BBVA Research

BBVA Finanzia

Spain

Consumption Outlook

First half 2010

Economic Analysis

- International outlook: challenges ahead for a sustained recovery.
- The recovery in the Spanish economy continues, although at a slow pace, and could be affected by persistent elements of uncertainty.
- Private consumption performed better than expected in the first quarter of 2010, but the necessary fiscal consolidation process and increased uncertainty threaten its recovery.
- The differences in risk aversion and the composition of households explain the heterogeneity in the tendency to save in Spanish households.
- Given the weakness of demand, no recovery in consumer credit is expected in the short term.
- Outlook for the automotive sector: per capita car ownership in Spain is nearing a saturation point.

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Contents

Closing date: July 8, 2010

Summary

The global economy is dominated by two opposing forces: on the one hand, the positive cyclical boost from the emerging economies and the U.S.; and on the other, the considerable increase in sovereign risk in some European countries. Although the EMU rescue plan reduces uncertainty in the short term, medium-term risks continue to be downward biased

There are major differences between the strength of the economic recovery in different countries. This is due to the varying degrees to which economies are using fiscal and monetary policies. These policies have been particularly effective in driving the economic cycle in China and in the U.S. At the same time, emerging economies are benefiting from a stronger domestic demand and their recovery seems to be much more consolidated. In developed economies, on the other hand, as expansionary policies are weakening, there are doubts regarding the sustainability of the recovery beyond 2010.

In particular, the European economy has traditionally emerged from recessions slower than the U.S., due to structural differences that make it less resistant to shocks and that imply that the economy takes longer to adapt to new situations. The current environment is made worse by two negative factors that will make the adjustment particularly slow: the delay in reforms to the European financial system, with very slow recapitalization that reduces the funding capacity of financial institutions in the area in the medium and long term; and the need to reduce public deficits through consolidation plans that will have a negative effect on economic activity in the coming years.

The magnitude of both effects is uncertain: in the case of financial weaknesses, Europe has never been faced with a crisis of this size, and because of the lack of transparency with which many banks in the area have recognized their losses, the situation of their balance sheets is still not known in the detail demanded by the international financial markets. In the case of the fiscal adjustments, the reduction of the deficit in the euro zone by around 3.5 percentage points of GDP over the next four years will have a direct negative effect on demand, although this will be diluted over time and compensated by a positive effect on confidence and on the costs of financing from achieving the promised fiscal targets. Overall, despite the significant differences between countries, the effect of these plans on annual growth in the area as a whole is not expected to be more than a few tenths of GDP.

Against this background of uncertainty, the deterioration of the Spanish economy continued to moderate steadily in the first half of 2010

After the major contraction in economic activity at the start of 2009, and the subsequent slowdown in the rate of contraction in the later stages of the year, the Spanish economy began 2010 with a modest 0.1% GDP quarterly growth in the first quarter. This was the first positive figure for nearly two years. The composition of GDP growth showed that private domestic demand was normalizing and there was a consolidation regarding the positive contribution of net foreign demand. It is worth highlighting in this respect that private consumption performed better than expected and showed positive rates of growth in the last quarter of 2009 (0.3%) and the first of 2010 (0.5%). Transitory elements that were partially covered in the last edition of this publication, such as the expected rise in the VAT in July, undoubtedly contributed positively to the performance of this part of aggregate demand. However, the persistent weakness of the labor market and the exhaustion of fiscal stimuli, suggest that the consumption of Spanish households will have hardly grown in the second quarter of 2010, despite the steady reduction in the saving rate. In this respect, Section 2 of the publication shows that the behavior of saving differs according to the type of household: households affected by liquidity restrictions, differences in the level of risk aversion and the existence of interdependent preferences between members of the household, all explain a substantial part of the heterogeneity in the tendency to save in Spanish households.

The adjustments underway suggest that the Spanish economy could once more show a contraction in economic activity during 2010

The factors behind this limited and temporary correction in the trend towards improvement in economic activity are basically a result of the contractive effects of fiscal consolidation in the Spanish and European economies, the doubts regarding the strength of the recovery in the European economy and increased uncertainty on international financial markets. Regarding fiscal consolidation in Spain, although there will be medium- and long-term benefits on consumption and on the overall economic activity, the VAT increase is expected to have a negative effect in the short term. Second, the additional public spending cuts recently approved by the government will mean a reduction in public consumption and investment, which will be temporarily reflected in rates of growth in domestic demand that are slightly below those previously expected. Finally, the reversal of expansive fiscal policies in neighboring countries will limit the contribution of net exports to growth. However, this latter factor could be compensated (at least in part) by the possible effects of the recent devaluation of the euro on the competitiveness of Spanish exports.

Some sectors that produce and trade consumer durables will be specially affected by the withdrawal of fiscal stimulus packages in Spain and Europe and by the rise in financial tensions
In the first half of 2010, domestic and foreign demand for durable goods interrupted the pace of improvement registered in the second half of 2009. The deterioration in domestic demand can be explained by the continued loss of strength in certain fundamentals of consumption (mainly income and wealth), the increase of uncertainty associated with the resurgence of financial tensions, and the weakening fiscal stimulus measures. In particular, the stimulus provided by the 2000E Plan on the demand for cars has gradually worn out. As a result, household purchases have been mainly responsible for the loss of strength in the sales of new cars this year. Demand for motorcycles and mopeds has also not contributed positively to household consumption in the first half of the year. Meanwhile, home appliances and, to a lesser extent, furniture, have performed positively, boosted by the temporary easing of the deterioration in the real estate market.

In line with what has happened in the domestic market, foreign demand for durable goods also deteriorated in the first half of 2010. However, available data indicate that it has been the reduction in automobile exports caused by the end of the “cash for clunkers” programs in most countries in the region that has been the main cause of the deterioration of foreign trade in durable goods in the first half of this year. In fact, other durable goods have shown positive average monthly growth between January and April 2010, with the growth in consumer electronic goods being particularly noteworthy.

Consumer credit in Spain moderates its rate of deterioration in the first half of 2010 in what is still an adverse environment
Private demand has also not contributed to stimulating consumer credit, although its pace of decline has clearly slowed. Despite the difficulties some institutions have in getting funds on the financial markets and the burden of past due loans, the cost of credit is below last year’s levels. If this trend is to continue, official interest rates must be maintained at reduced levels and the ECB has to keep its extraordinary liquidity measures in place. In the future, demand will not increase significantly, given the weakness of its fundamentals and supply will be heterogeneous. Thus the outlook suggests that the rates of change will remain negative over the coming quarters.

Medium-term outlook for the automotive sector: the rate of cars per capita in Spain is near saturation point
The publication ends with an article that studies the relationship between income per capita in the Spanish economy and its level of motorization. The data show that growth in cars per capita appears to have been falling off gradually since the mid 1970s, indicating that there is a saturation point. In particular, the saturation point is estimated for Spain at around 520 cars per 1,000 inhabitants. This means that from today’s levels, the number of cars per capita is only expected to grow by 10% more.

Considering that the demographic trend expected for the next decade will not have a specially strong contribution towards growth demand for cars, there are two alternatives for the motor vehicle sector to avoid a drop in sales in the medium and long term: first, to boost foreign competitiveness by increasing exports towards economies that have a significant growth potential and that are furthest from their saturation point; and second, to increase the car replacement rate. Given that changing demand preferences may be costly, stimulating a higher rate of replacement would require technological advances that reduce the cost of the use of cars by increasing their energy efficiency and extend the spectrum of choices available to consumers.

2. The Spanish economy continues to recover, albeit at a slow pace, but may yet be affected by ongoing uncertainties

The global economy is currently dominated by two opposing forces: on the one hand, the emerging countries and the U.S. are showing a healthy recovery that is resulting in world trade picking up and will probably lead to a growth rate in the global economy of 4.2% in 2010; and on the other, there are countries (mainly European) with a high level of public debt, and a limited capacity for their private sector to delever in the short term. These latter countries have experienced a considerable increase in sovereign risk and uncertainty in the financial markets, which has resulted in a significant increase in the volatility of European assets and provided an incentive to reduce exposure to these assets in investment portfolios. This in turn creates a feedback effect with lack of confidence in the economic perspectives of European Economic and Monetary Union (EMU), at least in the short term.

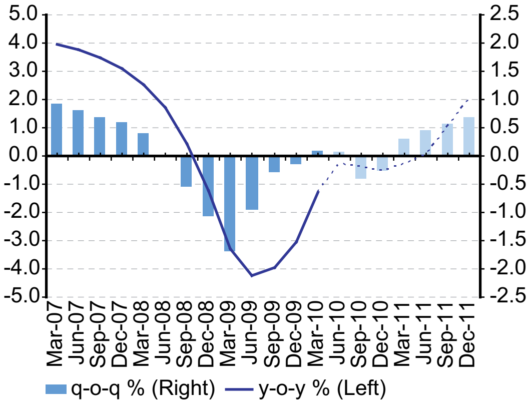
Although the European Stabilization Mechanism (ESM) agreed by the Council of Europe has prevented extremely adverse scenarios and reduced doubt about the capacity of the EMU to implement policies to address the problems of foreign financing by Member Countries with greater levels of debt, it has not been able to reduce uncertainty in the financial markets and return risk premiums to less tense levels. Nevertheless, one of the advantages of the ESM is that it conditions access to the stabilization fund set up by the Member States to the implementation of credible medium-term fiscal consolidation plans that must have the approval of the European Commission and ECOFIN. Thereby, the EMU has taken an important first step in effective fiscal rules within the monetary union and created adequate and sufficiently powerful incentives for countries to implement ambitious budget consolidation programmes.

However, given the financial markets uncertainty, it is particularly difficult to evaluate the impact on short-term growth caused by the acceleration of fiscal adjustment policies introduced by several European countries. In episodes of fiscal stress caused by problems related to the sustainability of public accounts, a credible fiscal adjustment accompanied by an improvement in the macroeconomic environment can ensure that the increase in private demand resulting from improved expectations and confidence more than offsets declining public expenditure, thereby leading to expansive effects even in the short term. The fiscal consolidation processes in Ireland (1985-1989), Denmark (1983-1986) and Spain (1993-1999) are good examples of this phenomenon. However, in an environment of increased uncertainty in which expectations do not improve quickly, the fiscal adjustment may have a negative impact on growth. In the current scenario this could lead to a greater uncoupling between the European and U.S. economies. Nevertheless, these negative short-term effects of fiscal adjustment may be offset by the euro's sharp depreciation in past few months and the resulting improvement in net exports. The consequences of all the factors that condition the recovery in the EMU will be the growing probability of a divergence between the monetary policy expectations in Europe and the U.S. and a consolidation of the euro/dollar exchange rate at close to current levels, which unlike a few quarters ago, are now close to their long-term equilibrium level.

Against this environment of financial markets tensions, the adjustment of the Spanish economy continued to moderate gradually in the first quarter of 2010. Following the major deterioration in economic activity in early 2009, and the subsequent slowdown in the rate of contraction at the end of the year, the Spanish economy began 2010 with a moderate quarterly (q-o-q) growth of 0.1% in the first quarter, the first positive rate for nearly two years (see Chart 1). In addition to the positive growth figures, its composition showed that private domestic demand was in a normalization process and foreign demand was consolidating its positive contribution to growth, just as the international environment began to demand a faster fiscal consolidation than had been initially planned. In this vain, it is worth highlighting that private consumption performed better than expected, with positive growth rates in the last quarter of 2009 (0.3%) and the first of 2010 (0.5%) (see Chart 2)[1], despite labour market continued to show unmistakable signs of weakness and gross disposable income did not show signs of recovery. Temporary factors partially accounted for in the last edition of this publication, such as bringing forward of private spending ahead of the VAT increase in July 2010, have undoubtedly contributed positively to the performance of this component of aggregate demand. In addition, the gradual recovery of household confidence in the first quarter of 2010, with the resulting reduction in precautionary savings, was an important element supporting this recovery[2].

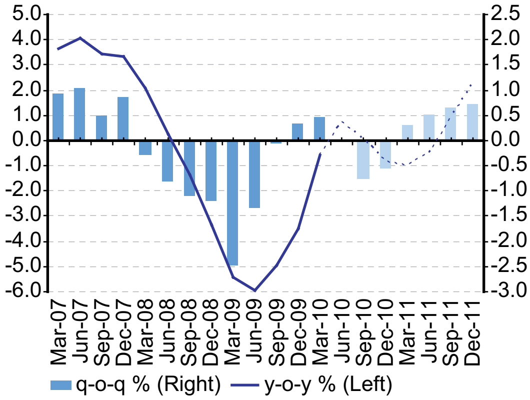
1: For a detailed analysis of the rest of the components of aggregate demand in the Spanish economy, see Spain Economic Outlook, June 2010.
2: See Box 1 for a detailed analysis of the microeconomic determinants of saving in Spain.

Chart 1
Spain: GDP growth



Source: BBVA Research based on INE

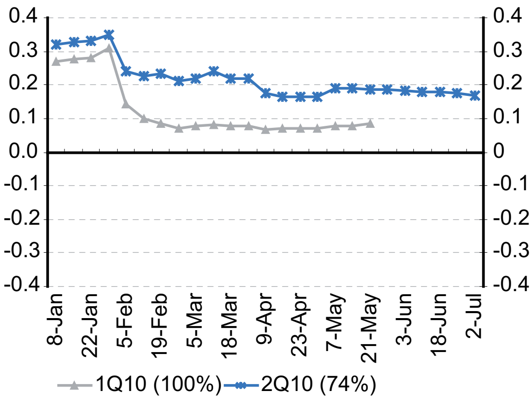
Chart 2
Spain: private consumption growth



Source: BBVA Research based on INE

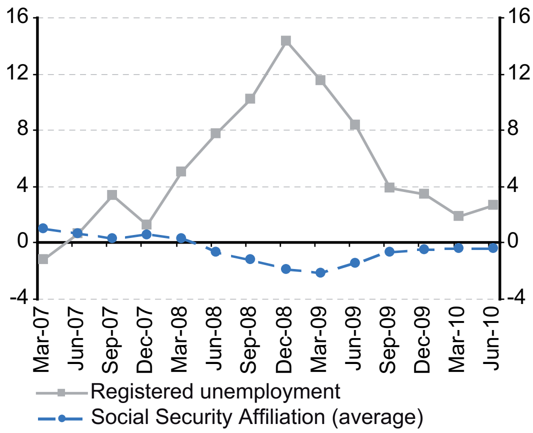
Pending the publication of official data, the information collected at the closing date of this report suggests that the Spanish economy has continued its stabilization process. In the second quarter of 2010 it may have performed similarly to the first quarter showing again a moderate quarterly growth rate (see Chart 3). However, although the economic recovery is ongoing, it is happening at too slow pace, and despite the expected labour market seasonal improvement during the second quarter of the year, it is not enough to support a sustained growth in employment and to significantly reduce unemployment. In particular, as in the first quarter of the year, Social Security affiliation (quarterly average) fell by 0.4% q/q in seasonally adjusted (sa) terms in 2Q10, while registered unemployment increased 2.7% q-o-q (sa), 0.8 percentage points (pp) more than in 1Q2010 (see Chart 4).

