United States, but also the elimination of the internal digital divides, as evidenced by the fact that the countries in Southern Europe, including Spain, are well behind the EU average. Special attention should be given to this issue in the drawing up of the future *eEurope 2005 Action Plan*, which is due to be presented before the European Council to be held in Seville in June 2002.

¹ Approved in the European Council held in Santa Maria de Feira in June 2000.
² The choice of these 13 indicators was based on their quantitative and qualitative importance, as well as the availability of time series for them. Nonetheless, the conclusions obtained are robust to the inclusion of additional indicators. The complete list of indicators agreed for the cross-country assessment of the Plan, as well as the statistics available can be found on the web page of the Directorate General for the Information Society of the European Commission at www.europa.eu.int/information_society/europe/benchmarking/index_en.htm.

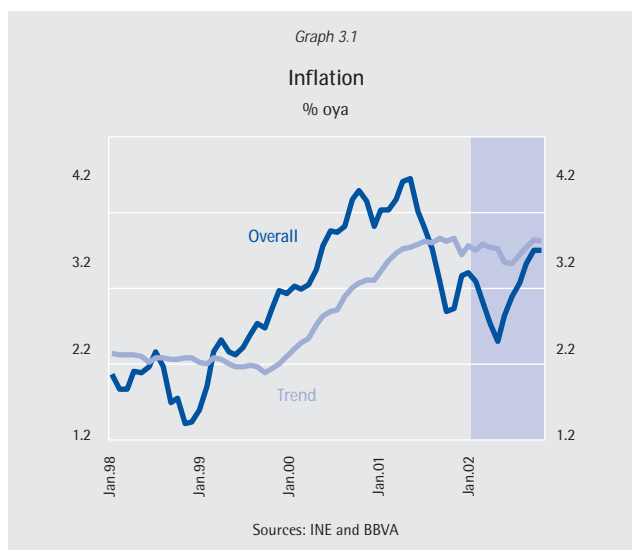


3. Prices and wages

“Residual” improvement in inflation

Inflation was running at 3.1% in February, unchanged from the previous month and up 0.4 points from end-2001. This increase is essentially due to hikes in indirect taxes and administered prices at the start of the year (a new special fuel tax, public transport prices, VAT on butane gas and motorway tolls, etc.). It is also important not to overlook the upward impact on inflation of the changeover of banknotes and coins to euros. This would result from the adjustment of easy-to-use, round prices in pesetas to equally convenient amounts in euros (ending in 0 or 5, below certain psychological thresholds such as 1, 5, 10, 50, 100, etc.). The “euro effect” on prices will not necessarily entail an increase in inflation in the medium term if agents do not incorporate it into their expectations for price developments. It may nonetheless have resulted in a step up in the price level in 2002 and hence higher inflation this year¹.

Inflation expectations for the Spanish economy, measured using BBVA Trend CPI, remain stable at between 3.3% and 3.5%. Overall inflation should be under these rates throughout the year thanks to a less-negative performance by energy and non-processed food prices, the



most volatile components. Despite a reduction in the surplus demand that is present in the economy², however, trend inflation is not falling to any great extent. This points to the presence in the economy of upward pressures on costs, the growth rates of which may be higher than is consistent with productivity developments.

Energy prices are likely to decline by around 2% in 2002 (their best performance since 1998) as a consequence of the stability expected in crude oil prices, at around US\$23/barrel, and a 2.6% depreciation of the euro's exchange rate (from 0.90 to 0.87 dollars/euro).

¹ The modifications to the CPI in January 2002 (see Box “A More Modern CPI” in this chapter) make the “euro effect” on prices even more difficult to gauge. Even without these changes, however, any estimate of the impact on inflation of the conversion of prices from pesetas to euros would be fairly tentative given that INE reflects price levels, not why they are set.

² In 2002 the output gap will be negative.

Table 3.1. Inflation

(% oya)	Overall CPI			IPSEBENE			Residual CPI			Trend CPI		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Jan.	3.7	3.1	3.2	3.1	3.6	3.0	5.4	2.4	2.7	3.0	3.3	3.4
Feb.	3.8	3.1	3.0	3.2	3.7	2.9	5.7	2.2	2.4	3.2	3.4	3.3
Mar.	3.9	3.0	2.9	3.3	3.6	2.9	5.4	2.0	1.7	3.3	3.4	3.3
Apr.	4.0	2.8	3.0	3.4	3.3	3.0	5.6	0.9	2.3	3.4	3.5	3.2
May	4.2	2.5	2.9	3.5	3.4	2.9	6.3	0.0	2.2	3.4	3.4	3.2
Jun.	4.2	2.3	3.0	3.5	3.3	2.9	6.4	-0.7	2.3	3.4	3.4	3.2
Jul.	3.9	2.6	3.0	3.5	3.3	3.0	4.7	0.8	2.3	3.5	3.3	3.2
Aug.	3.7	2.8	3.0	3.6	3.3	3.0	3.9	1.8	2.4	3.5	3.2	3.2
Sep.	3.4	3.0	2.9	3.5	3.4	2.9	2.9	2.1	2.2	3.5	3.3	3.2
Oct.	3.0	3.2	2.8	3.7	3.3	2.8	1.4	2.7	1.9	3.5	3.4	3.1
Nov.	2.7	3.4	2.7	3.7	3.1	2.8	0.2	3.0	1.7	3.5	3.5	3.1
Dec.	2.7	3.4	2.7	3.8	3.1	2.8	0.2	3.1	1.8	3.5	3.5	3.1
Average	3.6	3.0	2.9	3.5	3.3	2.9	4.0	1.7	2.2	3.4	3.4	3.2

Sources: INE and BBVA forecasts

Fresh-food prices are expected to post growth of 4.3% in 2002, down by a half from a rise of 8.6% in 2001. Slower rates of increase in meat prices, following the sharp acceleration registered at the start of 2001 as a result of the BSE crisis, will allow fresh-food prices to slow in the first half of the year. The most notable inflationary pressures are building up in products affected by supply problems (cereals, fish, vegetables and fruit).

Stable trend CPI and a smaller differential with EMU

The more stable components of CPI, which make up BBVA Trend CPI³, are still on divergent courses. The prices of processed food, excluding oils and tobacco, have been on a downward path since October 2001. This decline should continue in the coming months because of a high basis of comparison linked to the food crises in early 2001.

The rate of increase in prices of non-energy industrial goods is expected to slow from 2.6% in February to little over 2% in December. Lower demand pressure in 2002 in a context of moderate wage costs should help to keep a lid on prices. Nonetheless, one upward risk is that associated with an intensification of the recovery in industrial raw material prices in international markets which got under way at the end of 2001, though from very low levels⁴.

In the case of services - the group most sheltered from competition, most employment-intensive and least sensitive to demand slowdowns - prices are expected to rise

slowly throughout 2002, to rates of increase of around 4.6% in the second half of the year, 0.4 points higher than at the end of 2001.

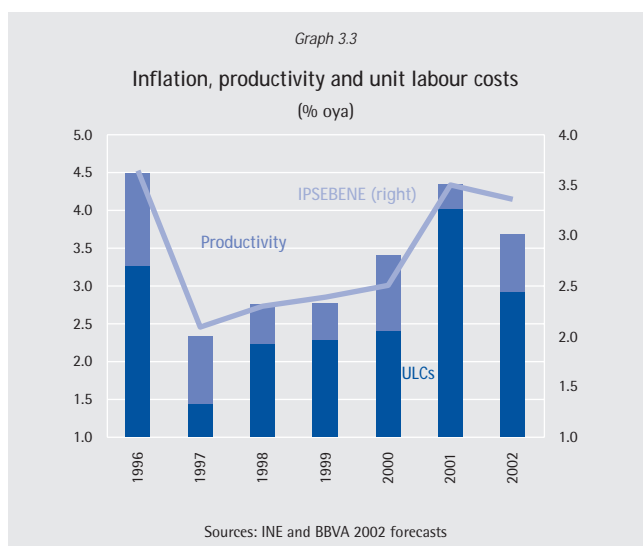
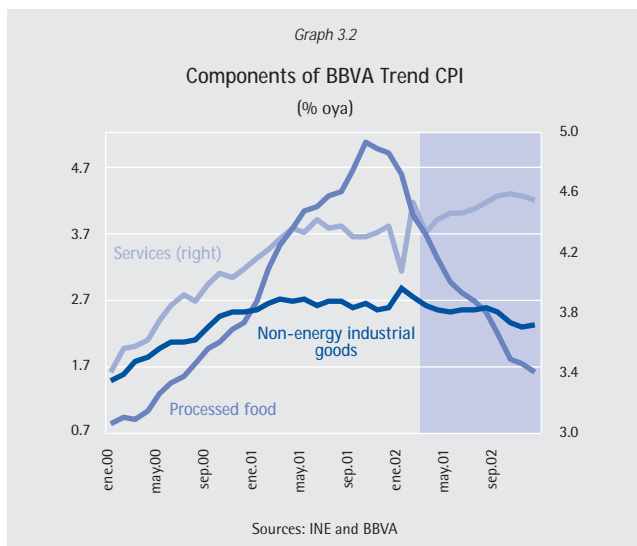
Average inflation in 2002 is nonetheless expected to come in at 3%, 0.6 percentage points lower than a year earlier. Annual rates of inflation should decline up until the middle of the year (2.3% in June), before rising in the second half of the year, to stand at 3.4% in December. For its part, this year's inflation differential with EMU is expected to be lower than in 2001: after 1.1 percentage points in 2001, the differential should fall to 0.8 points this year, its lowest level since 1997. The problem of the inflation differential is twofold, however, since it affects both tradeable and non-tradeable goods, with the resulting deterioration in the competitiveness of the Spanish economy vis-à-vis EMU as a whole.

Labour costs: wage moderation in sight?

Early data on collective wage bargaining in 2002 point to a fall in the negotiated wage increase of around 1 percentage point. An average pay award of 2.7% was negotiated in the first two months of the year (covering 2.3 million workers, 28% of the total subject to collective bargaining in 2001), 0.8 points lower than the increase negotiated in 2001. It is too early to gauge the impact on these figures of the 2002 Interconfederal Agreement on Collective Bargaining, signed by social agents last December. Under this agreement, an objective of 2% was set for pay awards, though this can increase in the event of gains in productivity. In this sense, this agreement was an attempt by employers and trade unions to exhaust all the possibilities of the present collective bargaining system in pursuit of wage moderation and thus stave off the government's proposed legal reform.

³ For a description of its composition see Box "Less Tourism in BBVA Trend CPI", Situación Spain, December 2001.

⁴ The Economist Index for industrial raw materials prices in euros in February 2002 was 10 percentage points below the peaks reached in the final quarter of 2000.

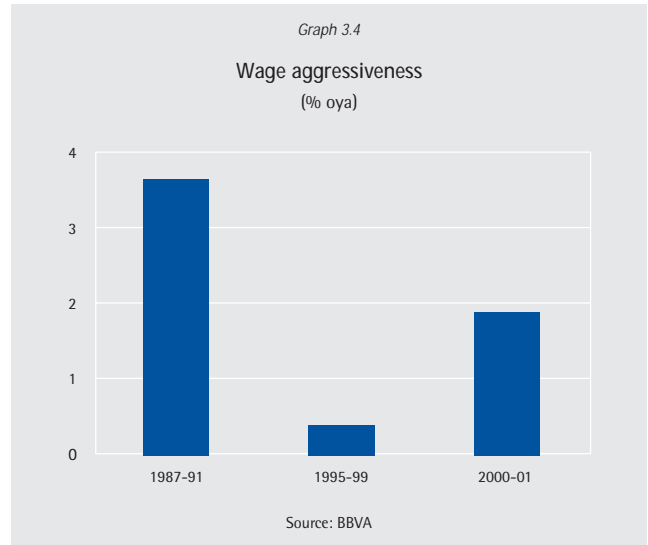


The variable with the most direct impact on the inflation performance is labour costs per unit of output (ULCs)⁵, which, according to available National Accounts information, rose by 4% last year, 1.6 percentage points more than in 2000. The acceleration in ULCs came to a halt in the second half of 2001 as a result of stronger growth in apparent labour productivity, since salaried-employee compensation continued to accelerate until the end of the year.

In addition to nominal increases, however, after allowing for the inflation surprises relative to expected inflation, labour costs have also accelerated in real terms. This variable, which can be equated to wage aggressiveness, increased in the two-year period 2000-2001, to triple the values registered in the period 1995-1999.

In sum, the moderation in collectively-bargained wage settlements in the early part of 2002 is a first step towards securing a deceleration in salaried-employee compensa-

⁵ The variation in prices is the sum of variations in labour costs and a "remaining part" equatable to business margins.



tion in 2002. This, in turn, would be conducive to a decline in inflation from the average levels seen in 2001. The increased responsiveness of social agents to the "employment" objective, rather than the "wage" objective, should make it easier to attain this goal.

A better CPI

The National Statistics Institute completed in January 2002 the changes to the method of calculating the Consumer Price Index (CPI) initiated in January 2001. These changes involve a re-basing of the CPI, with an updating of the basket of goods in the price index to accurately reflect the structure of household spending. Methodological improvements have also been incorporated to the index (chained indices, the inclusion of sales prices, new techniques to adjust for quality effects) to modernise it and allow it to be updated more frequently. These changes are also aimed at bringing the index more into line with the Harmonised Index of Consumer Prices (HICP).

A more up-to-date and dynamic CPI

The CPI measures the behaviour of the prices of a basket of goods and services representative of the consumption of households resident in Spain. The selection of items and their weights in the basket is based on the structure of household spending, as reflected in the Household Budget Surveys (EPF). As the components and weights of the basket are fixed, over time it becomes less representative of household consumption as a consequence of three factors. First, changes in consumer tastes lead to the consumption of goods that are not included in the CPI basket or variations in the weight assigned to spending in the groups considered in the basket. Second, changes in relative prices because of substitution effects also affect the structure of household spending, increasing the weight of those items that are relatively cheaper. The third factor is self-weighting. Even assuming that consumers have stable consumption patterns unaffected by fashions and changes in relative prices, the components of the index with rising and diverging price levels induce an upward bias in the aggregate index.

As a result, for the basket of goods and services on which the CPI is computed to be as up to date and representative as possible, it should be updated regularly, taking that period, in this case the year 2001, as the base year (an average value of 100 for the various price indices). The basis for the definition of the new basket is the information provided by the Continuous Household Budget Survey (ECPF), drawn up quarterly since 1997. A re-weighting of the index was already introduced in January 2001 after the weighting had remained fixed since 1992, although only in the large groups of consumption expenditure¹. However, the re-weighting was only completed in January 2002, on the basis of the Continuous Household Budget Surveys (ECPF) information between the second quarter of 1999 and the first quarter of 2001. The weights of the large groups of goods and services will now be updated annually using the information available and a reassessment made as to whether new products should be included in the basket. A re-basing of the index will be carried out every five years and the methodology used to calculate the index reassessed.

More robust methodology

The annual revision of the CPI basket and the need to avoid index self-weighting make it necessary to switch from a fixed base index to a chained index. Hitherto, the CPI was calculated keeping the basket of goods in the base year fixed, the prices at each time being compared with that year (in this case, 1992). Now, the annual re-weighting of the basket will also entail a change in reference period for current prices: in 2002, prices will be compared with those of the year 2001, and starting in 2003, with prices in December the previous year. The chaining of indices and the obligation to keep observed CPI variations (official inflation) fixed with a legal range by applying legal linking coefficients² give rise to a

¹ The calculation of the prices of goods with centralised data-collection was updated at the same time. These prices are elaborated by the INE head office because of their special characteristics: network industry tariffs (telephone, gas, electricity), administered prices (university education) and goods with many varieties (cars, medicine, books).

² A legal linking coefficient is the number by which the index is multiplied in the former base year in order to obtain the index in the new base year. The aim of this exercise is to keep the historical rates of variation of inflation unchanged. Logically, the coefficient is computed as the ratio for a given period, in this case December 2001, between the index with the new methodology and that calculated using the old methodology.

Selected characteristics of the CPI

	Base year 1992	Base year 2001
Base year	1992	2001
Establishments	29,000	30,000
Items	471	484
Prices	150,000	180,000
Elementary indices	arithmetical average	geometrical average
Calculation formula	Laspeyres fixed base index	Laspeyres chained index
Sales and price reductions	no	yes

Sources: INE and BBVA

CPI weights (%)

	Base year 1992	Updated 1992	Base year 2001	Var. 01-92 (p.p.)
Special groups				
Energy	7.1	8.9	9.4	2.3
Unprocessed food	11.9	8.9	8.3	-3.6
Processed food	17.5	15.8	16.8	-0.7
Non-energy ind. goods	32.9	32.4	31.3	-1.6
Services	30.6	34.0	34.2	3.6
IPSEBENE (Overall CPI less energy and unprocessed food)	81.0	82.2	82.3	1.3
Overall CPI	100.0	100.0	100.0	—

Sources: INE and BBVA

further difficulty: chained series aggregate indices are not the result of the weighted average of the elementary indices compromising them.

Other significant methodological changes in CPI measurement are:

- The elementary indices, the provincial indices referring to each of the basket's items, are elaborated by means of geometrical price averages, not arithmetical averages, thereby enhancing the statistical properties of the index in cases of greater price dispersion.
- Quality adjustments, which prevent price variations in the basket from reflecting changes in the characteristics of items, have incorporated new correction procedures. Hitherto, the consultation of experts in the corresponding sector to ascertain the cost of options or improvements in items and the calculation of overlapping prices were used³. These will continue to be the basic quality adjustment methods, but, as of January 2002, hedonic regression methods are also being used, although only to complement the former and in CPI headings that account for less than 7.4% of the index (new cars and household goods).

But without historical homogeneity

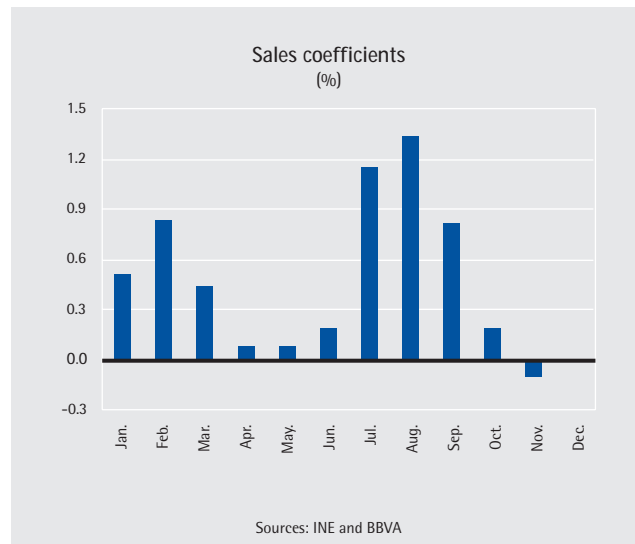
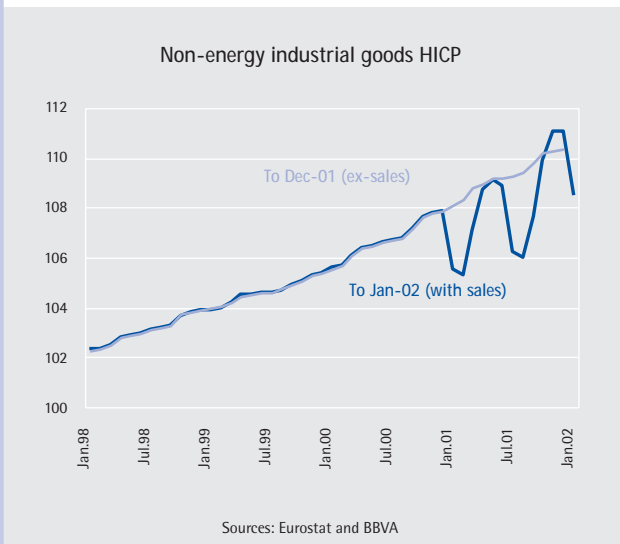
The incorporation of sales and price reductions to the index is one of the most significant changes of System 2001. The CPI will now take into account price reductions linked to both special offers and temporary sales promotions and the official sales period. This change causes a break in the series which cannot be overcome using the legal linking coefficients generally applied in re-basings. In order to calculate homogeneous annual rates of change for the CPI during 2002, that is, taking account of the sales in 2001, the INE has calculated sales coefficients for the various indices of that year which "reduce" official CPI inflation by the amount corresponding to the sales and price reductions. As the graph shows, the most significant effects of the sales are concentrated in January, August, July, February and September. Thus, for instance, CPI inflation published in January 2001 has to be reduced by 0.5% in order to allow the inflation rate in January 2002, the date from which the CPI takes account of sales⁴, to be calculated.

In sum, a better CPI

The CPI elaborated on the basis of System 2001 remedies the loss of representativity of CPI base-year 1992 by updating the index's reference basket and incorporating calculation improvements for items with centralised data-collection. With the introduction of a series of methodological improvements (geometrical averages, chained indices, additional quality adjustments, price reductions), it is also more homogeneous with the HICP and should make for faster adaptation to changes in consumption patterns. These advantages bring with them a significant change in the seasonal pattern of the series, which considerably increases the uncertainty surrounding forecasts of overall CPI and its components.

³ A quality change is considered to be the price change existing between two overlapping varieties of the same article (one disappearing, and one being brought onto the market).

⁴ As can be seen in the graph, the sales effect estimated for November is "negative" and for December zero. This is because the effect of the sales on the indices is calculated in relative terms compared with a base month; in this case, December 2001.



4. The public sector

A balanced budget in 2001, but with a large deficit in territorial administrations

The public sector ran a balanced budget in 2001 despite the fact that the economic slowdown was more pronounced than initially anticipated by the government (GDP grew by 2.8%, instead of 3.6% as envisaged in the budget). Public sector debt, in turn, came in below 60% of GDP (57.2%), complying for the first time with the Maastricht Treaty requirement. Despite this very positive result, the fiscal performances of different levels of government differed widely. As occurred in 2000, the deficit correction was thus the result of a stronger fiscal performance at central government level (the deficit was 0.4%, as against a projected 0.5% in the Stability Programme for 2001-2005) and by the social security system, which ran a surplus of 0.8% of GDP, 3 tenths of a point higher than forecast (see Table 4.1). This increase in the social security surplus should allow the reserve fund for future pension payments to rise to 6,010 million euros at end-2002, much higher than the initial projection of 3,455.8 million.

The territorial administrations, in contrast, not only missed the target (-0.4% of GDP, instead of fiscal balance), but recorded a higher deficit than the previous year. The consolidation of state-owned enterprises created in the past in the budget of some autonomous governments, in accordance with ESA-95 rules, contributed to this overshoot, as did the decision to bring forward some investment projects in view of the obligation to present balanced budgets from 2003 onwards set down in the Fiscal Stability Law (LEP). This overshooting of the fiscal target, for the second year running, is of particular concern in 2002 as the new regional financing system enters into force. In

this new scenario, when the transfer of health care and social services responsibilities is completed, the autonomous regions will control around 36.6% of total public spending, almost 10 points more than in 2001. In addition, having been linked to a wider basket of taxes, their resources are more dependent on the cyclical situation of the economy. Given that activity is expected to continue to slow in 2002, the autonomous governments will need to enhance spending control if further deviations from the balanced budget target required by the LEP are to be avoided. Moreover, the Sufficiency Fund¹, which replaced transfers associated with the share of State revenue, was calculated taking a year with strong growth in tax revenue as base year - 1999 - thereby introducing an upward bias in the fiscal capacity of the autonomous regions relative to their average position over the economic cycle, and hence a downward bias in the Fund. It is evident from these considerations that the autonomous regions need to keep a tight grip on public spending in order to secure a balanced budget in a context of slowing economic growth. Also, the deviations from the deficit target set in the Stability Programmes have confirmed the need to establish a national pact, formulated in the LEP, to guarantee compliance with Spain's commitment within EMU through these Programmes. With this aim in mind, and in line with LEP requirements, a commitment was undertaken by the Fiscal and Financial Policy Council to secure a balanced budget for the autonomous regions as a whole. Whether this objective is to be achieved with fiscal balances in all the autonomous regions or a mix of deficits and surpluses will be decided at future meetings of the Council.

¹ The Sufficiency Fund is the difference between the financing requirement and fiscal capacity of each autonomous region. The size of the fund was calculated on the basis that no autonomous region could obtain a lower volume of financing than it would have obtained in base year 1999 under the previous system.

Table 4.1. Public deficit and debt

(%/GDP)	1998	1999	2000	2001 Stability Programme 2001-05	2001	2002 Stability Programme 2001-05
State	-2.2	-1.1	-0.6	-0.5	-0.4	-0.5
Social Security System	-0.1	0.1	0.5	0.5	0.8	0.5
Territorial Administrations	-0.3	-0.2	-0.3	0.0	-0.4	0.0
General Government	-2.6	-1.2	-0.3	0.0	0.0	0.0
(%/GDP)						
Debt (General Government)	64.7	63.4	61.1	57.5	57.2	55.7

Source: Ministry of Finance

A strong direct tax revenue performance and a continuing positive contribution from interest payments have paved the way for fiscal balance

The fiscal deficit adjustment (-0.3% of GDP) is attributable to both a fall in the share of total spending (-0.2 percentage points) and an increase in resources (0.1 percentage points). As regards spending, growth was admittedly stronger than expected, at 6.2% year-on-year, instead of 5.6%, but, in contrast to previous years, was concentrated in the capital heading. This expenditure heading was, in fact, the only one that rose as a percentage of GDP, to 5.1%, though this was still below the 5.4% increase registered in 1999. The healthy pace of execution of the 2000-2007 Infrastructure Plan should allow civil engineering works to continue to grow strongly in 2002. The negative note is that the reduction in terms of GDP of current expenditure has been smaller than in previous years: 0.4 percentage points, as against an average of 0.7 in the period 1998-2000. Two spending headings are curtailing the reduction in the share of current expenditure: interest payments and welfare payments.