Chart 3
Spain: quarterly GDP growth forecasts of MICA-BBVA Model, by date of estimate



Note: the figure in brackets is the percentage of the data set known at the last estimate date relative to the benchmark quarter.
Source: BBVA Research

Chart 4
Spain: Social Security affiliation (average) and registered unemployment (% q-o-q, SA data)

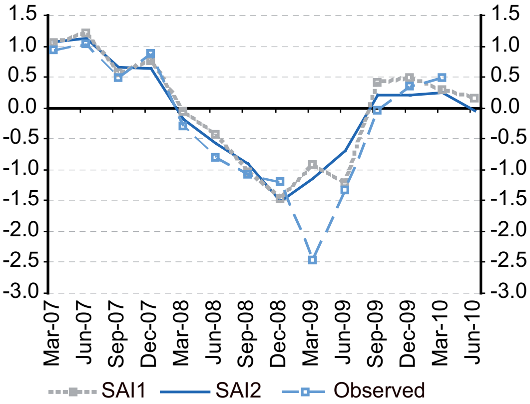


Source: BBVA Research, based on SPEE and Ministry of Labor and Immigration

The recent development of the labour market, together with the winding down of fiscal stimulus measures aimed to support households' final consumption expenditure (i.e., the 2000E Plan in the case of car purchases), suggest that this demand component could have registered a zero growth rate during the second quarter of 2010 (see Chart 5). In terms of the expenditure indicators, Chart 6 shows that in the months of April and May, the retail sales recovery registered during the previous quarter in seasonal and working day adjusted terms (swda) was reversed[3]. If this trend continued in June, there could have been a fall of a 1.4% q-o-q (swda) in this indicator during 2Q10. In addition, as we comment in detail in Section 3 of this report, the growth rates of passenger car registration once more slowed significantly in this quarter. With respect to qualitative indicators, household confidence fell by 4.7 points in 2Q10, following an increase of 1.7 points in the first quarter of the year.

Chart 5

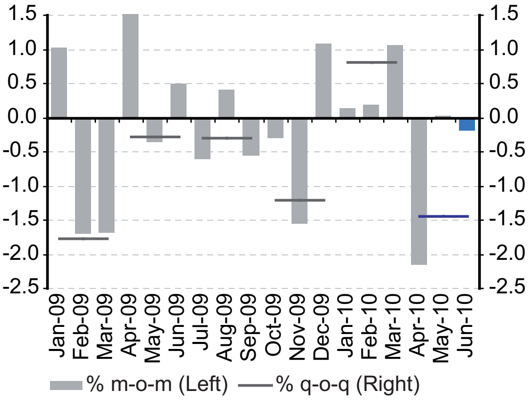
Spain: household consumption and BBVA's consumption Synthetic Activity Indicator (SAI) (% q-o-q)



Source: BBVA Research, based on INE

Chart 6

Spain: retail sales at constant prices (Seasonally and working day-adjusted data)



Source: BBVA Research, based on INE

For 2010 as a whole, the adjustments in progress suggest that the Spanish economy could once more contract, by around 0.6%. In particular, given the weakness of the recovery in the first half of the year, we expect the Spanish economy to experience additional quarters of negative growth during the following quarters, possibly in the third quarter, although lower than those registered in 2008 and 2009. The factors behind this temporary correction setback in the economic uptrend derive mainly from the contractive effects of fiscal consolidation programmes being pushed through in Spain and Europe, and from the increased uncertainty on the international financial markets. Firstly, despite the medium and long-term benefits of fiscal consolidation on the economic environment, the VAT increase, which has been in force since July, is expected to have a negative effect on economic activity in the short term[4]. Secondly, the additional public expenditure cuts recently approved by the Spanish government will entail a decline in public consumption and public investment that will be reflected in rates of growth slightly below those expected before the latest austerity package was announced (see Table 1)[5]. Finally, the reversal of expansive fiscal policies in neighboring countries will condition the contribution of the foreign sector, undermining some of the strength of Spanish exports. However, this latter factor could be offset (at least in part) by the positive effects of the recent euro's depreciation on the competitiveness of Spanish exports.

3: In part due to the calendar effect of Easter Week.
4: Details of our analysis of the impact of fiscal changes on the Spanish economy, see Spain Watch, November 2009.
5: For a detailed analysis of the fiscal adjustment plan in the Spanish economy, see Spain Economic Outlook, June 2010.

Table 1

Spain: macroeconomic forecasts

(Year-on-year change in %)	2007	2008	2009	2010	2011
Household consumption	3.6	-0.6	-5.0	-0.2	0.4
Public consumption	5.5	5.5	3.9	1.4	0.2
GFCF	4.6	-4.4	-15.2	-8.8	-2.7
Capital goods and other products	6.8	-2.7	-20.6	-7.9	-1.1
Construction	3.2	-5.5	-11.1	-9.4	-3.7
Housing	3.0	-10.3	-24.5	-16.5	-5.6
Other construction	3.3	-0.4	1.6	-4.3	-2.4
Domestic demand (*)	**4.4**	**-0.5**	**-6.4**	**-1.9**	**-0.4**
Exports	6.6	-1.0	-11.3	5.3	5.6
Imports	8.0	-4.9	-17.7	-0.2	0.9
Net trade balance (*)	**-0.9**	**1.4**	**2.8**	**1.3**	**1.1**
GDP at mp (% y-o-y)	**3.6**	**0.9**	**-3.6**	**-0.6**	**0.7**
Pro-memoria					
Total employment (LFS)	3.1	-0.5	-6.8	-2.7	-0.3
Unemployment rate (% active population)	8.3	11.3	18.0	19.4	19.2
Total employment (FTE)	2.8	-0.6	-6.7	-2.7	-0.5
Current account balance (% GDP)	-10.0	-9.7	-5.4	-3.0	-1.1
Public debt (% GDP)	36.2	39.7	53.2	63.7	69.8
Public administration balance (% GDP)	1.9	-4.1	-11.2	-9.6	-6.6
CPI (annual average)	2.8	4.1	-0.3	1.2	1.0

(*) contribution to GDP growth
Source: official institutions and BBVA Research

All in all, the fall in private consumption forecast for 2010 is below the estimate for the aggregate demand as a whole, and substantially below that for 2009. In particular, despite the growth perspectives in household disposable income for the whole of the year (-1.4% in real terms), the saving rate will probably fall gradually throughout the year and thus ease downward pressure on consumption growth, as was already seen in the first quarter. With regard to the remainder fundamentals, although the credit availability will continue to be below pre-crisis levels[6], the outlook for interest rates over the whole forecast horizon suggests that monetary conditions will not exercise downward pressure on consumption. Although it is true that the reduction of the household debt burden (which in 2009 freed income amounting to over 18.1 billion euros) will probably only be at around 1.8 billion in 2010, it is worth pointing out that the volume of this debt burden will continue to be around 13.6% of GDP, significantly below the figure for the period immediately prior to the crisis (16.8% GDP in 2007).

With respect to consumer prices, it is important to note that given the continuing weakness of demand described above, the scenario for the Spanish economy is particularly favorable for inflationary pressure to remain out of scope in 2010. Thus our current forecast for 2010 stands at 1.2% for headline inflation and 0.5% for core inflation. Nevertheless, the increase in prices in the first half of the year (average of +1.3% y-o-y for headline inflation and +0.1% y-o-y for core inflation), together with the probable pass-through of the VAT increase to consumer prices, suggest that there are moderate upward risks for our central forecast.

6: See Section 3 for a detailed analysis of consumer credit.

Box 1: Microeconomic determinants of saving: a static analysis

The process of deleveraging in Spanish households during the current economic crisis has been characterized by a significant upturn in their saving rate. Chart 7 shows that the saving rate of Spanish households registered the greatest increase in the euro zone over the last two years, at 18.8% in gross disposable income in 2009.

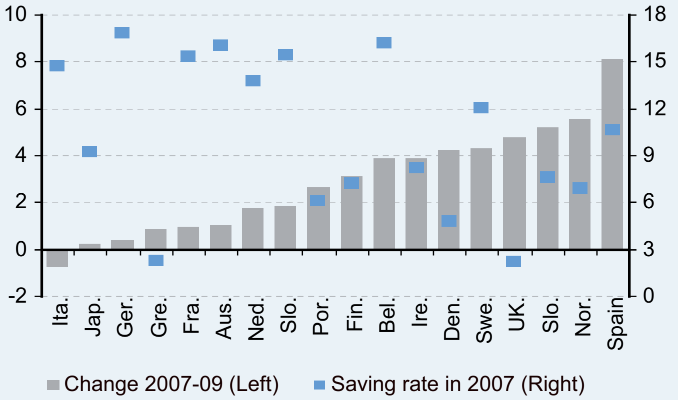
Household saving has been conditioned by the uncertainty associated with the deterioration of economic activity and, in particular, employment. Doubts regarding the solvency of households have led to tougher conditions for finance. In addition, the increase in household risk aversion and the worsening outlook of their future economic situation would have encouraged saving as a precautionary meaure[7]. However, given that the level of risk aversion is not the same for all households, its effects on decisions on consumption, saving and investment will also be different. In particular, international empirical evidence indicates that the tendency to save differs according to the composition of the family and the socioeconomic characteristics of its members[8].

Microeconomic information is essential for analyzing the degree of heterogeneity of saving. The drawback is that no recent data on household saving are available in Spain, so they have to be reconstructed from available surveys. Here we have chosen to use the last Family Budget Survey (FBS) for 2008 (see Appendix).

The results of the reconstruction of the figures for household income and expenditure on final consumption indicate that average notional voluntary[9] saving by Spanish households amounted to 5,500 euros in 2008. The most striking characteristic of the distribution of notional household saving is its high level of dispersion: the standard deviation stood at 26,000 euros in 2008 (see Chart 8). Thus the tendency to save in Spain differs by type of household.

Chart 7

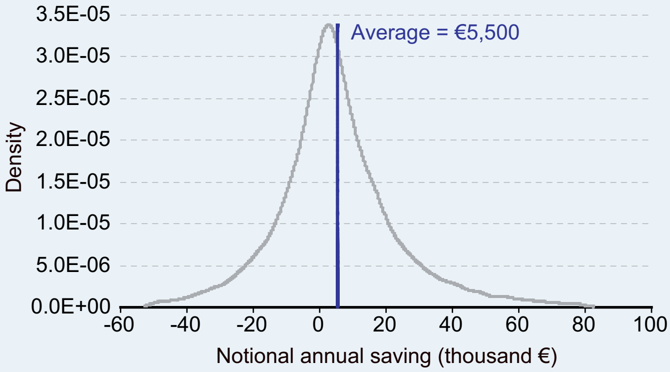
Changes in household saving rates. 2007-2009 (pp)



Source: BBVA Research, based on AMECO

Chart 8

Spain: distribution of notional household saving 2008



Observations below percentile 1 (p1) and above percentile 99 (p99) have been eliminated
Source: BBVA Research, based on INE data

What are the characteristics of the household that saves? Table 2 sums up the characteristics of households that show an above-average tendency to save. The descriptive analysis indicates that the tendency to save is higher in regions in the north of the peninsula (except for Galicia and Navarre), the center (Madrid, Castile-Leon and Castile-La Mancha), the east (Aragon, Catalonia and Valencia) and the islands, and among the residents of provincial capitals and/or towns of more than 50,000 inhabitants. The unconditional probability of saving is highest if the household owns its own home[10]. This result could be a consequence of a composition effect derived from the fact that households of homeowners who are not in debt coexist with households of homeowners paying off a mortgage.

7: BBVA (2009) carries out a detailed analysis of the deleveraging process of Spanish families and its implications on saving and consumption.
8: See, inter alia, Browning y Lusardi (1999), Deaton y Paxson (2000) y Börsch-Supan (2001, 2003).
9: It is defined as notional because they are not observed figures but reconstructed data. It is voluntary given that compulsory contributions to the Social Security are excluded.
10: Moreno-Badía (2006) finds the same evidence for Ireland.

The analysis of the composition of the households shows that the tendency to save reduces with size and increases with the number of members who have an income. Among other aspects, these results suggest that there may be a positive income effect that determines the probability of saving[11].

The characteristics of the main breadwinner in the household also affect the tendency to save. Specifically, there is greater than average (unconditional) probability of saving in households whose main breadwinner is a woman, single or widowed, Spanish, with higher education, working or voluntarily inactive and with a monthly net income above 1,500 euros. The relationship between the age of the main breadwinner and saving does not show the bell curve suggested by the conventional life-cycle theory. The results of Table 2 indicate that the tendency to save in households is greatest when the main breadwinner is over 65. Although the positive relationship between saving and age in retirement could be the result of a composition effect, it could also be a dynastic effect[12].