The effect of the reduction in interest rates has been declining progressively as the average interest rate of outstanding government debt is close to the rate at which the Treasury is now issuing debt. Indeed, in 2001, interest payments amounted to 3.1% of GDP, 0.2 percentage points lower than in 2000, whereas between 1996 and 1998 their proportion of GDP fell by around 0.6 percentage points per year. Interest spending nonetheless accounts for almost 40% of the reduction in current expenditure in 2001. As a result, the primary surplus rose

once again, to 3.1% of GDP (2.9% in 2000), though the increase was smaller than in previous years (0.7 and 0.5 percentage points in 1999 and 2000, respectively). With a 12-month growth rate of 6.3%, welfare payments (excluding payments in kind) were the fastest growing component of current expenditure. This explains why current expenditure in terms of GDP was virtually unchanged at around 12.2% (12.3% in 2000), interrupting the downward trend observed since 1997. This shift in trend is partly attributable to the impact of the economic slowdown. In fact, unemployment benefit spending was up by 10% in the first eleven months of 2001, compared with a rise of 3% in 2000, while temporary disability spending rose at an annual rate of over 14%. These data confirm that the weaker cyclical position of the Spanish economy is being reflected in a number of expenditure headings. With GDP growth below the 2.4% rate envisaged in the 2002 budget, in 2002 it is reasonable to assume that the operation of the automatic stabilisers will again increase the resources allocated to these headings. This, together with the increase in spending arising from measures approved by the government (incentives to encourage older workers to remain in the labour market, increases in excess of CPI inflation for some pensions, etc.), suggests that only limited scope remains for reducing current spending through additional adjustment in interest and welfare payments. This is so despite the fact that credit rating agency Moody's granted government debt the maximum rating at the end of December 2001. The differential between Spanish and German government debt is so small (18 basis points, compared with an average differential of 30 in the period from EMU's inauguration to

Table 4.2. General Government revenue and expenditure

Millions of euros	2000	% oya	%/GDP	2001	% oya	%/GDP
Total expenditure	245,261	5.5	40.3	260,460	6.2	40.1
Current expenditure	215,190	6.4	35.3	227,000	5.5	34.9
Interest and dividends	19,892	-0.5	3.3	20,167	1.4	3.1
Social security outlays	74,812	6.6	12.3	79,493	6.3	12.2
Final expenditure	105,975	7.5	17.4	112,303	6.0	17.3
Capital expenditure	30,071	-1.1	4.9	33,460	11.3	5.1
Current expenditure ex-interest	195,298	7.2	32.1	206,833	5.9	31.8
Total expenditure ex-interest	225,369	6.0	37.0	240,293	6.6	37.0
Total revenue	243,148	7.3	39.9	260,231	7.0	40.0
Tax revenue	216,345	9.4	35.5	230,484	6.5	35.4
Taxes on production and imports	71,399	8.3	11.7	74,207	3.9	11.4
Income tax and stamp duty	63,812	10.4	10.5	68,197	6.9	10.5
Social security contributions	81,134	9.7	13.3	88,080	8.6	13.5
Other	26,803	-7.0	4.4	29,747	11.0	4.6
Deficit	-2,113			-229		
(%/GDP)	-0.3			0.0		
Primary surplus	17,779			19,938		
(%/GDP)	2.9			3.1		

Source: Ministry of Finance

Moody's announcement) that saving derived from further reductions in interest rates is very modest. In 2002, moreover, given the growing percentage of spending controlled by the autonomous regions, a firm control of budget execution is necessary in order to avoid significant deviations.

Fiscal pressure was virtually unchanged in 2001

Direct tax receipts, specifically IRPF personal income tax receipts and social security contributions, along with interest and dividend payments, account for the favourable revenue performance in 2001. A good employment performance, despite the economic slowdown (social security registrations were up by 3.9%, 150,000 more than envisaged in the budget), permitted revenue from social security contributions to increase by 8.6%. Although information on IRPF receipts in National Accounts terms is not available, State cash-balance data confirm the strong performance in 2001. According to these data, IRPF receipts grew by 13.4% at an annual rate, much faster than the 5.6% growth initially envisaged in the 2001 budget. This increase reflects, on one side, continuing strong growth in salaried employee compensation and, on the other, the non-deflation of the tax schedule and the fact that neither allowances nor the tax-exempt living standard minimum are adjusted for inflation. This performance contrasts with that of other tax receipts, which have been affected by the fall-off in domestic demand. Thus, revenue from taxes on production and imports rose by only 3.9% year-on-year, compared with an average growth rate of over 10% in the last three years. The divergence between the increase envisaged in the 2001 budget for State revenue from this source – 8.4% – and that observed confirms that the slowdown in economic growth and, particularly, in private consumption is proving more intense than anticipated by the government. The stagnation shown

by corporation tax revenue – as against a forecast increase of 5.6% – points in the same direction. The negative behaviour of corporate profits, especially for companies with interests in Latin America, and pension plan endowments account for the weaker performance of corporation tax in 2001. As a result of this divergent behaviour in tax revenue, fiscal pressure was virtually unchanged in 2001; total tax revenue, including social security contributions, amounted to 35.4% of GDP, compared with 35.5% in 2000. With respect to other non-tax revenue, payment of the radio spectrum levy (461.5 million euros) by Telefónica and Vodafone and higher interest from the Treasury's account at the Bank of Spain lie behind a 25.7% increase in the interest and dividends heading.

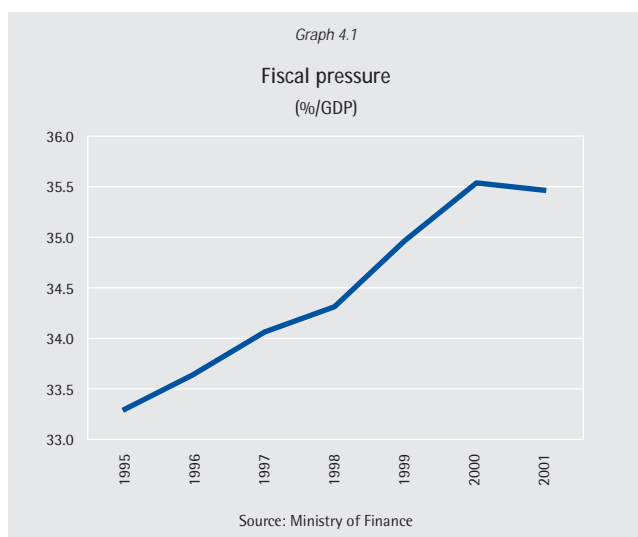
A lower structural deficit in 2001

The adjustment in the structural component of the deficit (down to close to 0.7% of GDP, from an estimated 1.2% in 2000) outstripped that of the fiscal deficit overall in 2001. This result represents a step in the right direction, though further efforts are required to reach a position of balance in structural terms. In this sense, the LEP target of a balanced budget each year, instead of allowing deficits in recessions to be offset by surpluses in expansions, may be restrictive.

Uncertainties in 2002

No figures for the budget outturn in 2002 have as yet been released. However, most of the activity indicators for the first quarter of the year suggest that the economic slowdown could be more pronounced than envisaged in the 2002 budget. In this case, the risk that a balanced budget will not be attained this year is by no means negligible². This does not necessarily imply a critical evaluation of the fiscal policy stance, since the cyclical component of the deficit would be responsible for the failure to meet the target as the automatic stabilisers kick in. A higher deficit would nonetheless be compatible with a further reduction in the structural component, which should move close to balance.

In addition to the risks associated with the economic cycle, uncertainty also exists surrounding the following: i) the functioning of the new regional financing system; ii) the impact on spending of agreements signed in 2001 that come into force in 2002 (the agreement to reinforce social protection³



² On the basis of the historical elasticities of fiscal revenue to GDP, it emerges that, in the absence of regulatory changes, a 1-point deceleration may reduce revenue by around 0.2% of GDP. Specifically, there is a risk that revenue from social security contributions will be around 0.1 of a point lower than budgeted, since employment is unlikely to grow at the 1.8% rate anticipated by the government.

³ According to the government, the allowances in the social security contributions of employers to encourage people over 60 to stay in the labour market will have a cost of 378 million euros (0.06% of GDP). Added to this is the cost associated with the increase in minimum pensions (174 million euros, the equivalent of 0.03% of GDP).

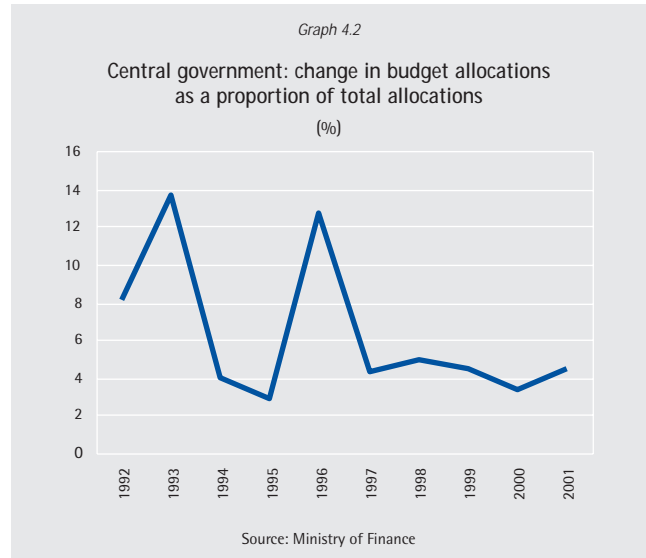
and the package of fiscal measures adopted on September 28); iii) the impact of the drought on the agricultural sector, which could spark demands for assistance from the primary sector (farmers estimate losses at 1,200 million euros); and iv) the EU ruling that State transfers to publicly-owned shipyards (110 million euros) and the grape pomace oil sector (84 million euros) must be considered government subsidies.

By contrast, a series of factors could boost revenue or reduce expenditure in 2002. Of these, the most interesting to note are the following: i) the extraordinary revenue that will accrue to the Treasury (amounting to as much as 0.2% of GDP) if the entire stock of pesetas in circulation is not converted to euros⁴; ii) the decision by the Supreme Court to overturn a High Court ruling forcing the State to compensate central government civil servants for a wage-freeze in 1997; iii) the fact that neither the IRPF tax schedule nor the living standard minimum and allowances are adjusted for inflation; iv) the creation of a new tax on retail sales of petrol and diesel, the revenue raised (close to 1,000 million euros) being transferred to the autonomous regions to finance health care and deducted from the Contingency Fund; v) the increase in transport taxes, with an impact on revenue of around 45 million euros; vi) other tax hikes (VAT on butane gas and motorway tolls, special taxes on tobacco and alcoholic beverages, the system of IRPF modules and the special VAT regime), which should raise some 366 million euros.

In contrast to other years, parliament has approved tax changes designed to cushion the impact on the budget of a faster economic deceleration than expected when the Budget Draft was submitted in September. At that time, the Ministry of Finance was projecting a GDP growth rate for the Spanish economy of 2.9% in 2002 (5.9% in nominal terms), 0.5 points more than the rate finally assumed (2.4% in real terms). Therefore, if the economy slows at a faster rate, the fiscal measures approved are unlikely to compensate for the negative revenue impact of slower economic growth.

The State spending ceiling set for 2003 looks difficult to attain

As required by the LEP, the Council of Ministers approved in the first quarter of the year a ceiling for State spending in 2003. In consequence, next year the State will be able



to spend a maximum 109,273 million euros in national accounts terms, an amount 4.1% higher than budgeted expenditure in 2002. This amount includes the so-called Contingency Fund, some 2% of the approved spending ceiling (2,290 million euros), use of which is reserved for off-budget, non-discretionary actions. The State budget outturn in recent years shows that this fund may not be large enough to cope with adverse economic situations. As Graph 4.2 shows, since 1992 the change in budget allocations has consistently exceeded total allocations envisaged initially for the year by more than 2%. Moreover, setting a ceiling for spending in 2003 is particularly risky. Not only because of the IRPF reform that is scheduled to come into force, but because of the considerable uncertainty surrounding the cyclical situation of the economy. In such a scenario, introducing a spending ceiling may be too restrictive, since the obligation to run a balanced budget means that there is very little room for manoeuvre in fiscal policy. Nonetheless, designing the budget on the basis of projected spending, rather than on the basis of projected revenue, is an important step that will help safeguard against significant increases in spending during expansion phases.

The Stability Programme (2001-2005) confirms the difficulties of achieving a budget surplus

The economic slowdown has not only made it necessary to revise the public accounts for 2002, it has also affected the updated Stability Programme for 2001-2005. In the new Stability Programme, the attainment of a fiscal surplus has been put back by two years. It is, moreover, attained thanks to the contribution of the social security

⁴ Eurostat has still to announce whether, for accounting purposes, this revenue can be used for deficit reduction, as in the case of receipts from UMTS licences, or whether it should be allocated to pay down debt (like privatisation proceeds).

surplus, since the State fails to correct the deficit over the 2001-2005 time horizon (in the previous Stability Programme for 2000-2004, a balanced budget was projected for 2003). This fact accounts for the government's decision to modify the Fiscal Stability Law during its parliamentary passage. In its first draft, the LEP forced all sub-sectors of general government to present at least a position of balance. Finally, it was approved that balance should be presented by the State and the social security system jointly, until the transfer of basic pension supplements from

the social security system is completed. The new figures show both the sensitivity of the Stability Programme to changes in the macroeconomic scenario (average GDP growth of 3% in 2003-2005, compared with 3.2% in 2002-2004 in the previous Stability Programme) and the conviction that the territorial administrations will maintain a balanced budget over the whole period (despite the significant deviations from the target set in the last two years). The attainment of the Stability Programme for 2001-2005 is therefore subject to considerable uncertainty.

5. The financial system

Increasing household indebtedness

During the third quarter of 2001, net household indebtedness (measured as the ratio of financial liabilities to financial assets) registered a sharp increase and an acceleration of the upward trend observed since early 2000.

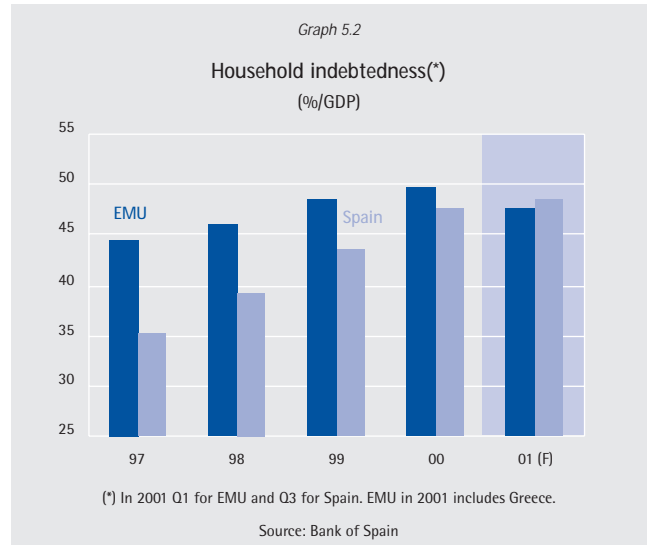
This contrasts with slowing growth in households' financial liabilities since the end of 2000, however. Credit to households rose by 12% during 2001, as against 17% the year before.

The recent increase in leverage is therefore essentially the result of the decline seen in assets, which was prompted, in turn, by a sharp transitory fall in financial markets following the terrorist attacks on September 11.

In fact, the value of the share portfolio held by households, which amounts to 30% of their financial assets, registered a fall of 13% in one quarter alone.

The rise in household indebtedness over recent years is nonetheless very tangible. The ratio of debt to GDP increased by 12 percentage points between 1997 and 2000, to stand at 47%. Several factors lie behind this trend. Robust economic growth during this period (4% on average) and the increase in asset values have strengthened the borrowing capacity of households¹.

Interest rates have also played a crucial role in this process, however. Spanish households' debt as a proportion of

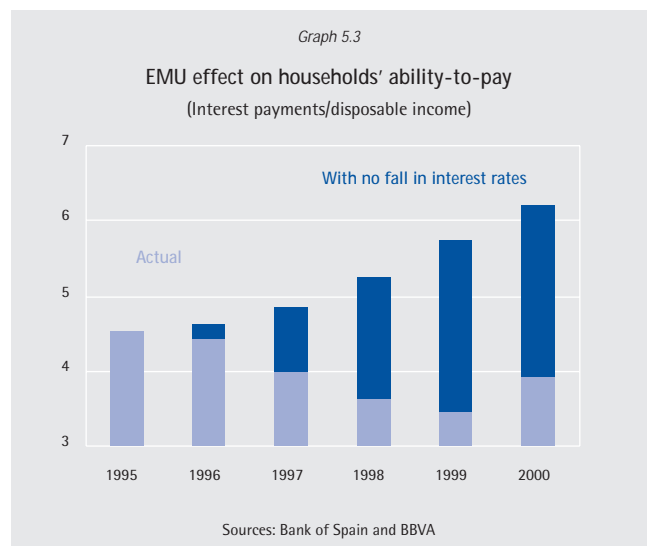
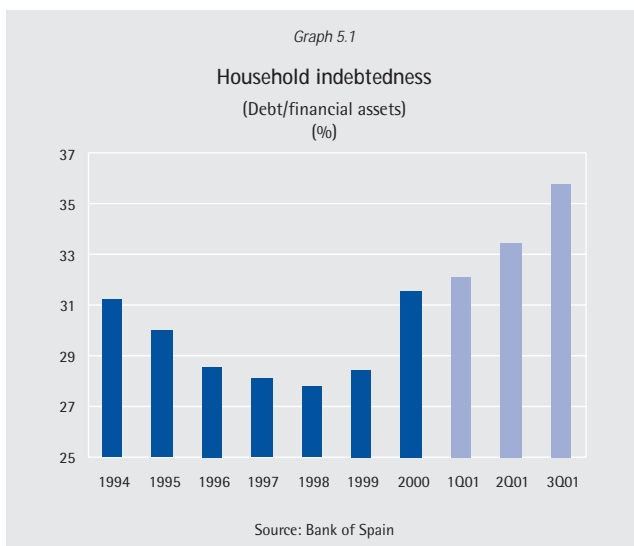


GDP is likely to have risen to around 50% at the end of 2001, a level very similar to the euro area average. In this sense, the increase in household indebtedness could be interpreted as another signal of European convergence associated with structurally very low interest rates. That is, households have been able to increase leverage thanks to a significant decline in the debt service cost.

To illustrate this factor we have estimated what the gross interest burden of Spanish households would have been if there had not been such a pronounced decline in interest rates as occurred between the years 1995-2000². According to the information provided by the Financial Accounts of the Bank of Spain, the implicit interest rate on credit to Spanish households has fallen from 7.5% in 1995 to 4.7% in 2000. This has allowed a rise in indebtedness to coexist

¹ See special note "An analysis of the increase in value of households' financial and property assets" in this issue of Situación Spain.

² The implicit interest rate is estimated as the ratio between gross interest payments and the stock of households' financial liabilities.



with a fall in the gross interest burden as a proportion of household disposable income.

In fact, as can be seen in Graph 5.3, if interest rates had remained at 1995 levels during the last five years, the interest burden as a proportion of disposable income in 2000 would have been more than 2 percentage points higher and would have trended upwards in recent years.

Moreover, the important differences that exist in the composition of the net assets of Spanish households in relation to that of more developed countries also contribute to a higher financial leverage in Spain. It is interesting to note in this context the larger share of real estate assets in Spanish households' total wealth.

While real estate as a percentage of household assets in G-7 countries ranges between 10% and 40%, in Spain it represents a share of 70%³. In fact, when indebtedness is measured as a percentage of total assets (financial assets and real estate), the deterioration is much less pronounced and, except for Italy, the level is lower than in G-7 countries.

This preference of Spanish households for house purchases has its counterpart in the high proportion of mortgage debt in total household debt. In Spain, 73% of credit to households is devoted to home purchases and improvements, a much higher percentage than in the leading OECD countries (except for France and the United Kingdom), where it ranges between 44% and 69%.

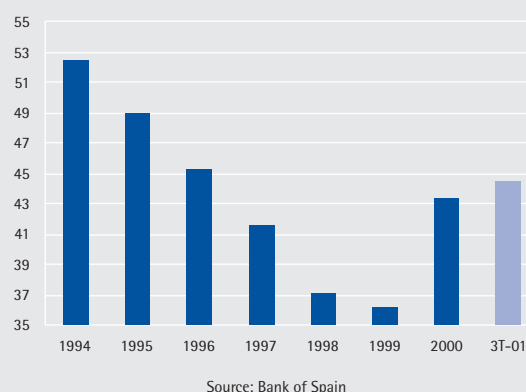
As a result, there has been an increase in the exposure of the financial system to the real estate sector. The share of mortgage lending in total lending in December 2001 was 39% in the case of banks and 62% in the case of savings banks (7 and 2 percentage points above 1997 levels).

Nonetheless, the available evidence suggests that mortgage lending presents the lowest risk in relation to cyclical factors. First because of its collateralization and second because of the value that borrowers assign to the guarantee, particularly where first houses are concerned. The mortgage problem loan ratio thus tends to be lower than for other types of lending. According to Spanish Mortgage Association data, in September 2001, the mortgage non-performing loans ratio was 0.63%, compared with 1.2% for total credit extended to the resident private sector.

³ See Situación Inmobiliaria, March 2002, BBVA Research Department.

Graph 5.4

Corporate indebtedness
(debt financing/net assets)
(%)



In addition, developments in the Spanish financial system in recent years have contributed to partially mitigate the exposure of the financial sector to the real estate sector. On one side, issuance of mortgage-backed bonds has increased significantly, from 0.5% of credit extended by banks and savings banks in 1997, to 4.4% in 2001. On the other, the introduction of the new statistical provision in the middle of 2000 has increased provisioning for mortgages with value-loan ratios over 80%.

And increasing corporate indebtedness

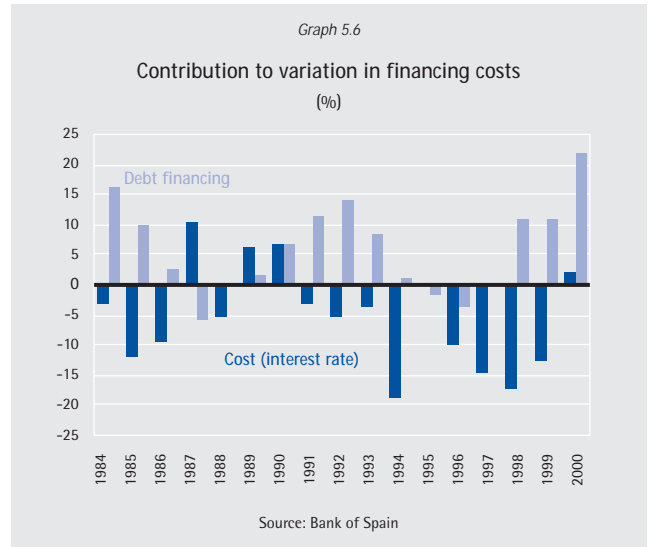
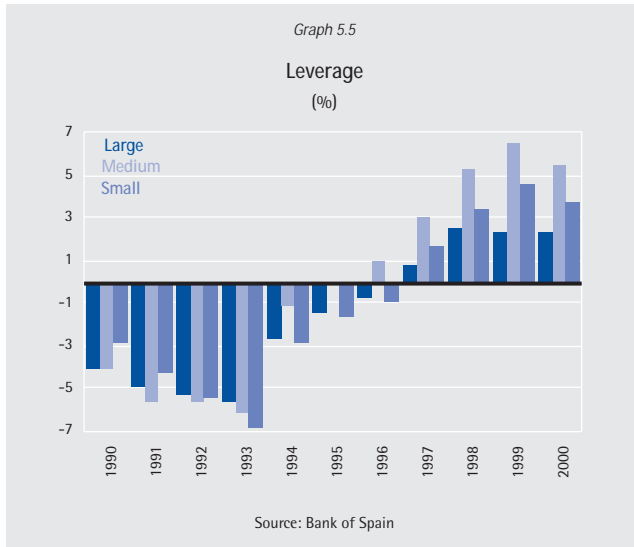
The indebtedness of non-financial companies as a proportion of GDP has also risen sharply over recent years, from 96% in 1995, to 133% in the third quarter of last year. When corporate debt is compared with net assets⁴, leverage is found to have increased from 36% in 1999 to 44% in the third quarter of 2001.

As in the case of households, the reduction in interest rates has made external financing significantly cheaper.

The cost of financing for non-financial companies declined from 9% in 1994 to 5% in the third quarter of 2001. This permitted companies to increase debt over this period, while at the same time reducing the share of financial spending in costs.

An analysis of the situation of companies by size shows that the biggest beneficiaries of the decline in financing costs have been small and medium-sized enterprises.

⁴ Assets less provisioning for risks and outlays.



The interest differential paid by SMEs relative to large companies has fallen by 3 and 2 percentage points since 1995. This has had a positive effect on earnings and leverage ratios (defined as rate of return of net assets less financial costs on total liabilities). In 2000, medium-sized companies were the most profitable and had the best leverage ratio, in contrast to their situation in the first half of the last decade.

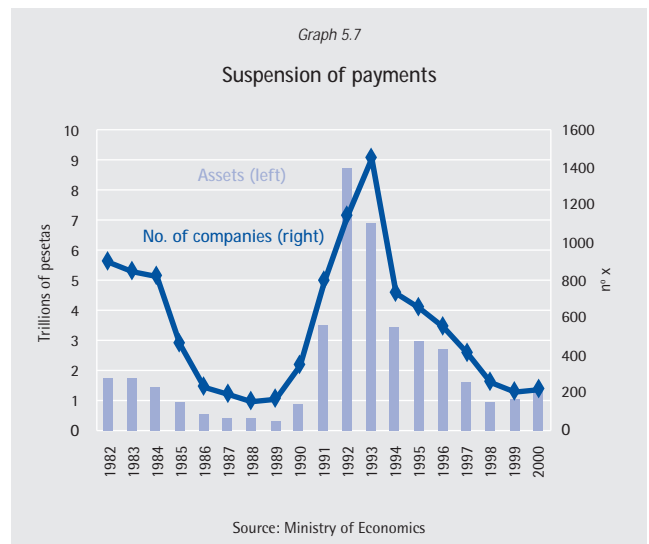
The decline in interest rates also seems to have affected the composition of the sources of corporate finance, increasing the share of external debt financing to the detriment of non-debt financing. Thus, bank lending increased from 44% of external financing in 1994 to 48% in the third quarter of 2001. In contrast, issues of securities have shrunk from 6% of external financing in 1994 to 2% in 2001. The direction of this shift in the financing of Spanish companies is particularly significant in the context of the faster growth in private fixed-income markets in recent years. Trading on the AIAF (Spain's largest private fixed-income market) increased by 42% during 2001.

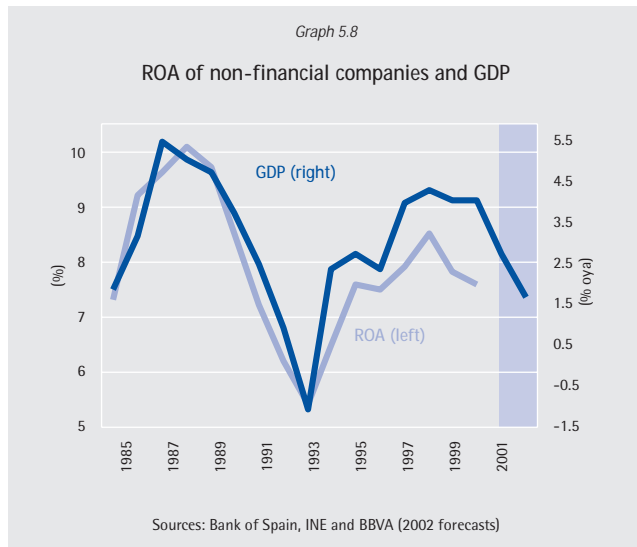
Nonetheless, the behaviour of interest rates has not been making a positive contribution to the variation in interest payments during the last two years. Interest rates have remained at very low levels, but financing costs have risen sharply because of the increased financing accumulated in previous years. The share of financing costs in total costs continues to be very low (around 4%), however, so that the modest rise in interest rates expected in 2002 will not in itself lead to a significant deterioration in Spanish companies' ability-to-pay.