Table 2

Spain: characteristics of households that save

Percentage of households that save in each age group out of the percentage of households that save in the economy as a whole. Spain = 1. Only values greater than one are represented

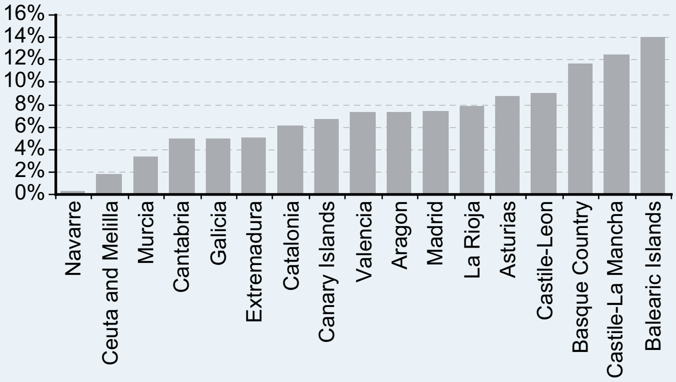
Autonomous region of residence		**Number of workers in the household**	
Aragon	1.04	2	1.11
Asturias	1.03	3	1.10
Balearic Islands	1.18	4 or more	1.10
Canary Islands	1.00	**Number of income earners**	
Cantabria	1.03	2	1.08
Castile-Leon	1.07	3	1.12
Castile-La Mancha	1.10	4	1.14
Catalonia	1.03	5	1.30
Valencia	1.01	6	1.52
Madrid	1.07	7 or more	1.61
Basque Country	1.10	**Age of the main breadwinner**	
La Rioja	1.05	Between 35 and 44 years	1.00
Provincial capital		65 years or more	1.02
Yes	1.04	**Nationality of the main breadwinner**	
Size of the town/city		Spanish	1.00
100,000 inhabitants or more	1.03	Spanish and dual	1.08
Between 50,000 and 100,000	1.03	**Marital status of main breadwinner**	
Form of tenancy of the main residence		Single	1.11
Ownership	1.01	Widowed	1.05
Number of members of the household		**Educational level of the main breadwinner**	
One person	1.06	University graduate	1.07
Two people	1.03	**Employment situation of the main breadwinner**	
Dependent minors?		Working	1.05
No	1.04	Working but temporarily off	1.03
Number of active household members		Household work	1.01
2	1.05	**Net monthly income of the main breadwinner**	
3	1.01	€1,500 to €2,000	1.07
4 or mor	1.04	€2,000 to €2,500	1.20
Gender of the main breadwinner		€2,500 to €3,000	1.25
Female	1.02	€3,000 and over	1.34

Source: BBVA Research based on INE Family Budget Survey (FBS 2008)

11: The relationship between income and saving is an open question in the economic literature, as shown by Dynan, Skinner and Zeldes (2003).
12: Obtaining a profile of increasing saving during retirement is not an isolated result in the literature, as can be seen in Brugiavini and Padula (2001) for Italy, Demery and Duck (2006) for the United Kingdom, and Klevmarken (2004) for Sweden, among others. For the case of Spain, Oliver, Raymond and Pujolar (1997) and Alegre and Pou (2008) find a similar result using the 1990-1991 FBS and the Continuous Family Budget Surveys (CFBS) for 1986-1996.

Chart 9

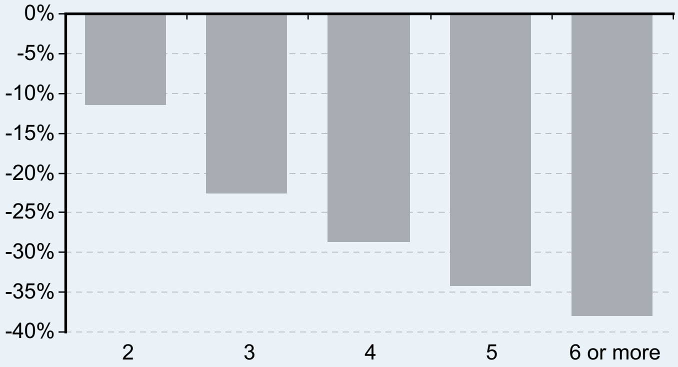
Marginal effect of the autonomous region of residence on the probability of household saving (reference group: Andalusia)



Source: BBVA Research

Chart 10

Marginal effect of the size of the household on the probability of household saving (reference group: one member)



Source: BBVA Research

As a result, in order to see how the probability of household saving is affected by each of the variables characterizing it, a conditional analysis is required to avoid the contamination produced by third variables. This has been done by estimating a discrete choice model in which the probability of household saving depends on three groups of variables:

1. Geographical characteristics and those of the main residence: the autonomous region of residence, population density, the form of tenancy of the main residence, etc.
2. Composition of the household: number of members, number of income earners, whether there are dependent minors, the household unemployment rate, etc.
3. Characteristics of the main breadwinner: gender, age, nationality, marital status, employment situation, etc.

Also included is the income of the household instrumented by the educational level of the main breadwinner and a set of variables related to the area of residence and the characteristics of the main residence[13].

The results of the regression back up some of the data commented in the descriptive analysis above and refute others. In particular, they confirm the existence of regional heterogeneity in the tendency to save, even when controlling for possible differences in the type of home among regions. For example, ceteris paribus, residing in the Balearic Islands increases the probability of a household saving by 14% compared with Andalusia (see Chart 9).

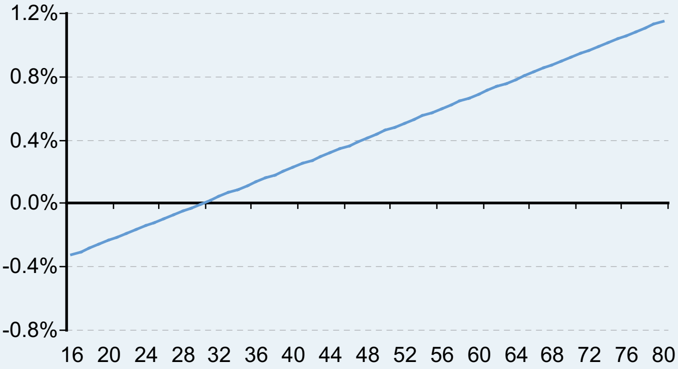
It can be seen that the conditional probability of saving is monotonically reduced with the size of the home (see Chart 10). Given that both the income level of the household and the number of income earners have been included in the regression (both have a positive and statistically significant effect on the probability of saving)[14] the inverse relationship between the size of the household and saving is not explicable by an income effect. This result, combined with the positive influence on the probability of saving if there are dependent minors in the home (9.6%), suggests that there are differences in the degree of risk aversion by type of home and interdependent preferences (or altruistic behavior): the level of precautionary saving is higher in those homes with a lower number of members, and/or dependent minors, to counteract the greater relative impact of a negative income shock. The heterogeneity of the degree of risk aversion would also justify the positive effect of home ownership on the probability of saving. However, given the possible composition effect derived from the unfeasibility of distinguishing the owners with and without mortgages , this result should be taken with caution.

Focusing on the characteristics of the main breadwinner, the results of the estimation indicate that age has a non-linear effect on the conditional probability of saving. As a result, the marginal effect is negative until the main breadwinner reaches 30 years of age, and positive - and increasing - after that age (see Chart 11). Unlike the findings from the prior descriptive analysis, male breadwinner households have a slightly higher (1.9%) conditional probability of saving than those with a female breadwinner. Finally, the variable that has the greatest impact on the household's conditional probability to save - apart from its size - is the employment situation of the main breadwinner. Ceteris paribus, the probability of saving is reduced by 19.2% when the main breadwinner in the household is unemployed, and 15.8% when he or she is not active (see Chart 12).

All in all, the results of the calculations indicate that those characteristics that determine the growth of permanent income in the household have a greater marginal impact on its probability of saving. But income is not the only variable that explains the differences in the probability of saving across households: households affected by liquidity restrictions, different degrees of risk aversion and the existence of interdependent preferences among household members, all explain a substantial part of the heterogeneity in the tendency to save of Spanish households.

13: The details of the calculation are available for interested readers.
14: Each additional income earner increases the conditional probability of the household saving by 12.2%.

Chart 11
The marginal effect of age on the probability of household saving



Marginal effect of age = b0+2*b1*age, where b0 is the effect of age on the probability of household saving and b1 is the effect of age squared
Source: BBVA Research

Chart 12
The marginal effect of the employment situation of the main breadwinner on the probability of household saving (reference group: working)

Source: BBVA Research

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Appendix: Construction of saving data by household based on the FBS 2008

As mentioned above, there are no recent saving data in Spain at the household level. This is why it has been necessary to deduce them from micro data on income and expenses included in the FBS for 2008. However, two problems hamper the use of household surveys to calculate saving data: the lack of a response, whether total or partial, and measurement errors in the income and expenditure variables.

It is assumed that the INE offers a satisfactory solution to the lack of a response. However, there is a second problem that introduces a measurement error in the income and expenditure variables of those households that answer the survey: the data indicate that both income and consumption expenditure (after being elevated to their population equivalents) are lower than the values offered both by the Income Use Account for the Household Sector of the Spanish National Accounts (SNA) and by the Non-Financial Accounts of Institutional Sectors (NFAIS). In addition, it is calculated that the degree of under-declaration is asymmetrical: i.e., it is greater in income than in spending. As a result, saving calculated according to the information provided by the FBS is below the figure registered by the SNA, as can be seen in Table 3:

Table 3
Spain: income, consumption and saving: SNA vs. FBS

Gross Household Disposable Income (million euro)	
NFAIS (includes NPISHS)	715,310
Income use account (SNA)	705,236
Income use account (SNA) – Employer Social Security contributions	599,526
Net household income (FBS) (a)	513,693
% of (SNA - employer SS contributions)	85.7
Final consumption expenditure 2008 (million euro)	
NFAIS (includes NPISHS)	622,964
Income use account (SNA)	613,016
FBS	534,941
% of SNA	87.3
Gross saving (million euro)	
NFAIS (includes NPISHS)	92,346
Income use account (SNA) (b)	92,220
Income use account (SNA) – Employer Social Security contributions (b)	-13,490
FBS	-21,248
Saving rate (%)	
NFAIS (includes NPISHS)	12.9
Income use account (SNA)	13.1
Income use account (SNA) – Employer Social Security contributions	-2.3
FBS	-4.1

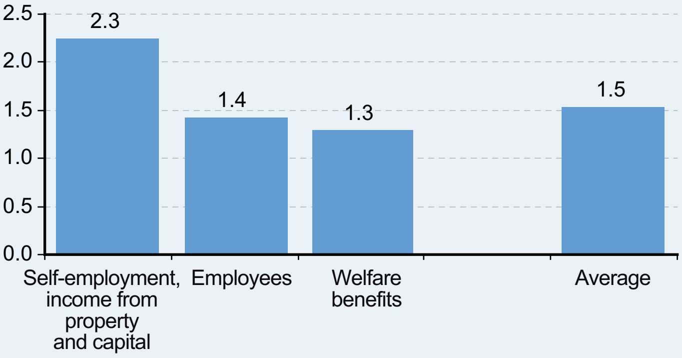
(a) Includes non-monetary income and income imputed by INE.
(b) Includes the adjustment by variation of net participation of households in pension fund reserves
Source: BBVA Research, based on INE data

A two-stage procedure has been developed, to solve the problem of under-declaration of income and household expenditure, inspired in the work of Marchante et al. (2002):

Stage 1: Standardization of the expenditure criteria and transformation of internal consumption of the FBS into domestic. Given that both the consumption of non-residents in Spain (A) and that of Spanish residents in the rest of the world (B) are not broken down by goods and services, we have chosen to allocate the net balance (B)-(A) proportionally to the weight of each item in internal consumption, excluding group 10, Education (See Chart 13).

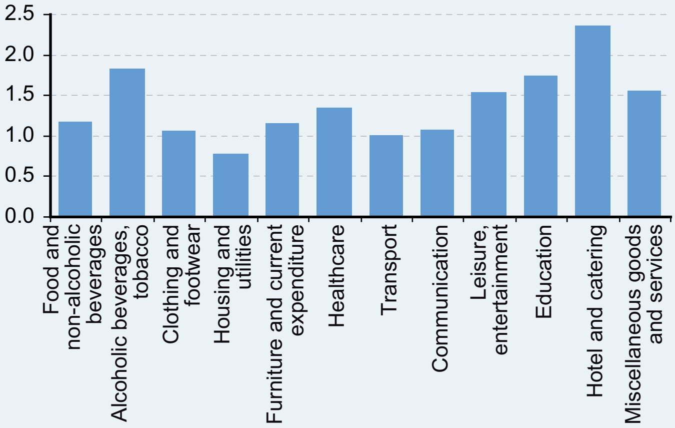
Stage 2: Calculation and application of correction factors for the degree of under-declaration, both in terms of expenditure and income. In the case of expenditure, a correction factor is constructed for each of the 12 groups of goods and services in the COICOP-HBS classification. In the case of income, it has been assumed that the probability of under-declaring depends (positively) on the level of household income and the kind of income received. As households do not declare what part of their income comes from each source of income, we have decided to group the sources into three: (1) self-employed and income from property and capital; (ii) employees; (iii) pensions, subsidies and other benefits - and we have assumed that all the income received comes from the main source of income. It should be noted that 65.9% of homes surveyed declare that they have a single source of income, and among those that receive two or more, the distribution of the main source is relatively similar between the three types considered. When the social security contributions and taxes are deducted from the SNA figures, they are grouped together and compared with the income items from the FBS equivalents, thus obtaining the correction factors included in Chart 14.

Chart 13
Correction factors for income included in FBS 2008



Imputed rentals are not included
Source: BBVA Research, based on INE data

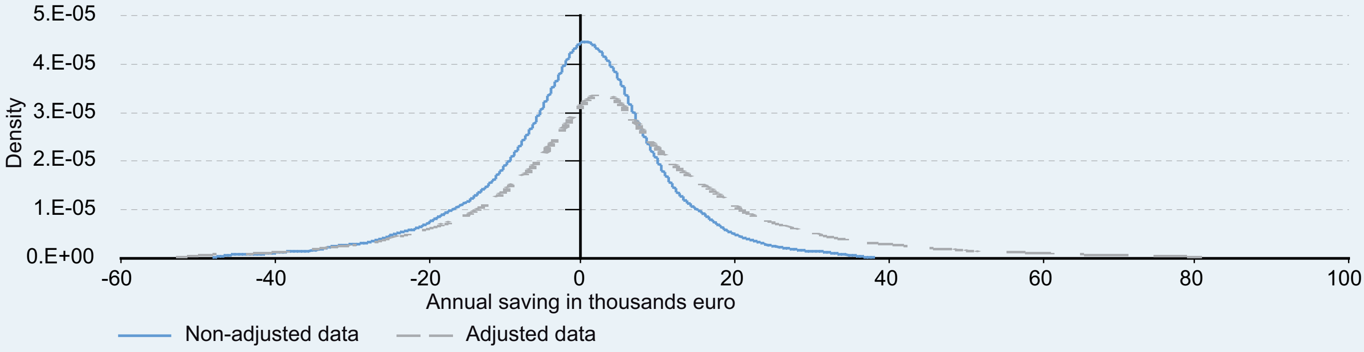
Chart 14
Correction factors for the expenditure groups in FBS 2008



Source: BBVA Research, based on INE data

The correction of the figures for income and expenditure for each household results in an increase of 14.4% in the average expenditure and 37.1% in the average income. As can be seen in Chart 15, the distribution of annual household saving moves towards the left.