A further factor pushing up corporate indebtedness has been the healthy economic climate, which has enabled companies to obtain high rates of return on their investments for the past six years.

In fact, despite the increase in indebtedness, the financial health of companies and the positive economic performance have made possible a marked fall in the number of companies and volume of assets in bankruptcy and suspension of payments proceedings.

The high correlation between corporate earnings and economic activity will probably lead to a moderation in the return on assets of non-financial companies in 2002. Nonetheless, companies have already started to react to this situation by cutting back on borrowing. Credit for productive activities grew by 9% in 2001, as against 17% in 2000.





In sum, the slowdown in corporate financing growth and the fact that interest rates will continue at low levels suggest that the solvency of Spanish companies (the ratio of indebtedness is still below 1996 levels) is unlikely to deteriorate significantly.

Table 5.1. Financial variables
(% oya, unless otherwise indicated)

	2000*	2001*	Sep.01	Oct.01	Nov.01	Dec.01	Stock (Bn euros)
Sight and savings deposits	5.7	14.4	7.0	7.4	11.0	14.4	263
Term deposits	24.7	12.6	20.3	17.6	16.2	12.6	194
Net assets of investment funds	-11.2	-2.9	-12.8	-9.8	-4.6	-2.9	178
Net assets of pension funds	19.8	15.8	15.9	—	—	15.8	44
Credit to private sector	17.3	11.9	12.9	12.3	12.1	11.9	626
Bad debt ratio (credit institutions)	1.24	1.22	1.20	1.22	1.20	1.22	n.a.

* end-year
Sources: Bank of Spain and Inverco

On-line banking in Spain: an overview of two years of deposit-taking

In 2001 some 800,000 people, close to 11% of the Internet-user population, were customers of the 6 on-line banks operating in Spain¹: ING Direct, Patagon, Uno-e, Popular-e, Activo Bank and Cortal. In fact, only 25.9% of Spanish Internet-users made use of Internet banking² for enquiries or transactions that year³.

By December 2001, on-line banks had managed to raise 6,668 million euros in deposits, representing a market share as a proportion of resident banks of only 3.8% and of all credit institutions of 1.5%. Of this heading, the lion's share is concentrated in checking and saving accounts, with 5,359 million euros under management (4.5% of the banking sector and 2% of total credit institutions).

As yet, none of these six banks has managed to become profitable and make a return on their aggressive marketing launches and the substantial initial investments in the development of technological platforms and human capital. Nonetheless, the modest figures noted above do not detract from the strategic importance of a sub-sector that has expanded rapidly in these first two years of activity proper. Between December 1999 and December 2001, on-line banks in Spain have increased tenfold the volume of deposits under management and have captured 16.3% of the volume of new deposits in the banking sector as a whole, multiplying more than six times over their market share. The expansion has been based on deposit-taking in checking and saving accounts, a segment in which on-line banks have captured 23.5% of the volume of new accounts in the banking sector in the last two years (this percentage increased to 42% during 2000). Their forceful entry to the market for time deposits since the first quarter of 2001 has also met with considerable success, attracting 32% of the volume of new deposits during 2001.

These results, as corresponds to a new sub-sector and in line with the international evidence, have been achieved through very aggressive deposit-taking strategies consisting in offering much higher deposit rates than other credit institutions. Thus, if we look at the three largest banks (ING Direct, Patagon and Uno-e), the weighted average deposit rate offered by these three on-line banks exclusively on their checking and saving accounts has risen to 4.54%, 44 basis points above the average minimum bid rate of the European Central Bank – the ECB rate (this differential will be referred to as the *account spread*).

Moreover, between December 1999 and December 2001, the average short-term deposit rate (selecting the most aggressive offer at each moment not only for accounts but also for time deposits)⁴ of these banks rose to 4.96%, 86 basis points above the ECB rate (the *deposit spread*).

Account-capturing offensives are defined as the periods in which the *account spread* series is above average for at least two consecutive months. Similarly, deposit-taking offensives are defined as the period in which the *deposit spread* series is above average for at least two consecutive months.

In concrete, four periods of offensives to increase checking and saving account volumes can be identified during the last two years: January–February 2000, July–September 2000, May–July 2001 and November–December 2001. Two periods of offensives to attract short-term deposits can also be identified: February–March 2001 and September–November 2001. During these months, the average deposit rate of these banks rose to 6.42%, 237 basis points above the ECB rate.

¹ This paper looks at the on-line banking sector (known variously as virtual banking, branchless banking or Internet-only banking); that is, the banking sector which only operates via Internet (although telephone communication may be permitted) and which has no traditional bank branches (although in a number of cases the branches of the parent institution may be used or the on-line bank may have its own premises). In addition, the availability of statistical series means that the study is limited to those institutions for which disaggregated information is provided by the Spanish Banking Association (AEB).

Total users of on-line banks in Spain are obtained as the sum of estimates supplied by the banks themselves. Nonetheless, not all banks publish these figures regularly, and so this figure should be taken as approximate only.

² Internet banking includes both on-line banks and the Internet operating channels developed within credit institutions to complement the other traditional channels.

³ According to the Asociación Española para la Investigación de Medios de Comunicación (2001): *Encuesta Navegantes en la Red*, April–June 2001.

⁴ To construct this series (*deposit spread*), we depart from the monthly series of checking and saving accounts annual percentage rates (APR) for each of the three banks. During the one-off offer periods for short-term deposits, the values of the original series are substituted by the rate offered on these deposits. On the basis of the three resulting series, representative of the highest rate offered by each of the banks on their deposit products, we calculated the average weighted by the deposit share under management.

On-line bank deposits

Millions of euros

	Total	Checking and saving	Time
Dec-99	794	508	286
	<i>0.6</i>	<i>0.5</i>	<i>0.7</i>
Dec-00	3,083	2,804	279
	<i>1.9</i>	<i>2.7</i>	<i>0.5</i>
Dec-01	6,668	5,359	1,309
	<i>3.8</i>	<i>4.5</i>	<i>2.3</i>

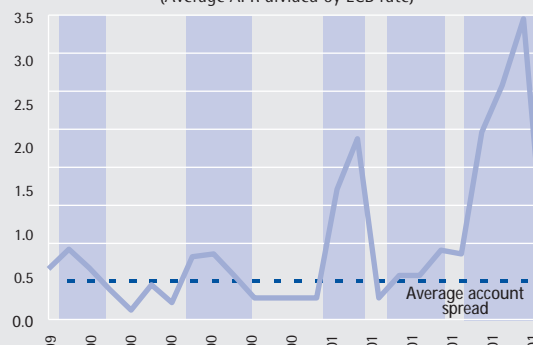
Notes: Includes ING Direct, Patagon, Uno-e, Popular-e, Activo Bank and Cortal.

Italics show the share in the resident banking sector.

Sources: AEB, Bank of Spain and BBVA

Deposit rates of on-line banks

(Average APR divided by ECB rate)



Notes: Considers only ING Direct, Patagon and Uno-e.

Shaded areas indicate periods of offensives to capture accounts and time deposits.

Sources: AEB, Bank of Spain and BBVA

While caution must be exercised in drawing conclusions from only two years of on-line banking activity proper, two differences between account-capturing and deposit-taking strategies are discernible. First of all, the deposit-taking offensives are more aggressive, both because of the higher interest rate offered and their shorter duration. Secondly, during the period of the offensive, the impact on alternative deposit products differs. Thus, during account-capturing offensives, the volume of time deposits falls, perhaps revealing a redistribution of funds by clients towards the product on offer. In contrast, deposit-taking offensives do not bring about a reduction in account balances, which may be due to amount restrictions and the raising of new funds⁵.

In any case, both strategies have proved fairly effective in raising deposits, as clients seem to respond to the interest rate spread offered. In fact, the outcome of both offensives, estimated as the net increase in the volume of deposits managed by the banks during the offensive and the post-offensive period is similar between those consisting of higher-yield accounts compared with deposits. During these periods, the three largest on-line banks have been able to attract on average around 250 million euros monthly to accounts⁶.

Evaluation and outlook

An assessment of the high deposit rate policy adopted by the on-line banks is by no means straightforward and may be premature. First of all, this strategy has clearly made it possible to win considerable market share in a relatively short space of time and has led to more intense deposit-taking competition in the Spanish financial system.

Secondly, the available empirical evidence for the United States shows that certain factors may explain the existence of losses during the start-up period⁷. These studies stress that, while on-line bank start-ups have been less profitable than traditional bank start-ups, as a result of lower business volumes and high costs, profitability and efficiency improve faster than in traditional banking because of the economies of scale associated with the new technologies.

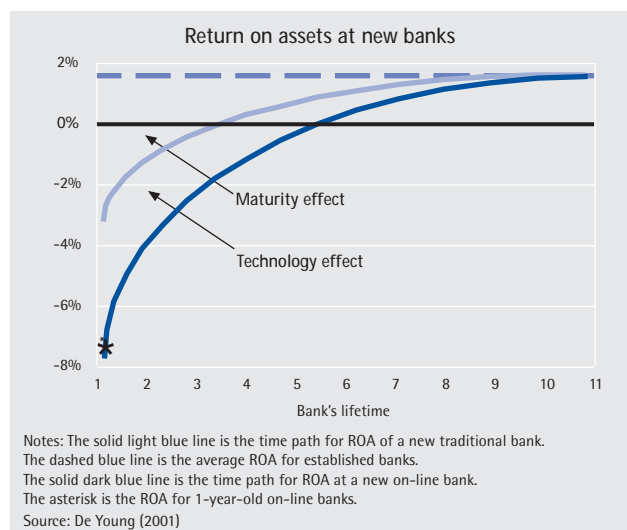
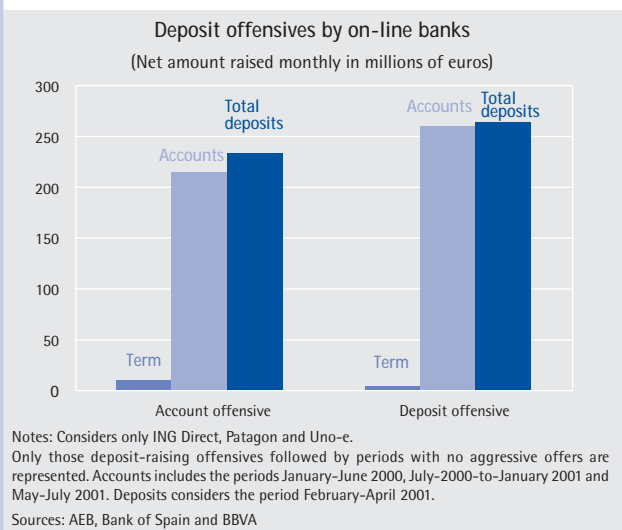
Third, the environment for on-line bank start-ups and their expansion in Spain has not been favourable. The still emerging Information Society, low Internet penetration and the global economic slowdown have combined to hamper their development.

But perhaps the biggest caveat of all would be that associated with another question. Do clients of on-line banks really perceive and value the advantages offered by the use of Internet bank distribution channels? Or are these banks growing simply because their deposit products are a secure financial investment option, superior even during the last two years than other investments that have had negative rates of return (especially equity investments), and because their deposit products are comparable to those offered by other credit institutions but with a much higher rate of return?

An answer to these questions will have to wait until some quarters hence. Even though on-line banks have continued with their policy of high deposit rates, a general strategy of offering an increasingly broader range of products and services, such as consumption loans, mortgages, pension plans, insurance and even stock market intermediation, is apparent.

Whatever the outcome, there can be no doubt that these institutions' entry to the Spanish financial system has boosted competition and has put pressure on established financial institutions to develop more attractive business models for their clients and to strengthen their investment in new technology.

⁵ This hypothesis cannot be tested as series for (active) on-line banking users of sufficient periodicity and disaggregated by contracted deposit product are unavailable.
⁶ The net stock of short-term deposits is practically zero. This is attributable to the negative impact detected on short-term deposits of account offensives, as well as the short duration of the time deposit offers themselves.
⁷ See, for instance, Robert de Young (2001): "Learning-by-doing, scale efficiencies, and financial performance at Internet-only banks", Federal Reserve Bank of Chicago *Working Paper* 2001-06.



An analysis of the rise in value of households' financial and real estate assets

The restructuring of the portfolio of financial assets held by households and the rise in market values of their instruments of preference¹ have paved the way for significant increases in household financial wealth in recent years². This, together with a sharp rise in house prices in a country in which households own approximately 80% of urban property assets³, has brought about a substantial increase in total household wealth.

The impact on private consumption of changes in household wealth depends on whether these changes are viewed as being permanent or temporary. Both the life cycle and permanent income theories maintain that the spending decisions of individuals depend not only on current income but also on expectations for the evolution of future income, from both labour and assets owned, and uncertainty about this income. In addition, the response of aggregate consumption to fluctuations in wealth is related to the characteristics of the asset that prompted the change in household wealth, that is, whether it was caused by non-financial (real) or financial assets. The distribution of different assets over the population differs and hence so does the group of beneficiaries of the increases in value accumulated in recent years. Although there are no statistics that provide this information directly, the surge in the number of mutual fund holders⁴ suggests that the group benefiting from the rise in financial asset values has increased more than that benefiting from the rise in property values⁵. Also, property assets are less liquid than financial assets, as a house cannot be sold immediately at market prices, and so their impact on spending

decisions should be smaller (see Estrada and Buisán, 1999)⁶.