Chart 15
Spain: distribution of notional household saving 2008. Effect of corrections



Observations below percentile 1 (p1) and above percentile 99 (p99) have been eliminated
Source: BBVA Research

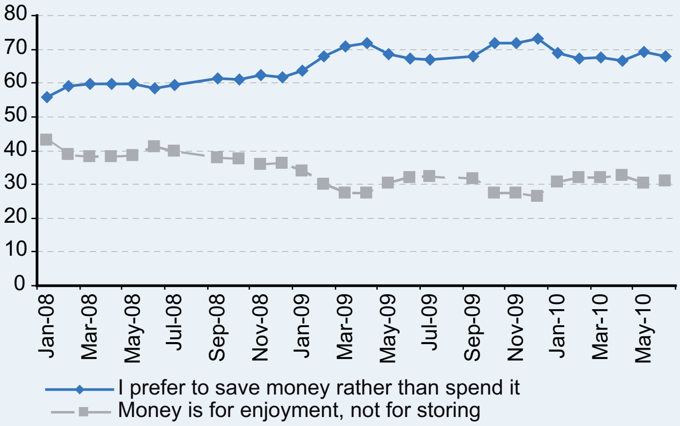
Box 2: The psychological dimension of saving: an approach based on the BBVA Consumer Trends Observatory[15]

Saving constitutes the most commonly used strategy by Spanish families to control their income and expenditure in the face of the current crisis. We will begin with the data: studies carried out by the BBVA Consumer Trends Observatory show that from 2008 to 2010 the declared intention to save ("I prefer to save money rather than spend it") has increased by 13 points from 56% to 69% of the Spanish population (see Chart 16). At the same time, the number of Spanish people who state that they control their income and expenditure compared with those who say they do not do so has increased a further 10 points from 78% in 2008 to 88% in the first quarter of 2010 (see Chart 17).

These data reflect the growing interest that "conservative" formulas of money management (saving, control, constriction, contention) are having in current Spanish society, as well as their associated systems of value: austerity, sacrifice, seriousness, realism, security, etc.

Chart 16

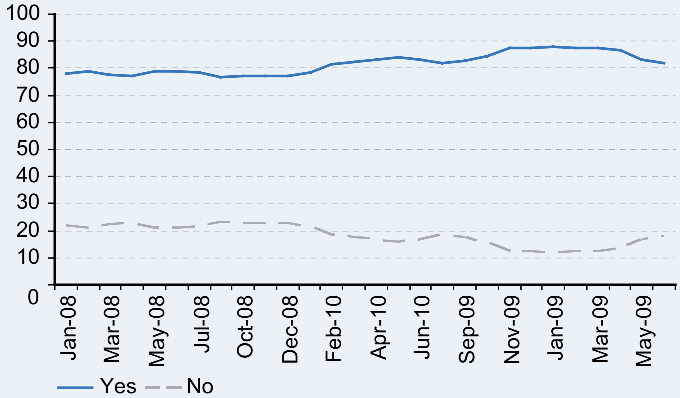
Preference for saving vs. spending (% surveyed)



Population between 18 and 70 years
Source: Consumer Trends Tracking BBVA Spain

Chart 17

Do you control your personal and/or family income and spending in any way? (% surveyed)



Population between 18 and 70 years
Source: Consumer Trends Tracking BBVA Spain

Saving is a socioeconomic phenomenon where a number of dimensions converge. To understand it in more depth, we should differentiate between two aspects that function in a complementary fashion in the minds of consumers:

- First there is the pragmatic and merely functional aspect that puts saving as a simplifier or facilitator of household financial management. In this sense, saving "makes life simpler" for families.
- But even though this pragmatic aspect is important, what is much more important is the symbolic aspect of saving. In other words, what having money saved means for a family. Saving is a refuge, a defense against uncertainty and risk. Most people save not only to have money available, but mainly because of the security, tranquility, stability and freedom from worry this money provides them. It is worth here mentioning the etymological origin of the Spanish term for saving, ahorro: it provides "freedom" for the person involved[16]. This freedom can be translated into welfare and quality of life.

A few years ago, although saving was not exactly regarded with suspicion, it was not something that people aspired to. Saving was associated with an antiquated and conservative style of life that did not want to assume risks. Saving was related with sacrifice, self-denial, privation, etc. It was a rather unsophisticated strategy to opt for certain consumer goods, given that we were in a context in which hedonism and immediacy were the dominant values.

However, the financial crisis and its consequences in the form of the crisis in values and their consequent reassessment for the future, have led to savings being seen in a much more positive and aspirational sense. Currently, consumers consider saving as something positive and desirable. Saving is perceived as a symptom of intelligence and reflection. It is understood as the capacity to establish priorities, to restrain oneself, to control impulses that have partially been provoked by the current crisis.

15: This box has been prepared by Santiago de la Asunción of BBVA's Consumer Insight department.
16: The Spanish word for savings, "ahorro", comes from the Arabic word horro, which means "free". This adjective was applied to a freed slave, and the certificate of horro was the document that accredited that the slave had been freed. Ahorrarse, or freeing yourself, was the origin of the Spanish verb for save, "ahorrar", and it meant the financial contribution the slave (or captive) had to pay to buy his freedom.

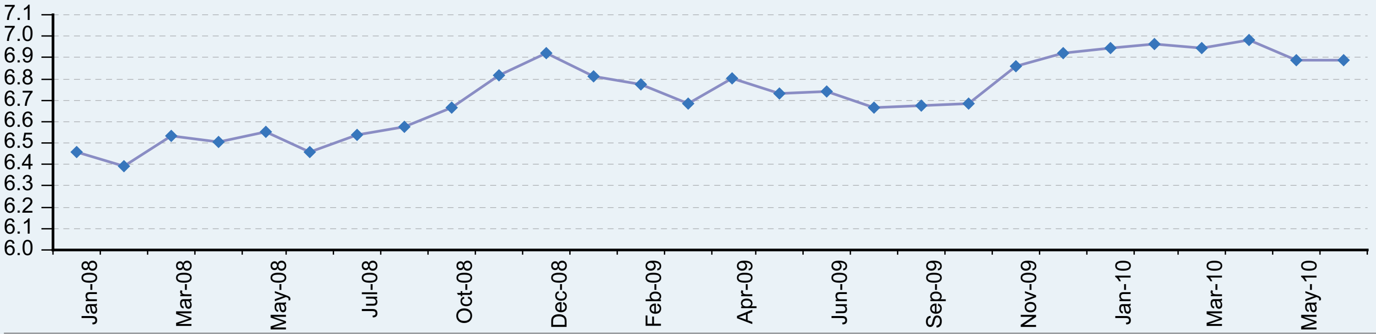
The concept of saving has also undergone a major transformation in terms of its intrinsic function. Formerly, one saved in order to achieve something; it was a sacrifice and a necessary condition for accessing the desired good (a home, automobile, etc.). This changed radically with the extension and normalization of credit as a form of financing the purchase of all kinds of consumer goods. Credit allowed people to obtain what they wanted immediately, without making an initial sacrifice. Saving was left to people who were antiquated and scared: people who did not take risks.

But in the current crisis, saving has moved from being exclusively a means to achieve something to an aim in itself. In other words, the aim of saving is not to acquire a good or service The aim of saving is to accumulate capital that provides security and peace of mind and that improves our quality of life. So we can talk about a new concept of saving: positive, optimistic, aspirational, intelligent and not linked to sacrifice (material), but rather to achievement (emotional).

This re-conceptualization of saving is leading to important changes in patterns of consumption and in the experience of consumption itself. Among these changes are the following:

- The emergence of the smart buyer as a specific type of consumer that is gaining ground and importance in current society (see Chart 18). His ultimate goal is to save and obtain the greatest benefit from spending. To do so, he adopts a much more active, involved and critical role in decision-making processes, while taking a more reflective and cautious position that leaves a smaller margin to impulse. He is more informed and this makes him more demanding in his relationship to manufacturers, firms and brands in general.
- The increase of the importance of price in purchasing decisions, above even quality in some products and categories.
- The appearance of new forms of ownership (co-ownership, exchange) or the recovery of other forms that had fallen somewhat out of use (the upsurge in second-hand items, leasing, rental applied to new categories of products such as luxury clothes and accessories, etc.) have become a type of "compromise solution" for people who do not want to give up enjoying the object and are satisfied with having access to it without owning it.
- The boom in low-cost formulas. The arrival of "outlet" stores, earlier and more extensive sales periods, etc.

Chart 18
"Smart buyers"
Those surveyed rating comparing and buying cheaply from 0 to 10. Average of answers



Population between 18 and 70 years
Source: Consumer Trends Tracking BBVA Spain

All these changes show that saving has now become the focus of attention in everything relative to phenomena of consumption and finance. It has become a symptom of intelligence and adaptation to the current uncertain times; a defense mechanism against insecurity and the risk involved in the global economic situation. Saving is aspirational, desirable. It is an end in itself that provides security, tranquility and peace of mind; feelings that are very important in the current times of upheaval.

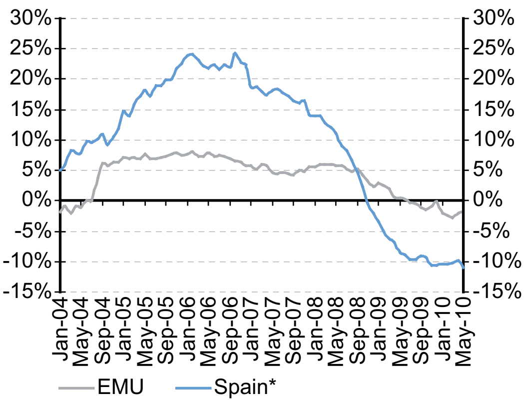
3. Consumer credit in Spain moderates its rate of deterioration in the first half of 2010

In a framework of still adverse international economic conditions and financial markets,consumer credit in Spain has continued on the downward path it began in early 2007. The latest available data shows a nominal year-on-year growth rate of -11.0% in May 2010, well below the rate in the euro area (-1.8%), but in line with the observed fall in previous quarters. Therefore, the trend may have bottomed out (see Chart 19). The outstanding balance of consumer credit in Spanish financial institutions stood at 90 billion euros in May 2010, 14.6% of total consumer credit in the euro zone. Even so, outstanding credit as a proportion of GDP in Spain has been higher than in the euro zone since 2002, being the ratio 8.6% in May 2010, compared with 7.0% for the EMU (see Chart 20).

The moderation of the decreasing path of consumer credit is partly due to a moderation in new consumer credit lending, both in Spain and the rest of the euro zone. In Spain, the amount of new transactions has been decreasing since the end of 2007. The credit granted between January and April 2010 was 10.3 billion euros, 1.7% less than the previous year. Thus the rate of the decline has eased somewhat from -34.9% in the same period of 2009. The fall in new consumer credit lending in the euro zone between January and April was less significant, at -1.8% on 2009, an improvement from the -13.8% in the same period in 2009.

Chart 19

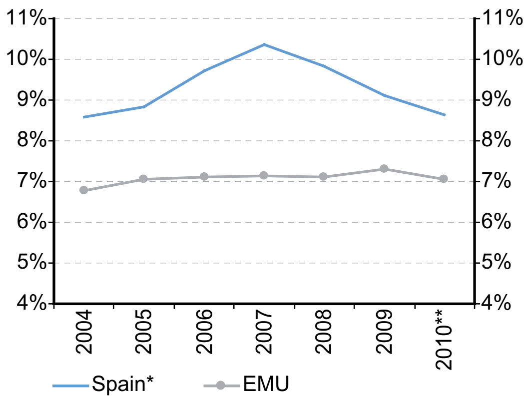
Consumer credit (% y-o-y)



* Includes securitizations
Source: BBVA Research, based on ECB, Bank of Spain and INE data

Chart 20

Consumer credit / GDP (%)

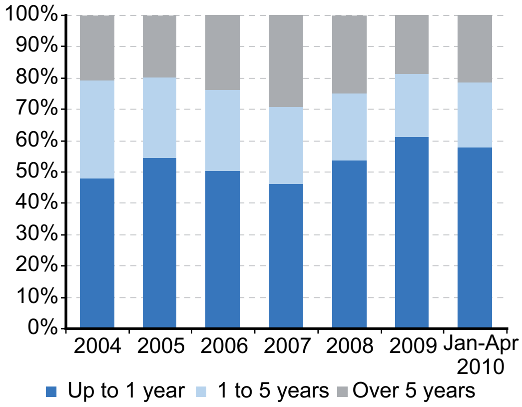


* Includes securitizations
** Latest data available: May 2010
Source: BBVA Research, based on ECB, Bank of Spain and INE data

The main difference between Spain and the rest of Europe in the profile by maturities of new credit granted continues to be the higher proportion of the short-term in the Spanish case (57.8% to April 2010 compared with 36.4% in the euro zone). This can partly be explained by the importance of credit cards as payment methods. Their use increases in line with the worsening of the financial situation of consumers. In contrast, in Spain the importance of medium-term operations is decreasing, accounting for 20.7% of the total, compared to 35.2% in the euro zone. Finally, the relative importance of new credit at terms of more than 5 years, 21.5% of the total, is slightly under the average for the last five years, showing the decline in the purchase of durable goods (see Chart 21).

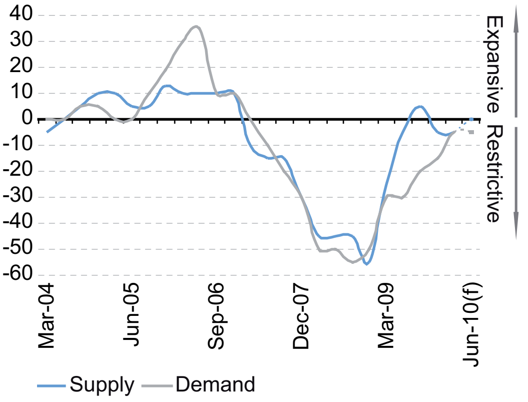
According to the Bank Lending Survey (BLS), the criteria for approving new credits to companies and homes continued to relax in the first quarter of 2010, in line with a trend begun mid-way through last year. This happened despite the slight contractive effect resulting from the perception of deterioration in consumer solvency. In all, both the supply and demand of consumer credit behaved relatively well in Spain. Forecasts suggest that access to credit has remained fairly stable in the second quarter of the year, although the fall in consumer confidence could have caused demand to drop again (see Chart 22).

Chart 21
Spain: interest rates on new consumer credit transactions



Source: BBVA Research, based on Bank of Spain data

Chart 22
Spain: Bank Lending Survey: consumer and other credit



Source: BBVA Research, based on Bank of Spain data

As there are no aggregate consumer credit statistics broken down by purpose of the credit, the breakdown analysis has to be carried out using figures from the National Association of Financial Institutions (ASNEF), which compiles information from financial credit institutions. New consumer credit granted by financial credit institutions amounted to 4.1 billion euros in the first quarter of 2010, 4.1% less than the same period last year, and in line with the negative growth rates experienced since the end of 2008, though an improvement on the trend in the preceding quarters. Thus, 2.7% of new consumption in the first quarter of the year were financed by these institutions and an additional 2,1% by other entities (see Chart 23).

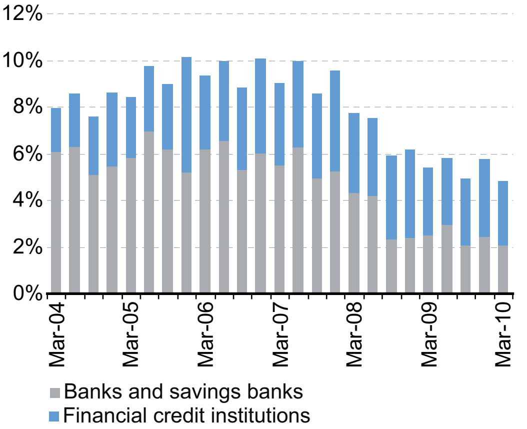
By type of credit, the biggest fall was in personal loans, down 7% on the first quarter of 2009. The financing of consumer goods registered the second biggest fall (-5.0% in the first quarter of 2010, compared with -30.1% in 2009). Finally, the lowest fall was for revolving credit. Therefore, products such as debt consolidation schemes, which have become considerably more expensive, no longer play such a prominent role in household finances, despite the increasing financial difficulties being faced. Nevertheless, revolving loans continue to account for 74.2% of finance from financial credit institutions, while the financing of consumer goods accounted for 19.6% and personal loans for 4.9%.

New vehicle financing transactions by financial credit institutions amounted to 1.7 billion euros in the first three months of 2010, 8.7% more than in the same period of 2009. New cars for personal use continued to represent the biggest proportion, at 68.4% of the total, with a rise of 11.7% compared with the first quarter of 2009, as a result of the boost in demand caused by public Plan 2000E. They were followed by new cars for business use (-0.4% y-o-y) and used cars for personal use (17.7% y-o-y), at 14.7% and 13.3% of the total, respectively. Finally, there was a notable fall of 50.5% in new transactions to finance second-hand business cars in the first quarter of 2010 against the same period last year.

Between January and March 2010, the average loan for purchasing new cars was just over 13,000 euros, down 1.0% compared to 2009. Loans for second-hand cars were slightly below this figure, at 10,500 euros. There was a notable increase in the average size of loans for second-hand business cars, which amounted to 13,700 euros in March. Sales of second-hand ex-rental and high-end cars may be behind this trend.

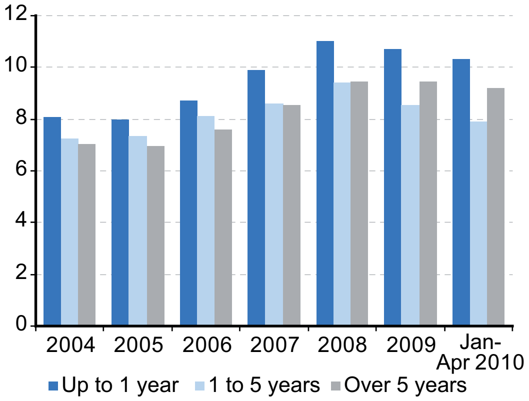
Despite the difficulties of banks to get funds on the financial markets, and the cost represented by impaired portfolios, the cost of credit is below last year's levels (see Chart 24). If this trend is to continue, official interest rates must be maintained at reduced levels and the ECB has to keep its extraordinary liquidity measures in place.

Chart 23
Spain: percentage of new consumer transactions that are financed



Source: BBVA Research based on Bank of Spain, ASNEF and INE data

Chart 24
Spain: interest rates on new consumer credit (%)



Source: BBVA Research, based on Bank of Spain data

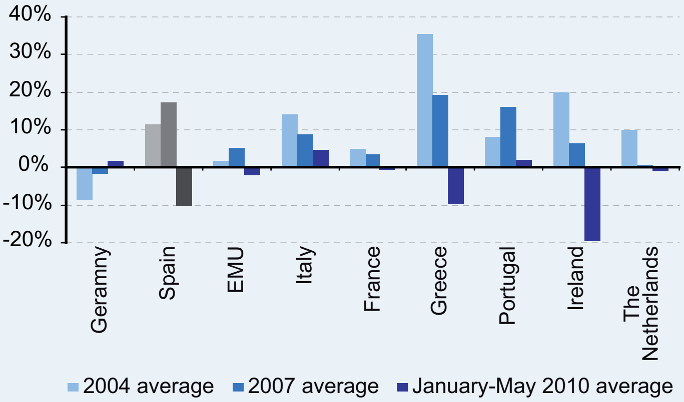
To sum up, the fall in consumer credit in Spain could have bottomed out, although we cannot expect that the growth rates will become positive in the coming months, given the contractive effect on household consumption of the recent rise in VAT. In the future, demand will not increase significantly because of the weakness of its fundamentals, and supply will be heterogeneous, as some institutions will continue being affected by the deterioration of financial conditions provoked by the sovereign debt crisis. Thus the outlook suggests that the credit growth rates will remain negative over the coming quarters.

Box 3: Consumer finance: an international comparison

The global trend in the economy has been marked in recent months by economic and financial difficulties faced by all European countries. Overall, despite the fiscal stimulus measures, domestic demand in EMU member states remains weak. This has contributed to a deterioration of consumer finance in Europe. The latest available data show a year-on-year rate of growth in May 2010 of -1.8% for the whole of the euro zone, under the rates in Italy, Portugal or Germany. Countries such as Spain and Greece registered steeper falls, in an environment of uncertainty created by the renewed financial tensions caused by the sovereign debt crisis. However, an analysis of the first half of 2010 reveals that Ireland is the country with the biggest fall in consumer credit, at -19.5% (see Chart 25).

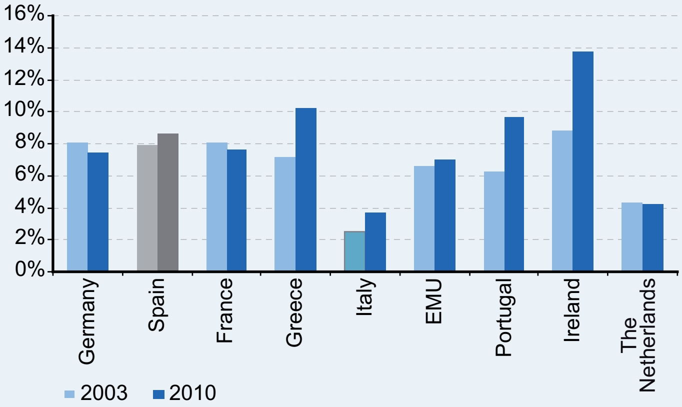
The decline in consumer credit has been the result of numerous factors on both the demand and supply side. Among them is the lack of confidence of consumers and companies, the worsening financial situation of those requesting credit, the difficulties found by banks in getting funding on international markets and the strong upturns in delinquency rates faced by European banks. But despite the unfavorable trend in credit during the current crisis, credit to GDP ratios indicate high levels of leverage in several economies. In particular, in May 2010 the consumer credit to GDP ratio amounted to 13.7% in Ireland and 10.2% in Greece, respectively, compared to 3.7% in Italy and 7.0% on average in the euro zone. In contrast, economies such as Germany and France currently exhibit levels of leverage that are lower than in 2003. Therefore, data suggest that the resort to credit to finance consumption is higher in those economies where the situation of households has deteriorated most (see Chart 26).

Chart 25
Consumer credit (average annual rate of growth)



Source: BBVA Research based on Bank of Spain and ECB data

Chart 26
Consumer credit (% GDP)

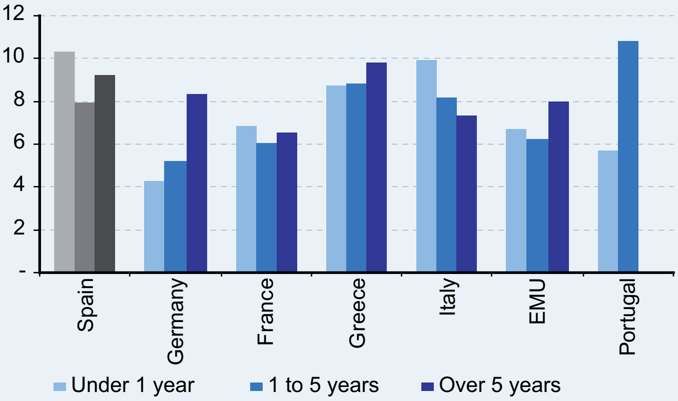


Latest data: May 2010
Source: BBVA Research, based on ECB and domestic sources

If we focus attention on the new consumer credit lending, we can see a reduction in the whole of the euro zone during the current year. In the first four months of 2010, new credit fell by 2.6% compared to the same period of the previous year. However, its evolution varies according to the term: short-term operations increased, while those over 5 years fell from 31.3% of the total at the end of 2008 to 28.4% in the first few months of 2010. Thus it could be inferred that major purchase decisions that need longer term finance are being delayed given the current uncertainty.

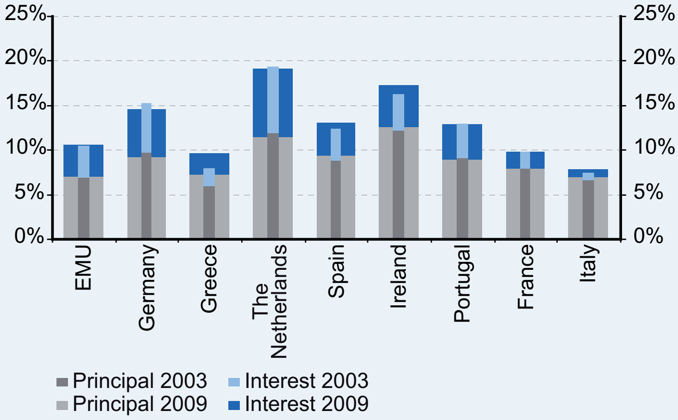
One of the consequences of the persistent financial tensions is the increase in risk premiums of those requesting credit. This has led to a general increase in prices of operations for all the different terms. In countries such as Greece, Germany and Spain, credit with terms longer than 5 years have an interest rates of over 8.0% on average between January and April this year. This level is the same as the euro zone average. In Italy and Greece, credit between 1 and 5 years was at 8.8% and 8.1% respectively, while short-term credit prices set by Spanish and Italian institutions (10.3% and 9.3% respectively) were particularly high (see Chart 27).

Chart 27
Interest rates on new consumer credit lending January-April 2010 average



Source: : BBVA Research based on Eurostat

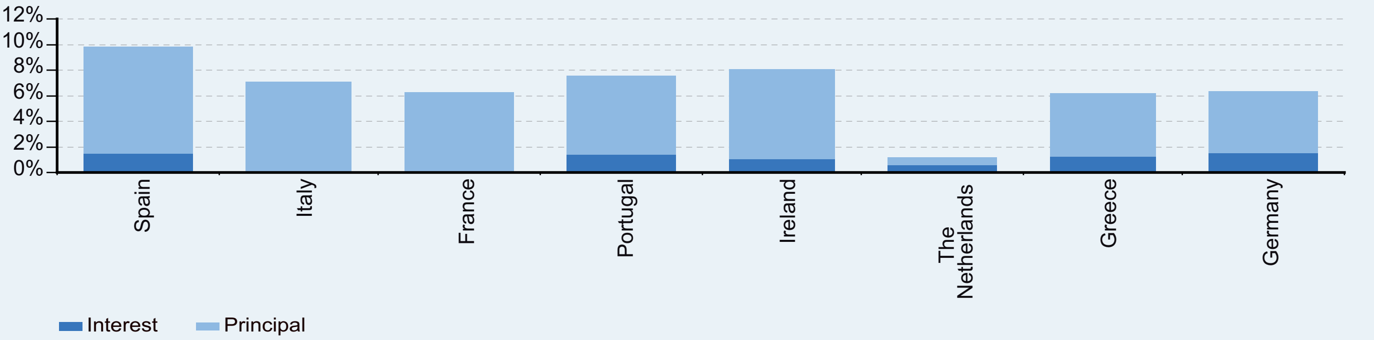
Chart 28
Household debt burden (% of gross disposable income)



Source: BBVA Research

The changes in consumer credit have had an effect on the debt burden of households throughout 2009. This variable indicates the percentage of average monthly income that households dedicate to the repayment of debt. Results indicate that the debt burden is higher in The Netherlands, Ireland and Germany, at 19.3%, 16.3% and 15.3% of household income, respectively. In contrast, countries such as Italy and Greece only have rates of 7.5% and 8.0% respectively[17]. In general the average debt burden of households in European countries is relatively stable over time, but in countries such as Spain it has fallen markedly, as the reduction of official interest rates has been passed on (see Chart 28). Specifically, if we look at the debt burden in the consumer credit segment, Spain and Ireland register a higher effort, both in terms of the repayment of interest and capital, with a burden of 8.4% and 7.1% respectively. In contrast, the debt burden of consumer loans in The Netherlands and Germany was 5.0% and 6.3% respectively (see Chart 29).

Chart 29
Debt burden of households, excluding housing. 2009 (% GDI)



Source: BBVA Research

In short, the consumer credit segment is experiencing a major downturn. The funding and liquidity problems of most of the financial institutions are toughening this trend on the supply side. The high leverage ratios, as well as the difficult financial situation of some households, condition the trend from the demand side. Germany and Italy show a more solid position when compared to economies such as Greece and Ireland. In the future, measures such as those implemented by governments and the extraordinary liquidity support from the European Central Bank should return confidence to the financial markets and consumers, so that consumer credit can begin to recover.

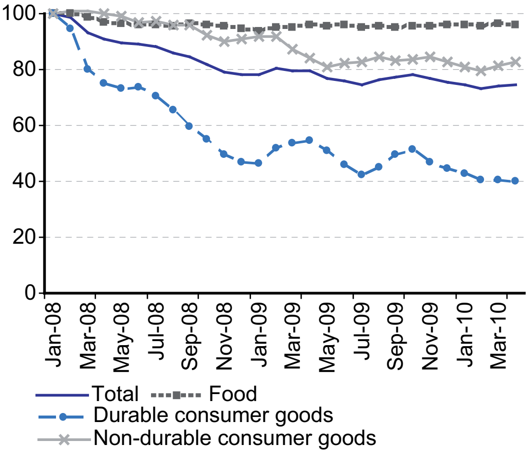
17: In fact, Spain and Italy are the two countries with the highest consumer credit to GDP ratio.