Price effect versus quantity effect

The aim of this note is, first, to assess to what extent trends in financial and real state markets have contributed to the change in net household financial wealth and, second, to provide some insight into the degree of uncertainty implicit in the gains in wealth accumulated in recent years. To this end, we shall proceed to identify the two factors that account for fluctuations in asset market values: the quantity effect and the price effect. The quantity effect is determined by the flow of funds allocated (obtained) to asset purchases (sales), which partially reflects the shift noted in agents' preferences (portfolio re-composition). The price effect reflects the variation in the market price of the instruments in which agents invest⁷. If no significant biases exist in market asset valuations and a rapid and significant increase in wealth takes place, the greater the contribution to this change from (rising) invested funds, the more stable it would be expected to be. On the other hand, if it is underpinned by a sudden, sharp rise in the market prices of assets, which may have been prompted by transitory factors and hence be quickly reversed, it would be expected to be less stable. In the increases in wealth accumulated at the end of the 1990s, therefore, if the price effect were more important than the quantity effect, the uncertainty surrounding expected income from the assets would be expected to be higher than if the opposite were true.

The decomposition of the variation in asset market values into a price effect and a quantity effect can be expressed as follows:

$$V_{t+k}^i - V_t^i = S_{t+k}^i * p_{t+k}^i - S_t^i * p_t^i = S_t^i \Delta p_{t+k}^i + \Delta S_{t+k}^i * p_{t+k}^i$$

Price effect	Quantity effect
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where V_t^i is the market value of asset i in t , S_t^i is the stock of asset i held in t , and p_t^i is the price of asset i in t .

¹ According to the Financial Accounts published by the Bank of Spain, the "Shares and other holdings" heading accounted for 44.8% of total household financial assets in 2000, compared with 27.9% in 1994. The increased nominal stability that came with Spain's participation in EMU, the changes in the tax treatment of saving, Spaniards' deepening investment culture and the emergence of new financial instruments are the main factors behind the shift in the structure of households' financial balance sheet.

² Even though net financial wealth, defined as the difference between the market value of financial assets less financial liabilities, declined in 2001, the gains accumulated between 1994 and 2001 make up around 8.5% of GDP.

³ In Spain the share of property wealth in total wealth is one of the highest of the industrial countries, at around 70% in recent years, compared with 20% in the United States and 30% in Germany and Italy.

⁴ Up from 550,000 investors in 1980 to 7.455 million in 2001. Almost 100% were holders of pure fixed-income funds in 1990, compared with only 42.5% in 2001.

⁵ According to the 1991 census, around 30% of houses are not first houses.

⁶ Although existing studies are not conclusive, in the United States the sensitivity of consumption to changes in financial wealth could be lower than to variations in property wealth. See Situación Global, April 2002.

⁷ To undertake this decomposition, we assumed that the price effect and quantity effect are independent, despite the fact that they are highly correlated.

Fluctuations in share prices and portfolio restructuring have resulted in equity assets becoming dominant in changes in financial wealth

With respect to financial assets, we analyse those assets for which the available information allows us to obtain their value at market prices and the net contributions made over the year. This limits the analysis to mutual fund holdings (fixed and variable income)⁸ and direct equity⁹ and government debt holdings¹⁰. Though they represent around 25% of the total financial assets of households, these assets are, along with non-quoted shares, the most sensitive to changes in value caused by price fluctuations. In fact, if total financial assets amounted to 186% of GDP in 2000 (the latest yearly figure published), 46.3 percentage points above the ratio registered in 1994, around half of this growth is attributable to increases in the assets considered in this study.

The decomposition obtained for each of the groups of financial assets is displayed in Table 1. The results confirm

that variations in market prices have made a rising contribution to changes in gross financial wealth. For the assets taken together, the cumulative rise in value between 1993 and 2001 amounts to 55% of GDP. Of this, 22.7% corresponds to the price effect and 32.3% to the quantity effect. That is, the quantity effect dominates the price effect. Nonetheless, as Graph 1 shows, this result is affected by the negative stock market performance in 2000, and especially in 2001, that followed the boom in equities in previous years (between Q496 and Q499 the IBEX-35 rose by 130%). Thus, when we look at the period 1997-1999, the price effect is distinctly more important than the quantity effect (20.2% and 14.9% of GDP, respectively). These data seem to support, in the case of financial assets, the theory that increases in value underpinned by sudden, sharp price rises are subject to greater volatility than those caused by a quantity effect. This is possible because of the liquidity of financial markets and the speed with which

⁸ INVERCO data, both on total net assets and rate of return indices, were used to estimate the price effect. The percentage of total net assets held by households was obtained from the financial accounts in the corresponding distribution of assets by institutional sector, according to which the mutual fund holdings of households and NPISH have ranged between 80% and 90% of the total. Net subscriptions are identified with the quantity effect and the rest with the price effect. This approximation of the price effect would be accurate if new subscriptions were made at the end of each year. However, given that mutual fund investors can buy and sell subscriptions whenever they wish, the price effect calculated will incorporate the gains or losses that occur between the time of the investment and the time the fund is valued. To correct this error, we estimated the price effect assuming that those contributions are distributed continuously throughout the year. The results are very similar to those displayed in the table and are therefore not presented.

⁹ Direct share holdings have been approximated by the participation of individuals in the capitalisation of the Madrid stock market. New purchases are considered to be spread evenly over the year.

¹⁰ The price effect was estimated for the stock of government bonds held by individuals, using the bond price index published by the Bank of Spain.

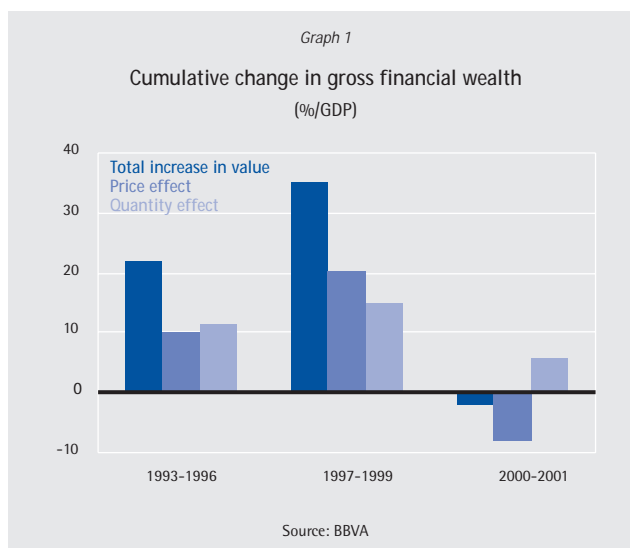


Table 1. Contribution of price effect and quantity effect to change in market value of gross household financial assets

% of GDP	1993	1994	1995	1996	1997	1998	1999	2000	2001
FINANCIAL ASSETS	8.4	0.9	2.4	10.3	16.0	14.5	4.6	0.4	-2.4
Price effect	4.4	-0.3	1.9	4.3	7.0	8.5	4.6	-3.6	-4.3
Quantity effect	3.9	1.2	0.4	6.0	9.0	5.9	0.0	3.9	1.9
Mutual funds	5.5	1.3	1.2	7.5	9.1	6.9	0.4	-3.0	-0.6
Price effect	1.3	0.5	1.2	1.6	2.2	2.5	1.6	-0.5	-0.5
Quantity effect	4.2	0.8	0.0	5.9	6.8	4.5	-1.2	-2.4	-0.1
Shares	3.0	-0.8	0.6	3.1	7.1	7.7	4.3	3.1	-1.8
Price effect	2.7	-0.6	0.6	2.5	4.7	6.0	3.1	-3.0	-3.8
Quantity effect	0.2	-0.2	0.1	0.6	2.4	1.7	1.2	6.2	2.0
Debt	-0.1	0.3	0.5	-0.3	-0.1	-0.1	-0.1	0.2	0.0
Price effect	0.4	-0.2	0.1	0.2	0.1	0.1	-0.1	0.0	0.0
Quantity effect	-0.5	0.6	0.4	-0.5	-0.2	-0.2	0.0	0.2	0.0

Source: BBVA

the capital gains accumulated can be realised. Thus, the valuation of those instruments that are most closely linked to the stock market performance (variable-income funds and shares), in which the price effect has determined the sign of the changes in their market value, have shown a higher volatility. Moreover, this impact has been strengthened by the shift in households' preferences towards equity assets.

Greater share of real state wealth in total wealth

Despite the importance of the gains accumulated in financial wealth, an analysis of the behaviour of total assets held by households would not be complete without a closer look at the evolution of the property sector¹¹. This is of particular relevance in the current context characterised by significant increases in prices¹² and new house purchases¹³.

As a result of the increase in value of the housing stock, net household property wealth¹⁴ in 2000 represented around 61% of total wealth, compared with a low point in the second half of the 1990s of 58.4% in 1999. In 2001,

the fall in value of financial assets and a further rise in house prices are likely to have led to an increase in real state wealth as a proportion of total household wealth to around 66%. These data only include real home assets, meaning that the real state asset holdings of households are underestimated. In fact, bearing in mind that at national level urban property assets have represented between 70% and 80% of real urban assets since the second half of the 1980s, taking account of all real assets held by households would take the share of non-financial wealth in the total to well over 70%¹⁵.

The significant decline accumulated by interest rates since 1995 and the increased macroeconomic stability associated with Spain's membership of EMU have had an important bearing on housing supply and demand in Spain¹⁶. The changes in house prices over recent years are in part accounted for by robust demand in response to improved housing accessibility conditions for households and an easing of credit restrictions. And from 2000 onwards, the scarcity of alternative assets for investment offering high rates of return following the stock market corrections, and the influx of hoarded cash in the run-up to the introduction of the euro, have provided additional boosts to demand for housing and hence house prices. While part of the price effect may clearly be due to transitory factors (the "euro effect" and the stock market setback), the structural change that has taken place in the Spanish economy has led to a permanent change in housing accessibility conditions and hence has increased the average price of affordable housing for households. In this sense, as in the case of the rise in the value of financial assets, the price effect has dominated the quantity effect. Nonetheless, in contrast to financial

¹¹ The reduction in interest rates, the favourable tax treatment of housing and the improved accessibility to housing, together with lower uncertainty about future income and the low probability of interest rates returning to the high levels observed in the past because of the macroeconomic stability brought by Spain's entry into EMU, fuelled investment in housing and demand for credit for house purchases.

¹² Second-hand house prices rose at an annual rate of 10.5% in 1999, 14.4% in 2000 and 15.4% in 2001.

¹³ The number of house completions amounted to 356,400 in 1999, 415,800 in 2000 and 550,000 in 2001, compared with an average of 256,000 in the period 1989-1998.

¹⁴ Only the market value of the "total housing stock" is considered, so that we are identifying real wealth with the housing stock of households, which existing studies estimate at around 90% of the total. For an exact measurement of real wealth, in addition to the value of building land, offices and business premises, which constitute urban property assets (80% held by households and NPISH), rural assets and assets linked to the economic activities of sole traders and the self-employed would need to be considered. Real net wealth is obtained by subtracting the volume of mortgage credit extended by the financial system from the market value of the estimated housing stock.

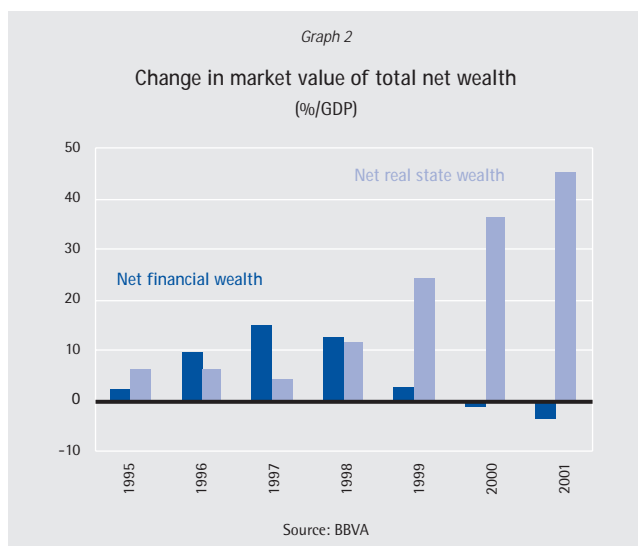
¹⁵ See Naredo, J. M. and O. Carpintero (2002): "El Balance Nacional de la economía española (1984-2000)".

¹⁶ See Balmaseda, M. and I. San Martín (2002): "Política monetaria, precios de vivienda y actividad económica", Situación Inmobiliaria, March 2002.

Table 2. Change in market value of gross financial and real state assets: price effect and quantity effect

% of GDP	1993	1994	1995	1996	1997	1998	1999	2000	2001
FINANCIAL ASSETS	8.4	0.9	2.4	10.3	16.0	14.5	4.6	0.4	-2.4
Price effect	4.4	-0.3	1.9	4.3	7.0	8.5	4.6	-3.6	-4.3
Quantity effect	3.9	1.2	0.4	6.0	9.0	5.9	0.0	3.9	1.9
REAL STATE ASSETS	2.7	7.8	8.8	9.2	8.9	16.6	30.7	43.0	52.2
Price effect	2.7	7.7	8.9	8.4	8.5	16.4	29.4	41.5	49.2
Quantity effect	0.0	0.2	-0.1	0.8	0.4	0.2	1.2	1.6	3.1
TOTAL	11.0	8.7	11.2	19.5	24.9	31.1	35.3	43.4	49.9
Price effect	7.1	7.3	10.8	12.6	15.4	25.0	34.1	37.9	44.9
Quantity effect	3.9	1.3	0.4	6.8	9.4	6.1	1.2	5.5	5.0

Source: BBVA



assets, the lower liquidity of the real state market and the structural changes noted earlier considerably reduce the likelihood of a sharp correction in house prices in the short term. This does not rule out a slow correction in prices, however.