4. Durable goods

There has been a slight recovery in the consumption of durable goods in Spain in the second half of 2009, due to the slowdown of the decline of the economy in the second half of 2009 (mainly as a result of the effect of the stimulus plans on domestic demand, mainly fiscal in nature, and the reduction in interest rates), improved consumer confidence and reduced inflation. However, this recovery was interrupted in the second quarter of the year due to the continued loss of dynamism in certain fundamentals of consumption (mainly income and wealth), the increased uncertainty associated with the resurgence of financial tension, and the easing of the fiscal stimulus measures implemented by the central government and autonomous regions last year (see Chart 30).

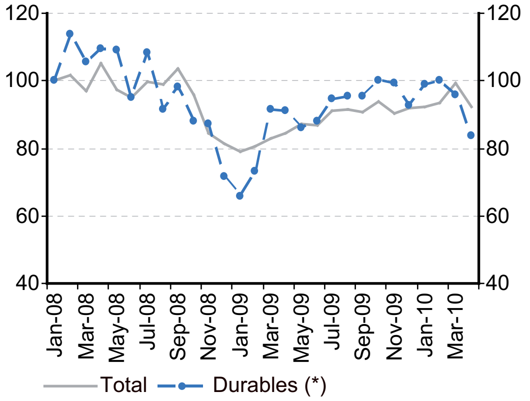
Similar to domestic demand for durable goods, foreign demand has also deteriorated in the first half of 2010. Chart 31 shows how after reaching pre-crisis levels in the second half of last year, exports of durable goods posted an accumulated fall of nearly 16.4 percentage points (pp) in real terms between February and April. Table 4 shows that the downward trend in car exports attributable to the expiration of the trade-in-for-scrap programs in most countries in the region has been the main cause of the deterioration of foreign trade in durable goods in the first half of this year[18]. In fact, other durable goods have shown a positive average monthly growth between January and April 2010, particularly consumer electronic goods (9.8%).

Chart 30
Spain:
consumer goods for sale (CPI: Jan-08=100)



Seasonally & calendar adjusted data
Source: BBVA Research, based on Ministry of Economy and Finance data

Chart 31
Spain:
real exports of goods (CPI: Jan-08=100)



Seasonally & calendar adjusted data. * Electrical appliances, consumer electronics, computing equipment, furniture, motorcycles and cars
Source: BBVA Research, based on Ministry of Economy and Finance data

Table 4
Spain: exports of goods in real terms. Seasonally and calendar adjusted data. Average monthly growth rate (%)

	Total	Electrical appliances	Computing equipment	Consumer electronics	Automobiles	Motorcycles and mopeds	Furniture	Durables (*)
Jan-95/Dec-07	0.5	0.0	0.9	0.7	0.1	0.4	0.4	0.2
Jan-08/Dec-08	-1.8	-3.3	0.4	-1.6	-4.8	-1.4	-1.8	-3.0
Jan-09/Dec-09	1.4	1.2	-2.3	3.2	4.4	2.2	1.0	3.2
Jan-09/Jun-09	1.9	-2.8	-8.2	-2.8	8.7	-5.5	-0.2	6.0
Jul-09/Dec-09	0.2	-0.1	-3.5	7.2	-0.8	3.4	-0.1	-0.4
Jan-10/Apr-10	0.0	3.3	2.8	9.8	-7.1	3.1	0.3	-5.5

(*) Sum of the following: electrical appliances, consumer electronics, computing equipment, furniture, motorcycles and automobiles
BBVA Research, based on Ministry of Economy and Finance data

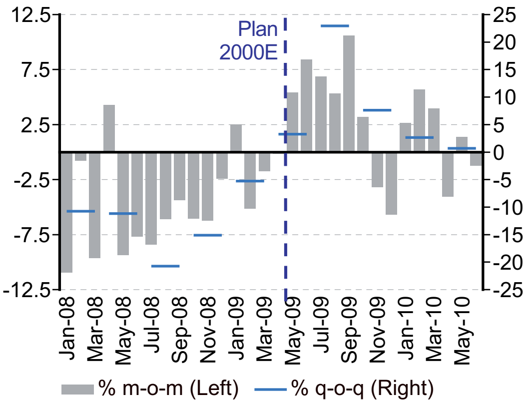
18: According to the European Automobile Manufacturers' Association (ACEA), only seven countries in Europe subsidized the acquisition of vehicles in the first quarter of 2010: France, The Netherlands (until March 31), Ireland, Luxembourg, Portugal, the United Kingdom (until March 31) and Romania.

4.1 Weakening demand for cars linked to end of Plan 2000E

Following its major success in the third and fourth quarters of last year, the Plan 2000E stimulus to demand for cars has gradually weakened[19]. Chart 32 shows that seasonally-adjusted (SA) quarterly growth in new car registrations slowed down from 22.9% between June and September 2009 to 0.7% in the second quarter of 2010. Unlike in the second half of 2009, the private channel has been the main driver for the slowdown in new car registrations this year. In fact, the renewal rental company fleets (not only for seasonal reasons) and increased investment in cars by companies have positively contributed to the growth of car sale registrations (see Chart 33).

Chart 32

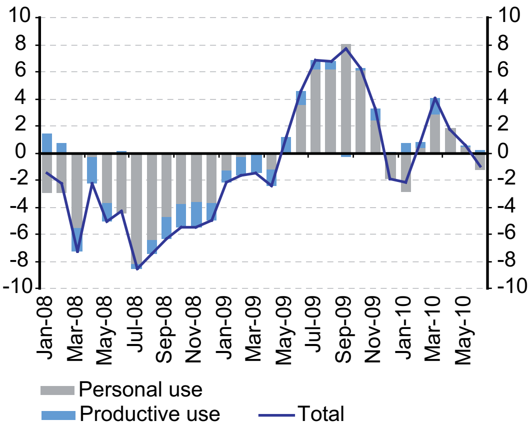
Spain: car sale registrations



Seasonally adjusted data
Source: BBVA Research, based on ANFAC and Ganvam

Chart 33

Spain: car sale registrations by channel

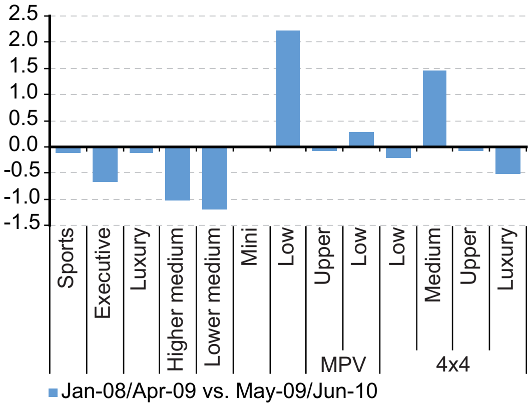


Seasonally adjusted data
(3MMA, % m-o-om)
Source: BBVA Research, based on Bank of Spain and ANFAC data

Despite the fact that Plan 2000E conditioned the payment of the subsidy on the vehicle acquired emitting less than 120 grams of CO2 per kilometer (or 149 grams per kilometer under certain conditions[20]), no significant change has been registered in the composition of the demand for cars by segment, as indicated in Chart 34. As can be seen in Chart 35, all the segments, except luxury SUVs, have posted positive growth figures since the entry into force of Plan 2000E in May last year. There are two reasons for relative demand by segment hardly altering: First, technological breakthroughs, encouraged by appropriate fiscal policy measures, have allowed top-end cars to be manufactured with a relatively low level of emissions that were therefore eligible under Plan 2000E. Second, the price of cars that were not eligible has fallen at a similar rate to those under Plan 2000E, so that consumers were indifferent in terms of price between choosing a car eligible under the program and one that was not.

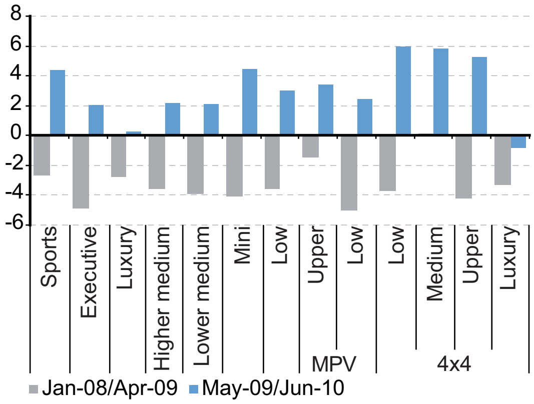
19: A detailed analysis of the effects of Plan 2000E on demand for cars, in particular, and on expenditure on final household consumption in general, can be found in Section 4 of the publication Consumption Watch for the second half of 2009. This is available on: http://www.bbvaresearch.com/KETD/fbin/mult/Consumption_Watch_tcm348-211012.pdf?ts=1872010.
20: The requirements to make use of Plan 2000E can be found in the website of the Ministry of Industry, Tourism and Trade: http://www.mityc.es/industria/es-ES/Servicios/2000E/Paginas/Plan2000E.aspx.

Chart 34
Spain: change in the composition of car sale registrations by segment (pp)



Seasonally adjusted data
Source:BBVA Research, based on ANFAC data

Chart 35
Spain: car sale registrations by segment



Seasonally adjusted data
Average monthly growth rate (%)
Source: BBVA Research, based on ANFAC data

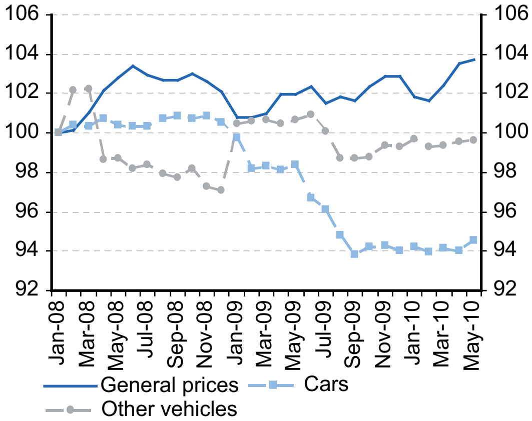
All in all, the slowdown in growth of demand for cars in the first half of 2010 has not led to a fall in their prices. In fact, the price of cars has not fallen since September 2009, and actually rose in May this year. In all, the price of automobiles fell by 5.5% in nominal terms and 9.2% in real terms since the start of 2008 (see Chart 36).

4.2 Mopeds and motorcycles: Plan Moto-E is still ineffective

Given the favorable impact of Plan 2000E on the sales of automobiles and the major slump in demand for mopeds and motorcycles since the end of 2007, the Government approved Plan Moto-E at the start of July 2009. With a budget of 9 million euro, Plan Moto-E provides direct financial assistance to the purchase of new mopeds and motorcycles with a limit power output of 74 kW and a maximum price of 9,500 euros (including VAT). The subsidies are conditioned on the scrapping of a moped or motorcycle that is more than 5 years old (more than 7 in the case of a motorcycle of more than 250cc).

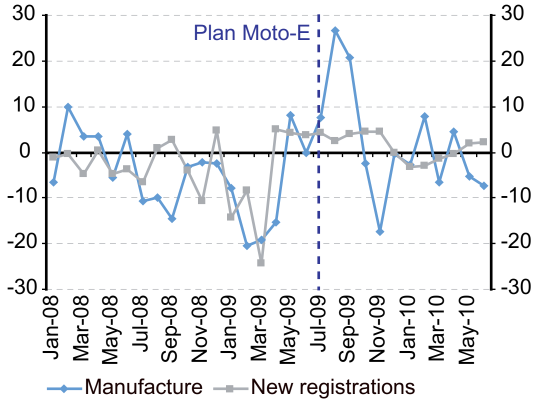
There were two main reasons for the plan's lack of success: it did not include the purchase of larger motorcycles; and it was implemented by only a small number of autonomous regions, as can be seen in Chart 37. In the first half of 2010, the average monthly growth in seasonally adjusted motorcycle sales was 1.9% (1.2% since the beginning of Plan Moto-E). Finally, the fact that prices have not adjusted downward despite the major fall in demand (see Chart 36) may also have contributed towards an intensification of the slump in the sector.

Chart 36
Spain: purchase prices of cars and other vehicles (CPI Jan-08=100)



Source: BBVA Research, based on INE data

Chart 37
Spain: motorcycle production and registration



(3MMA, % m-o-om)
Source: BBVA Research, based on Bank of Spain data

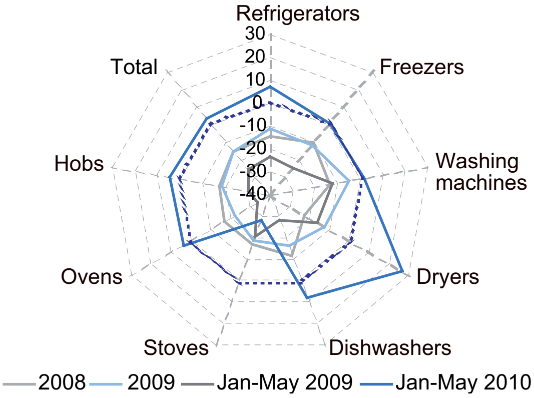
4.3 Major appliances: light at the end of the tunnel

According to figures from the National Association of Manufacturers of major appliances (ANFEL), the volume of sales of electrical appliances rose by 2.8% year-on-year between January and May 2010, compared with -25.8% in the same period last year and -15.2% at the close of 2009. Although sales of all types of electrical appliances increased -except for stoves-, dryers, refrigerators, dishwashers, hobs and ovens recorded above average rises (see Chart 38)[21]. This positive trend in amounts, combined with a growth in prices that has been steadily below the headline inflation rate (see Chart 39) has led to an increase in sales in the sector of around 3.5% this year, compared with over two-digit falls since 2008.

As shown in the Consumption Watch for the second half of 2008[22], sales of electrical appliances are a leading indicator of economic activity. Starting in 1991, the first year for which comparable figures for electrical appliance sales are available, prices of electrical appliances, in particular washing machines and refrigerators, appear to anticipate the Spanish economic cycle. In other words, sales of electrical appliances begin to fall one year before GDP does so and, in symmetrical fashion, they recover around one year before the economy as a whole begins its upturn. However, the major adjustment in residential investment has meant that during the current crisis the recovery in the white goods sector has taken place at the same time as the emergence from recession.

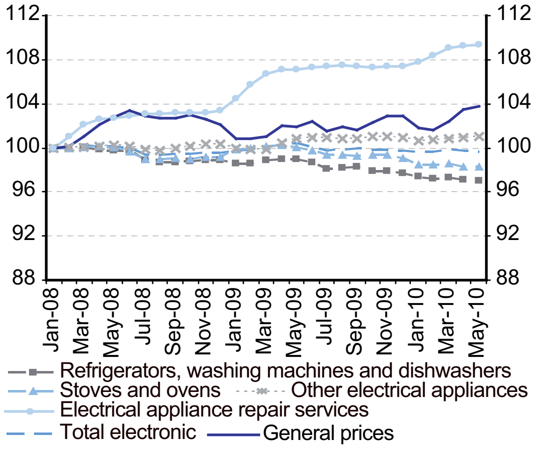
21: The relative increase in prices for repair services for electrical appliances, as shown in Chart 39, could have contributed to stimulate consumer demand for new products.
22: See http://www.bbvaresearch.com/KETD/fbin/mult/IEUES_081218_consumptionwatch_15_tcm348-182317.pdf?ts=1972010

Chart 38
Spain: electrical appliance market by family (% y-o-y)



Source: Source: BBVA Research, based on ANFEL data

Chart 39
Spain: consumer prices of electrical appliances (Jan 08 = 100)



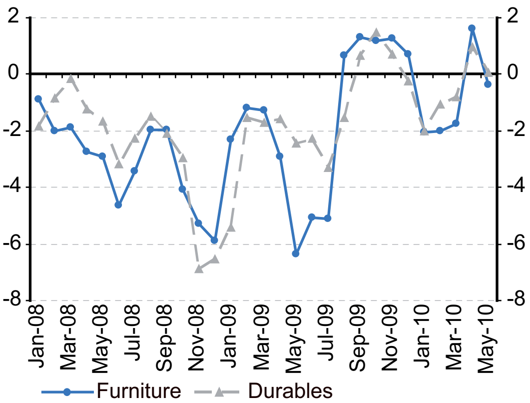
Source: BBVA Research, based on INE data

4.4 Furniture: the trend is still conditioned by the resizing process in the real estate sector

The slight recovery in foreign demand, combined with the temporary moderation in the deterioration of the real estate market (as a result of the recent rise in VAT and the imminent end to the tax allowance on the purchase of homes) has led to a stimulus to the manufacture of furniture. Thus there has been a trend for an improvement to the index of industrial production of furniture from the mid-2009, only been interrupted in the first quarter of this year (see Chart 40).

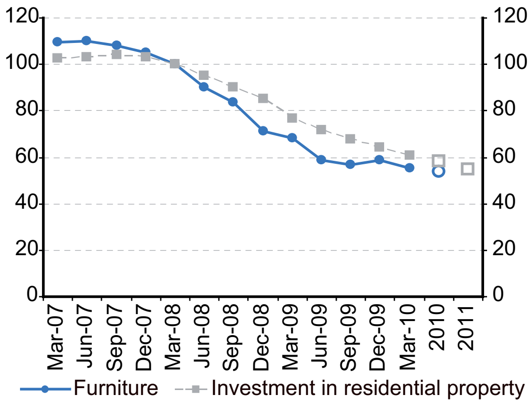
As in the case of white goods, the trend in the production and sale of furniture is similar to that for the real estate sector, particularly residential. A close relationship can be observed between the changes in sales in the sector over time and the changes in the number of mortgages granted. BBVA Research estimates that for a reduction in the number of mortgages of 1%, sales in the furniture sector will decline by between 0.2% and 0.4%. In the same way, the negative outlook for residential investment suggests a negative effect on furniture manufacture performance in the coming quarters (see Chart 41).

Chart 40
Spain: index of industrial production



(Seasonally-adjusted data. 3MMA, % m-o-om)
Source: BBVA Research, based on INE data

Chart 41
Spain: furniture production and investment in residential property (March 08 = 100)

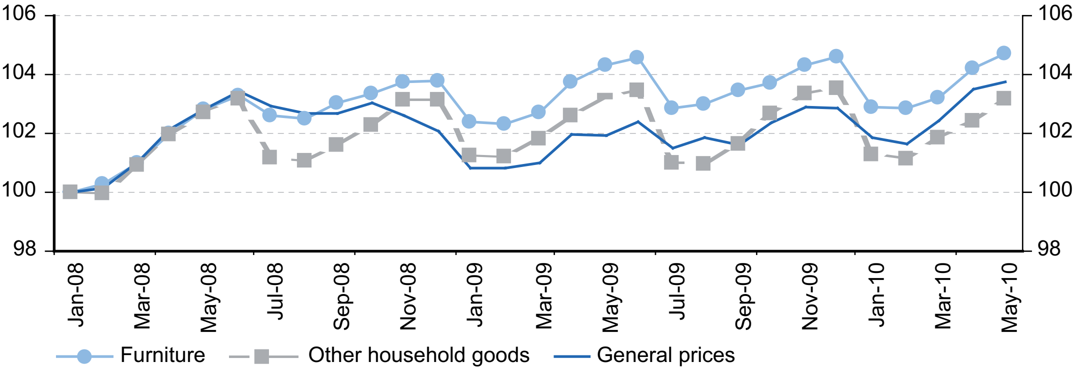


Source: BBVA Research, based on INE data

The weakness of demand for furniture has led to a stagnation in its prices since the start of 2009. In fact, there has been a narrowing of the differential with respect to the general level of prices, as reflected in Chart 42.

Chart 42

Spain: prices of furniture and other household goods (Jan 08 = 100)



Source: BBVA Research, based on INE data

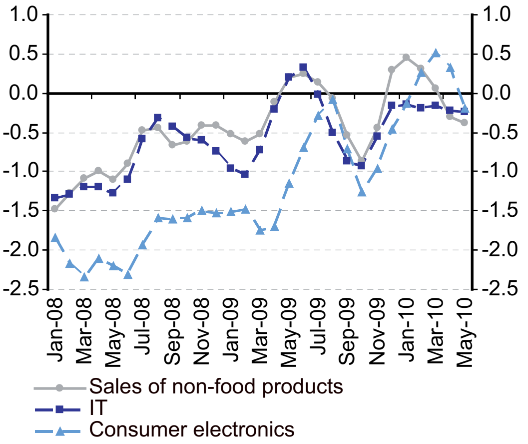
4.5 Consumer electronics and IT equipment (CEIT): the steady fall in prices helps increase the level of penetration in households

The trend in retail sales of consumer electronic products and, to a lesser extent IT equipment, has been increasing, though extremely volatile, since the start of 2008. In particular, there is no appreciable significant increase in the sale of CEIT equipment in the first half of 2010 (see Chart 43). Thus, given the weakness of domestic demand, any expansion in the CEIT equipment sector must depend on the strength of foreign demand, as highlighted at the beginning of this section.

With regard to the behavior of the domestic market, the CEIT equipment sector continues to be characterized by a persistent deflation in prices. Chart 44 shows that since the start of 2010, prices for all consumer electronics and IT equipment products have fallen (between -1.4% for computing equipment to -3.5% for telephony equipment).

Chart 43

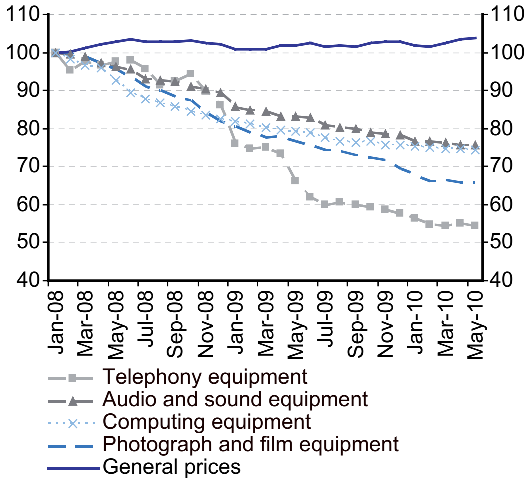
Spain: CEIT equipment and IT. Retail trade in real terms



Cycle-trend, % m-o-m
Source: BBVA Research, based on Eurostat data

Chart 44

Spain: consumer prices of video, sound and IT equipment (Jan 08 = 100)

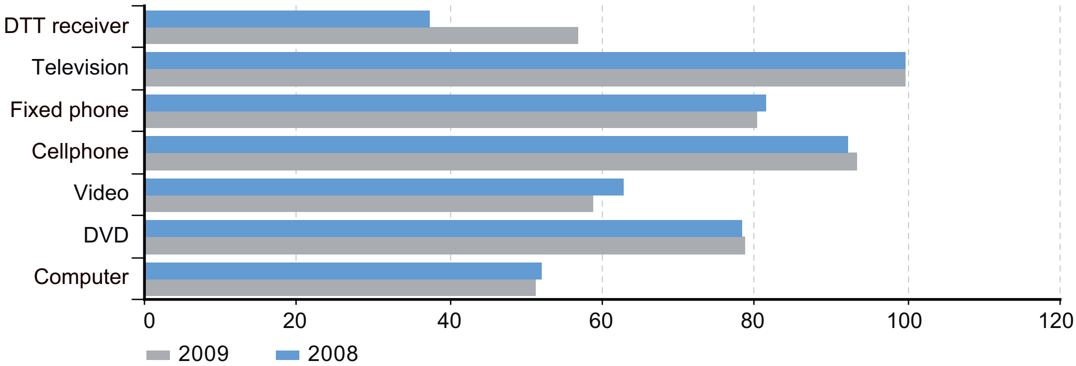


Source: BBVA Research, based on INE data

This general fall in prices has resulted in an increased penetration of CEIT equiptment in Spanish households. Surveys on IT equipment and its use in homes by the National Institute of Statistics (INE) indicate that the product that has increased its presence most in the home over the last two years has been the DTT receiver, followed by the cellphone and DVD. Note that despite the major expansion over the last decade, computers have still only penetrated in households at comparatively low levels (see Chart 45).

Chart 45

Spain: CEIT equipment in homes (% homes)



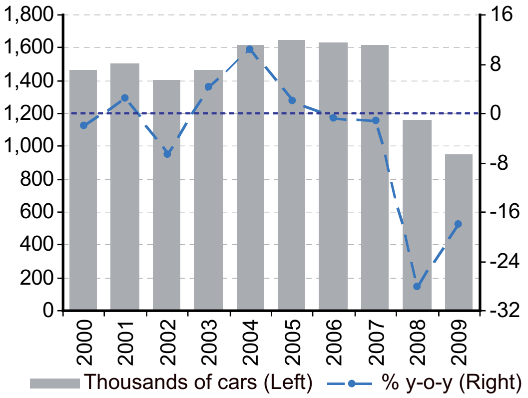
Source: BBVA Research, based on INE data

5. Economic growth and demand for cars in Spain

Is there a saturation point?[23]

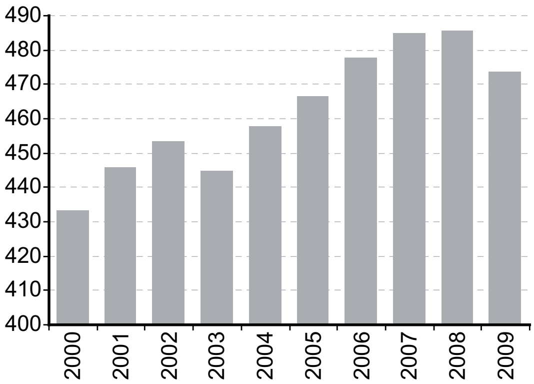
After reaching its peak in 2005, the demand for cars in Spain has shrunk by 42.4% over the last four years to 952,600 units at the end of 2009 (see Chart 46). Despite the positive effect of Plan 2000E on the renewal of the stock of cars, the contraction in demand has led to a significant reduction in the number of motor vehicles per capita: the number of cars per 1,000 inhabitants fell to 473.7 in 2009, 12 below the maximum in 2008 (see Chart 47).

Chart 46
Spain: passenger cars registrations



Source: BBVA Research, based on DGT and ANFAC data

Chart 47
Spain: number of cars per 1,000 inhabitants



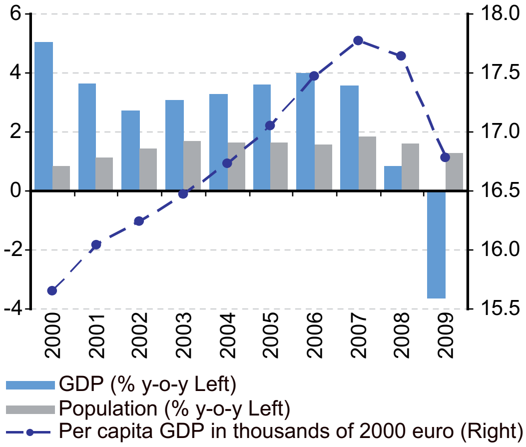
Source: BBVA Research, based on Bank of Spain and European Commission data

The principal determinant of the unfavorable trend in demand for automobiles, and thus the level of motorization of the Spanish economy, has been the major deterioration of economic activity. As the population has continued to grow (although at rates below those in the preceding expansive phase), per capita income fell by 5.6% between 2007 and 2009 (see Chart 48). In addition, the increased uncertainty associated with the job destruction has increased precautionary saving, so consumers have postponed their spending decisions on durable goods[24].

When the number of cars in the country is compared with per capita income, a positive non-linear relation can be observed that is verified both from a static (between countries for a particular year) and dynamic perspective (for each economy over time). Thus Chart 49 shows the non-linear nature of the relation: the response of demand for cars to changes in income (income-elasticity) hardly varies until per capita GDP is around $5,000 (in real terms, with a 2005 base). Growth in the number of cars per thousand inhabitants picks up until per capita GDP reaches $15,000-$20,000. From this threshold, the income elasticity of demand for cars reduces monotonically, suggesting that there a saturation point in the consumption of cars: in the long term, the rate of growth in the total stock of cars converges at the rate of population growth.

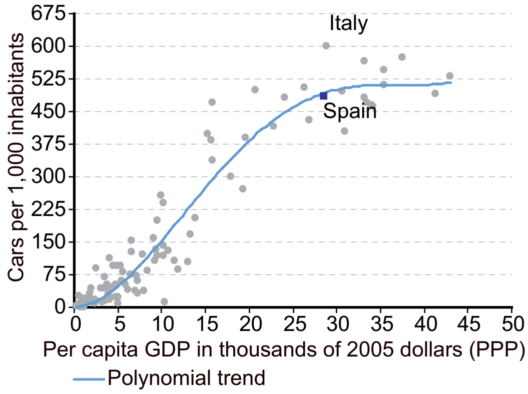
23: We thank Rodrigo Falbo for his suggestions.
24: See Consumption Watch for the second half of 2009: http://www.bbvaresearch.com/KETD/fbin/mult/Consumption_Watch_tcm348-211012.pdf?ts=1872010.