Graph 2 shows that, between 1996 and 1998, the improvement in household net worth was the result of the evolution of net financial assets, both because of the significant rise in stock market valuations and the increase in household equity holdings. In the period since 1998, by contrast, real state assets have been responsible for the increase in household net worth¹⁷.

Sudden changes in household wealth are unlikely in the short term

Two conclusions can be drawn from the existing evidence. The first is that, on average, real state assets have contributed to a greater extent to the increase in household net worth than financial assets. The second is that, generally speaking, the price effect has dominated the quantity effect.

These facts have influenced the spending decisions of individuals. First of all, the sensitivity of private consumption to variations in total wealth depends on whether this change is induced by fluctuations in financial or property asset values. Despite the fact that in the case of Spain consumption is more sensitive to financial assets, the significant increase in housing stock values registered

in recent years should have affected private consumption. According to Bank of Spain estimates for the period 1985-1991, property wealth – which rose at an average real rate of 10.2% – contributed almost 0.4 tenths of a point on average per year to private consumption (Estrada and Buisán, 1999). In 1998-2001, the increase in the value of the housing stock was slightly higher than that registered at the end of the 1990s, at around 11.5% on average. According to the above estimates, this would lift private consumption by 0.4 tenths of a point. Secondly, although the price effect has dominated the quantity effect as an explanatory variable for changes in household wealth in recent years, in the short term there is little likelihood of a sharp decline in wealth, for two reasons. First, because financial wealth has already registered a sharp correction in 2000 and 2001. And second, because a sudden fall in household real state wealth capable of affecting private consumption could only be expected if there were a sudden correction in prices, in our view a scenario that seems improbable in 2002.

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¹⁷ Net property assets are calculated by subtracting mortgage credit extended by resident credit institutions from the housing stock valued at market prices. Net financial assets are obtained by subtracting non-mortgage credit from the market value of the assets considered.

The inflation differential between Spain and EMU¹

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1. Introduction

In the early 1990s, there was considerable uncertainty about the real cost of the disinflationary process in the industrial economies. The situation of the peripheral European countries was a source of particular concern. These countries were starting from high rates of inflation and faced the need to make headway in nominal convergence with the best-performing European countries in terms of inflation, in accordance with the criteria laid down in the Maastricht Treaty.

In Spain, notwithstanding the initial uncertainties, the disinflation policy was a notable success³. In spite of this, however, a high and significant inflation differential with the EMU countries has persisted. As shown in Graph 1, this differential narrowed in 1997 and 1998, reaching record low levels precisely at the reference dates for assessment of the nominal convergence for admission to EMU. Since 1999, after the launch of EMU, as the cyclical expansion matured, the inflation differential between Spain and the European countries has widened markedly.

Although there is a current of opinion that places the origin of this problem in the services sector, using the Balassa-Samuelson theory to explain the inflation differential, the

empirical evidence suggests that there is no basis of support for this explanation. First, productivity growth in Spain has not been stronger than in EMU. Further, Spain's inflation differential is not confined to the services sector, but also shows up in the non-energy industrial goods sector. The inflation problem in the Spanish economy can therefore be described as a problem of "double inflation", rather than simply a "dual inflation" problem.

In view of this evidence against the Balassa-Samuelson hypothesis, we attempt to ascertain the reasons for the differential in price variations in Spain, analysing the dynamics of inflation itself. Using the analytical framework of the Phillips curve, we find that the inflation differential seems to be explained by the divergent path of inflation's trend component, probably as a result of rigidities in the Spanish economy, the process of expectations formation or the influence of economic policies.

This article is structured as follows. Section 2 analyses the problem of Spain's inflation differential as a problem of "double inflation". Section 3 looks at the inflation dynamics and Section 4 presents the results of the estimation of a Phillips curve for Spain and EMU. Section 5 concludes.

2. The inflation differential: a "double" problem

The inflation differential between Spain and EMU has been positive since 1992, though three distinct periods are discernible in its behaviour during this decade (Table 1). Between 1993 and 1996, a period of nominal convergence, the average differential was 1.7 points, with a peak of 2.5 points in May 1995 and a low of 1.0 point 10 months later. Between 1997 and 1998, a transition period, the differential averaged 0.5 points, and at no time was higher than one percentage point. Finally, since the launch of EMU in January 1999, the inflation differential has increased to 1.1 points. Its volatility has also fallen, though by a modest amount.

¹ Summary of a forthcoming article in *Papeles de Economía Española*.

² The authors are grateful to Julián Cubero and Rafael Doménech for their assistance and helpful comments.

³ Compliance with the inflation requirement of the Maastricht treaty was a consequence of both the behaviour of social agents in reaction to the sharp employment adjustment suffered in the recession of the early 1990s and economic policy-making, especially the independence of the Bank of Spain.

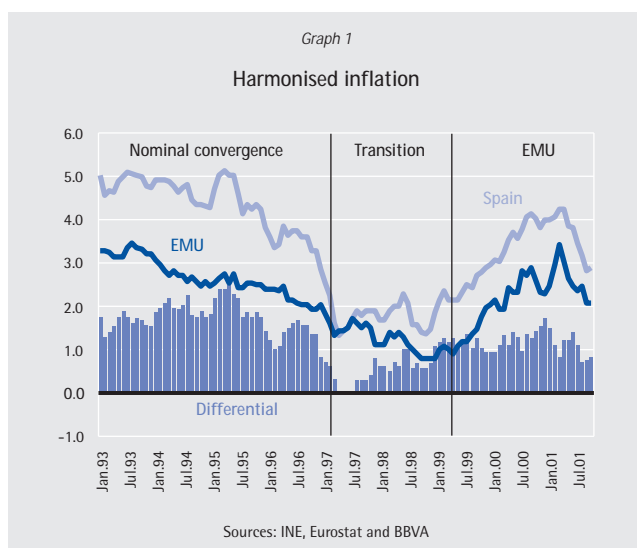


Table 1. Spain and EMU: inflation differential

Periods	Nom. convergence 1993-96	Transition 1997-98	EMU 1999-01
Average (pp)	1.7	0.5	1.1
Standard dev.	0.3	0.3	0.2

Source: INE, Eurostat and BBVA.

Table 2. Spain and EMU: inflation variations

	Absolute variations (pp)				Relative variations (%)			
	From nom. convergence to transition		From transition to EMU		From nom. convergence to transition		From transition to EMU	
	Spain	EMU	Spain	EMU	Spain	EMU	Spain	EMU
Total	-2.6	-1.3	1.3	0.7	-59	-50	72	49
Goods (ex-energy)	-2.6	-1.0	1.3	0.3	-67	-48	96	28
Services	-1.9	-1.7	0.1	-0.2	-35	-44	4	-11
IPSEBENE	-2.6	-1.3	0.9	0.0	-56	-45	43	0

Source: INE, Eurostat and BBVA.

As can be seen in Table 2, between the first two periods, inflation in Spain fell on average by 2.6 points (from 4.4% to 1.8%), double the decline registered in EMU. However, the increase in average inflation in the period 1999-2001 in Spain was practically twice as large as in EMU. That is, in absolute terms, Spanish inflation varied more than that of EMU as a whole. When the initial level of inflation is taken into account, the relative change between these two periods is of similar magnitude. The difference in the evolution of prices is only found to be higher between the transition and monetary union periods, when inflation rose by 72% in Spain and by 49% in EMU relative to the level in the second of the periods considered.

This behaviour of relative prices, with more intense accelerations and decelerations of consumer prices in the Spanish economy than in EMU as a whole, is also apparent in the large groups of products in the basket of goods and services, and, in particular, in IPSEBENE (energy, unprocessed food). Specifically, services inflation, the group with the biggest weight in the index, rose by 0.1 points in Spain (a 4% rise in the level of inflation in the group) between the transition and monetary union periods, whereas it fell by 0.2 points (an 11% drop) in EMU as a whole. The services group

is the component of consumer prices with the highest inertia, reflecting the fact that it is more sheltered from competition because of the nature of the activities that comprise it (these are also relatively more regulated).

During the past three years, the inflation differential in services has increased from an average of 1.4 points to 1.8 points (Table 3). It is also the only group of consumer prices in which the differential is higher in the current period of monetary union than in the period of nominal convergence⁴.

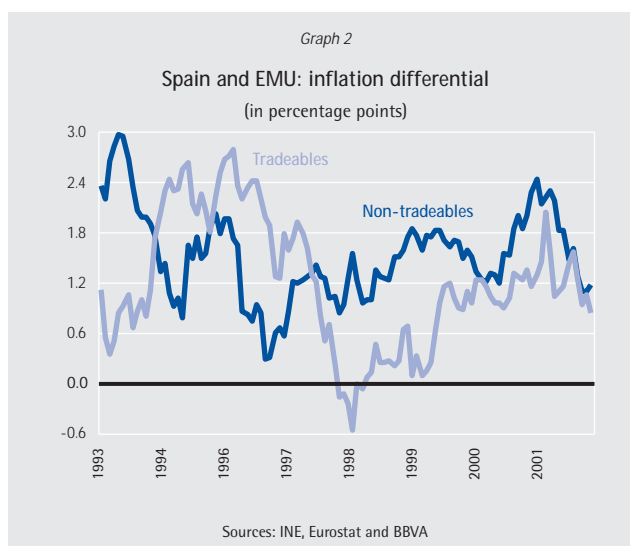
The average inflation differential since the launch of EMU is 1.1 points, the only negative differential being that registered by the energy group (-0.7 points). From this it is apparent that inflation is not a dual problem affecting only services, rather there is an inflation differential for tradeable goods as a whole (which are open to international competition). Graph 2 shows that the inflation dif-

⁴ The delay in updating Spain's CPI basket may have contributed to the increase in the services inflation differential in recent years. In Germany, Italy and France, the CPI basket of goods was updated to give a greater weight to new services linked to telecommunications which have seen sharp falls in prices.

Table 3. Spain and EMU: inflation differential

Periods	(average in percentage points)		
	Nom. convergence 1993-96	Transition 1997-98	EMU 1999-01
Total	1.7	0.5	1.1
Unprocessed food	1.8	0.2	1.4
Processed food	2.9	-1.2	0.6
Energy	2.3	-0.8	-0.7
Non-energy ind. goods	1.7	0.8	1.1
Goods (ex-energy)	1.9	0.2	1.2
Services	1.6	1.4	1.8
IPSEBENE	1.9	0.5	1.4

Source: INE, Eurostat and BBVA.



ferential between Spain and Europe for tradeable goods was only wiped out in 1997. Thereafter, it rose steadily until early in 2001. In other words, Spain has a "double" inflation problem affecting both tradeable and non-tradeable goods.

It is therefore difficult to account for the inflation differential on the basis of different rates of productivity growth in Spain and EMU, an interpretation based on the Balassa-Samuelson (1964) hypothesis. Moreover, there is no evidence that Spain is experiencing a possible productivity shock relative to EMU. On the contrary, the productivity of the Spanish economy relative to that of Europe has been falling since the middle of the 1980s.

3. Inflation dynamics

As Graph 3 shows, the variation in prices in recent years has been higher and more stable in the Spanish economy than in the European economy. Thus, during the past 20 years, inflation rose on average by 6.5% in the Spanish economy, compared with 4.1% in EMU. Given that this behaviour appears not to be the result of a dual inflation problem, it is necessary to identify the factors differentiating between Spain and EMU. To do so, we used an alternative analytical framework, the Phillips curve, which considers stickiness, demand pressure and trend inflation as important explanatory variables of inflation dynamics.

The first of these variables, price stickiness, tends to be proxied using the lapse of time between an inflation shock and the return of inflation to its level prior to the shock. The most direct measure of stickiness is to consider the autocorrelation function of the inflation time series. As Graph 4 shows, the rate of inflation exhibits a positive

and significant autocorrelation, with similar levels in Spain and EMU between a lag of one quarter and ten quarters. The autocorrelation only declines more slowly in Spain than in EMU from ten quarters onwards, which may indicate a higher stickiness over time in the case of Spanish inflation.

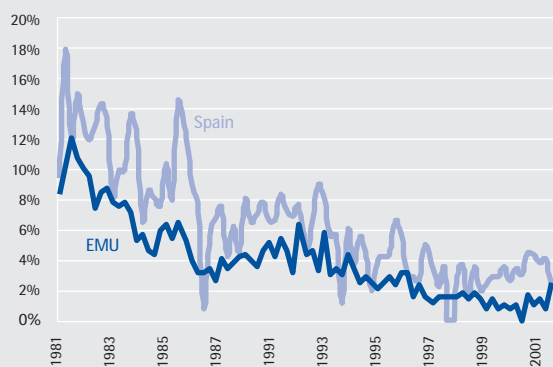
The cyclical component of output is used, in this case, as a proxy for the second variable, demand pressure. To this end, we used the seasonally-adjusted National Accounts series for the Spanish economy and EMU. The Hodrick-Prescott filter (1997) was used in the estimation of the trend component. Clearly, the cyclical component of output displayed in Graph 5 is strongly correlated in the two areas and even the deviations from trend are of similar magnitude.