Chart 48
Spain: economic and demographic growth



Source: BBVA Research, based on INE and Eurostat data

Chart 49
Number of cars per 1,000 inhabitants and per capita GDP



Source: BBVA Research, based on World Bank and Eurostat data

The relationship illustrated in Chart 49 does not necessarily indicate that all economies have the same saturation point. In fact, data suggest that countries with a similar per capita income, such as Spain and Italy, converge at different stationary states of per capita car rates. Among other reasons, this is due differences in the preference for the use of public (or private) transport between countries. Other factors that can play a significant role in determining the saturation level in per capita cars are differences in the demographic composition by age, population density in urban areas, accessibility of alternative means of transport, and the degree of competition and variety of cars on offer.

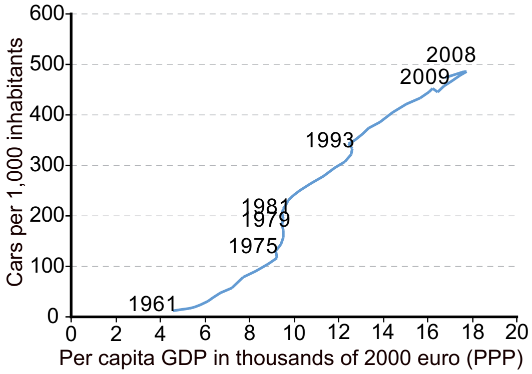
The case of Spain is particularly interesting given that during the last five decades its per capita income has multiplied by a factor of 3.7 in real terms. This means that we can analyze in detail the relationship between its economic development and level of motorization. Chart 50 shows that between 1961 and 2009 the number of cars per 1,000 inhabitants multiplied by a factor of 40.8 from the level of 11.3 at the start of the 1960s. Despite there being no data earlier than 1960, Chart 50 confirms the non-linear nature of the relation and the trend of a growing level of motorization. Although per capita GDP fell in the first and second oil crisis (1975, 1979 and 1981), during the recession of the 1990s (1993) and during the current recession (2008 and 2009), the number of cars per 1,000 inhabitants only fell in 2003 (due to a methodological change in calculating the total[25]) and in 2009 (as a result of a fall in demand).

However, the growth in the total stock of cars per capita does appear to have slackened since the mid 1970s, suggesting that there is a saturation point (see Chart 51). Following the work of Dargay and Gately (1997), Dargay, Gately and Sommer (2007) and Medlock and Soligo (2002), this article estimates a dynamic non-linear model in which the fleet of cars per 1,000 inhabitants depends on per capita income and its various retarded values (see Appendix for more details). The results show that the saturation point of demand is at around 520 cars per 1000 inhabitants. This means that the growth potential for cars per capita is around 10%.

25: In 2003 the Directorate General for Traffic began to exclude cars that were temporarily off the road from their estimated figures for the total stock.

Chart 50

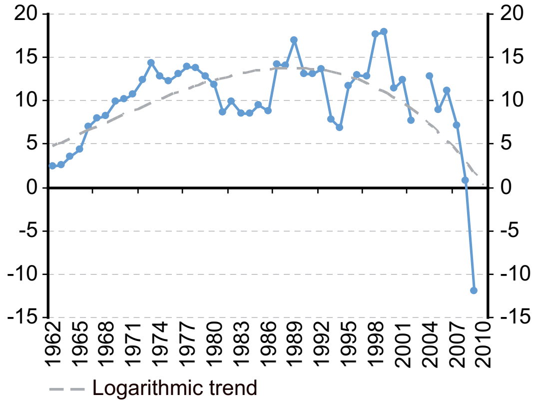
Spain: number of cars per 1,000 inhabitants and per capita GDP, 1961-2009



Source: BBVA Research, based on INE, Bank of Spain and European Commission (AMECO) data

Chart 51

Spain: growth of stock of cars per 1,000 inhabitants



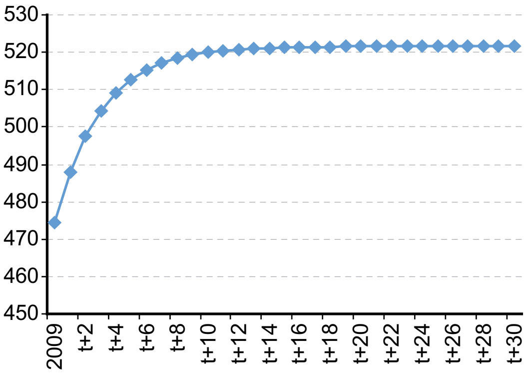
Source: BBVA Research, based on INE, Bank of Spain and European Commission (AMECO) data

How long will the Spanish market take to reach its saturation point? The calculation of the parameter that represents the speed of adjustment to long-term equilibrium indicates that convergence is relatively swift. Without major changes in supply and demand, 28% of the gap between the current level of cars per capita and the saturation point will be closed in the first year; 90% of the adjustment will have been made in the first seven years; and the equilibrium point will have been reached within 30 years[26] (see Chart 52).

The existence of a saturation point implies that the income elasticity of demand for cars tends to zero as per capita income increases. When we derive the expression of income elasticity (long-term), we see that: (i) it reached its maximum level when real per capita income was at 3,300 euros; and (ii) in 2009 it was nearly twelve time lower than at its maximum: an increase of 1% in per capita GDP increases the level of motorization by only 0.6% (see Chart 53).

Chart 52

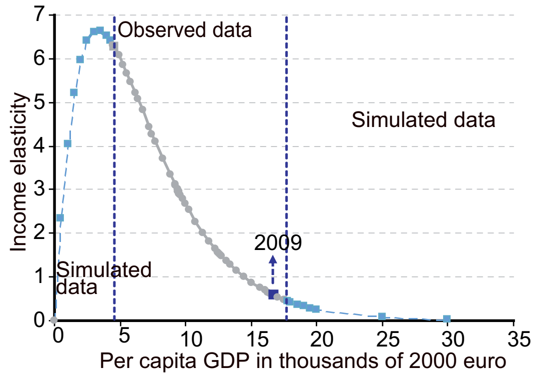
Spain: convergence speed to the saturation point of cars per 1000 inhabitants



Source: BBVA Research

Chart 53

Spain: long-term income elasticity of demand for cars



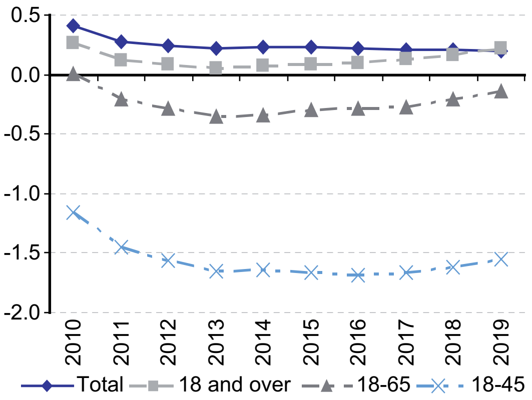
Source: BBVA Research

26: Dargay (2001) and Dargay, Gately and Sommer (2007) find that the speed of convergence is asymmetrical: vehicle ownership - not only automobile ownership - responds with greater intensity when income per capita grows. Checking the symmetrical hypothesis in the Spanish case indicates that the speed of convergence does not differ when per capital GDP increases or lowers.

To sum up, the per capita level of cars in Spain is close to its saturation point and the speed of convergence towards this point is high. Considering that the demographic trend expected for the next decade will not particularly contribute towards a growth in demand for cars (as can be seen in Chart 54), there are two alternatives for the automotive sector to avoid a drop in sales in the medium and long term: first, to boost foreign competitiveness by increasing exports towards economies that have a significant growth potential and that are furthest from their saturation point; and second, to increase the car replacement rate. Although the latest available data (for 2008) indicate that Spain has a stock of cars that is less old than the average in the European Union, the aim would be to reach replacement rates similar to those of the United Kingdom. The percentage of cars in Spain that are ten years old or more was 32.6% in 2008, 7.4 pp more than in the United Kingdom (see Chart 55).

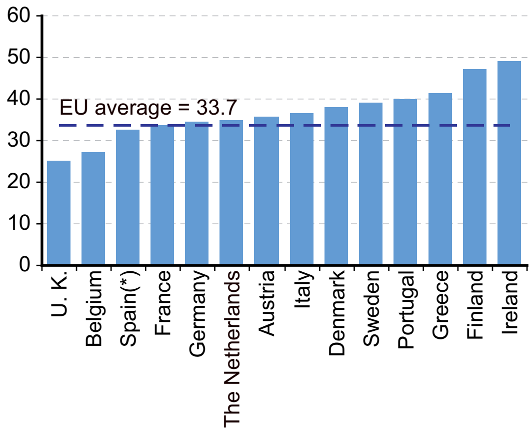
Given that changing demand preferences may be costly, stimulating greater replacement would require technological advances that could reduce the cost of the use of cars by increasing their energy efficiency and extending the whole range of possibilities of choice open to consumers. The automotive sector has demonstrated a notable ability to respond to weakening demand resulting from external factors, such as the increase in fuel prices and growing population density in urban areas, which are gradually pushing down demand for larger cars.

Chart 54
Spain: demographic projections (%)



Source: BBVA Research, based on INE data

Chart 55
Cars over 10 years old in 2008 (%)



(*) 35.7 in 2009
Source: BBVA Research based on ANFAC

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Appendix

The non-linear relation between the per-capita stock of cars and per-capita income has been modeled using a Gompertz function. In particular, let T* be the long-term point of equilibrium of demand for cars per 1,000 inhabitants and GDP_{pc} the per-capita GDP of a country at year t. The equation that describes the long-term relation between T* and GDP_{pc} is as follows:

$$T^* = \beta_0 e^{-e^{(-\beta_1 *(GDPpc_t - \beta_2))}} \tag{1}$$

where β_0 denotes the saturation point and β_1 and β_2 define the level of curvature of the function.

The long-term income elasticity of the per-capita stock of cars is obtained by differentiating (1):

$$\eta_t = -\beta_2\, \alpha GDPpc_t e^{(-\beta_2 (GDPpc_t)} \tag{2}$$

where $\alpha = -e(\beta_2\beta_3)$. Thus income elasticity is not constant, but rather varies with the per-capita GDP level. It takes values of between 0 (when $GDP_{pc} = 0$) and $-1/\beta_2$. It diminishes monotonically from the maximum until the saturation point is reached.

The modeling of convergence towards the long term is carried out through the following adjustment mechanism:

$$T_t = T_{t-1} + \theta(T^* - T_{t-1}) \tag{3}$$

where θ represents the speed of adjustment towards the saturation point. Replacing (1) in (3) and reordering it we obtain:

$$T_t = \theta\beta_0\, e^{-e^{(-\beta_1 *(GDPpct - \beta_2))}} + (1 - \theta)T_{t-1} \tag{4}$$

The estimation results of equation (4) by iterative non-linear least squares for Spain are as follows:

Table 5

Convergence equation

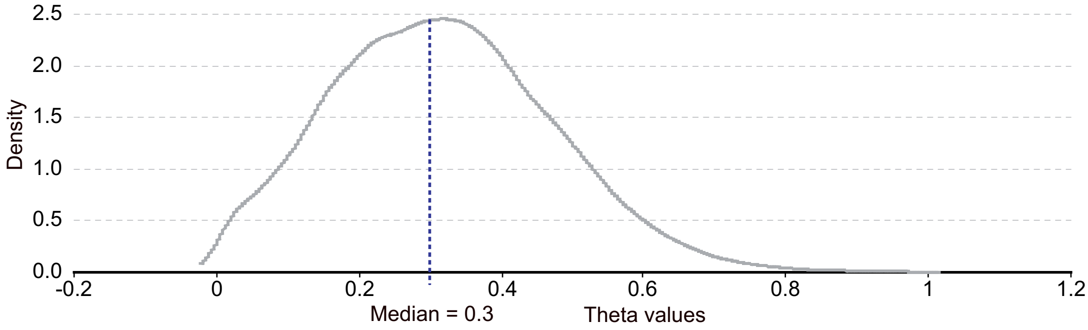
	beta	Standard error	t	p-value
θ	0.285	0.273	1.040	0.302
β_0	521.573	13.277	29.280	0.000
β_1	0.302	0.018	16.870	0.000
β_2	9.571	0.123	72.600	0.000
No. of observations = 48 (1961 - 2009)				
R_2	0.997			
Adjusted R_2	0.997			
Root MSE	17.379			

Source: BBVA Research

The parameter θ does not result statistically significant given that there are no observations close to the distribution tails (T = 0 and T = T*). In these circumstances the asymptotic distribution is not convenient for evaluating the significativity of parameter θ, given that the non-linearity of the estimated function increases the likelihood of rejecting that θ is different from zero. A Monte Carlo experiment was carried out to check the significativity of θ, simulating the empirical distribution of this parameter. The results of the simulation exercise indicate that the value of theta after 10,000 simulations is statistically distinct from zero and that the mean value is around 0.3 (see Chart 56).

Chart 56

Empirical distribution of the convergence parameter (theta) (10,000 simulations)



Source: BBVA Research

In previous editions

Consumption Watch. Second half 2009

- While the global economic situation recovers, though still with a high level of uncertainty, the adjustments pending in the Spanish economy condition the start of the recovery.
- The fragility of the determinants of consumption, together with the deleveraging process underway, will maintain demand weak in 2010, although the improved consumer expectations could condition the forecast upwards.

Consumption Watch. First half 2009

- Households increase their saving rates, extending the adjustment in spending over time, which leads to a continued slowdown in the consumption of durable goods.
- The reduction in interest rates provides support, as do economic policies, which have an important part to play, particularly in sectors with a significant knock-on capacity, such as motor vehicles.

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- Consumption: sluggish in 2009.
- Financing: consumer credit slows and converges with European countries.
- The automobile industry: against a background of weak demand, identifying potential customers is key.

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- Financing: consumer credit will continue to fall to more sustainable levels.
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- Consumer finance: increase in cards and automobiles.
- New cars: slowdown in spending.
- Second-hand cars: sleeping giants?

Consumption Watch. Second half 2005

- Private consumption above 4% in 2005 and 2006.
- 2005: New record for vehicle registrations?
- Consumer credit surpasses European levels.
- In perspective: the challenges for the furniture sector in Spain.

Consumption Watch. April 2005

- Sustained growth in consumption above GDP.
- Consumer finance: steady although somewhat slow.
- Car sales: 2005 will surpass 2004.
- Spending on automobiles: above Europe for the next two years.

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