The third explanatory variable of the inflation dynamics is trend inflation. In recent years, as a consequence of the orientation of monetary policy towards inflation targeting, a measure of inflation is needed that will eliminate the high noise component of the more aggregate inflation indices. By doing so, the aim is to identify the permanent signals in the behaviour of prices that allow us to extract information for medium-term forecasts.

The standard measures are those which strip out the more volatile components from the price indices, mainly food and energy, thereby obtaining a measure of "underlying" inflation. These are insufficient, however, since several goods and services may experience shocks to relative prices. Accordingly, this study uses stochastic filters as alternative measures of trend inflation. Specifically, we use two types of filter. A symmetrical one, the Hodrick-Prescott (1997) filter, which for each point in time yields a trend

Graph 3

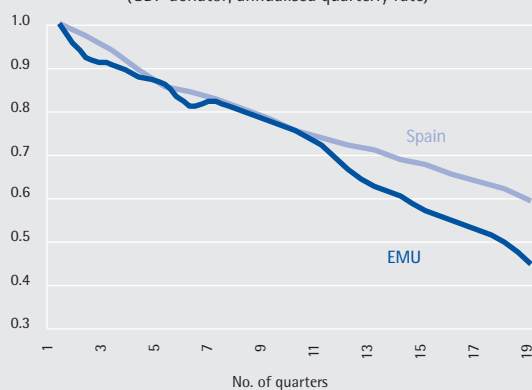
Inflation rate
(GDP deflator, annualised quarterly rate)



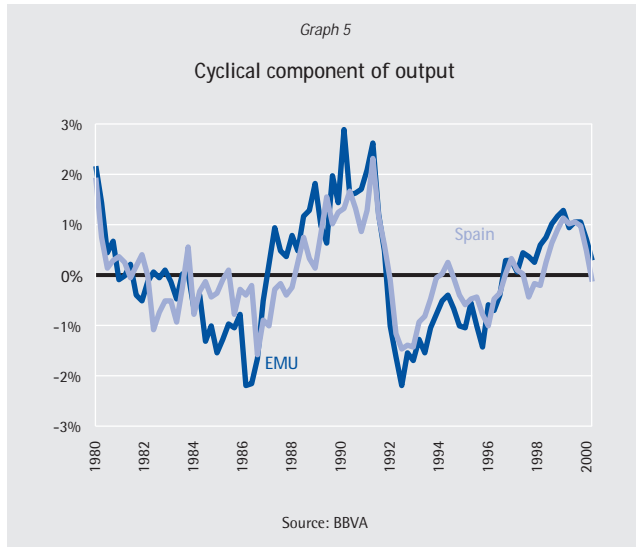
Source: BBVA

Graph 4

Autocorrelation
(GDP deflator, annualised quarterly rate)



Source: BBVA



that depends on both past and future values, and the asymmetrical Cogley filter based on an algorithm of the following type:

$$\mu_t = \mu_{t-1} + g_0(\pi_t - \mu_{t-1}) \quad (1)$$

Where μ_t is trend inflation at time t , and g_0 is a parameter lying between 0 and 1⁵. Expression (1) can be rewritten as a geometric sum of infinite terms, the first of which is g_0 and the ratio of which is $(1-g_0)$, such that:

$$\mu_t = g_0 \sum_{j=0}^{\infty} (1-g_0)^j \pi_{t-j} \quad (2)$$

This yields an asymmetrical filter with interesting properties. First of all, at each point in time, the estimated trend depends solely on past inflation, not on future inflation, so that the most recent data will not be biased by projec-

⁵ When it is 0, there is no variation in the trend relative to the previous time, and when it equals 1, the trend at each time coincides exactly with the inflation rate, that is, it does not depend on the previous value of the trend.

tions of the variable, one of the shortcomings of symmetrical filters. Secondly, for appropriate choices of parameter g_0 , it is found to be capable of eliminating efficiently the more volatile components of inflation. Finally, it has a notable capacity for predicting inflation.

We used both measures – the Hodrick-Prescott and Cogley filters – to estimate trend inflation in Spain and EMU based upon annualised quarterly data for the GDP deflator. The results presented in Graphs 6 and 7 show that trend inflation has been falling in both areas for the past 20 years, with a more pronounced reduction between the early 1980s and 1988. The fact that trend inflation has fallen more in Spain than in EMU is significant, though a positive differential between the two areas existed at all times.

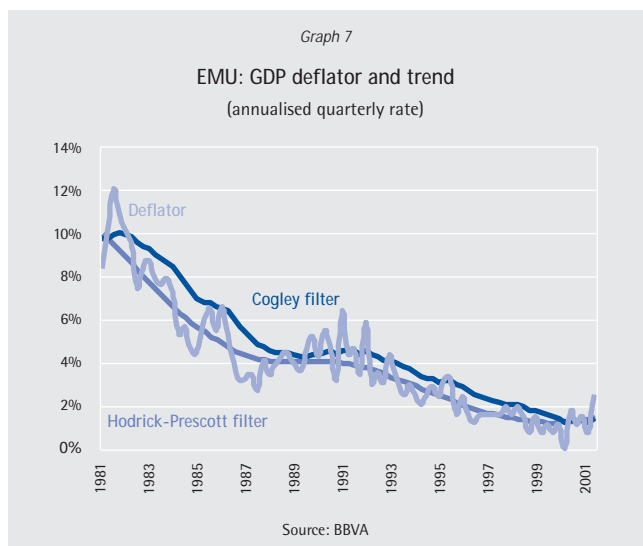
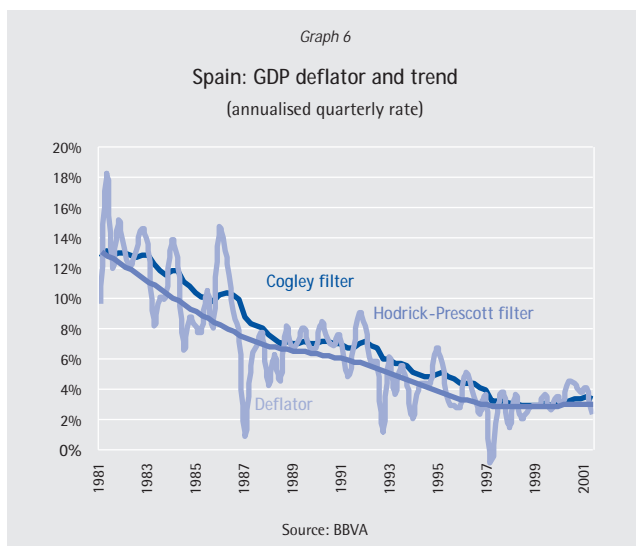
4. The Phillips curve in Spain and EMU

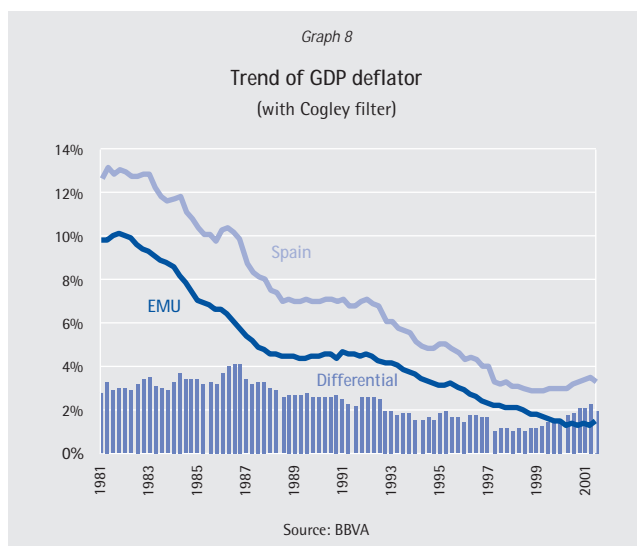
Having analysed the explanatory variables, we shall proceed to estimate a Phillips curve. In this framework, inflation, π_t , can be expressed as:

$$\pi_t = (1 - \sum_{i=1}^4 \alpha_i) \pi_t^* + \sum_{i=1}^4 \alpha_i \pi_{t-i} + \beta(y - y^*)_t + u_t \quad (3)$$

Where $(y - y^*)_t$ is the cyclical component of output, the sum of π_{t-i} proxies the stickiness of inflation and π_t^* is trend inflation, estimated alternatively using the Hodrick-Prescott and Cogley filters. The data are quarterly for the period 1981.1-2001.3.

The results show that the coefficient of the cyclical component of output is significant and relatively robust when inflation dynamics are incorporated. Moreover, the coefficient of the cyclical component of GDP is similar in





both areas, which, coupled with the fact that its behaviour is also similar, means that this does not appear to be the explanation for the divergent inflation performance. Nor do the differences in price stickiness seem significant to explain this situation. The most plausible explanation to gain an understanding of the existence of higher inflation in Spain therefore lies in the behaviour of the trend component.

An analysis of the behaviour of trend inflation in both areas, using the Cogley filter as a proxy, shows that it was higher in Spain than in EMU throughout the period. The average differential was 3.2 points in the 1980s and 1.8 points in the 1990s, increasing slightly at the end of the sample to average 2 points in 2001 (see Graph 8).

The reasons why trend inflation in Spain has been systematically higher than in Europe are more difficult to ascertain. The positive differential probably reveals the existence of differences in the process of expectations formation, the greater inertia of Spanish inflation and even the

different impact on the economy of the economic policies applied in the past.

5. Conclusions

The problem posed by Spanish inflation has been the existence of a persistent inflation differential with EMU, which can best be described as a "double", rather than a "dual" inflation problem. Using the analytical framework of the Phillips curve, the results show that Spain's divergent inflation problem is due to the different behaviour of its trend component. This constitutes a good proxy for inflation expectations and may indicate the existence of rigidities in the price setting process (more pronounced in Spain than in EMU), problems of information in the process of formation of expectations and even the different effect of economic policies. In recent years, however, the Spanish economy is adjusting to the change induced by entry into EMU, so that it remains to be seen whether the application of a common monetary policy with a clear anti-inflation stance will succeed in bringing Spain's inflation closer to European levels in the coming years.

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Spain: Main economic indicators

(% year-on-year change, unless otherwise stated)

	2000	2001 (1)	December	January	February	Latest figure	One year ago	Trend
Industrial production (seasonally-adjusted)	-1.4	0.5	-6.0	0.5		0.5	1.1	-
Business confidence index (net balance)	-5.4	-9.8	-9.0	-10.3	-9.3	-9.3	-1.7	+
CU (3)	79.2	76.9	78.3	76.9	76.9	76.9	79.3	-
Electricity consumption (4)	5.9	5.1	6.8	6.4	3.7	3.7	5.1	-
Cement consumption	8.9	14.8	-0.7	14.8		14.8	16.3	-
Car registrations	4.0	-2.1	11.2	4.5	-7.4	-7.4	-3.8	-
Consumer confidence index (2)	-4.0	-9.5	-8.0	-10.0	-9.0	-9.0	-1.0	-
CPI (overall)	3.6	3.1	2.7	3.1	3.1	3.1	3.9	-
Producer prices	1.7	-0.1	-0.8	0.1	-0.2	-0.2	3.6	-
Wage agreements (5)	3.4	2.7	3.5	2.7	2.7	2.7	3.1	=
Money supply (households and NPISH)	6.9	6.7	6.9	6.7		6.7	3.4	=
Domestic private sector credit	13.3		11.9			11.9	17.3	-
Social security registrations	3.9	3.3	3.4	3.4	3.1	3.1	4.5	-
Registered unemployment (6)	-27.6	49.1	18.5	31.0	67.1	67.1	-60.9	+
Unemployment rate (3)	13.0		13.0			13.0	13.6	+
Employment (qtr.) (3)(6)	294.7		256.0			256.0	569.4	-
Current account balance (7)	-17041.9		-3198.0			-3198.0	-3512.3	-
Trade balance (7)	-43018.3		-4346.0			-4346.0	-4269.7	-
State cash balance (7)	-2884.2		-2884.2			-2884.2	-2430.8	-

(1) Available to date. (2) Balance of replies (%). (3) Quarterly data for quarter ending in month specified. (4) Corrected for calendar effects and temperature. (5) Year-to-date. (6) Year-on-year in '000s. (7) Balance in millions of euros.

International situation: Forecast summary

	Real GDP (% average)				Inflation (% average)			
	2000	2001	2002	2003	2000	2001	2002	2003
US	4.1	1.2	2.0	3.2	3.4	2.8	1.6	2.5
EMU	3.4	1.5	1.3	2.3	2.3	2.5	2.2	2.4
Japan	2.2	-0.4	-0.8	1.0	-0.7	-0.7	-0.9	-0.3

	Fiscal balance (% of GDP)				Current account balance (% of GDP)			
	2000	2001	2002	2003	2000	2001	2002	2003
US	2.4	1.3	0.0	0.1	-4.5	-4.1	-4.0	-4.1
EMU ¹	-0.8	-1.3	-1.6	-1.1	-0.9	-0.1	0.1	-0.3
Japan	-9.5	-8.0	-8.5	-8.1	2.5	2.2	2.2	2.3

¹ Public sector, excluding revenues from UMTS

	Official interest rate (%)*				Exchange rate (vs. \$)*			
	Closing date	Jun-02	Dec-02	Jun-03	Mar-02 average	Jun-02	Dec-02	Jun-03
US	1.75	1.75	2.75	4.00				
EMU	3.25	3.25	3.50	4.00	0.88	0.88	0.86	0.86
Japan	0.10	0.10	0.10	0.10	131	140	135	135

* End of period

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